Preliminary Scoping Statement for Genesee Road Solar Energy Center

Towns of Sardinia and Concord, Erie County, New York

Case 19-F-0602

March 2020

Prepared for:

EDF renewables

Prepred by:

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Commonly Used Terms

Adjacent Landowner:	Landowner with property within 500 feet of the proposed Facility Site.
Applicant:	EDF Renewables Development, Inc. a wholly owned subsidiary of EDF Renewables, Inc. Genesee Road Solar Energy Center will be owned by EDF Renewables Development, Inc.
Application:	The Application refers to the stage of the Article 10 process whereby the Applicant—within 90 days of filing the PSS—submits a formal Article 10 Application to the Siting Board, which includes the same information as the preliminary scoping statement but in greater detail.
Article 10:	Public Service Law that provides for the siting review of new and repowered or modified major electric generating facilities in New York State by the Board on Electric Generation Siting and the Environment (Siting Board) in a unified proceeding instead of requiring a developer or owner of such a facility to apply for numerous state and local permits.
Climate Leadership and Community Protection Act (CLCPA):	The New York State Climate Leadership and Community Protection Act (CLCPA) was passed in 2019 (State of New York 2019). The CLCPA sets ambitious and comprehensive climate and clean energy legislation encompassing climate change impact adaptation, reductions in greenhouse gas (GHG) emissions and investments in technology, as well as job creation and energy worker transitions and the protection of disadvantaged communities. The CLCPA goals include reaching a net 100% carbon-free electricity by 2040 and achieving 70% of New York's electricity generated from renewable sources by 2030, specifically calling for 6,000 MW installed solar by 2025 and 3,000 MW of energy storage capacity by 2030. The legislation establishes energy system resiliency goals and ensures fair transitions for workers and all New York communities, while also focusing on transportation, agriculture, energy-intensive and trade-exposed industries, land use, and energy efficiency.
Document and Matter Management System (DMM):	Online docket (found here: http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterSeq=60766&MNO=19-F-0602) within the Department of Public Service (DPS) where information about the Project is filed and where interested parties can "Subscribe to Service List" or "Request for Party Status" to participate in the process.

Commonly Used Terms

Energy Storage:	System for storing produced electricity until it can be injected onto the power grid at another time. Various infrastructure solutions exist for safe energy storage systems. In 2019, an Energy Storage System Supplement was added to the New York State Uniform Fire Prevention and Building code resulting in some of the strictest design and safety standards for energy storage in the nation.
Environmental Justice:	"Fair and meaningful treatment of all people, regardless of race, income, national origin or color, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies" (NYSDEC n.d.[a]).
Facility:	Collectively refers to all potential components of the proposed Project, including but not limited to photovoltaic (PV) panels, access roads, buried and above ground electrical collection lines, collection substation, point of interconnection switchyard, staging areas, energy storage system, and an operations and maintenance building.
Facility Area:	A 1-mile buffer around the Facility Site.
Facility Site:	Those parcels currently under contract, or being pursued, for purchase, lease, or other real property interests by the Applicant for the location of Facility components.
Open House:	A free event hosted by the Applicant at a central, easily accessed facility (e.g., school cafeteria or gymnasium) that enables the public and interested stakeholders to get information about the project, submit/share concerns, and sign up for updates. Open house events are publicized in advance across various channels, including free local publications as available. The format is open and unstructured, with attendees able to come and go within a three-hour period.
Payment in lieu of taxes (PILOT):	Payments that the Applicant agrees to make to local Affected Tax Jurisdictions such as school districts, counties, and cities, towns, or villages instead of paying property taxes due to a tax-exempt status of the leased land.
Preliminary Scoping Statement:	A preliminary scoping statement is a written document to inform the Siting Board, other public agencies and the public that the applicant is contemplating making an Article 10 Application. It is prepared by an applicant after consulting with the public, affected agencies, and other stakeholders. "Consulting" means providing information to and effective opportunities for input from the public, affected agencies, and other stakeholders, concerning the proposal.
Project:	The Genesee Road Solar Energy Center.

Commonly Used Terms

Public Involvement Program (PIP) Plan:	The PIP Plan addresses requirements of 16 New York Codes, Rules and Regulations (NYCRR) § 1000.4(c), to provide information regarding the Facility to stakeholders, solicit information from those stakeholders during public outreach events, and generally foster participation in all phases of the Article 10 review process.
Project Substation:	The collection substation and point of interconnection (POI) switchyard where the Facility's electrical output voltage will be increased from the collection system voltage (e.g., 34.5 kV or 69 kV) to the transmission line voltage of 345 kV via a step-up transformer. The Project substation will connect the Facility to the existing electrical grid and will be located on a parcel of land within the Facility Area intersected by the existing transmission line.
Siting:	Siting is a process consisting of a series of steps conducted by a regulatory agency in determining whether to allow a facility to be located and operated on a site.
Siting Board:	The Power NY Act of 2011 established a process for the siting of electric generating facilities and re-powering projects. As part of the process, a multi-agency Siting Board is charged with streamlining the permitting process for power plants of 25 megawatts (MW) or greater. The Board is made up of the Chair of the DPS; the Commissioner of the Department of Environmental Conservation (DEC); the Commissioner of the Department of Health (DOH); the Chair of the New York State Energy Research and Development Authority (NYSERDA); the Commissioner of Economic Development (Empire State Development) and two ad hoc public members, both of whom reside within the municipality in which the Facility is proposed to be located.
Stipulation:	Agreement arrived at in a negotiation process concerning what the Applicant will study and how it will study issues of concern—the scope and methodology of studies—before the Application is filed.
Study Area:	A radius around the Facility Site corresponding to the area to be studied for a particular Exhibit of the Article 10 Application. The Study Area for each Exhibit will vary with respect to the potential impacts being analyzed within that Exhibit. For example, Exhibit 25 Effects on Transportation assesses impacts within a 5-mile radius of the Facility Site and interconnections, and Exhibit 27 Socioeconomic Impacts may have a Study Area as large as a County. Unless specified in the Exhibit, a 2-mile-radius from (and including) all Facility components applies.

Commonly Used Acronyms and Abbreviations

Acronym/ Abbreviation	Definition/Denotation
AC/DC	alternating current/direct current
ANSI	American National Standards Institute
APE	Area of Potential Effect
Applicant	EDF Renewables Development, Inc.
Article 10	Article 10 of the New York State Public Service Law, which provides for the siting review of major electric generating facilities
ASTM	American Society for Testing and Materials
BMP	best management practice
BOP	Balance of Plant
CECPN	Certificate of Environmental Compliance and Public Need
CES	Clean Energy Standard
CIP	Critical Infrastructure Protection
CLCPA	New York State Climate Leadership and Community Protection Act
CNR	Composite Noise Rating
CRIS	Cultural Resources Information System
dBA	A-weighted decibel value
DMM	Document and Matter Management
DOH	Department of Health
DPS	Department of Public Service
EJ	Environmental Justice
EMF	electromagnetic field
FAA	Federal Aviation Administration
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration

Acronym/ Abbreviation	Definition/Denotation
FTE	full-time equivalent
G	gauss
GHG	greenhouse gas
GIS	geographic information system
GPS	Global Positioning System
GW	gigawatts
HDD	horizontal directional drilling
Hz	hertz
IEEE	Institute of Electrical and Electronics Engineers
IETA	International Emissions Trading Association
IMPLAN	IMpact analysis for PLANning
IPaC	Information for Planning and Consultation
JEDI	Job and Economic Development Impact
kW/kWh/kV	Kilowatt/kilowatt hour/kilovolt
mG	milligauss
MT CO2e	metric tons of carbon dioxide equivalent
MW/MWh	megawatt/megawatt hour
NAAQS	National Ambient Air Quality Standards
NERC	North American Electric Reliability Corporation
NFPA	National Fire Protection Association
NLCD	National Landcover Database
NLEB	northern long-eared bat
NPS	National Park Service
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places

Acronym/ Abbreviation	Definition/Denotation
NWI	National Wetland Inventory
NYAC	New York Archaeological Council
NYCRR	New York Codes, Rules and Regulations
NYISO	New York Independent System Operator
NYNHP	New York Natural Heritage Program
NYS	New York State
NYS Standards	NYSDOS 2017 Uniform Code Supplement, New York Specifications for Erosion and Sediment Control
NYSDAM	New York State Department of Agriculture and Markets
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOS	New York State Department of State
NYSDOT	New York State Department of Transportation
NYSDPS	New York State Department of Public Service
NYSEG	New York State Electric and Gas Corporation
NYSERDA	New York State Energy Research and Development Authority
NYSOPRHP	New York State Office of Parks, Recreation, and Historic Preservation
NYSORPS	New York Office of Real Property Services
O&M	operations and maintenance
O&M Plan	Operations and Maintenance Plan
PILOT	payment in lieu of taxes
PIP	Public Involvement Program
PNIA	Pre-construction Noise Impact Assessment
POI	point of interconnection
PSL	Public Service Law

Acronym/ Abbreviation	Definition/Denotation
PSS	Preliminary Scoping Statement
PV	photovoltaic
REV	Reforming the Energy Vision
RIBS	Rotating Integrated Basin Studies
ROW	right-of-way
Rs	Richter scale
SEP	New York State Energy Plan
SHPO	State Historic Preservation Office
Siting Board	New York State Board on Electric Generation Siting and the Environment
SPCC	Spill Prevention, Control, and Countermeasure
SPDES	State Pollutant Discharge Elimination System
SRIS	System Reliability Impact Study
SRP	Safety Response Plan
SSURGO	Soil Survey Geographic
SWPPP	stormwater pollution prevention plan
T&E	threatened and endangered
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VIA	Visual Impact Assessment
WQC	Water Quality Certification

1.0 INTRODUCTION AND OVERVIEW OF ARTICLE 10

EDF Renewables Development, Inc. (EDF Renewables or Applicant), a subsidiary of EDF Renewables, Inc., is proposing to construct a 350-megawatt (MW) alternating current (AC) photovoltaic (PV) solar energy generation facility, which may include approximately 50 MW (200 megawatt-hours [MWh]) of energy storage, referred to as the Genesee Road Solar Energy Center (the Facility or Project), in the Towns of Sardinia and Concord, Erie County, New York.

For over 30 years, EDF Renewables has dedicated its efforts to creating a green energy economy through the deployment of renewable energy resources while building mutually beneficial relationships with local communities. For the Genesee Road Solar Energy Center, EDF Renewables intends to submit an application to construct a Major Electric Generating Facility under Article 10 of the Public Service Law (PSL) ("Article 10 Application" or "Application") in the Towns of Sardinia and Concord, Erie County, New York ("the Facility").

Any new electric generating facility that will generate 25 MW or more is subject to Article 10 and requires a Certificate of Environmental Compatibility and Public Need (CECPN) from the New York State Board on Electric Generation Siting and the Environment (Siting Board). In order to issue the CEPCN, the Siting Board must make a determination regarding several factors, including that the facility benefits the electric generation capacity of the state and is in the public interest; that adverse environmental effects of the construction and operation of the facility will be minimized or avoided to the maximum extent practicable; and that the facility is designed to operate in compliance with applicable state and local laws and regulations. The Siting Board consists of seven members, including the Chair of the Department of Public Service (DPS), who serves as the Chair of the Siting Board; the Commissioner of the Department of Environmental Conservation (DEC); the Commissioner of the Department of Health (DOH); the Chair of the New York State Energy Research and Development Authority (NYSERDA); the Commissioner of Economic Development (Empire State Development); and two ad hoc public members, one appointed by the President Pro Tem of the Senate and one appointed by the Speaker of the Assembly. The Siting Board ad hoc members will reside within the municipality of the proposed Facility.

Pursuant to the Article 10 rules, not less than 90 days before the date of filing an Article 10 Application and no earlier than 150 days following the submission of a Public Involvement Program (PIP) Plan, the applicant must file a Preliminary Scoping Statement (PSS) with the Siting Board. EDF Renewables filed the draft PIP Plan for the Facility on September 23, 2019, and filed the final PIP Plan on November 22, 2019, after addressing comments from the New York State Department of Public Service (NYSDPS) staff.

EDF Renewables is a leading independent power producer and service provider with more than 16 gigawatts of renewable energy projects developed across North America. EDF Renewables values meaningful relationships between business and society, which includes a shared goal of building a cleaner world for tomorrow. This Preliminary Scoping Statement describes the Project and the environmental and technical analyses required for the Article 10 Application and continues our public outreach and involvement efforts.

EDF Renewables welcomes and encourages input from all stakeholders on their interests and concerns related to the proposed Genesee Road Solar Energy Center. The PSS and other information can be accessed at the Project website (www.geneseeroadsolar.com) or from the online case record maintained by the Siting Board on its Document and Matter Management System (DMM) on the DPS website for Case No. 19-F-0602 (http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=19-F-0602&submit=Search).

The PIP Plan addresses requirements of 16 New York Codes, Rules and Regulations (NYCRR) § 1000.4(c), including: (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. This will be an ongoing, evolving process throughout all phases of the Article 10 review process (pre-application phase, application phase, hearing and decision phase, and post-Certification phase) intended to disseminate information regarding the Facility to stakeholders, solicit information from those stakeholders during public outreach events, and generally foster participation in the Article 10 review.

Your input matters!
We want to hear about your interests and concerns.

Stakeholders may also contact EDF Renewables directly with questions, concerns, etc.:

Jack Honor
Development Manager
Phone: 1-833-333-7369
NewYork.Solar@edf-re.com

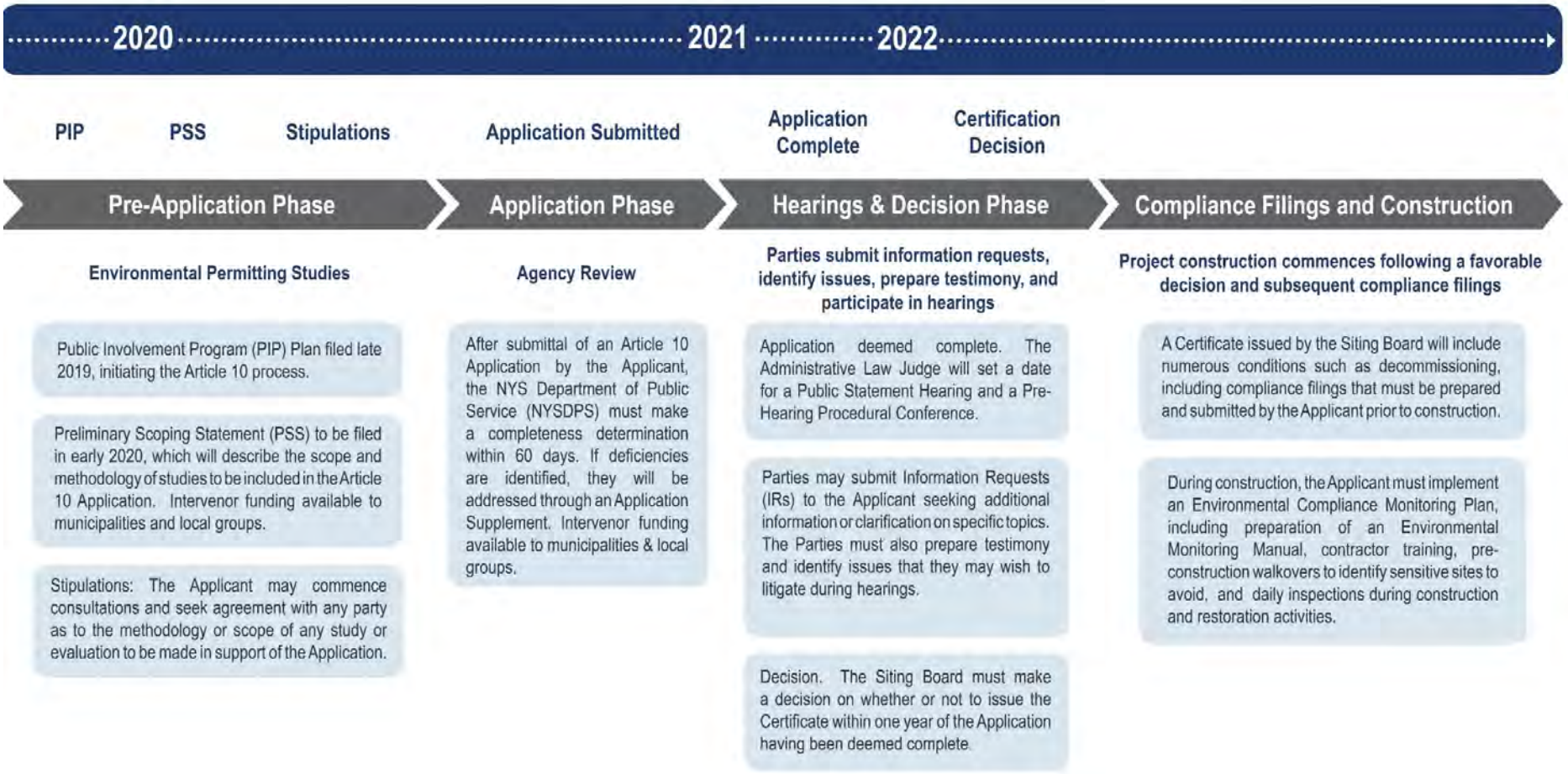
In support of this PSS, EDF Renewables consulted with the public, affected agencies, and other stakeholders, as required by 16 NYCRR § 1000.5(b). Appendix A, Meeting Log, documents these consultations and will be updated and submitted to the Siting Board on a regular basis. Additional details regarding PIP implementation and outreach to stakeholders is provided in Section 2.2 of this PSS.

Stakeholders and members of the public have the opportunity, at this early stage, to ask questions or submit comments on the proposed scope and methodology of studies through their PSS comments. These comments will help ensure that local issues of concern are identified and addressed in the Application and will allow EDF Renewables the opportunity to adjust its approach to certain studies and/or information gathering efforts before the Application is filed.

Comments on the PSS will be due 21 days after the PSS is filed. Within 21 days after closing of the comment period, the Applicant will prepare and file a summary of material comments and its reply to such comments. Once EDF Renewables files its responses to comments on the PSS, the Presiding Examiner assigned to the Article 10 proceeding will commence the stipulation negotiations process. Stipulations are agreements reached between the negotiating parties as to any aspect of the PSS and the methodology or scope of any study or program of studies made or to be made to support the Application. The stipulations process helps ensure the Article 10 Application addresses issues of importance and narrows the number of issues that parties have the potential to disagree about during later phases of the proceeding, which can also help to reduce the cost and burden for stakeholders participating in the Article 10 process.

Once an Article 10 Application is submitted, the Chair of the Siting Board has 60 days to identify any deficiencies that the applicant must address. Once the Chair determines the Application is complete, the Siting Board will have one year to make a decision on the Application. Upon filing the Application, the Siting Board will hold Public Statement Hearings to solicit public comments. Thereafter, during that one-year period, if all issues are resolved by the parties, the proceeding could be settled through a Joint Proposal (i.e., settlement). Alternatively, evidentiary hearings would likely be held through a formal litigation phase and a Recommended Decision would be issued by the Presiding Examiners to the Siting Board for its review and consideration. The Siting Board would then decide whether to grant, grant with conditions, or deny the requested CECPN. See Figure 1.0-1 below for a general Article 10 timeline.

Figure 1.0-1 Article 10 Permitting Timeline



Given the complexity and timelines involved in the Article 10 regulations, it is important to EDF Renewables that stakeholders come forward as soon as possible to identify potential issues, impacts, or interests that should be addressed. By law, the Towns of Sardinia and Concord will be party to this proceeding at all stages, as will numerous State of New York agencies. Municipalities will be able to nominate potential members for participation as ad hoc members to the Siting Board. Throughout all stages of the proceeding, comments and questions will be accepted from stakeholders and members of the public on the Siting Board's website (under Case 19-F-0602) or via email to the Project representative, Jack Honor.

Additional information on the Article 10 process is available at the Siting Board's website: http://www.dps.ny.gov/SitingBoard.

EDF Renewables draws from 30+ years' experience developing projects, including 16 GW of renewables. Seen here is the 24-MW Delta Solar Project in Michigan and the 23.4-MW Arnprior Solar Project in Ontario, Canada

1.1 ORGANIZATION OF THE PRELIMINARY SCOPING STATEMENT

Article 10 regulations require that the PSS provide as much information as is reasonably available concerning the proposed Facility generally in the form that it will appear in the Article 10 Application. To aid readers in better understanding the intended content and organization of the Article 10 Application, and to identify the proposed methodology or scope of the studies to be conducted in support of those Application exhibits, this PSS is organized in accordance with the exhibit structure set forth in the regulations at 16 NYCRR § 1001 (Content of an Application). Specifically, all sub-sections of Section 2.0 (Content of the Application) of this PSS correspond directly to each Exhibit that will be included in the Application as set forth in 16 NYCRR § 1001 (e.g., Section 2.1 corresponds to 16 NYCRR § 1001.1 General Requirements, Section 2.2 corresponds to 16 NYCRR § 1001.2 Overview and Public Involvement, etc.). Exhibits that are not necessarily applicable to the Facility have been included as individual PSS sections in order to maintain consistency, but

they are called out in this PSS as not being applicable to the Genesee Road Solar Energy Center (e.g., Natural Gas Power Facilities, Nuclear Facilities). Table 1.1-1 lists the requirements of 1000.5(l) and the section of the document which contains the required information.

To provide stakeholders with as much information as is reasonably available at the time of filing the PSS, EDF Renewables performed desktop and screening-level studies using publicly available geographic information system (GIS) information from federal, state, and local agencies and other sources. The results are reflected in each Exhibit, when applicable, in the following subsections:

Environmental Setting provides qualitative and quantitative descriptions of the areas encompassing the Facility Area using GIS databases. In many cases, a Study Area is considered based on the requirement of the Exhibit or other appropriate radius.

Potential Impacts and Mitigation describes the Project's design, construction, and operation within the context of the potential impacts on each resource area. Impacts from typical activities relevant to the existing conditions are described based on information obtained from the desktop studies. Further, the proposed or expected measures that may be implemented to minimize or avoid impacts are also described.

Regulatory Framework lists the regulatory requirements and guidance potentially relevant to the evaluation of impacts. Applicability of any specific requirement will depend on details of design and location and on whether the Commission will choose or refuse to apply any specific substantive requirement.

Proposed Contents of the Application identifies specific studies and their methodologies to provide the information needed to prepare the Article 10 Application.

The PSS will not provide the level of specific detail about the Facility layout and components that stakeholders and members of the public may be seeking at this stage. For example, the PSS cannot yet identify the precise locations of solar panels or inverters. This is because the PSS and related "scoping" process are designed to outline studies and expected analyses and gather stakeholder input at a relatively early stage, before an applicant has a fully developed design.

Table 1.1-1 Preliminary Scoping Statement Compliance with the Requirements of 16 NYCRR Section 1000.5(l) Pre-Application Procedures

Section	Requirement	PSS Section	Description
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	Section 2 provides reasonably available information related to the environmental setting, potential impacts and minimization and mitigation.
1000.5 (l)(2)	A preliminary scope of an environmental impact analysis containing a brief discussion, on the basis of reasonably available information, of the following items:		
1000.5 (l)(2)(i)	A brief **description** of the proposed Facility and its **environmental setting**;	Section 1.1 Section 2	Section 1.1 provides a brief **description** of the Project**,** and Section 2 provides a brief description of its **Environmental Setting**.
1000.5 (l)(2)(ii)	Potentially significant adverse environmental and health **impacts** resulting from the construction and operation of the proposed Facility including also an identification of particular aspects of the **environmental setting** that may be affected, including any material impacts or effects identified in consultations by the public, affected agencies, and other stakeholders, and a responsive analysis by the Applicant as to those issues identified in consultations;	Section 1.4 Section 2	Section 1.4 includes general information regarding Project-related impacts, and the **Potential Impacts and Mitigation** subsections in Section 2 provide further description.
1000.5 (l)(2)(iii)	The extent and quality of **information needed** for the Application to adequately address and evaluate each potentially significant adverse	Section 2.0	The Proposed **Content of the Application** subsections provide the details on the information needed for the Application.

Table 1.1-1 Preliminary Scoping Statement Compliance with the Requirements of 16 NYCRR Section 1000.5(l) Pre-Application Procedures

Section	Requirement	PSS Section	Description
	environmental and health impact, including existing and new information where required, and the methodologies and procedures for obtaining the new information;		
1000.5 (l)(2)(v)	A description of how the applicant proposes **to avoid adverse impacts** to the environment and health;	Section 1.5 Section 2	Section 1.5 includes general information regarding Project-related avoidance, minimization and mitigation measures, and the **Potential Impacts and Mitigation** subsections in Section 2 provide further description.
1000.5 (l)(2)(vi)	For those adverse environmental and health impacts that cannot be reasonably avoided, an identification of measures proposed to **mitigate such impacts**;	see above	see above
1000.5 (l)(2)(vii)	Where it is proposed to use petroleum or other back-up fuel for generating electricity, a discussion and/or study of the sufficiency of the proposed on-site fuel storage capacity and supply;	Not applicable to this Project	
1000.5 (l)(2)(viii)	A description and evaluation of reasonable and available alternative locations for the proposed Facility, including a description of the comparative advantages and disadvantages of the **proposed and alternative locations**, except that a private facility applicant may limit its description and evaluation of alternative locations to parcels owned by, or under option to, such private facility applicant or its affiliates;	Section 2.9	Because the Project is being proposed by a private applicant, the description and evaluation of alternative locations will be limited to parcels owned by, or under option to, such private facility applicant or its affiliates.

Table 1.1-1 Preliminary Scoping Statement Compliance with the Requirements of 16 NYCRR Section 1000.5(l) Pre-Application Procedures

Section	Requirement	PSS Section	Description
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	The proposed Facility is not within a coastal management zone, or in proximity to a local waterfront revitalization program area.
1000.5 (l)(2)(x)	A statement of the reasons why the primary proposed location and source, taking into account the potentially significant and adverse environmental impacts, is best suited, among the alternatives, including a "no action" alternative, to promote public health and welfare, including the recreational and other concurrent uses that the site may serve, except that a private facility applicant may limit its description and evaluation of **alternative locations** to parcels owned by, or under option to, such private facility applicant or its affiliates and its description and evaluation of alternative sources to those that are reasonable alternatives to the proposed Facility that are feasible considering the objectives and capabilities of the sponsor;	Section 2.9	Because the Project is being proposed by a private applicant, the description and evaluation of alternative locations will be limited to parcels under contract with the Applicant or its affiliates.
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 con-	Sections 2.27 and 2.28	Section 2.27 provides **demographic information for the host towns**, while Section 2.28 specifically addresses **Environmental Justice**, including identification of the nearest potential Environmental Justice area.

Table 1.1-1 Preliminary Scoping Statement Compliance with the Requirements of 16 NYCRR Section 1000.5(l) Pre-Application Procedures

Section	Requirement	PSS Section	Description
	struction 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 New York State Department of Environmental Conservation (NYSDEC) for the analysis of Environmental Justice issues;		
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.	Section 2.2 and Appendix A	Section 2.2 describes the status of public involvement activities and **issues being discussed with stakeholders**. Appendix A provides the most recently filed Meeting Log.
1000.5 (l)(3)	An identification of all other state and federal **permits, certifications, or other authorizations needed** for construction, operation, or maintenance of the proposed Facility;	Sections 2.32 and 2.33	Section 2.32 addresses state laws and regulations, which Section 2.33(b) addresses **anticipated federal permits and approvals**.
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 2.32	Section 2.32 addresses **state laws and regulations**.
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	Section 2.31	Section 2.31 addresses **local laws and ordinances**.

Table 1.1-1 Preliminary Scoping Statement Compliance with the Requirements of 16 NYCRR Section 1000.5(l) Pre-Application Procedures

Section	Requirement	PSS Section	Description
	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;		
1000.5 (l)(6)	A description of the **applicant**, its formation, status, structure, holdings, affiliate relationships, powers (including whether it has or will seek to obtain the power of eminent domain, either directly or indirectly), franchises and consents;	Section 2.1	Section 2.1 describes the applicant, including the type of business and its formation. The Applicant does not have the power of eminent domain.
1000.5 (l)(7)	A description of the Applicant's property rights and interests or those it proposes to acquire to all **lands of the proposed Facility** and any private or public lands or private or public streets, highways, or rights-of-way crossed by any interconnections necessary to serve the Facility such as, but not limited to, electric lines, gas lines, water supply lines, waste water or other sewage treatment facilities, communications and relay facilities, access driveways, rail facilities, or steam lines; and	Section 2.13	Section 2.13 provides information regarding the **land proposed** for the Project.
1000.5 (l)(8)	Any other information that the Applicant may deem to be relevant.	Entire PSS	The Preliminary Scoping Statement provides stakeholders information to understand the proposed Project. .

1.2 FACILITY DESCRIPTION

The Genesee Road Solar Energy Center Project is a proposed 350-MW solar PV energy generating project located within the Towns of Sardinia and Concord, Erie County, New York.

Figures 1.2-1 and 1.2-2 identify the Facility Area and Facility Site, respectively. The lands under consideration to host the Facility infrastructure (Facility Site) are rural in nature. Not all land included in the Facility Site will be developed as part of the Facility and additional lands currently not depicted may be added. EDF Renewables will lease or purchase land from private landowners, providing a stable and predictable revenue stream for the landowners. Figure 1.2-3 shows areas being considered for solar infrastructure. Figure 1.2-3 essentially represents the preliminary build-out scenario, which has not yet fully considered avoidance and minimization of impacts to the various sensitive resources. Within this build-out, parcels will be connected by easements for collection circuits. The Article 10 Application will present the results of additional studies, additional avoidance and minimization efforts, and potentially different or additional parcels of land as the Facility evolves over the coming months leading to the Article 10 Application.

Throughout this PSS, references to the Facility include the physical generation, collection, and transmission components of the utility-scale solar facility, including temporary features installed during construction, in addition to those areas used for the construction and operation, as well as the designation of conservation areas, vegetative buffers and screening, and mitigation measures. The Facility components include:

- **Arrays of PV solar panels** producing direct current (DC) electricity. The panels are currently anticipated to be approximately 9 feet in height;
- Potential **operations and maintenance (O&M) building** to provide work and storage space;
- **Inverters and medium-voltage transformers placed throughout the Facility** (internal to the panel arrays) to convert DC electricity to alternating current (AC) electricity and increase the electricity voltage from the solar panels to the collection system voltage;
- **Energy storage systems,** typically 40 feet long by 8 feet wide by 8 feet high enclosures housed within the Facility Area in open-air or a facility building, if determined to be feasible. The exact Facility layout and placement of these components is still being determined;

- **A medium-voltage electrical collection system** that will aggregate the AC output from the inverters;
- **Project substation,** the collection substation and point of interconnection (POI) switchyard where the Facility's electrical output voltage will be increased from the collection system voltage (e.g., 34.5 kV or 69 kV) to the transmission line voltage of 345 kV via a step-up transformer. EDF Renewables will work with the New York Independent System Operator (NYISO) and New York State Electric and Gas Corporation (NYSEG) to design an appropriate Facility substation that will connect the Facility to the existing electrical grid. The substation will be located on a parcel of land within the Facility Area intersected by the existing transmission line;
- **Internal infrastructure,** including access roads and fencing; and
- **Temporary laydown areas** for equipment staging during construction.

Power generated at the Facility will be stepped up to the interconnection voltage (345 kV) at the Project substation. The Facility will interconnect with the grid via the POI switchyard, which will connect to the NYSEG 345-kV Southwest to Stolle Road transmission line, which crosses the Facility Site. The Article 10 Application will include a general arrangement plan view drawing of the POI switchyard.

The Genesee Road Energy Center Project will have a nameplate capacity of up to 350 MW, which may include approximately 50 MW (200 MWh) of energy storage capacity. The Facility will consist of approximately 1 million PV solar panels and will generate over 400,000 MWh of electricity each year.

The Facility will be located on private land that is rural in nature, with a footprint that encompasses approximately 2,500 acres of land within the Facility Site, with the majority of the Project in Sardinia. Not all land included in the Facility Site will ultimately be developed as part of the Facility.

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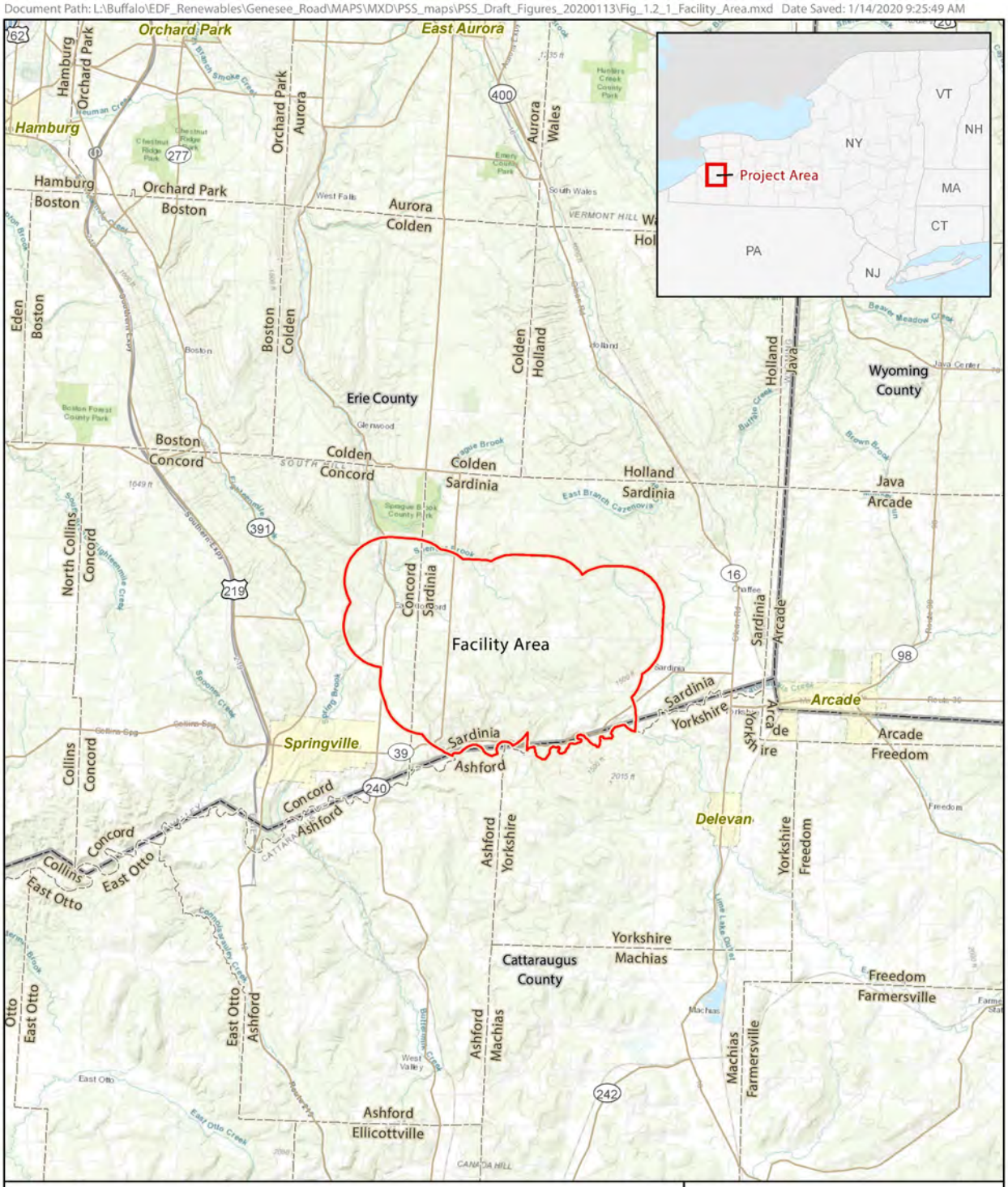

Figure 1.2-1
Facility Area
Genesee Road Solar Energy Center
Towns of Sardinia and Concord,
Erie County, New York

Source: E&E 2019; ESRI 2017; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019.

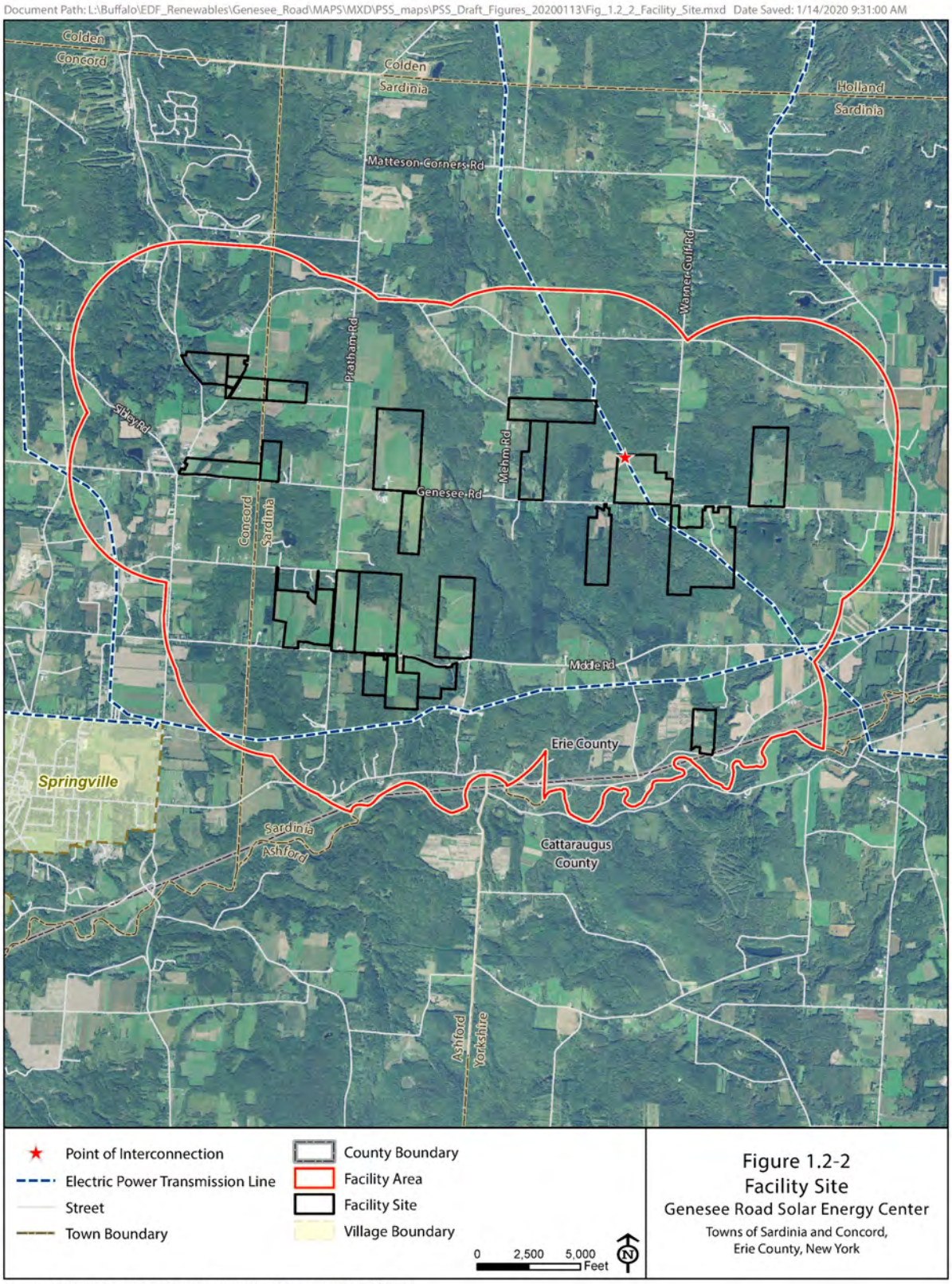

Figure 1.2-2
Facility Site
Genesee Road Solar Energy Center
Towns of Sardinia and Concord,
Erie County, New York

Source: E&E 2019; ESRI 2017; HIFLD 2018; NAIP 2017; NYSDEC 2018; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019.

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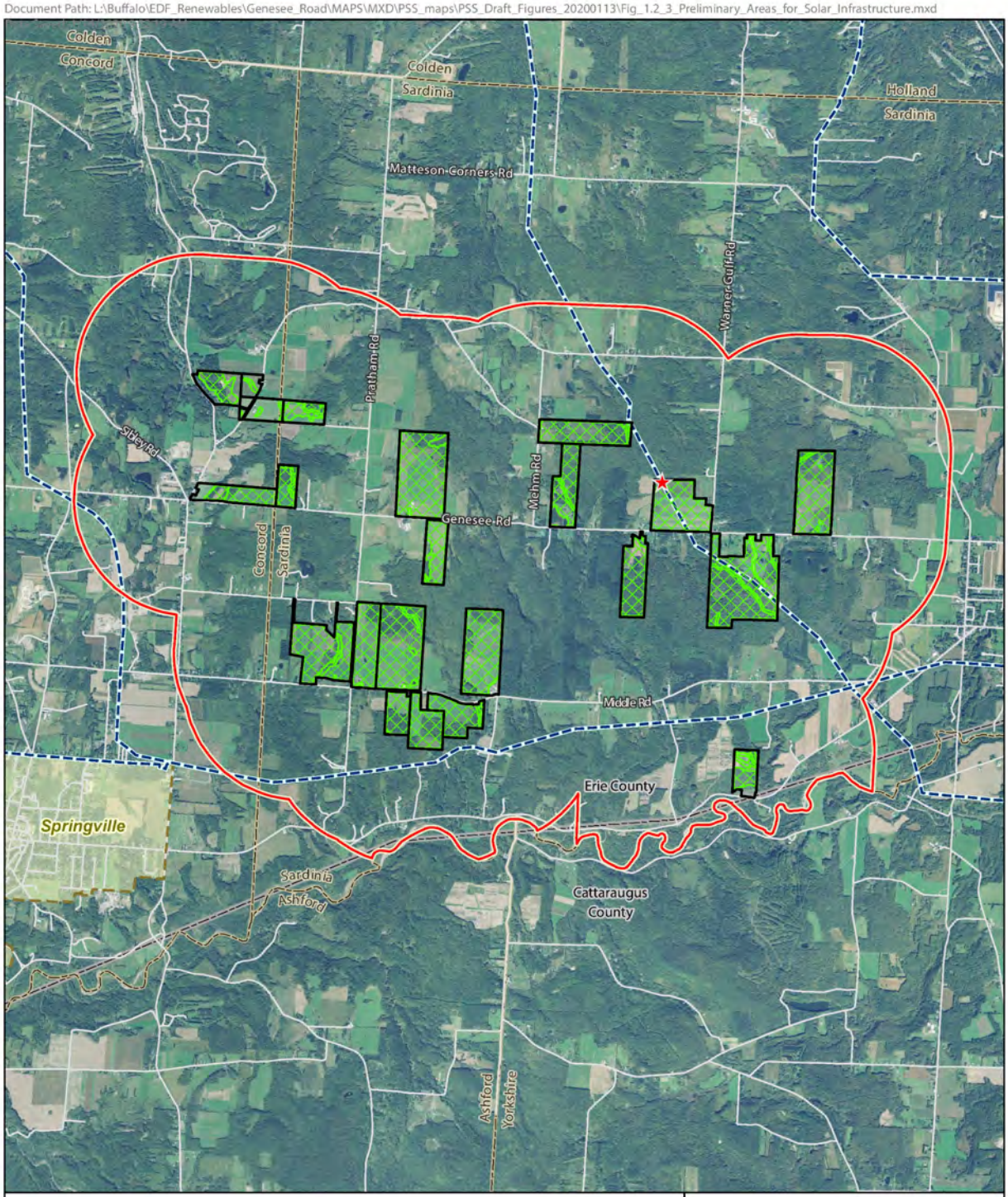


Figure 1.2-3
Preliminary Areas for
Solar Infrastructure
Genesee Road Solar Energy Center
Towns of Sardinia and Concord,
Erie County, New York

Source: E&E 2019; ESRI 2017; HIFLD 2018; NAIP 2017; NYSDEC 2018; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019.

1.3 FACILITY BENEFITS

At the proposed nameplate capacity of 350 MW, the Genesee Road Solar Energy Center will significantly contribute to the State of New York's clean energy goals. The State of New York has adopted aggressive policies to combat climate change and modernize its electrical system to improve efficiency, affordability, resiliency, and sustainability. The New York State Climate Leadership and Community Protection Act (CLCPA) was passed in 2019 (State of New York 2019). The CLCPA sets ambitious and comprehensive climate and clean energy legislation encompassing climate change impact adaptation, reductions in greenhouse gas (GHG) emissions and investments in technology, as well as job creation and energy worker transitions and the protection of disadvantaged communities.

> CLCPA goals include reaching a net 100% carbon-free electricity by 2040 and achieving 70% of New York's electricity generated from renewable sources by 2030, specifically calling for 6,000 MW installed solar by 2025 and 3,000 MW of energy storage capacity by 2030. The legislation establishes energy system resiliency goals and ensures fair transitions for workers and all New York communities, while also focusing on transportation, agriculture, energy-intensive and trade-exposed industries, land use, and energy efficiency.

While the more aggressive and wide-reaching CLCPA requirements will be incorporated into policies and regulations, the State of New York will continue to implement current energy policies. The 2015 State Energy Plan (SEP) was issued on June 25, 2015, by the New York State Energy Planning Board (NYSEP 2015). The plan provides specific goals that are maintained as milestones toward the new CLCPA goals, such as achieving a 40% reduction in GHG emissions (compared to 1990) by 2030 (NYSEP 2015). The goals contained in the SEP and CLCPA are ambitious and require grid-scale solar projects to achieve targeted levels of new renewable generation.

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

Further, the Genesee Road Solar Energy Center will provide socioeconomic benefits in the area through employment opportunities, specifically by generating temporary construction employment, a significant amount of which will likely be drawn from Erie County and the regional labor market. Local construction employment will primarily benefit those in the construction trades,

including equipment operators, truck drivers, laborers, and electricians. The peak employment for construction phase is estimated to be around 300 workers. In addition, operation of the Facility will generate full-time employment for a site manager and solar technicians and part-time contracting service opportunities for electricians, laborers, fencing contractors, and landscaping maintenance crews. An estimated five on-site, full-time job equivalents will be generated from operation of the Facility, with additional occasional work for landscaping, periodic maintenance, and other incidental work. A payment in lieu of taxes (PILOT) and/or community benefit agreement will be proposed to provide annual revenues to Erie County, the Towns of Sardinia and Concord, and the Springville-Griffith Institute Central, Pioneer Central, and Holland Central school districts. Landowners hosting Facility infrastructure will also receive annual payments, and additional local revenues are possible through the purchase of construction materials, supplies, services, and goods throughout the life of the Facility.

Responsibly sited solar facilities can provide long-term preservation of agricultural land. The Facility is not a permanent structure and will be decommissioned at the end of its operational life, at which time the land can be returned to its former use. Solar projects generally have an operational life of up to 40 years. As required under Article 10, EDF Renewables will provide a decommissioning plan in its Application, as well as a proposed financial security mechanism to ensure adequate funding is available for decommissioning. In accordance with Article 10 Regulations, the plan will ensure proper removal of the Facility and restoration of the land at the end of the Project's operational life.

The proposed Genesee Road Solar Energy Center should also improve fuel diversity within the State of New York by increasing the amount of electricity produced by non-fuel-dependent sources. Consequently, there will be no adverse impacts or constraints on fuel delivery. Rather, by generating electricity without the need for fuel delivery and offsetting the need for facilities that rely on fuel for electrical generation, it is expected that the Facility will contribute to reducing the demand for fuel, thereby alleviating fuel delivery constraints.

1.4 IMPACT AVOIDANCE MEASURES

EDF Renewables' criteria for siting projects aims to minimize impacts on the environment and surrounding community, while also minimizing the costs of construction and operation. A primary factor in the siting of a solar and energy storage facility is proximity to transmission infrastructure with sufficient interconnection capacity, which avoids the development and impacts associated with new transmission infrastructure. EDF Renewables also considers the availability of relatively flat, open, and appropriately oriented land to site the panels; willing land lease participants; and preliminary environmental screenings to avoid potential impacts. It is anticipated that much of the land within the Facility Site that will host the equipment will require relatively little work to prepare it for construction. Coordination between EDF Renewables and federal, state, county, and

local entities will ensure that impacts are avoided to the extent practicable and that minimization and mitigation programs are in place to effectively monitor and mitigate potential impacts.

In addition, the final Facility layout will follow siting criteria, guidelines, and design standards intended to avoid or minimize adverse environmental impacts. Previous solar energy development experience has given EDF Renewables a strong understanding of how to effectively avoid, minimize, and mitigate impacts that can result from the development of a solar generating facility. With careful planning and design, many of the potential impacts associated with solar facilities can be avoided or minimized to be compatible with the surrounding areas. As the studies characterizing these resources are completed, and the results of such studies are used to support the preliminary layout and design of the Facility, the specific avoidance, minimization, and mitigation measures will be identified. Section 2 further describes the anticipated and typical measures to avoid and minimize impacts, as based on experience and regulatory requirements.

1.5 POTENTIAL IMPACTS

Relative to conventional energy generation methods of a similar scale of electricity production, solar facilities result in minimal impacts to the environment. Impacts from the construction and operation of solar energy generation are largely the result of requiring a large area for the collection and distribution of energy. EDF Renewables sited the Facility in a rural agricultural region in order to minimize the need for land clearing. Siting of Facility components will minimize impacts to vegetation and wildlife habitat by utilizing previously disturbed areas and avoiding forest and shrubland communities to the extent practicable. Land within the Facility Site may be used for dual purposes during operation, such as sheep grazing or beekeeping, if deemed feasible. Following decommissioning of the Facility, the land within the Facility Site will remain available to revert to agricultural use.

PV panels have a low profile (i.e., approximately 9 feet in height), which limits their visibility and potential visual effect in terms of the distance from which the panels will be visible. However, the large areas required to achieve the necessary scale of electrical production for utility-scale solar projects can result in visual impacts for viewers located in areas immediately adjacent to the panels.

Similarly, solar projects produce minimal noise impacts to neighboring residences, wildlife, or other sensitive receptors. Transformer noise is typically described as a hum near the step-up transformer unit; however, the prominence of this noise diminishes quickly with distance. In addition, noise will be generated during project construction and maintenance, primarily from vehicles and equipment operating along access routes and at work areas. However, these are temporary activities that will not typically generate sounds louder than routine noise sources such as farm equipment and vehicles passing on the road.

Additional information regarding potential environmental impacts that could result from construction or operation of the Facility, as well as practices to avoid and minimize impacts, is included in Section 2.0.

2.0 PRELIMINARY ENVIRONMENTAL ANALYSIS AND PROPOSED CONTENT OF THE ARTICLE 10 APPLICATION

2.1 GENERAL REQUIREMENTS

EDF Renewables possesses the technical expertise, financial resources, and commitment to deliver this new, proficient solar facility in accordance with New York's Clean Energy Standard (CES) (NYSERDA 2016) and the new CLCPA. With United States headquarters in San Diego, California, and offices in more than 20 countries, EDF Renewables is a global market leader in green electricity production, as well as a leading Independent Power Producer and service provider. With 16 gigawatts (GW) of renewable energy projects developed, including more than 2,700 MW of commercial and utility-scale solar installations placed in service or in construction, EDF Renewables ranks among the most reputable full-service renewable energy companies in the United States. Throughout our significant experience, we have built long-standing relationships with key stakeholders, including utilities, corporate buyers, regulatory agencies, and the communities in which we operate, enabling us to expertly navigate the development process, ensuring successful completion and operation of our projects.

The Project website can be found at: www.geneseeroadsolar.com.

The Project's public contact is Jack Honor, Development Manager. The Principal Officers for Genesee Road Solar Energy Center are:

- Tristan Grimbert, Chief Executive Officer and President
- Luis Silva, Chief Financial Officer and Treasurer
- Ryan Pfaff, Executive Vice President, Grid-Scale Power
- Joshua Pearson, Assistant Secretary

Comments or questions about the Facility should be directed to Jack Honor, Development Manager:

Phone: 1-833-333-7369
Email: NewYork.Solar@edf-re.com;

Genesee Road Solar Energy Center will be owned by EDF Renewables Development, Inc., a wholly owned subsidiary of EDF Renewables, Inc.

2.2 OVERVIEW AND PUBLIC INVOLVEMENT SUMMARY

2.2.1 Discussion

EDF Renewables' PIP Plan addresses requirements of 16 NYCRR § 1000.4(c) to provide information regarding the Facility to stakeholders, solicit information from those stakeholders during public outreach events, and generally foster participation in all phases of the Article 10 review process. The draft PIP Plan was submitted to the Siting Board on September 23, 2019; comments on the PIP Plan were received from the DPS on October 23, 2019. The draft PIP Plan was updated, finalized, and filed on November 22, 2019.

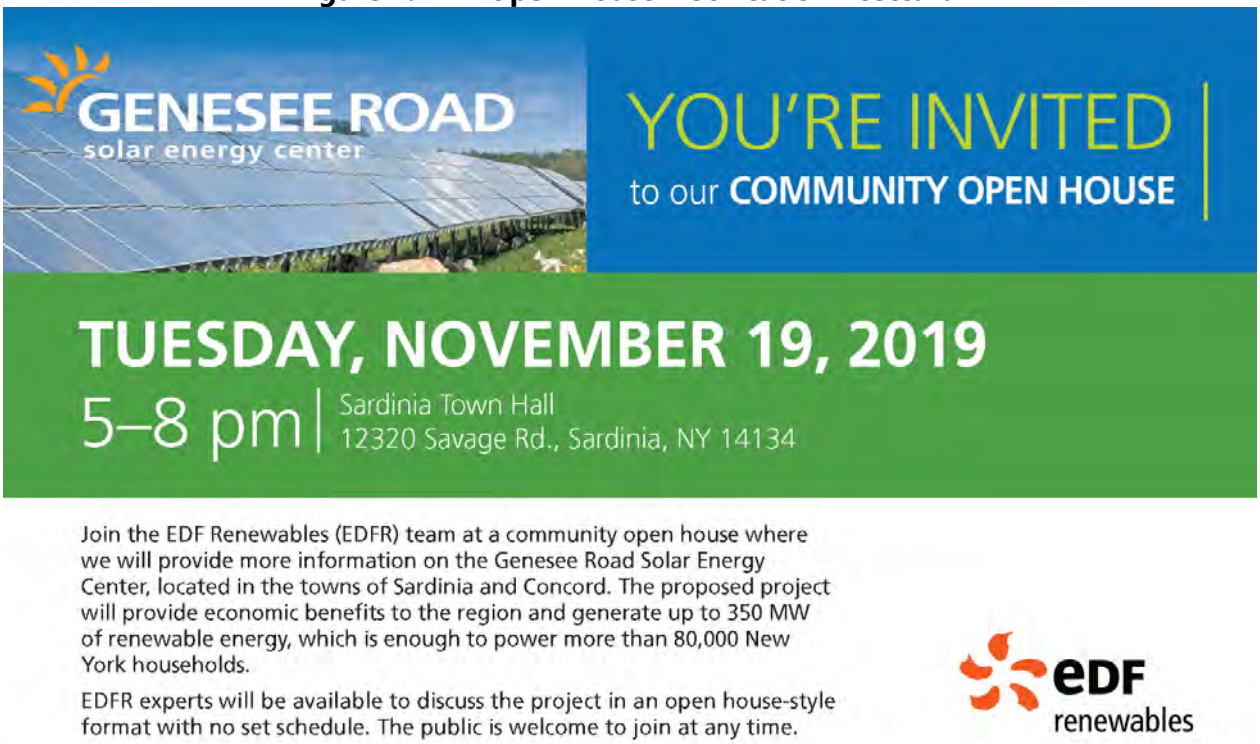
A primary goal of the PIP is to identify stakeholders and other interested parties. Appendix B provides the Master Stakeholder List, which is continuously updated as additional individuals and organizations express Project interest.

EDF Renewables' PIP Plan outlined adherence to the Article 10 process by stating EDF would host two public meetings in advance of PSS filing—enabling stakeholders and the public to learn about and provide input into the Project in advance of this stage. However, underscoring a commitment to robust public engagement, EDF Renewables held an initial open house to begin a dialogue with local communities in advance of the Article 10 process. This open house occurred on August 7, 2019, at East Concord Fire Department. To ensure that the community was notified about the meeting, an invitation was sent to everyone in the Facility Area, along with those up to 1,000 feet from the Facility Area boundary. The invitation was mailed to 570 unique addresses on July 24, 2019 and 116 additional addresses on July 31, 2019. In addition, a half-page ad in the *Springville Journal* advertising the meeting to the public ran two weeks prior to the event. The open house was attended by approximately 50 stakeholders and 10 members of the Genesee Road Solar Project Team. Participants viewed 40 posters with information on topics of interest and were invited to provide written and/or oral comments. Many provided contact information for future outreach efforts. The Applicant actively sought to collect names and email addresses from individuals interested in hearing more information about the Project to facilitate future outreach.

> EDF Renewables is engaging with municipalities, agencies, and stakeholders throughout the Article 10 process to discuss their respective interests, and listen to concerns and recommendations.

EDF Renewables' second open house was the first required within the PIP and the Article 10 timeline and occurred on November 19, 2019, at the Sardinia Town Hall in Sardinia, New York (See Figure 2.2-1, Open House Notification Postcard; examples of additional notifications are provided in Appendix C).

Figure 2.2-1 Open House Notification Postcard



EDF Renewables' designed an event notification strategy that would result in greater community and stakeholder awareness of the November open house to ensure those interested in learning more had the opportunity to do so and to sign up for receiving future mailings if interested. Advertisement for future open houses would be narrowed to reflect notification standards included within the PIP and to target those with express continued interest in the Project. For each open house, EDF Renewables also endeavors to engage local media, providing additional opportunities for potentially interested individuals to learn about the Project.

Notice of the November 19 open house meeting was mailed on November 7 to 2,874 entities, including adjacent landowners (landowners with property within 500 feet of the Facility), landowners within 2,500 feet of the Facility, stakeholders, and residences located within 2 miles of the Facility Area. Advertisements were also published in the *Springville/Ellicottville Pennysaver & News*—a free publication—and the *Springville Journal* on November 2, 2019. The session was attended by approximately 100 individuals and 14 members of the Genesee Road Solar Project Team. Participants were able to view updated posters with information on the proposed Project, view preliminary participating project parcel maps, and learn about planned studies that will be undertaken. The presentation resources were filed on the DMM on November 26, 2019. Participants were also invited to make written or oral comments, file comments on the Siting Board's online DMM, and provide their contact information for future outreach efforts. At the meeting, the Sardinia Town Clerk requested paper copies of documents and meeting boards presented at

the open house for review by the Town Council. EDF Renewables mailed these materials to both the Sardinia and Concord Town Clerks the following week.

On February 3, 2020, EDF Renewables hosted its third open house meeting at the East Concord Fire Hall in East Concord, New York from 12:00 to 3:00 p.m. Notice of the public meeting was mailed 14 days prior to the meeting to 1,229 entities, including adjacent landowners (landowners with property within 500 feet of the Facility), stakeholders, and residents located within 2 miles of the Facility Area. Advertisements were also published in the *Springville/Ellicottville Pennysaver & News* and the *Springville Journal* on January 18, 2020. The session was attended by approximately 45 individuals and 13 members of the Genesee Road Solar Project Team. Based on feedback from previous open houses, this session included additional poster boards on topics like public benefit, energy storage, and public safety. It also provided greater detail about the Facility Site.

Following the open houses, EDF Renewables is planning follow-up discussions with stakeholders who attended the event and/or who have submitted questions or concerns regarding the proposed Facility. These meetings and discussions will be documented in the Meeting Log (Appendix A) and/or PIP Comment Tracker and filed on the DMM and included in Exhibit 2 of the Application.

In addition to the open house meetings, stakeholders may access and/or request project information through the website (www.geneseeroadsolar.com), by calling a toll-free number (1-833-333-7369), or by emailing NewYork.Solar@edf-re.com). Electronic copies of significant documents (i.e., PIP Plan, PSS, Stipulations, Article 10 Application) are, or will be, posted on the website and placed at local repositories. All relevant documents and filings are on the Facility-specific DMM website maintained by the Siting Board:

- http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=19-F-0602&submit=Search

EDF Renewables conducted a mailing of all stakeholders prior to the submission of this PSS to provide an update on the Facility, invite comments, and remind the stakeholders of the comment period timeframe. The full PSS legal notice was published in local newspapers and mailed to the Master Stakeholder List, including host and adjacent landowners. This notice was also emailed to those who provided an email address at the open houses, members of the Siting Board's Party List, and those identified on the Master Stakeholder List for whom an email address was available. Proof of those mailings will be submitted separately to the Secretary.

KEEPING THE PUBLIC AND AGENCIES ENGAGED

EDF Renewables maintains a log of written comments and strives to capture general themes of verbal comments received at open house meetings, town board meetings, and other activities designed to build transparency and invite participation from interested parties. Comments thus far reflect interest in land use change from agricultural to industrial use, understanding of the Article 10 process and project timeline, site restoration after decommissioning, and the project layout and how that is informed by studies and surveys. EDF Renewables will continue to gather comments for consideration in the project design.

EDF Renewables will continue stakeholder outreach throughout the Article 10 process. These consultations will be tracked and included in Exhibit 2 of the Article 10 Application.

As will be described in the Article 10 Application, EDF Renewables will develop and implement a Facility-specific Complaint Resolution Plan during construction, operation, and decommissioning of the Facility to address potential community complaints and concerns, as well as outreach to provide important information, following Certification of the Facility. A draft of this plan will be provided in the Application, and will identify procedures to be used to track, investigate, and address complaints, provide reports to DPS Staff, and provide notifications and information to stakeholders and members of the public. Several sections of this PSS refer to addressing resource- or impact-specific complaints, such as potential noise or construction complaints; all such issues will be addressed comprehensively in the Facility's Complaint Resolution Plan, and sections of the Plan will be referenced in the relevant Exhibit.

2.2.2 Proposed Content of the Application

Consistent with the requirements of 1001.2 of the Article 10 Regulations, Exhibit 2 of the Application will contain the following information:

(a) Brief Description of the Proposed Facility

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

- **Facility**: Proposed components will include:
  - Photovoltaic solar panels and their rack/support systems;

- Direct current and communications cables connecting the panels to inverters;
- Inverters, with their support platforms, control electronics, and step-up transformers;
- Energy storage system;
- Buried and/or overhead alternating current medium-voltage collector circuits;
- Fencing and gates around each array of panels;
- Access roads;
- Temporary laydown/construction support areas;
- Project substation, with associated equipment and fenced areas;
- A short length of transmission voltage line connecting the substation to a switchyard containing switching gear, the point of interconnection switchyard, associated equipment, and fenced area; a short length of 345-kilovolt line, with possible support poles to connect to the existing New York State Electric and Gas Corporation 345-kilovolt transmission line; and
- Potentially an operations and maintenance building with fenced and parking/storage areas as well as any other improvements subject to the Siting Board's jurisdiction.

The following terms may also be used in reference to the Facility:

- **Project**: Collectively refers to construction and operation of the Facility, as well as proposed environmental and cultural preservation areas, and other efforts proposed by the Applicant.
- **Facility Site**: The parcels proposed to host the Facility components. This includes parcels currently under, or being pursued, for lease or easement (or other real property interests) by the Applicant for the location of all Facility components. A preliminary Facility Site is identified in this Scoping Statement, and the final Facility Site will be identified in the Application.

(b) Brief Summary of the Application Contents

Exhibit 2(b) will include a detailed table that provides a brief summary of all applicable exhibits required under 16 New York Codes, Rules and Regulations Part 1001. This will follow the organization of the Application's Table of Contents and will satisfy the requirements of Part 1001.2(b).

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

Exhibit 2(c) will contain a brief description of the Public Involvement Program conducted by the Applicant prior to submission of the Application and an identification of significant issues raised by the public and affected agencies during such program and the response of the Applicant to those issues including a summary of changes made to the proposal (if any) as a result of the public involvement program. Specific components of the Public Involvement Program conducted as of the date of Application filing will be described, including:

- Opportunities for public involvement;
- Development and use of stakeholder list, including host and adjacent landowners;
- Consultation with affected agencies and stakeholders;
- Reference to existing website, email and toll-free phone number established for the Facility;
- Identification of significant issues raised and how those issues were addressed, including a summary of changes made to the Project;
- Process for response to public comments received through these communication portals;
- Location and use of public document repositories;
- Applicant's efforts relating to language access;
- Identification of any Environmental Justice areas;
- Factsheets on the Article 10 process and intervenor funding and other outreach materials; and
- Use of meeting logs tracking Public Involvement Program activities, significant questions and/or issues raised by the public, and the Applicant's response or follow-up action.

The Public Involvement Program Plan and all other submissions under Article 10 will remain available at the designated repositories and online (website) throughout the application review processes.

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

Exhibit 2(d) will include a summary of post-Application Public Involvement Program activities. The Applicant will continue to engage stakeholders following submission of the Article 10 Application, to be documented as follows:

- In addition to notifications required under 16 New York Codes, Rules and Regulations 1000.6 and 1000.7, the Applicant will mail notice of the Application submittal to a project mailing list comprised of the updated stakeholders list, including host and adjacent landowners, and additional addresses received through public outreach. The notice will include information on the Project generally and the Article 10 Application specifically. A copy of the mailing list and documentation indicating the dates and mailings that were made will be provided to the Secretary.
- In addition to newspaper publication as required under 16 New York Codes, Rules and Regulations 1000.7(a), the Applicant will publish notification about the Project in at least one free local community newspaper circulated in the Project and Study Areas, if available.
- The Applicant agrees to provide a brief description of the Public Involvement Program to be conducted by the Applicant after the submission of the Application, such as hearings, notification of construction activities, and complaint resolution procedures.

(e) Brief Overall Analysis

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

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

In addition, this section will summarize the facts in the Article 10 Application that will provide the Siting Board with the information needed to determine:

- That the Facility is a beneficial addition or substitution for electric generation capacity of the State;
- That the construction and operation of the Facility will serve the public interest;
- That the adverse environmental effects of the construction and operation of the Facility will be minimized or avoided to the maximum extent practicable;

- If the Facility results in or contributes to a significant and adverse disproportionate environmental impact in the community in which the Facility would be located, that the Applicant will avoid, offset, or minimize impacts caused by the Facility upon the local community for the duration of certificate to the maximum extent practicable using verifiable measures; and
- That the Facility is designed to operate in compliance with applicable state and local laws and regulations, or in the alternative that such laws and regulations as applied to the Facility are unreasonably burdensome and therefore not applicable.

Ultimately, this information will provide a basis for the Siting Board to make the required findings on the proposed Facility and support a decision to grant the Certificate in accordance with Public Service Law Section 168.

2.3 LOCATION OF FACILITIES

2.3.1 Discussion

Maps and drawings of the location of the proposed Facility, including all interconnections, and any ancillary features such as roads, which together comprise the proposed Major Electric Generating Facility, will show the relationship of the Facility Area to municipalities (county, city, town and village). The proposed Facility's components will be located in the Towns of Sardinia and Concord, Erie County, New York.

2.3.2 Proposed Content of the Application

Consistent with the requirements of 1001.3 of the Article 10 Regulations, Exhibit 3 will contain the following information:

(a) Topographic Maps

Exhibit 3(a) will include mapping showing the location of the components of the major electric generation and interconnection facilities associated with the proposed Facility including the photovoltaic panels, access roads, electrical collection system, collection substation, potential operations and maintenance building, and staging/laydown area. These components, collectively referred to as the Facility, will be mapped on the U.S. Geological Survey "Topo" topographic tile cache base map service displayed at a scale of 1:24,000 or greater. This map service combines the most current data (Boundaries, Elevation, Geographic Names, Hydrography, Land Cover, Structures, Transportation, and other themes) that make up The National Map (USGS 2017). The National Map is a collaborative effort between the U.S. Geological Survey and other federal, state, and local partners to improve and deliver topographic information for the United States (USGS 2018). The U.S. Geological Survey "Topo" map service is designed

to provide a seamless view of the data in a geographic information system accessible format and depicts information consistent with the U.S. Geological Survey 7.5-minute (1:24,000) quadrangle topographic maps at large scales (USGS 2017). Shapefiles will also be provided to New York State Department of Public Service and New York State Department of Environmental Conservation Staff.

Note that a table of Preliminary Proposed Map Sizes and Scales, for the Article 10 Application for Printed Maps, is included as Appendix D. The scales listed are based on preliminary analysis and may be adjusted based on actual data.

1. Proposed Major Electric Generating Facility Locations

   The required maps will depict all Facility components that can be clearly depicted at the required scale. More detail regarding specific Facility components (e.g., fencing and similar details) will be provided as part of the site plan drawings, as described in Section 2.11. With respect to the substation, a separate map will be prepared (at an appropriate scale) to depict the collection substation, point of interconnection, and associated voltage. With respect to alternatives, the mapping will depict those alternatives as defined in Exhibit 9 of the Application. With respect to the potential operations and maintenance building, any preliminary locations under consideration will be identified in the Application; however, this location may change post-Certification. Although unlikely, to the extent any information is known at the time of the submission of the Article 10 Application regarding potential locations of permanent mitigation/offset sites for wetlands or historic resources, such locations will also be mapped.

2. Interconnection Location

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

3. Location of Ancillary Features

   Any off-site ancillary features that could be required for the Facility will be depicted on mapping/figures in the Article 10 Application.

4. Location of Article VII Transmission Lines Not Subject to Article 10

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

5. Study Area

   The Facility will be subject to a number of studies in support of the Application. The various studies undertaken in support of the Application will apply appropriate, resource-specific

study areas, which will be described in this section of the Application along with a reference to the exhibit in which more information is provided.

(b) Municipal Boundary Maps

Exhibit 3(b) will contain mapping/figures depicting the location of the proposed Facility with respect to municipal boundaries, taxing jurisdictions, designated neighborhoods, or community districts as applicable and to a scale sufficient to determine and demonstrate relation of facilities to those geographic and political features.

(c) Description of Proposed Facility Locations

Exhibit 3(c) will contain a narrative description of the locational relationship of the Facility municipal boundaries, taxing jurisdictions, designated neighborhoods, or community districts as applicable.

(d) Facility Shapefiles

The Applicant will provide Facility shapefiles directly to Department of Public Service staff that show the proposed photovoltaic array locations, access driveways, inverter, energy storage and transformer equipment pad locations, medium-voltage collection lines, collection substation, point of interconnection switchyard, potential operations and maintenance building (as applicable), and construction staging areas.

2.4 LAND USE

2.4.1 Environmental Setting

Land use refers to the activities on and uses of physical property. This discussion focuses on the land cover and uses within the Study Area. The land use Study Area encompasses a 2-mile radius around the Facility Site. The Facility Site are those parcels currently under, or being pursued, for purchase, lease, or other real property interests by the Applicant for the location of all Facility components. The Facility Site is approximately 2,500 acres of land, with approximately 2,200 acres currently leased. The Facility Area is the area of land within a 1-mile buffer around the Facility Site, within which all Facility components will ultimately be located. The Facility Area is in Erie County, New York, and is primarily situated in the Town of Sardinia with a smaller portion of the Facility Area in the Town of Concord.

Figure 2.4-1 provides land cover classifications using the USGS National Landcover Database (NLCD) (2016). NLCD is a nationwide dataset that maps landcover at a 30-meter resolution with a classification system that covers 16 distinct land cover categories. These categories provide insight on land characteristics and their potential land use. Three farmland classes are recognized in New York State based on SSURGO data: (1) Prime Farmland, which includes land with soils meeting specific criteria in respect to a number of properties such as temperature, moisture, erodibility,

pH, water table, permeability, and rock fragment content; (2) Prime Farmland if Drained, which meets all the criteria required of Prime Farmland with the exception of seasonal high water table depth and is suitable for drainage; and (3) Farmland of Statewide Importance, which includes soils that do not meet all the criteria for Prime Farmland or Prime Farmland if Drained but are mineral soils of importance. Areas that do not fall into these categories are referred to as Not Prime Farmland. Figure 2.4 2 shows prime farmland in the Study Area.

The Study Area comprises approximately 36,879 acres of land. The primary land cover within the Study Area is natural vegetation, hay or pasture/grazing land, and cultivated cropland. Approximately 14% is under cultivation, 19% is hay or pasture/grazing land, and 5% is developed lands. Table 2.4-1 further details the land cover classifications within the Study Area.

Table 2.4-1 Land Cover Classifications within the Study Area

Land Cover Type	Study Area	
	Number of Acres	Percent of Total Acreage
Open Water	188.51	0.51%
Developed, Open Space	1,459.35	3.96%
Developed, Low Intensity	184.80	0.50%
Developed, Medium Intensity	21.53	0.06%
Developed, High Intensity	2.39	0.01%
Barren Land	49.34	0.13%
Deciduous Forest	12,665.44	34.34%
Evergreen Forest	2,746.01	7.45%
Mixed Forest	5,403.66	14.65%
Shrub/Scrub	133.45	0.36%
Herbaceous	143.46	0.39%
Hay/Pasture	7,047.20	19.11%
Cultivated Crops	5,233.63	14.19%
Woody Wetlands	1,342.98	3.64%
Emergent Herbaceous Wetland	257.18	0.70%
Total	**36,878.93**	**100.00%**

Source: USGS 2019. National Landcover Dataset.

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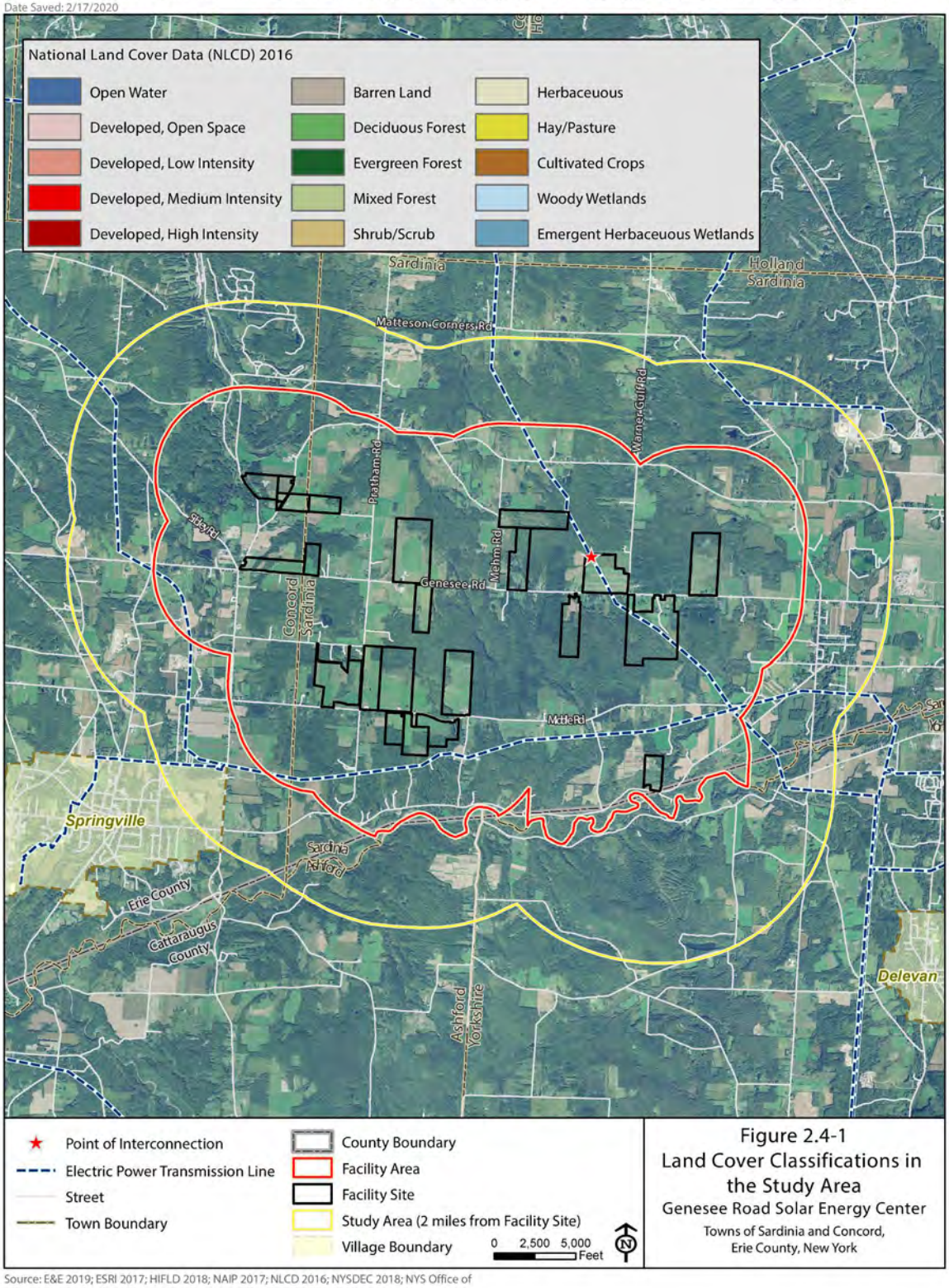

Figure 2.4-1
Land Cover Classifications in the Study Area
Genesee Road Solar Energy Center
Towns of Sardinia and Concord, Erie County, New York

Source: E&E 2019; ESRI 2017; HIFLD 2018; NAIP 2017; NLCD 2016; NYSDEC 2018; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019.

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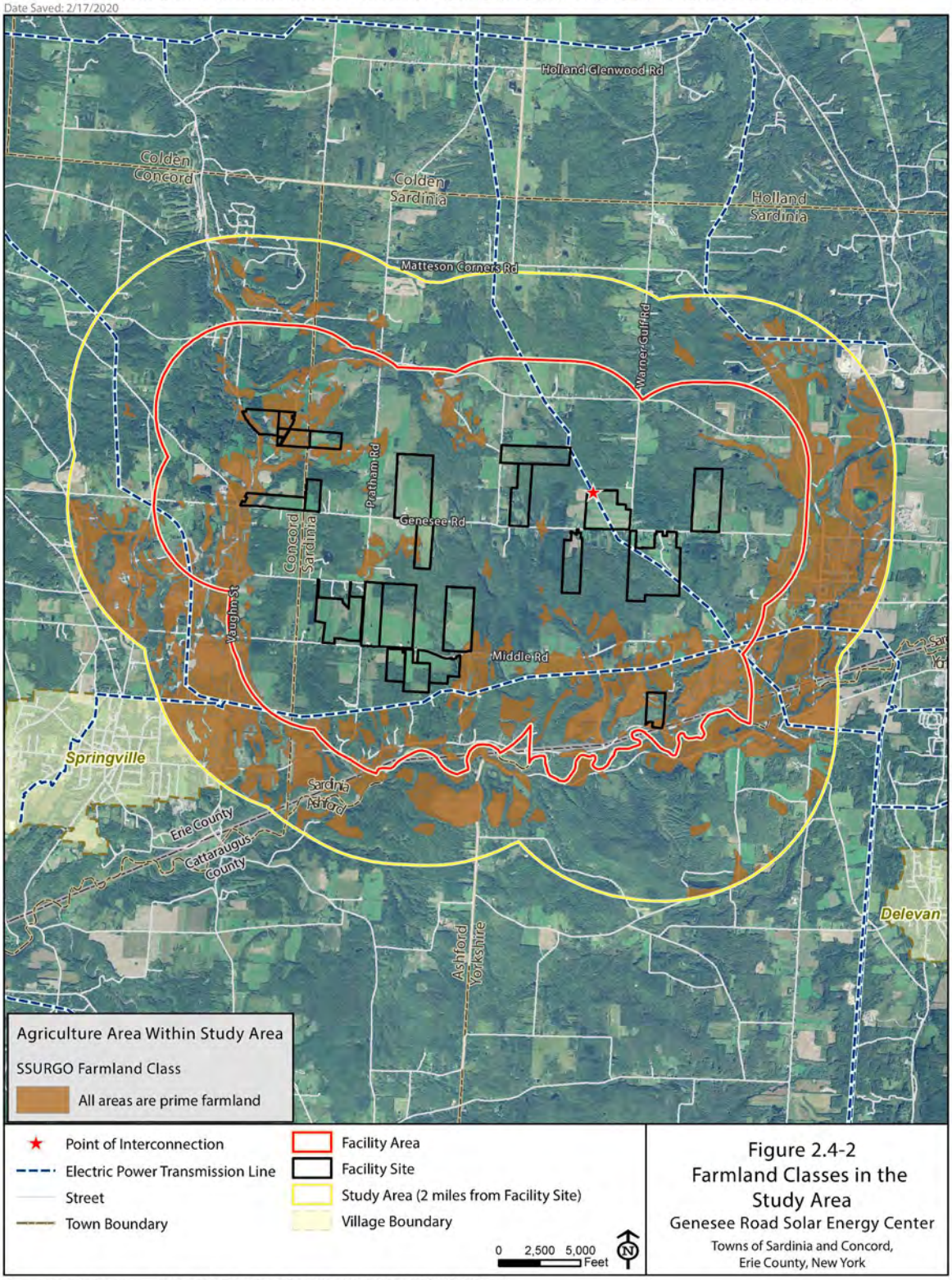


Figure 2.4-2
Farmland Classes in the Study Area
Genesee Road Solar Energy Center
Towns of Sardinia and Concord, Erie County, New York

Source: E&E 2019; Erie County 2019; ESRI 2017; HIFLD 2018; NAIP 2017; NYSDEC 2018; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019; USDA 2018

In 2012, Erie County developed the Agricultural and Farmland Protection Plan, a collaborative effort of the Erie County Department of Environment and Planning and the Erie County Agricultural and Farmland Protection Board (Erie County Department of Environment and Planning 2012). The Plan addresses the challenges and opportunities facing agricultural lands in the County and outlines two primary strategies for implementation:

- Protect farmland and agricultural production and increase investment in agricultural economic development; and
- Educate on the benefits that agriculture provides the County and support policy and legislation that improves farm viability.

2.4.2 Potential Impacts and Mitigation

Responsibly sited solar facilities can provide long-term preservation of agricultural land. The Facility is not a permanent structure and will be decommissioned at the end of its operational life, at which time the land can be returned to its former use. Solar projects generally have an operational life of up to 40 years.

The types of land use impacts that may occur as a result of development activities include a change in the use of land associated with clearing, staging areas, access roads, and structure sites. The construction and operation of the Facility will minimize land clearing. The PV panels to be utilized for the Facility will require minimal excavation and will not require concrete foundations. In some cases, temporary access roads and construction activities may obstruct access to areas in the Facility Site, and vehicle traffic may increase temporarily in new areas due to new access roads and construction activities. Clearing and crossing with construction vehicles may cause surface disturbance that would temporarily remove productive cropland within the right-of-way (ROW). General operational activities would include maintenance of the access roads and project components, vegetation maintenance, and the inspection or repair of any necessary permanent erosion control structures, but these activities are not anticipated to impact land use resources. EDF Renewables will implement best practices for construction, operation, decommissioning, and site restoration to avoid and minimize land use impacts and instead provide long-term preservation of agricultural land. EDF Renewables also will employ, to the extent practicable, the guidelines set forth in the New York State Department of Agriculture and Markets (NYSDAM) Guidelines for Solar Energy Projects (2019).

The following are among the best practices for construction and site restoration that EDF Renewables would implement to avoid and minimize adverse land use impacts:

- Locate facility components away from residential, scenic, recreational, and historic areas to the maximum extent practicable;

- Use existing roads for transportation of materials and equipment to and from staging and storage areas where practicable;
- Locate new access roads, work areas, and facilities away from cultural resources, wherever feasible; and
- Consult with the County land use planners to identify additional impact avoidance measures at specific locations.

Following construction, disturbed areas will be restored with topsoil, if necessary, and a cover of native grasses and/or pollinator-friendly plant species will be established underneath and around the solar panels. The Facility Site could accommodate some form of pollinators and/or grazing during the life of the Project. After decommissioning, the Facility Site would be returned to agricultural use or another use at the landowner's direction.

2.4.3 Regulatory Framework

A preliminary list of regulations and plans to be reviewed with respect to the proposed Project includes the following:

- New York State Legislative Commission on Rural Resources, 2018
- The 2016 New York Open Space Plan (OSP)
- The New York State Historic Preservation Plan, 2015-2020
- The Statewide Comprehensive Outdoor Recreation Plan, 2014-2019
- The New York State Office of Parks, Recreation and Historic Preservation (NY-SOPRHP) Sustainability Plan, 2009
- 480-a Forest Management Programs
- NYSDAM Guidelines for Solar Energy Projects, 2019
- Erie County Agricultural District Program (Southeast Agricultural District #15)
- Erie County Agricultural and Farmland Protection Plan, 2012
- Erie County Framework for Regional Growth, 2006
- Erie County Park System Master Plan, 2003
- Erie County Zoning Ordinance
- Town of Concord Comprehensive Plan, 2018
- Town of Concord Zoning Ordinance, 2015

- Town of Concord Zoning Amendment related to Solar Energy Systems, 2019
- Town of Sardinia Comprehensive Plan, 2003
- Town of Sardinia Zoning Ordinance, 2012

A more detailed analysis of the specific land use plans will be made as the permitting process proceeds.

2.4.4 Proposed Content of the Application

Consistent with the requirements of 1001.4 of the Article 10 Regulations, Exhibit 4 of the Application will contain the following information:

(a) Map of Existing Land Uses

Exhibit 4(a) will map existing land uses within a 2-mile radius of the Facility Site associated with the properties containing any component of the Facility, and all properties adjoining such properties, together with a description of each property's use. Existing land use will be determined using publicly available data, including the classification codes of the New York Office of Real Property Services, which are generally included with parcel data available for Erie County. For parcels that are classified as "vacant land," the Applicant will provide applicable information on the existing use of these lands based on field observations and consultation with landowners and/or local municipalities.

A separate map of lands enrolled in New York State Agricultural Districts, conservation programs, 480-a Forest Management Programs, or similar long-term conservation agreements within or adjacent to the Facility Site will be included with the Application. If known, the Applicant will discuss the status of conservation enrollments, upcoming renewals or recertifications for any property within the Facility Site, and the implications of Facility construction on these properties.

(b) Transmission Facilities Map

Exhibit 4(b) will include existing overhead and underground transmission facilities for electric, gas, and telecommunications within a 2-mile radius of the Facility, which will be identified and mapped. This information will be based on publicly available data sources and information obtained by the Applicant through consultation with various public (i.e., New York State Department of Public Service) and private (i.e., New York State Electric and Gas Corporation) entities. Additionally, any gas lines or wells within the Facility Site will be identified, and the owners of utilities identified.

(c) Tax Parcel Map

Exhibit 4(c) will include a map of all properties with proposed photovoltaic panels, inverters and medium-voltage transformers, ancillary facilities, collection lines, or related uses, and all properties adjoining those hosting the Facility. Parcels and land use data will be obtained from Erie County and the host Towns of Sardinia and Concord. The map will depict property lines, land use, tax parcel number, owner of record, and any publicly known proposed change in land use.

(d) Zoning District Map

Exhibit 4(d) will include a description of existing and proposed zoning districts within the Study Area, based on data obtained from each municipality and Erie County. The Applicant will review zoning regulations for each municipality, and a summary of the zoning regulations will be presented in the Article 10 Application. This summary will focus on the permitted and prohibited uses within each zoning district where Facility components will be located, as they apply to solar energy generation.

(e) Comprehensive Plan

Exhibit 4(e) will include a review of existing comprehensive plans adopted by municipalities in the Study Area, and will discuss whether the proposed Facility is consistent with these Plans. Note that the status of the relevant comprehensive plans will be included in this discussion in the Application, as well as a website address for the location of the plan if available.

(f) Map of Proposed Land Uses

Exhibit 4(f) will include information gathered by the Applicant about proposed land uses within the 2-mile Study Area through discussions with local planning officials, public input at open houses, the Public Involvement Program implementation/Preliminary Scoping Statement development process, and other sources. The Article 10 Application will present, in acres, the permanent (if any), temporary (i.e., during construction), and reversible impacts to each of the existing and proposed land use classes to be directly affected by the Facility.

(g) Map of Specially Designated Areas

Exhibit 4(g) will include maps showing any designated inland waterways, groundwater management zones, designated agricultural districts, special flood hazard areas, and other specially designated areas potentially occurring within a 2-mile radius of the Facility. Data depicted in these maps will be from publicly available datasets maintained by New York State Department of Environmental Conservation, New York State Geographic Information System, and Federal Emergency Management Agency, among others.

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

Exhibit 4(h) will include maps depicting recreation areas and sensitive land uses known to the Applicant within a 2-mile radius of the Facility. Data depicted in these maps will be from publicly available datasets maintained by state, federal, and private sources (e.g., New York State Department of Transportation, New York State Geographic Information System, New York State Department of Environmental Conservation, New York State Department of Public Service, ESRI, etc.). The Article 10 Application will address the potential for the Facility to have direct and/or indirect impacts on the recreational resources and other sensitive areas identified.

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

Exhibit 4(i) will include an assessment of the compatibility of the proposed Facility with existing and proposed land uses, as well as local and regional land use plans within a 2-mile radius of the Facility Site. This assessment will include a qualitative evaluation of land use impacts on residential areas, schools, civic facilities, recreational facilities, and commercial areas within 2-mile of the Facility Site. This assessment will also include an assessment of the Facility's compatibility with local, State, and County planning documents, including but not limited to:

- New York State Legislative Commission on Rural Resources, 2018
- The 2016 New York Open Space Plan
- The New York State Historic Preservation Plan, 2015-2020
- The Statewide Comprehensive Outdoor Recreation Plan, 2014-2019
- The New York State Office of Parks, Recreation and Historic Preservation Sustainability Plan, 2009
- 480-a Forest Management Programs
- New York State Department of Agriculture and Markets Guidelines for Solar Energy Projects, 2019
- Erie County Agricultural District Program (Southeast Agricultural District #15)
- Erie County Agricultural and Farmland Protection Plan, 2012
- Erie County Framework for Regional Growth, 2006
- Erie County Park System Master Plan, 2003
- Erie County Zoning Ordinance
- Town of Concord Comprehensive Plan, 2018
- Town of Concord Zoning Ordinance, 2015
- Town of Concord Zoning Amendment related to Solar Energy Systems, 2019

- Town of Sardinia Comprehensive Plan, 2003
- Town of Sardinia Zoning Ordinance, 2012

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

Exhibit 4(j) will assess the direct land use impacts of any above-ground collection line with land uses within 300 feet of the interconnect lines. To the extent that a land use impact is identified, such information will be briefly discussed in this section. Exhibit 4(j), and to a greater extent, Exhibit 24, will also assess the visual impacts of any above-ground collection lines in areas determined to have visibility of these Project components.

The maps included in the Application depicting Project components will include the location of overhead interconnections, point of interconnection(s), and associated facilities.

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

Exhibit 4(k) will include a discussion of compatibility of proposed underground interconnections, including existing, potential, and proposed land uses within 300 feet from the centerline of such interconnections or related facilities. The Application will also discuss temporary disturbances associated with construction of these Facility components.

(l) Conformance with the Coastal Zone Management Act

The proposed Facility is not located within a Coastal Zone Management Area. Therefore, Exhibit 4(l) will not be addressed in the Application.

(m) Aerial Photographs

Exhibit 4(m) will include aerial photographs within a 2-mile radius of the Facility. This mapping will likely be prepared using 1-meter resolution natural color orthoimagery from the U.S. Department of Agriculture National Agriculture Imagery Program's most recently available dataset for the area.

(n) Aerial Photograph Overlays

Exhibit 4(n) will include a preliminary map of Facility components overlaid on aerial photographs at a readable scale. These maps will be created using ArcGIS® software. Line symbols will be used to depict the centerlines of proposed access roads and electrical collection lines and polygon symbols will be used to depict panel locations, the substation, any operation and maintenance buildings, and, if necessary, construction laydown areas. Buffers around each Facility component will show the limits of clearing and disturbance required (e.g., 20-foot permanent width and 50-foot temporary width for access roads).

(o) Source of Aerial Photographs

Exhibit 4(o) will include the information required by this section. Mapping will likely be prepared using 1-meter resolution natural color orthoimagery from the U.S. Department of Agriculture National Agriculture Imagery Program most recently available dataset for the area.

(p) Community Character

Exhibit 4(p) will include the information required by this section. Information used to describe community character will be based on on-site observations and information included in Town, County, and/or regional master plans, among other sources. A discussion of current land uses and agricultural productivity within the Facility Site will be included, as well as photographic representation(s) of the Facility Area.

(q) Agricultural Land Use

Exhibit 4(q) will include a discussion of cumulative impacts on agricultural lands, identify known threat of non-agricultural development in agricultural districts that may be potentially impacted by the Facility, and identify potential impacts to local agricultural support services and/or businesses.

If sheep grazing/farming is determined to be feasible for the Project, the Applicant will provide a Prescribed Grazing Plan, including animal stocking rates, fencing and watering systems, and related information in the Application. Additionally, beekeeping operations will be further defined in the Application.

2.5 ELECTRIC SYSTEM EFFECTS

2.5.1 Discussion

The Facility will connect to the existing NYSEG's Southwest to Stolle Road 345-kV transmission line that traverses the Facility Area via a new POI switchyard and collection substation where the electrical output voltage will be increased from approximately 34.5 kV. In general, all new connections to the electric transmission system are strictly controlled by the NYISO and other organizations charged with maintaining the reliability of the New York State electric transmission system. EDF Renewables filed an interconnection request with the NYISO for interconnection of 350 MW (AC) to the NYSEG 345-kV transmission system and was assigned queue number Q#858. With NYSEG's support, the NYISO's process to conduct a System Reliability Impact Study (SRIS) and a Facility Study is underway. The NYISO conducts its Facility Study as part of its Class Year process. In this process, projects that have reached certain milestones and are ready to move forward are treated as a single study group. The Applicant is working towards entering into the NYISO 2020 Class Year Facilities Study. When NYISO completes the SRIS, EDF Renewables will file it separately under confidential cover, pursuant to Section 87(2)(d) of the New York State Public Officers Law and the Commission's regulations, as well as 16 NYCRR 6-1.4.

Dependent on the NYISO scope, the SRIS is performed for Summer Peak, Winter Peak, and Light Load system conditions. The study system includes the Central Zone (Zone A) in the NYISO system. The Article 10 Application will describe the impact of the proposed Facility and interconnection on transmission system reliability in the state in more detail.

The Facility components will be designed in accordance with applicable standards, codes, and guidelines. For portions owned by EDF Renewables (e.g., collection system), best industry practices will be used, along with any standards/preferences set by the companies designing the Facility. For the POI switchyard, NYSEG requirements will be followed. Additionally, the Application will include descriptions of procedures and controls for facility inspection, testing, and commissioning. The substation will be inspected, tested, and commissioned in accordance with various American National Standards Institute (ANSI), Institute of Electrical and Electronics Engineers (IEEE), National Fire Protection Association (NFPA), International Emissions Trading Association (IETA), American Society for Testing and Materials (ASTM), etc., requirements, as necessary. EDF Renewables will be responsible for the operation, inspection, and maintenance requirements of all Facility components, except for the POI switchyard. These activities can generally be classified as scheduled inspection/maintenance, unscheduled maintenance/repairs, or electrical system inspection/maintenance.

The Facility will have a written inspection, testing, and commissioning plan that is adhered to during all stages of construction as well as a post-construction inspection and testing phase. When completed, all documentation will be provided to the Siting Board and stored at the Facility Site for easy review/access in the future.

EDF Renewables will prepare a Preliminary Operations and Maintenance Plan (O&M Plan), which will be included in the Application. This plan is intended to be the foundation of the final O&M Plan that will be implemented at the Facility once it becomes operational and will be based on experience and typical O&M requirements for solar power projects. Ultimately, the Facility Operators will be responsible for the O&M Plan's implementation. The objective of the O&M Plan is to optimize the Facility's operational capacity and availability through best in class maintenance guidelines and inspections that are designed to proactively detect any significant safety or maintenance issues. The O&M Plan will also identify vegetation management practices for the proposed POI switchyard (if required) and collection substation.

2.5.2 Proposed Content of the Application

Consistent with the requirements of 1001.5 of the Article 10 Regulations, Exhibit 5 of the Application will contain the following information:

(a) System Reliability Impact Study

Exhibit 5(a) will include a System Reliability Impact Study performed in accordance with the New York Independent System Operator's Open Access Transmission Tariff approved by the Federal Energy Regulatory Commission that shows expected flows on the system under normal, peak, and emergency conditions and effects on stability of the interconnected system, including the necessary technical analyses (Thermal, Voltage, Short Circuit, and Stability) to evaluate the impact of the interconnection. The study will include the new electric interconnection between the Facility and the point of interconnection, as well as any other system upgrades required.

(b) Potential Reliability Impacts

Exhibit 5(b) will include an analysis and/or statement of the impact of the proposed Facility on transmission system reliability in the State of New York, as evaluated in the System Reliability Impact Study.

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

Exhibit 5(c) will include a discussion of the benefits and detriments of the Facility on ancillary services and the electric transmission system as evaluated in the System Reliability Impact Study, including impacts associated with reinforcements and new construction necessary as a result of the Facility.

(d) Reasonable Alternatives to Mitigate Adverse Reliability Impacts

Exhibit 5(d) will include a summary of reasonable alternatives that would mitigate adverse reliability impacts (if such impacts are identified), as evaluated in the System Reliability Impact Study.

(e) Estimated Change in Total Transfer Capacity

Exhibit 5(e) will include an estimate of the increase or decrease in the total transfer capacity across each affected interface based on the analysis in the System Reliability Impact Study. If a forecasted reduction in transfer capability across affected interfaces violates reliability requirements, the Article 10 Application will include an evaluation of reasonable corrective measures that could be employed to mitigate or eliminate said reduction.

(f) Criteria, Plans, and Protocols

Exhibit 5(f) will include a description of criteria, plans, and protocols for generation and ancillary facilities design, construction, commissioning, and operation, including as appropriate to generation technology:

1. Applicable engineering codes, standards, guidelines, and practices
2. Generation facility type certification
3. Procedures and controls for inspection, testing, and commissioning
4. Maintenance and management plans, procedures, and criteria

(g) Heat Balance Diagrams

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

(h) Point of interconnection Switchyard Transfer Information

Since the new point of interconnection switchyard to be built will be transferred to the transmission owner (New York State Electric and Gas Corporation), Exhibit 5(h) will include:

1. A description of point of interconnection switchyard facilities to be transferred and the contemplated future transaction, including a timetable for transfer
2. A description of how the point of interconnection switchyard design will meet the transmission owner's requirements
3. A description of the operational and maintenance responsibilities for the point of interconnection switchyard and how they will meet the transmission owner's standards (only required if there is a significant time period before the transfer of the point of interconnection to New York State Electric and Gas Corporation).

(i) Facility Maintenance and Management Plans

Exhibit 5(i) will include Facility maintenance and management plans, procedures, and criteria addressing any necessary maintenance to the Project components, and specifically addressing the following topics:

1. Electric transmission gathering and interconnect line inspections, maintenance, and repairs, including:
    i) Vegetation clearance requirements
    ii) Vegetation management plans and procedures
    iii) Inspection and maintenance schedules

iv) Notifications and public relations for work in public rights-of-way

v) Minimization of interference with distribution systems

(j) Vegetation Management Practices for Substation and Point of interconnection Switchyard

Exhibit 5(j) will include vegetation management practices for the point of interconnection switchyard (if required) and collection substation, and for danger trees (trees that due to location and condition are a particular threat to fall on and damage electrical equipment) around the substation and point of interconnection switchyard, specifications for clearances, inspection and treatment schedules, and environmental controls to avoid off-site effects.

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

If the Applicant will entertain proposals for sharing above-ground facilities with other utilities (communications, cable, phone, cell phone relays, and similar facilities), Exhibit 5(k) will include the criteria and procedures for review of such proposals.

(l) Availability and Expected Delivery Dates for Major Components

Exhibit 5(l) will include a status report on equipment availability and expected delivery dates for applicable major components including, but not limited to, solar arrays, inverters, transformers, etc. Heat recovery steam generators, towers, and turbines are not applicable to the Project.

(m) Blackstart Capabilities

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

(n) Identification and Demonstration of the Degree of Compliance

Exhibit 5(n) will include the information provided through the System Reliability Impact Study, developed in consultation with New York Independent System Operator and New York State Electric and Gas Corporation.

2.6 WIND POWER FACILITIES

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

2.7 NATURAL GAS POWER FACILITIES

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

2.8 ELECTRIC SYSTEM PRODUCTION MODELING

2.8.1 Discussion

EDF Renewables will perform electrical system production modeling, identify the experts conducting that modeling, and include their resumes in the modeling report for the Article 10 Application. Prior to start of the modeling, EDF Renewables will consult the appropriate agencies to develop an applicable dataset to conduct electrical system modelling. Portions of the data to be provided will include Critical Energy Infrastructure Information, which will be filed under a protective agreement, as required by law.

PVsyst is an industry standard modeling tool produced by the University of Geneva, Switzerland. The software uses solar resource data, PV module choice, inverter selection, array design characteristics, shading models, and several loss assumptions to calculate hourly and monthly generation estimates. An 8,760 hourly generation profile will be developed using PVsyst photovoltaic software for the first production year 2023-2024. Using the PVsyst generation profile, energy production will be forecasted, based on the established dataset and user inputs, utilizing the computer simulation program PROMOD. The gross average energy yield for each month will be determined from the generation profile with each monthly dataset adjusted to the monthly long-term. Monthly energy yield averages will be determined from the observed solar production profile data in each specific month, and long-term adjustments will be made to the monthly data set and included in the Application. Based on the long-term adjusted average energy yield for each month, a gross monthly energy distribution for the year can be determined. Monthly specific loss assumptions for availability and environmental factors will be taken from the gross monthly production distribution to yield the 12 estimated monthly productions in MWh. An annual production output will be determined from the sum of all monthly net energy yields in MWh.

In addition, a Generation Dispatch Forecasting Analysis will be prepared. To conduct the analysis, the NYISO 2023-2024 system will be modeled to the extent that information is available, with and without the proposed Facility, and compared to the generation dispatch of must-run resources with the NYISO service territory between the two scenarios. This comparison will be performed using simulator software heavily utilized for market studies within the NYISO service territory. The first step in the analysis will be to complete a power flow study to identify any critical constraints in the vicinity of the proposed Facility, followed by conducting a generation and transmission nodal market study based on the 8,760 hours-per-year simulation for the 2023-2024 study year, while taking into consideration system constraints including the critical constraints identified in

the power flow calculations. The analysis will simulate the effect of energy schedules from energy resources on must-run resources and re-dispatching to reliably serve the grid and avoid curtailment.

2.8.2 Proposed Content of the Application

Consistent with the requirements of 1001.8 of the Article 10 regulations, Exhibit 8 of the Application will contain the following information:

(a) Computer-based Modeling Tool

Exhibit 8(a) will include analyses, as described below, that will be developed using PROMOD or a similar computer-based modeling tool. The Applicant will conduct the required consultation with the New York State Department of Public Service and New York State Department of Environmental Conservation regarding appropriate inputs, assumptions, and parameters used in the preparation of this Exhibit and related modeling. The Applicant will consult with Mr. John Cary at the Department of Public Service regarding this Exhibit. In addition, the following information will be included in the Application:

1. Estimated Statewide Levels of Greenhouse Gas Emissions

   The estimated statewide levels of carbon dioxide, sulfur dioxide, and nitrogen oxide emissions, both with and without the proposed Facility.

2. Estimated Prices Representative of all New York Independent System Operator Zones

   The estimated minimum, maximum, and average annual spot prices representative of the New York Independent System Operator Zones within the New York Control Area, both with and without the proposed Facility.

3. Estimated Capacity Factor

   An estimated capacity factor for the Facility.

4. Estimated Annual and Monthly Output Capability Factors

   The estimated monthly, on-peak, shoulder, and off-peak megawatt output capability factors for the proposed Facility.

5. Estimated Annual and Monthly Production Output

   The average annual and monthly production output of the proposed Facility in megawatt-hours.

6. Estimated Production Curve Over an Average Year

   An estimated production curve for the Facility over an average year.

7. Estimated Production Duration Curve over an Average Year

   An estimated production duration curve for the Facility over an average year.

8. Effect of the Facility on the Energy Dispatch of Existing Must-run Resources

   The estimated effects of the proposed Facility on the energy dispatch of existing must-run resources (which includes existing wind, hydroelectric, and nuclear facilities, as well as co-generation facilities to the extent they are obligated to output their available energy because of their steam hosts).

(b) Digital Copies of Inputs Used in the Above Simulations

Digital copies of all inputs used in the simulations required in subdivision (a) of this section will be provided.

2.9 ALTERNATIVES

2.9.1 Discussion

Article 10 regulations (16 NYCRR 1001.9) recognize that it is not practicable for a private applicant to simultaneously procure land contracts, perform environmental and engineering due diligence studies, enter and progress through multiple interconnection permit processes, and conduct community outreach for locations which are only being considered for purposes of assessing alternatives. Unlike state or municipal agencies, private developers do not have the power of eminent domain or condemnation. Accordingly, a project of this size is limited in the range of potential sites that might be considered for siting a facility by virtue of the need to form contractual relations with willing landowners. For private applicants, Article 10 limits the scope of the required alternatives analysis to the identification and description of siting alternatives to sites owned by, or under option to, the Applicant or its affiliates. Therefore, the identification and description of reasonable and available siting alternatives to be addressed in the Article 10 Application will be limited to lands owned by or under contract/option to EDF Renewables for the Genesee Road Solar Energy Center. These options are further limited by what the landowner considers to be a reasonable dedication of space and resources to Facility components.

EDF Renewables criteria for siting projects will minimize impacts on the environment and minimize costs of construction and operation. The primary factor directing the siting of a solar and storage facility is proximity to transmission infrastructure with sufficient interconnection capacity. With an onsite interconnection to the New York electrical grid via a new POI, located on the NYSEG Southwest to Stolle Road 345-kV transmission line, impacts to the environment and costs are significantly minimized. The selection of appropriate sites for a solar-powered electric generation facility is constrained by numerous other factors that are essential considerations for a project to operate in a technically and economically viable manner. These important factors include the availability

of relatively flat, open, and appropriately oriented land to site the panels, willing land lease participants, and preliminary environmental screenings that have not indicated any significant environmental or societal barriers.

As noted in Section 1.1, the lands under evaluation for potential solar development are located in the Towns of Sardinia and Concord, Erie County, New York. Not all the land included in the Facility Area will be utilized by the Project. Rather, the Facility Area represents the broader area within which participating parcels will be developed with solar facilities. This provides flexibility during the development phase to minimize and avoid impacts to wetlands, cultural resources, visual resources, wildlife habitat, and other sensitive resources. The Project will ultimately be sited on leased private land within the Facility Area, which consists primarily of cleared land.

2.9.2 Proposed Content of the Application

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

(a) Description of Reasonable Alternative Location Sites

The Applicant does not have and will not seek eminent domain authority. In accordance with the Article 10 regulations, the identification and description of reasonable and available siting alternatives to be addressed in the Application will be limited to lands owned by or under contract/option to the Applicant within the proposed Facility Site.

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

Given the limitations faced by a private Facility Applicant, the Applicant is not providing an evaluation of comparative advantages and disadvantages of alternative locations. As described above, the Siting Board's regulations (16 New York Codes, Rules and Regulations 1001.9) provide that the Applicant need only identify and describe alternative sites owned by, or under option to, the Applicant or its affiliates. However, the general site selection process and relevant information/analyses associated with the Facility will be provided in relation to Exhibit 9(b)(1) through (11).

(c) Description of Reasonable Alternatives to the Proposed Facility at the Proposed Location

Traditional energy generation such as fossil fuels and nuclear energy do not meet New York State's energy generation and sustainability goals. Accordingly, other power generation technologies are not reasonable alternatives and will not be considered in the Application. Rather, 1001.9(c) of the Application will provide information on chosen design and technologies of the Facility, including:

1. The general arrangement and design (detailed information will be presented in Exhibit 3).
2. Photovoltaic panel and energy storage technology.
3. Alternative scale, interconnection configuration, and magnitude of the facilities in the context of interconnection position, and information on the economic benefit available to local communities because of the introduction of a utility-scale facility.
4. The proposed Facility is not a wind power facility, and as such, the requirements of 1001.9(c)(4) do not apply. Notwithstanding this, the Applicant agrees to provide in the Application a discussion of practicable and commercially reasonable alternative arrangements of Facility components within the Facility Site, including alternative layouts for photovoltaic solar panels and their rack/support systems. This discussion will include a comparative assessment of the environmental impacts, including impacts on vegetation, wildlife, and wildlife habitats for alternative layouts. This assessment of alternative layouts will include a discussion of how alternative layouts for the Facility could help to avoid, minimize, or mitigate environmental impacts from the Facility. This assessment of alternatives will also evaluate agricultural impacts, as follows:
    - Alternative Facility technology, scale, layout, and design considerations that could enable a range of degrees of continued agricultural use of the Facility Site;
    - Alternative configurations that minimize the impact of isolated or "orphaned" field corners and edges that become un-farmable due to size and orientation;
    - Alternative fencing designs that would support agricultural uses, such as grazing, while maintaining the more traditional appearance of agricultural fencing rather than industrial-security fencing. This will include consideration of avoiding the use of barbed wire-topped perimeter fencing particularly along public roads, areas of open views, along recreational trails, and near residences; and
    - To the extent that the Facility's location and participating properties allow, consideration of alternative point of interconnection substation locations and explanation of advantages and constraints of alternative sites.

- Timing of the proposed in-service date for the Facility in relation to other planned additions, withdrawals, or other capacity, transmission, or demand reduction changes to the electric system.

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

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

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

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

(f) No Action Alternative

The Applicant agrees to provide the information required by 1001.9(f). "No Action/No Build" alternative refers to not building the Facility.

(g) Energy Supply Source Alternatives

This information is not applicable to the Facility, and therefore will not be included in the Application.

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

Source and demand-reducing alternatives will not be identified in the Article 10 Application.

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

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

2.10 CONSISTENCY WITH ENERGY PLANNING OBJECTIVES

2.10.1 Existing Conditions

New York State adopted aggressive policies to combat climate change and modernize the electric system to improve the efficiency, affordability, resiliency, and sustainability of the electric system. The recently passed CLCPA sets ambitious and comprehensive climate and clean energy goals, encompassing climate change impact adaptation, reductions in GHG emissions, and investments in technology, as well as job creation and energy worker transitions and the protection of disadvantaged communities. The legislation establishes energy system resiliency goals, as well as ensuring fair transitions for workers and all New York communities, while also focusing on transportation, agriculture, energy-intensive and trade-exposed industries, land use, and energy efficiency.

The specific goals set by the CLCPA include reaching a net 100% carbon-free electricity by 2040 and achieving 70% of New York's electricity generated from renewable sources by 2030. The CLCPA specifically calls for 6,000 MW of installed solar by 2025 and 3,000 MW of energy storage capacity by 2030. The law also requires a reduction of GHG emissions 85% below 1990 levels in all sectors of the economy by 2050, with the goal of offsetting the additional 15% to achieve net zero emissions. While the CLCPA goals will establish clean energy solutions such as wind, solar, energy efficiency, and energy storage, it also requires that state agencies invest 35 to 40% of the investments in the clean energy programs to benefit disadvantaged communities, create tens of

thousands of new jobs, improve public health and quality of life, and provide all New Yorkers with more robust clean energy choices (New York State Governor's Press Office 2019).

As a result, New York State's energy planning is undergoing a dramatic transition facilitated by the SEP, the CLCPA, and NYSERDA competitive solicitations for renewable projects under the CES. While small-scale and community solar installations will play an important role in advancing the State's energy policies and meeting the renewable energy goals, the State has also emphasized that small-scale facilities alone will not be enough. One of the core goals of the SEP, the Reforming the Energy Vision (REV) initiative, and the CLCPA is to spur innovation and creative problem-solving in New York, allowing market participants to develop new strategies and solutions to the many challenges facing the State today. Large scale solar projects will contribute to meeting the CLCPA's goal of 6,000 MW of solar capacity by 2025.

2.10.2 Potential Impacts and Mitigation

The goals set forth in the SEP and the CLCPA are ambitious, and utility-scale solar projects, such as the Genesee Road Solar Energy Center, will help achieve targeted levels of new renewable generation.

The proposed Genesee Road Solar Energy Center has the potential to benefit the State's energy planning objectives as it relates to energy policy, system reliability, fuel diversity, regional requirements for capacity, electric transmission constraints, and fuel delivery constraints. The development of large-scale renewable energy is consistent with the SEP and other important State policies and initiatives, including the goals of the CLCPA. The SEP target of achieving 40% GHG reductions by 2030 is also considered an interim goal of the CLCPA. The CLCPA includes broader societal goals such as sustainability, cooperative use and management of land and resources, benefits to disadvantaged communities and fair transition for workers in conventional energy industries, reduction in harmful air pollution, and scientific research and advancement. The proposed Facility will have positive impacts on socioeconomics in the area through employment opportunities, specifically by generating temporary construction employment, a significant amount of which will likely be drawn from Erie County and the regional labor market. Local construction employment will primarily benefit those in the construction trades, including equipment operators, truck drivers, laborers, and electricians. Landowners hosting Facility infrastructure will also receive annual payments, and additional local revenues are possible through the purchase of construction materials, supplies, services, and goods throughout the life of the Facility.

The Genesee Road Solar Energy Center's combination of solar energy generation and energy storage, if economically feasible, will advance the State's broader climate and public health goals, particularly by helping to reduce the likelihood that future energy needs will be met by fossil fuel-burning plants and by continuing to reduce harmful air emissions, from GHGs driving climate change to toxic compounds. The transition from fossil fuels to renewable energy in New York will not only play a critical role in the State's efforts to combat climate change, it also will aid efforts to reduce air pollution and advance principles of Environmental Justice by creating jobs and eliminating significant sources of air pollution.

A common concern raised about solar energy generation is that it does not produce electricity when the sun is not shining. The output of the PV array is affected by the solar irradiance as well as temperature. What surprises some people is that the output of a PV array is inversely affected by temperature; a lower temperature produces a higher voltage as well as more power output. Arrays produce more power in cooler locations. To maximize effectiveness, pairing energy storage with solar would enable the Genesee Road Solar Energy Center to capture and store solar energy to balance the intermittent power supplied by the photovoltaic system when solar irradiance is high. Energy storage can also allow for distribution of power during peak power periods, when power is more valuable on NYISO's wholesale electricity market. This option could also reduce demand for "peaker" plants that operate to preserve reliability on days with the highest electricity demand and use natural gas or oil.

Since the proposed Facility will generate electricity without the use of fuel, there will be no adverse impact on fuel delivery constraints. Rather, by generating electricity without the need for fuel delivery and creating an energy source that does not rely on fuel for generation, it is expected that the Facility will contribute toward reducing the demand for fuel, thereby alleviating fuel delivery constraints and emissions related to coal and gas exploration, mining, refining, and transportation.

2.10.3 Regulatory Framework

A preliminary list of County and New York State laws, regulations, and energy goals to be reviewed with respect to consistency with energy planning includes the following:

- New York SEP
- New York State CES
- CLCPA
- Erie County Commits to Paris Report in January 2018 (Poloncarz 2018)
- Erie County Achieves Climate Smart Community Pledge (Poloncarz 2017)

The Application will include New York State's latest regulatory and policy energy planning objectives as they evolve to incorporate CLCPA mandates and initiatives.

2.10.4 Proposed Content of Application

Consistent with the requirements of 1001.10 of the Article 10 Regulations, Exhibit 10 of the Application will contain the following information:

(a) Consistency with State Energy Plan

The Article 10 Application will explain how the Facility advances the objectives of the State Energy Plan and the Clean Energy Standard, and assists the State in achieving the new renewable energy generation objectives recently adopted as part of the Climate Leadership and Community Protection Act.

(b) Impact on Reliability

A System Reliability Impact Study will be completed for the Facility on behalf of the New York Independent System Operator in 2020, and Exhibits 5 and 8 of the Article 10 Application will present the results, with certain issues such as reliability addressed in greater detail in Exhibit 10. The objectives of the System Reliability Impact Study are to: (1) confirm that the proposed new or modified facilities associated with the Project comply with applicable reliability standards, (2) assess the impact of the proposed Project on the reliability of the pre-existing power system, (3) evaluate alternatives to eliminate adverse reliability impacts, if any, resulting from the proposed interconnection, and (4) assess the impact of the proposed Project on transmission transfer limits, considering thermal, voltage, and stability limitations, and estimate the increase or decrease in the Transfer Capability of affected transmission interfaces. The scope and methodology of the System Reliability Impact Study is set by the New York Independent System Operator, and is uniform across projects of this nature. A number of power flow base cases will be evaluated both with and without the proposed Facility in service, including 2019 summer peak, winter peak, and light load.

The Article 10 Application will contain an analysis of the impact of the proposed Facility on electrical system reliability based on the results of the System Reliability Impact Study and subsequent studies/analyses conducted by/with the New York Independent System Operator. The System Reliability Impact Study will be submitted with the Article 10 Application under separate confidential cover. In particular and if applicable at the time the Article 10 Application is submitted, the proposed inclusion of energy storage in the Genesee Road Solar Energy Center will be discussed in the context of reliability

(c) Impact on Fuel Diversity

The proposed Facility will likely improve fuel diversity within the State by increasing the amount of electricity produced by non-fossil fuel dependent solar power. Coal electricity generation in New York has been reduced to 692 gigawatt-hours in 2018, or half of one percent of the 135,585 gigawatt-hours generated in 2018 in the New York Independent System Operator (NYISO 2019). Fuel diversity challenges in New York have changed as the fuel supply has changed, driven by market factors as much as regulation and policy. The challenges of fuel diversity over the past few decades have evolved. According to the New York Independent System Operator, "From a statewide perspective, New York has a relatively diverse mix of generation resources. However, New York's bulk power system is characterized by stark regional differences whereby the downstate supply mix is less diverse than the upstate supply mix" (NYISO 2019). The Article 10 Application will include discussion of the current electric generation capacity by fuel type to demonstrate that the addition of the Facility will contribute to fuel diversity.

(d) Impact on Regional Requirements for Capacity

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

(e) Impact on Electric Transmission Constraints

New York State has a diverse mix of generation resources compared to many other states. However, much of the renewable power is provided by hydroelectric projects and wind farms located in the western and northern portion of the State, while the southeastern region hosts power plants fueled primarily by natural gas. Taking full advantage of statewide fuel diversity will require upgrades and enhancements of the transmission system (NYISO 2019). The Article 10 Application will discuss Facility impacts on electric transmission constraints, based on the *New York State Transmission Assessment and Reliability Study* and other New York Independent System Operator reports/data.

(f) Impact on Fuel Delivery Constraints

The proposed Facility will generate electricity without the use of fuel. Consequently, there will be no adverse impact on fuel delivery constraints. Rather, by generating electricity without the need for fuel delivery and creating an energy source that does not rely on fuel for generation, it is expected that the Facility will contribute toward reducing the demand for fuel thereby alleviating fuel delivery constraints and emissions related to coal and gas exploration, mining, refining and transportation. The Article 10 Application will contain an analysis of the Facility's impact on fuel delivery constraints.

(g) Impact on Energy Policy

The need for additional renewable generation and a decreased reliance on fossil-fueled generation has been a mainstay of New York energy policy for almost two decades. Large-scale renewables, which are larger utility-scale renewable energy project developments, such as the Facility, are a key component of Reforming the Energy Vision and the Clean Energy Standard. In fact, Reforming the Energy Vision recognizes that large-scale renewables, which require more capital and take more planning than other facilities, will be critically important to meeting greenhouse gas emission reduction goals. The Climate Leadership and Community Protection Act established mandates to achieve 6,000 megawatts of solar by 2025.

The Application will address how the Project will impact New York's current and future energy policies contained in the State Energy Plan, Clean Energy Standard, Reforming the Energy Vision, and Climate Leadership and Community Protection Act programs. The proposed Facility's consistency with and furtherance of these goals will be discussed in detail in the Article 10 Application.

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

Given the unique nature and constraints associated with the siting of solar-powered electric generation facilities (i.e., level, affordable, naturally screened suitable land, landowners willing to enter into agreements with the Applicant, and adequate access to the bulk power transmission system), the Application will not contain a full comparison between the proposed Facility Site and alternative locations. Instead, the Article 10 Application will focus on the analysis identified in Section 2.9.2.

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

In accordance with the mandates of the Climate Leadership and Community Protection Act, the Genesee Road Solar Energy Center will provide positive impacts on socioeconomics benefits in the area through employment opportunities, specifically by generating temporary construction employment. Local construction employment will primarily benefit those in the construction trades, including equipment operators, truck drivers, laborers, and electricians. In addition, Facility operation will generate full time employment for a site manager and solar technicians and part time contracting service opportunities for electricians, laborers and fencing contractors, and landscaping maintenance crews. The Facility will also result in increased revenues to county, local municipality and school district tax bases, and lease and easement revenues to participating landowners.

The Facility will have a positive impact on public health and welfare by producing electricity with zero emissions. Electricity delivered to the grid from solar energy projects can reduce the growth of existing conventional power plants. The Genesee Road Solar Energy Center will reduce New York's dependency on the combustion of fossil fuels (coal, petroleum, and natural

gas) which not only have negative consequences for public health but also the atmosphere (NYESEP 2015). Natural gas is the most frequent marginal fuel unit in New York's power pool, or the one that is turned on or off as the load fluctuates (Patton et al. 2015). When the proposed Facility is generating power, electricity generation from natural gas would be reduced within the region, thereby eliminating the associated emissions.

2.11 PRELIMINARY DESIGN DRAWINGS

2.11.1 Discussion

EDF Renewables will show the locations of proposed Facility components on preliminary design drawings in support of Exhibit 11 of the Article 10 Application. Preliminary drawings will be labeled "preliminary" and/or "not for construction purposes," and will prepared under the direction of a professional engineer, landscape architect, or architect who is licensed and registered in New York State.

The drawings will include PV panels, access roads, electric collection lines, inverter/transformer stations, collection substation, POI switchyard, potential O&M building, approximate limits of disturbance, stormwater management features, delineated wetlands, and anticipated construction staging/material laydown areas. A landscaping plan will show where plantings will be installed around the Facility to mitigate potential visual impacts. With respect to those areas where trees may be removed due to Facility construction and operation, the Preliminary design drawings will depict the Facility footprint using recent aerial imagery. The Article 10 Application will also include a construction operations plan and a lighting plan for the Facility.

2.11.2 Proposed Content of the Application

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

(a) Site Plan

Exhibit 11(a) will include:

i. Site plan drawings of all Facility components at a common engineering scale. The drawings will depict Facility boundaries and all delineated wetlands (including the 100-foot adjacent areas if New York State Department of Environmental Conservation jurisdictional), streams, and waterbodies within the Facility Site boundary. Specific to construction of a solar facility, the site plan drawings will include the following proposed features:

- Photovoltaic panel locations and associated racking structures;
- Access roads (temporary and permanent);

- Perimeter fencing;
- Turn-around areas to be used during construction;
- Grading showing proposed final contours;
- Electric collection lines – the required number of circuits for each collection line route will be indicated on site plans; also, overhead (if any) and underground cable routes will be differentiated with specific line-types;
- Approximate limits of disturbance for all Facility components (photovoltaic panels, inverters, access driveways, buildings, electric collection lines, substation, point of interconnection switchyard, etc.) based on impact assumptions;
- Locations of any proposed energy storage systems associated with the Project, if applicable;
- Indication of permanent right-of-way for all electric cable installations;
- Locations that will use trenchless methods of electric cable installation, such as horizontal directional drilling (including layout of trenchless installation distances);
- Location of property lines, existing utility lines and equipment, and utility easements;
- Applicant's proposed setbacks from occupied structures, property lines and easements, existing overhead electric lines, gas transmission pipelines and associated easements, and roads;
- Locations and details for any proposed back-up generators and fuel storage areas;
- Collection substation and point of interconnection switchyard outlines, including local setbacks, access driveway and fence line; and
- Preliminary location of the potential operations and maintenance building and associated setbacks, access driveway, parking area, equipment storage areas, and any associated septic or water systems.

(b) Construction Operations Plan

Exhibit 11(b) will include a construction operations plan indicating all materials lay-down areas, construction preparation areas, any major excavation and soil storage areas, though not anticipated, construction equipment and worker parking areas. The construction operations plan will also include a discussion of transportation and truck routes to be used during construction. Details of mitigation measures to control noise will be described in Exhibit 19. Mitigation of public health and safety concerns, will be described in Exhibit 15.

(c) Grading and Erosion Control Plans

Exhibit 11(c) will include:

i. Soil type and depth to bedrock information based on publicly available data and test borings at representative locations within the Facility Site. Preliminary cut and fill calculations along with a general description of typical cut and fill scenarios and locations. Exhibit 21 of the Application will provide this information as well as boring logs and maps indicating location of the pre-Application test borings.

ii. Existing and proposed contours, retaining walls, and any permanent stormwater retention areas (if known at the time of Application submittal), as shown on the Preliminary Design Drawings.

(d) Landscaping Plan

Exhibit 11(d) will include:

i. A discussion of the need for landscaping or other forms of visual screening, and preparation of conceptual screening plans if needed.

ii. Aerial imagery shown with the proposed Facility footprint to identify areas where tree removal may be needed. However, an on-site inventory and survey of individual trees to be removed will not be included.

iii. A range of contingency measures to address potential visual screening needs for mitigation of impacts at historic resources, community or cultural sites, visually sensitive resources, or public use areas, if such measures are proposed in Exhibit 20 and/or Exhibit 24.

(e) Lighting Plan

Exhibit 11(e) will include a Lighting Plan showing type, location, and height of installation of proposed exterior lighting fixtures for all Facility components, and an indication of the measures to be taken to prevent unnecessary light trespass beyond the Facility boundaries.

(f) Architectural Drawings

Exhibit 11(f) will include architectural drawings for:

i. The potential operations and maintenance building, substation, point of interconnection switchyard, building facades, and perimeter fencing (including the type(s) of site perimeter fencing to be installed), as applicable, in final or preliminary form, depending on availability.

ii. Designs for any proposed mechanical, electrical, and plumbing systems.

iii. Lighting specifications for lighting associated with the Project substation, potential operations and maintenance building, and any temporary lighting during construction, if applicable.

(g) Typical Design Detail Drawings

Exhibit 11(g) will include typical details for Facility components, including:

i. Typical photovoltaic panel details, including the configuration of photovoltaic panel arrays and mounting details.

ii. Typical plan and section details of anticipated significant slope changes, if applicable.

iii. Typical plan and sections of underground facilities, including single and multiple-circuit layouts with dimensions of proposed depth and level of cover, separation requirements between circuits, clearing width limits for construction and operation of the Facility, limits of disturbance, and required permanent right-of-way.

iv. Elevation plans for buildings and overhead structures, if applicable, including height above grade, structure layouts, clearing width limits for construction and operation of the Facility, and permanent right-of-way widths, average span lengths for each proposed layout, and structure separation requirements (for installations requiring more than one pole, etc.) for all single and multiple-circuit layouts.

v. Typical support structures to be used for solar panel installations.

vi. Typical details of any proposed energy storage systems, including energy storage devices, if applicable.

vii. Typical details of any potential protection measures of existing pipelines.

viii. A circuit map indicating overhead and underground installations and the number of circuits per proposed run.

ix. Typical details associated with stream crossings and trenchless installations, including typical staging areas, construction machinery arrangements, and bore pits.

x. Examples of typical technical and safety manuals for the types of solar panels that are anticipated to be used in the Facility.

(h) Interconnection Facility Drawings

Exhibit 11(h) will include a single line drawing of the point of interconnection switchyard in the System Reliability Impact Study, and the general arrangement of the point of interconnection switchyard.

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

Exhibit 11(i) will include a list of engineering codes, standards, guidelines, and practices that the Applicant intends to conform with when planning, designing, constructing, operating, and maintaining the Facility, including the New York State Department of State 2017 Uniform Code Supplement, the New York Specifications for Erosion and Sediment Control (NYS Standards), and New York State Stormwater Design Manual (NYSDEC 2015, 2016; NYSDOS 2017), and all applicable local, state, and federal laws and regulations. Facility design will adhere to New York State Department of Agriculture and Market guidelines for construction mitigation to the extent practicable (NYSDAM 2019). If energy storage systems are proposed for the Project, this exhibit will also include code references and descriptions for any proposed electrical energy storage system(s).

(j) Protective Measures

Exhibit 11(j) will include details and descriptions of any protective measures for Facility components within or adjacent to "Flood Hazard Areas." If this information is not available, a description of potential measures to be utilized will be included.

2.12 CONSTRUCTION

2.12.1 Discussion

EDF Renewables will develop construction plans for a phased, systematic approach to include:

- Surveying;
- Limited earth moving to level access driveways, install stormwater management features, dig transformer vaults, and level areas where solar panels, equipment, and potential buildings (i.e., substation) will be placed;
- Tree removal;
- Temporary and permanent access roads;
- Installation of foundations into the ground for mounting solar panel arrays; and
- Installation of inverters, step-up transformers, and underground electrical conduit to connect solar panel arrays to onsite substation, potential energy storage system, and connection to electrical grid (off-site transmission main).

As discussed in Section 2.21, a preliminary geotechnical study will confirm site-specific geological conditions and that conditions are suitable for the design and construction of the Facility, including topography and soil. Solar panels will be installed on a low-profile racking system, which typically consists of small I-beam posts, helical piles, ground screw piles driven or screwed into the ground, or H piles augered or driven into the ground, without the need for excavation, concrete,

or other foundations. In cases where bedrock is shallow, there may be a need to drill into the bedrock, place the piles in the hole, and grout. Limited grading may be necessary in some areas. In those limited areas where soil disturbance is necessary, topsoil will be stripped and stockpiled for restoration purposes. Following construction, any disturbed areas will be restored with topsoil, and a cover of native grass and/or other vegetation species will be established under and around the solar panels. In addition, during operation of the Facility, the soils within the Facility will not be treated with fertilizers, herbicides or pesticides as routine practice.

Temporary and permanent access roads generally use gravel surfacing that may include stabilized cement and are designed to follow existing driveways and tractor paths to the maximum extent practical. Larger equipment like inverters, step-up transformers, and potentially energy storage systems, may require placement with cranes. Access driveways to inverter/medium-voltage transformer and substation locations will generally be designed to accommodate cranes and multi-axle delivery trailers. Equipment laydown areas will be sited near these driveways to minimize the need for an extensive access driveway network. Construction equipment would include excavators, dozers, dump trucks, and compaction equipment.

Several types of racking foundation options are being evaluated to accommodate the range of existing geotechnical conditions and slopes, and to minimize site disturbance. The racks will be supported using one, or a combination, of the following types of foundations:

- Galvanized H pile, typically driven directly into the ground approximately eight to 12 feet below grade;
- Machine-augered holes in rock and H piles cement-grouted in place;
- Machine-augered holes and H piles driven into compacted stone screenings;
- Ground screws consisting of a circular shaft with screw threads drilled directly into the ground or into pre-drilled holes; and/or
- For weaker soils, helical piles consisting of a central shaft with a circular helical steel blade welded at the bottom.

The proposed grassed laneways between each row of solar panels (within each solar array) will not require any upgrades or construction preparation other than general site grading or seeding, as required.

Since the solar panels are mounted above the ground, infiltration of water through vegetation and the underlying subsurface material will be maintained. Where appropriate, surface drainage will continue to be directed to existing receiving systems (drainage paths, roadside ditches, etc.). In accordance with *New York State Stormwater Management Design Manual* (NYSDEC 2015) and *New York State Standards and Specifications for Erosion and Sediment Control* (NYSDEC 2016), the stormwater pollution prevention plan (SWPPP) for the Project will describe methods to be used

to minimize impacts to soil and water quality during construction. Exhibit 23 of the Application will provide the preliminary SWPPP, and Exhibit 12 will discuss phasing of construction proposed to comply with the SWPPP as a part of the overall design.

DC wire runs connecting arrays of modules to solar inverter/transformers will be installed using above-ground cable tray, above-ground wiring harnesses, underground conduit, or direct-burial wires, based on final design. AC wire runs to connect the Facility's inverter/transformers back to the collector substation will be installed utilizing a combination of underground runs in trenches and overhead runs on appropriately designed poles based on site conditions and final design.

Typically, trenches for underground AC collector runs will be excavated to a depth of 4 feet below finished grade using backhoes or tracked excavators. The collector cables will be bedded in sand, and the trench will be backfilled with the excavated material using dump trucks and compaction equipment. Underground runs through actively farmed agricultural areas will follow NYSDAM guidelines. Typically, overhead AC collector runs are installed on 40 to 50 feet wood poles appropriately designed for the number of conductors, size, and site conditions. It is expected that overhead AC collector runs would be utilized in forested areas to reduce required tree clearing.

A preliminary Quality Assurance and Control Plan will be included in the Application. The Quality Assurance and Control Plan will discuss the proposed environmental compliance monitoring plan, responsibilities of the Environmental Monitor, and reporting responsibilities. The plan will further discuss the specifics and frequency of compliance inspections during construction to verify construction is in compliance with engineering designs and regulatory requirements.

In addition, to maintain compliance with permit conditions, EDF Renewables will provide funding for an independent, third party Environmental Monitor who will oversee Facility construction. The reporting procedures for the Environmental Monitor will be described in the Article 10 Application. Environmental compliance activities and monitoring will adhere, to the extent practicable, with NYSDAM guidelines for solar energy projects (NYSDAM 2019).

EDF Renewables will require that contractors conform to the requirements of the Public Service Commission's regulations regarding the protection of underground facilities (16 NYCRR Part 753) and will become a member of Dig Safely New York. Because the Facility Area is rural in nature compared to a more suburban or urban setting, there are fewer existing utility systems with which the Facility may interfere. Information on the location of existing utilities will be taken into account during Facility component siting in order to avoid and minimize conflicts with utilities. EDF Renewables will also coordinate with public (i.e., NYSDPS) and private (i.e., NYSEG) entities regarding underground utilities and will register its utilities and any underground collection lines with a NYS One Call Center after construction.

2.12.2 Proposed Content of the Application

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

(a) Preliminary Quality Assurance and Control Plan

Exhibit 12(a) will include:

i. A preliminary Quality Assurance and Control Plan, which will include a discussion of the Applicant's proposed environmental compliance monitoring plan, responsibilities of the Environmental Monitor, and reporting responsibilities.

ii. A discussion of how the construction will meet applicable design, engineering, and installation standards, including construction codes applicable to solar panel structures.

iii. A description of the notification procedures to notify local residents and the general public regarding construction activities and schedule.

(b) Conformance with Public Service Commission Requirements

Exhibit 12(b) will include:

i. A statement from a responsible company official that the Applicant and its contractors will conform to the requirements for protection of underground facilities contained in the Public Service Law §119-b, as implemented by 16 New York Codes, Rules and Regulations Part 753.

ii. A statement from a responsible company official that the Applicant will comply with pole numbering and marking requirements, as implemented by 16 New York Codes, Rules and Regulations Part 217.

(c) Plans to Avoid Interference with Existing Utility Systems

Exhibit 12(c) will include:

i. Preliminary plans and descriptions indicating:

- Design, location, and construction controls to avoid interference with existing utility transmission and distribution systems.
- Locations and typical separations of proposed Facility components from existing electric, gas, and telecommunications infrastructure.
- Identification of measures to minimize interferences where avoidance cannot be reasonably achieved.

ii. A section regarding consultations with owners operating gas and/or electric transmission lines within the Facility Area, including:

- A description of design and layout of the proposed Facility including any underground construction, and delineation of existing underground utility locations and rights-of-way;
- A description of proposed protection measures for pipelines, including typical details of protection measures showing proposed Facilities relative to existing pipeline locations (will also be included as part of the drawings in Exhibit 11);
- Reference to any construction specifications or guidelines (available or provided by utility owners) for work near existing underground utilities;
- Specific utility owner criteria for installations of Facility components near the existing electric and gas utilities. Descriptions of any potential studies (including potential cathodic protection impact studies) required or recommended by the utility owners (along with an indication of timing of the studies) to the extent applicable; and

iii. A description of communications and coordination procedures to be followed with underground utility owners for construction of proposed Facilities in proximity to the utility right-of-way.

(d) Procedures for Addressing Public Complaints and Disputes

Exhibit 12(d) will include a Complaint Resolution Plan, including procedures for public notification of upcoming construction activities, addressing public complaints, and for dispute resolution during Facility construction and operation. The complaint resolution plan will include input from construction managers as appropriate, and clearly define the responsibilities for issue resolution. The complaint resolution process will have dedicated personnel to track the resolution of the complaint from the time of receipt through confirmation of resolution. In addition, the Complaint Resolution Plan will:

i. Include a procedure for transmittal of complaint logs to New York State Department of Public Service. The complaint log will list all complaints and resolutions, be maintained during construction and operation of the Facility, and be available to New York State Department of Public Service upon request;

ii. Describe procedures the Applicant will follow to address complaints;

iii. Describe the types of complaints anticipated and any specific procedures related to them (i.e., noise, dust);

iv. Describe actions the Applicant will take if a complaint remains unresolved after all steps are followed; and

v. Indicate how complaints will be received, both written and verbal, such as from the toll-free lines, electronically through email, and/or via the Facility website. Verbal complaints received during construction will be converted to written documents that can be tracked by the certificate holder and contractors and be reported to New York State Department of Public Service Staff.

2.13 REAL PROPERTY

2.13.1 Discussion

Real property refers to the parcels (leased, owned, or subject to easement) on which Facility components for the proposed Genesee Road Solar Energy Center will be located. The lands being evaluated for potential solar development are located in the Towns of Sardinia and Concord, Erie County, New York, identified on Figures 1.2-1 and 1.2-2 as the Facility Site. Not all the land included in the Facility Site will be utilized by the Facility. Rather, the Facility Site represents the broader area within which participating parcels will be developed with solar facilities. This provides flexibility during the development phase to minimize and avoid impacts to wetlands, cultural resources, visual resources, wildlife habitat, and other sensitive resources. The Facility will ultimately be sited on leased private land within the Facility Site, which consists primarily of cleared land.

2.13.2 Proposed Content of the Application

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

(a) Real Property Map of Generating Site

Exhibit 13(a) will include, as applicable, property boundaries with tax map; block and lot numbers; the owner of record of all parcels included in the site and for all adjacent properties; easements, grants and related encumbrances on the site parcels; public and private roads on or adjoining or planned for use as access to the site; and zoning and related designations applicable to the site and adjoining properties.

(b) Real Property Map of Interconnection Facilities

Exhibit 13(b) will include a map including all proposed interconnection facilities, associated access roads, construction laydown areas, and lands owned or under contract to the Applicant.

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

Exhibit 13(c) will include a description of the agreements for parcels that are secured or under option for the Facility, including ingress/egress access to public roads, easements for collections lines, as well as easement agreements for crossing existing natural gas and/or electric transmission lines, and will provide a statement that the Applicant has obtained, or will obtain, the necessary real property rights for all parcels needed for the Facility. The Applicant will continue its internal due diligence to assure that the Facility parcels are not encumbered in a manner that is inconsistent with future solar power use. The Applicant will continue to work towards securing all land necessary to construct and operate the Facility.

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

Exhibit 13(d) will include a statement that the Applicant has or will obtain the necessary property rights for the Facility interconnects.

(e) Improvement District Extensions

The Applicant will discuss the need for improvement district extensions with local municipal representatives to determine the applicability to the proposed Project. If improvement district extensions are necessary based on discussions, Exhibit 13(e) will include an identification of improvement district extensions for the Facility and a demonstration that the Applicant has obtained, or can obtain, such improvement district extensions.

2.14 COST OF FACILITIES

2.14.1 Discussion

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

2.14.2 Proposed Content of the Application

Consistent with the requirements of 1001.14 of the Article 10 regulations, Exhibit 14 of the Application will contain the following information:

(a) Total Capital Costs

Exhibit 14(a) will contain an estimate of the total capital costs of the Project and will include development costs, construction design and planning, equipment costs, and construction costs, and will be broken down by:

- Photovoltaic panels, inverters, storage (if applicable)
- Roads, collection lines, fencing
- Substation and switchyard
- Engineering
- Construction (including contingency)
- Insurance
- Development (including contingency)

(b) Source of Cost Estimates

Exhibit 14(b) will include a cost estimate based on the Applicant's historical experience, historical and current price quotes, and solar industry standards.

(c) Work Papers

Exhibit 14(c) will include an internal work paper that describes the assumptions in estimating the total capital costs as described above in 14(a).

2.15 PUBLIC HEALTH AND SAFETY

2.15.1 Environmental Setting

Emergency service providers near the Facility Site are typically based in community centers, such as the Village of Springville, but serve the larger region. Figure 2.15-1 shows three fire stations located within the 2-mile Study Area, including the East Concord fire station and Chaffee-Sardinia Volunteer Fire Company stations 2 and 3. Police services within the 2-mile Study Area are provided by the Erie County Sheriff's department. The nearest Sheriff's substation is located approximately 2.7 miles southwest of the Study Area in the Village of Springville. The Bertrand Chaffe Hospital is the nearest hospital to the Study Area, approximately 2.5 miles southwest of the Facility Area. The hospital includes 24 beds and provides emergency services.

2.15.2 Potential Impacts and Mitigation

EDF Renewables is committed to constructing and operating the Genesee Road Solar Center in a safe and environmentally responsible manner. PV facilities are not known to pose significant health risks (NYSERDA n.d.). On the contrary, they contribute to reduced GHG emissions by potentially displacing higher-emitting sources. The primary public health concerns related to PV would be related to increased traffic during the relatively short construction period. Section 2.25 provides information on temporary traffic during construction, and Section 2.18 provides information on security.

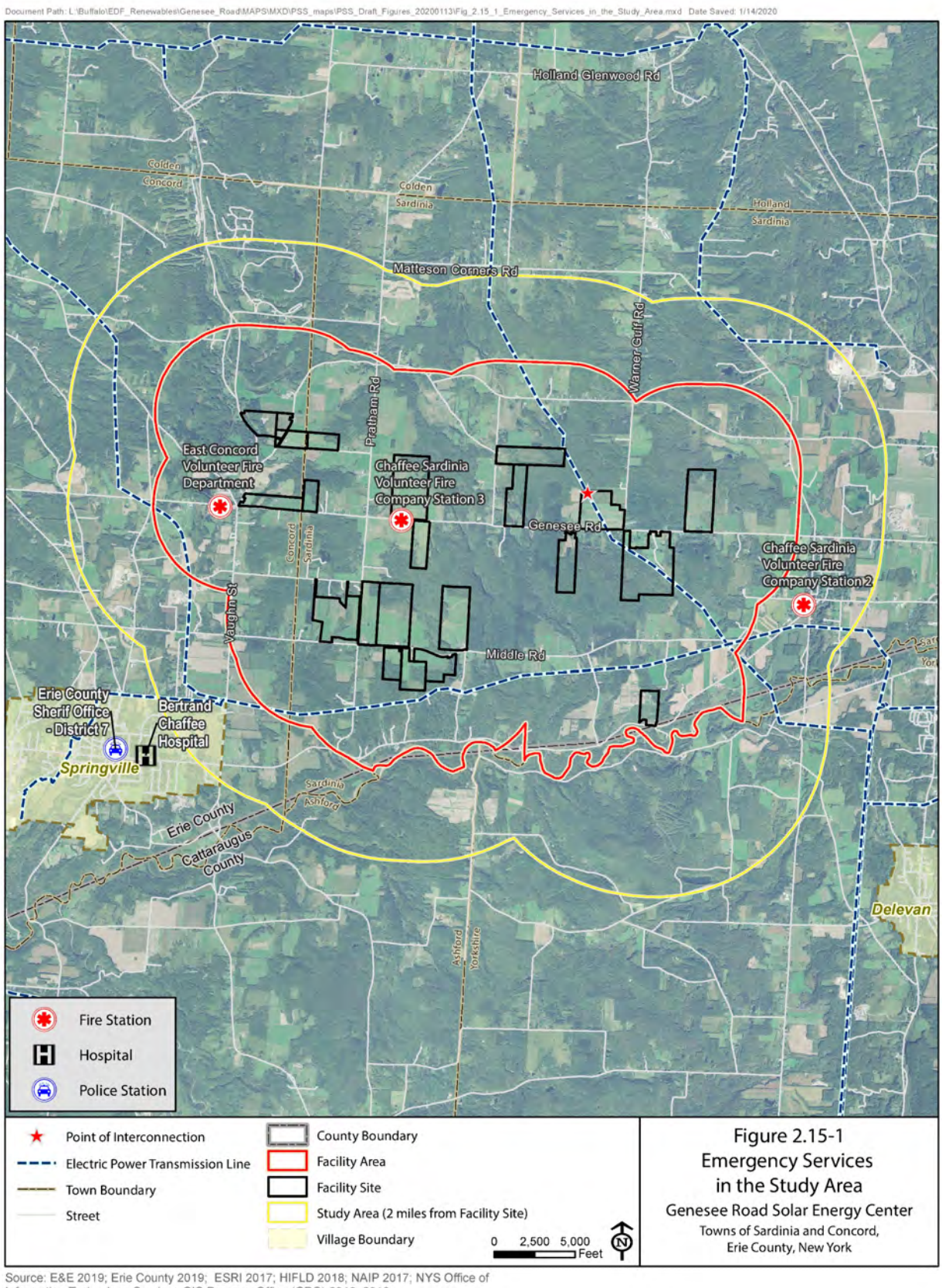


Figure 2.15-1
Emergency Services
in the Study Area
Genesee Road Solar Energy Center
Towns of Sardinia and Concord,
Erie County, New York

Source: E&E 2019; Erie County 2019; ESRI 2017; HIFLD 2018; NAIP 2017; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019

New York State's 2015 SEP involves reducing GHG emissions from the energy sector, highlighting those efforts as critical to protecting the health and welfare of New Yorkers. Combustion of fossil fuels is the dominant source of energy-related emissions. The types of health risks associated with the combustion of carbon-based fuels are not associated with solar, wind, or hydroelectric power generation. Increasing the fraction of New York's electricity needs met by solar, wind, and water will, in general, decrease public health risks associated with electricity production. Solar generated power is unlike conventional power generating facilities, as solar facilities produce energy without emitting pollutants that decrease air quality. This is a major public health benefit since, as has been well-established in scientific research and literature, air pollution and climate change have significant impacts on human health and the environment.

The presence of electrical equipment carries some increase risk of a shock hazard, or for equipment such as inverters, a combustion risk. NYS Uniform Building and Fire Code provides requirements that minimize these risks; however, as discussed below measures implemented by the Applicant would further reduce health and safety risks. PV panels are typically constructed of silicon, tempered glass, and metals. Since the PV panel materials are enclosed and do not mix with water or vaporize into the air, there is little to no risk of chemicals being released into the environment during normal use (NYSERDA 2019).

Measures to avoid and minimize adverse health and safety impacts typically include the following:

- Use solar panels free of toxic materials;
- Use non-combustible vegetable oil in transformers;
- Provide multi-day training to first responders on safety procedures for solar facilities; and
- Provide ArcFlash training and proper training for working with electrical system components for construction workers.

2.15.3 Regulatory Framework

A preliminary list of regulations and plans related to public health and safety includes the following:

- New York State Uniform Code Supplement (NYSDOS 2017), and
- Town Zoning – lot setbacks and relevant safety requirements.

If applicable, Exhibit 31 (Local Laws and Ordinances) may include additional standards relevant to public health and safety.

2.15.4 Proposed Content of the Application

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

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

Exhibit 15(a) will include a discussion of waste generation during construction, which is primarily limited to byproducts and wastes from standard construction activities and equipment, including minor amounts of solid waste, primarily plastic, wood, cardboard, packing materials, and general refuse. Wastes will be handled by the Balance of Plant contractor in accordance with all applicable laws and regulations pertaining to such wastes, and materials will be recycled when possible.

The Article 10 Application will provide additional information regarding construction-generated wastes, including sanitary facilities and cleared vegetation, including tree debris and stump disposal. Any defective or broken solar panels would be properly disposed of in accordance with federal and state law. Any solar panels that are found to be defective would be returned to the manufacturer.

Operations and maintenance activities would consist of routine maintenance and emergency work at the Facility. These activities would generate minimal solid waste.

With respect to operations of the Facility, waste generation will likely be limited to cardboard packaging and vegetation from maintenance. One of the advantages of producing electricity from solar is that it does not produce gaseous wastes during operation, and a minimal amount of liquid and solid wastes during construction only. Every effort will be made to recycle cardboard and any other materials if services are locally available. Solar panels that are broken would be disposed of in accordance with federal and state law. Solar panels that are found to be defective would be returned to the manufacturer. Depleted energy storage systems will be recycled. Inverter wear parts and transformers will be repurposed if possible or sent to a local scrap yard.

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

This is not applicable to solar facilities.

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

This is not applicable to solar facilities.

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

Exhibit 15(d) will include a discussion of the procedures for collection, handling, storage, transport, and disposal of construction waste.

(e) Wind Power Facility Impacts

This is not applicable to solar facilities.

(f) Public Health and Safety Maps

Exhibit 15(f) will include maps within a 2-mile radius of the Facility and analysis showing relation of the proposed Facility Site to the following:

- Public water supply resources;
- Community emergency response resources and facilities (police, fire and emergency medical response facilities and plans);
- Emergency communications facilities;
- Hospitals and emergency medical facilities;
- Designated evacuation routes;
- Emergency Services mobile land sites;
- Existing known hazard risks (flood hazard zones, storm surge zones, areas of coastal erosion hazard, landslide hazard areas, areas of geologic, geomorphic or hydrologic hazard);
- U.S. Environmental Protection Agency-regulated facilities;
- Dams, bridges, and related infrastructure;
- Explosive or flammable materials transportation or storage facilities;
- Contaminated sites; and
- Local risk factors.

The maps will be prepared using data from the New York State Geographic Information System Clearinghouse, Federal Emergency Management Agency, local municipalities, New York State Department of Environmental Conservation, New York State Department of Health, the U.S. Geological Survey, and local sources for emergency response resources.

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

Exhibit 15(g) will include a discussion of significant impacts to the environment, public health, and safety, including any short- and long-term impacts resulting from Facility construction and operation.

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

Exhibit 15(h) will include a discussion of potential adverse impacts on the environment, public health, and safety that cannot be reasonably avoided, and measures for monitoring and mitigating such impacts.

(i) Irreversible and Irretrievable Commitment of Resources

Exhibit 15(i) will include a discussion of any irreversible and irretrievable commitment of resources that would be involved in the construction and operation of the Facility.

(j) Impact Minimization Measures

Exhibit 15(j) will include additional detail regarding any proposed measures to minimize public health and safety impacts, if any.

(k) Mitigation Measures

Exhibit 15(k) will include a discussion of any proposed measures to mitigate or offset any impacts, to the extent impacts are anticipated. This will include reference to a Complaint Resolution Plan, which will outline communications protocols and contacts for construction and operation; procedures for registering a complaint; a process for gathering and analyzing information about complaints; tracking and follow up mechanisms.

(l) Proposed Monitoring

Although not anticipated, Exhibit 15(l) will include a description of any proposed monitoring programs of the impacts identified in the Application.

2.16 POLLUTION CONTROL FACILITIES

Genesee Road Solar Energy Center will not require pollution control facilities, and, as such, the requirements of 1001.16 are not applicable and will not be included in the Article 10 Application. See Section 2.17 of this Scoping Statement for information on temporary air emissions during construction, and Section 2.23 for information on the Facility's State Pollutant Discharge Elimination System (SPDES) General Permit for construction.

2.17 AIR EMISSIONS

2.17.1 Environmental Setting

Air pollutants originate from many human activities, and most of the largest individual emission sources in New York State continue to be electricity generation plants. Many regions along the North Atlantic Coastline are considered non-attainment or maintenance regions for one or more of the National Ambient Air Quality Standards (NAAQS) set to limit concentrations of air pollutants

at levels that protect public health and the environment. Erie County is currently in attainment with all NAAQS.

Air quality in New York has continued to improve since the promulgation of federal and state control requirements for stationary and area sources, complemented by ongoing improvements in mobile source emissions and efficiency, and as a result of market factors. Since 2000, coal has been providing progressively less of New York's net electricity generation. In 2018, less than 0.5% of New York's net electricity generation has been fueled by coal (NYISO 2019).

Historically, New York State has been proactive in establishing goals to reduce GHG emissions, including the latest goals of the CLCPA to reduce GHG emissions by 40% by the year 2030 and 85% by 2050 (compared to 1990 levels). New York has the lowest state per capita GHG emission value, at 8 metric tons of carbon dioxide equivalent (MT CO2e) per person. In 2016, 13% (27.72 Million MT of CO2) of the state's GHG emissions were attributed to the electricity sector, while, in 1990, 27% of GHG emissions, or 63.02 Million MT of CO2e, were from electricity generation (NYSERDA 2019). Continued improvement in the reduction of total and average GHG emissions from the electricity sector is needed to reduce emissions from transportation and other sources.

2.17.2 Potential Impacts and Mitigation

The proposed Facility will produce electricity without generating any air emissions from use of fossil fuels. The operation of this Facility is anticipated to have an overall positive impact on air quality by producing electricity with essential zero emissions, except for negligible emissions from vehicles that may periodically service the Facility. In fact, the operation of the Facility will offset air emissions from other sources of electrical generation such as fossil fuel powered generation plants. In addition, with state efforts to reduce gasoline use by increasing the electrification of transportation, growing renewable energy capacity will also provide reduction in transportation emissions.

During construction, operation, and maintenance, air emissions associated with the Project are expected primarily to be the result of the combustion of gasoline or diesel fuel in project vehicles and equipment (e.g., delivery trucks, cranes, etc.). These emissions would primarily occur during construction since operations will only involve periodic vehicle travel for maintenance activities.

Additional potential impacts to air quality could occur on a temporary basis from the generation of fugitive dust during earth moving activities and travel on unpaved roads. The increased dust will not be of a magnitude or duration that will significantly impact local air quality. Potential measures to minimize emissions from project vehicles and equipment during construction, operation, and maintenance activities may include the following:

- Limit engine idle time and use equipment with electric motors where feasible; and
- Implement dust control procedures to minimize the amount of dust generated by construction activities in a manner consistent with the Standards and Specifications for Dust Control, as outlined in the *New York State Standards and Specifications for Erosion and Sediment Controls* (NYSDEC 2016).

2.17.3 Regulatory Framework

A preliminary list of regulations and plans to be reviewed to ensure compliance with air quality standards includes the following:

- 6 NYCRR Chapter III-Air Resources
- New York State CES
- CLCPA

Air quality compliance is managed by NYSDEC. The proposed Facility is located in NYSDEC Region 9, which encompasses Allegany, Cattaraugus, Chautauqua, Erie, Niagara and Wyoming counties. A more detailed analysis of New York State's air quality standards and goals will be made in the Application.

2.17.4 Proposed Content of the Application

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

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

Exhibit 17(a) will include a discussion of compliance with applicable federal, state, and local regulatory requirements. Section 111 of the Clean Air Act Extension of 1970, the U.S. Environmental Protection Agency established New Source Performance Standards to regulate emissions of air pollutants from new stationary sources. These standards apply to a variety of facilities including landfills, boilers, cement plants, and electric generating units fired by fossil fuels. The New York State Department of Environmental Conservation Division of Air Resources administers an air permitting program as required by the Clean Air Act and 6 New York Codes, Rules and Regulations Part 201. The two most common types of permits for air contamination sources are State facility and Title V facility permits. Since solar facilities generate electricity without releasing pollutants into the atmosphere, the proposed Facility will not be subject to New Source Performance Standards, and will not require air pollution control permits under the Clean Air Act or New York State law or regulation. All construction activity will meet current applicable air quality regulations.

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

Exhibit 17(b) will include an assessment of existing ambient air quality levels and trends in the region. The New York State Department of Environmental Conservation Division of Air Resources publishes air quality data for New York State annually. The most recent summary of air quality data available for the state is the New York State Air Quality Report for 2018 (NYSDEC n.d.[b]). Included in this report are the most recent ambient air quality data, as well as long-term air quality trends derived from data that have been collected and compiled from numerous state and private (e.g., industrial, utility) monitoring stations across the state. These trends are assessed and reported by New York State Department of Environmental Conservation regions.

The Clean Air Act requires the U.S. Environmental Protection Agency to set National Ambient Air Quality Standards for pollutants considered harmful to public health and the environment. In 2019, Region 9 sampling points in Dunkirk and Buffalo for carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter under 2.5 (PM2.5) and 10 (PM10) microns, and sulfur dioxide were within the acceptable levels established by the National Ambient Air Quality Standards for all tested parameters. No other local air monitoring data are available to further characterize air quality in the immediate vicinity of the proposed Facility.

(c) Emissions by Combustion Sources Table

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

(d) Potential Impacts to Ambient Air Quality

The Article 10 Application will include a discussion of the potential impacts to air quality that may be expected from Facility construction and operation. Since solar facilities generate electricity without combusting fuel or releasing significant pollutants into the atmosphere, the specific requirements of 1001.17(d) pertaining to pollutant emissions are not applicable to the proposed Facility operation and will not be included in the Article 10 Application.

The operation of this Facility is anticipated to have an overall positive impact on air quality by producing electricity with zero emissions (except for negligible emissions from vehicles that may periodically service the Facility). In fact, the operation of the Facility is expected to offset air emissions from other sources of electrical generation such as fossil fuel powered generation plants. The Article 10 Application will evaluate the estimated annual displacements resulting from Facility operation.

Potential impacts to ambient air quality resulting from the construction of the Facility will be discussed in the Article 10 Application. Such impacts could occur on a temporary basis as a result of emissions from engine exhaust and from the generation of fugitive dust during earth moving activities and travel on unpaved roads. The increased dust and emissions will not be of a magnitude or duration that will significantly impact local air quality. Dust control procedures will be implemented to minimize the amount of dust generated by construction activities in a manner consistent with the Standards and Specifications for Dust Control, as outlined in the *New York State Standards and Specifications for Erosion and Sediment Controls* (NYSDEC 2016).

(e) Off-site Consequence Analysis for Ammonia Stored On site

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

2.18 SAFETY AND SECURITY

2.18.1 Discussion

EDF Renewables will implement procedures to ensure safety and security of construction crews and the community. Based on experience with other solar projects and reasonable expectations associated with the Facility, EDF Renewables will develop preliminary site security, health and safety, and safety response plans and coordinate with the Erie County and New York State Divisions of Homeland Security and Emergency Services and local responders to take appropriate actions in the event of an emergency.

The POI station design will include fencing and security lighting (see fencing examples in the image below). The PV panels, inverters, energy storage system, and POI switchyard will be contained within perimeter fencing with locked gates. The general public will not be allowed on the construction site and vehicular access will be blocked by fencing and locked gates. Video cameras or other surveillance technology may be used if problems with trespassing occur.

Security lighting for the POI switchyard will be directed downward, and manual switches and/or movement sensors will be installed for the security lighting to minimize the effects of light pollution and reduce potential wildlife attraction. The Article 10 Application will provide an outline related to associated setbacks and locations for site security lighting.

EDF Renewables installs fencing for solar facilities for safety and security.

A preliminary list of regulations and plans that address safety and security includes the following:

- North American Electric Reliability Corporation's (NERC's) Critical Infrastructure Protection (CIP) standards;
- 40 CFR 112.7 Spill Prevention, Control and Countermeasure (SPCC) Plan; and
- Town Zoning – lot setbacks and relevant safety requirements.

The NERC's CIP standards are mandatory Reliability Standards that address the security of cyber assets essential to the reliable operation of the electric grid. Subject to Federal Energy Regulatory Commission (FERC) oversight, the NERC and its Regional Entity partners enforce these standards. The Applicant has a 24/7 NERC-compliant operations control center located in San Diego, California, where remote monitoring, diagnostics, troubleshooting, and cybersecurity measures are implemented for all wind and solar power farms under operation by EDF Renewables. Genesee Road Solar Energy Center would also be monitored at this Facility.

The Application will also include a Preliminary Safety Response Plan (SRP), which will outline the safety plans of the Facility throughout its lifecycle, developed in consultation with local emergency service providers and relevant stakeholders. The SRP will be made available to all employees of the Balance of Plant (BOP) and all subcontractors or authorized visitors to the Facility Site, and will outline the procedures to follow in the event of an emergency. The information contained in the SRP will be developed in conjunction with local emergency service providers and will be consistent with local and state emergency response plans, though open-ended enough to grow and evolve as first responder organizations change.

2.18.2 Proposed Content of the Application

Consistent with the requirements of 1001.18 of the Article 10 Regulations, Exhibit 18 of the Application will contain the following information:

(a) Preliminary Site Security During Facility Construction Plan

Exhibit 18(a) will include a preliminary plan for site security of the facility during construction which will include:

i. Access controls including fences, gates, bollards, and other limitations;

ii. Electronic security and surveillance facilities;

iii. Security lighting, including specifications for lighting and controls to address work-site safety requirements and to avoid off-site light trespass; and

iv. Setback considerations for Facility components which may present hazards to public safety.

(b) Preliminary Plans for Site Security During Facility Operation

Exhibit 18(b) will include a preliminary site security plan for operation, which will likely include the following:

i. Access controls including fences, gates, bollards, and structural limitations;

ii. Electronic security and surveillance facilities;

iii. Security lighting, including specifications for lighting and controls to address work-site safety requirements to avoid off-site light trespass;

iv. Setback considerations for Facility components which may present a hazard to public safety; and

v. A description of a cyber security program for the protection of digital computer and communication systems and networks that support the facility demonstrating compliance with

current standards issued by a standards setting body generally recognized in the information technology industry, including, but not limited to, the federal Department of Commerce's National Institute of Standards and Technology, the North American Electric Reliability Corporation, or the International Organization for Standardization.

Preliminary draft plans for site security during facility operations will be provided to the New York State and Erie County Divisions of Homeland Security and Emergency Services and the Towns of Sardinia and Concord for their review and comments prior to Application submittal.

(c) Preliminary Safety Response Plan

Exhibit 18(c) will include a Preliminary Safety Response Plan to ensure the safety and security of the local community. The plan will include:

i. Identification of contingencies that would constitute an emergency;

ii. Emergency response measures by contingency;

iii. Evacuation control measures by contingency; and

iv. Community notification procedures by contingency, including the identified stakeholders, the timeframes for notification, and the planned methods that will be used (i.e., letter, email, telephone call, radio, etc). for various contingencies.

A preliminary draft Safety Response Plan will be submitted to the New York State and Erie County Divisions of Homeland Security and Emergency Services and the Towns of Sardinia and Concord for their review and comments.

(d) Provision of Security and Safety Plans to New York State Division of Homeland Security and Emergency Services

Exhibit 18(d) will include documentation of the submittal of the Preliminary draft Plans for Site Security During Facility Construction and Site Security During Facility Operations and preliminary draft SRP to the New York State Division of Homeland Security and Emergency Services requesting their review and comments.

(e) Provision of Security and Safety Plans to Local Office of Emergency Management

The Facility Site is not located within any part of a city that has a population of over one million and therefore a review by the local office of emergency management is not required.

(f) On-site Equipment to Respond to Fire Emergencies or Hazardous Substance Incidences

In accordance with 1001.18(f), the Safety Response Plan will include a detailed list of all equipment and systems available on site to handle fire emergencies or hazardous substance incidences.

If energy storage systems are proposed for the Project, this Exhibit will also include:

- A summary of correspondence with the local fire department regarding potential installation of any electrical energy storage system(s);
- Correspondence with the local fire department specific to site plans and details of any proposed electrical energy storage systems.

(g) Contingency Plans for Fire Emergencies or Hazardous Substance Incidences

Exhibit 18(g) will include a description of all contingency plans to be implemented in response to the occurrence of a fire emergency or a hazardous substation incident.

(h) Provision of Security and Safety Plans to Local Emergency First Responders

Exhibit 18(h) will include a statement that it has provided a copy of the plans listed above and requested review and comment of such plans by local emergency personnel and first responders serving the area of the Facility Site, and a review of responses received.

2.19 NOISE AND VIBRATION

2.19.1 Environmental Setting

Noise can be characterized as unwanted sound that disrupts normal human activities or diminishes the quality of the human environment. The "A-weighted" scale is the most common weighting network used to characterize and evaluate noise. An "A-weighted" decibel value ("dBA") is measured in the sound level meter after the ambient sound passes through a set of internal filters that simulates the frequency sensitivity of the human hearing mechanism.

The setting of the proposed Project is primarily rural areas and open spaces. In such settings, ambient noise levels are often lower than those found in suburban or urban areas and are typically composed of such sources as motor vehicle traffic; farming equipment; agricultural activities such as plowing and irrigation; local roadways; periodic aircraft flyovers; and natural sounds such as birds, insects, and leaf and vegetation rustle during windy conditions. Weather conditions such as wind and precipitation may also be primary drivers of ambient sound levels in rural areas and open spaces. Rural area sound levels are typically lower during the night compared to the daytime, except when nighttime insect noise may dominate during the summer season.

Background noise in the vicinity of the proposed Project reflects primarily rural farmlands, small town and suburban communities. For land uses most representative of the Study Area, average outdoor noise values of 30 A-weighted decibels (dBA) is typical for nighttime (10pm to 7am) in rural areas, and 40 dBA is typical for suburban area at night. Daytime average sound levels in these types of land use areas are typically higher due to sound produced by increased traffic and other general daytime activities and range from 40 to 50 dBA (Cowan 1994).

2.19.2 Potential Impacts and Mitigation

Sound emissions from utility scale solar projects are largely confined to the step-up transformer in the substation, electrical inverters and medium-voltage transformers installed within the interior of the various PV solar panel arrays, and some short-term activities during construction. The electricity generated by the photovoltaic panels will be collected and routed to a step-up transformer in a new substation associated with the Facility. This substation will be similar in design and operation to other like-sized 34.5-69kV/345-kV substations, a typical size for the power industry. The potential noise impact from any substation is a matter of how prominent and audible the tonal sound emissions from the transformer(s) are at the nearest receptors. Tones at harmonics of 120 hertz (Hz) are generated by all transformers and when audible are typically described as a hum near the unit; however, the prominence of these tonal peaks diminish quickly with distance as they attenuate and are masked by background sounds as that distance increases. Apart from the substation transformer, other sound sources of possible significance are the electrical inverters used to convert generated DC power into AC power, medium-voltage transformers that increase the voltage of the power from 1,500 V to 34.5 kV, as well as energy storage systems, if applicable. Typically, the inverter/medium-voltage transformers and storage electrical cabinets are situated within and near the center of each solar array, or independent group of solar panels, so they are usually a considerable distance from the perimeter fence and potential neighbors beyond.

A field study of inverter sound emissions at several existing large-scale solar facilities was carried out for the Massachusetts Clean Energy Center, an agency of the Massachusetts state government, in 2007, and indicates that any noise from these cabinets generally drops into the background level and becomes insignificant at distances beyond about 150 feet (Guldberg 2012). Consequently, any conventional solar field layout will likely result in a situation where the inverters are more than 150 feet from any neighbor. Nonetheless, the impact of projected sound levels from the inverters will be evaluated.

Noise will be generated during project construction and maintenance, primarily from vehicles and equipment operating along access routes and at work areas. However, these are temporary activities that will be similar to routine noise sources such as farm equipment and vehicles passing on the road. The construction will include the insertion into the ground of the piles on top of which the racking will sit. These piles will be installed with pile driving or drilling machines, which could create minor and short-term vibration impacts in the immediate vicinity during construction.

EDF Renewables will conduct background sound monitoring surveys during both winter/leaf-off and summer/leaf-on conditions to measure the existing sound levels at positions representative of the soundscape around the nearest sensitive receptors to the Project substation and inverters as the first step in a modified Composite Noise Rating (CNR) analysis to establish the baseline background conditions and in fulfilling the requirements of Article 10. In addition, the Article 10

Application will include a pre-construction noise impact assessment to evaluate the projected sound emissions from the proposed Project components. The assessment will estimate sound emissions on the sensitive receptors nearest to the substation and inverters. The assessment will be used to determine what noise abatement measures, if any, should be incorporated into the Facility design to meet the Project noise design goals and any applicable local noise ordinances. To minimize noise during construction, the following types of measures may be appropriate:

- Use vehicles and equipment equipped with mufflers and/or silencers;
- Limit on-site construction activities to the hours specified by local codes; and
- Implement a Complaint Resolution Plan.

2.19.3 Regulatory Framework

A preliminary list of regulations and plans to be reviewed with respect to noise and vibration includes the following:

- New York DEC Program Policy Assessing and Mitigating Noise Impacts, Revised 2001;
- Local codes applicable to construction activities at the Facility; and
- American National Standards Institute.

2.19.4 Proposed Content of the Application

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

A Pre-construction Noise Impact Assessment, as outlined in the following subsections, to evaluate the projected sound emissions from noise-producing equipment.

(a) Sensitive Sound Receptor Map(s)

The Application will include map(s) of the Sound Study Area, which will extend at least 1,500 feet from the nearest solar panel, inverter, transformer, or other noise-generating source, not including distribution lines or access roads, or until the 30-dBA noise contour is reached, whichever is greater.

The Application will include maps showing the Project's noise-producing equipment in relation to the nearest sensitive sound receptors including residences, schools, hospitals, libraries, places of worship, cemeteries, public parks, and seasonal homes. Note that with respect to parks, federal, and state lands, only public facilities and publicly accessible areas are considered noise-sensitive receptors, such as picnic areas, rest areas, trails, and campgrounds. Seasonal receptors, such as cabins and hunting camps, will be identified by property tax codes

where feasible based on public records. Buildings without septic systems or running water will not be identified as sensitive receptors. The Applicant will continue to solicit feedback on noise sensitive receptors from landowners and local authorities, and identified noise sensitive receptors will be included in the Pre-construction Noise Impact Assessment, as appropriate.

The maps will show all sensitive sound receptors and property lines, differentiating participating and non-participating parcels, and include all substantive noise sources included in the modeling (transformers, inverters, tracking motors, if any, and energy storage, if any).

(b) Ambient Pre-Construction Baseline Noise Conditions

Background sound monitoring surveys during both winter/leaf-off and summer/leaf-on conditions to measure the existing sound levels at positions representative of the nearest potentially sensitive receptors to the Project substation and inverters. The full and 1/3 octave band spectra on a continuous 10-minute time resolution will be measured over at least a 48-hour period and will record, at a minimum, the L_{90}, L_{50}, L_{10}, and L_{eq} levels.

The presence of any existing tones that might be present at the receptor points will be evaluated per American National Standards Institute S12.9 Part 4 – Annex C. This method defines prominent discrete tones in terms of the prominence of the 1/3 octave band containing the suspected tone above the average of the adjacent 1/3 octave bands. Prominence/perceptibility is frequency dependent and the thresholds are generally taken as 15 decibels for tones between 25 and 125 hertz, 8 decibels for frequencies between 160 and 400 hertz, and 5 decibels for frequencies between 500 and 10,000 hertz. Tonal periods will be further screened to determine if the tonal sound is audible using Table 7 of ISO 387-7 (2005).

Ambient pre-construction baseline noise conditions will be measured by following relevant portions of the applicable American National Standards Institute/ASA standards for measurement of sounds. In particular:

i. Sound Instrumentation: Class 1 or Class 2 sound level meters and Type 1 acoustical calibrators for field sensitivity checks.

ii. Sound Level Meters Sound Floor: Equal to or lower than: 25 dBA for overall A-weighted measurements and at least 39 decibels from 12 hertz to 16 hertz (if used), 28 decibel from 20 hertz to 31.5 hertz, 20 decibels from 40 hertz to 5,000 hertz, and 24 decibels above 5,000 hertz for any 1/3 octave band spectrum analyzer.

iii. Wind Screens: 7-inch-diameter foam or equivalent.

iv. Microphone Height: Approximately 1.5 meters above grade.

v. Sound Level Meter Temperature Range: At least from 14° to 122°.

vi. Relative Humidity Range for Sound Level Meters: from 30% to 90%.

vii. Wind Speed: Measured at microphone height at each location. Wind direction, temperature, relatively humidity, and rainfall can be measured at a single location on site or taken from the nearest METAR/NWS station.

viii. NIST-Traceable Sound Level Meter Calibration: Acoustical calibrator 1 year; sound level meters 2-years or less.

ix. Meter Settings: 1-second Leq logging.

x. Range of Sound Frequencies: 1/3 octave bands between 20 and 10,000 hertz.

xi. Proposed Time Frames: Tests during winter and summer. Collect, at a minimum, 48 hours of valid data during each season.

xii. Testing Standard: To the extent applicable, American National Standards Institute S12.18.

Monitoring positions will be selected to represent as many soundscapes as possible. These may or may not be in the most impacted locations, but rather representative of different sound environments in the area. For example, such representations may be receptors close to or on public lands, near highways of different traffic volumes, agriculture, wooded areas, and dense residential areas. At least one sound monitor should be near the proposed substation. To the extent practical, microphones should be positioned at least 50 feet from the nearest highway and away from local noise sources (wind chimes, air conditioners, fans, etc.) and at least 25 feet from any vertical reflecting surface (walls of homes, etc.).

The results will be filtered to exclude high-frequency biogenic sound when it is detected[1] (ANS-weighting according to American National Standards Institute S12.100) and periods of rain or sleet, wind speed exceeding 5 meters per second (11 miles per hour) at the sound microphone, and out-of-range temperature and humidity. Summary tables of both A- and ANS-weighted results will be reported.

Provisions for analysis of results, reporting, and documentation: A report of ambient pre-construction baseline noise conditions will be included as an Appendix to the Application including sound instrumentation specifications, certificates of calibration, summary of weather conditions during the survey, tested locations and results. Broadband ANS-weighted[2] sound levels will be reported in graphs plotted as a function of time at each evaluated position showing exclusions (due to wind speed, temperature, relative humidity, or rain). For each location, the overall L10, L50, and L90 will be plotted by 1/3 octave band.

[1] *A "smart-ANS" weighting will be used, where the ANS low-pass filter (ANSI S12.100) will be applied to one-second periods where tonal sound over the 1,250 Hz 1/3 octave band is found. The filter defines tonality on the basis of ANSI S12.9 Part 4 Annex C, with the modification that each 1/3 octave band is tested along with the combination of adjacent 1/3 octave bands. This method captures tonality for biogenic sounds that have a peak frequency near the confluence of two 1/3 octave bands. If tonality is not detected, then the ANS filter is not applied. This is the same method used in both Cassadaga and Baron Article 10 PNIAs.*

[2] *"Smart-ANS" weighting*

(c) Modeling of Construction Sound Levels

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

i. Noise resulting from construction will be modeled using the Cadna/A software or similar and sound power data from the *Federal Highway Administration Highway Construction Noise Handbook FHWA-HEP-06-015,* as applicable. Section 6.4 of the *Federal Highway Administration Highway Construction Noise Handbook* will be used to provide a general approach to construction noise prediction methodology.

ii. The *Federal Highway Administration Construction Noise Handbook* database will be used for reference where appropriate.

iii. To the extent the information is known, the Application will also 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 the evening time (6 pm to 10 pm, nighttime (after 10 pm or before 7 am), during weekends (Saturdays and Sundays), or national holidays.

iv. Computer noise modeling software that incorporates the ISO 9613-2 propagation standards will be used for the main phases of construction (e.g., clearing, foundation, and installation of solar panels and transformers) at the most impacted receptor.

A contour map showing construction sound levels will be provided for the most impacted receptor. A table will be provided showing sound pressure levels for each piece of equipment at a reference distance of 50 feet, as well as the closest distance to a non-participating sensitive receptor.

(d) Modeling of Operational Sound Levels

The octave band sound power level spectrum of the proposed noise generating equipment will be calculated or otherwise obtained. An A-weighted sound level contour map out to 30 dBA will be provided with 1 dB resolution. Details regarding the modeling of operational sound levels are as follows:

i. Sound propagation modeling will be conducted using ISO 9613-2 with no meteorological correction (Cmet=0).

ii. The ground factor (G) will be set as appropriate to the ground around the closest non-participating sensitive receptor: G=0 for hard ground (including small bodies of water) and G=1 for porous ground. If the ground is half hard/half porous, a ground factor of G=0.5 can be used. The substation ground is gravel and will be modeled between 0.5 and 0.6.

Sound power for all operational equipment will be provided by the manufacturers. If these are not available, then sound power from RSG's library of equipment for a similar sized equipment will be used. Similarly, if only A-weighted sound power levels are available, then RSG's library of spectral shapes will be used to estimate full octave sound power levels.

iii. A discussion of the accuracy of the computer noise modeling using the ISO 9613-2 propagation standard will be included in the Pre-construction Noise Impact Assessment.

iv. If any corrections are applied to any model results, both corrected and uncorrected results will be presented along with a discussion, documentation, and justification for any corrections.

v. A temperature of 10° Celsius and 70% relative humidity will be used in the model, as these generally yield the lowest sound absorption provided by the air.

It should be noted that the exact location of every inverter and medium-voltage transformer is not typically known or defined early in the design process, but the sound analysis will make use of the best available information at the time of the assessment and make a conservative analysis based on worst-case scenarios. If there is no energy storage, there will be three sound models. The first is daytime under full sunlight. This is the maximum sound level and the L10 (the sound level exceeded 10 percent of the time). Under this scenario, the inverters would be operating, and the transformers are under cooling (fans on). The second scenario is daytime where the transformer fans would not be cooled (fans off, lower power scenario). The third is during the night when the inverters are off, and the transformers are still energized and under cooling. The L50 would be one of these scenarios, calculated based on the projected power generated at the site, as a function of sunlight and time of day/year. With energy storage, there would be one or more additional scenarios for energy storage charging and discharging.

(e) Future Sound Levels at Receptors During Facility Operation

Future sound levels during operation of the proposed Facility will be provided including modeled A-weighted sound levels and un-weighted full octave band low frequency levels at all sensitive receptors. The modeling will be done from 31.5 hertz to 8,000 hertz in full octave bands. A tonal evaluation will be based on the sound power of the transformer and inverters (see 1001.19.2(b)4). A discussion for the potential of low frequency sound will be provided using literature and manufacturer data, if available. The Facility is not expected to produce notable infrasound or amplitude modulation.

The latest version of American National Standards Institute S12.9 Part 4 Annex D will be considered for indoor or outdoor low-frequency noise criteria as appropriate. Note that other than from cooling fans used in the inverters to cool the transformers, solar projects do not generate sounds below the 125 hertz 1/1 octave band.

(f) Predicted Sound Levels Table

Predicted sound levels based on sound propagation modeling and background sound level monitoring will be provided in tabular format. One-second L_{eq} data will be collected during background sound monitoring. The L90 will be the 1-second L_{eq} exceeded 90 percent of the time in any period.[3] This will be summarized by day, night, and overall.

(g) Applicable Noise Standards

Applicable noise standards and guidelines will be described in the Pre-construction Noise Impact Assessment including local municipal standards, New York State Department of Environmental Conservation guidelines, World Health Organization guidelines, American National Standards Institute standards, and EPA guidelines to develop Project noise design goals. Neither Sardinia nor Concord have noise standards specific to solar facilities in their zoning ordinances.

With respect to World Health Organization, the Pre-construction Noise Impact Assessment will consider World Health Organization 1999 outdoor noise guidelines and the World Health Organization Europe 2009 nighttime guideline. World Health Organization Europe 2018 will not be used as it applies to only transportation, wind turbine, and leisure noise. No indoor guidelines will be considered as there is no way to know in advance the outside to inside sound attenuation of each home in the area. No interior design goals or regulatory limits will be made.

The Application will discuss low-frequency design goals in the 32.5 hertz and 63 hertz octave bands. No infrasound design goals or regulatory limits will be proposed as solar projects do not generate substantive infrasound.

The Pre-construction Noise Impact Assessment will discuss design goals for the substation and will include a review of prior Article 10 and Article 7 cases and their applicability to this case. This will include a review of the applicability of tonal penalties.

(h) Noise Standards Comparison

The Application will include a tabular comparison of the noise standards applicable to the Facility including any local requirements and design goals for the Facility and the degree of compliance indicated by computer noise modeling at the representative external property boundary lines of the Facility and related facilities and ancillary equipment sites and at the representative nearest and average noise receptors. Note that at this time, there are no local noise standards applicable to this Facility. If there were, the Pre-construction Noise Impact Assessment will include a discussion of the parameters, assumptions and corrections that are used for sound level predictions. The Pre-construction Noise Impact Assessment will include

[3] *ANSI S12.100-2014*

the number of receptors that will be exposed to project sound levels that exceed any identified local noise standard, project design goal, or proposed regulatory limit (in terms of absolute and percent values).

Participant and non-participant boundary lines will be indicated and differentiated in the map and sound contour drawings. Degree of compliance with noise design goals at the boundary lines of the Facility will be stated in the Application. A large-scale map (ANSI D) will be included that show the sound contours, along with parcel tax ID numbers. At least one table will be included in the Pre-construction Noise Impact Assessment to correlate tax ID numbers to Receptor IDs.

(i) Noise Abatement for Construction Activities

Although impacts related to construction noise will be temporary, and are not anticipated to be significant, best management practices for sound abatement will be implemented during construction, including use of appropriate mufflers and limiting hours of construction where practicable, and turning off construction vehicles when not in use. The Pre-construction Noise Impact Assessment will list general examples of noise mitigation measures that may be applied to address reasonable complaints from construction noise. The Pre-construction Noise Impact Assessment will also include a Complaint Resolution Plan, to be implemented during construction, operation, and decommissioning of the Project.

(j) Noise Abatement for Facility Design and Operation

The model will be used to determine what noise abatement measures, if any, might need to be incorporated into the Facility design to meet the Project noise design goals. Noise mitigation alternatives will be discussed in the Pre-construction Noise Impact Assessment and, as applicable, in Exhibit 9.

(k) Community Impact Assessment

This section of the Application will include the following:

1. Potential for Hearing Damage

   The potential for the Facility to result in hearing damage based on Occupational Safety and Health Administration standards, the recommendations of the U.S. Environmental Protection Agency, and the guidelines of the World Health Organization.

2. Potential for Speech Interference

   A discussion of the potential for indoor and outdoor speech interference based on guidelines from the U.S. Environmental Protection Agency and the World Health Organization.

3. Potential for Annoyance/Complaints

   The study will include a modified Composite Noise Rating analysis at each design point based on the measured average octave band background sound level, seasonality, character, and attitudinal adjustments. A final Composite Noise Rating for each location will be determined and further evaluate if noise mitigation, such as a local noise barrier for the transformer or low noise transformer, would be appropriate to maintain a Composite Noise Rating of C (no reaction to sporadic complaints) or less.

4. Potential for Sound-Induced Vibration and Annoyance

   The potential for sound-induced vibration and annoyance at the low frequency bands of 16, 31.5 and 63 Hz will be assessed using outdoor criteria established in Annex D of American National Standards Institute standard S12.9 -2005/Part 4. Applicable portions of American National Standards Institute 12.2 (2008) may be used for the evaluation of frequency bands as appropriate. However, it should be noted that there is no mechanism for the generation of any substantial sound below 120 hertz in the transformers or inverters.

   Blasting is not anticipated for the Project. If horizontal directional drilling is proposed, Exhibit 21 will include an evaluation of the feasibility and potential impacts. As noted in Section 2.19.2(c) of the Scoping Statement, the Application will include an evaluation of the possibility of noise or vibration-related disturbance from any construction phase activity. Noise resulting from construction will be modeled using the Cadna/A software or similar and sound power data from the *Federal Highway Administration Highway Construction Noise Handbook FHWA-HEP-06-015,* as applicable.

5. Potential for Structural Damage and Interference Technological, Industrial, or Medical Activities that are Sensitive to Sound

   The Article 10 Application will discuss the potential for structural damage; and the potential for interference with technological, industrial or medical activities that are sensitive to vibration or infrasound within 1 mile of the Facility Site.

(l) Post-construction Noise Evaluation Studies

The solar facility is not expected to generate substantial sound outside the Project boundaries. As a result, the Application will propose that no routine post-construction sound evaluation be conducted if the 30 dBA Project sound contour is within the Project and/or participating lands. If the 30 dBA Project contour overlaps with a non-participating sensitive receptor, then the Applicant will develop a post-construction sound monitoring protocol, focusing on short-term daytime measurements (when worst-case noise emissions are expected) and generally following the standards of American National Standards Institute S12.9 Part 3, "Quantities and Procedures for Description and Measurement of Environmental Sound – Part 3: Short-term Measurements with an Observer Present." The protocol will be implemented in response to

noise complaints directed at the Facility. Note that the post-construction sound monitoring protocol will generally follow American National Standards Institute S12.9 Part 3; however, American National Standards Institute S12.18 will also be considered.

(m) Identification of Practicable Post-construction Operation Controls and Other Mitigation

The Pre-construction Noise Impact Assessment will identify practicable post-construction operational controls and other mitigation measures that will be available to address reasonable complaints, including a description of a complaint-handling procedure that will be provided during periods of operation. Mitigation measures will focus on barriers and berms control of harmonics, and proper maintenance.

(n) Computer Noise Modeling

The computer noise modeling values used for the major noise-producing components of the Facility will fairly match the unique operational noise characteristics of the particular equipment models and configurations proposed for the Facility. The software input parameters, assumptions, and associated data used for the computer modeling will be provided. The modeling will follow the standards of ISO 9613-2 with parameters that have been shown to yield accurate results for similar types of facilities. Such parameters will include terrain, ground cover, source and receiver heights, ground attenuation methodology, atmospheric attenuation, and consideration of uncertainty. Estimates of annualized sound levels will consider the amount of available sunlight, daylight hours, and associated sound emissions.

Sound power level information from the relevant equipment manufacturers will be included in the Application, but may be provided only under a protective agreement if marked as confidential. If sound power level information is not available from the manufacturers, it may be estimated using acoustical formulae. The methodologies for estimation and results will be described in the Application. If sound power level information is based on actual sound readings from a similar piece of equipment, the measurement procedure will be described along with a discussion of similarities and differences regarding the proposed equipment and whether any corrections to the input data or output results were applied.

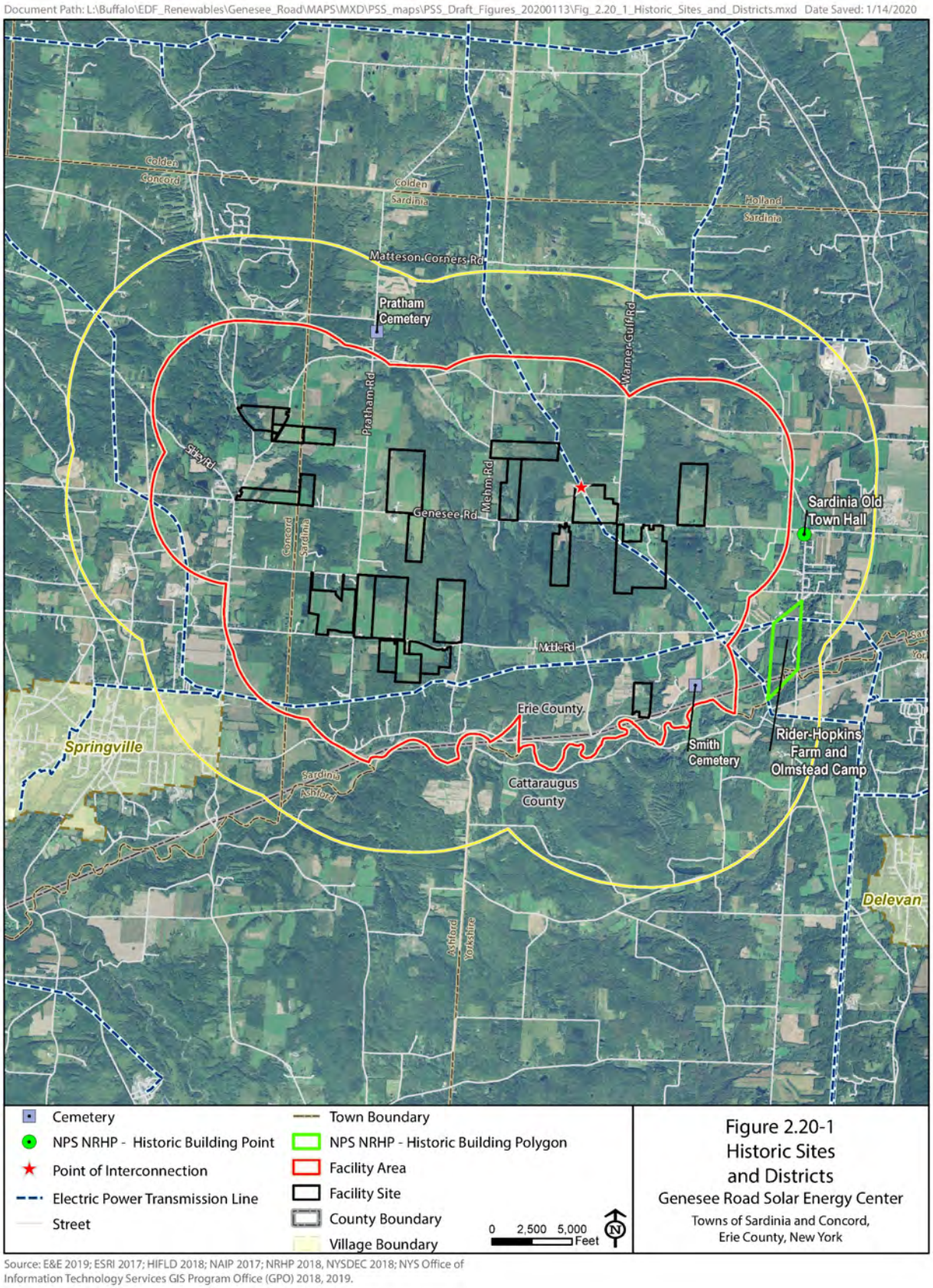
Geographic information system files used for computer noise modeling including noise source and receptor locations, topography, and boundary lines will be forwarded to Department of Public Service Staff in digital media, if requested. Any proprietary information will be marked as confidential.

2.20 CULTURAL RESOURCES

2.20.1 Environmental Setting

Cultural resources typically consist of archaeological and architectural resources. Archaeological resources in New York can consist of prehistoric and historic archaeological sites and isolated finds and the remains of buildings and structures (such as railroad beds, canals, etc.). Architectural resources in New York are associated with the built environment, typically consist of existing buildings and structures (such as roads, bridges, etc.), and for the purposes of cultural resources analysis, are usually 50 years old or older. Those cultural resources that meet the eligibility criteria at 9 NYCRR Part 427 are eligible for listing in the State Register of Historic Places (State Register). Historic properties are a subset of cultural resources and are defined as any prehistoric or historic district, site, buildings, structure or object that is included (listed) in, or determined eligible for inclusion (listing) in the National Register of Historic Places (NRHP) (in accordance with National Register criteria found in 36 CFR Part 60). The term historic properties includes artifacts, records, and remains that are related to and located within such properties. Historic properties may also include landscapes, including designed landscapes, cultural landscapes, and rural historic landscapes. This also includes properties that are of traditional religious and cultural importance to an Indian tribe and that meet the National Register criteria. National Historic Landmarks are also listed in the NRHP, but are specially designated properties that have been determined to be of exceptional value to the nation as a whole (in accordance with National Register criteria found in 36 CFR Part 65). All properties listed in or determined eligible for listing in the NRHP are automatically listed in the State Register.

Figure 2.20-1 shows historic sites and districts within a 5-mile-radius. Portions of the Facility Area are located within an archaeologically sensitive area, meaning there is potential to locate archaeological sites. A preliminary review of the historical documentation relevant within a 5-mile radius of the Facility Site identified the NRHP-listed Rider Hopkins Farm and Olmstead Camp; the Sardinia Old Town Hall; the Citizens National Bank in Springville; the Baptist Church of Springville; the U.S. Post Office in Springville; the Arcade and Attica Railroad; the Buffalo, Rochester, and Pittsburgh Railroad Station; and the East Main-Mechanic Streets Historic District. Additionally, 25 building sites are within the Study Area, two of which are listed on the NRHP. In addition, the review of existing infrastructure identified schools and cemeteries within the Study Area that may be considered historic.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Pratham Cemetery
Pratham Rd
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Genesee Rd
Concord
Sardinia
Sardinia Old Town Hall
Mttle Rd
Erie County
Springville
Sardinia
Ashford
Cattaraugus County
Smith Cemetery
Rider-Hopkins Farm and Olmstead Camp
Delevan
Ashford
Yorkshire
Cemetery
NPS NRHP - Historic Building Point
Point of Interconnection
Electric Power Transmission Line
Street
Town Boundary
NPS NRHP - Historic Building Polygon
Facility Area
Facility Site
County Boundary
Village Boundary
0 2,500 5,000 Feet
N
Figure 2.20-1
Historic Sites
and Districts
Genesee Road Solar Energy Center
Towns of Sardinia and Concord,
Erie County, New York
Source: E&E 2019; ESRI 2017; HIFLD 2018; NAIP 2017; NRHP 2018, NYSDEC 2018; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019.

2.20.2 Potential Impacts and Mitigation

Relative to other types of energy generation projects, utility-scale solar facilities present a low risk for impacts to archaeological resources due to the comparatively minimal amount of ground disturbance required during construction and operation. The site design and construction elements to be used in constructing the Facility will minimize the need for soil disturbance wherever possible, by locating the project components away from cultural resources and by utilizing low-impact construction methods. To avoid or minimize impacts on cultural resources, including properties listed or eligible for listing in the NRHP and the State Register, EDF Renewables may implement measures, such as the following:

- Locate the proposed Facility components away from cultural resources or properties listed in, or eligible for listing in, the NRHP or State Register to the maximum extent practicable;
- Use existing roads, where possible, and locate new access roads, work areas, and facilities away from cultural resources wherever feasible; and
- Consult with the NYSOPRHP and other consulting parties during the early stages of planning so that additional impact avoidance measures may be identified, such as vegetative screening at specific locations.

The potential for direct, physical impacts to cultural resources is currently unknown. The Facility's potential effect on cultural resources may result in a change (resulting from the introduction of PV panels or other Facility components) in the visual or auditory setting associated with a given historic resource. These potential effects may be highly variable and are dependent on several factors, including distance to the Facility, the number of visible panels/components, the extent to which the Facility is screened or partially screened by buildings, trees, or other objects, and the amount of existing visual clutter and/or modern intrusions in the view. In addition, visibility of the Facility from surrounding areas is anticipated to be limited because the height of the PV arrays will be approximately 9 feet above grade, and the forested areas and topography surrounding the Facility Site will serve to restrict visibility. A thorough inventory of cultural resources, including any locations/resources proposed for inclusion by agencies, municipalities and others through ongoing outreach efforts, will be compiled in support of the Visual Impact Assessment (VIA) and will be evaluated for potential visual impacts therein.

2.20.3 Regulatory Framework

The regulatory requirements and guidance relevant to the evaluation of cultural resource impacts associated with the Project include the following:

- Section 14.09 of the New York State Historic Preservation Act of 1980;
- Implementing regulations for compliance with Section 14.09 of the NYSHPA at 9 NYCRR Part 428;
- New York State Archaeological Council's Standards for Cultural Resources Investigations and the Curation of Archaeological Collections in New York State (NYAC 1994); and
- Office of Parks, Recreation and Historic Preservation (OPRHP) – State Historic Preservation Office (SHPO) - State Historic Preservation Office Phase I Archaeological Report Format Requirements (NYSOPRHP 2005).

2.20.4 Proposed Content of the Application

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

(a) Archaeological Resources

Exhibit 20(a) will include a full analysis of the potential impacts of the construction and operation of the Facility on archaeological resources.

1. Summary of Impacts and Avoidance Measures

   The Applicant will prepare a summary of the nature of the probable impact on any archeological/cultural resources identified and address how those impacts will be avoided or minimized.

2. Phase 1A Cultural Resources Study

   The Applicant will prepare a Phase 1A Archaeological Resources Survey, which will be submitted through New York State Office of Parks, Recreation and Historic Preservation's Cultural Resource Information System website. The purpose of the Phase 1A archaeological resources survey is to: 1) define the Facility's Area of Potential Effect relative to archaeological resources based on the anticipated area of disturbance for Facility components; 2) determine whether previously identified archaeological resources are located in the Area of Potential Effect; and 3) propose a methodology to identify archaeological resources within the Area of Potential Effect, evaluate their eligibility for the National Register of Historic Places or State Register, and assess the potential effect of the Facility on those resources.

3. Phase 1B Cultural Resources Study

   A Phase 1B Archaeological Survey will be conducted to determine whether archaeological sites are located in the areas of significant proposed ground disturbance for the Facility.

The Phase 1B survey will be conducted under the supervision of a Registered Professional Archaeologist in a manner consistent with the New York State Office of Parks, Recreation and Historic Preservation Phase I Archaeological Report Format Requirements (NYSOPRHP 2005) and the New York Archaeological Council Standards (NYAC 1994). The Phase 1B Archaeological Survey will be conducted in accordance with the methods proposed in the Phase IA archaeological survey, based on consultation with New York State Office of Parks, Recreation and Historic Preservation. This report will be summarized in the Article 10 Application and appended to Exhibit 20.

4. Phase II Study

   If required, the Applicant agrees to provide the information outlined by 1001.20(a)(4) in the Article 10 Application.

5. Archaeological Material Recovered During Cultural Resources Studies

   In the event that any artifacts are recovered during the cultural resources studies for the Facility, the Applicant agrees to provide the information required by 1001.20(a)(5). A complete listing of any recovered artifacts will be included in the Phase IB Archaeological Survey Report.

6. Unanticipated Discovery Plan

   The Article 10 Application will include an Unanticipated Discovery Plan that identifies the actions to be taken in the unexpected event that resources of cultural, historical, or archaeological importance or human remains are encountered during Facility construction. The plan will include a provision for work stoppage upon the discovery of possible archaeological or human remains. Evaluation of such discoveries, if warranted, will be conducted by a professional archaeologist, qualified according to the New York Archaeological Council Standards (NYAC 1994). The Unanticipated Discovery Plan will specify the degree to which the methodology used to assess any discoveries follows the New York Archaeological Council Standards.

(b) Historic Resources

1001.20(b) will include a full analysis of the potential impacts of the construction and operation of the Facility on historic resources.

1. A complete Historic Architectural Survey

   The Applicant is committed to completing an historic architectural survey and associated report. No survey work has been conducted at this time. An historic architectural survey will be undertaken to define the Facility's Area of Potential Effect relative to above-ground historic resources within a 5-mile Study Area; conduct a field review of previously identified above-ground historic resources located in the Area of Potential Effect, as well as their

visual setting; assess if additional above-ground historic resources are located within the 5-mile Study Area and Area of Potential Effect for indirect (visual) effects; and propose a methodology to assess the potential visual and auditory effect of the Facility on those resources.

Area of Potential Effect Relative to Above-Ground Historic Resources

The Facility will not have any physical impacts to above-ground historic resources (i.e., no historic structures will be damaged or removed). The Facility's potential effect on a given above-ground historic resource would be a change (resulting from the introduction of photovoltaic panel arrays or other Facility components) in the property's visual setting. Therefore, the Area of Potential Effect for visual effects on above-ground historic resources must include those areas where Facility components (including photovoltaic panel arrays) will be visible and where there is a potential for a significant visual effect. The Study Area to be used in this analysis is defined per the requirements set forth in 16 New York Codes, Rules and Regulations § 1000.2(ar) for major electric generating facilities.

For recent solar projects reviewed under Article 10[4], the New York State Office of Parks, Recreation and Historic Preservation has indicated that a 5-mile Study Area be established for assessing indirect effects of the Facility on above-ground historic resources. Proposed solar panel visibility is anticipated to be relatively limited as the panels and inverter equipment are not expected to extend more than 9 feet above grade and the forested areas and topography surrounding the Facility Site will serve to significantly restrict visibility. A 5-mile radius Study Area will be evaluated in the Application to ensure that potential visual effects on historic properties are adequately considered. A thorough inventory of above-ground historic resources, including any locations/resources proposed for inclusion by agencies and municipalities and other through ongoing outreach efforts, will be compiled in support of the Visual Impact Assessment and will be evaluated for potential visual impacts therein.

Methodology to Identify Above-Ground Historic Resources and Assess Potential Effects of the Facility

Historically significant properties are defined herein to include buildings, districts, objects, structures and/or sites that have been listed in the National Register of Historic Places or State Register, as well as those properties that New York State Office of Parks, Recreation and Historic Preservation has formally determined are eligible for listing in the National Register of Historic Places or State Register.

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

Criteria set forth by the National Park Service for evaluating historic properties (36 CFR 60.4) state that (NPS 1990):

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:
>
> (A) That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (B) That are associated with the lives of persons significant in our past; or
>
> (C) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> (D) That have yielded, or may be likely to yield, information important in prehistory or history.

Criteria for the State Register are set forth by 9 CRR-NY 427.3 and include the following:

> (A) The quality of significance in American history, architecture and culture is present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association, and:
>
> (1) that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (2) that are associated with the lives of persons significant in our past; or
>
> (3) that embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> (4) that have yielded, or may be likely to yield, information important in prehistory or history (9 CRR-NY 427.3).

The methods and results of the survey will be summarized in an illustrated historic resources survey report, along with an annotated properties table that will include an entry for each identified property. The annotated properties table will include one or more photographs of each property, a brief description of the property (name, address, estimated age, architectural style, materials, etc.), an assessment of its condition, and an evaluation of significance. The initial survey results and recommendations of National Register of Historic Places or State Register eligibility will be provided to New York State Office of Parks,

Recreation and Historic Preservation via the Cultural Resources Information System database. The Applicant will request that New York State Office of Parks, Recreation and Historic Preservation review these results and provide determinations of eligibility prior to completing a historic resources effects analysis for the Facility, so that only the potential effects of the Facility on historic properties determined eligible by New York State Office of Parks, Recreation and Historic Preservation are considered.

2. A Summary of the Nature of the Probable Impact of Facility Construction and Operation on Any Above-Ground Historic Resources

   Following New York State Office of Parks, Recreation and Historic Preservation's review of the above-ground historic resources survey results for the Facility, the Applicant will prepare an above-ground historic resources effects analysis that will evaluate the potential visual and auditory effects of the Facility on properties determined by New York State Office of Parks, Recreation and Historic Preservation to be National Register of Historic Places or State Register-eligible. The effects analysis will specifically address effects of the Facility associated with National Register of Historic Places or State Register eligible and listed sites and/or districts within the Area of Potential Effect and will include visual simulations where appropriate. The effects analysis will also include recommendations regarding potential cultural resources mitigation projects, as appropriate. The above-ground historic resources effects analysis will be provided to New York State Office of Parks, Recreation and Historic Preservation via the Cultural Resources Information System database and provide the basis for the evaluation of potential visual effects on above-ground historic resources included in Exhibit 24 (Visual Impacts) of the Article 10 Application. The completed historic resources effects analysis will be submitted as part of the Article 10 Application.

2.21 GEOLOGY, SEISMOLOGY, AND SOILS

2.21.1 Environmental Setting

The Facility Site is in the southeastern part of Erie County, within the Allegheny Plateau (a physiographic section of the larger Appalachian Plateau). The Facility Area 's elevation ranges from 1,240 to 1,919 feet above mean sea level and borders the north side of Cattaraugus Creek and Highway 39 along Pratham Road. Based on a desktop review, the geology at the Facility Area consists of Till (6,200 acres, 77%), Outwash sand and gravel (1,290 acres, 16%), Kame deposits (360 acres, 4.6%), Till moraine (126 acres/1.6%), and Colluvium (1.95 acres, 0.03%) (NYS Museum/NYS Geological Survey 1999). Bedrock found at the Facility Site is characterized as primarily of shale, sandstone, and siltstone from the Upper Devonian age (USGS n.d.). Based on GIS analysis, the Facility Area has approximately 300 acres of Hydric soils which represents 3.89% of the total area. (NYS Museum/NYS Geological Survey 1999).

A wide variety of soil types are documented within the county according to the Soil Survey of Erie County, New York (USDA NRCS 2018). Table 2.21-1 describes the major soil series (comprising 15 acres or more) within the Facility Site, along with their soil series description. Soil Series is a category within the soil classification system and are defined based on color, texture, structure, reaction, consistence, mineral and chemical composition and arrangement on the soil profile. This type of information is important in identifying areas suited for construction. Figure 2.21-1 identifies the soil series within the Facility Site that are greater than 15 acres.

Table 2.21-1 Soil Series within the Facility Site

Soil Series	Soil Series Description
Chenango	The Chenango series consists of deep, well drained to somewhat excessively drained soils on outwash plains and associated moraines, terraces, deltas, remnant beaches, and alluvial fans. These soils formed in Water sorted deposits. Slopes ranges from 0 to 50 percent but is dominantly 0 to 8 percent.
Castile	The castile series consists of deep, moderately well drained soil on terraces, outwash plains, and remnant deltas, mostly in the glacial outwash deposits that have a high content of sand and gravel. Slope ranges from 0 to 8 percent.
Fluvaquents and Udifluvents	The Fluvaquents consist of moderately deep and deep, somewhat poorly drained soils that formed in recent alluvial deposits. These soils have little or no soil profile development. They are adjacent to streams that are subject to frequent flooding. Slope ranges from 0 to 3 percent but is mostly less than 2 percent. Udifluvents consist of deep, moderately well drained and well drained soils adjacent to streams that are subject to frequent flooding. These soils formed in recent alluvial deposits and have little or no soil profile development.
Langford	The Langford series consists of deep, moderately well drained and well drained soils on the upland plateau in the southern part of Erie County. These soils formed in glacial till deposits derived mainly from shale and limestone. In some areas the glacial till is underlain by lacustrine silt and clay. These soils have a dense fragipan in the lower part of the subsoils. Slope ranges from 3 to 25 percent
Mardin	The Mardin series consists of deep, moderately well drained soils on the upland plateau in the southern part of the county. These soils formed in glacial till deposits derived mainly from acid shale and sandstone. They have a dense fragipan in the lower part of the subsoil. Slope ranges from 3 to 50 percent but is dominantly 3 to 15 percent.

Table 2.21-1 Soil Series within the Facility Site

Soil Series	Soil Series Description
Marilla	The Marilla series consists of deep, moderately well drained soils at the fringe of the upland plateau and in a few isolated areas of the lowland plain. These soils formed in shaly glacial till deposits. They have a dense fragipan layer in the subsoil. Slope ranges from 0 to 15 percent but is dominantly 3 to 8 percent.
Middlebury	The Middlebury series consists of deep, moderately well drained to somewhat poorly drained soils on nearly level flood plains and on few alluvial fans. These soils formed in alluvial deposits derived from upland soils having a high component of shale and sandstone. Slope ranges from 0 to 3 percent.
Red Hook	The Red Hook series consists of deep, somewhat poorly drained soils on glacial outwash plains and stream terraces through the county. Those soils formed in outwash and stream deposits. Slope ranges from 0 to 3 percent.
Valois	The Valois series consists of deep, well drained soils on reglaciated outwash moraines, lateral moraines, and recessional moraines. These soils formed in glacial till deposits dominated by material derived from sandstone, siltstone, and shale. Slope ranges from 3 to 25 percent but is dominantly 8 to 25 percent.
Varysburg	The Varysburg series consists of deep, well drained and moderately well drained soils on dissected lake plains and valley sides where gravelly deposits are 20 to 40 inches thick over fine textured sediments. These soils formed in gravelly glacial outwash deposits and the underlying clayey lake sediments. Slope ranges from 0 to 40 percent but is dominantly 3 to 8 percent.
Volusia	The Valois series consists of deep, well drained soils on reglaciated outwash moraines, lateral moraines, and recessional moraines. These soils formed in glacial till deposits dominated by material derived from sandstone, siltstone, and shale. Slope ranges from 3 to 25 percent but is dominantly 8 to 25 percent.

Source: Soil Survey of Erie County, New York (USDA NRCS 1986).

Ground slopes can have a large impact on construction, with steep slopes being more difficult to build on and requiring a different construction approach to limit erosion than areas with no or gradual slopes. Figure 2.21-2 show the percent slopes for the surrounding watershed and Facility Area.

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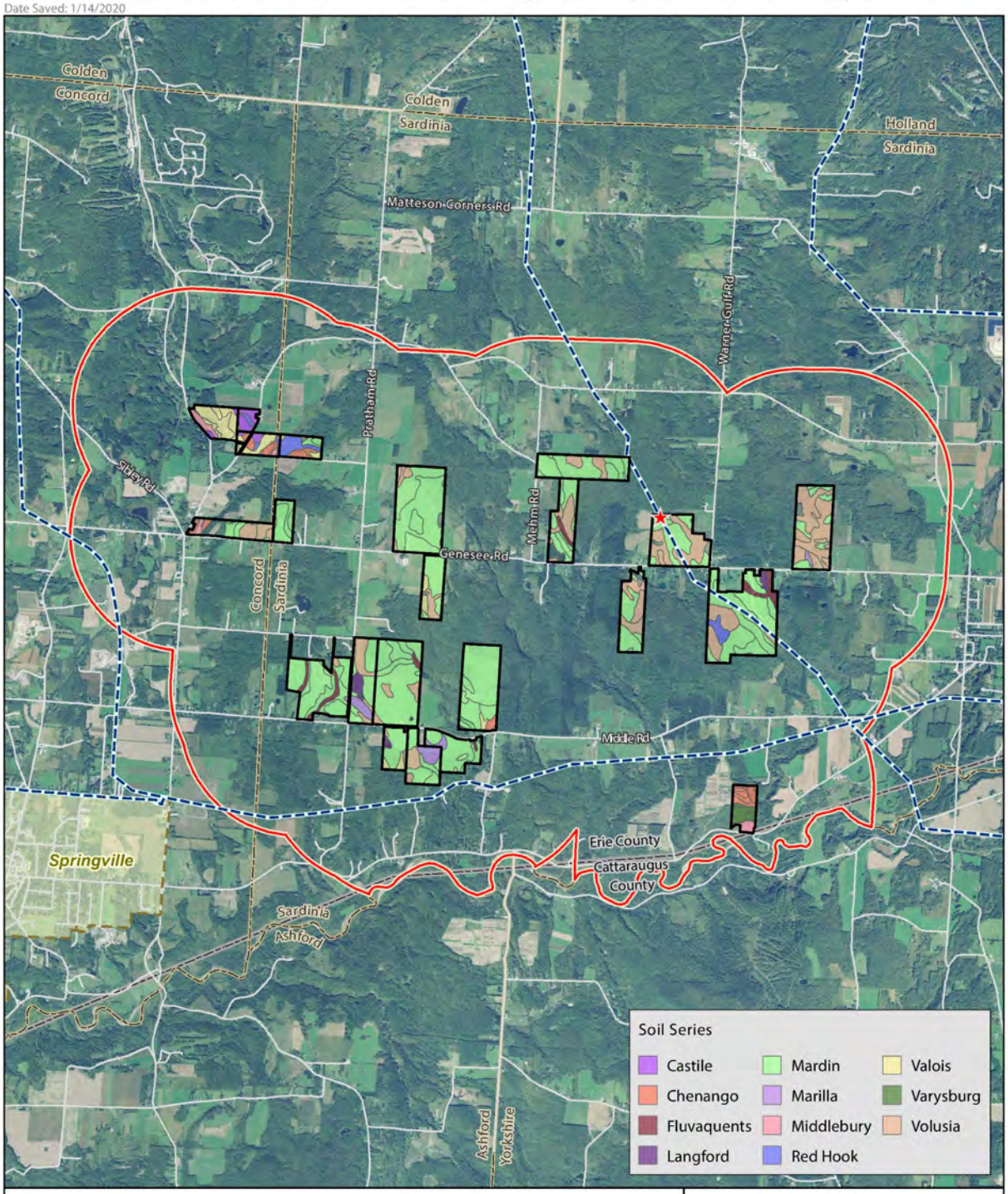

Figure 2.21-1
Soil Series
within the Facility Site
Genesee Road Solar Energy Center
Towns of Sardinia and Concord,
Erie County, New York

Source: E&E 2019; ESRI 2017; HIFLD 2018; NAIP 2017; NLCD 2016; NYSDEC 2018; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019; USDA 2018.

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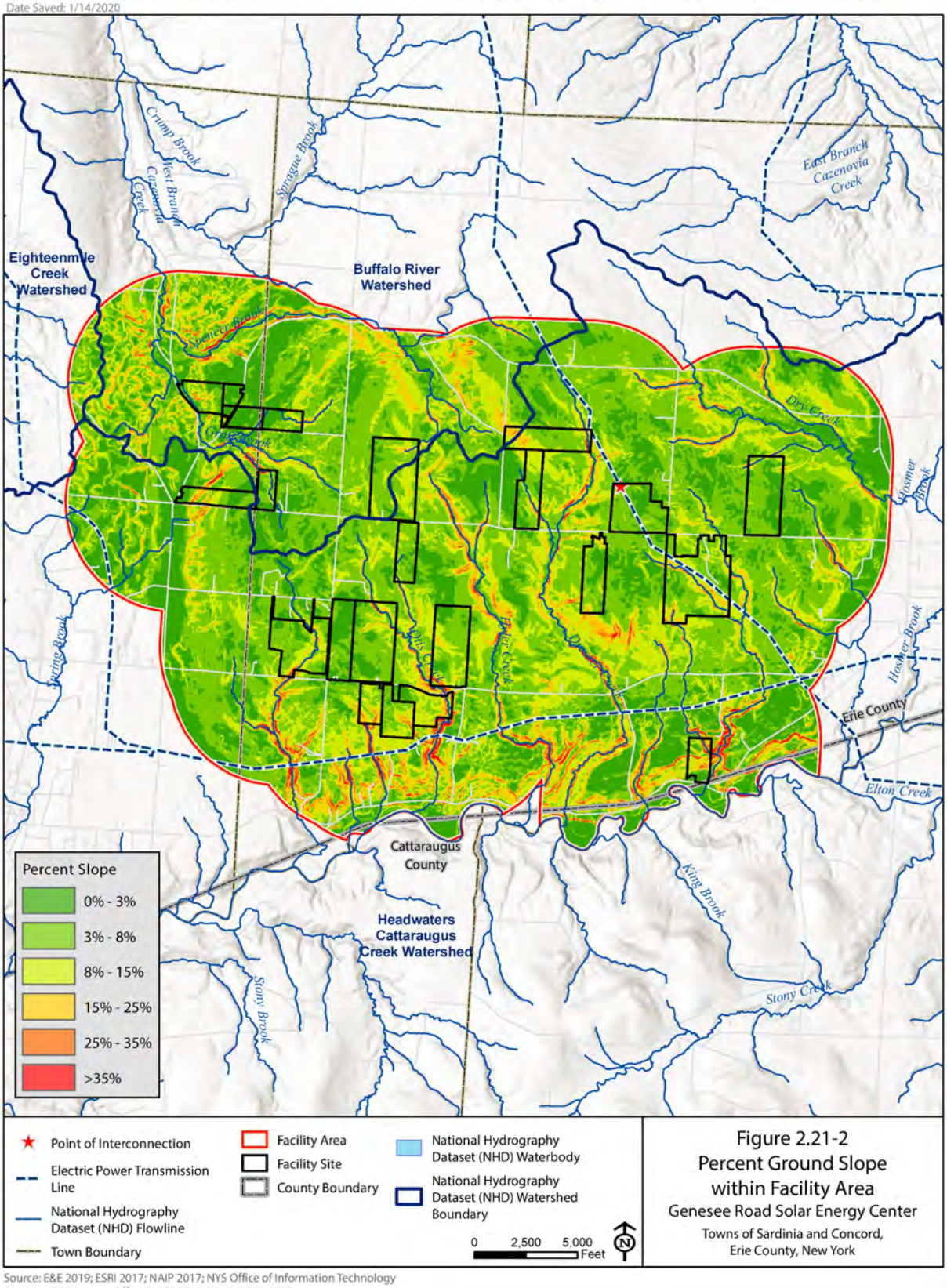

Figure 2.21-2
Percent Ground Slope within Facility Area
Genesee Road Solar Energy Center
Towns of Sardinia and Concord, Erie County, New York

Source: E&E 2019; ESRI 2017; NAIP 2017; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019; USGS 2017

Based on the 2014 New York State Hazard Map (USGS 2014) and the Homeland Infrastructure Foundation Level Data (HIFLD 2019[a],[b]), the Facility Site is located in an area of relatively low seismic hazard. Since 1950, there have been five earthquakes greater than 2.5 on the Richter scale with centers located approximately 25 miles from the Facility Site. Three of these earthquakes were 2.9, 2.6, and 2.9 on the Richter scale and occurred in 2009, 2007, and 2004, respectively. The other two earthquakes were 4.1 (1967) and 4.3 (1966) on the Richter scale (USGS 2019). Earthquakes between 2.5 and 5.4 Richter scale are often felt, but only cause minor damage. The USGS Earthquake Hazards Program does not list any young faults, or faults that have had displacement in the current geologic age within the vicinity of the Facility Site (USGS 2018).

Natural gas in the bedrock can be found throughout the region and, with the presence of natural gas, wells have been installed to extract the gas. Based on NYSDEC's New York State Mines and Well data (NYSDEC n.d.[d]), there are several gas wells throughout the 1 and 2 mile radius from the Facility Site with several within the boundaries of the Facility Site parcels or very close to the parcels (Figure 2.21-3).

2.21.2 Potential Impacts and Mitigation

General construction activities potentially affecting geology, seismology, and soils include construction of temporary and permanent access roads; vegetation clearing and grading for and installation of project structures; and cleanup and restoration. Earthwork during construction of the Facility is expected to include only minor site grading, as necessary, to create finished grade slopes suitable for racking installation and stormwater management. EDF Renewables will generally avoid impacts by measures such as the following:

- Implement erosion and sedimentation control practices consistent with the site's final SWPPP which may include:
  - Stockpiling soil outside of known floodplains;
  - Minimizing the width of clearing; and
  - Clearing vegetation while leaving root masses in place to. Cleared vegetation would be left in place depending on location and landowner preferences.
- Use excavated soil for fill where suitable and to support restoration of the site.
- Minimize construction activities, where practicable, on soil types at risk to impacts. Access to wet soil areas would be conducted with equipment suited for that purpose (e.g., wide flotation tires, temporary mats, etc.).

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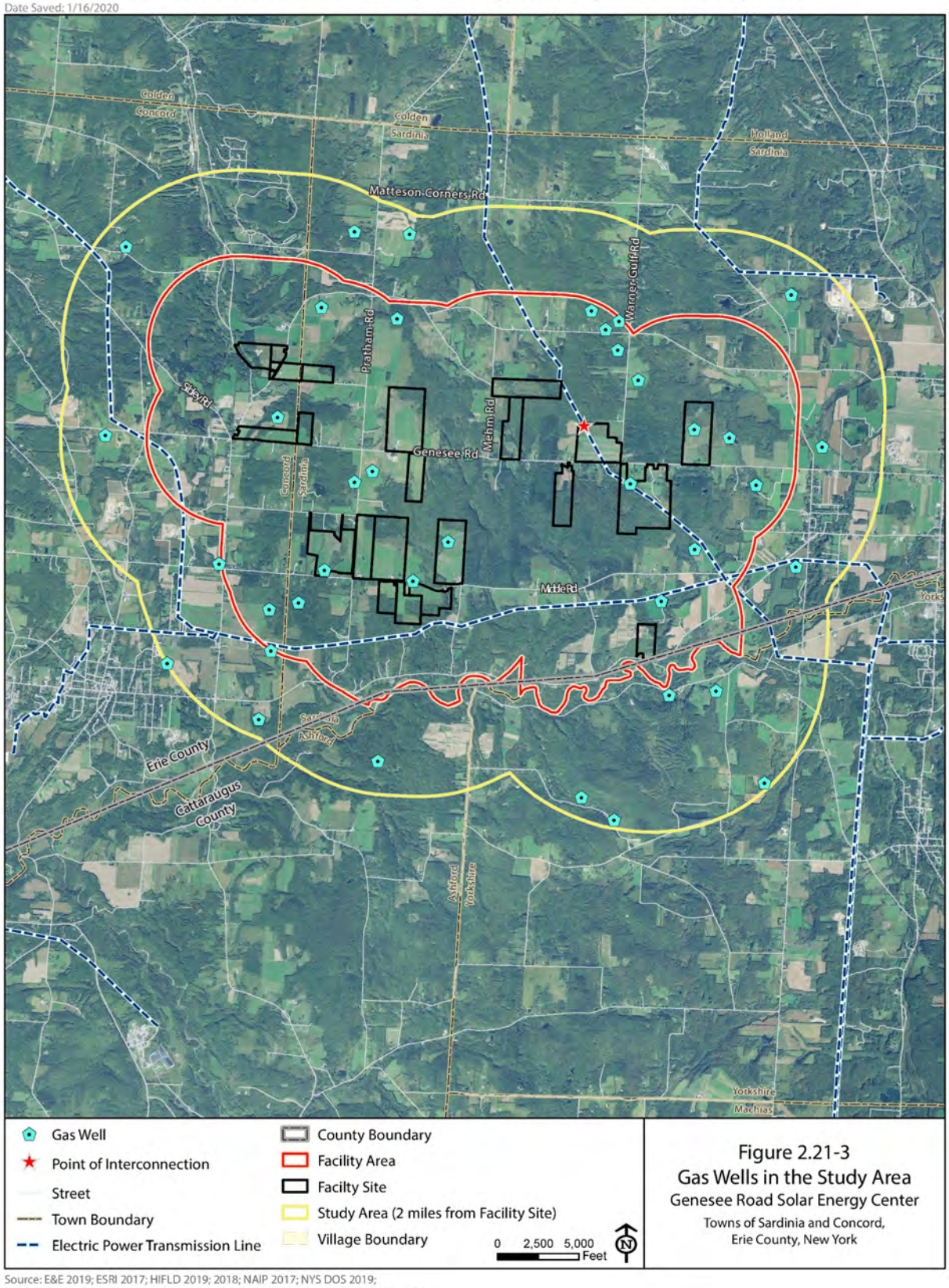

Figure 2.21-3
Gas Wells in the Study Area
Genesee Road Solar Energy Center
Towns of Sardinia and Concord,
Erie County, New York

Source: E&E 2019; ESRI 2017; HIFLD 2019; 2018; NAIP 2017; NYS DOS 2019;
NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019.

- Restore disturbed areas, including breaking up compacted soils caused by heavy equipment and blading to level rutted soils where possible. Careful stockpiling and selective replacement of excavated soil, combined with appropriate grading and revegetation practices, would be conducted to facilitate stabilization of disturbed areas and limit erosion potential once construction activities are complete.

The impacts of construction and operation of the Facility on regional geology is anticipated to be minor but will be evaluated in the Article 10 Application. The Preliminary Geotechnical Investigation will define the soil and geological characteristics of the Facility Site and address their suitability for Facility construction. This stand-alone report will be based on a Facility-specific site visit conducted by a geotechnical expert, review of publicly available data, and test borings to be completed at a subset of PV panel and other Facility component locations. In addition, before construction commences, EDF Renewables will determine the exact location of proposed Facility components and conduct a detailed geotechnical investigation to verify subsurface conditions and allow development of final Facility component designs.

Based on solar facility construction, and a preliminary review of geologic data, blasting is not anticipated for the construction of the Facility.

2.21.3 Regulatory Framework

A preliminary list of regulations and guidelines to be reviewed with respect to geology, seismology, and soils includes the following:

- New York State Standards and Specifications for Erosion and Sediment Control (NYSDEC 2016);
- New York SPDES (Environmental Conservation Law Article 17, Titles 7, 8 and Article 70);
- U.S. Environmental Protection Agency (USEPA), Clean Water Regulations, 40 CFR Part 401, et seq.;
- New York State Department of Agriculture and Markets Guidelines for Agricultural Mitigation for Solar Energy Projects; and
- NYSDEC, 6 NYCRR Parts 703, 704, 750-56.

2.21.4 Proposed Content of the Application

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

(a) Existing Slopes Map

Exhibit 21(a) will include a map delineating existing slopes (0-3%, 3-8%, 8-15%, 15-25%, 25-35%, 35%, and over) on and within the drainage area potentially influenced by the Facility Site and interconnections, based on the U.S. Geological Survey National Elevation Dataset. Digital Elevation Model data will be processed using ESRI ArcGIS® Software to delineate drainage areas and develop slope mapping. The map will identify surface water features in and around the Facility Site (streams, rivers, lakes, reservoirs). A preliminary stormwater pollution prevention plan will be included in Exhibit 23 of the Application will outline the erosion and sediment control, and stormwater management practices to be in place during construction.

(b) Proposed Site Plan

Facility Design and layout is currently ongoing. Preliminary design drawings showing existing and proposed contours at 2-foot intervals for the Facility Site and interconnections, at a scale sufficient to show all proposed buildings, structures, paved and vegetative areas, and construction areas will be included in Exhibit 11 of the Article 10 Application (see Appendix D for Preliminary Proposed Map Sizes And Scales) .

(c) Cut and Fill

Exhibit 21(c) will include:

i. Preliminary cut and fill calculations based on 2-foot contours. Separate calculations for topsoil, sub-soil, and rock will be roughly approximated based on publicly available data from the Erie County Soil Survey and U.S. Department of Agriculture Natural Resource Conservation Service Web Soil Survey, and the results of preliminary geotechnical investigations.

ii. A description of typical scenarios that would result in cut and fill necessary to construct the Facility, such as constructing an access road on a side slope, will be provided.

iii. The identification 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 Facility Site or interconnections will be addressed in Exhibit 22(b) of the Application.

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

Exhibit 21(d) will provide a preliminary calculation of the amount of required fill, gravel, asphalt, etc. based on the proposed layout of photovoltaic panels, collection lines, substations, access roads, and other Facility components and construction areas. Calculations will be based on the anticipated dimensions of Facility components and limits of grading. For example, an access road typical detail will indicate width of road and depth of gravel, which will be multiplied by the linear distance of proposed access roads to calculate an estimate of the gravel required for road construction.

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

Although not anticipated, if applicable, Exhibit 21(e) will include a description and preliminary calculation of the proposed type and amount of any cut material or spoil to be removed from the Facility Site and interconnection routes.

(f) Excavation Techniques to be employed

Exhibit 21(f) will include:

i. A detailed description of excavation techniques to be employed, including the following:
   a. Trenching using chain trenchers, small scale track excavators and backhoes.
   b. General land and road grading using bulldozers.
   c. Stormwater facility construction including ditching and small ponding areas using similar earth moving equipment as above.

ii. If horizontal directional drilling is proposed for Facility construction, an evaluation of the feasibility of horizontal directional drilling within the Facility Site will be included in the Application.
   a. An Inadvertent Return Plan will be provided with the Application if horizontal directional drilling is proposed. The Inadvertent Return Plan will establish proposed setbacks of horizontal directional drilling operations from stream banks, drinking water wells, and other known potential sensitive receptors and resources, and include a description of inadvertent return mitigation and response measures. The plan will also include a scaled drawing showing typical horizontal directional drilling equipment staging layout and design. The Plan will include a frac-out risk evaluation based on known and suspected soil and bedrock conditions and identification of any locations where horizontal directional drilling or other trenchless installation methods were considered but determined to be infeasible.

(g) Temporary Cut and Fill Storage Areas

Exhibit 21(g) will include a map showing temporary cut or fill storage areas to be employed during Facility construction.

(h) Suitability for Construction

Exhibit 21(h) will include a description of the characteristics of the material to be excavated for the Facility, and of the deposits found at foundation level, including factors indicating their suitability for construction, such as soil corrosivity, bedrock competence, and subsurface hydrologic characteristics will be included with the Application.

The analysis of the suitability of existing soils for construction purposes will include frost action risk, soil shrink-swell potential, and corrosion potential, including separate evaluations of the potential for corrosion of uncoated steel and the potential for corrosion and degradation of concrete, as applicable. 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. The results of a Preliminary Geotechnical Investigation will also be presented, and are anticipated to include:

1. A detailed summary of preliminary geotechnical investigations performed, including a description of the rationale for the selection of boring/deep test locations and how the data collected will be applied to evaluate the suitability of soils for construction of Facility components and use as backfill.
2. Results of test borings conducted at a sub-set of photovoltaic module and inverter locations, including copies of field logs for each boring.
3. Literature review and publicly available data regarding surface and subsurface soil, bedrock, and groundwater conditions.
4. A detailed report with suitability analysis and recommendations.
5. Identification of additional pre-construction geotechnical and geophysical investigations that are recommended for final design of the Facility.
6. The Preliminary Geotechnical Investigation Report will be included as an Appendix to Exhibit 21.

(i) Preliminary Blasting Plan

Exhibit 21(i) will include a statement that no blasting will be required, if appropriate based on the results and data obtained from the Preliminary Geotechnical Investigation. If blasting is anticipated, a preliminary plan describing all aspects of the blasting operations will be provided, including:

- Location;
- Minimum blasting contractor qualifications;
- Hours of blasting operations;
- Estimates of amounts of rock to be blasted;
- Warning measures;
- Measures to ensure safe transportation;
- Storage and handling of explosives;
- Use of blasting mats;
- Procedures for a pre-blasting condition survey of nearby buildings and improvements to assess; potential impacts, if any, from blasting operations;
- 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;
- Coordination with local safety officials; and
- Maps showing the locations of known and permitted quarries and natural gas wells (and associated infrastructure and existing access roads), and the operating status of such quarries and gas wells, to the extent that information is available to the Applicant.

(j) Potential Blasting Impacts

If blasting is anticipated, Exhibit 21(j) will include an assessment of potential impacts of blasting to environmental features, above-ground structures, and below-ground structures such as pipelines and wells will be included in the Application, in addition to a discussion of:

- Potential mitigation measures;
- Procedures and timeframes for notifying host communities and property owners within a one-half mile radius of blasting locations;

- Plans for pre- and post-blasting surveys of wells and foundations potentially affected by blasting operations; and
- Plans for securing timely compensation for damages to wells and foundations that may occur due to blasting.

(k) Mitigation Measures for Blasting Impacts

Exhibit 21(k) will identify and evaluate reasonable mitigation measures regarding blasting impacts, if such impacts are anticipated, including the use of alternative technologies and/or location of structures, and securing compensation for damages that may occur due to blasting.

(l) Regional Geology, Tectonic Setting, and Seismology

Exhibit 21(l) will include a description of the regional geology (including any known or suspected areas of karst topography within the Facility Site), tectonic setting, and seismology of the Facility Site.

(m) Facility Impacts on Regional Geology

Exhibit 21(m) will include an analysis of the expected impacts of construction and operation of the Facility with respect to regional geology.

(n) Impacts of Seismic Activity on Facility Operation

Exhibit 21(n) will include an analysis of the impacts of typical seismic activity experienced in the Facility Site based on current seismic hazards maps, and the location and operational characteristics of the Facility, while identifying potential receptors in the event of failure. No young faults exist in the vicinity of the Facility; therefore, these will not be addressed in the Application.

(o) Soil Types Map

Exhibit 21(o) will include a map delineating soil types at the Facility Site using data from the U.S. Department of Agriculture Natural Resource Conservation Service Web Soil Survey. Prime Farmland, Prime Farmland if Drained, and Farmland of Statewide Importance will be mapped based on data obtained from the Soil Survey Geographic Database, while Unique Farmland and Farmland of Local Importance will be mapped based on consultation with the local Natural Resource Conservation Service office (assuming the local Natural Resource Conservation Service office is able to identify the location of such soils). A discussion of the current agricultural use and productivity of farmlands within the Facility Site as informed by local farmers and landowners, and the County Soil and Water Conservation District will be presented. The Application will identify those agricultural lands which are used for row crops, regularly or in rotation, as well as agricultural lands used for pasture, hay, or other purposes. The location of

drainage tiles will also be identified to the greatest extent possible based upon information from landowners and publicly available information, along with a discussion of potential impacts to drainage tiles and other features.

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

Exhibit 21(p) will include:

i. A description of the characteristics of each soil type identified on the Facility Site, including a description of the soil structure, texture, percentage of organic matter, recharge/infiltration capacity, and suitability for construction purposes. Any areas where dewatering is anticipated will be identified and typical dewatering methods will be described. If dewatering is addressed in a separate Exhibit (e.g., Exhibit 23), an appropriate reference to that information will be provided.

ii. A Preliminary Geotechnical Analysis that will, in general terms, address the suitability and limitations of existing soils and depth to bedrock for the proposed site development including excavation stability, erosion hazard, corrosion potential, and structural integrity. These discussions will be supported by published information on specific soil types and the findings of a limited drilling program (including data regarding soil consistency, composition, density, presence of water/bedrock, etc.). Best management practices that should be employed by the designer/contractor to help minimize potential risks/hazards will be identified.

(q) Bedrock Analyses and Maps

Exhibit 21(q) will include maps, figures, and analyses of depth to bedrock, underlying bedrock types, and vertical profiles of soils, bedrock, water table, and seasonal high groundwater (using U.S. Geological Survey Online Spatial Geology Data, and the U.S. Department of Agriculture Natural Resource Conservation Service Web Soil Survey. Typical photovoltaic module support structure and inverter foundation depths (which typically require minimal excavation) will also be described. The maps included in the stand-alone Preliminary Geotechnical Analysis will show all Facility components, including access roads and interconnections. Vertical profiles will be associated with test boring locations only, and the locations of borings advanced during the preliminary geotechnical investigations will also be identified on maps included with the report. Areas designated for stockpiling of spoils and fill materials will be identified. If spoil materials will be temporarily stockpiled adjacent to access roads and trench locations, typical layouts will be provided.

(r) Suitability for Construction Evaluation

Exhibit 21(r) will include an evaluation to determine suitable building and equipment foundations, including:

1. Preliminary Engineering Assessment

   A preliminary engineering assessment to determine the types and locations of foundations to be employed. The assessment will investigate the suitability of the various foundations under consideration, such as concrete pads (for inverters and energy storage), or piles (for racking/photovoltaic panels), including a statement that all such techniques conform to applicable building codes or industry standards.

2. Pile Driving Assessment

   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 Facility, and an assessment of pile driving impacts on surrounding properties and structures due to vibration. If applicable, the Application will include a description of methods for minimizing the risk of post and pile-driving vibrational impacts (if proposed) on nearby buildings, water wells, or other infrastructure. The Application will include a description and justification of any proposed pile driving setback distances.

3. Mitigation Measures for Pile Driving Impacts

   Identification of measures proposed to mitigate pile driving impacts, if necessary, including a plan for securing compensation for damages that may occur due to pile driving.

(s) Vulnerability to Earthquake and Tsunami Events

Exhibit 21(s) will include a discussion of vulnerability to earthquake damage. As previously indicated, the Facility appears to have minimal vulnerability associated with seismic events based on review of publicly available data. Because the Facility is located over 40 miles from the nearest large water body (Lake Ontario), there is no vulnerability associated with tsunami events, and this will not be discussed in the Article 10 Application.

2.22 TERRESTRIAL ECOLOGY AND WETLANDS

2.22.1 Environmental Setting

Vegetation

The Facility Site is located in the Cattaraugus Hills Ecoregion of New York State (Bryce et al. 2010), on relatively flat, cleared lands to the east of Springville in Sardinia and Concord, NY. Native vegetation has been cleared and much of land (approximately 59%) within the Facility Site has historically been used for agricultural purposes. Open, active agricultural lands (which the Facility will be almost entirely sited on) provide a limited variety of habitat opportunities for most species. The remaining plant communities present within the Facility Site, listed in Table 2.22-1, provide a

variety of habitat types for wildlife, with shrublands and forest likely supporting a diversity of avian species. Figure 2.22-1 provides a preliminary map of Ecological Communities in the 5-mile radius Study Area.

Table 2.22-1 Vegetation Communities in Facility Site

Community Type[1]	Acres	Percent Cover (%)
Open Water	8	0.4
Developed/Disturbed	37.1	1.7
Cropland	245.1	11
Pastureland (includes hay)	1,051	48
Deciduous Forest	550.2	25
Evergreen Forest	105.6	4.9
Mixed Forest	173.7	8
Shrub/Scrub	2.4	<0.1
Woody Wetlands	8.1	0.4
Emergent Herbaceous Wetlands	1.3	<0.1
Barren Land	0.1	<0.1
TOTAL	2,182.6[2]	100

Notes:

[1] Community types have been defined by USGS National Landcover Dataset (2016). These community types will be further defined in the Article 10 Application, using Edinger et al (2014).

[2] Total acreage reflects the total acreage of currently signed parcels and will be adjusted as additional parcels are added to the Facility Site.

Wildlife and Threatened and Endangered Species

Wildlife species such as squirrels, mice, deer, chipmunk, and fox may be present within the Facility Site, moving between areas of intact forests within portions of the Facility Site and the larger Facility Area. A variety of bird species, such as the common crow (*Corvus brachyrhynchos*), blue jay (*Cyanocitta cristata*), field sparrow (*Spizella pusilla*), and woodpeckers are likely to be present within the shrubland and forested areas of the Facility Site. The wetlands and streams present within the Facility Site may provide habitat for various frogs, toads, salamanders, and fish species.

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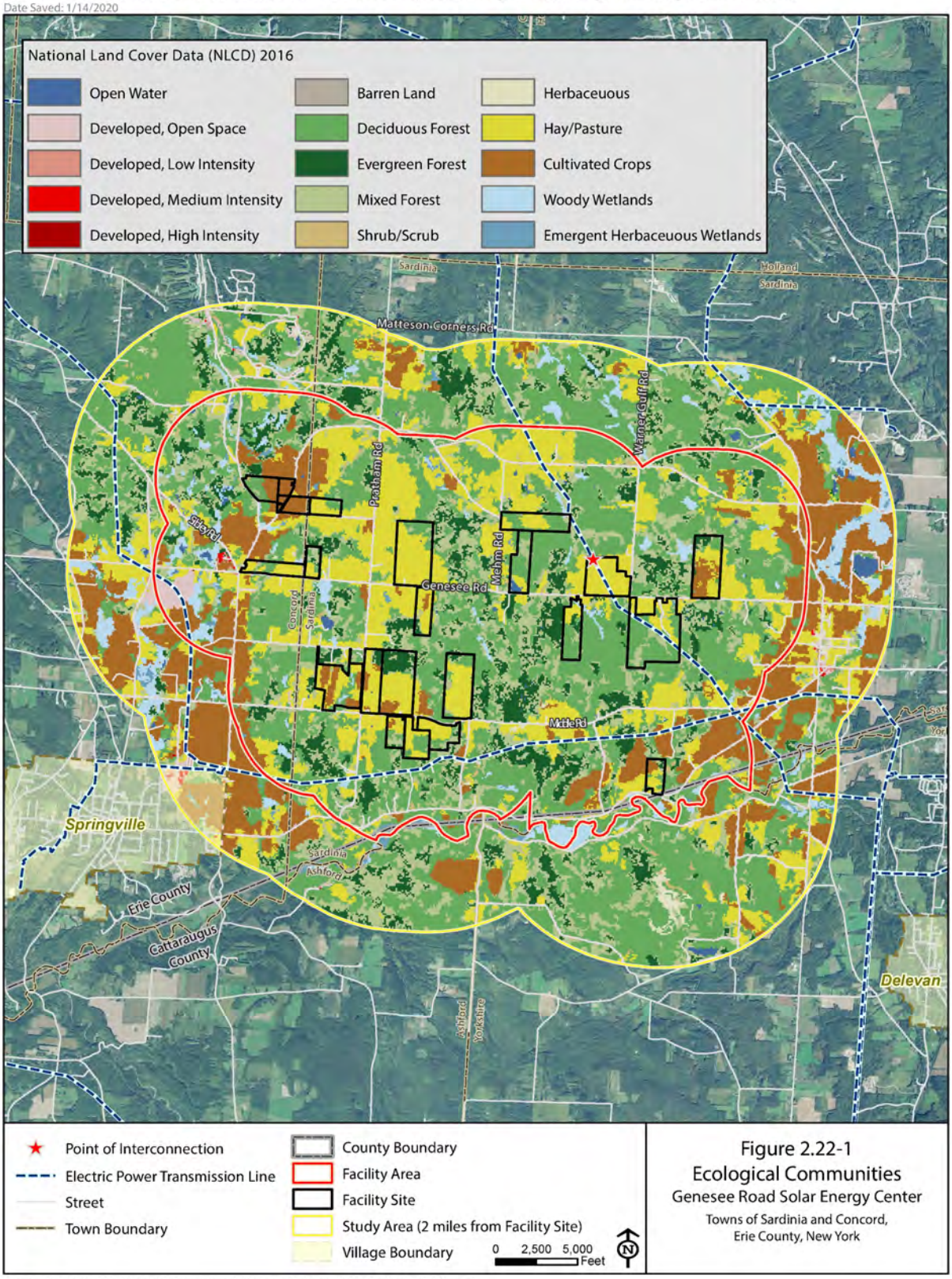

Figure 2.22-1
Ecological Communities
Genesee Road Solar Energy Center
Towns of Sardinia and Concord,
Erie County, New York

Source: E&E 2019; ESRI 2017; HIFLD 2018; NAIP 2017; NLCD 2016; NYSDEC 2018; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019.

According to the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system, the federally and state-listed threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*) potentially occurs within the Facility Area (see Appendix E). Review of a separate database maintained by the USFWS indicates that the closest known NLEB winter hibernaculum location is approximately 25 miles to the northeast of the Facility Area in Letchworth State Park (USFWS 2019). According to USFWS data and data maintained by the NYSDEC, there are no documented records NLEB occurrence or of maternity roosts in either Concord or Sardinia and no records were documented within the Facility Area (USFWS n.d.; NYSDEC 2018[a]; NYNHP 2019). This species utilizes a diversity of forest habitats for roosting, foraging, and raising young, and may occur within the Facility Site. NLEBs emerge at dusk to feed, primarily utilizing the forest understory (USFWS 2015). These bats do not forage in intensively harvested stands or open agricultural areas, generally restricting movement to intact forests (Patriquin & Barclay 2003). They are known to forage under the forest canopy at small ponds or streams, along paths and roads, or at the forest edge (Caire et al. 1979). Females have been reported to move up to 6,500 feet and males up to 3,300 feet between roost sites (Broders et al. 2006).

In addition to review of the IPaC system described above, a formal request for information regarding state-listed threatened and endangered (T&E) species within the Facility Area was sent to the New York Natural Heritage Program (NYNHP). The response received from the NYNHP on September 20, 2019, indicated there are no records of rare or state-listed animals or plants within the Facility Site (see correspondence in Appendix E).

Grassland birds are a conservation priority across the northern United States due to their significant population declines over time. In New York, grassland bird population declines are closely linked to the loss of agricultural grasslands, primarily hayfields and pastures. Grassland birds with the highest priority for conservation in New York include the northern harrier (*Circus hudsonius*), upland sandpiper (*Bartramia longicauda*), short-eared owl (*Asio flammeus*), and others (Audubon New York 2008). Based on a review of mapped Grassland Bird Focus Areas, which were established in areas where conservation efforts would be most effective, none exist within the Facility Area. Focus Area 1 is located in Western New York and includes portions of several counties, including Erie County; however, it is only the northeastern portion of Erie County. The Facility Area is located approximately 7 miles west of Focus Area 1. Additionally, based on feedback regarding the most recent breeding, wintering, and habitat data for state-listed species from the NYSDEC, Region 9 Wildlife Office, the Facility Area is not located within a Grassland Conservation Core Area (NYSDEC 2019). EDF Renewables conducted wintering grassland surveys within the Facility Area during the winter of 2019/2020. The survey methods followed the draft New York State Department of Environmental Conservation (2015) *Survey Protocol for State-listed Wintering Grassland Raptor Species*, and consisted of both stationary and driving routes surveys. Stationary surveys focused on short-eared owl and Northern harrier, as well as observations of other raptors in the area, including eagles and hawks. Avian activity was recorded at the fixed points from one hour before sunset

and one-half hour following sunset. Additionally, a driving route was established along all accessible roads within and around the Facility Area.

Additionally, the NYNHP data did not include any reported grassland or T&E species, and there are no eBird reports of northern harrier, upland sandpiper, or other listed grassland species within the Facility Area. Lastly, a review of eBird records for the short-eared owl and northern harrier for the past 10 years indicated that there are no documented winter concentration areas within the Facility Area (eBird 2019).

Wetlands

National Wetland Inventory (NWI) mapping indicates four wetland communities exist within the Facility Site, which cumulatively total 207.5 acres A total of 119 mapped wetlands exist within the Facility Site. The NWI data indicate that riverine wetlands comprise the greatest area on site, totaling 65.2 acres, followed by freshwater forested/shrub wetlands (50.4 acres), freshwater ponds (46.5 acres), and freshwater emergent wetlands (45.4 acers). The NYNHP response also identified one significant natural community within the Facility Area, the black spruce-tamarack bog. This community surrounds a pond in the Town of Concord, in the western-most portion of the Facility Site. The black spruce-tamarack bog is a wetland type that is uncommon in the state, and thus has ecological and conservation value (NYNHP 2019).

Agricultural Lands

Based on a preliminary review of aerial imagery of the Facility Site and existing publicly available data, much of the land where Facility components are proposed is within an established agricultural district, the Southeast Agricultural District #15. However, because the lands where Facility components are proposed are not anticipated to have significant levels of ground disturbance, with the exception of the substation, these lands may return to agricultural use at the end of life of the Facility. A map of designated farmland soil classifications is included as Figure 2.4-3.

2.22.2 Potential Impacts and Mitigation

Facility components will ultimately be placed to use the available space efficiently, including maintaining open space in between rows of PV panels and in the buffer areas around the perimeter. The remaining lands within the Facility Site will be undeveloped due to a combination of ecological resource avoidance, setbacks, and engineering constraints. In general, potential impacts to ecological resources may include:

- Clearing of vegetation and tree removal;
- Degradation of habitat or interference with the movement of wildlife;
- Avian collisions with operational solar panels; and

- Filling of wetlands or otherwise altering local drainage patterns that would affect wetland- dependent species.

Siting of the Facility components will avoid and/or minimize impacts to ecological resources, including wildlife, wildlife habitat, and wetland communities, associated with the construction, operation, and maintenance where possible, such as preferentially utilizing existing or narrow stream crossing locations to minimize impacts on wetlands. Additional measures may include special crossing techniques, equipment restrictions, herbicide use restrictions, and erosion and sedimentation control measures. The majority of Facility components will be preferentially sited in previously cleared areas, and significant forest clearing is not anticipated. EDF Renewables will evaluate and identify measures to avoid, minimize, and mitigate significant impacts to ecological resources, such as:

- Design and construct the Facility to minimize soil disturbance;
- Site Facility components to avoid areas with the highest habitat value;
- Site Facility components and/or using construction techniques to avoid impacts to wetlands with the highest functions and values;
- Utilize mechanical methods or grazing to maintain vegetation under and around PV panels (as opposed to herbicides);
- Protect and manage areas of valuable habitat (e.g., black spruce-tamarack bog and grassland) for sensitive species within the Facility Site; and
- If potential impacts to bat species become a concern, conduct tree clearing in accordance with NYSDEC requirements in 6 NYCRR Part 182 which restricts tree clearing activities between April 1 and October 31, if the proposed activity is within 5 miles of an occupied winter hibernaculum or 1.5 miles of a documented summer occurrence and in accordance with USFWS 4(d) rule prohibiting incidental take of NLEB resulting from tree removal activities within a quarter-mile of a hibernaculum or from activities that cut down or destroy known occupied maternity roost trees, or any other trees within 150 feet of a known maternity roost tree between June 1 and July 31.

2.22.3 Regulatory Framework

A preliminary list of regulations and plans to be reviewed with respect to terrestrial ecology and wetlands includes the following:

- Endangered Species Act;
- Bald and Golden Eagle Protection Act;
- Migratory Bird Treaty Act;

- New York State Environmental Conservation Law, Article 11, Fish and Wildlife; and
- Freshwater Wetlands Permit: Article 24 – Environmental Conservation Law Implementing Regulations – 6 NYCRR Part 663, Part 664, and Part 665

2.22.4 Proposed Content of the Application

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

(a) Existing Plant Communities

Exhibit 22(a) will include information on and a description of the plant communities within the Facility Site, and adjacent properties, including plant community mapping using geographic information system software. Specific information on, and a detailed description of, all ecological communities identified within parcels that will host Facility components will be provided, as classified according to Ecological Communities of New York State (Edinger et al. 2014). Maps, at a scale of 1":500', based on aerial photography and National Landcover Database information, showing approximate locations and extent of identified plant communities throughout the Facility Area, will be included. Maps at a scale of 1":100' showing approximate locations and extent of identified plant communities as classified according to Ecological Communities of New York State for Facility Areas within 500 feet of the limits of disturbance will be included (Edinger et.al. 2014). Plant communities for parcels outside the Facility Area on which the Applicant does not have access will be determined as identified through the National Landcover Database, and observations made from publicly accessible roads.

(b) Impacts to Plant Communities

Exhibit 22(b) will include a characterization of impacts on plant communities from construction and operation will be provided, including:

1. Proposed temporary and permanent impacts to plant communities, including permanent conversion of one cover type to another, will be calculated for each community type and will:
2. Discuss 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.
    i. Provide a table of assumed area disturbance for each project component type. Associated with Exhibit 11 addressed in "i" above.

ii. Calculate using geographic information system software, and present in a summary impact table, the number of acres impacted. Permanent impact calculations will include all tree clearing for construction and operation of the Facility.

iii. As referenced in the plant community mapping in 22(a), will also depict vegetation cover types throughout the Facility Site in relation to proposed limits of vegetation disturbance at a scale of 1":1000', and associated geographic information system shapefiles showing all areas of clearing and disturbance will be provided to New York State Department of Environmental Conservation. A discussion and evaluation of fragmentation to grasslands and forested habitat that may occur as a result of the construction of the Facility will also be included.

3. Invasive Species Identification will include:

   i. A list of all non-native invasive species observed during site-specific field investigations, incidentally while on site for other purposes, and/or and known to occur within the Facility Site. Unless otherwise specifically noted, "invasive species" is defined as all terrestrial and aquatic species listed at: http://www.dec.ny.gov/docs/lands_forests_pdf/islist.pdf. The list and shapefiles (as points or polygons, depending on the amount of area covered) of non-native invasive plant species in areas of proposed disturbance will be based on a qualitative field survey. The results of the survey will be summarized in a baseline invasive species report to be included with the Application.

   ii. For each invasive species identify an area and concentration threshold that requires mapping and an individual treatment plan. geographic information system files of such concentration areas will be provided to New York State Department of Environmental Conservation.

   iii. Maps at a scale of 1":1200' of any identified concentrations of non-native invasive plant species in areas of proposed disturbance.

   iv. A list of invasive insect species, if any, limited to incidentally observed concentrations of insects during field observations in support of Exhibits 22 and 23.

4. An Invasive Species Prevention and Management Plan that addresses the plant species listed in 6 New York Codes, Rules and Regulations Part 575 will be included in the Application. For the purposes of the entirety of Exhibit 22, unless otherwise specifically noted, "invasive species" is defined as all terrestrial and aquatic species listed at: http://www.dec.ny.gov/docs/lands_forests_pdf/islist.pdf (NYSDEC 2014). Additional invasive species not included on this list (e.g., reed canary grass and wild parsnip) may also warrant specific management and control measures, depending on current populations of such species within the Facility Site. The Invasive Species Prevention and Management Plan will apply to all prohibited and regulated invasive species and include:

i. A summary of the survey results (i.e., baseline survey), and a description of how these results will be verified prior to construction;

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

iii. A specification on how fill material brought to and placed in the Facility Site will be free of non-native invasive species material, seeds, and parts, by source inspection or other method, or describe how fill brought to the Facility Site will not be used in areas free of invasive species;

iv. A detailed description of the measures to be taken to prevent the introduction, proliferation and spread of all non-native invasive species due to implementation of the Facility's grading and erosion and sediment control plan;

v. Details of procedures for preventing the spread of invasive invertebrates and diseases such as the emerald ash borer and hemlock woolly adelgid, based on standard protocols and/or guidance provided by the New York State Department of Environmental Conservation and New York State Department of Agriculture and Markets, and a discussion of how the Applicant will comply with the state quarantine and protective zones, where applicable;

vi. Plans for ensuring that appropriate measures are implemented to avoid equipment and personnel arrive at and depart from the Facility Site clean and free of all non-native invasive species material, seeds, and parts. The protocol for inspection of equipment arriving at the Facility Site will be provided in the Application;

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

viii. A detailed description of the best management practices or procedures that will be implemented, and the education measures that will be used to educate workers;

ix. A detailed description of post-construction monitoring over a five-year time period at appropriate intervals (e.g., years 1, 3, and 5), and corrective action plan (if needed), based on the results of the baseline survey, which includes a detailed description of monitoring goals with respect to invasive species abundance, and survey measures and procedures for revising the Invasive Species Prevention and Management Plan in the event that the established goals are not met within a specified timeframe;

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

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

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

Exhibit 22(c) will include a detailed description of the proposed measures that will be implemented to avoid, minimize, and mitigate for any temporary and permanent impacts to existing, non-invasive plant communities, particularly grasslands, wetlands, interior forests, shrublands and young successional forests, as a result of the construction, operation and maintenance of the Facility. A discussion of measures taken to avoid and minimize impacts to vegetation such as collocating linear project components, and constructing all panels, buildings, storage areas, and other structures in areas already developed or disturbed, to the maximum extent practicable, will be included in the Application. In addition, a discussion of measures for appropriate post-construction vegetative restoration and management regimes, including reseeding disturbed areas with appropriate native seed mix or planting native woody species if such habitat loss/degradation occurs, will be described. A summary impact table quantifying anticipated temporary and permanent impacts associated with various project components in relation to vegetation cover types, particularly grasslands and interior forests, will be included.

(d) Existing Vegetation, Wildlife, and Wildlife Habitat

Exhibit 22(d) will include information on and a characterization of aquatic and terrestrial vegetation, wildlife, and wildlife habitats that occur within the Facility Site, encompassing all areas that may be disturbed for construction of panels, roads, electric collection, substation, switchyard, and other facility components, including:

1. Identification and description of plant communities, plant and wildlife species, and wildlife habitat. Such descriptions will include field identification of aquatic habitats, plant communities, and wildlife habitat that could potentially support federally or state-listed threatened and endangered species, species of special concern, and state species of greatest conservation need, as documented during on-site field investigations (e.g., ecological cover type assessments, habitat assessments, and wetland delineations).
2. Ecological cover type assessments and habitat assessments identified in "1" above, will be classified according to Ecological Communities of New York State (Edinger et al. 2014).
3. Identification and depiction of any significant natural communities that could support federally or state-listed threatened and endangered species, species of special concern, or species of greatest conservation need.
4. A table of state and federally listed species occurring or likely to occur within the Project including the following columns:

i. Species name;

ii. Federal status;

iii. New York State status;

iv. Species of special concern/species of greatest conservation need listing;

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

vi. Identify maps from 1001.22(a)(3) that include habitat for each species;

vii. Source of information indicating potential presence of species;

viii. Indicate if species was observed on site.

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

x. Estimated take of each listed threatened and endangered species and/or their habitat, if applicable; and

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

5. New York Natural Heritage Program database information will be used to identify the presence of any bat hibernacula or maternity roosts. If hibernacula or roosts are identified within the Facility Site, or 5 miles from any Facility component or boundary (based on the consultations results with the U.S. Fish and Wildlife Service and New York Natural Heritage Program), the location and distance to all hibernacula and roosts within 5 miles of the Facility Site will be provided separately and confidentially to New York State Department of Environmental Conservation and New York State Department of Public Service.

6. Information on amphibians and reptiles based on the New York State Amphibians & Reptile Atlas Project (Herp Atlas), database records obtained from Natural Heritage Program, New York State Department of Environmental Conservation, and U.S. Fish and Wildlife Service, and assessments of suitable habitat in the Facility Area.

7. Vernal pools will be inventoried at the time of wetland field delineations. The Application will identify vernal pools located within 500 feet of the edge of disturbance of all Facility components, including forested areas potentially impacted by Facility construction. Vernal pools will be identified in accordance with the 2012 Northeastern Regional Supplement to the Corps of Engineers Wetland Delineation Manual (USACE 2012). To the extent that vernal pools are identified, the Applicant will submit to New York State Department of Environmental Conservation detailed location maps and ecological characterization data for all identified vernal pools. The Application will include an assessment of potential impacts to vernal pools (including the surrounding upland habitat).

8. Information on bird species that may be present or utilize the Facility Site at some point during the year based the following sources: existing data from New York Natural Heritage Program, New York State Department of Environmental Conservation, and U.S. Fish and Wildlife Service; assessments of suitable habitat within the Facility Site; field observations made on-site during avian studies of the Facility Site; New York Breeding Bird Atlas; U.S. Geological Survey Breeding Bird Survey; Christmas Bird Count; Hawk Migration Association of North America; eBird; The Nature Conservancy surveys/reports; The Kingbird publication; reaching out to local birding groups (e.g., Buffalo Audubon Society) for information on recent and historical occurrences; and any other publicly available sources that may provide relevant information regarding bird occurrences within or in the vicinity of the Facility and interconnection line.
9. Description of potential impacts to calcareous shoreline outcrops and karst features, if present within or adjacent to the Facility, and any species that may utilize these habitats if final site design indicates there could be impacts to these ecological communities.
10. Shapefiles suitable for use in Geographical Information System software via ESRI's ArcGIS® suite of software (e.g., ArcMap) containing project components will be provided. In addition, shapefiles showing all wildlife and habitat survey locations as applicable and labeled by year will be included. This will include: a. breeding bird and wintering grassland raptor surveys transects/points; b. boundaries of all delineated wetlands, adjacent areas, and streams; and c. the location(s), observation date(s), species, and behavior(s) of all threatened and endangered and species of special concern individuals observed during pre-construction surveys and incidentally within and adjacent to the Facility Site. Shapefiles will be considered business confidential and will not be shared outside of the agency staff involved in reviewing this Project. Draft reports or summaries of results of all bird, habitat, and wetland surveys will be submitted to New York State Department of Environmental Conservation prior to the filing of the Application (if available). These reports will include maps and shapefiles provided confidentially to New York State Department of Environmental Conservation depicting the location(s), observation date(s), species, and behavior(s) of all threatened and endangered and species of special concern individuals observed during pre-construction surveys and incidentally in the Facility.
11. Final reports of all wildlife, habitat and wetland surveys will be included in the Application.

(e) Wildlife Species List

Exhibit 22(e) will include the information required by 1001.22(e), based on the information obtained in support of subpart (d) above. A plant and wildlife species inventory will also be included, based on existing data available from the Natural Heritage Program, New York State Department of Environmental Conservation staff, U.S. Fish and Wildlife Service, Herp Atlas, Breeding Bird Atlas, Hawk Migration Association of North America, Christmas Bird Count, eBird, The Nature Conservancy surveys/reports, The Kingbird publication, on-site surveys, local

birding and conservation organizations, and any other publicly available source that may provide relevant information regarding wildlife occurrences within or in the vicinity of the Facility and electric interconnection line. The inventory will include the typical species of birds, mammals, herpetofauna, and terrestrial invertebrates found in the region and likely to occur within or in the vicinity of Facility. On-site field surveys (e.g., avian surveys, ecological cover type assessments, habitat assessments, and wetland delineations) and/or the availability of suitable habitat, will also be used to identify species that could potentially occur within or in the vicinity of the Facility at some time during the year. The inventory will specify whether species were observed, known to occur in Facility Site, or are predicted to occur based on habitat characteristics and historical records.

(f) Analysis of Impacts from Construction and Operation

Exhibit 22(f) will include:

1. A summary narrative and associated mapping to explain and illustrate:
   i. Potential and expected construction, operational, restoration and maintenance impacts of the Project and interconnections on: vegetative cover types; wildlife (reptiles, amphibians, mammals, and birds); wildlife habitats (including a discussion of impacts from functional loss and degradation of habitat, forest and grassland fragmentation, and wildlife displacement); wildlife concentration areas; wildlife travel corridors, if identified; and terrestrial and aquatic organisms identified during pre-construction field studies in relation to the proposed limits of disturbance.
2. This will include a discussion of any direct and indirect construction-related impacts that may occur to wildlife and wildlife habitat, including but not limited to:
   i. incidental injury and mortality due to construction activity vehicular movement;
   ii. habitat disturbance and loss associated with clearing and earth-moving activities; and
   iii. the indirect impacts resulting from displacement of wildlife.
3. A discussion of potential direct and indirect operational and maintenance impacts including but not limited to:
   i. Loss of habitat;
   ii. Forest and grassland fragmentation;
   iii. Wildlife displacement; and
   iv. To the extent any documented wildlife travel corridors or concentration areas are identified within or adjacent to the Facility Site, direct and indirect impacts to such corridors and concentration areas will be addressed.

4. A discussion of potential short- and long-term impacts to plants, animals, and habitats that may result from the application of biocides, if any, during site preparation, construction, maintenance, or operations.

5. A summary impact table quantifying anticipated temporary and permanent impacts associated with all Facility components in relation to wildlife habitats, identified concentration areas or travel corridors (to the extent data associated with such areas or corridors are readily available or provided to the Applicant by New York State Department of Environmental Conservation personnel), and vegetation cover types classified according to *Ecological Communities of New York State* (Edinger et al. 2014), such as grasslands, young successional forests and interior forests, if affected.

6. A wildlife and habitat impact analysis including an identification, evaluation, and assessment of direct and indirect Facility-related impacts to wildlife species, particularly: federally and state-listed threatened and endangered species and their habitats; wildlife concentration areas; migration corridors; and forest and grassland habitats. The U.S. Fish and Wildlife Service 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.[

7. Draft copies of all wildlife survey reports or a summary of results planned for the Facility or requested by state or federal agencies, based on work plans developed with the agencies, will be submitted prior to the filing of the Application (if available), including any associated maps and shapefiles. Final reports of all wildlife, habitat and wetland surveys will be included in the Application.

8. To the extent that pre- and post-construction wildlife survey data are available for other utility-scale solar facilities in New York State, avian occupancy and usage of the Facility Site will be compared with these data.

9. If the project impacts federally listed or protected and state-listed threatened and endangered species or their habitat, a cumulative impact analysis will be conducted to evaluate the expected impacts from the construction, operation and maintenance of the Facility as they relate to other proposed and operating solar energy projects nearby the Facility and in the state. This analysis will minimally include a discussion and calculations describing and showing:

    i. examination of data on currently installed or proposed utility-scale solar energy capacity in the state;

    ii. to the extent that the Facility could result in unavoidable impacts to federally listed or protected and state-listed threatened and endangered species, the Applicant will provide an estimated take of identified species and their habitats based on data collected on site and provided by state and federal agencies, including but not limited to post-construction studies completed in the state and northeast, or any other publicly available relevant information;

iii. acres of each habitat type lost directly through installation of panels and other project components, clearing, and cover type conversion;

iv. acres of each habitat type lost indirectly due to functional loss/degradation of habitat (for purposes of forest fragmentation analyses, it is assumed that indirect effects will extend up to 300 feet beyond the limits of disturbance); and

v. cumulative impacts of forest and grassland habitat fragmentation, particularly potential impacts on listed bird species.

10. A literature review and impact analysis evaluating how the construction, operation, restoration and maintenance of the Facility will affect wintering and breeding grassland bird species, including an assessment of the potential population-level effects of habitat loss is likely to have on wintering grassland bird species at a regional scale.

11. Information regarding the presence of federally and state-listed threatened and endangered species, species of special concern, rare species, and species of greatest conservation need including:

    i. A discussion of the Facility's potential to impact such species or their habitats based on database records obtained from the Natural Heritage Program, other known records documented by New York State Department of Environmental Conservation, U.S. Fish and Wildlife Service, and on-site wildlife and habitat, ecological, and wetland surveys. A summary impact table containing information on all species within these categories will be compiled and included in the Application.

    ii. The presence of Facility components in occupied habitat of listed threatened and endangered species may constitute take, pursuant to 6 New York Codes, Rules and Regulations Section 182.11 (Part 182), of individuals or the habitat they depend on, or both. Based on preliminary data received from U.S. Fish and Wildlife Service, New York State Department of Environmental Conservation, and New York Natural Heritage Program, it is not anticipated that construction of Facility components would results in take. However, if applicable and if adverse impacts are unavoidable and would result in a take under Part 182, the Application will include a clear and reasoned explanation as to why complete avoidance of impacts to each affected species is not feasible, along with proposed actions to minimize impacts to the maximum extent practicable, and proposed mitigation and adaptive management actions that will result in a net conservation benefit to the affected species. If it is determined that adverse impacts are unavoidable and would result in a take under Part 182, the Application will describe the process of developing a post-construction monitoring plan on a site-specific basis through discussions between New York State Department of Environmental Conservation, the Applicant, and U.S. Fish and Wildlife Service (if federally listed species may be impacted), which would specify the following: the expected and allowed level of take of each target species; survey monitoring methods, effort, duration, data reporting and

compliance documentation; construction parameters; proposed adaptive management responses, if applicable, and; mitigation measures sufficient to ensure the Applicant complies with the substantive requirements of Part 182.

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

Exhibit 22(g) will include 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 photovoltaic technologies, regarding impacts to vegetation, wildlife, and wildlife habitat. The Facility design, construction controls, and operational, restoration and maintenance measures that can be reasonably implemented to first avoid to the maximum extent practicable, then minimize and mitigate for impacts to wildlife and wildlife habitat as a result of the construction, operation, restoration, and maintenance of the Facility Site will also be described. This will include a discussion of measures to first avoid and, if impacts are unavoidable, minimize to the greatest extent practicable direct and indirect impacts to individuals of federally and state-listed and protected species through appropriate project siting, adhering to designated construction limits and seasonal restrictions, and other best management practices, and indirect impacts associated with habitat loss, fragmentation, and displacement. While not anticipated, if any demonstrably unavoidable impacts will occur to listed threatened and endangered species or their habitats as a result of the Project, a commitment to mitigate, in an appropriate and timely manner, will also be discussed. 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. Measures to avoid, minimize and mitigate for impacts to vegetation will be addressed in Exhibit 22(c).

(h) Wind Powered Facilities

The Applicant is proposing a solar powered facility, therefore, the requirements set forth in 1001.22(h) do not apply.

(i) Wetland Delineation and Mapping

Exhibit 22(i) will include the following:

1. Maps at a reference scale of 1″:50′ and shapefiles showing delineated wetland boundaries for federally and state-regulated wetlands and adjacent areas within the entire Facility Site. Maps at a scale of 1″:50′ and shapefiles showing delineated wetland boundaries for federally and state-regulated wetlands and adjacent areas occurring within 500 feet of the edge of ground disturbance all proposed Facility components, where property access is available. Delineation as used in reference to wetland and stream delineation throughout this document refers to the placement in the field of sequentially numbered pink surveyor's flagging marked "wetland delineation" with the locations of individual flagging points

documented using Global Positioning System technology with reported sub-meter accuracy. The use of Wetland Delineation Data Forms (or comparable forms) to fulfill U.S. Army Corps of Engineers requirements, and field verification by the U.S. Army Corps of Engineers and the New York State Department of Environmental Conservation, will not be required to obtain a finding by the Chair of the Siting Board that a developer's Article 10 Application complies with the statute. However, such information and verifications will be necessary to obtain U.S. Army Corps of Engineers approval outside of the Article 10 process and to reach agreement with New York State Department of Environmental Conservation Staff in the Article 10 proceeding on the extent and nature of wetlands impacts.

2. All wetland boundaries will be keyed to the submissions described in Exhibit 11 (Preliminary Design Drawings).

3. Information on the predicted presence and extent of wetlands on the remainder of site properties and adjacent properties within 500 feet of areas to be disturbed by construction, will also be included in the Application, as applicable. For adjacent properties without accessibility, surveys will be based on remote-sensing data, interpretation of published wetlands and soils mapping, roadside observations, and aerial photography.

4. The delineation report that will be provided to the District Office of the U.S. Army Corps of Engineers and the Regional New York State Department of Environmental Conservation office (and included with the Article 10 Application) will include the results of the field delineation (i.e., describe the location, size, community type and likely jurisdictional status of all delineated streams and wetlands). Maps at a scale of 1":50' depicting all Facility components, field-delineated wetlands and adjacent areas within 500 feet of all areas to be disturbed by construction will be included in the Application. All impacts to wetlands and regulated adjacent areas will be clearly explained and presented/depicted on mapping in support of Exhibit 22.

5. Information will be provided indicating which delineated wetlands are likely state-regulated, including those that are part of wetland complexes that meet state-criteria for jurisdiction (e.g., 12.4 acres or larger, is of Unusual Local Importance, and/or support listed species) but are not currently mapped. All state-regulated wetlands will be identified by New York State Department of Environmental Conservation's alphanumeric code in addition to the code assigned by the Applicant during delineation. Investigation areas for wetland delineations may need to be extended to make these determinations. At a minimum, the desktop mapping approach described in Exhibit 22(i) will identify all wetlands that potentially meet state-criteria for jurisdiction.

6. The Applicant will coordinate with New York State Department of Environmental Conservation and U.S. Army Corps of Engineers to schedule a jurisdictional determination field visit to review/confirm the findings of the wetland delineations during the 2020 growing season, if applicable. The Applicant will provide maps and geographic information system

shapefiles of delineated wetlands to the New York State Department of Environmental Conservation when these materials are finalized.

(j) Descriptions of Delineated Wetlands

Exhibit 22(j) will include a description of the characteristics and Cowardin classification of all federally, state, and locally regulated delineated wetland communities, a summary of the field data collected regarding vegetation, soils, and hydrology and copies of all Wetland Determination Data Forms compiled into a Wetland and Stream Delineation Report, to be appended to the Application. The wetland's alpha-numeric code will be included if the wetland is regulated or eligible for regulation under Environmental Conservation Law Article 24.

(k) Wetland Functional Assessment

Exhibit 22(k) will include a qualitative and descriptive wetland functional assessment, including seasonal variations, for all delineated wetlands. Qualitative scores that assess functions and values for each delineated wetland will be based on a methodology similar to *The Highway Methodology Workbook Supplement, Wetlands Functions and Values: A Descriptive Approach* published by the U.S. Army Corps of Engineers New England District in 1999. The functions/values evaluated using this method will include:

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

Potential vernal pools will be inventoried. The Application will identify vernal pools that could be disturbed by construction, operation, restoration or maintenance of the Facility. A discussion will be included that evaluates the potential use of the identified vernal pools by amphibians, reptiles and turtles, and the potential impacts to those species. Such evaluation of impacts may require, in consultation with New York State Department of Environmental Conservation, the development and implementation of site-specific surveys for amphibian, reptile and turtle species under appropriate seasonal conditions in order to fully quantify the level of impact from the Facility.

(l) Analysis of Off-site Wetlands

Exhibit 22(l) will include an off-site wetland evaluation, including:

1. Wetland boundaries and adjacent areas within 500 feet of all Facility components and all disturbed areas will be field delineated. For adjacent properties without accessibility, surveys may be based on remote-sensing data, interpretation of published wetlands and soils mapping, roadside observations, and aerial photography. This information will be used to inform an analysis and description of hydrological connections of all wetlands within the Facility Site to off-site wetlands, including those that are anticipated to fall under New York State Department of Environmental Conservation jurisdiction (under Article 24 of the Environmental Conservation Law) and U.S. Army Corps of Engineers jurisdiction (under Section 404 of the Clean Water Act). Assessments of potential state wetland jurisdiction will include both "mapped" and "unmapped wetlands" that meet New York State Department of Environmental Conservation's 12.4-acre size threshold (including any wetlands of any size separated by less than 50 meters which function as a unit in providing wetland benefits), within the meaning of 6 New York Codes, Rules and Regulations Part 664, or otherwise meet state criteria for jurisdiction (e.g., wetlands or vernal pools determined to be of Unusual Local Importance, pursuant to 6 New York Codes, Rules and Regulations 664.7(c)). A summary will be provided of off-site wetlands adjacent to the Facility Site and any disturbed areas that may be hydrologically or ecologically influenced or impacted by development of the Facility, including public lands, to determine their general characteristics and relationship, if any, to the delineated wetlands within the Facility Site. All information from a site visit to be conducted during the 2020 growing season, including maps and shapefiles, will be provided to New York State Department of Environmental Conservation personnel as soon as delineations are completed and before the Application is submitted, to allow for New York State Department of Environmental Conservation to determine the full extent of wetland jurisdiction.

(m) Identification of Temporary and Permanent Impacts to Wetlands

Exhibit 22(m) will include the identification and description of temporary and permanent impacts to wetlands and their regulated adjacent areas, including:

2. A quantification of temporary and permanent impacts to field delineated wetlands (and all state-regulated 100-foot adjacent areas) based on the proposed footprint of all Facility components and associated impact assumptions. This assessment will also include a description of applicable permanent wetland forest conversion, if any, which would occur as a result of the construction or maintenance of the Facility. Such impacts will be summarized and presented in a table that will:
    i. Describe and calculate the following: the type of impact, including but not limited to permanent or temporary fill and forest conversion, to each wetland and adjacent area; associated crossing methodology for each wetland;
    ii. clearly discern between federal and state wetlands and 100-foot adjacent area impacts; acreage of each temporary and permanent impacts to regulated wetlands and adjacent areas;
    iii. Include wetland delineation and New York State Department of Environmental Conservation wetland identification code and type;
    iv. For each resource, explain if it could reasonably be avoided;
    v. Propose site specific actions to minimize impacts to resources that are not bypassed;
    vi. Propose site specific actions to mitigate impacts to resources that are not bypassed;
    vii. Propose appropriate compliance monitoring schedule to ensure mitigation is successful, including adaptive management actions to be implemented should the planned mitigation fail;
    viii. Identify the corresponding reference to the respective sheet of the preliminary design drawings depicting the resource, and on the mapping required by the following Item 2.
3. Impacts to wetlands will also be presented on a separate set of site plan drawings at 1":50' scale, showing wetland boundaries, permanent and temporary structures, stream crossings, roads, power interconnects, and the limits of disturbance.
4. The Applicant intends to design the Facility to avoid impacts to wetlands to the maximum extent practicable. Setbacks from delineated wetland and stream resources and New York State Department of Environmental Conservation-related wetlands will be discussed in the Application. The photovoltaic panels will not exceed 9 feet in height. Discussion on the potential impacts of shade on wetlands will be included in the Application.

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

Exhibit 22(n) will include an identification and evaluation of all reasonable avoidance measures, or where impacts are unavoidable, minimization measures considered, and an indication of methods to be implemented to avoid and minimize wetland impacts. Where impacts are unavoidable, and have been minimized to the greatest extent possible, any required mitigation measures to be implemented to offset impacts to streams, wetlands and all state-regulated 100-foot adjacent areas will be discussed, including the use of alternative stream and wetland crossing methods, alternative technologies, and control of phosphorus and nitrogen sources from the Project. Final impact calculations to wetlands and 100-foot adjacent area of NYS-regulated wetlands and associated mitigation will be based on New York State Department of Environmental Conservation-verified delineation boundaries for jurisdictional wetlands. Pursuant to 6 New York Codes, Rules and Regulations 663.5(g), a conceptual mitigation plan for impacts to state-regulated wetlands and adjacent areas must be included in the Application and at a minimum must meet the following provisions:

1. The mitigation must occur on or in the immediate vicinity of the Facility (preferably elsewhere in the same wetland);
2. The area affected by the proposed mitigation must be regulated by the Freshwater Wetlands Act and 6 New York Codes, Rules and Regulations Part 663 after mitigation measures are completed; and
3. The mitigation must provide substantially the same or more benefits than will be lost through the proposed activity.

This section of the Application will also describe the anticipated Environmental Compliance and Monitoring Program to be implemented during Facility construction, demonstrating adherence to all relevant permit conditions to protect wetlands, streams, and other waterbodies. The Facility's Environmental Compliance and Monitoring Program will include an Environmental Monitor(s) during construction and restoration activities, and the duties of the Environmental Monitor will be described. The Environmental Compliance and Monitoring Program will describe the locations of all staging areas, temporary spoil or woody debris stockpiles, "extra work" areas, and other places material or equipment maybe 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 when in proximity to wetlands. Plans to restore all temporary disturbances in regulated areas, including replanting trees in disturbed forested areas, will be provided.

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

Exhibit 22(o) will include an identification of New York State and Federally listed threatened and endangered species, species of special concern, and species of greatest conservation need documented within or adjacent to the Facility Area, along with a discussion of all potential

direct and indirect impacts to these species, if applicable. An Endangered Species Avoidance, Minimization and Mitigation Plan, if needed, will be provided in Exhibit 22(f). The results of pre-construction surveys and the associated impact analysis, as well as the estimated direct and indirect take of listed threatened and endangered species and their habitats will provide a basis for ongoing consultation with New York State Department of Environmental Conservation, New York State Department of Public Service, and U.S. Fish and Wildlife Service (if necessary) to determine an appropriate post-construction monitoring protocol.

(p) Invasive Species Prevention and Management Plan

Exhibit 22(p) will include an Invasive Species Prevention and Management Plan as described in 1001.2(b)(3).

(q) Evaluation of Impacts to Agricultural Resources

Exhibit 22(q) will include an evaluation of impacts on agricultural resources including:

1. A quantification and analysis of temporary and permanent impacts to agricultural land based on the proposed footprint of all Facility components and associated limits of disturbance during construction. To minimize impacts to active agricultural land, the Applicant plans to coordinate with the New York State Department of Agriculture and Markets. A discussion of potential mitigation, following the most recent edition of guidance documents issued by New York State Department of Agriculture and Markets. The Applicant will discuss adherence to and potential deviations from the New York State Department of Agriculture and Markets guidelines that are proposed for the Project. The Applicant will also include a discussion of historical trends in land use (with a specific focus on conversion of farmland) over the last 20 years within a 5-mile radius of the Facility. This will include a discussion of the Facility's potential effect on the availability of farmland within 5 miles and the anticipated impact of agricultural viability in the Study Area over the next 20 years;
2. A map of the Facility Site showing locations of prime farmland, prime farmland if drained, unique farmland, and farmland of state and local importance, will be provided in Exhibit 21;
3. A discussion of methods for identifying drainage tile lines prior to construction, along with restoration of tile lines impacted by Facility construction activities in areas where lands will be returned to agricultural use following decommissioning;
4. A discussion of current agricultural use and productivity within the Facility Site, including information gained from interaction with the New York State Department of Agriculture and Markets and local farmers; and
5. A description of appropriate measures that avoid or minimize permanent impacts to the agricultural viability of soils and lands within the Facility Site.

2.23 WATER RESOURCES AND AQUATIC ECOLOGY

2.23.1 Environmental Setting

Groundwater

There are no primary aquifers in Erie County; therefore, the Facility Site does not border or contain any part of a primary aquifer, a designation applied by USGS and NYSDEC for aquifers that are highly productive and utilized by major municipal water supply systems (see Figure 2.23-1; NYSDEC 2011; NYSDEC n.d.[c]). The nearest primary aquifer is the Salamanca aquifer, located more than 20 miles south of the Facility Site in southern Cattaraugus County. Depth to groundwater ranges from the ground surface to greater than 200 centimeters throughout the Facility Site. Depth to bedrock is greater than 200 centimeters throughout the Facility Site (USDA NRCS 2019).

The Facility Site overlays parts of one unconsolidated, unconfined aquifer with unknown thickness and also overlays part of an unconsolidated aquifer with both unconfined (and confined elements, both with unknown thickness, as mapped by USGS (1988). Additionally, the USEPA maintains data on sole source aquifers, which are those that supply at least 50% of the drinking water in a given area. The Cattaraugus Creek Basin Sole Source Aquifer underlies the majority of the Facility Site, with the exception of the northwestern-most corner (USEPA 2016).

Based on available NYSDEC GIS data sources, there are 13 water supply wells within the Facility Area (NYSDEC n.d.[d]).

Surface Water

The Facility Area is in the Cattaraugus Creek Basin (USGS Hydrologic Unit 04120102), a sub-basin of the larger Lake Erie Watershed. The Cattaraugus Creek Basin drains approximately 550 square miles of New York State in Cattaraugus, Erie, Chautauqua, Wyoming and Allegany counties. The prominent surface water feature associated with this watershed is Cattaraugus Creek. Based on the National Hydrography Dataset, the Facility Area includes multiple surface water features, including Cattaraugus Creek, which provides recreation and tourism opportunities, specifically fishing, to the region (Figure 2.23-2). There are also multiple surface water features within the Facility Site. These features are summarized in Table 2.23-1 along with the NYSDEC waterbody classification. NYSDEC's waterbody classification system includes three classes, with Class A representing the highest quality, including water supply for drinking, culinary or food processing purposes; primary and secondary recreation; and fishing. Class A, B, and C waters may also be protected because of their ability to support a trout population (T), or for the ability to support trout spawning (TS). Formal field delineation of wetlands and streams will be conducted prior to the submittal of the Article 10 Application and summarized in a wetland and stream delineation report.

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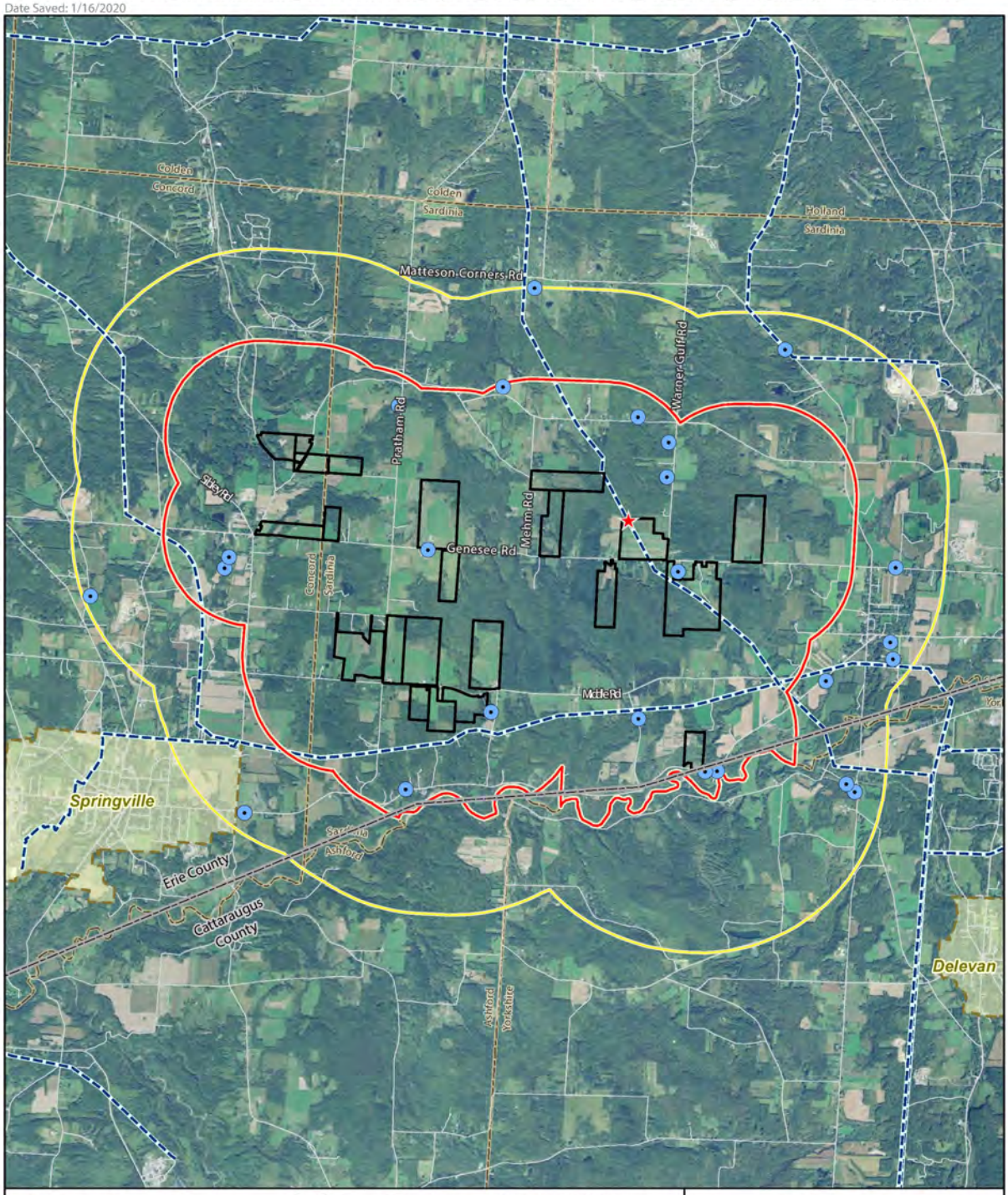

Figure 2.23-1
Water Wells and Aquifers in the Study Area
Genesee Road Solar Energy Center
Towns of Sardinia and Concord, Erie County, New York

Source: E&E 2019; ESRI 2017; HIFLD 2019; 2018; NAIP 2017; NYS DEC 2019;
NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019.

Table 2.23-1 NYSDEC Streams Present within the Facility Site

NYSDEC Stream	NYSDEC Stream Classification
Otis Creek	C
Dresser Creek	C
Richmond Gulf	C
Unnamed tributary to Cattaraugus Creek	C
Graff Brook	B

Aquatic Ecology

The aquatic ecology of freshwater rivers, streams, and ponds is comprised of biological components (aquatic species), physical components (water, habitat features), and chemical components (water quality). The Facility Site is located within the Cattaraugus Headwaters sub-watershed. Many of the tributaries to Cattaraugus Creek within this sub-watershed sustain fishes that are indicative of adequate water quality, such as darters, sculpins, shiners, suckers, and daces. Multiple tributaries in the sub-watershed support brook trout (Erie County Department of Environment and Planning et al. 2019). Specific data regarding the fisheries that may be present in the streams within the Facility Site are not available.

Freshwater macroinvertebrates found in New York include a variety of taxa, including flatworms, snails, worms, mayflies, dragonflies, beetles, and caddisflies. NYSDEC monitors surface waters to determine the overall quality of waters, trends in water quality, and identification of water quality problems and issues (NYSDEC n.d.[e]). One way they do this is through the use of benthic macroinvertebrate communities as indicators of water quality. Rotating Integrated Basin Studies (RIBS) monitoring collects this data in drainage basins across the state. Only one stream that traverses the Facility Site has been monitored to date by RIBS, Otis Creek. Macroinvertebrate species documented during the 2005 monitoring include mayflies, caddisflies, flies/craneflies, riffle beetles, and others.

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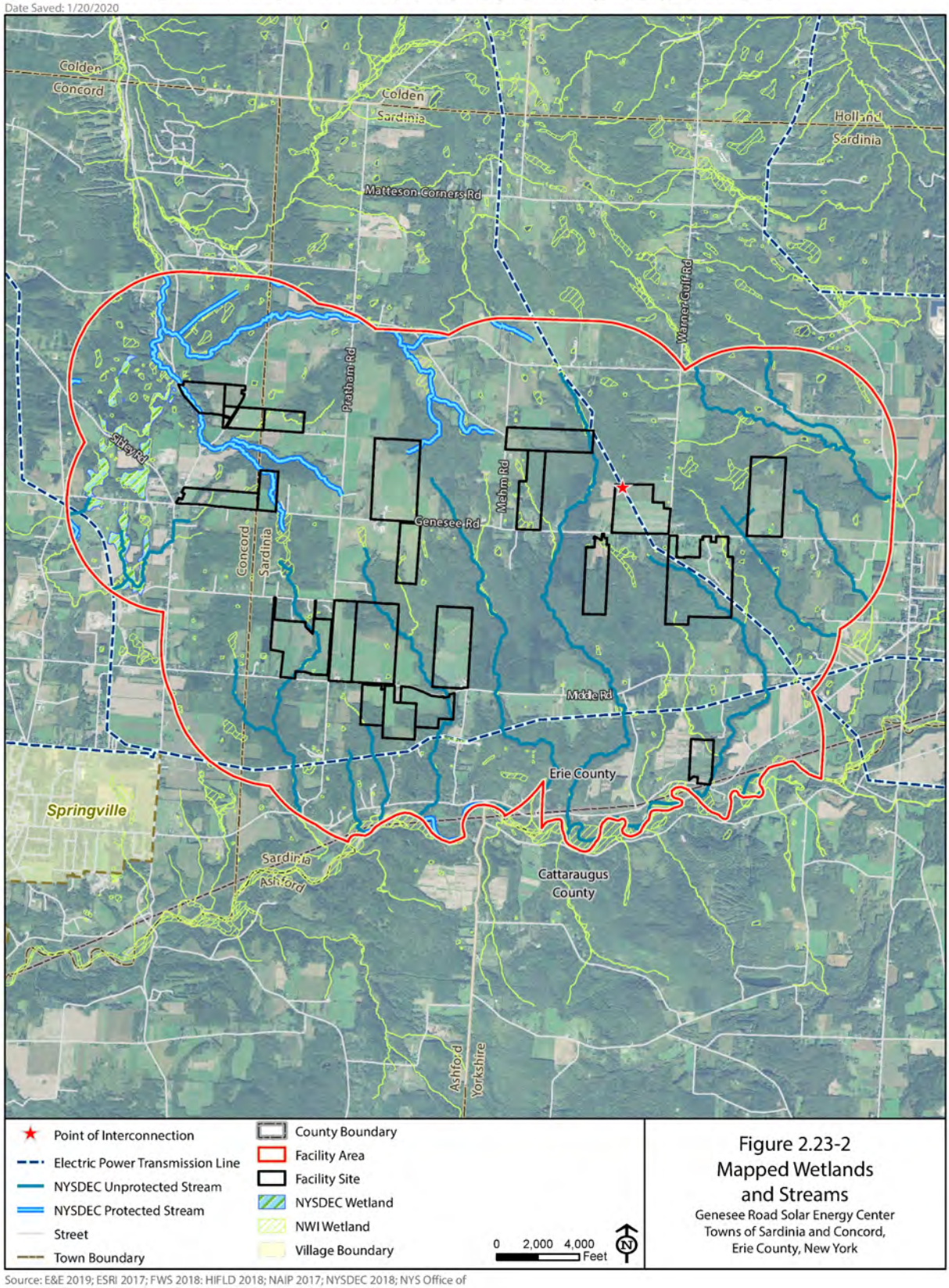

Figure 2.23-2
Mapped Wetlands and Streams
Genesee Road Solar Energy Center
Towns of Sardinia and Concord,
Erie County, New York

Source: E&E 2019; ESRI 2017; FWS 2018: HIFLD 2018; NAIP 2017; NYSDEC 2018; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019. USGS 2019

2.23.2 Potential Impacts and Mitigation

Based on typical construction and operation techniques for solar energy, the Genesee Road Solar Energy Center is not anticipated to result in any significant impacts to groundwater quality or quantity, drinking water supplies, or aquifer protection zones. Excavations for the substation and POI switchyard foundations, roadways, and any underground collection lines are relatively shallow, and are not anticipated to intercept groundwater within the surrounding aquifers.

Impervious surfaces include parking lots and access roads, concrete pads for the inverters and substation, and the potential O&M building, which have the potential to increase stormwater runoff to surface waters. The proposed design will add only small areas of impervious surface, dispersed throughout the Facility Site, and stormwater runoff will be treated in various stormwater management facilities, with a negligible effect on groundwater recharge.

To reduce adverse impacts to water quality, surface water hydrology, and aquatic organisms, the Facility layout will avoid surface water or utilize existing or narrow crossing locations whenever possible. Additional measures to avoid and minimize impacts may include:

- Place structures outside surface waters to the extent practicable;
- Use existing roads for transportation of materials and equipment from staging and storage areas to locations where they will be needed, where practicable;
- Locate new access roads, work areas, and facilities away from water resources wherever feasible;
- Schedule construction activities around sensitive aquatic life to minimize turbidity or incidental discharges and avoid critical reproductive dates for protected species;
- Minimize clearing of vegetation and disturbance along stream banks;
- Use existing crossings and narrow crossing locations, along with buried collection circuits to the extent practicable;
- Work within stream channels during low flow conditions to the maximum extent practicable, typically between June and September in order to minimize impacts to fisheries and water quality;
- Implement erosion and sedimentation control practices consistent with NYSDEC guidelines for SWPPs to minimize surface water quality impacts;
- Stockpile soil outside of known floodplains;
- Restore temporary construction access roads and similar facilities to pre-construction conditions; and

- Implement a restoration plan to maintain the landscape contours, reestablish vegetation, and prevent erosion.

Where crossings of surface waters are required, best management practices (BMPs) will be utilized, as required by the NYSDEC and U.S. Army Corps of Engineers (USACE). Specific mitigation measures for protecting surface water resources will be described in the Article 10 Application, and may include, but are not limited to, the following:

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

Stormwater

Prior to construction, the Applicant will seek coverage under the SPDES General Permit (GP-0-15-002 or most current) with a Notice of Intent for Stormwater Discharges from Construction Activity issued in January 2015 and effective on January 29, 2015 (modified July 15, 2015). The preliminary SWPPP will describe in general terms the erosion and sediment control practices that will likely be implemented during construction activities, and the post-construction stormwater management practices that will be used to treat water quality and quantity as well as reduce pollutants in storm-water discharges after Facility construction has been completed. The preliminary SWPPP will be prepared in accordance with the NYS Standards (NYSDEC 2016) and the *New York State Storm-water Management Design Manual* (NYSDEC 2015).

Chemical and Petroleum Bulk Storage

It is not anticipated that the Facility will require on-site storage or disposal of large volumes of any substances subject to regulation under the State of New York's chemical and petroleum bulk storage programs (e.g., fuel oil, petroleum, etc.). During construction, some materials, such as fuel, lubricating oils and other fluids will be stored and used on site and, therefore, have the potential for accidental spills and, thus, potentially enter surface water. The Facility SPCC Plan will minimize

the potential for unintended releases of petroleum and other hazardous chemicals. This plan will identify procedures for loading and unloading transfers of oil, discharge or drainage controls, procedures in the event of discharge discovery, a discharge response procedure, a list of spill response equipment (to be maintained on site), methods of disposal of contaminated materials in the event of a discharge, and spill reporting requirements.

It is not anticipated that the Facility will require the on-site storage or disposal of large volumes of any substances subject to regulation under local laws. This will be confirmed in the Article 10 Application.

2.23.3 Regulatory Framework

A preliminary list of regulations to be reviewed with respect to water resources and aquatic ecology includes the following:

- Clean Water Act Section 401;
- USEPA, Clean Water Regulations, 40 CFR Parts 401 and 404, et seq.;
- Freshwater Wetlands Permit: Article 24 – Environmental Conservation Law Implementing Regulations – 6 NYCRR Part 663, Part 664, and Part 665; and
- Protection of Waters Permit, including stream impacts and Section 401 Water Quality Certification (WQC): Article 15 – Environmental Conservation Law Implementing Regulations – 6 NYCRR Part 608;

2.23.4 Proposed Content of the Application

Consistent with the requirements of 1001.23 of the Article 10 Regulations, Exhibit 23 of the Application will contain the following information:

(a) Groundwater

Exhibit 23 (a) will include the following:

1. Maps showing depth to bedrock, depth to water table, and karst features throughout the Facility Site, based on the Soil Survey of Erie County, New York.
2. Information on groundwater aquifers and recharge areas including:
    i. Maps based on publicly available water well information including the following: data requested from the New York State Department of Health Records Access Officer, the New York State Department of Environmental Conservation, U.S. Geological Survey Office of Groundwater, U.S. Department of Agriculture Soil Conservation Service, U.S. Department of Agriculture Natural Resource Conservation Service Web Soil Survey, the

Erie County Soil and Water Conservation District, and other local municipalities, as well as data collected during subsurface investigations on the Facility Site.

ii. A discussion on groundwater quality, location, depth, yield, and use by identified public and private ground water wells, and the location of well head and aquifer protection zones within one mile of the Facility Site.

iii. The Applicant will conduct a private well survey within a 2,000-foot radius of the Facility Site. The Application will include a list of private wells, identified through the Applicant's survey, and available well design and production information (to the extent provided in response to well surveys). The survey will solicit well construction details, usage patterns, and water quality data, and will include educational information describing the Project and the Article 10 process, ways to contact Facility personnel, a link to the Applicant's website, and methods by which survey recipients can obtain additional information regarding the Facility and be added to the stakeholder list. The Applicant will field-confirm the locations of any such wells identified within lands where property access rights have been obtained prior to construction of the Facility. Maps of wells will indicate whether each well location is approximate (based on publicly available data or data obtained from the New York State Department of Health) or has been confirmed in the field.

3. An analysis and evaluation of potential ground water impacts (during normal and drought conditions) from the construction and operation of the Facility on drinking water supplies, and groundwater quality and quantity within 1 mile of the Facility Site. This will include the following:

   i. Data collected regarding the nature and extent of existing groundwater contamination within the Facility Site obtained from the well survey and publicly available data, including potential impacts to known public and private water supplies, groundwater aquifers, wellheads, and aquifer protection zones;

   ii. Plans for notification and complaint resolution during construction of the Facility;

   iii. Information on anticipated areas of potential dewatering during construction and operation of the Facility, based on publicly available databases, the results of the well survey, and geotechnical borings conducted at select locations within the Facility Site. A proposed method of dewatering (where needed) will be described in the Application;

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

(b) Surface Waters

Exhibit 23(b) will include the following:

1. A map, at a scale that supports legibility, identifying all surface waters, including intermittent and ephemeral streams, using data from New York State Department of Environmental Conservation, ESRI, U.S. Geological Survey, National Wetlands Inventory, and stream data collected during the on-site surveys of water resources within 500 feet from the edge of disturbance from all proposed Facility components (where landowner permission for access is available). This information will also be provided in tabular format that can be cross-referenced to the maps and shapefiles.
2. For each waterbody, a description of New York State-listed Water Classification and Standards pursuant to 6 New York Codes, Rules and Regulations Part 800-941, including part numbers, Water Index Numbers, physical water quality parameters, flow rate, biological aquatic resource characteristics (including incidentally observed species of vertebrates and invertebrates [if any], habitat, and presence of invasive aquatic species), and other characteristics of such surface waters, including intermittent streams, in the Facility Site using publicly available data, and when necessary, supplemented by field data collected during wetland and stream delineations or information provided by New York State Department of Environmental Conservation. Aquatic invasive species as identified by New York State Department of Environmental Conservation (http://www.dec.ny.gov/docs/lands_forests_pdf/islist.pdf), which are observed while conducting delineations and field investigations, will be documented and included in the Application. Invasive species are further addressed in Exhibit 22 (Terrestrial Ecology and Wetlands).
3. An identification of all downstream surface water drinking intakes within 1 mile of the Facility and contained within the drainage basin in which the Facility is located, or if none are located within 1 mile, the nearest downstream surface water drinking supply intake. Location(s) of the intakes will be given by longitude and latitude. A discussion of potential impacts to drinking water supplies due to the Facility or onsite non-Article VII interconnections, including characterization of the type, nature, and extent of service provided from the identified source, will also be included.
4. A narrative discussion will be provided that describes all potential impacts to surface water resources, including streams and lakes. Environmental impacts to be discussed and addressed will include thermal changes to waterbodies due to vegetative clearing, changes to in-stream structure, morphology and stability, potential impacts to state-listed threatened and endangered species, state-listed species of special concern, species of greatest conservation need, and the effects of turbidity on nearby habitat. Where appropriate and practical, mitigation actions will be discussed to offset acute and chronic impacts to waterbodies. Potential source(s) of and collection systems for water for construction period uses, invasive species wash station(s), fire control, and other uses will be provided. For any

horizontal directional drilling installations, a "frac-out" contingency plan will be provided to address any inadvertent releases. The feasibility of using overhead crossings with poles more than 50 feet from the top of banks, or trenchless crossings, will be assessed and implemented for all streams proposed to be crossed. A table will be provided that identifies all resource impacts to surface waters. This will include:

i. A calculation of the approximate acreage and linear distance of surface waters that will be temporarily or permanently impacted based on the proposed Facility footprint and associated impact assumptions, and field delineated stream boundaries;

ii. The construction impact type at each waterbody and, as applicable, the crossing methodology impact (e.g., buried collection, access road) and construction technique used (e.g., horizontal directional drilling or access driveway utilizing temporary bridge);

iii. Typical details of best management practices to be used. Detailed best management practices will be provided for each construction technique as appendices to the Application;

iv. All stream crossings for temporary and permanent roads, anticipated culvert specifications, and best management practice considerations for culvert placement, including methodology for controlling water flow during construction. Stream culvert design will meet New York State Department of Environmental Conservation Water Quality Certification requirements, and be designed for the 100-year storm event and a width of at least 1.25 times the width of the Mean (Ordinary) High Water Channel, among other requirements such as those described in the New York State Department of Environmental Conservation's Stream Crossing Guidelines, available at http://www.dec.ny.gov/permits/49060.html;

v. Culvert placement specifications should be described and enumerated, detail the expected flow calculations, and demonstrate culvert capacity with best management practice considerations for culvert placement. The feasibility of using trenchless stream crossings should be assessed for all streams proposed to be crossed. Work prohibition dates should be established after the Application has identified which streams will be crossed. Best management practices should be employed throughout the remainder of the year for all stream crossings;

vi. References to photographs depicting all perennial and intermittent stream crossings (including photos of upstream and downstream of the crossing site) identified for the Project which will be included as an Appendix; and

vii. All relevant information described above in 2.23(b)(2) will be referenced in this table.

A map of all anticipated horizontal directional drilling locations in relation to surface water resources will also be included. The location of all proposed horizontal directional drilling operations within 500 feet of surface waters, wetlands or existing water supply wells will

be identified in the Application. Additionally, a description of mitigation measures to minimize impacts of horizontal directional drilling operations on surface water quality and the hydrologic flow patterns and groundwater quality of the aquifer will be included.

5. The Application will identify and evaluate reasonable avoidance measures and Facility layout alternatives. This will include an evaluation of reasonable alternatives that may entirely avoid impacts to regulated waterbodies. Where impacts are unavoidable and have been minimized to the greatest extent possible, mitigation measures will be proposed for groundwater and surface water impacts. No state-protected streams exist within the Facility Site.

(c) Stormwater

Exhibit 23(c) will include the following:

1. Prior to construction, the Applicant will seek coverage under the New York State Department of Environmental Conservation State Pollution Discharge Elimination System General Permit with a Notice of Intent for Stormwater Discharges from Construction Activity issued in January 2015 and effective on January 29, 2015 (modified July 15, 2015). This authorization is subject to review by New York State Department of Environmental Conservation and is independent of the Article 10 process. However, the Article 10 Application will include a preliminary stormwater pollution prevention plan, which will be prepared consistent with the State Pollution Discharge Elimination System General Permit and NYS Standards (NYSDEC 2016), and will describe in general terms the erosion and sediment control practices that will likely be implemented, including:
    i. An introduction that will review the proposed Project, and the purpose, need, and appropriate contents of the complete stormwater pollution prevention plan;
    ii. Anticipated stormwater management practices, including temporary and permanent erosion and sediment control measures (vegetative and structural), and post-construction practices;
    iii. Anticipated construction activities, including a preliminary construction phasing schedule and definition of disturbance areas;
    iv. Site waste management and spill control measures;
    v. Proposed site inspection and maintenance measures, including construction site inspection, and construction site record keeping; and
    vi. Conditions what will allow for the termination of permit coverage.

2. The Preliminary stormwater pollution prevention plan identified above will be prepared in accordance with NYS Standards and the *New York State Stormwater Management Design Manual*. The stormwater pollution prevention plan will include typical information on permanent, post-construction erosion and sediment control measures (vegetative and structural), along with the anticipated stormwater management practices that will be used to reduce the rate and volume of stormwater runoff after construction has been completed. The preliminary stormwater pollution prevention plan will describe how stormwater controls and drainage features during site restoration will be designed to avoid post-construction increases in stormwater runoff. However, the preliminary stormwater pollution prevention plan will not include pre- or post-construction stormwater runoff calculations. The Applicant will identify as necessary the post-construction stormwater management practices that are anticipated to be implemented to meet the stormwater quality and quantity requirements of the final stormwater pollution prevention plan. In accordance with the General Permit, hydrologic modeling and complete design of the post-construction stormwater management will be completed prior to construction as part of a final stormwater pollution prevention plan.

(d) Chemical and Petroleum Bulk Storage

Exhibit 23(d) will include the following:

1. A description of the preliminary Spill Prevention, Control, and Countermeasure Plan. Spill containment requirements for electric transformers at the substation and inverters at the photovoltaic panel sites will be provided.
2. It is not anticipated that the Facility will require on-site storage of large volumes of any substance subject to regulation under the State of New York's chemical and petroleum bulk storage programs (e.g., fuel oil, petroleum etc.). If construction, operational, or maintenance activities at the Facility require petroleum or other hazardous chemicals be stored on site, the Application will identify such substances and demonstrate compliance with all local laws, regulations, and guidelines.

(e) Aquatic Species and Invasive Species

Exhibit 23(e) will include the following:

1. A discussion and analysis of the impact that construction and operation of the Facility is likely to have on biological aquatic resources (and related critical and sensitive habitat), including species listed as endangered, threatened, or species of special concern in 6 New York Codes, Rules and Regulations Part 182, as well as species of greatest conservation need, that are known or suspected of being present within the Facility Site. The analysis will include a discussion of the potential for introducing and/or spreading invasive species within those areas disturbed by construction. The presence of invasive species within the

Facility Site will be documented during wetland and stream delineations and other on-site investigations, as described in Section 2.22 (Terrestrial Ecology and Wetlands). However, no species-specific surveys for invasive or aquatic species are planned. Maps and shapefiles of the locations of aquatic invasive species will be provided to New York State Department of Environmental Conservation when the Application is submitted.

2. An identification and evaluation of reasonable avoidance measures and, where impacts are unavoidable, mitigation measures regarding impacts on such biological aquatic resources, including native and invasive species impacts (if any) and assure compliance with applicable water quality standards (6 New York Codes, Rules and Regulations Part 703). Based on data from the New York State Department of Environmental Conservation and U.S. Fish and Wildlife Service, it is not anticipated that construction activities and the presence of Facility components would occur in occupied habitat of listed aquatic threatened and endangered species and would not constitute take of individuals or the habitat they depend on, or both. However, if field surveys document the presence of threatened and endangered species or their habitat, the Applicant will submit with the Application an avoidance, minimization and mitigation plan that demonstrates a net conservation benefit to the affected species as defined pursuant to 6 New York Codes, Rules and Regulations Part 182.11 (Part 182), along with the informational requirements of an Incidental Take Permit, as provided for in Part 182, including proposed actions to avoid all impacts to listed species. If impacts are unavoidable, the Application will demonstrate this and contain thorough and clear justification of why complete avoidance of impacts is not feasible, proposed mitigation activities, and how the proposed minimization actions will reduce impacts to the maximum extent practicable.

(f) Cooling Water

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

2.24 VISUAL IMPACTS

2.24.1 Environmental Setting

Visual quality is the significance given to a landscape based on its intrinsic physical properties and cultural values and perspectives. As described in previous sections, the existing landscape in the Study Area is characterized by rolling hills with agricultural land, forest, and recreational land. There are also rural residences and small businesses. Visual resources are defined as places or locations designated for their aesthetic qualities and, therefore, visible changes to the natural and cultural features of the environment may affect how these resources are viewed. A landscape's

character generally refers to the arrangement of features and elements in an area that give it a distinctive appearance and quality.

Cultural resources, summarized in Section 2.20, above are also considered visual resources. Cultural and visual resources of local importance may include residences or residential neighborhoods where people have frequent and long-term views of the surrounding landscape and areas where people gather and engage in recreation, leisure, or ceremonial activities. These resources generally consist of local recreation areas, such as local parks, but may also consist of schools, cemeteries, golf courses, fair grounds, nature preserves, conservation areas, and local trails.

Table 2.24-1 lists visual resources of state and local concern, based on a preliminary desktop review of the 5-mile Study Area. Visual resources of statewide significance include the relevant categories identified in the NYSDEC Program Policy for Assessing and Mitigating Visual Impacts (NYSDEC 2018[b]). Visual resources of local concern include local parks, schools, and trails, to the extent known at this time. As noted in Section 2.20, a preliminary review of the National Park Service (NPS) database identified two historic places within 2 miles: (1) the Rider Hopkins Farm and Olmstead Camp and (2) the Sardinia Old Town Hall.

Table 2.24-1 Visual Resources Within the Study Area

Name of Resource	Location (Municipality)	Category
Hosmer Brook Public Fishing Stream Access	Sardinia	Municipal Recreation (Local)
Rider Hopkins Farm and Olmstead Camp	Sardinia	State Register (Historic Places)
Sardinia Old Town Hall	Sardinia	State Register (Historic Places)
Sprague Brook County Park/Campground	Colden/Sardinia	County Recreation
Kissing Bridge Snow Sports	Colden/Concord	Private Recreation
Craneridge Pool	Concord	Community Recreation
Route 240 WNY Southtowns Scenic Byway	Colden/Concord	NY State Scenic Byway
Springville Elementary School	Springville	Public School
Springville Middle School	Springville	Public School
Springville-Griffith Institute High School	Springville	Public School
Warner Museum - Concord Historical Society	Springville	Museum
Concord Community Park	Concord	Municipal Recreation (Local)
Concord Crest Golf Course	Concord	Private Recreation

Table 2.24-1 Visual Resources Within the Study Area

Name of Resource	Location (Municipality)	Category
Bureau of Forestry Visitor's Center and Maple Sugar Shack	Concord	County Recreation
Scarbuck Trail, Silent Woods Trail Loop and portions of the Conservation Trail	Concord	County Recreation (County Forest)
Erie County Forest	East Concord	County Recreation (County Forest)
Eaton Park	Springville	Municipal Recreation (Local)
Fiddlers Green Park	Springville	Municipal Recreation (Local)
Manion Park	Chaffee	Municipal Recreation (Local)
Delevan Elementary School	Delevan	Public School
Griffith Institute High School	Springville	Public School
Griffith Institute Middle School	Springville	Public School
League for the Handicapped Preschool Learning Center	Springville	Public School
Pioneer Middle School	Yorkshire	Public School
Pioneer Senior High School	Yorkshire	Public School
Saint Aloysius Regional School	Springville	Private School
Saint Pius X School	Getzville	Private School

2.24.2 Potential Impacts and Mitigation

Solar energy projects do not result in the visual impacts comparable to other large-scale energy projects that require tall structures, smokestacks, or generate plumes, such as wind energy projects and natural gas-fired power plants. Photovoltaic panels have a low-profile (i.e., approximately 9 feet in height), which limits their visibility and potential visual effect in terms of the distance from which the panels will be visible. However, the large areas required to achieve the necessary scale of electrical production for utility-scale solar projects can result in visual impacts for viewers located in areas immediately adjacent to the Project.

In addition, glare is frequently raised as a possible concern for solar PV installations. PV panels are designed to absorb as much of the solar spectrum as possible to maximize efficiency. The potential for reflectivity or glare from a given PV system is much lower than the glare and reflectance generated by common reflective surfaces in the environments surrounding the given PV system. There is an inverse correlation between light absorption and reflection. Consequently, virtually all PV panels installed in recent years have at least one anti-reflective coating to minimize reflection and maximize absorption. Therefore, although frequently raised as a concern, PV panels do not

typically produce glare unless the angles of the panels relative to reflective light is above approximately 60 degrees.

Siting a project in open fields minimizes the potential need for tree clearing and associated visual impacts from the loss of trees and increased visibility. The network of existing woodlots and hedgerows around agricultural fields minimize project visibility from nearby areas. In addition, collocating electrical facilities (such as the substation) with existing electrical infrastructure minimizes visual impacts. All facilities will be located at least 50 feet from roads and non-participating property boundaries, and additional or preserved landscaping will screen views of the Facility from roads and neighbors. PV panel visibility is anticipated to be relatively limited as the PV panels and associated equipment are approximately 9 feet tall and in many areas, and the forested areas and topography surrounding the Facility Area will serve to significantly restrict visibility.

Although the PV panels would be the most widespread Facility component, the collector substation and interconnection switchyard house the tallest structures associated with the Facility, including substation equipment such as the overhead gantry (which allows the powerlines to connect to the existing transmission line), lightning shield poles, and possible telecommunication structures. The tallest substation components are expected to be no more than 70 feet, depending on final design and requirements from the transmission owner and NYISO.

In general, measures to avoid and minimize visual impacts include the following:

- Locate away from residential and commercial areas and scenic, recreational, and historic areas to the maximum extent practicable;
- Use existing roads for transportation of materials and equipment from staging and storage areas to locations where they will be needed where practicable. Siting temporary construction yards and lay-down areas in locations where they are not easily visible from visual resources or paved roads to the extent practicable;
- Use landscaping or fencing or other similar materials to screen views of project features from visual resources; and
- Use the minimum temporary and permanent night lighting necessary for safety and security, orient lighting downward, fully screen bare bulbs from view from sensitive resources, and use on-demand lighting and/or timers to minimize visual impacts of lighting.

2.24.3 Regulatory Framework

A VIA will assess the extent and significance of the visibility of the Project, including viewshed mapping, visual simulations, and characterization of effects in accordance with applicable state

and federal guidance. A preliminary list of regulations, plans, and guidelines to be reviewed with respect to the proposed Project includes the following:

- NYSDEC's Program Policy Assessing and Mitigating Visual Impacts;
- USDA, Forest Service. Landscape Aesthetics: A Handbook for Scenery Management, Agriculture Handbook Number 701.42 (USDA Forest Service 1995); and
- *Visual Resources Assessment Procedure for U.S. Army Corps of Engineers*, Instruction Report EL-88-1 prepared by State University of New York, Syracuse, (Smardon et al. 1988)

2.24.4 Proposed Content of the Application

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

(a) Visual Impact Assessment

Exhibit 24(a) will include a VIA to determine and assess the significance of Facility visibility. The Visual Impact Assessment procedures used for this study will be consistent with Exhibit 24 requirements and the general methodologies developed by various state and federal agencies, including the U.S. Department of the Interior, Bureau of Land Management (1980), U.S. Department of Agriculture, Forest Service (1995), the New York State Department of Environmental Conservation Program Policy DEP-00-2, Assessing and Mitigating Visual Impacts (2018), and the National Park Service's *Guide To Evaluating Visual Impact Assessments for Renewable Energy Projects* published in 2014 (Natural Resource Report NPS/ARD/NRR-2014/836; BLM 2014). The components of the Visual Impact Assessment will include identification of visually sensitive resources (see (b)(4) below for additional information), viewshed mapping, confirmatory visual assessment fieldwork, visual simulations (photographic overlays), and proposed visual impact mitigation. The Visual Impact Assessment will include:

1. Character and Visual Quality of the Existing Landscape

   A 5-mile Visual Study Area will be established for the purpose of identifying visually sensitive resources of regional and/or statewide significance. A more inclusive inventory of locally significant visually sensitive resources will be conducted for the area within 2-miles of the proposed Facility. Distinct Landscape Similarity Zones within the 5-mile-radius Visual Study Area will be identified and defined (including discussion and analysis of the existing landscape setting, land uses and visual characteristics of the Study Area) and the approximate location of these Landscape Similarity Zones will be illustrated in the Application.

2. Visibility of the Facility and Above-ground Components

Topographic and vegetation viewshed maps will be created to identify potential visibility of the photovoltaic arrays, and the substation. Methodology for these analyses is described in detail below in 1001.24(b)(2). The results of the viewshed analysis will be verified through visual field review. During these site visits, public roads and public vantage points will be visited to document locations from which Facility components would likely be visible, partially screened, or fully screened. This determination will be made based on the visibility of the distinctive Facility Area ridges/landforms, as well as existing features (such as residences and hedgerows) on the Facility Area, which will serve as locational and scale references. These site visits will result in photographs from representative viewpoints within the Study Area. The viewpoints will document potential visibility of the Facility from the various Landscape Similarity Zones, distance zones, directions, visually sensitive resources, and areas of high public use throughout the Visual Study Area. Photos will be taken using digital SLR cameras with a minimum resolution of 24 megapixels. All cameras will utilize a focal length between 28 and 35 millimeter (equivalent to between 45 and 55 millimeter on a standard 35 millimeter film camera). This focal length is the standard used in Visual Impact Assessment because it most closely approximates normal human perception of spatial relationships and scale in the landscape. Viewpoint locations will be documented using hand-held Global Positioning System units and high-resolution aerial photographs (digital ortho quarter quadrangles). The time and location of each photo will be documented on all electronic equipment (cameras, Global Positioning System units, etc.) and noted on field maps and data sheets. The results of the field review will be presented in detail with visual aids in the Visual Impact Assessment.

3. Appearance of the Facility Upon Completion

   Lighting standards, photovoltaic panels, inverters, energy storage systems, fences, access roads, and any other above-ground/visible Facility components will be included in all visual simulations in which they would be visible. One or more visual simulations that depict the proposed substation and point of interconnection switchyard will also be prepared. It is anticipated that the collection system for the Facility will be buried underground. If overhead collection lines are necessary, then these would also be also be depicted in the visual simulations.

4. Facility Lighting

   No lighting will be installed as part of the photovoltaic arrays. Lighting that will be installed as part of the Facility will be at the proposed substation, and potentially at an operations and maintenance building. Additional dark sky compliant lighting may be installed at the inverter/transformer locations and any energy storage systems. Additional information regarding lighting at the Facility will be included with the Lighting Plan in Exhibit 11 of the Application. The potential impact of proposed lighting that needs to be installed as part

of the Facility, as well as mitigation measures to address light trespass, will be described in the Article 10 Application.

5. Photographic Overlays

   Photographic simulations will be developed by constructing a three-dimensional computer model of the proposed photovoltaic panels, inverters, transformers, energy storage systems (if applicable in the final design), and other visible components of the Facility layout based on specifications provided by the manufactures and/or the Applicant. The photographic simulations will illustrate any proposed vegetation clearing, any proposed vegetative screening, and at least one will show the collection substation and/or point of interconnection switchyard, and the operations and maintenance building, if constructed, (including exterior color and finish) if the location and design are known at the time of Visual Impact Assessment preparation.

6. Nature and Degree of Visual Change from Construction

   The Visual Impact Assessment will include a discussion of short-term visual impacts associated with the clearing of trees, construction of access roads, installation of photovoltaic panels, energy storage systems, overhead lines, and general construction activity.

7. Nature and Degree of Visual Change from Operation

   Photographic simulations will be developed by using Autodesk 3ds Max Design 2015® (or similar) to create a simulated perspective (camera view) to match the location, bearing, and focal length of each existing conditions photograph. Existing elements in the view (e.g., buildings, existing transmission structures, roads) will be modeled based on aerial photographs and Digital Elevation Model data in AutoCAD Civil 3D 2014® (or similar). A three- dimensional topographic mesh of the landform (based on Digital Elevation Model data) will then be brought into the three-dimensional model space. At this point minor adjustments are made to camera and target location, focal length, and camera roll to align all modeled elements with the corresponding elements in the photograph.

   An evaluation of Facility visibility and visual impact during operation will be conducted by a panel of three visual professionals using a standardized rating form. The methodology utilized in this evaluation will be a modified version of the U.S. Department of the Interior Bureau of Land Management contrast rating methodology. Completed forms and the rating form instructions will also be included with the Application.

8. Operational Effects of the Facility

   The Application will include a discussion of operational effects of the Facility. Operation of the Facility will not have visible effects related to generating plumes, off-site shading, and

shadow-flicker. Therefore, the operational impacts discussion will focus on the visual appearance of the photovoltaic panels and other Facility components, including a consideration of solar glare.

Regarding the potential for glare, a preliminary analysis to determine the occurrence and duration of solar glare on sensitive receptors will be provided in the Application. The glare analysis will utilize the viewshed analysis (see 2.24.2(b)) to identify residences within 1,500 feet of Facility components and roadways within one mile of Facility components with potential direct line of sight visibility of the proposed Facility. The tool used to evaluate glare occurrence and duration will be the Sandia National Laboratories' Solar Glare Hazard Analysis Tool (through a licensed contractor). The Solar Glare Hazard Analysis Tool is a web-based glare assessment tool that provides an assessment of when and where solar glare may occur throughout the year from a solar installation (https://share-ng.sandia.gov/glare-tools/). If levels of potential glare are found to be unacceptable, mitigation measures will be discussed in (9) below, including vegetation planting, and/or revisions to the Project layout, as appropriate.

9. Measures to Mitigate for Visual Impacts

   An assessment of various visual impact mitigation strategies, including screening (landscaping), setbacks, architectural design, visual offsets, Facility color and design, and lighting options, will be presented. An assessment of relocating or rearranging Facility components, reduction of Facility component profiles, and alternative technologies will be presented in Exhibit 9. Mitigation will also be assessed in relation to New York State Department of Environmental Conservation Program Policy DEP-00-2 (NYSDEC 2000).

10. Description of Visual Resources to be Affected

    An identification and description of visually sensitive resources within the Visual Study Area will be included, as well as an assessment of probable impacts of the Facility on these resources. Visually sensitive resources will include any specific location identified by municipal planning representatives, Department of Public Service, Department of Environmental Conservation, and Office of Parks, Recreation, and Historic Preservation. This section will also include discussion of potential visual impacts on residences located within the Facility Area.

(b) Viewshed Analysis

Exhibit 24(b) will include a viewshed analysis within the Application that identifies the locations within the Visual Study Area where it may be possible to view the proposed photovoltaic arrays and other proposed above-ground Facility components from ground-level vantage points.

This analysis includes identifying potentially visible areas on viewshed maps. The viewshed analysis component of the Application will include:

1. Viewshed Maps and Methodology

   Maps showing the results of viewshed analyses based on 1) the screening effect of topography alone, and 2) the combined screening effect of topography, vegetation, and built structures within the environment. Viewshed maps will be presented on the most recent edition U.S. Geological Survey 1:24,000 scale topographic base map. Additionally, results of the viewshed analyses will also be shown on maps that depict visually sensitive sites, viewpoint locations, foreground, mid-ground, and background distance zones, and Landscape Similarity Zones. The Application will include representative line-of-sight figures for certain resources, particularly NYS-listed resources that are predicted to not have visibility due to vegetation screening or cover.

   A topographic viewshed map for all Facility components will be prepared using a bare earth Digital Elevation Model derived from Light Detection and Ranging data, sample points representing photovoltaic panel locations based on the Facility layout presented in the Application, an assumed maximum photovoltaic panel height of 12 feet or less (depending on final proposed Facility design); an assumed viewer height of six feet; and ESRI ArcGIS® software with the Spatial Analyst extension. The resulting topographic viewshed map will define the maximum area from which any photovoltaic module sample point could potentially be seen within the Study Area (i.e., ignoring the screening effects of existing vegetation and built structures). A second-level analysis will be conducted to incorporate the screening effect of structures and vegetation, as captured in Light Detection and Ranging data. A digital surface model of the Study Area has been created from these Light Detection and Ranging data, which includes the elevations of buildings, trees, and other objects large enough to be resolved by Light Detection and Ranging technology.

2. Sensitive Viewing Areas

   Identification of visually sensitive resources using a variety of data sources including digital geospatial data (shapefiles) obtained primarily through the NYS GIS Clearinghouse or ESRI, national, state, county and local agency/program websites as well as websites specific to identified resources; U.S. Geological Survey 7.5-minute topographical maps; and web mapping services such as Google Maps. Identified aesthetic resources of statewide or local significance within the Visual Study Area will be included with the Application. Visually sensitive resources will also include any specific location identified by municipal planning representatives, Department of Public Service, Department of Environmental Conservation and Office of Parks, Recreation, and Historic Preservation.

3. Representative Viewpoint Selection

   Identification of representative viewpoints to be used for visual simulations. Representative viewpoints will be selected based upon outreach to/consultation with members of the public; engaged stakeholders; municipal planning representatives; Department of Public Service; Department of Environmental Conservation; and Office of Parks, Recreation, and Historic Preservation, along with the criteria outlined below to ensure that a variety of views are represented. The Applicant will include a list of visual stakeholders and copies of viewpoint selection correspondence in the Application. Visual stakeholders have been added to the master list of stakeholders in Appendix B. The selected viewpoints should:

   i. Provide open views toward the Facility Area from different directions throughout the Visual Study Area (as determined through field verification).

   ii. Illustrate the most open views available from potentially significant public resources within the Visual Study Area.

   iii. Illustrate open, representative views from the various Landscape Similarity Zones within the Visual Study Area, which are defined based on the similarity of features such as landform, vegetation, water, and land use patterns.

   iv. Illustrate open views of the proposed Facility that may be available to representative viewer/user groups within the Visual Study Area.

   v. Illustrate typical views of different numbers of photovoltaic panel arrays, from a variety of viewer distances, and under different lighting conditions, to illustrate the range of visual change that will occur with the Facility in place.

   vi. Illustrate the proposed substation and potential operations and maintenance building if design of these Facility components are known.

4. Photographic Simulations

   Photo-realistic simulations of the completed Facility from each of the selected viewpoints. The photos selected for visual simulations will illustrate a range of typical/representative conditions, including leaf-on and leaf-off conditions.

5. Mitigation Simulations

   The Article 10 Application will include visual simulations or other representative images that illustrate the various visual mitigation measures (such as fence styles or plantings) that are being considered for the Facility. Common approaches to visual vegetative screening that will be considered will include evergreen hedges, native shrubs and plantings, and pollinator-friendly grasses and wildflowers. A discussion of the proposed annual maintenance schedules of vegetative screening materials will be included in the Application.

6. Simulation Rating and Assessment of Visual Impact

   A composite contrast rating for each viewpoint. All rating forms will be included in the Application along with a narrative description of the existing view and overall visual effect representing the nature and degree of visual change resulting from construction and operation of the Facility on scenic resources and viewers represented by each of the selected viewpoints using comments provided by the rating panel members.

7. Visible Effects Created by the Facility

   Operation of the Facility is not anticipated to result in any operational visual effects, such as vapor plumes, shadow-flicker, or off-site shading. Other than the potential for glare from the photovoltaic panels, these types of effects will not be evaluated in the Application.

2.25 EFFECT ON TRANSPORTATION

2.25.1 Environmental Setting

Transportation access to and from the Genesee Road Solar Energy Center includes both state routes and local roads in the Study Area shown on Figure 2.25-1. U.S. Route 219 is a limited access highway located approximately 3.5 miles west of the 5-mile radius Study Area and is the primary regional access route. State Route 39 connects with U.S. Route 219 to the west of Village of Springville, and serves as the main east-west access route to the Study Area, with additional east-west access provided by Genesee Road. State Route 240 provides the main north-south access route on the western half of the 5-mile Radius Study Area, while State Route 16 provides the main north-south access on the eastern side. Table 2.25-1 lists major roadways within the Study Area along with average daily traffic volumes from the New York State Department of Transportation (NYSDOT). Traffic volumes are generally higher within the village of Springville and lower in the surrounding rural areas.

Table 2.25-1 Major Roadways near the Study Area

Route	Description	Average Daily Traffic Volumes
U.S. Route 219	4-lane divided highway	5,076 - 11,099
State Route 16	2-lane highway	8,269 - 8,967
State Route 39	2-lane highway	3,632 - 7,594
State Route 240	2-lane highway	1,151 - 2,660

Source: NYSDOT 2019

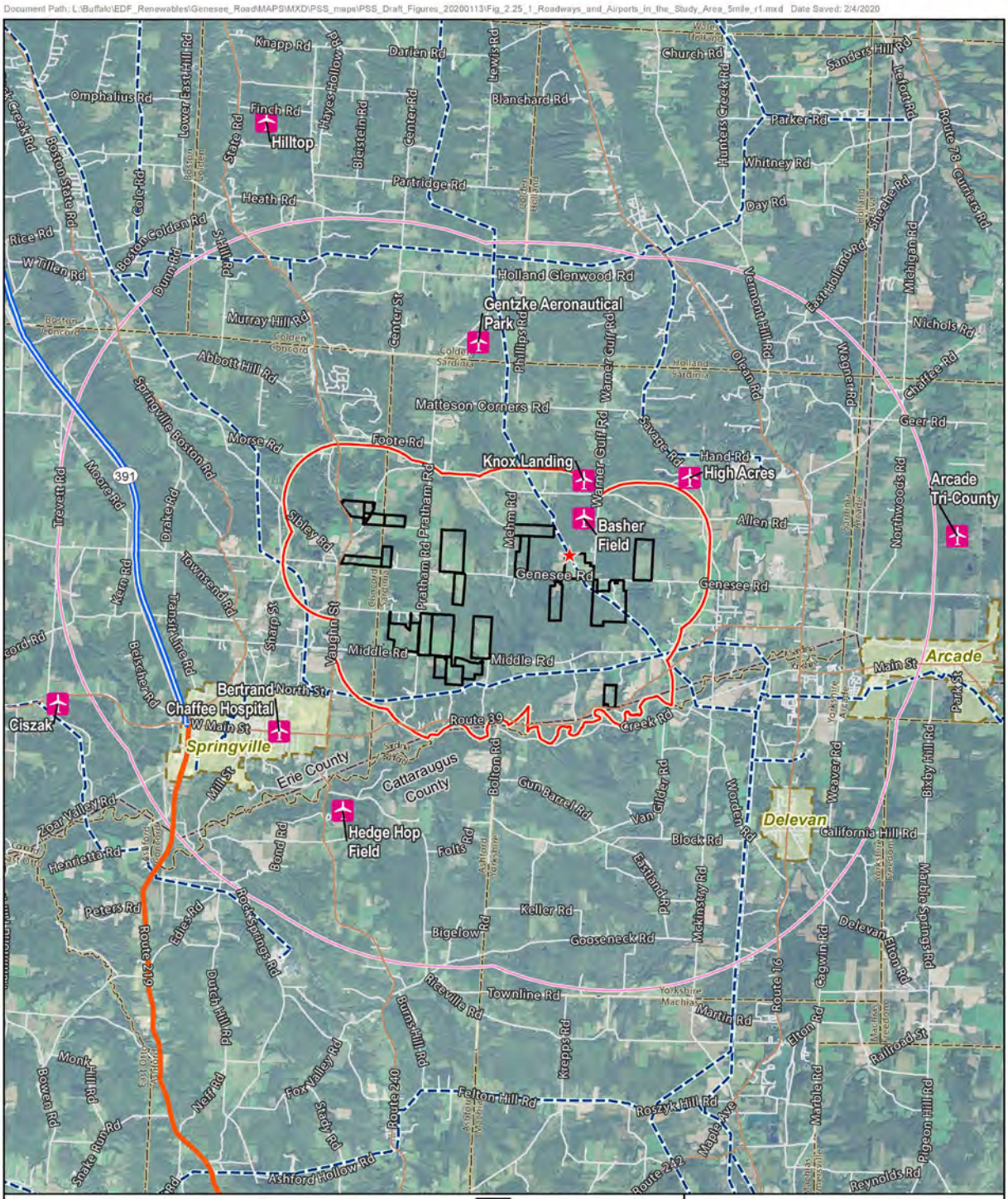

Figure 2.25-1
Roadways and Airports in the Study Area
Genesee Road Solar Energy Center
Towns of Sardinia and Concord, Erie County, New York

Source: E&E 2019; Erie County 2019; ESRI 2017; HIFLD 2018; NAIP 2017; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019; USBOT 2018

No fixed route public transit is available within the 5-mile radius Study Area; however, Rural Transit Services on-demand transit for older adults, low-income individuals, and persons with disabilities in the Towns of Concord, Holland, and Sardinia. An active rail line runs parallel to SR 240. The Arcade Tri-County Airport is the nearest public airport to the proposed Project Facility, approximately 4.2 miles to the east. Basher Field is a privately-owned airstrip, located within the proposed Facility Area. Additional private airstrips within the 5-mile Study Area include the Bertrand Chaffee Hospital, Hedge Hop Field, High Acres, Knox Landing, and Gentzke Aeronautical Airport.

2.25.2 Potential Impacts and Mitigation

Generally, the potential impacts associated with construction, operation, and maintenance may include localized temporary increases in traffic from construction vehicles and workers and impacts to public roads from use of overweight or oversized vehicles for the delivery of construction equipment and materials. No new traffic control devices are anticipated to be necessary, and no damage to roads due to normal operation of the Facility are expected to occur.

A Route Evaluation Study will identify public road constraints, potential haul routes, and impacts to transportation systems used to prepare a construction plan to avoid and minimize impacts to traffic and public roads. Consultation with local emergency service providers will also inform emergency service routes in use, and those listed within the emergency training and communication plan. In general, measures to avoid and minimize impacts on transportation resources include the following:

- Use existing access roads as much as possible;
- Design new access roads and improvements according to NYSDOT standards;
- Consider the scenic, historic, and cultural associations with proposed transportation routes during construction;
- Provide notice to adjacent landowners when construction would take place; and
- Contact NYSDOT representatives to discuss potential traffic impacts and avoidance measures.

Construction vehicles will use the same haul routes used by other construction vehicles and component delivery haulers. Workers and employees in regular vehicles (pick-up truck size and smaller) will access construction areas and worker parking areas through use of whichever public road route is most logical and efficient. Employees and workers accessing the site with construction equipment will follow the identified specified haul routes.

2.25.3 Regulatory Framework

A preliminary list of regulations to be reviewed with respect to the proposed Project includes the following:

- NYSDOT standards; and
- NYSDOT's Highway Data Services website
- Special Hauling Permit (Section 385 of the New York State Vehicle and Traffic Law)
- Erie County Highway Work Permit

2.25.4 Proposed Content of the Application

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

(a) Conceptual Site Plan

Exhibit 25(a) will include the preliminary design drawings prepared in association with Exhibit 11 which will serve as the conceptual site plan. In addition, a Route Evaluation Study will be prepared for the Facility and included in the Application. The Study will identify horizontal and vertical geometry, the number of approach lanes, the lane widths, shoulder width, traffic control devices (if needed), and sight distance of all Facility Site driveway and roadway intersections.

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

Exhibit 25(b) will include a description of the pre-construction characteristics of roads in the 5-mile Study Area that will include the following:

1. Traffic Volume and Accident Data

   Data will be obtained from the New York State Department of Transportation Traffic Data Online Viewer to review existing traffic volumes along proposed approach and departure routes for the Facility. Accident information along those routes contained in the Accident Location Information System will be requested from the local police agencies and/or New York State Department of Transportation regional office. These data will be compared with the Transportation Study Area, to be identified in the Application.

2. Transit Facilities, Including School District Bus and Routes

   The Article 10 Application will include a review of transit facilities and routes, including school district routes for the districts serving the Facility Site, as well as Rural Transit Services, as applicable and publicly obtainable. Information related to school district routes

will be accomplished by obtaining school bus routes, number of buses, and times from Springville-Griffith, Holland, and Yorkshire-Pioneer School Districts.

3. Emergency Service Providers

   This section of the Article 10 Application will provide a review of locations of emergency service provider stations (police, fire, ambulance, and hospitals) that serve the Facility Site. The Application will include a map of service provider location and routes, which will also be provided to operations and maintenance staff during Facility operation.

4. Available Load Bearing and Structural Rating Information

   The Application will identify Load Restricted Bridges and/or roadways along the proposed approach and departure routes for the Facility. For non-posted bridges along those routes, information from the New York State Department of Transportation's Highway Data Services website will be reviewed to determine potential load capacity restrictions. Consultations with local highway supervisors will also be summarized in the Application.

5. Traffic Volume Counts

   The Facility is not within a congested urbanized area, therefore twenty-four-hour traffic counts are not applicable and will not be included in the Article 10 Application.

(c) Facility Trip Generation Characteristics

Exhibit 25(c) will include an estimate of Facility trip generation characteristics, including:

1. Number, Frequency, and Timing of Vehicle Trip

   An estimate of the number, frequency and timing of vehicle trips will be presented in the Application based on anticipated delivery routes, site plan, and location of Facility components as presented in the Article 10 Application. Exact scheduling of construction work and required vehicles will be determined by the Applicant's contractor prior to construction. Therefore, the study to be conducted and included in the Article 10 Application will only provide an estimate based on the anticipated volume of materials and number of vehicles. The Application will tabulate construction vehicle volumes for the Facility broken down by Facility component/truck type.

2. Approach and Departure Routes for Trucks Carrying Water, Fuels, or Chemicals

   Information and routes regarding trucks carrying water, fuels, or chemicals, if any, out to 5 miles from the Facility Site will be provided.

3. Cut and Fill Activity

   The Article 10 Application will provide an estimate of cut and fill activity of anticipated quantities of earthwork and materials based on the site plan and locations of Facility components. Any cut and fill activity will be subject to the conditions of the Facility-specific stormwater pollution prevention plan.

4. Conceptual Haul Routes and Approach and Departure Routes for Workers and Employees

   Conceptual haul routes will be identified by a transportation engineer and details regarding the routes will be included in the Application. Approach and departure routes will be based on the anticipated type of delivery vehicle to be used, and such routes will be identified to and from the Facility Site for employees and construction workers of the Facility.

(d) Traffic and Transportation Impacts

Exhibit 25(d) will include an analysis of traffic and transportation impacts of the Facility, including:

1. Levels of Service along Linear Segments of Highway

   Synchro and HCS software (or similar software generally accepted by the industry) will be utilized to determine levels of service for linear segments of highways used by construction and delivery vehicles. The anticipated extent and duration of traffic interferences/delays during construction will be described. As indicated above, the Facility is not in a congested urbanized area requiring detailed intersection analysis.

2. Route Evaluation Study

   A Route Evaluation Study, including anticipated delivery routes and analyses of the adequacy of these routes to accommodate vehicles associated construction and operation of the Facility will be included in the Application. The possible extent and duration of traffic interferences resulting from construction of the Facility and interconnects will be discussed.

3. Over-sized Deliveries

   The Applicant will conduct a review of aerial photography and online street view maps in conjunction with driving all potential haul routes to identify physical restrictions. Anticipated temporary improvements will be identified and a corresponding location map will be developed and included in the Article 10 Application.

4. Measures to Mitigate for Impacts to Traffic and Transportation

   Identification of measures to mitigate traffic and transportation impacts, which will be presented in the Route Evaluation Study, will be included in the Application. This analysis will include any time restrictions regarding delivery of Facility components and provisions for repair of roads damaged by heavy equipment or construction activities during construction or operation of the Facility.

5. Road Use and Restoration Agreements

   Any anticipated Town, County, or State permits to be required for construction and/or post-construction use of public roads, including highway work permits and special use permits from New York State Department of Transportation will be identified, if necessary. If applicable, a draft road use agreement will be included as an Appendix to the Application. This section will also generally discuss use agreements with private landowners which may be required for construction use of private property along public roads. Note that if it is determined that road use agreements are not applicable, the Application will include a discussion on an alternative method for ensuring that required repair due to damage caused by Project construction is handled by the Applicant.

(e) Impact of the Facility on Mass Transit Systems

There are no mass transit systems within the Facility Area that could be affected by the construction and operation of the Facility. Therefore, these systems will not be addressed in the Article 10 Application.

(f) Federal Aviation Administration Review

Construction and operation of the Facility are not anticipated to affect aviation and therefore will not be addressed in the Article 10 Application. The proposed Facility does not fall under any of the categories for which Federal Aviation Administration review triggered under 14 CFR Part 77.9 because no structure is proposed which exceeds 200 feet in height above ground level, and because nearby public airports are outside the designated range required for by the Federal Aviation Administration. Therefore, no Federal Aviation Administration filing or review is required.

Privately owned airstrips near the proposed Facility are not subject to 14 CFR 77.9, and therefore notification of construction is not required. However, EDFR Renewables included the owners of these airports as stakeholders in meetings regarding the Facility.

1. Department of Defense Review

   Construction and operation of the Facility are not anticipated to affect military aviation or operation and, therefore, will not be addressed in the Article 10 Application.

2. Consultation with Nearby Airports/Heliports

   Prior to the submission of the Article 10 Application, letters regarding the Facility's development and status will be sent to any public airports or heliports identified on the Facility's stakeholder list. After meeting with a landowner to discuss the private airstrip on their property, the Applicant included restrictions in their lease agreement to mitigate any potential concerns. In addition, if necessary or requested, the Applicant will meet with the above-mentioned aviation stakeholders to discuss Facility-specific information. The Article 10 Application will discuss the results of those consultations.

3. Responses from the Federal Aviation Administration and Department of Defense

   This information will not be provided in the Application as the construction and operation of the Facility is not anticipated to have any effect on aviation and, therefore, will not be addressed in the Application.

2.26 EFFECT ON COMMUNICATION

2.26.1 Environmental Setting

Broadcasting communication sources include AM/FM radio; television; telephone; microwave transmission; emergency services; municipal/school district services; public utility services; doppler/weather radar; air traffic control; armed forces, Global Positioning System (GPS); and amateur radio licenses registered to users. Other communication systems include underground cable and fiber optic major transmission telecommunication lines. Figure 2.26-1 shows the current locations of known broadcast communication sources within a 2-mile radius Study Area. Based on the most currently available GIS data, there are three private transmission towers and one microwave service tower within the Study Area and four additional private transmission towers within the Study Area.

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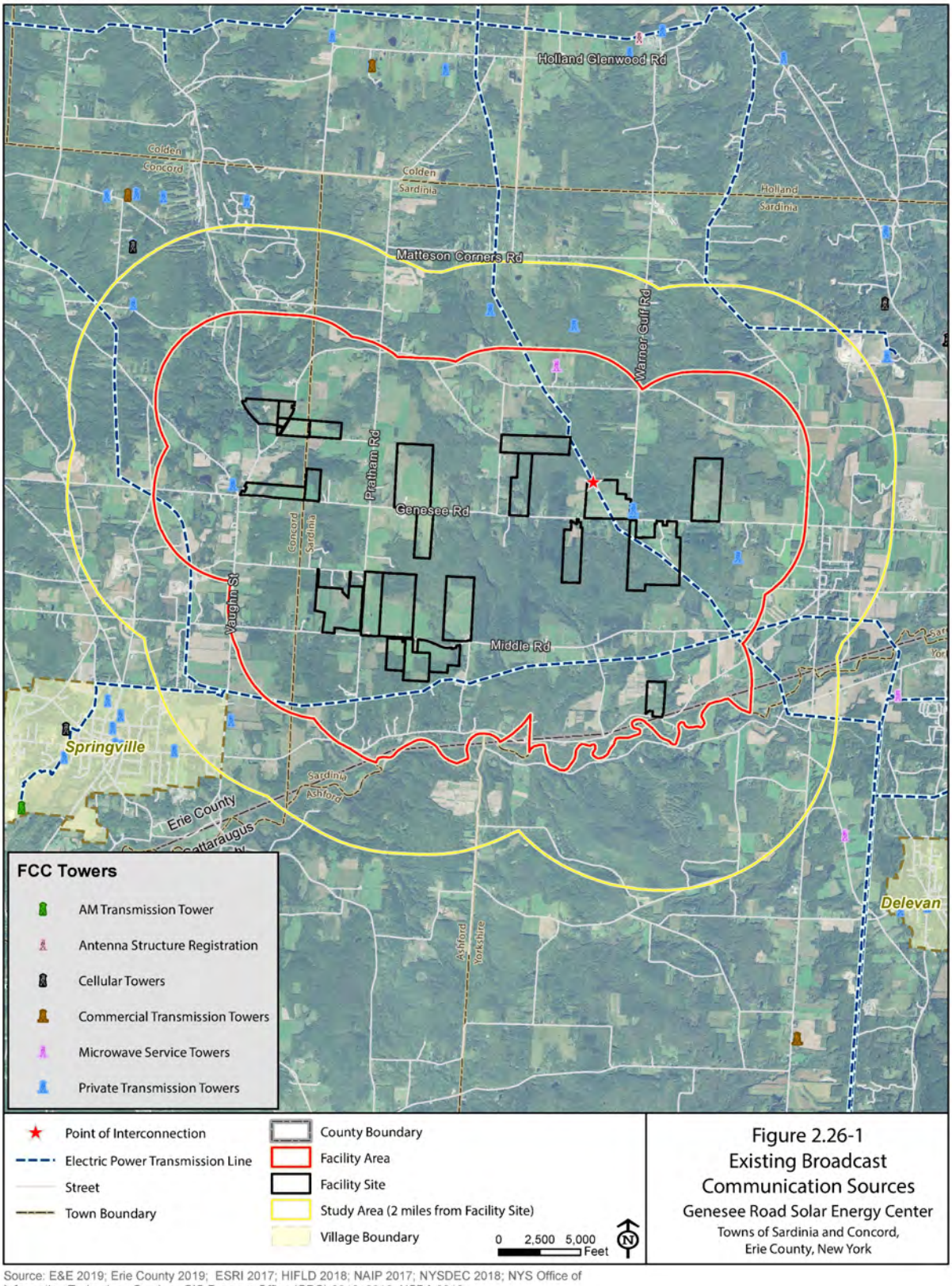

Figure 2.26-1
Existing Broadcast
Communication Sources
Genesee Road Solar Energy Center
Towns of Sardinia and Concord,
Erie County, New York

Source: E&E 2019; Erie County 2019; ESRI 2017; HIFLD 2018; NAIP 2017; NYSDEC 2018; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019; USDA 2018

2.26.2 Potential Impacts and Mitigation

In general, electrical equipment, tall structures, and electromagnetic fields (EMFs) can cause interference with the operation of broadcast communication equipment. The Genesee Road Solar Energy Center is not expected to impact public broadcasting communication technologies because:

- Solar panels have a low-profile design and are not anticipated to exceed 9 feet in height;
- Facility components generate weak EMFs. The "PV arrays generate EMF in the same extremely low frequency range as electrical appliances and wiring found in most homes and buildings" (MDER 2015).
- The Facility will be located on private land that is rural in nature. Any EMFs generated by the Facility will dissipate rapidly within short distances. In a recent study of three solar arrays in Massachusetts, EMF levels measured along the boundary of each project were not elevated above background levels (MCEC 2012).

Additionally, Genesee Road Solar Energy Center is not expected to have any material impact on military or civilian radar systems because the design does not include tall structures that could potentially block radar signals. The Federal Aviation Administration (FAA) has concluded that solar arrays do not cause radar interference:

> "Radar interference occurs when objects are placed too close to a radar sail (or antenna) and reflect or block the transmission of signals between the radar antenna and the receiver (either a plane or a remote location).
>
> Due to their low profiles, solar PV systems typically represent little risk of interfering with radar transmissions. In addition, solar panels do not emit electromagnetic waves over distances that would interfere with radar signal transmissions, and any electrical facilities that do carry concentrated current are buried beneath the ground and away from any signal transmission.
>
> Off-airport solar projects are even more unlikely [than on-airport solar projects] to cause radar interference unless located close to airport property and within the vicinity of a radar equipment and transmission pathways" (FAA 2010).

As described in Section 2.15, the Complaint Resolution Plan will provide a mechanism through which residents can issue a formal complaint should any issues arise as a result of construction of operation of the Facility. This plan will be included with the Article 10 Application.

2.26.3 Regulatory Framework

Under CFR 47 Subpart A Section 15.13, Incidental Radiators, the Facility will employ good engineering practices to minimize the risk of harmful interference.

2.26.4 Proposed Content of the Application

Consistent with the requirements of 1001.26 of the Article 10 regulations, Exhibit 26 of the Application will contain the following information:

(a) Existing Broadcast Communication Sources

Exhibit 26(a) will identify all existing broadcasting communication sources within a 2-mile radius of the Facility and the associated interconnection between the Facility and the point of interconnection including:

- AM/FM radio;
- Television;
- Telephone;
- Microwave transmission (all affected sources, not limited to a 2-mile radius);
- Emergency services;
- Municipal/school district services;
- Public utility services;
- Doppler/weather radar (all affected sources, not limited to a 2-mile radius);
- Air traffic control (all affected sources, not limited to a 2-mile radius);
- Armed forces (all affected sources, not limited to a 2-mile radius);
- Global Positioning System; and
- Amateur radio licenses registered to users.

(b) Existing Underground Cable and Fiberoptic Lines within Two Miles

Exhibit 26(b) will include the identification of existing cable and fiber optic major transmission telecommunication lines within a 2-mile radius of the Facility and electrical interconnection between the Facility and the point of interconnection.

(c) Anticipated Effects on Communication Systems

Exhibit 26(c) will include any anticipated effects to the communication systems mentioned above by the proposed Facility and the electric interconnection between the Facility and point of interconnection. This section will include a discussion on the potential for the following scenarios:

- Structures to interfere with broadcast patterns by re-radiating the broadcast patterns in other directions;
- Structures to block necessary lines-of-sight;
- Physical disturbance by construction activities;
- Adverse impacts to collocated lines due to unintended bonding; and
- Any other potential for interference.

LORAN radio signals will not be addressed because transmission of all signals was terminated in 2010 by the Department of Homeland Security Appropriations Act.

(d) Evaluation of Design Configuration

Exhibit 26(d) will include an evaluation of the design configuration of the proposed Facility and electric interconnection between the Facility and the point of interconnection demonstrating that there will be no adverse effects of the communication systems identified in Sections (a) and (b) above.

(e) Post-construction Activities to Identify and Mitigate Adverse Effects on Communication Systems

If deemed to be necessary, exhibit 26(e) will include a description of post-construction activities that will be undertaken to identify and mitigate any adverse effects on the communications systems identified in Sections (a) and (b) above that occur despite the design configuration of the proposed Facility and the electrical interconnection between the Facility and the point of interconnection.

(f) Potential Interference with Radar

Exhibit 26(f) is specific to wind power facilities. As the proposed Facility is a solar facility, this section is not applicable.

2.27 SOCIOECONOMIC EFFECTS

2.27.1 Environmental Setting

The Study Area for Socioeconomics includes Erie and Cattaraugus County, New York and the communities within the 2-mile Study Area. Table 2.27-1 shows the 2010 and 2017 total population and the percent change in population. The towns and villages within the Study Area are relatively small compared to Erie and Cattaraugus counties, each with a population of less than 10,000 residents. Most of the communities have seen modest increase in population between 2010 and 2017. However, Cattaraugus County, the town of Holland, and the town of Yorkshire experienced a population loss between 2010 and 2017.

Table 2.27-1 Population Statistics for Communities within the Study Area

State/County/Town-ship	Total Population 2010	Total Population 2017 (2013-2017 Five-Year Estimates)	Percent Change (2010 to 2017)
New York	**19,378,102**	**19,798,228**	**2.2%**
Erie	919,040	923,995	0.5%
Colden	3,265	3,310	1.4%
Concord	8,494	8,550	0.7%
Holland	3,401	3,382	-0.6%
Sardinia	2,775	2,792	0.6%
Village of Springville	4,296	4,333	0.9%
Cattaraugus	80,317	78,175	-2.7%
Ashford	2,132	2,266	6.3%
Yorkshire	3,913	3,794	-3.0%

Sources: U.S. Census Bureau 2010, n.d.[a]

Table 2.27-2 provides the average annual employment statistics for 2018 for Cattaraugus and Erie Counties. Erie County has a much larger labor force compared to Cattaraugus County. However, both counties had average annual unemployment rates comparable to the state rate of 4.1%.

Table 2.27-2 Annual Average Labor Force Statistics for Communities within the Study Area (2018)

State/County	Civilian Labor Force	Employed	Unemployed	Average Annual Unemployment Rate (%)
New York	**9,574,706**	**9,181,058**	**393,648**	**4.1**
Cattaraugus	34,020	32,200	1,820	5.3
Erie	443,446	423,872	19,574	4.4

Source: Bureau of Labor Statistics 2019

Note: Bureau of Labor Statistics employment data are not available for towns under 25,000 population.

2.27.2 Potential Impacts and Mitigation

The Genesee Road Solar Energy Center will have a variety of potential socioeconomic effects on surrounding municipalities and districts. Generally, these impacts will have a positive effect resulting from a temporary increase in construction jobs and local spending, and a permanent increase in maintenance jobs, and tax revenue. The peak employment for construction phase is estimated to be around 300 workers. The majority of these workers would be drawn from Erie County and the regional labor market. An estimated five on-site, full-time job equivalents will be generated from operation of the Facility, with additional occasional work for landscaping, periodic maintenance, and other incidental work. Additional benefits to the community will include a PILOT and community benefit agreement to the Towns of Sardinia and Concord, Erie County, and the impacted school districts. Landowners hosting Facility infrastructure will also receive annual payments, and additional local revenues are possible through the purchase of construction materials, supplies, services, and goods throughout the life of the Facility.

As the design progresses, EDF Renewables will quantify the local economic impacts of constructing and operating the Facility using the Job and Economic Development Impact (JEDI) model. This model was created by the National Renewable Energy Laboratory, a national laboratory of the United States Department of Energy and calculates various indicators for each level of impact using project-specific data and geographically defined multipliers. These multipliers are produced by IMPLAN Group, LLC, using a software/database system called IMPLAN (IMpact analysis for PLANning), a widely used and widely accepted general input-output modeling software and data system that tracks each unique industry group in every level of the regional data (IMPLAN 2018).

Calculating the number of jobs and economic output associated with a proposed Facility using the JEDI model is a two-step process. The first step requires facility-specific data inputs (such as year of construction, size of facility, nameplate capacity and location). The next step of analysis requires a detailed input of project cost values into the model, including, financial parameter values, default tax values, default lease payment values, and default local share of spending values. Based on these customized cost inputs, the JEDI model then calculates the economic impacts,

typically through the use of county-specific and state-specific multipliers. These multipliers account for the change in jobs, earnings, and output likely to occur throughout the economy as a result of Facility-related expenditures. This model allows impacts to be estimated for both the construction and operation phases of the proposed development.

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

- **On-site labor impacts:** These are the direct impacts experienced by the companies engaged in the construction and operation of the Facility. This value estimates the dollars spent on labor and professional services by Facility developers, consultants, and construction contractors, as well as O&M personnel. On-site labor impacts do not reflect material expenditures.
- **Local revenue and supply chain impacts:** These impacts measure the estimated increase in demand for goods and services in industry sectors such as local food and hotel industries, that supply or otherwise support the companies engaged in construction and operation.
- **Induced impacts:** Induced impacts measure the estimated effect of increased household income resulting from the Facility. These impacts reflect the reinvestment of earned wages, as measured throughout the first two levels of economic impact. This reinvestment can occur anywhere within the economy, on household goods, entertainment, food, clothing, transportation, etc. Household income may also be increased as a result of the downward pressure on wholesale electric prices by the NYISO, resulting from the introduction of low marginal cost electric supplies, from the Facility and from other energy generation facilities elsewhere in New York.

Each of these impacts can be measured in terms of three indicators: jobs, the amount of money earned through those jobs, and the overall economic output associated with each level of economic impact. These indicators are described in further detail below:

- **Jobs:** Jobs refer to the increase in employment demand as a result of Facility development. These positions are measured across each level of impact, so that they capture the estimated number of jobs on site, in supporting industries, and in the businesses that benefit from household spending. For the purposes of this analysis, this term refers to the total number of year-long full-time equivalent (FTE) positions created by Facility development. Persons employed for less than full time or less than a full year are included in this total, each representing a fraction of an FTE position (e.g., a half-time, year-round position is 0.5 FTE).

- **Earnings:** This measures the wages earned by the employees described above.
- **Output:** Output refers to the value of industry production in the state or local economy, across all appropriate sectors, associated with each level of impact. For the manufacturing sector, output is calculated by total sales plus or minus changes in inventory. For the retail sector, output is equal to gross profit margin. For the service sector, it is equal to sales volume.

2.27.3 Regulatory Framework

The goal of the socioeconomic study is to assess the pertinent demographics of people in the Study Area and determine if there will be any adverse impacts that require mitigation. A preliminary list of regulations, plans, and tools to be reviewed and utilized with respect to the proposed Project includes the following:

- JEDI model

2.27.4 Proposed Content of the Application

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

(a) Construction Workforce

Exhibit 27(a) of the Application will identify the estimated construction workforce associated with the Facility. The results of the Job and Economic Development Impact model output will be evaluated by the Applicant's construction management team to provide an estimate of the average work force, by discipline, for each phase of construction.

The Applicant intends to review the default Job and Economic Development Impact model cost input estimates and customize if warranted. The most up to date New York State-specific and Erie County-specific IMPLAN multipliers will be used in the Job and Economic Development Impact model to assess the jobs and economic impacts at both the statewide and countywide levels.

Job estimates, as well as the basis for economic multipliers and assumptions used, will be made available for Department of Public Service review. Further, the Application will include a description of actual direct jobs and economic impact numbers from similar projects, if available and feasible at the time of filing, to supplement the findings of the Job and Economic Development Impact model. Note that as costs vary with time due to the introduction of new technology, industry activity level, commodity prices, exchange rates, location, and project considerations, a broader body of knowledge may create a more reasonable basis for assessment.

(b) Construction Payroll

Exhibit 27(b) will identify the estimated annual construction payroll and non-payroll expenditures associated with the Facility. The results of the Job and Economic Development Impact model output will be evaluated by the Applicant's construction management team to provide an estimate of the annual construction payroll by trade.

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

Exhibit 27(c) will identify a range of the yearly estimated secondary employment and economic activity associated with Facility construction as reasonable. The results of the Job and Economic Development Impact model output will be included in the Application and the economic multiplier factors or other assumption(s) used will be described. Where reasonable, high and low input values will be evaluated to obtain a range of potential secondary impact results.

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

Exhibit 27(d) will identify the estimated number of jobs associated with Facility operation. The Article 10 Application will also provide an estimate of other local expenditures likely to be made during a typical year of Facility operation.

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

Exhibit 27(e) will provide additional information regarding the range of economic benefit associated with expenditures including payment to local landowners in association with the lease and/or purchase agreements executed to host Facility components as reasonable. Where reasonable, high and low input values will be evaluated to obtain a range of potential secondary impact results.

(f) Incremental School District Operating and Infrastructure Costs

Exhibit 27(f) will confirm that the Facility is not expected to result in any additional operating or infrastructure costs to the local school districts.

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

Exhibit 27(g) will confirm that the Facility is not expected to result in any additional operating or infrastructure costs to local municipalities, authorities, or utilities.

Jurisdictions that Will Collect Taxes or Benefits

Exhibit 27(h) will discuss jurisdictions that will collect taxes or benefits from the Facility, which are anticipated to include:

- Erie County
- Town of Concord

- Town of Sardinia
- Springville-Griffith School District
- Yorkshire-Pioneer School District

(h) Incremental Amount of Annual Taxes or Payments

Exhibit 27(i) will provide more detail regarding the anticipated Payment in Lieu of Taxes and Community Benefit Agreement agreements. The Applicant expects to enter into a Payment in Lieu of Taxes agreement with Erie County Industrial Development Agency that will provide annual tax revenues to Erie County, Town of Concord. Town of Sardinia, Springville-Griffith School District, and Yorkshire-Pioneer School District. The specific terms of the Payment in Lieu of Taxes and Community Benefit Agreement agreements are being negotiated. An update will be provided in the Application. The Payment in Lieu of Taxes and Community Benefit Agreement payments will increase the revenues of the local taxing jurisdictions and will represent a significant contribution to their total tax levy.

Exhibit 27(i) will also provide more detail regarding annual payments to landowners hosting Facility infrastructure, and potential additional local revenues through the purchase of construction materials, supplies, services and goods.; special district taxes; and potential additional revenues to compensate for the penalty associated with removing agricultural exemptions.

(i) Comparison of Incremental Costs and Incremental Benefits

Exhibit 27(j) will discuss the comparison of incremental costs and incremental benefits of the Facility. As indicated above, the Facility is not expected to result in any additional costs to local tax jurisdictions, but will result in significant benefit through implementation of a Payment in Lieu of Taxes and Community Benefit Agreement agreements, and through the potential increase in tax revenue.

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

Exhibit 27(k) will discuss equipment or training deficiencies in local emergency response capacity, if applicable. Exhibit 18 of the Article 10 Application (along with a Preliminary Health and Safety Plan and Emergency Action Plan to be appended to the Article 10 Application) will provide specific detail on emergency equipment that the Applicant will maintain for the Facility. The Applicant will continue consultation with local emergency service providers in order to confirm all necessary equipment and training for fire and medical emergencies either by the Applicant or by emergency responders.

(k) Consistency with State Smart Growth Public Infrastructure Criteria

Exhibit 27(l) will address the Facility's consistency with the smart growth criteria as defined in Environmental Conservation Law 6-0107(2). The Facility does not include any infrastructure that will promote or facilitate secondary growth or sprawl as specified in this law.

2.28 ENVIRONMENTAL JUSTICE

2.28.1 Environmental Setting

The Environmental Justice analysis evaluates whether environmental or health impacts of a project disproportionately affect minority communities or low-income populations. Although solar powered generation facilities do not typically result in adverse impacts to the environment or health impacts, the analysis includes a discussion of the characteristics of the NYSDEC-mapped Environmental Justice areas and whether potential disproportionate impacts occur (NYSDEC n.d.[f]).

According to guidance from the USEPA, minority populations are present in an affected area where racial and ethnic minority groups exceed 50% or are "meaningfully greater" than in the general population of the larger surrounding area, referred to as a reference area (USEPA 1998). Per NYSDEC Environmental Justice 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:

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

Table 2.28-1 includes information regarding minority populations and individuals below the poverty level in Census Block Groups within one-half mile of the Facility Site. Based on the USEPA and NYSDEC guidelines described above, none of the Census Block Groups within 0.5 miles are considered Environmental Justice areas. However, EJSCREEN—a USEPA Environmental Justice (EJ) screening and mapping tool—uses demographic indicators to map environmental justice. Its "low income" indicator marks the percent of a block group's population in households where the household income is less than or equal to twice the federal "poverty level." Figure 2.28-1 identifies potential EJ community via EJSCREEN. According to EJSCREEN, 30% of the population of 2,544 in the Springville census block 360290159001, located 0.3 miles from the Facility Area, is "low income" and 30% of the 1,790 population of Springville census block 360290159002, located 0.8 miles from the Facility Area, is "low income." The EJSCREEN methodology also identified an EJ

community located 3.2 miles from the Facility Area in census block 360290150032. All three of these census blocks are greater than 0.5 miles from the Facility Site.

Table 2.28-1 Race, Ethnicity, and Poverty Statistics for the Census Block Group within a 0.5-Mile-Radius Study Area (2013-2017 Five-Year Estimates)

State/County	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some other race	Two or more races	Total Racial Minority	Hispanic or Latino (of any race)[a]	% Below Poverty Level
New York	**55.9%**	**14.4%**	**0.2%**	**8.3%**	**0.0%**	**0.5%**	**1.8%**	**25.3%**	**18.8%**	**15.1%**
Erie	76.0%	13.0%	0.4%	3.4%	0.0%	0.1%	1.8%	18.8%	5.2%	14.9%
Block Group 1, Census Tract 151.02	98.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	1.0%	7.7%
Block Group 2, Census Tract 151.02	95.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	7.5%
Block Group 1, Census Tract 158	97.9%	0.0%	0.4%	0.0%	0.0%	0.0%	1.7%	2.1%	0.0%	5.4%
Block Group 2, Census Tract 158	99.1%	0.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	6.5%
Block Group 1, Census Tract 159	95.4%	1.4%	0/0%	1.1%	0.0%	0.0%	1.6%	5.1%	0.5%	13.3%
Cattaraugus	90.8%	1.6%	2.9%	0.9%	0.0%	0.1%	1.7%	7.2%	2.0%	16.9%
Block Group 1, Census Tract 9603	93.9%	0.0%	0.8%	0.0%	0.0%	0.0%	4.0%	4.8%	1.3%	13.2%

Sources: U.S. Census Bureau n.d.[b], [c]

[a] The U.S. Census Bureau and EO 12898 define minority populations based on race alone. Hispanic or Latino populations are defined by ethnicity, not race. Therefore, non-white populations have not been combined with Hispanic or Latino populations due to the potential for double counting.

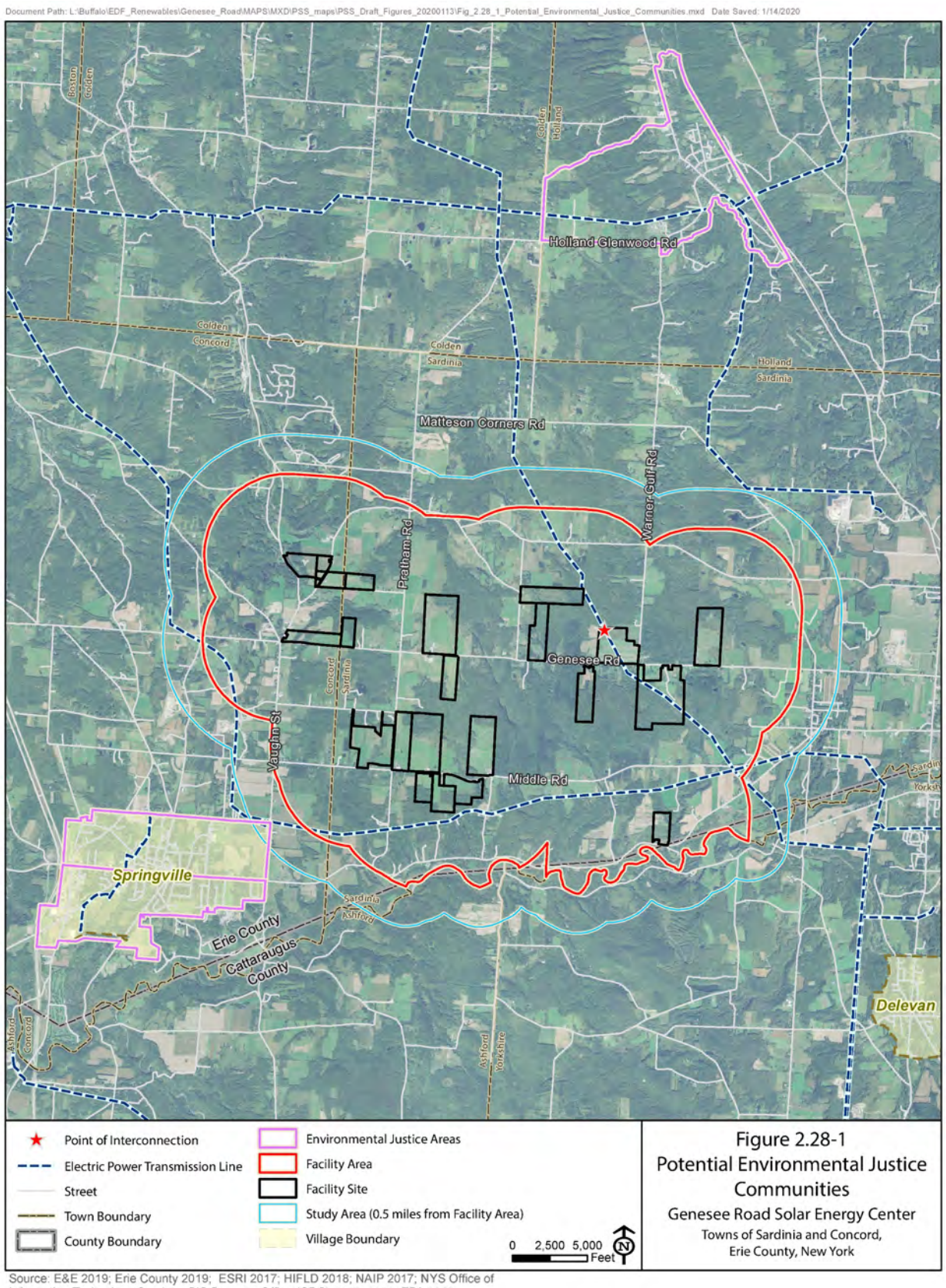

Figure 2.28-1
Potential Environmental Justice Communities
Genesee Road Solar Energy Center
Towns of Sardinia and Concord, Erie County, New York

Source: E&E 2019; Erie County 2019; ESRI 2017; HIFLD 2018; NAIP 2017; NYS Office of Information Technology Services GIS Program Office (GPO) 2018, 2019; EPA 2018

2.28.2 Potential Impacts and Mitigation

Because solar powered generation facilities do not typically result in adverse environmental or health impacts, disproportionate effects environmental justice populations are not expected. As discussed in Section 2.2, EDF Renewables submitted a PIP Plan to DPS that describes the public outreach and involvement activities that will be conducted by EDF Renewables throughout the Article 10 certification process. Environmental justice populations are considered to be vulnerable or sensitive populations, and have historically been left out of decision-making processes. The PIP provides a clear process to ensure that potential environmental justice populations are engaged throughout the Article 10 certification process and potential impacts are addressed.

2.28.3 Regulatory Framework

A preliminary list of regulations, plans, and tools to be reviewed and utilized with respect to the proposed Project includes the following:

- NYSDEC's GIS Tools for Environmental Justice;
- USEPA's Office of Environmental Justice;
- NYSDEC Environmental Justice Policy CP-29; and
- 6 NYCRR Part 487 Analyzing Environmental Justice Issues in Siting of Major Electric Generating Facilities Pursuant to PSL Article 10.

2.28.4 Proposed Content of the Application

Consistent with the requirements of 1001.28 of the Article 10 Regulations, Exhibit 28 of the Application will contain the following information:

(a) Identification and Evaluation of Potential Impact

Exhibit 28(a) will include a figure identifying the location of any potential environmental justice populations. The Applicant will also include an identification and evaluation of any potentially significant, adverse, and disproportionate environmental impacts of the proposed Facility on Environmental Justice Areas (including traffic related impacts based on the analyses conducted for Exhibit 25), as a result of its construction and operation, if any can be identified. The Applicant will identify any studies cited in support of this analysis, including the author and date thereof, in accordance with 6 New York Codes, Rules and Regulations Part 487.

(b) Impact Avoidance and Mitigation

Based on the preliminary assessment described in section 2.8.1, none of the Census Block Groups within 0.5 miles of the proposed Facility are considered Environmental Justice Areas, and therefore, no additional studies are anticipated. If determined applicable, Exhibit 28(b) will

include a description of the following for each identified significant and adverse disproportionate environmental impact resulting from Facility construction and operation:

1. The specific measures the Applicant proposes to take to avoid such impacts to the maximum extent practicable for the life of the Facility. A description of proposed impact avoidance measures, including a statement of cost for each measure, will also be provided.
2. If such impacts cannot be avoided, measures proposed by the Applicant to minimize impacts to Environmental Justice areas to the maximum extent practicable for the life of the Facility, including a description of each mitigation measure, procedures to verify of implementation, and the cost of each mitigation effort.
3. If such impacts cannot be avoided, the specific measures proposed by the Applicant to offset such impacts to the maximum extent practicable for the life of the Facility, including a description of the manner in which such impact offset measures will be verified and a statement of the cost of such measures.

(c) Impact Analysis

If applicable, Exhibit 28(c) will include a qualitative analysis demonstrating that the proposed avoidance, mitigation, and offset measures are appropriate for the identified significant, adverse, and disproportionate environmental impacts as a result of Facility construction and operation. If possible, the Applicant will provide a quantitative analysis of the avoidance, mitigation, and offset measures proposed.

2.29 SITE RESTORATION AND DECOMMISSIONING

2.29.1 Discussion

EDF Renewables has estimated a useful life of the Facility of 40 years. After this time, it is anticipated that the Genesee Road Solar Energy Center will be decommissioned, installed equipment and structures will be removed, and the Facility Area will be restored to its previous condition. If Project economics and need for the power produced remain viable, the Facility could be "repowered" with new technology and continue operating for an extended period. This process may include the replacement and/or upgrading of components; however, technological improvements over the next 20 or more years are unknown. EDF Renewables would engage the public, as appropriate and as required, based on regulations and requirements in effect at the time of decommissioning.

Nearly all Facility components will be sited on open, non-prime agricultural lands. Upon decommissioning of the Facility, these lands will again be available for agricultural use. Disturbed areas will be planted with native seed mixes or allowed to return to their use prior to Facility construction.

2.29.2 Proposed Content of the Application

(a) Performance Criteria

Consistent with the requirements of 1001.29 of the Article 10 Regulations, Exhibit 29 of the Application will contain a statement of the performance criteria proposed for site restoration and decommissioning of the Facility, including proposed financial security mechanisms for funding decommissioning, and the estimated cost of decommissioning and restoration of the Facility at the end of its useful life.

(b) Decommissioning and Restoration Plan

Exhibit 29(b) will include the Site Decommissioning and Restoration Plan. Decommissioning will be triggered by local municipal ordinances or code. If no local provisions exist decommissioning will be triggered in a time frame established in the decommissioning plan.

- Decommissioning and restoration will adhere to New York State Department of Agriculture and Markets guidelines to the extent practicable, and the site Environmental Monitor will coordinate with New York State Department of Agriculture and Markets when restoration work is occurring on agricultural land (NYSDAM 2019);
- The decommissioning plan will include a list of site restoration activities;
- All above-ground structures and components, including photovoltaic panels, racking, inverters, fencing, poles, and the collection substation, will be removed;
- Underground structures and components will be removed to a depth of 48 inches below ground surface, including concrete piers, footers, and other supports, and underground electric lines;
- Where appropriate and in accordance with property owner land-lease agreements, access roads, fences, gates, buffer plantings, and/or buildings which underlying landowners have sought to retain will be left in place following decommissioning of the Facility;
- Ground disturbance during decommissioning will be minimized to the extent practicable and the site will be restored to its original condition to the extent practicable, including restoration of topsoil consistent with surrounding site conditions, and disturbed areas seeded with native and/or suitable plant species. In the event the lands are meant to be returned to agricultural production, the landowner will be responsible for re-seeding the lands.

- The disposal of solid wastes generated during decommissioning will be conducted in accordance with applicable local, state, and federal waste disposal regulations;
- Advance notification will be provided to the Town(s), impacted landowner(s), and key stakeholders provided at least two weeks prior to the commencement of decommissioning activities, and prior to commencing site restoration;
- The type and value of financial assurance to be secured by the Applicant, for the purpose of adequately performing decommissioning will be described. The value of the financial assurance will be based on a Professional Engineer's certified estimate of decommissioning cost, less the expected salvage value and/or resale value of components;
- Clear instructions will be outlined for the Town(s) as to how it will be able to access the financial assurance should the Applicant fail to decommission the Project in accordance with the Plan.
- Town officials will be granted access to the Facility Site, with reasonable notice to the Applicant, to inspect the completed decommissioning and restoration activities.

Additional detail regarding decommissioning of the Facility will be provided in the Article 10 Application.

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

Exhibit 29(c) will include a discussion of decommissioning/restoration agreements between the Applicant and landowners. All Facility components are anticipated to be located on private land under lease and/or purchase agreement with the landowners, and all leases with private landowners do or will contain a provision on decommissioning. Although the specific terms of these lease agreements are confidential, decommissioning provisions in the leases outline a plan similar to the one described above. Information on the method and schedule for updating the cost of decommissioning and restoration, the method of securing funds for decommissioning and restoration, and the method by which the Facility will be decommissioned and the site restored will be provided in Exhibit 29(b) of the Application.

(d) Nuclear Power Facilities

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

2.30 NUCLEAR FACILITIES

The requirements of 1001.30 do not apply and will not be addressed in the Article 10 Application.

2.31 LOCAL LAWS AND ORDINANCES

2.31.1 Discussion

The Facility will be located Erie County, New York, in the Towns of Sardinia and Concord, New York. Throughout the pre-application process, EDF Renewables will consult with the host municipalities on a range of issues, including identifying relevant local laws and ordinances that could impact the Facility, as described further below. EDF Renewables will continue to consult with the Towns and County during the Article 10 Application process to ensure that all applicable laws and ordinances, among other local concerns, are addressed in the Article 10 Application.

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

2.31.2 Proposed Content of the Application

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

Below is a preliminary list of applicable local laws and ordinances of a procedural nature that potentially would have been applicable to the Facility, in the absence of Article 10. This list will be updated when the Application is submitted, should any changes occur in the intervening months. Generally, it is not known at this early stage whether the Facility will trigger certain identified regulations listed below; the list is meant to provide a broad overview based on an initial screen of the Towns' laws. These provisions are included because of their potential application to the Facility, but the Facility layout set forth in the Application may not include components or aspects which trigger some of the requirements identified below.

Town of Sardinia

§ 52-4: Building Permits

§ 52-5: Construction Inspections

§ 52-7: Certificates of Occupancy / Certificates of Compliance

§ 52-10: Operating Permits

§ 63-12: Floodplain Development Permit

§ 115-45. Grading/filling and alteration of natural topography.

§ 115-63 Solar Energy Systems

- D. Special use permit and site plan approval by the Town Board

§ 115-65: Sign Permits

§ 115-79: Site Plan Review and Approval Procedure

§ 115-87: Special Use Permits – Application Procedure

§ 115-92: Building Permits

§ 150-102: Mining; Special Use Permit Required

Other Potentially Applicable Requirements:

- Town of Sardinia Comprehensive Plan

Town of Concord

§ 72-7: Building Permits

§ 72-10: Certificates of Occupancy or Certificates of Compliance

§ 72-13: Operating Permits

§ 76-11: Flood Damage Prevention; Establishment of Development Permit

§ 150-129: Sign Permit Required

§ 150-168: Certificate of Zoning Compliance Required

§ 150-172: Site Plan Review; Applicability

§ 150-180: Special Use Permits

- Also - § 150-217: Large Scale Solar Energy Systems; Special Use Permit Requirements

(b) Local Procedural Requirements Requiring Board Authorization

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

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

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

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

Livingston County Department of Health is a full-service health department, which manages permitting and regulations related to sanitary septic systems and/or drinking water wells. To the extent that the Facility may include a new operations and maintenance building requiring a septic system or drinking water well, the Applicant may request that the Siting Board authorize the County to issue these ministerial permits, to the extent necessary and applicable to the Project. The Application will provide further information on this topic, to the extent it is anticipated to apply to the Genesee Road Solar Energy Center.

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

Below is a preliminary list of applicable local laws and ordinances of a substantive nature that may be applicable to the Facility. Generally, it is not known at this early stage whether the Facility will trigger certain of the identified regulations listed below; the list is meant to provide a broad overview based on an initial screen of Town laws. These provisions are included because of their potential application to the Facility, but the Facility layout set forth in the Application may not include components or aspects which trigger some of the requirements identified below.

Town of Sardinia

§ 63-15: Flood Damage Prevention – General Provisions

- § 63-16: Standards for All Structures
- § 63-18: Nonresidential Structures

§ 111-11: Trucks Over Certain Weights Excluded

§ 115-19: AR Agricultural-Residential District; purpose

§ 115-27: Location of Prime Farmland Soils Overlay District

§ 115-28: Uses Permitted Within Prime Farmland Soils Overlay District

§ 115-29: Acceptance of Conservation Easements/Deed Restrictions

§ 115-32: General Provisions

§ 115-38: Parking Area Lighting Requirements

§ 115-39: Area/Building Lighting Requirements

§ 115-40: Parking Area Screening Requirements

§ 115-41: Landscaping Requirements

§ 115-44: Maintenance of Landscaping/Fencing

§ 115-47: Temporary Structures and Uses

§ 115-52: Agricultural Animals, non-commercial

§ 115-63: Solar Energy Systems

§ 115-66: Signs; General Provisions

§ 115-67: Signs; Design Standards

Town of Concord

§ 76-13: Flood Damage Prevention; General Standards

§ 76-14: Flood Damage Prevention; Specific Standards

§ 150-47: R-AG – Residential-Agricultural District Regulations; Permitted Uses and Structures

§ 150-98: General Industrial District Regulations; Permitted Uses and Structures

§ 150-101, et seq.: Mining Reclamation District

§ 150-131: General Sign Requirements

§ 150-133: Signs in Residential or Agricultural Districts

§ 150-140: Temporary Structures and Uses

Article XXXIX – Solar Energy Systems

§ 150-212: Use Districts Where Permitted

§ 150-213: General Regulations

§ 150-216: Large or Utility-Scale Solar Energy Systems

§ 150-218: Abandonment and Decommissioning

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

At this time, the Applicant anticipates complying with all substantive local laws and ordinances, to the greatest extent practicable, and has not identified any specific substantive local laws for which it seeks a waiver. The Applicant will work with the Towns of Sardinia and Concord to identify potential substantive provisions of local law for which it may need to seek a waiver from the Siting Board, and will identify those provisions, if any, in the Application. Should the Applicant seek relief from any substantive local laws, the Application will include the justification required under Article 10 to support a waiver of local laws or ordinances.

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

If an operations and maintenance or energy storage building is constructed for the Facility, a review of local procedural ordinances and laws regarding the installation or water, sewer, or telecommunication facilities will be provided in the Application. At this time, the Applicant has not identified any procedural local ordinances or laws related to the interconnection of water, sewer, or telecommunications lines that are applicable to the Facility.

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

If an operations and maintenance or energy storage building is constructed for the Facility, a review of local substantive ordinances and laws regarding the installation of water, sewer, or telecommunication facilities will be provided in the Application. At this time, the Applicant has not identified any substantive local ordinances or laws related to the interconnection of water, sewer, or telecommunications lines that are applicable to the Facility.

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

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

(h) Summary Table of Substantive Local Requirements

The Article 10 Application will include a table identifying all substantive local laws and ordinances that may impact the Facility and how Applicant intends to meet those requirements. The Application will include all of the information required by 16 New York Codes, Rules and Regulations § 1001.31(i).

(i) Zoning Designation

The Towns of Sardinia and Concord have adopted zoning regulations under Town Code Chapters 155 and 155, respectively. The Towns' Zoning Maps will be provided with the application. The Application will describe the zoning designations underlying the properties where the Facility is proposed, and whether solar is a permitted use there, at the time of the Application.

The Article 10 Application will provide a detailed summary of the zoning regulations for each Town, as well as any applicable County requirements. As part of that summary, the Article 10 Application will discuss the permitted and prohibited uses in the zoning districts where the Facility is proposed to be located, as well as the solar specific regulations adopted by the Towns. In addition, the Article 10 Application will describe how the Facility will comply with these zoning regulations, or areas where deviation is necessary, if any.

2.32 STATE LAWS AND REGULATIONS

2.32.1 Discussion

During preparation of the Article 10 Application, EDF Renewables will continue to consult with the state agencies and authorities whose requirements are the subject of Exhibit 32 to determine whether all such requirements have been correctly identified. To the extent the substantive requirements below are applicable, EDF Renewables intends to comply with such requirements unless specifically requesting relief from the Siting Board.

2.32.2 Proposed Content of the Application

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

The Applicant has compiled a preliminary listing of state approvals, consents, permits, or other conditions of a procedural nature required for the construction or operation of the proposed Facility, as summarized in Tables 2.32-1 and 2.32-2.

Table 2.32-1 List of All State Approvals for the Construction and Operation of the Facility that are Procedural in Nature and Supplanted by Article 10

State Agency	Requirement	Discussion
New York State Department of Environmental Conservation (NYSDEC)	Water Quality Certification (WQC), Section 401 of the Clean Water Act	The request for a 401 WQC will not be filed until a federal U.S. Army Corps of Engineers permit application is filed (if necessary). Under Article 10, the WQC must be issued by the Siting Board.
New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP)	Consultation Pursuant to § 14.09 of the New York State Historic Preservation Act	The Applicant will consult with the NYSOPRHP to ensure compliance with § 14.09 of the New York State Historic Preservation Act.
NYSDEC	Endangered and Threatened Incidental Take Permit Article 11, 6 NYCRR Part 182	The NYSDEC may issue a license or permit to "take" any species listed as endangered or threatened by New York State. This permit may be required if, in consultation with state agencies, it is determined that the Project could result in incidental take of any state-listed endangered or threatened fish or wildlife species from occupied habitat. If this permit is required, the procedural requirements are supplanted by Article 10.
NYSDEC	Permit for Freshwater Wetlands Article 24, 6 NYCRR Part 663	This permit would be required for the crossing of regulated freshwater wetlands or adjacent areas by Facility components. Regulated freshwater wetlands are designated and mapped by the NYSDEC, and are generally 12.4 acres or larger. Around every regulated freshwater wetland is an adjacent area of 100 feet that is also regulated to provide protection for the wetland. If this permit is required, the procedural requirements are supplanted by Article 10.
NYSDEC	SPDES General Permit for Construction Activity	This permit is required for construction projects that disturb one or more acres of soil. In accordance with 16 NYCRR 1001.32(a) this is identified as a state procedural requirement issued by the NYSDEC pursuant to federal recognition of state authority. This approval is subject to review by the NYSDEC independent of the Article 10 process.

Table 2.32-1 List of All State Approvals for the Construction and Operation of the Facility that are Procedural in Nature and Supplanted by Article 10

State Agency	Requirement	Discussion
New York State Public Service Commission	Certificate of Public Convenience and Necessity NY PSL § 68	No electric corporation will begin construction of an electric plant, having a generating capacity of at least 80 MW, without first having obtained the permission and approval of the commission. The procedural requirements of Section 68 are supplanted by Article 10.

As indicated in the table above, some of these state procedural requirements are supplanted by Public Service Law Article 10, except those permits to be issued by the New York State Department of Environmental Conservation, which are authorized pursuant to federal recognition of state authority, or pursuant to federally delegated or approved authority, in accordance with the Clean Water Act, the Clean Air Act and the Resource Conservation and Recovery Act, and permits pursuant to Section 15-1503, Title 9 of Article 27, and Articles 17 and 19 of the Environmental Conservation Law.

Table 2.32-2 List of All State Approvals Related to the Construction of the Facility to be Obtained from Issuing Agency

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

As indicated in the chart above, the Applicant anticipates requesting that the Siting Board authorize the New York State Department of Transportation to issue the applicable highway work permit(s) and other ministerial permit(s) associated with road work in state highways or rights-of-way. Generally, these approvals are issued immediately prior to construction and are submitted by the contractor. It is anticipated that the information required to be included in the submission will not be available until after a contractor is selected and post-Certification. The Applicant will provide an additional explanation of why such an authorization would be desirable and/or appropriate in the Article 10 Application.

If applicable to the Project, additional requirements for Use and Occupancy Permits, and compliance with Public Service Commission regulations regarding marking and numbering of above-ground electric system poles will be identified in the Application.

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

The Applicant does not anticipate any procedural state approvals/permits/etc. that the Applicant will request the Board not apply. However, should any be identified, they will be discussed in the Application.

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

The Applicant will construct and operate the Facility in a manner that conforms to all State substantive requirements for those approvals, consents, permits, certificates, or other conditions, to the greatest extent practicable. The following is a list of substantive state requirements, which may or may not be applicable to the Facility:

- Water Quality Certification, Section 401 of the Clean Water Act 6 New York Codes, Rules and Regulations Part 621.4e (Water Quality Certifications in Accordance with Section 401 of the Clean Water Act)
- Consultation Pursuant to Section 14.09 of the New York State Historic Preservation Act
- Permit for Protection of Waters, Article 15, 6 New York Codes, Rules and Regulations Part 608.7b (Permit Application Review) and 608.8 (Standards)
- Permit for Freshwater Wetlands, Article 24, 6 New York Codes, Rules and Regulations Part 663.5 (Standards for Issuance of Permits and Letters of Permission)
- SPDES General Permit for Construction Activity, Article 3, 6 New York Codes, Rules and Regulations Part 750-1.11 (Application of Standards, Limitations, and other Requirements)
- Endangered and Threatened Incidental Take Permit Standards, Article 11, 6 New York Codes, Rules and Regulations 182.12 (Incidental Take Permit Standards)
- NYS Highway Work Permit
- NYS Highway Use and Occupancy Permit
- NYS Oversize Delivery Permit
- Public Service Law § 68 Certificate of Public Convenience and Necessity

(d) Summary Table of Substantive State Requirements

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

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

To the extent that off-site ancillary features, which are not considered part of the Major Electric Generating Facility, are needed, a list of all state approvals, consents, permits, certificates, or other conditions for the construction or operation of said off-site ancillary features will be listed in the Article 10 Application. The Genesee Road Solar Energy Center does not anticipate that the proposed Project will include off-site interconnections or ancillary features not otherwise encompassed by the Major Electric Generating Facility, which would make this subsection inapplicable.

2.33 OTHER APPLICATIONS AND FILINGS

2.33.1 Discussion

Submissions and filings which do not fall within the jurisdiction of the Siting Board but are nevertheless directly related to the construction or operation of the proposed Genesee Road Solar Energy Center include applicable federal permits and approvals issued by federal agencies, and not by the State Siting Board. For informational purposes, this section of the Application will also make note of awards or power purchase contracts the Facility has received for sale of the energy produced or renewable attributes related thereto, such as agreements with NYSERDA.

2.33.2 Proposed Content of the Application

(a) Other Applications or Filings Concerning the Subject Matter of the Proceeding

Besides the list of approvals identified in Section 2.32 and 2.33, the Applicant does not have, and is not aware of, any other application or filing before any governmental agency, department or court which concerns the subject matter of this proceeding (i.e., Genesee Road Solar Energy Center). Should that change, additional information will be added to the Application.

(b) Federal Permits, Consents, Approvals, or Licenses Required for Construction or Operation

Table 2.33-1 summarizes any anticipated federal permit, consent, approval, or license needed for the proposed Facility. This information will be confirmed and/or updated in the Article 10 Application. In Exhibit 25 on Transportation, the Article 10 Application will discuss any outreach or discussions between the Applicant and the Federal Aviation Administration, to the extent that any are required for this Facility. However, the Facility is not anticipated to trigger those federal regulations which require Federal Aviation Administration consents or approvals, given the location of the Project and the fact that no structures are proposed over 200 feet in height.

Table 2.33-1 Federal Permits and Approvals for the Facility

Agency	Anticipated Application Date1	Description of Permit or Approval Required
U.S. Army Corps of Engineers	TBD	Section 404 Nationwide Permit for Placement of Fill in Federal Jurisdictional Wetlands/Waters of the U.S.

[1] The anticipated application submittal date will be identified in the Article 10 Application.

2.34 ELECTRIC INTERCONNECTION

2.34.1 Discussion

Interconnection of the Facility to the electric grid will be achieved using multiple systems. The PV panels themselves produce power at a low voltage and will be connected in strings where they will connect to inverters at up to 1,500-V DC. The inverters convert the power from DC to AC. Co-located with the inverters are medium-voltage transformers that will increase the voltage from the approximately up to 1,500 V provided by the inverters to 34.5-69 kV. If utilized, energy storage system enclosures (typically 40-feet long by 8-feet wide by 8-feet high) or a single storage building may be collocated with the inverters within the Facility Area. A medium-voltage (34.5-kV) collection system comprised of underground cables will deliver the power from the inverters to a collection substation. The collection substation will step-up the voltage from 34.5 kV to 345 kV, which is then delivered to the adjacent POI switchyard, to be constructed by EDF Renewables or by NYSEG and built to NYSEG's standards. The POI switchyard will connect to the NYSEG transmission system on the Southwest to Stolle Road transmission line (345-kV).

The types, design standards, and descriptions of the electric interconnection components will be included in the Article 10 Application. All components will meet applicable state and federal codes and specifications. The entire substation area will be fenced. Direct burial methods using a trencher, cable plow, excavators, and/or similar equipment, will generally be used during the installation of the underground electrical collection system. Direct burial will involve the installation of bundled cable (electrical and fiber optic bundles) into an excavated trench or directly into a "rip" in the ground created by the plow. The trench may disturb an area up to approximately 36 inches wide with bundled cable installed to a minimum depth of 36 to 48 inches. If more than one electrical circuit is required in a trench, a larger width will be required. Side-cast material will be replaced with a small excavator or small bulldozer. All areas will be returned to approximate pre-construction grades and restored following installation of the collection lines. When necessary, collection lines may be installed as overhead lines or using horizontal directional drilling (HDD) depending on which method minimizes impacts. Further information regarding HDD is presented

in Exhibit 21, and preliminary locations of HDD will be shown on the site plans in Exhibit 11 of the Application.

2.34.2 Proposed Content of the Application

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

(a) Design Voltage and Voltage of Initial Operation

Exhibit 34(a) will describe the number and specifications for the inverters and medium-voltage transformers, as well as the length and anticipated number of circuits for the electrical collection system, along with the design voltage and voltage of initial operation.

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

Exhibit 34(b) will describe the length of the collection system, broken down by anticipated length of overhead (if any) and underground lines. Typical details related to conductors will also be included.

(c) Insulator Design

Exhibit 34(c) will provide a description of overhead sections of the collection line (if any), the typical utility-grade ceramic/porcelain insulators to be used, and a statement that overhead collection lines will be designed and constructed in accordance with American National Standards Institute C29.

(d) Length of the Transmission Line

The Facility will not include construction of a new high-voltage transmission line. The Facility will include a short (less than 500 foot) transmission line between the Project substation and point of interconnection switchyard. The Facility will connect to the existing 345-kilovolt transmission line that is owned by New York State Electric and Gas Corporation. Therefore, 1001.34(d) will not be addressed in the Article 10 Application.

(e) Typical Dimensions and Construction Materials of the Towers

Exhibit 34(e) will provide a description of any overhead collection lines, and also any line support structures between the collection substation, point of interconnection switchyard and the existing 345-kilovolt transmission line, which could be required in some areas where geologic conditions or the potential for buried cultural artifacts prevents underground installation. Typical dimensions and construction materials of any proposed support structures will be presented in the Article 10 Application.

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

Exhibit 34(f) will include design standards for any overhead line support structures and foundations (if required).

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

Exhibit 34(g) will include the type of cable system to be used and the design standards for that system.

(h) Profile of Underground Lines

Exhibit 34(h) will provide a typical drawing of the underground collection cable and associated material.

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

Exhibit 34(i) will describe the point of interconnection switchyard equipment and collection substation. The Article 10 Application will also include a plan/overview of the point of interconnection switchyard and collection substation.

(j) Any Terminal Facility

Exhibit 34(j) will describe the terminal facilities expected to be constructed for the Facility (point of interconnection switchyard and the collection substation).

(k) Need for Cathodic Protection Measures

Exhibit 34(k) will discuss the potential need for cathodic protection measures.

2.35 ELECTRIC AND MAGNETIC FIELDS

2.35.1 Environmental Setting

Humans are exposed to a wide variety of natural and man-made magnetic and electric fields. The Earth's electric fields are produced by air turbulence and atmospheric activity. The Earth's magnetic field is considered to be produced by electric currents flowing in the planet's core. All devices that conduct or use electricity produce EMFs, which consist of two components: magnetic and electric fields. Current is the flow of electricity in a conductor (e.g., a wire) that produces the magnetic field component of the EMF. Voltage, the difference in electric potential that drives the current, creates the electric field component of the EMF.

Magnetic fields are present in the vicinity of common electric appliances. Magnetic fields are measured in units of gauss ("G") or milligauss ("mG"), with 1 G being equal to 1,000 mG. Average magnetic field strength in most homes is typically less than 2 mG. However, commonly used items such as hair dryers or electric shavers can produce magnetic fields of hundreds of mG in the area

of use. As with electric fields, the magnetic fields from transmission lines rapidly dissipate with distance from the line. Table 2-12 shows examples of typical magnetic fields depending on the distance from the sources.

Table 2.35-1 Common Sources and Typical Magnetic Field Levels

Equipment	Magnetic Field Strength at 6 Inches from Source (Milligauss)
Hair dryer	300
Electric Shaver	100
Microwave Oven	200
Vacuum	300

Source: National Institute of Environmental Health Sciences, National Institutes of Health, *Electric and Magnetic Fields Associated with the Use of Electric Power*, pp. 33-35, June 2002.

2.35.2 Potential Impacts and Mitigation

As previously described, EDF Renewables sited the Project in proximity to transmission infrastructure with sufficient interconnection capacity to avoid impacts associated with new transmission infrastructure. Collocating electrical facilities (such as the substation) with existing electrical infrastructure generally minimizes impacts. The Genesee Road Solar Energy Center will interconnect to the New York electrical grid via a new POI, located on the NYSEG Southwest to Stolle Road 345-kV transmission line, on-site, thus minimizing EMF associated with electrical infrastructure.

2.35.3 Regulatory Framework

A preliminary list of regulations, plans, and tools to be reviewed and utilized with respect EMF includes the following:

- New York State Public Service Commission Opinion No. 78-13 issued June 19, 1978, which set an interim standard of 1.6 kV/m for Article VII 345-kV electric transmission lines, at the edge of the ROW, one meter above ground level, with the line at the rated voltage.
- American Conference of Governmental Industrial Hygienists, which has set a maximum limit for magnetic field exposure of 10,000 mG.

2.35.4 Proposed Content of the Application

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

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

The electrical lines from the inverters/medium-voltage transformers to the collection substation/point of interconnection switchyard may be 34.5-69 kilovolt. The Facility's electrical output voltage will be increased from approximately 34.5 or 69 kilovolt to the transmission line voltage of 345 kilovolt via a step-up transformer at the Project substation and switchyard. The Facility will not have a right-of-way associated with high-voltage transmission lines. However, 1001.35(a) will identify right-of-way segments greater that 34.5 kilovolt with unique electromagnetic field characteristics, which will be evaluated in the electromagnetic field study. Modeling calculations will identify existing electromagnetic fields and future electromagnetic fields that would result from construction and operation of the Facility. For the purposes of calculations, the right-of-way is assumed to be 100 feet (50 feet from centerline) for all of the segments. The Article 10 Application will identify the name and calculation number of each segment.

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

Exhibit 35(b) will include a discussion of the electromagnetic field study, which will provide both base case (where existing facilities are present) and proposed cross sections that will show, to scale, the following features for each of the unique right-of-way segments, including:

1. Any known overhead electric transmission, sub-transmission, and distribution facilities showing structural details and dimensions and identifying phase spacing, phasing, and any other characteristics affecting electromagnetic field emissions;
2. Any known underground electric transmission, sub-transmission (e.g., 34.5-kilovolt collection system), and distribution facilities;
3. Right-of-way boundaries;
4. Structural details and dimensions for all built and proposed structures (dimensions, phase spacing, phasing, and similar categories) and an overview map showing locations of structures.

(c) Enhanced Aerial Photos/Drawings

Exhibit 35(c) will include a set of aerial photos/drawings showing the exact location of each unique right-of-way segment and each cross-section, and any residences or occupied buildings within the right-of-way segments. If no residence or occupied building is within the right-of-way segments, the distance between the edge of the right-of-way segment and the nearest residence or occupied building will be indicated.

(d) Electric and Magnetic Field Study

Exhibit 35(d) will include an electromagnetic field study with calculation tables and field strength graphs calculated at one meter above ground level with 5-foot measurement intervals depicting the width of the entire right-of-way and out to 500 feet from the edge of the right-of-way on both sides for each unique right-of-way cross section. If applicable to the Project, the electric and magnetic field study will include information for locations where the maximum current flow will result from collocated collection lines during peak load conditions. The electromagnetic field study will also involve and/or include:

1. Licensed Professional Engineer

   The electromagnetic field study included in the Article 10 Application will be signed and stamped/sealed by a licensed professional engineer registered and in good standing in the State of New York.

2. Computer Software Program

   The software to be used in the electromagnetic field study will be identified in the Article 10 Application.

3. Electric Field Calculation Tables and Field Strength Graphs

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

4. Magnetic Field Calculation Tables and Field Strength Graphs

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

5. Magnetic Field Calculation Tables and Field Strength Graphs for Maximum Annual Load within 10 Years

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

6. Base Case Magnetic Field Calculation Tables and Field Strength Graphs

   Other than the short (<1,000-foot) loop-in/loop-out lines between the existing 345-kilovolt transmission lines and the point of interconnection switchyard, there are no proposed high voltage transmission lines, therefore this analysis is not applicable to the proposed Facility.

2.36 GAS INTERCONNECTION

Genesee Road Solar Energy Center will not require gas interconnection facilities and, as such, the requirements of 1001.36 do not apply and will not be included in the Article 10 Application.

2.37 BACK-UP FUEL

Genesee Road Solar Energy Center will not require back-up fuel and, as such, the requirements of 1001.37 do not apply and will not be included in the Article 10 Application.

2.38 WATER INTERCONNECTION

During construction, water may be used for dust control in a manner consistent with the Standards and Specifications for Dust Control, as outlined in the New York State Standards and Specifications for Erosion and Sediment Controls (NYSDEC 2016). Water for dust control will be trucked in from an off-site source. Under most conditions during operation, rainfall and snow will naturally clean the solar panels. If required, water for cleaning the panels will be trucked in from an off-site source. Genesee Road Solar Energy Center will only require water interconnection facilities if the potential O&M building is constructed. Otherwise, no water interconnection facilities will be necessary for the Facility. Unless the design process determines the need for an O&M building, the requirements of 1001.38 will not apply and will not be included in the Article 10 Application.

2.39 WASTEWATER INTERCONNECTION

In general, the installation of solar panels does not require the construction of wastewater infrastructure and does not result in increased use of wastewater systems. Genesee Road Solar Energy Center will only require wastewater interconnection facilities if the potential O&M building is constructed. Otherwise, no water interconnection facilities will be necessary for the Facility. Unless the

design process determines the need for an O&M building, the requirements of 1001.39 will not apply and will not be included in the Article 10 Application.

2.40 TELECOMMUNICATIONS INTERCONNECTION

2.40.1 Discussion

Telecommunication interconnections, as defined by Article 10, 16 NYCRR 1000.2 for servicing the site of a Major Electric Generating Facility, will not be required. As needed, data will be transmitted to NYSEG and others using existing telecommunications facilities as the area is generally served by existing cellular and broadband services. However, EDF Renewables will conduct a review of existing communications facilities to determine whether new facilities will be required to meet off-site communication needs prior to submitting the Article 10 Application. If any additional facilities are identified, Exhibit 2.40 of the Application will provide a description of such facilities.

2.40.2 Proposed Content of the Application

(a) Operational Data Transmitted to New York Independent System Operator and New York State Electric and Gas Corporation

Exhibit 40(a) will include information on the Facility's meter location, the means of providing operational data to New York State Electric and Gas Corporation/New York Independent System Operator, and the secure communications network for operational data. It is anticipated that the Facility's operational generating data will be transmitted to New York Independent System Operator/New York State Electric and Gas Corporation through an underground conduit or duct from the collection substation into the point of interconnection switchyard, and will include generation data (megawatt output,Mega Volt Ampere Reactive, and any curtailment) and weather data.

(b) Facility Operations Communications Methods

Exhibit 40(b) will include information regarding establishment of a high-speed internet connection to be established, and the means of transmitting the necessary data and other information to the appropriate parties for monitoring and reporting purposes.

(c) Status of Negotiations

Exhibit 40(c) will include a discussion of the status of negotiations with communications providers, or a copy of agreements that have been executed, with companies or individuals for providing the communications interconnection, including any restrictions or conditions of approval placed on the Facility imposed by the provider, if applicable. Such negotiations have not yet been initiated for the Facility because at this time, the need for these agreements has not been identified. Although not anticipated, any changes in status will be discussed in the Article 10 Application.

2.41 APPLICATIONS TO MODIFY OR BUILD ADJACENT

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

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Appendix A
Meeting Log

Genesee Road Solar Energy Center Meeting Log

PIP Tracking – Record of Activities Updated Through February 18, 2020

Date of Activity	Locations of Activity	Activity Attendees	Purpose of Activity	Follow-up Action Items	Comments	Future Outreach
6/5/2019	Town of Sardinia Town Hall	Jack Honor (EDF Renewables) and Town of Sardinia Code Enforcement Officer	General presentation about the project, EDF Renewables, solar development, Article 10 permitting, etc.	Prepare presentation for Town Board		Meeting(s) with Town Board and Other Local Officials
6/6/2019	Concord Town Board Member Ken Zittel's Office	Jack Honor and Town of Concord Board Member Ken Zittel	General presentation about the project, EDF Renewables, solar development, Article 10 permitting, etc.	Prepare presentation for Town Board		Meeting(s) with Town Board and Other Local Officials
7/11/2019	Town of Concord Town Hall	EDF Renewables and Town Board, various members of the public, and media	General presentation about the project, EDF Renewables, solar development, Article 10 permitting, etc.		Town generally supportive of Project	Public open house meeting
8/7/2019	East Concord Fire Department	Interested media, stakeholders, and landowners	Open house-style meeting. Invitations were mailed to 570 unique addresses on July 24, 2019 and 116 additional addresses on July 31. Ads were placed in local press two weeks prior to the event.	None	Attendees generally supportive of project. Around 50 people attended.	Additional public meetings in area
8/14/2019	Conference Call	Jack Honor, Nixon Peabody (EDF Renewables attorneys), Erie County IDA	General discussion introducing the project and a high-level review of the County IDA's policies, procedures, etc.	In-person meeting sometime in October/November	Expressed EDF Renewables' interest to apply for a PILOT.	Continued throughout project

Date of Activity	Locations of Activity	Activity Attendees	Purpose of Activity	Follow-up Action Items	Comments	Future Outreach
9/12/2019	Erie County Offices in East Aurora	EDF Renewables and Erie County Department of Environment and Planning	General presentation about the project, EDF Renewables, solar development, Article 10 permitting, etc. Conversation focused on environmental and agricultural impact of the project.	Prepare additional maps for Erie County.		Additional meetings as project progresses.
9/12/2019	Town of Sardinia Town Hall	EDF Renewables and Town Board, various members of the public, and media	General presentation about the project, EDF Renewables, solar development, Article 10 permitting, etc.			Public open house meeting sometime in the next 3 months
9/12/2019	Town of Concord Town Hall	EDF Renewables and Town Board, various members of the public, and media	General presentation about the project, EDF Renewables, solar development, Article 10 permitting, etc.			Public open house meeting sometime in the next 3 months
10/23/2019	NYS Department of Public Service - Albany	Jack Honor (EDF Renewables) and project team members, DPS staff	Provide update on status of EDF Renewables solar projects	Continue to keep the DPS informed on the project schedules	EDF Renewables provided a description and schedule for current projects. DPS provided feedback and suggestions for an effective Article 10 process.	Ongoing throughout the Article 10 process

Date of Activity	Locations of Activity	Activity Attendees	Purpose of Activity	Follow-up Action Items	Comments	Future Outreach
10/24/2019	NYS Department of Environmental Conservation	Jack Honor (EDF Renewables) and project team members, DEC staff	Discuss status of special status species and habitat and survey requirements	EDF Renewables to provide NHP letters		
11/19/2019	Erie County IDA offices in Buffalo	Jack Honor, project team members, Erie County IDA, Deputy Erie County Executive, Eric County Department of Environment and Planning	Introductory presentation about the project, more in-depth discussion of environmental topics, potential for PILOT agreement, project benefits, etc.	Second in-person meeting in early 2020. Additional maps, environmental information, and financial information requested by Erie County.	Productive meeting which provided many focus areas for follow up consultation.	Public open house meeting on Nov 19 and continued outreach throughout the project.
11/19/2019	Town of Sardinia Town Hall	13 Members of EDF Renewables' project team and approximately 100 interested stakeholders, municipal and government officials, and nearby residents.	Open house-style meeting where more than 40 poster boards about EDF Renewables, the project, and solar energy were presented. Members of the project team were on hand to answer questions and discuss the project with the public. Invitations were mailed 11/7/2019 to 2,874 entities, including adjacent landowners (landowners with property within 500 feet of the Facility), landowners within 2,500 feet of the	Multiple follow-up items with stakeholders. Many provided thoughtful feedback on the project and the project team is preparing additional material and expanded information for our second meeting in early 2020.	95 attendees signed in.	Next meeting planned for early 2020.

Date of Activity	Locations of Activity	Activity Attendees	Purpose of Activity	Follow-up Action Items	Comments	Future Outreach
			Facility, stakeholders, and residences located within 2 miles of the Facility Area. Advertisements were also published in the Springville/Ellicottville Pennysaver & News and the Springville Journal on November 2, 2019			
01/07/2020	Email correspondence	NYSDEC (Brianna Denoncour) and the EDF Renewables Project Team	Brianna provided feedback on EDF Renewables' winter raptor work plan, allowing applicant to refine and finalize the winter raptor field work occurring during the winter 2019/2020.	Execute on work plan and incorporate into PSS		
1/23/2020	Email correspondence	Email from EDF Renewables environmental consultants to Dan Castle, Deputy Commissioner of Erie County on behalf of EDF Renewables	EDF Renewables proactively sent updated maps and affiliated shapefiles to the County in advance of PSS filing. The County was also given advance notice of forthcoming PSS filing, anticipated for late February.			
1/31/2020	Email correspondence	Email between Jack Honor and Dan Castle, Deputy Commissioner of Erie County on behalf of EDF	Continuation of conversation from 1/23/2020.		Mr. Castle informed Jack Honor of a Draft EIS for the expansion of the Chaffee Landfill near the project	

Date of Activity	Locations of Activity	Activity Attendees	Purpose of Activity	Follow-up Action Items	Comments	Future Outreach
					area. Mr. Honor let Mr. Castle know there would be no impact to the project as the proposed landfill expansion is at least a mile away.	
02/03/2020	East Concord Fire Department	13 Members of EDF Renewables' project team and approximately 50 interested stakeholders, municipal and government officials, and nearby residents.	Open house-style meeting with more than 40 poster boards about EDF Renewables, the project, and solar energy were presented. Members of the project team were on hand to answer questions and discuss the project with the public. Notice of the public meeting was mailed 14 days prior to the meeting to 1,229 entities, including adjacent landowners, stakeholders, and residents located within 2 miles of the Facility Area. Ads were also published in the Springville/Ellicottville Pennysaver & News and the Springville Journal on January 18, 2020.	Collect and track comments verbal and written comments and use to inform project advancement and future engagement efforts.	45 attendees signed in.	Additional open house post PSS filing.

Appendix B
Master List of Stakeholders

State and Federal Agencies	
Empire State Development Corporation Eric Gertler, President and CEO Designate of Empire State Development and Acting Commissioner of NYS Department of Economic Development 625 Broadway Albany, NY 12245 (518) 292-5100 *Email not available*	**Empire State Development Corporation, Western New York Region** Amanda Mays, Regional Director 95 Perry Street Suite 500 Buffalo, NY 14203 (716) 846-8200 nys-wny-redc@esd.ny.gov
National Telecommunications and Information Administration David J. Redl, Assistant Secretary for Communications and Information Herbert C. Hoover Building (HCHB) U.S., Department of Commerce 1401 Constitution Avenue N.W. Washington, DC 20230 (202) 482-1840 *Email not available*	**New York Independent System Operator** Robert E. Fernandez, Interim President & CEO 10 Krey Boulevard Rensselaer, NY 12144 (518) 356-6000 stakeholder_services@nyiso.com
New York Power Authority Gil C. Quiniones, President and CEO 123 Main Street Corporate Communications Mail Stop 10 B White Plains, NY 10601-3170 (914) 681-6200 *Email not available*	**New York State Assembly** David DiPietro, District 147 Assemblyman 411 Main St E. Aurora, NY 14052 (716) 655-0970 dipietrod@nyassembly.gov
New York State Attorney General Letitia James, New York State Attorney General Office of the Attorney General The Capitol Albany, NY 12224-0341 1(800) 771-7755 *Email not available*	**New York State Department of Agriculture and Markets** Richard A. Ball, Commissioner 10B Airline Drive Albany, NY 12235 (518) 457-8876 info@agriculture.ny.gov

State and Federal Agencies	
New York State Department of Agriculture and Markets Michael Saviola, Environmental Analyst 10B Airline Drive Albany, NY 12235 (518) 457-2713 michael.saviola@agriculture.ny.gov	**New York State Department of Agriculture and Markets** Kathleen Tylutki, Environmental Analyst 10B Airline Drive Albany, NY 12235 (518) 457-2851 kathleen.tylutki@agriculture.ny.gov
New York State Department of Environmental Conservation Basil Seggos, Commissioner 625 Broadway Albany, NY 12233-1011 (518) 402-8545 basil.seggos@dec.ny.gov	**New York State Department of Environmental Conservation** Daniel Whitehead, Director, Division of Environmental Permits, Major Projects Management 625 Broadway Albany, NY 12233-1750 (518) 402-9167 deppermitting@dec.ny.gov
New York State Department of Environmental Conservation Kelly Turturro, Exectuve Deputy Commissioner, Acting 625 Broadway Albany, NY 12233-1011 (518) 402-8560 kelly.turturro@dec.ny.gov	**New York State Department of Environmental Conservation, Region 9** Abby Snyder, Regional Director 270 Michigan Ave. Buffalo, NY 14203-2915 (716) 851-7200 region9@dec.ny.gov
New York State Department of Environmental Conservation, Region 9 David Denk, Regional Permit Administrator 270 Michigan Ave. Buffalo, NY 14203-2915 (716) 851-7165 dep.r9@dec.ny.gov	**New York State Department of Health** Howard A. Zucker, Commissioner Corning Tower Empire State Plaza Albany, NY 12237 (518) 474-2011 dohweb@health.ny.gov

State and Federal Agencies	
New York State Department of Health, Western Region 584 Delaware Avenue Buffalo, NY 14202-1295 (716) 847-4302 dohweb@health.ny.gov	**New York State Department of Public Service** Lorna Gillings, Outreach Contact Empire State Plaza Agency Building 3 Albany, NY 12223 (518) 474-1788 lorna.gillings@dps.ny.gov
New York State Department of Public Service John B. Rhodes, Chair and CEO Empire State Plaza Agency Building 3 Albany, NY 12223 (518) 474-2523 secretary@dps.ny.gov	**New York State Department of Public Service, Office of Electric, Gas, and Water** Tammy Mitchell, Director Empire State Plaza Agency Building 3 Albany, NY 12223 (518) 486-2483 tammy.mitchell@dps.ny.gov
New York State Department of Public Service, Office of Electric, Gas, and Water Andrew Davis, Supervisor Empire State Plaza Agency Building 3 Albany, NY 12223 (518) 496-2853 Andrew.davis@dps.ny.gov	**New York State Department of Public Service, Office of General Counsel** Noreena Chaudari, Assistant Counsel Empire State Plaza Agency Building 3 Albany, NY 12223 (518) 408-1441 noreena.chaudari@dps.ny.gov
New York State Department of Public Service, Office of General Counsel David Solimeno, Excelsior Fellow Empire State Plaza Agency Building 3 Albany, NY 12223 (518) 408-1441 david.solimeno@dps.ny.gov	**New York State Department of Public Service, Public Affairs** James Denn, Director Empire State Plaza Agency Building 3 Albany, NY 12223 (518) 474-7080 james.denn@dps.ny.gov

State and Federal Agencies	
New York State Department of State Rossana Rosado, Secretary of State One Commerce Plaza 99 Washington Avenue Albany, NY 12231-0001 (518) 473-2492 *Email not available*	**New York State Department of Transportation** Marie Therese Dominguez, Acting Commissioner 50 Wolf Road Albany, NY 12232 (518) 457-4422 *Email not available*
New York State Department of Transportation, Region 5 (Western New York) Francis P. Cirillo, Regional Director 100 Seneca Street Buffalo, NY 14203 (716) 847-3238 *Email not available*	**New York State Division of Homeland Security and Emergency Services** John P. Melville, Commissioner 1220 Washington Avenue State Office Campus, Building 7A Suite 710 Albany, NY 12242 (518) 242-5000 *Email not available*
New York State Energy Research and Development Authority Richard Kaufmann, Chair 17 Columbia Circle Albany, NY 12203 (518) 862-1090 info@nyserda.ny.gov	**New York State Energy Research and Development Authority** Alicia Barton, President and CEO 17 Columbia Circle Albany, NY 12203 (518) 862-1090 info@nyserda.ny.gov
New York State Governor's Office Andrew Cuomo, Governor of New York New York State Capitol Building State Street and Washington Avenue Albany, NY 12224 (518) 474-8390 *Email not available*	**New York State Office of Parks, Recreation and Historic Preservation** Erik Kulleseid, Commissioner NYS Office of Parks, Recreation and Historic Preservation Albany, NY 12238 (518) 474-0456 erik.kulleseid@parks.ny.gov

State and Federal Agencies	
New York State Office of Parks, Recreation and Historic Preservation-Niagara Region Niagara Falls State Park P.O. Box 1132 Niagara Falls, NY 14303 (716) 278-1770 *Email not available*	**New York State Senate** Patrick M. Gallivan, New York State District 59 2721 Transit Road Suite 116 Elma, NY 14059 (716) 656-8544 gallivan@nysenate.gov
US Army Corps of Engineers, New York District Thomas D. Asbery, Colonel; Commander; and District Engineer Jacob K. Javits Federal Building, 26 Federal Plaza Room 2109 New York, NY 10278-0090 (917) 790-8007 cenan-pa@usace.army.mil	**US Federal Aviation Administration** Jennifer Solomon, Eastern Regional Administrator 1 Aviation Plaza Jamaica, NY 11434 (718) 553-3001 *Email not available*
US Fish and Wildlife Service, New York Field Office David Stilwell, Field Supervisor 3817 Luker Road Cortland, NY 13045 (607) 753-9334 david_stilwell@fws.gov	**US House of Representatives** Representative, District 27 8203 Main Street Suite 2 Williamsville, NY 14221 (716) 634-2324 *Email not available*
US National Parks Service Northeast Regional Office 1234 Market Street Philadelphia, PA 19107 *Phone not available* *Email not available*	**US Senate** Kirsten E. Gillibrand, US Senator Larkin at Exchange 726 Exchange Street, Suite 511 Buffalo, NY 14210 (716) 854-9725 *Email not available*

State and Federal Agencies

US Senate
Charles E. Schumer, US Senator
130 South Elmwood Avenue, #660
Buffalo, NY 14202
(716) 846-4111
Email not available

Local Agencies

Erie County Clerk's Office
Michael P. Kearns, County Clerk
Erie County Clerk's Office
92 Franklin Street
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(716) 858-8785
ErieCountyClerkOffice@erie.gov

Erie County Department of Health
Gale R. Burstein, Commissioner of Health
95 Franklin Street, 9th Floor
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Email not available

Erie County Department of Homeland Security and Emergency Services
Daniel J. Neaverth, Commissioner
Erie County Public Safety Campus
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(716) 858-6578
daniel.neaverth@erie.gov

Erie County Department of Public Works
William Geary, Commissioner
Edward A Rath County Office Building
95 Franklin Street, 14th Floor
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Erie County Environment and Planning Department
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Erie County Environment and Planning Department
Bonnie Lawrence, Deputy Commissioner, Environmental Compliance Services Division
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Local Agencies	
Erie County Environment and Planning Department Daniel Castle, AICP, Deputy Commissioner, Planning & Economic Development Division Edward A Rath County Office Building 95 Franklin Street, 10th Floor Buffalo, NY 14202 (716) 858-6043 daniel.castle@erie.gov	**Erie County Environment and Planning Department** Jeremy Rosen, Senior Administrator Edward A Rath County Office Building 95 Franklin Street, 10th Floor Buffalo, NY 14202 (716) 858-7495 jeremey.rosen@erie.gov
Erie County Environment and Planning Department Joanna Panasiewicz, Senior Environmental Compliance Specialist Edward A Rath County Office Building 95 Franklin Street, 10th Floor Buffalo, NY 14202 (716) 858-8077 JoannaPanasiewicz@erie.gov	**Erie County Historian** Doug Kohler, County Historian Edward A Rath County Office Building 95 Franklin Street Buffalo, NY 14202 doug.kohler@erie.gov
Erie County Industrial Development Agency Steve Weathers, Chief Executive Officer 95 Perry Street, Suite 403 Buffalo, NY 14203 (716) 856-6525, ext 121 sweathers@ecidany.com	**Erie County Industrial Development Agency** John Cappellino,Executive Vice President 95 Perry Street, Suite 403 Buffalo, NY 14203 (716) 856-6525, ext 118 jcappell@ecidany.com
Erie County Legislature Hon. John J. Mills, Legislator, District 11 Old Erie County Hall 92 Franklin Street, 4th Floor Buffalo, NY 14202 (716) 858-8850 john.mills@erie.gov	**Erie County Parks, Recreation, and Forestry Department** 95 Franklin Street, Rm 1260 Buffalo, NY 14202 (716) 858-8355 erie_county_parks@erie.gov

Local Agencies	
Erie County Soil and Water Conservation District Mark Gaston, District Field Manager 50 Commerce Way East Aurora, NY 14052 716) 652-8480 mark.gaston@ny.nacdnet.net	**Town of Concord Assessor's Office** Dawn M. Martin, Assessor P.O.Box 368 Springville, NY 14141 (716) 592-4947 concordassessor@yahoo.com
Town of Concord Clerk's Office Darlene G. Schweikert, Town Clerk/Tax Collector P.O.Box 368 Springville, NY 14141 (716) 592-4948 townclerk@townofconcordny.com	**Town of Concord Code Enforcement** Jeff Singleton, Code Enforcement Officer P.O.Box 368 Springville, NY 14141 (716) 592-4946 Ext.314 concordcode@gmail.com
Town of Concord Disaster Coordinator Michael Willibey, Disaster Coordinator P.O.Box 368 Springville, NY 14141 cd153oem@gmail.com	**Town of Concord Highway Department** Dennis M. Dains, Highway Superintendent P.O.Box 368 Springville, NY 14141 (716) 592-4892 concordhighway@gmail.com
Town of Concord Industrial Development Agency Gary Eppolito, Chairman P.O.Box 368 Springville, NY 14141 (716) 592-4946 *Email not available*	**Town of Concord Planning Board** Lawrence J. Kelly, Jr., Chairman P.O.Box 368 Springville, NY 14141 *Email not available*
Town of Concord Town Board Philip Drozd, Councilman P.O.Box 368 Springville, NY 14141 drozdphil@yahoo.com	**Town of Concord Town Board** Kenneth D. Zittel, Councilman P.O.Box 368 Springville, NY 14141 kdde8@aol.com

Local Agencies	
Town of Concord Town Board William F. Snyder,III., Councilman P.O.Box 368 Springville, NY 14141 w3concord@yahoo.com	**Town of Concord Zoning Board of Appeals** Edwin F. Heary, Chairman P.O.Box 368 Springville, NY 14141 *Email not available*
Town of Sardinia Assessor's Office Assessor P.O.Box 219 Sardinia, NY 14134 (716) 496-8900 Ext. 12 *Email not available*	**Town of Sardinia Clerk's Office** Jennifer Bray, Town Clerk/ Tax Collector P.O.Box 219 Sardinia, NY 14134 (716) 496-8900 Ext. 10 townclerk.sardinia@roadrunnner.com
Town of Sardinia Code Enforcement Gene Degman, Code Enforcement Officer/ Building and Fire Code Inspector P.O.Box 219 Sardinia, NY 14134 (716) 496-7526 *Email not available*	**Town of Sardinia Emergency Management** Gerard Whittington, Jr., Emergency Manager / Assistant Fire Chief P.O.Box 219 Sardinia, NY 14134 (716) 432-2435 gerard.whittington@erie.gov 45 Elm Street Buffalo, NY 14203
Town of Sardinia Highway Department Don Hopkins, Highway Superintendent P.O.Box 219 Sardinia, NY 14134 (716) 496-7526 *Email not available*	**Town of Sardinia Historian** Ted Wiedemann, Town Historian P.O.Box 219 Sardinia, NY 14134 sardiniahistorian@gmail.com
Town of Sardinia Planning Board Nancy Spink, Chairman P.O.Box 219 Sardinia, NY 14134 *Email not available*	**Town of Sardinia Town Board** Lenard Hochadel, Councilman P.O.Box 219 Sardinia, NY 14134 (716) 496-8900 *Email not available*

Local Agencies

Town of Sardinia Town Board
Douglas Morrell, Councilman
P.O.Box 219
Sardinia, NY 14134
(716) 496-8900
Email not available

Town of Sardinia Town Board
Mandy Quinn Stojek, Councilman
P.O.Box 219
Sardinia, NY 14134
(716) 496-8900
Email not available

Municipalities, Counties, and School Districts in the Facility Area

Chaffee-Sardinia Fire Department
Ron Kenyon, Fire Chief
PO Box 203
Chafee, NY 14055
(716)496-5150
mailbox@sardiniafire.org

East Concord Volunteer Fire Department
Michael Ahrens
9020 North Street
Springville, NY 14141
(716) 481-2328
Ahrens4095@roadrunner.com

Erie County
Mark C. Poloncarz, Erie County Executive
Erie County's Executive Office
95 Franklin Street, 16th Floor
Buffalo, NY 14202
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mark.poloncarz@erie.gov

Holland Central School District
Cathy Fabiatos, Superintendent
103 Canada Street
Holland, NY 14080
(716) 537-8222
cfabiatos@hollandcsd.org

Pioneer Central School District
Benjamin Halsey, Superintendent
12145 County Line Rd
Yorkshire, NY 14173
(716) 492-9300 Ext.9304
bhalsey@pioneercsd.org

Springville-Griffith Institute Central School District
Kimberly Moritz, Superintendent
267 Newman Street
Springville, NY 14141
(716) 592-3230
kmoritz@springvillegi.org

Town of Concord
Clyde M. Drake, Town Supervisor
P.O.Box 368
Springville, NY 14141
(716) 592-4946
concordtownsupervisor@gmail.com

Town of Concord
James M. Krezmien, Deputy Supervisor
P.O.Box 368
Springville, NY 14141
(716) 592-4946
wittdav@localnet.com

Municipalities, Counties, and School Districts in the Facility Area

Town of Sardinia
Beverly Gambino, Town Supervisor
P.O.Box 219
Sardinia, NY 14134
(716) 496-8900 Ext. 11
beverlygambino@outlook.com

Additional Municipalities, Counties, and School Districts in the 2-mile Study Area

Town of Yorkshire
Marcia Spencer, Town Supervisor
P.O.Box 6
Delevan, NY 14042
(716) 492-4834
yorkshiresupervisor@roadrunner.com

Town of Ashford
John Pfeffer, Town Supervisor
9377 Route 240
West Valley, NY 14171
(716) 942-6016 Ext. 5
ashfordwv@yahoo.com

Village of Springville
William Krebs, Town Supervisor
P.O.Box 17
Springville, NY 14141
(716) 592-4936
wkrebs@villageofspringvilleny.com

Cattaraugus County
John R. Searles, County Administrator
303 Court Street
Little Valley, NY 14755
(716) 938-2577
Email not available

Town of Holland
Michael C. Kasprzyk, Town Supervisor
47 Pearl Street
Holland, NY 14080
(716) 537-9443 Ext. 1
hollandsupr@roadrunner.com

Town of Colden
James Depasquale, Town Supervisor
PO Box 335
Colden, NY 14033
(716) 941-5022
james.depasquale@www.townofcolden.com

Additional Stakeholders	
Alliance for Clean Energy New York Anne Reynolds, Executive Director 119 Washington Avenue Suite 1G Albany, NY 12210 (518) 432-1405 info@aceny.org	**Arcade Area Chamber of Commerce** Ben Halsey, President 228 Main Street Arcade, NY 14009 (585) 492-2114 bhalsey@pioneercsd.org
Arcade Area Chamber of Commerce Julie Tingue, Chamber Services Director 228 Main Street Arcade, NY 14009 (585) 492-2114 office@arcadechamber.org	**Arcade Free Library** Susan Reding, Director 365 Main Street Arcade, NY 14009 (585) 492-1297 arcadelibrarydirector@owwl.org
Basher Field Airport Michael & Barbara Basher, Owners 11420 Warner Gulf Rd E. Concord, NY 14055 (716) 496-6044 *Email not available*	**Buffalo Audubon Society** Melissa Fratello, Executive Director 1610 Welch Rd Buffalo, NY 14113 (585) 457-3228 mfratello.buffaloaudubon@gmail.com
Buffalo Niagara Convention and Visitors Bureau Patrick Kaler, President & CEO 403 Main Street, Suite 630 Buffalo, NY 14203-1496 (716) 961-0200 kaler@visitbuffaloniagara.com	**Buffalo Niagara Partnership** Dottie Gallager, President & CEO 257 West Genesee Street, Suite 600 Buffalo, NY 14202 (716) 541-1701 dgc@thepartnership.org
Carpenters Local Union 276 Christopher Stone, President 1159 Maryvale Drive Cheektowaga NY 14225 716-632-3080 cstone@nercc.org	**Colden Trail Riders** Justin Abel, President P.O. Box 165 Colden, NY 14033 coldentrails@gmail.com

Additional Stakeholders	
Cornell Cooperative Extension Erie County Diane Held, Executive Director 21 Grove Street East Aurora, NY 14052-2345 (716) 652-5400 dbh24@cornell.edu	**Delevan-Yorkshire Public Library** Erin Brotka, Director P.O.Box 185 Delevan, NY 14042 (716) 492-1961 delyorkpublib@yahoo.com
Eden Trail Blazers Snowmobile Club Inc. Matt Skuse, President P.O. Box 165 Eden, N.Y. 14057 EdenTrailBlazers@aol.com	**Erie County Farm Bureau** Hal Kreher, President 21 South Grove St Suite 260 East Aurora, NY 14052 (716) 741-8781 office@ecfarm.com
Erie County Federation of Snowmobile Clubs Chuck Owen, President P.O. Box 158 Clarence, NY 14031 (716) 380-6728 co2truck@gmail.com	**Finger Lakes Trail Conference, Inc.** Quinn Wright, Executive Director 6111 Visitor Center Rd. Mt. Morris, NY 14510 585-658-9320 qwright@fingerlakestrail.org
Gentzke Aeronautical Park Airport Glenn D. Gentzke, Owner 10661 Crump Rd Holland, NY 14080 (716) 592-2023 *Email not available*	**Grand Island Snowmobile Club** Paul Coughlin, President P.O. Box 304 Grand Island, NY 14072 (716) 812-2339 *gisnowmobileclub@gmail.com*
Hamburg Snowmobile Club Jason Larson, President PO Box 102 Hamburg NY 14075 (716) 490-2275 sledhsc@gmail.com	**Hedge Hop Field Airport** Big Spread LLC 459 East Main St Springville, NY 14141 (716) 523-7387 *Email not available*

Additional Stakeholders	
High Acres Airport Preston C. Rice, Jr., Owner 11000 Savage Road Sardinia, NY 14134 (716) 496-7222 *Email not available*	**Hilltop Airport 3NY9 Airport** Gary A. Glassbrenner II, Owner 8659 Finch Rd Colden, NY 14033 (716) 830-2121 *Email not available*
Holland Snorascals Snowmobile Club Jeff Walek, President P.O. Box 329 Holland, NY 14080 (716) 277-6917 hollandsnorascals@gmail.com	**Hulbert Library of the Town of Concord** Jennifer Morris, Librarian 18 Chapel St Springville, NY 14141 (716) 592-7742 *Email not available*
International Brotherhood of Electrical Workers (IBEW), Local 41 Matt Hilmey, President/Training Director 3546 California Rd Orchard Park, NY 14127 (716) 662-9644 mhilmey@ibewlocal41.com	**Kissing Bridge Park** Rachel Fanelli, President 10296 State Rd. Glenwood, NY 14069 (716) 592-4963 Ext. 2216 *Email not available*
Lake Erie Watershed Protection Alliance Joanna Panasiewicz, Coordinator c/o Erie County Department of Environment and Planning 95 Franklin Street Buffalo, NY 14202 (716) 858-8077 Joanna.Panasiewicz@erie.gov	**Laborers International Union of North America (LIUNA)** Gary Bernardo – NY LECET / Executive Board Member Jonathan Fuzak – Recording Secretary / NYSLOF Organizer 330 Fisher Rd West Seneca, NY 14224 (716) 913-3895 gbbthumper@gmail.com jfuzak@nyslof.org
Marilla Sno-Mob Snowmobile Club Tom Kaufman, President PO Box 137 Marilla, NY 14102 (716) 655-6231 snomobmembership@gmail.com	**National Grid** Dean Seavers, President 300 Erie Boulevard West Syracuse, NY 13202 1(800) 642-4272 *Email not available*

Additional Stakeholders	
New York Agricultural Land Trust Amy Olney, Executive Director New York Agricultural Land Trust PO Box 216 Elbridge, NY 13060 (518) 860-6115 info@nyalt.org	**New York Farm Bureau** James Kirby, Chief Executive Officer P.O. Box 5330 Albany, NY 12204 jkirby@nyfb.org
New York Farm Bureau, Region 1 Tim Bigham, Senior Field Advisor P.O. Box 5330 Albany, NY 12205 (716) 474-6585 tbigham@nyfb.org	**New York Forest Owners Association – Niagara Frontier Chapter** Pat Glidden, Editor/Secretary 9204 Coleman Rd Barker, NY 14012 (716) 930-5788 pfglidden@verizon.net
New York Forest Owners Association – Niagara Frontier Chapter Mitch Banas, Vice Chairman (716) 983-6895 mbanas@bsk.com	**New York Public Interest Research Group** 107 Washington Avenue Albany, NY 12210 (518) 436-0876 nypirg@nypirg.org
New York State Conservation Council A. Charles Parker, President 8 East Main Street Ilion, NY 13357 (315) 894-3302 nyscc@nyscc.com	**New York State Electric and Gas Corporation** Carl A. Taylor, President and CEO P.O. Box 5224, Binghamton, NY 13902-5224 (800) 572-1111 *Email not available*
New York State Snowmobile Association PO Box 740 Central Square, NY 13036 (888) 624-3849 *Email not available*	**New Yorkers for Clean Power** Elizabeth Broad, Outreach Director 702 Broadway Kingston, NY 12401 (607) 222-3678 nyforcleanpower@gmail.com

Additional Stakeholders	
Northern Erie Sno-Seekers P.O. Box 167 Akron, NY 14001 (716) 741-6377 *Email not available*	**Pioneer SnoSurfers** Kelly Roblee, President P.O. Box 302 Sardinia, NY 14134 *Email not available*
Sardinia Historical Society Dan Degolier, SHS Museum Curator P.O.Box 212 Sardinia, NY 14134 sardiniahistoricalsoc@yahoo.com	**Shamel Milling Company** Bob Engel, Business Owner 9364 Genesee Rd East Concord, NY 14055 bobengel@shamelmilling.com
Sierra Club, Atlantic Chapter Roger Downs, Conservation Director 744 Broadway Albany, NY 12207 (518) 426-9144 Atlantic.chapter@sierraclub.org	**Sierra Club, Niagara Group** Sara Schultz, Chair P.O.Box 1127 Williamsville, NY 14221-1127 niagarasierra@gmail.com
Southern Tier Snow Drifters Bill Stickney, President 5075 Woodside Rd. Springville, N.Y. 14141 (716) 648-0995 *Email not available*	**Springville Area Chamber of Commerce** Debbie Hintz, Executive Director P.O.Box 310 Springville, NY 14141 (716) 592-4746 director@springvillechamber.com
The Western New York Environmental Alliance and Grow WNY Derek Nichols, Vice Chair 617 Main Street Suite 300 Buffalo, NY 14203 info@growwny.org	**Western New York Farm Bureau Office** Diane Chamberlain, Staff 29 Liberty St, Suite 212 Batavia, NY 14020 (877) 383-7663 wny@nyfb.org

Additional Stakeholders	
Western New York Land Conservancy Nancy Smith, Executive Director 21168 NYS Route 232 P.O. Box 471 East Aurora, NY 14052-0471 (716) 687-1225 info@wnylc.org	**Western New York Public Health Alliance, Inc.** Christine Schuyler, Board Co-Chair 7 North Erie Street- HRC Building Mayville, NY 14757 *Email not available*
Western New York Public Health Alliance, Inc. Loreen Ballengee, Board Co-Chair County Office Building - 7 Court Street Belmont, NY 14813-1076 *Email not available*	**Western New York Snowmobile Club Of Boston, Inc.** Frank Martin, President P.O. Box 137 Boston, NY 14025 (716) 941-6076 *Email not available*
Green Springville, Inc. Springville, NY greenspringvilleinfo@gmail.com	**Arcade Tri-County Airport** Larry Snyder, Owner 8234 Hunters Creek Rd Holland, NY 14080 *Email not available*
Bloecher Farm Airport Wolfgang Buergel, Owner Rd 3, Schang Rd East Aurora, NY 14052 (716) 652-7119 *Email not available*	**Ciszak Airport** Peter Hunter, Owner 243 Mill Street Springville, NY 14141 (716) 592-7623 *Email not available*
East Arcade Airport Larry Snyder, Owner 8234 Hunters Creek Rd Holland, NY 14080 *Email not available*	**Treichler Farm Airport** Peter Treichler, Owner 13262 Schang Rd East Aurora, NY 14052 (716) 316-8048 *Email not available*

Appendix C
Open House Notices

YOU'RE INVITED

to our **COMMUNITY OPEN HOUSE**

TUESDAY, NOVEMBER 19, 2019

5–8 pm | Sardinia Town Hall
12320 Savage Rd., Sardinia, NY 14134

Join the EDF Renewables (EDFR) team at a community open house where we will provide more information on the Genesee Road Solar Energy Center, located in the towns of Sardinia and Concord. The proposed project will provide economic benefits to the region and generate up to 350 MW of renewable energy, which is enough to power more than 80,000 New York households.

EDFR experts will be available to discuss the project in an open house-style format with no set schedule. The public is welcome to join at any time.

EDF renewables

GENESEE ROAD
solar energy center

COMMUNITY OPEN HOUSE

TUESDAY, NOVEMBER 19, 2019

5–8 pm

Sardinia Town Hall
12320 Savage Rd., Sardinia, NY 14134

Genesee Road Solar Energy Center
Mower c/o Andrew Rush
30 South Pearl Street, Suite 903
Albany, NY 12207

GENESEE ROAD
solar energy center

COMMUNITY OPEN HOUSE

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YOU'RE INVITED

to our **COMMUNITY OPEN HOUSE**

MONDAY, FEBRUARY 3, 2020

12–3 pm | East Concord Fire Department Recreation Hall
9413 Genesee Road, E Concord, NY 14055

Join the EDF Renewables (EDFR) team at a community open house where we will provide more information on the Genesee Road Solar Energy Center, located in the towns of Sardinia and Concord. The proposed project will provide economic benefits to the region and generate up to 350 MW of renewable energy, which is enough to power more than 80,000 New York households.

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EDF renewables

GENESEE ROAD
solar energy center

COMMUNITY OPEN HOUSE

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12–3 pm

East Concord Fire Department Recreation Hall
9413 Genesee Road, E Concord, NY 14055

Genesee Road Solar Energy Center
Mower c/o Brittany Gould
30 South Pearl Street, Suite 710
Albany, NY 12207

GENESEE ROAD
solar energy center

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Appendix D
Preliminary Proposed Map Sizes and Scales

Genesee Road Solar Energy Center (19-F-0602)

Preliminary Proposed Map Sizes and Scales for Article 10 Application for Printed Maps (for full-size copies of drawing sets)

Exhibit	Title	Format	Extents	Acres of Extents	Scale (mi/in)	Scale (ft/in)	Scale (in/in)	Size	# Sheets	16 NYCRR Ref	Comments
3	Layout	PDF	PA		0.4	2,000	24000 *	B	TBD	1001.3 (a) (1) & (4)	No concerns
3	Study Area	PDF	SA		0.4	2,000	24000 *	B	TBD	1001.3 (a) (5)	Redundant with other figures.
3	Towns	PDF	PA		0.4	2,000	24,000	B	TBD	1001.3	Combine into one municipal boundaries figure.
3	School Districts	PDF	PA		1	5,280	63,360	B	TBD	1001.3 (b)	Combine into one municipal boundaries figure with scale of 1:24,000.
3	Fire Districts	PDF	PA		1	5,280	63,360	B	TBD	1001.3 (b)	Combine into one municipal boundaries figure with scale of 1:24,000.
3	Project Location	PDF	PA		0.4	2,000	24,000	B	TBD	1001.3 (b)	Redundant with other figures (see Layout above).
4	Land Use Map	PDF	PA		0.2	1,000	12,000	B	TBD	1001.4 (a)	Suggest 1:20,000 scale.
4	Utility Infrastructure Map	PDF	SA		1	5,280	63,360	B	TBD	1001.4 (b)	Scale ok as minimum.
4	Land Ownership Map	PDF	PA		0.2	1,000	12,000	B	TBD	1001.4 (c)	Scale ok as minimum.
4	Zoning Districts (if applicable)	PDF	SA		1	5,280	63,360	B	TBD	1001.4 (d)	Scale ok as minimum.
4	Proposed Land Uses	PDF	PA		1	5,280	63,360	B	TBD	1001.4 (f)	Scale ok as minimum.
4	Agricultural Districts	PDF	SA		1	5,280	63,360	B	TBD	1001.4 (g)	Scale ok as minimum.
4	Utility Infrastructure Map	PDF	SA		1	5,280	63,360	B	TBD	1001.4(h)	Redundant with other figures.
4	Recreation and other uses	PDF	SA		1	5,280	63,360	B	TBD	1001.4 (h)	No concerns
4	Aerial Photographs and Vegetation Clearing Map	PDF	SA		0.2	1,000	12,000	B	TBD	1001.4 (m) & (n)	Scale ok as minimum.
9	Alternative Sites	PDF	TBD		0.4	2,000	24,000	B	TBD	1001.9 (a)	No concerns
9	Alternative project layout(s)	PDF	TBD		0.02	100	1,200	D2	TBD	1001.9 (c) (4)	Suggest combining with the above map at 1:24,000 scale
11	Overall Site Plan for all facilities	PDF	TBD		0.02	100	1,200	D2	TBD	1001.11 (a)	No concerns
11	Site Plans	PDF	PA		0.02	100	1,200	D2	TBD	1001.11 (a)	No concerns
11	Site Plan for Project Substation	PDF	TBD		0.02	100	1,200	TBD	TBD	1001.11 (a)	No concerns
11	Site Plan for O&M Building	PDF	TBD		0.02	100	1,200	TBD	TBD	1001.11 (a)	No concerns
11	Site Plan for Laydown Yard	PDF	TBD		0.02	100	1,200	TBD	TBD	1001.11 (b)	No concerns
11	Site Plan for POI Switchyard	PDF	TBD		0.02	100	1,200	TBD	TBD	1001.11 (h)	No concerns
11	Transmission Line Plan and Profile, Route Plan	PDF	TBD		0.04	200	2,400	B	TBD	1001.11 (h)	No concerns
13	Real Property	PDF	PA		0.2	1,000	12,000	B	TBD	1001.13 (a) & (b)	No concerns
15	Public Health and Safety	PDF	SA		1	5,280	63,360	B	TBD	1001.15 (f)	Scale ok as minimum.
18	Security Site Plan	PDF	TBD		0.02	100	1,200	TBD	TBD	1001.18 (a) (1) & (4);(b) (1) & (5)	No concerns
19	Noise contour map	PDF	PA		0.2	1,000	12,000	D2	TBD	1001.19 (a)	No concerns
21	Slopes	PDF	PA		1	5,280	63,360	B	TBD	1001.21 (a)	Scale ok as minimum.
21	Soil Types	PDF	PA		0.4	2,000	24,000	B	TBD	1001.21 (o)	No concerns
21	Bedrock	PDF	PA		2	10,560	126,720	B	TBD	1001.21 (q)	Scale ok as minimum.
22	Delineated Wetlands Map	PDF	PA		0.4	2,000	24,000	B	TBD	1001.22 (i)	Scale ok as minimum.
23	Water Resources - Groundwater	PDF	PA		0.4	2,000	24,000	B	TBD	1001.23 (a) (2)	No concerns
23	Water Resources - Surface Waters	PDF	PA		0.4	2,000	24,000	B	TBD	1001.23 (b) (1)	No concerns
23	SWPPP (preliminary)	PDF	PA		0.02	100	1,200	D2	TBD	1001.23 (c) (1) & (2)	No concerns
24	Viewshed map(s)	PDF	SA 10 mi		0.4	2,000	24,000 *	B	TBD	1001.24 (b) (1)	Suggest Study Area be 5-miles from Facility components. Suggest 24"x36" poster (D-size) at a scale of approximately 1:80,000 (with inset detail maps of crowded areas).
25	Site plan access roads	PDF	TBD		0.02	100	1,200	D2	TBD	1001.25 (a) (2)	No concerns
26	Microwave Paths - Facilities near paths shown in greater detail	PDF	PA		2.6	13,750	165,000	A	TBD	1001.26 (a) (5)	No concerns.
28	Potential Environmental Justice Area Map	PDF	SA		2	10,560	126,720	B	TBD	1001.28 (a)	No concerns
35	EMF and residences	PDF	TBD		0.02	100	1,200	D2	TBD	1001.35 (c)	No concerns

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

*Denotes scale requirements of Part 1001 *Content of an Application*

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

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

Appendix E
NHP and IPaC Information

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

September 20, 2019

Janine Whitken
Ecology and Environment, Inc.
1501 Lee Highway, Suite 306
Arlington, VA 22209

Re: Genesee Road Solar Energy Center
County: Erie Town/City: Concord, Sardinia

Dear Ms. Whitken:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants within the "facility area" of this project.

There is one significant natural community within the "facility area": a **black spruce-tamarack bog** surrounds the pond just west of the railroad tracks, about 1/3 mile west of the project tax parcel 143889308.00-1-17 at 11987 Allen Road, Town of Concord. This type of wetland is uncommon in New York, so while this example is small it has ecological and conservation value. For more information on black spruce-tamarack bogs, see the Natural Heritage Conservation Guide at https://guides.nynhp.org/black-spruce-tamarack-bog/.

For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

For information regarding permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 9 Office, Division of Environmental Permits, at dep.r9@dec.ny.gov, (716) 851-7165.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

1077

IPaC **U.S. Fish & Wildlife Service**

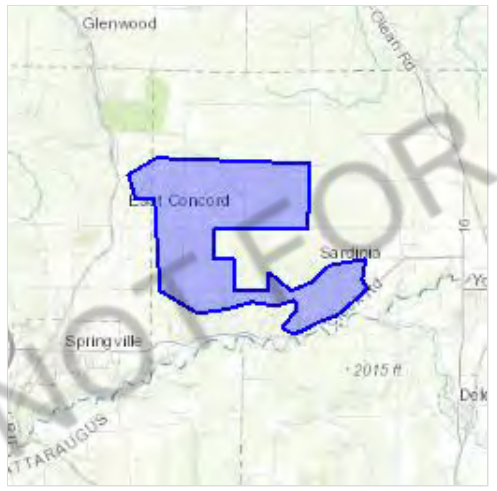
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Erie County, New York



Local office

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699

3817 Luker Road
Cortland, NY 13045-9385

http://www.fws.gov/northeast/nyfo/es/section7.htm

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. 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.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Northern Long-eared Bat Myotis septentrionalis Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9045

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Aug 31
Black-capped Chickadee *Poecile atricapillus practicus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 10 to Jul 31
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31
Yellow-bellied Sapsucker *sphyrapicus varius* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8792	Breeds May 10 to Jul 15

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

■ probability of presence ■ breeding season | survey effort – no data

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to

occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEM1Ed
- PEM1/SS1E
- PEM1C
- PEM1E
- PEM1A
- PEM5C
- PEM1Eb

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1A
- PFO1E
- PFO4C
- PFO4/1E
- PFO4B
- PFO1A
- PSS1/EM1E
- PFO1B
- PSS1C

FRESHWATER POND

- PUBHh
- PUBHx

RIVERINE

- R2UBH
- R4SBC
- R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.