



FLAT CREEK SOLAR

Permit Application No. 23-00054

**§ 1100-2.21 Exhibit 20
Effect on Communications**

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Appendix 20-1. Typical Block Diagram for Telecommunications Point of Interconnection

Acronym List

ADSS	All-Dielectric Self-Supporting
DANC	Development Authority of the North Country
EMF	Electric Magnetic Fields
EPC	Engineering, Procurement, and Construction
FCC	Federal Communications Commission
IP	Internet Protocol
LOD	Limit of Disturbance
NYCRR	New York Codes, Rules and Regulations
ORES	Office of Renewable Energy Siting and Electric Transmission
POI	Point of Interconnection
ULS	Universal Licensing System

Glossary Terms

Applicant

Flat Creek Solar NY LLC, a subsidiary of Cordelio Power LP, the entity seeking a siting permit for the Facility from the Office of Renewable Energy Siting and Electric Transmission (ORES) under Article VIII of the New York State Public Service Law.

Facility

Flat Creek Solar, a 300 MW solar generating facility located in the Towns of Root and Canajoharie, NY. The proposed Facility components to be constructed for the generation, collection, and distribution of energy for Flat Creek Solar include solar panel modules, electrical collection system, collection substation, point of interconnection (POI) switchyard, access roads, laydown/staging areas, and other ancillary facilities.

Facility Site

The participating parcels encompassing Facility components, which totals approximately 3,794 acres in the Towns of Canajoharie and Root, Montgomery County, New York (Figure 2-1).

Study Area

The Study Area for the Facility includes a radius of five miles around the Facility Site boundary, unless otherwise noted for a specific resource study or Exhibit. The 5-mile Study Area encompasses approximately 108,667 acres, inclusive of the approximately 3,794-acre Facility Site.

Limit of Disturbance (LOD)

The area to which temporary construction impacts will occur, totaling approximately 1,637 acres.

Exhibit 20: Effect on Communications

This Exhibit provides information required in accordance with the requirements of §1100-2.21 of the Article VIII Regulations.

20(a) Proposed Telecommunications Interconnection

It is anticipated that the generating Facility's operational data will be transmitted to the New York Independent System Operator, and the transmission utility, in this case New York Power Authority. This data will include generation data (megawatt output, megavar, and any curtailment) and meteorological data (wind speed, wind direction, barometric pressure, ambient temperature, dew point, and humidity). The Facility's meter is anticipated to be located at the point of interconnection (POI) switchyard. At the collection substation, an internet protocol (IP)-based network connection will be enabled.

Buried fiber lines exist in the vicinity of the Facility Site and the Applicant intends to utilize an existing fiber network for a proposed telecommunication interconnection for the Facility. The Applicant will coordinate with the fiber network owner to determine the preferred location for interconnecting to the network. A typical block diagram for telecommunications interconnection is included as Appendix 20-1.

20(b) Existing Broadcast Communications Sources near Wind Facilities

The Facility is a solar project, therefore, this section is not applicable.

20(c) Existing Underground Cable and Fiber Optic Major Transmission Location Telecommunications Lines

The Applicant reviewed publicly available information to determine if existing major fiber optic lines are located within a one-mile radius of the Facility. Based on information obtained from New York's Development Authority of the North Country's (DANC) website, it was determined that DANC has a fiber route that transverses along US interstate 90, approximately ¼ mile north of the Facility Site. The DANC fiber cable will be treated as a major communications transmission line.

A query of the Federal Communications Commission (FCC's) Universal Licensing System (ULS) database determined that no cellular towers are located within one mile of the Facility Site.

To ensure safety and to avoid impacts to existing utilities, the Applicant and/or the Engineering, Procurement, and Construction (EPC) contractor will submit a request for location information to U Dig-NY prior to the commencement of construction activities to verify the location of all buried utilities within one mile of the Facility Site. Using the information compiled on current fiber optic and/or underground cables through public review and completion of a site survey for the Facility Site, the Applicant will avoid interference.

20(d) Anticipated Interconnection Effects on Communications Systems

The following subsections discuss the anticipated effects of the proposed Facility and electric interconnection on the communications systems identified and discussed throughout this Exhibit.

(1) Potential Structure Interference with Broadcast Patterns

There will be no adverse impacts to communications systems as a result of construction and operation of the Facility. The Facility's infrastructure includes array panels that will be approximately nine feet high, which are not anticipated to create interference with broadcast patterns. Communications equipment electronics will be installed and tested to ensure compliance with the manufacturer's installation standards. Fiber optic cables neither emit, nor are affected by Electric Magnetic Fields (EMF). The Applicant is not aware of any research conducted to date that indicates interference to communications systems from utility-scale solar generation facilities. The Facility lacks tall structures and does not have exposed moving parts. The PV arrays generate weak EMFs during the day that dissipate at short distances.

There are no local broadcast structures within the Facility Site and as described in Section 20(d)(2) below, the Facility is not expected to impact lines-of-sight to other wireless broadcast facilities. Therefore, it was determined that Facility components will not create significant interference with broadcast patterns.

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

Given the low profile of the solar panels and lack of overhead collection structures, the Facility is not anticipated to disturb or block any lines-of-sight for microwave telecommunications systems or any other line of sight communications systems. The collection substation components will include several electric transmission towers that will be 75 feet tall, with an additional 15 foot tall lightning rods mounted at the top, This 90-foot height will be above the typical tree heights of 60

feet in the region surrounding the Facility. These components are limited to the POI switchyard. Microwave radios transmit point to point in a narrow path. FCC data was used to identify all microwave radio paths within a 10-mile radius of the POI. The closest microwave path is two miles from the POI switchyard. Based on this separation it is not anticipated that any wireless communications systems will be adversely impacted.

(3) Physical Disturbance by Construction Activities

Physical disturbance to communications infrastructure (e.g., towers, buried cables, etc.) during construction is not anticipated. The location of any such infrastructure within and adjacent to the proposed Facility will be indicated on construction drawings and reviewed by the contractor prior to construction. The Applicant and/or EPC contractor will also coordinate with UDig NY prior to commencing any construction activities. All Facility construction and maintenance work that requires excavation will follow the One Call process with UDig NY. 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 excavator identifies the area to be excavated and then provides information to UDig NY about the company performing the excavation, the duration of the job, the locations of digging, the depth of the excavation, and other information. UDig NY 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 utility cannot be avoided and needs to be exposed, the excavator will provide proper support and protection so that the utility is not damaged. Upon completion of work, the excavator backfills around any exposed utilities.

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

ADSS (All-Dielectric Self-Supporting) fiber cable will be used for communications in the Facility. ADSS does not have any metallic components nor transmit electrical signals. Therefore, it will not adversely impact other communications cables or be impacted by electrical signals.

No major copper-based communications cables were identified within one mile of the Facility Site. Fiber optic communications cables do not emit electromagnetic frequencies, nor are they affected by them. In addition, the Applicant has no intention of co-locating buried lines related to the

interconnection or transmission components. No adverse impacts of unintended bonding to co-located lines are anticipated.

(5) Other Potential for Interference

No adverse interference to communications systems due to the Facility are anticipated. Solar panels have a low profile and any frequencies produced by the Facility will likely dissipate quickly over short distances.

20(e) Analysis of Capacity

High speed internet connection will be established at the minimum point of entry. At that point, a secure encrypted 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.

20(f) Adverse Effects on Communications Systems

An evaluation of the design configuration of the Facility and electric interconnection between the Facility and the POI demonstrates that there shall be no adverse effects on the communications systems identified pursuant to subdivisions (b) and (c) of this section.

In the unlikely event that the interconnection does impact other communications systems, the Applicant will take appropriate steps to review and respond to any complaints. In accordance with 16 New York Codes, Rules and Regulations (NYCRR) Section 1100-10.2(e)(7), the Applicant will prepare a Complaint Resolution Plan as part of the Pre-Construction Compliance Filings that outline the protocols (documentation, resolutions, tracking, and reporting) to address complaints from the public.20(g) Plans to Mitigate Impacts on Existing Communications Sources

As previously described, it is not anticipated that the construction or operation of the Facility will cause any adverse impact on communications systems within one mile of Facility equipment and the electric interconnection between the collection substation and the POI switchyard. In accordance with Section 1100-10.2(e)(7) of the Article VIII Regulations, the Applicant will develop and implement a Complaint Management Plan as a compliance filing, through which members of the public can lodge formal complaints, should any issues arise as a result of Facility construction or operation. Although not anticipated, residents that experience degraded off-air television

service or interrupted telecommunication service during or after installation of the Facility can file a formal complaint with the Applicant.

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. Possible solutions include optimizing nearby base transmitters, adding a repeater site, and/or using utility towers within the Facility as base station or repeater sites. Additionally, the Applicant has prepared a Safety Response Plan as part of this Application to ensure the safety and security of the local community, provide guidance in the case of an emergency, and to supply contact information for Facility personnel and local public safety entities. The Safety Response Plan is available in Exhibit 6, Appendix 6-2 of this Application. 20(h) Status of Telecommunications Interconnection

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.