NORTH SENECA
SOLAR PROJECT

North Seneca Solar Project

ORES Permit Application No. 23-00036

1100-2.21 Exhibit 20

Effect on Communications

REVISION 1

TABLE OF CONTENTS

LIST OF FIGURES

EXHIBIT 20 EFFECT ON COMMUNICATIONS

(a) Proposed Telecommunications Interconnection

It is not anticipated that the Facility will require new off-site telecommunication interconnections at this time. The Facility's generating operational data will be transmitted to National Grid and the New York Independent System Operator (NYISO) using existing telecommunications facilities, as the area is generally served by existing cellular and broadband services. The information provided to National Grid and the NYISO will include generation data as required under NYISO standards and Federal Energy Regulatory Commission regulations. This will include generation data (megawatt output, megavar, and any curtailment) and meteorological data (barometric pressure, ambient temperature, dew point, and humidity).

To connect to existing infrastructure, North Seneca Solar Project, LLC (the Applicant) will use business grade broadband service which is available at the substation location off of Ninefoot Road in the Town of Junius. In addition, the Applicant will utilize cellular service as a backup system for data communications. Final communication requirements from National Grid and NYISO have not been determined, but the Applicant anticipates that broadband service with cellular service backup is sufficient for Supervisory Control and Data Acquisition, plant monitoring, revenue metering, and dispatch will be sufficient to meet National Grid and NYISO communications requirements.

For line protection, Breaker Failure Direct Transfer Trip, and data transmittal to the Emergency Management System/Remote Terminal Unit in the new Point of Interconnection (POI) substation, it is anticipated that the Facility would install two physically separate and fully independent self-supporting communication lines between the Facility and National Grid. Final communication requirements from National Grid and the NYISO have not been determined, but typically, dedicated redundant fiber or microwave communication is used for transfer trip, or line differential are sufficient.

The revenue meter and check meter will be located inside the collection substation. The Facility will establish a high-speed communication link at the collection substation and the POI substation, and multiple usable static Internet Protocols will be installed. Final communication requirements from National Grid and the NYISO have not been determined but it is typical for redundant fiber links to be required for the generation tie-line between a project substation and POI substation.

The Applicant has begun the process of a preliminary design to identify communications resources near the Facility Site to provide connectivity to the Facility.

(b) Existing Broadcast Communication Sources

The proposed Facility is not a wind facility; therefore, the requirements of Section 1100-2.21(b) are not applicable.

(c) Existing Underground Cable and Fiberoptic Lines within One Mile

The Facility POI is depicted in Figure 20-1 along with existing underground cable and fiber optic telecommunication lines that were identified within one mile of the Facility Site. Any collection line system crossings of existing infrastructure are indicated in the Site Plan Drawings (see Appendix 5-A). The Applicant will participate in the UDig New York program to ensure all existing utility systems near Facility construction are properly verified, and the Applicant will design and construct the Facility to avoid interference with all existing utility systems.

(d) Anticipated Effects on Communication Systems

The following subsections discuss the anticipated effects of the proposed Facility and electric interconnection on the communication systems identified in Sections (b) and (c):

(1) Potential Structure Interference with Broadcast Patterns

Pursuant to Section 1100-2.21(b), the identification of broadcast communications sources is required for wind facilities only; therefore, the requirements of Section 1100-2.21(d)(1) are not applicable to this Project and will not be addressed in this Application. No interference with broadcasting patterns is anticipated to result from construction or operation of solar facilities.

(2) Potential for Structures to Block Lines-of-Sight

Microwave telecommunication systems are wireless point-to-point links that require clear line-of-sight conditions to assure an uninterrupted line of communication. A microwave link should be clear, not only along the axis between the center point of each microwave dish, but also within a formulaically calculated distance around the center axis of the radio beam, known as the Fresnel Zone. Given the relatively low-profile of photovoltaic (PV) arrays (a maximum height of 12 feet) and other proposed aboveground Facility components (i.e., substation, POI, and storage trailer), the Facility is not anticipated to disturb or block any lines-of-sight for microwave telecommunication systems or any other line-of sight communication systems.

Aboveground Facility components, including at the collection substation and POI, with maximum structure heights of 70 feet, will not obstruct communication lines of sight. These structures will generally be consistent with the heights of existing infrastructure, surrounding houses, and existing tree stands. The tallest components of the collection substation and POI substation are the gantry structures and static masts, which will be 57 feet 3 inches and 55 feet tall, respectively. Two control buildings, each approximately 14 feet 6 inches in height, are proposed within the POI substation and collection substation yards. Other components of the stations will not exceed 22 feet in height. Energy will be transferred from the POI substation to the proposed transmission structures via two overhead transmission lines. The lines will be supported by six transmission structures: four 70-foot tall, dead-end transmission structures and two 65-foot-tall tangent transmission structures. At any distance from a

microwave source, the footprint of aboveground components will be negligible compared to any existing Fresnel Zone.

(3) Physical Disturbance by Construction Activities

Physical disturbance to communication infrastructure (e.g., towers, buried cables, etc.) during construction is not anticipated. The proposed Facility will consist of PV arrays installed on low-profile racking systems that are anchored to the ground via small posts and foundations for medium voltage transformers and the main step-up transformer at the POI. These foundations have been sited to avoid locations of known communications infrastructure.

The location of any known communications infrastructure adjacent to the Facility are indicated in the design drawings included with Exhibit 5 and will be reviewed by the contractor prior to construction. All Facility construction and maintenance work requiring excavation will follow the One Call process consistent with 16 New York Rules and Regulations (NYCRR) Section 1100-6.4(f) which includes the One Call process with UDig New York (formerly known as Dig Safely). This process helps prevent damage by alerting the excavator to the locations of underground utilities, including electric, gas, oil, steam, water, sewer, and communications lines. The contractor flags the area to be excavated and then provides information to UDig New York about the company performing the excavation, the duration of the job, the locations of digging, the depth of the excavation, and other information. UDig New York members, who are utility operators, respond to the request either by noting that the area is clear, or by providing the locations of their facilities. These facilities are then marked above ground, and either avoided or protected during the excavation. If an underground facility cannot be avoided and needs to be exposed, the contractor will provide proper support and protection so that the infrastructure is not damaged. Upon completion of work, the contractor will backfill around any exposed utilities.

(4) Adverse Impacts to Co-Located Lines Due to Unintended Bonding

The Facility does not include co-located lines, and as such, unintended bonding is not anticipated. As discussed in Section (d)(3), the Applicant will implement facility construction and maintenance measures including the One Call process with UDig New York, to avoid any unintended impacts to existing underground lines. Thus, the Applicant does not believe there is significant potential for the proposed Facility and electrical interconnection to adversely impact co-located lines due to unintended bonding.

(5) Other Potential for Interference

The Applicant does not anticipate any interference with radio broadcast coverage, first responder services, municipal/school district services, industrial/business land mobile sites, area-wide public safety, and mobile telephone communications. These communication sources are typically unaffected by the low-profile PV arrays and other Facility components proposed in this Application. Any frequencies produced by the Facility will likely dissipate quickly over short distances, due to the low profile of the PV arrays. Furthermore, land mobile systems operate in a non-line-of-sight environment

and are designed with overlap between base transmitter stations to maintain reception even when the signal to one station is impeded.

(e) Capacity Analysis

The Applicant has confirmed that Charter Communications offers high speed internet connection (currently up to 1,000 MBPS) at the location of the substation. Final communication requirements from National Grid and the NYISO have not been determined but it is assumed that this service is of sufficient capacity to support the Facility's requirements.

(f) Evaluation of Design Configuration

The Facility components will be designed in accordance with applicable standards, codes, and guidelines. For the collection system, industry best practices will be used along with any additional design considerations chosen by the Facility's designers. For the POI, NYISO and National Grid requirements will be followed. The collection substation will be inspected, tested, and commissioned in accordance with requirements set forth by the American National Standards Institute, the Institute of Electrical and Electronics Engineers, the National Fire Protection Association, the International Electrical Testing Association, and the American Society for Testing and Materials, as applicable. No adverse effects on the communication systems identified in Sections (b) and (c) are anticipated.

(g) Post-construction Activities to Identify and Mitigate Adverse Effects on Communication Systems

As previously described, it is not anticipated that the construction or operation of the Facility will cause any adverse impact on communication systems within 1 mile of Facility equipment and the electric interconnection between the collection station and the POI. However, the Applicant takes seriously any complaints that it may receive from members of the public concerning the impact of the Facility. Residents that experience degraded or interrupted service during or after installation of the Facility can file a formal complaint with the Applicant. The Applicant will develop a Complaint Management Plan as part of the compliance filings, consistent with 16 NYCRR Section 1100-10.2(e)(7) requirements, through which members of the public can lodge formal complaints, should any issues arise as a result of Facility construction or operation. The procedure and contact information for registering a complaint will be provided with the post-construction notice consistent with 16 NYCRR Section 1100-6.2(c) and (d)(5) requirements. Complaints can be made by telephone, or in writing via email or postal mail. The Applicant will implement a multi-step complaint response for all registered complaints, which includes: (1) gathering information; (2) responding to the complaint; (3) following up after the response has been issued; and (4) taking further action if the complainant believes that the issue has not been resolved.

(h) Communication Interconnection Negotiations and Agreements

If applicable, 16 NYCRR Section 1100-2.21(h) requires a description of the status of negotiations, or a copy of agreements that have been executed, with companies or individuals for providing the communications

interconnection, including any restrictions or conditions of approval placed on the Facility imposed by the provider. The Applicant has not yet initiated negotiations for a Large Generator Interconnection Agreement for the Facility. These requirements, along with the NYISO requirements, as well as the customer's operational and business requirements, will form the basis of specifications to be negotiated between parties. Following the Large Generator Interconnection Agreement, the Applicant will negotiate with local service providers for communication services, if required.