



**South Ripley**  
SOLAR PROJECT

**ConnectGen Chautauqua County LLC**

South Ripley Solar Project

Matter No. 21-00750

**900-2.21 Exhibit 20**

**Effect on Communications**

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## **EXHIBIT 20 EFFECT ON COMMUNICATIONS**

### **(a) Proposed Telecommunications Interconnection**

It is not anticipated that the Facility will require a telecommunications interconnection. The Facility's generating operational data will likely be transmitted to National Grid, and others, using existing telecommunications facilities since the area is generally served by existing cellular and broadband services. This data will include generation data (megawatt [MW] output, megavar [MVAR], and any curtailment) and meteorological data (barometric pressure, ambient temperature, dew point, and humidity). The Facility's meter is anticipated to be located at the point of interconnection (POI) at the existing National Grid substation. From the metered location, generation data would travel along a fiber optic line connecting the POI to the proposed adjacent collection substation. Similar internet service would also be provided for the Operations and Maintenance (O&M) building within the collection substation fence line. At the collection substation, a T-1 line, which is a paired copper line, would be established by the local internet service provider. At the POI, an IP-based network connection will be enabled. Once the POI and O&M building have internet service, a secure encrypted link will be established between the collection substation and the O&M building to allow for secure communication between the two.

### **(b) Existing Broadcast Communication Sources**

The proposed Facility is not a wind facility and therefore, the requirements of §900-2.21(b) are not applicable and are not addressed in this Application. Research on the potential for utility-scale solar generation facilities to interfere with or otherwise affect communications systems suggest that the Facility will not have a negative impact on communications systems in the area (Massachusetts Clean Energy Center, 2012). Solar PV panels have a low profile and any frequencies produced by the Facility will likely dissipate quickly over short distances (Massachusetts Department of Energy Resources et al., 2015) so interference with any broadcast coverage within the vicinity of the Facility is not anticipated.

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

A review of the New York State Broadband Availability Map (NYS Broadband Availability Office, 2021) and publicly available NYS Broadband spatial data (New York State Office of Information Technology Services, 2014) identified available cable and wireless coverage within one mile of the Facility Site by the following providers: AT&T Mobility, Cellco Partnership (Verizon Wireless), Sprint Nextel Corporation, ViaStat Inc. and Skycasters. Hughes Network System, Starband Communications, Inc. provide satellite coverage to the 1-Mile Study Area. In addition, telecommunications are transmitted throughout the Facility Site and 1-Mile Study Area by Chautauqua & Erie Telephone Corporation digital subscriber lines (DSL) which utilize copper telephone lines to deliver broadband service.

Within the Facility Site, utility poles, overhead distribution lines, communication pedestals for underground telecommunications and record locations of underground communication lines, were located and mapped during on-site surveys. On behalf of the Applicant, Mott MacDonald contacted Dig Safely New York (811) and filed a design ticket in July 2020 for parcels within the Facility Site. Record locations received in response to the ticket submittal were located. Underground communications lines identified within the Facility Site during the survey are identified on the design drawings included in Exhibit 5 and major transmission facilities (including telecommunications) are mapped on Figure 3-4. The Applicant will construct the Facility to avoid interference with all existing utility systems. See Exhibit 5 for a full discussion of the measures the Applicant will take to avoid interference with existing utility systems.

#### **(d) Anticipated Effects on Communication Systems**

The subsections below discuss the anticipated effects of the proposed Facility and electric interconnection on the communication systems identified in Exhibit 20(b) and (c) above:

##### **(1) Potential Structure Interference with Broadcast Patterns**

As noted above, no interference with broadcasting patterns is anticipated to result from construction or operation of solar facilities and the requirements of §900-2.21(b) and §900-2.21(d)(1) are not applicable and will not be addressed in this Application.

##### **(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 low-profile of PV panels (a maximum height of 15 feet) and other proposed aboveground Facility components (e.g., substation, BESS, O&M facility, overhead collection lines and poles) that will generally be consistent with the heights of existing infrastructure, surrounding houses, and existing tree stands, 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. 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 communications infrastructure (e.g., towers, buried cables, etc.) during construction is not anticipated. The proposed Facility will consist of PV panel 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 are not anticipated to impact communications infrastructure because they will be located to avoid communications infrastructure.

The location of any known communications infrastructure within the Facility Site is indicated in the design drawings included with Exhibit 5 and reviewed by the contractor prior to construction. The Applicant will coordinate with Dig Safely New York prior to commencing any construction activities. All Facility construction and maintenance work requiring excavation will follow the One Call process with Dig Safely New York. 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 Dig Safely 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. Dig Safely 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 facility 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**

Considering the separation and protection measures discussed in Exhibit 20(d)(3), the Applicant does not believe that 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**

As discussed in Exhibit 20(b), 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 is not anticipated. These communication sources are typically unaffected by the presence of large structures (e.g., wind turbines or buildings), much less by the low-profile PV panels proposed in this Application. Further, 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. PV panels have a low profile and any frequencies produced by the Facility will likely dissipate quickly over short distances.

### **(e) Capacity Analysis**

The Facility Site is currently serviced by cable-based internet and wireless service providers (AT&T Mobility, Cellco Partnership (Verizon Wireless), Sprint Nextel Corporation, ViaStat Inc. and Skycasters). High speed internet connection will be established at the collection substation and POI switchyard. A secure encrypted communication link will be established over that line with the Facility's central operations center to provide real-time telemetry and other information to the appropriate parties for monitoring and reporting purposes. At the O&M building, a similar setup will be established for high-speed data communications. A Voice Over Internet Protocol (VoIP) telecommunications network will be set up that will also allow for internal communications as well as telecommunications to the public and emergency responders, if necessary. There will be secure encrypted links at both the O&M building and the minimum point of entry that will be tied back to the Facilities central operations center, Applicant's corporate offices, or O&M monitoring center for monitoring and access to the Facility. Any required system upgrades to the local service provider infrastructure to bring broadband service to the Project will be addressed through negotiations between the Applicant and the local service provider.

### **(f) Evaluation of Design Configuration**

The Facility components will be designed in accordance with applicable standards, codes and guidelines. For the collection system, best industry practices will be used along with any additional design considerations chosen by the Facility's designers. For the POI, National Grid and NYISO requirements will be followed. The Facility substation will be inspected, tested, and commissioned in accordance with various ANSI, IEEE, NFPA, IETA, ASTM, requirements, 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 one mile of Facility equipment and the electric interconnection between the collection station and the POI. However, the Applicant takes seriously any complaints that it receives 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. In accordance with Section 900-10.2(e)(7) of the 94-c regulations, the Applicant will develop and implement a Complaint Management Plan through which members of the public can lodge formal complaints, should any issues arise as a result of Facility construction or operation. The Applicant will implement a multi-step complaint response for all registered complaints, which may include: (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. In the unlikely event that

a public safety entity believes their coverage has been compromised by the Facility, the Applicant will work with the public safety entity to remedy any interference related to the Facility.

**(h) Communication Interconnection Negotiations and Agreements**

The regulations require 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, if applicable. Such negotiations have not yet been initiated for the Facility because the need for these agreements is not anticipated.

## REFERENCES

Massachusetts Clean Energy Center. 2012. Study of Acoustic and EMF Levels from Solar Photovoltaic Projects. December 2012, p. iv.

Massachusetts Department of Energy Resources, et al. (MDER). 2015. Clean Energy Results: Questions and Answers, Ground-Mounted Solar Photovoltaic Systems” June 2015. “MDER Q&A,” p. 10.

New York State Broadband Program Office. *New York State Broadband Availability Map*. Available at: <https://map.nysbroadband.ny.gov/html5viewer/?viewer=broadband> (Accessed June 2021).

New York State Office of Information Technology Services (NYSITS) NYS GIS Clearinghouse. 2014. *NYS Broadband Data*. Available at: <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1200> (Accessed June 2021).