



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL

March 12, 2021

David W. Bogan, Esq.
Locke Lord LLP
20 Church Street
Hartford, CT 06103

RE: **PETITION NO. 1397** - Constitution Solar, LLC declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 20-megawatt AC solar photovoltaic electric generating facility on approximately 149 acres comprised of four separate parcels located off of Cornell Road in Plainfield, Connecticut and associated electrical interconnection.

Dear Attorney Bogan:

At a public meeting of the Connecticut Siting Council (Council) held on March 11, 2021, the Council considered and approved the Development and Management (D&M) Plan submitted for this project on January 4, 2021 with the following conditions:

1. Provide a copy of the DEEP Stormwater Permit authorization prior to the commencement of construction;
2. Provide the number of 475 Watt and 375 Watt panels to be installed at the site;
3. Revise and submit Site Plan Sheet C-029 Solar Array Fence detail to include a minimum six-inch gap between the ground and the bottom of the fence;
4. Incorporate native pollinator species into the post-construction site stabilization seed mix;
5. Provide an Operations and Maintenance Plan with inspection/maintenance protocols for site equipment, roads, fencing, solar field areas and stormwater management system; and
6. Provide contact information for the construction contractor.

This approval applies only to the D&M Plan submitted on January 4, 2021. Requests for any changes to the D&M Plan shall be approved by Council staff in accordance with Regulations of Connecticut State Agencies (RCSA) §16-50j-62(b). Furthermore, the project developer is responsible for reporting requirements pursuant to RCSA §16-50j-62.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the Council's decision on the petition dated July 17, 2020 and in the D&M Plan dated December 31, 2020.

Enclosed is a copy of the staff report on this D&M Plan, dated March 11, 2021.

Thank you for your attention and cooperation.

Sincerely,

s/Melanie A. Bachman

Melanie A. Bachman

MAB/RDM/lm

Enclosure: Staff Report dated March 11, 2021



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Petition No. 1397
Constitution Solar, LLC
Cornell Road, Plainfield
Development & Management Plan
Staff Report
March 11, 2021

On July 17, 2020, the Connecticut Siting Council (Council) issued a Declaratory Ruling to Constitution Solar LLC (CS), pursuant to Connecticut General Statutes §4-176 and §16-50k, for the construction, maintenance, and operation of an approximately 20 megawatt (MW) alternating current (AC) solar photovoltaic electric generating facility located off of Cornell Road in Plainfield, Connecticut.

The Project Site is located on four parcels totaling 149 acres located directly west and north of Cornell Road in Plainfield. The parcels, zoned residential, consist of a mix of forest and agricultural fields interspersed with wetland/watercourse corridors. The Quinebaug River abuts the parcels to the west.

The Council's Declaratory Ruling required CS to submit a Development and Management Plan (D&M Plan) and other documentation for Council review and approval prior to construction. On January 4, 2021, CS submitted the D&M Plan and other required documentation to the Council.

The Council's Declaratory Ruling required the following information to be included in the D&M Plan:

- a) **A final site plan including, but not limited to, final solar panel layout, access roads, electrical interconnection, fence design, equipment pads, and switchgear compound;**

CS submitted a D&M Plan that contains final site plans. The site plans include project modifications that were made after the Council issued its Declaratory Ruling and these modifications were incorporated in the D&M Plan. Project modifications include, but are not limited to, the following:

- 1) The site design was modified by using more efficient modules. The project initially specified the installation of 68,296 solar modules with 67,316 modules rated at 415 watts and 980 modules rated at 400 watts. CS will now install a mix of 475 watt and 375 watt modules. The exact number of each type was not provided.
- 2) Relocation of the switchyard (collector substation) from an area adjacent to Cornell Road to a more interior portion of the site.
- 3) Reduction of the Project development area from 80 acres to approximately 75 acres.
- 4) Establishment of larger buffer zones to wetland and watercourse resources.
- 5) Redesign of the stormwater management system.

The Project development area contains 3 distinct solar array areas, a northern array area located at the north end of Cornell Road, a central array generally located west of Cornell Road where it dead ends, and a southern array, located on a separate parcel on the west side of Cornell Road.

The modules would be oriented to the south at a 13 degree angle with inter-row spacing 8 to 10 feet wide.

The northern and central portion of the site will be accessed from a new 16-foot wide gravel road extending west from Cornell Road. Interior access roads would access 9 concrete equipment pads that will support inverter and transformer equipment. The switchyard would be located west of Cornell Road, adjacent to an interior access road. The southern portion of the site would be accessed from a gate on Cornell Road which provides access to a gravel parking area adjacent to a concrete equipment pad.

The switchgear would be located on a 25-foot by 50-foot concrete pad located along the east edge of the central array area. The 23 kilovolt (kV) switchgear will have disconnect switches and protective relays. A three-phase overhead feeder line from the switchgear pad to the point of interconnection at Eversource's Fry Brook Substation in Plainfield, Connecticut. A two-party Small Generator Interconnection Agreement between CS and Eversource is expected to be executed in the first quarter of 2021. All siting and permitting for the connecting feeder will be covered under Eversource's current utility processes and easements. The Project holds Independent Systems Operator-New England (ISO-NE) Generation Interconnection Queue Position 712. ISO-NE determined the interconnection will not have a significant adverse effect on the stability, reliability or operating characteristics of Eversource's transmission facilities.

Each solar array area would be enclosed by a 7-foot tall chain link fence with access through swing gates. By fencing each solar array area, open space for the movement of larger animals would be created between the array areas. The switchyard would be enclosed by a 7-foot chain link fence with barbed wire on top.

b) Construction site plans that comply with the DEEP-approved Stormwater Pollution Control Plan that include, but are not limited to, site clearing, grading, site phasing, construction laydown areas, erosion and sedimentation controls, and details regarding construction-related environmental mitigation measures;

The D&M Plan includes construction related details as well as environmental mitigation measures. The construction plan was designed to conform to DEEP's Stormwater Pollution Control Plan (SWPCP) requirements. The Project SWPCP has been filed with DEEP and is under review.

The Project would be constructed in phases; a land clearing phase followed by four main construction phases. The construction phases would be subdivided into 22 sub-phases designed to be less than 10 acres in size with each having a temporary sediment basin/trap.

The Land Clearing Phase consists of the demarcation of clearing limits and buffer areas followed by the installation of erosion and sedimentation (E&S) controls if the ground is not frozen. Cutting operations would then commence.

The four main Construction Phases are as follows;

- 1) Phase 1: Access Road Construction and Staging- work includes establishment of E&S controls, sediment basins/traps, construction access roads and laydown areas. Stump removal would occur where necessary;
- 2) Phase 2: Stump Removal for Previously Wooded Areas – work includes establishment of E&S controls, sediment basins/traps and grubbing of previously cleared areas followed by phase seeding/stabilization;
- 3) Phase 3: Grassed Area Array Construction – work includes establishment of E&S controls, sediment basins/traps followed by the construction of the solar array and phase stabilization; and

- 4) Phase 4: Wooded Area Array Construction- inspect/repair E&S controls and sediment basins/traps installed in Phase 2. Install new E&S controls as necessary. Construct solar array followed by phase stabilization.

After the Land Clearing Phase is completed, Construction Phase 1 would commence. Subsequent sub-phases can occur simultaneously if each active sub-phase has all temporary E&S measures in place. Construction laydown areas are shown on the plans, and would be re-located or decommissioned as sub-phasing warrants.

The project would disturb an approximate 75 acre area. Significant grading and/or clearing activities would occur over 26 acres of the site. Grading is required in certain areas to moderate steep slopes and to create interior access roads, stormwater features, and equipment pads.

Construction E&S controls will include swales, temporary sediment basins/traps, site perimeter controls, check dams, and other measures as required during construction to manage stormwater. E&S controls would be installed in accordance with the *2002 Guidelines for Soil Erosion and Sediment Control*.

Post-construction flows would be managed through the installation of 9 stormwater basins and associated swales. Rip-rap outflow structures would be installed at several existing eroded gullies on a steep slope above the Quinebaug River to reduce discharge velocities and to prevent erosion.

Environmental mitigation would be performed in accordance with the DEEP NDDDB letter dated November 11, 2020. Some of these measures include a 200-foot wide, no clearing buffer to the Quinebaug River and to on-site vernal pools.

c) Identification of the location where stonewall demolition debris and excess cut would be disposed of;

CS expects to re-use debris from stone wall demolition on site. A significant amount of excess excavated material is not expected. If surplus material is present the project contractors will be required to dispose of these materials in accordance with all applicable state and local regulations.

d) Examination of the feasibility of removing solar panels from the stormwater basins;

CS determined that removing the solar arrays from the stormwater basins would negatively affect the output of the facility and would not meet the requirements of the Power Purchase Agreement. The Project footprint was revised and reduced to account for larger buffers and additional stormwater control features. Installing panels within three of the linear basins would compensate for the reduction in the solar array footprint.

e) Post-construction restoration plan for all disturbed areas of the site;

Once construction is completed, the disturbed areas will be stabilized with a low growing seed mix and mulch. If a minimum 4 inches of topsoil is not present, loam would be imported to the desired depth to promote seed growth. Steeper slopes (> 7 percent) will be stabilized with hydroseed and erosion control blankets. A disturbed area is considered stabilized once it has reached 80 percent vegetative coverage.

The site plans contain provisions for the installation of landscape strips along the perimeter fence in select areas to screen views from Cornell Road and area residences. The landscape strips consist of red cedar and juniper, 6 to 7 feet high at planting, and 10 feet off center.

CS will maintain vegetation during the operational life of the Project.

f) Post-construction site maintenance and vegetation management plan; and

Vegetation will be mowed at least twice a year within the detention basins and solar field areas with the height of the grass maintained at a level to reduce the potential of grass fires. Vegetation located outside of the perimeter fence will be inspected and mowed on an as needed basis. Trees and shrubs located outside of the fence line will be trimmed and/or removed to prevent shading as necessary, except in designated vegetation management areas. Pesticides and herbicides may be used as a secondary control measures if necessary and only on a selective basis.

The habitat enhancement areas specified by DEEP will be monitored to ensure sufficient growth and to control invasive species.

g) Contact information for construction contractor.

To be submitted to the Council once the construction contractor is selected.

The Council's Declaratory Ruling also required the following additional documentation to be submitted:

2. Submit a copy of the DEEP NDDB Final determination letter prior to the commencement of construction;

CS submitted a DEEP NDDB Determination letter dated November 11, 2020. Numerous species were identified as occurring on and adjacent to the site. DEEP's letter included measures to mitigate potential impacts to state listed species, including, but are not limited to, the following:

- a) Establishment of a minimum 200-foot wide vegetative buffer between the Project's limits of disturbance and the Quinebaug River. No solar arrays or project components can be placed within 200 feet of the Quinebaug River and there can be no direct discharges of stormwater to the Quinebaug River;
- b) Establishment of a minimum 200-foot wide buffer around two vernal pools to protect sensitive species;
- c) Tree-clearing restrictions to protect roosting bat species;
- d) On-site monitoring by a qualified biologist and herpetologist to inspect construction practices, exclusionary fencing, and to employ/monitor species protection measures;
- e) Habitat enhancement in two areas, totaling 1.8 acres, to improve stream corridor and vernal pool habitat; and
- f) Three years of post-construction monitoring in accordance with a detailed post-construction monitoring plan approved by DEEP.

3. Submit a copy of a DEEP-issued Stormwater Permit prior to the commencement of construction;

CS submitted the Stormwater Permit application to DEEP on December 31, 2020. The Stormwater Permit application is currently under review and a copy of the permit authorization will be submitted to the Council when available.

- 4. Install perimeter fencing with a six-inch gap between the ground and the bottom of the fence, except adjacent to site access gates and around the switchyard and other areas where enhanced security is necessary;**

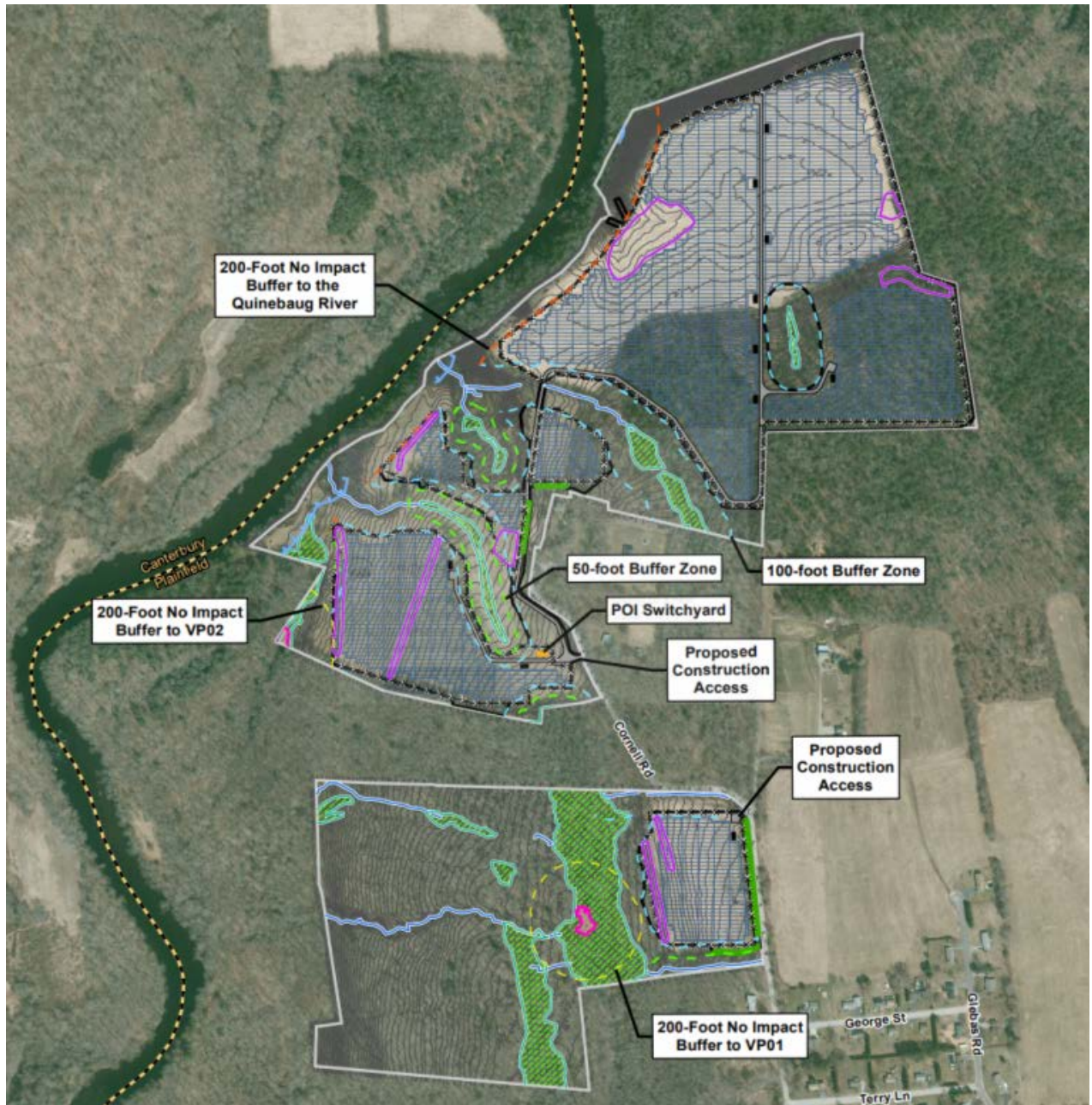
Although the text of the D&M plan states the fence design would include a six-inch gap between the ground and the bottom of the fence where enhanced security is not necessary, the solar array fence detail shown on D&M Site Plan C-029 specifies a four-inch gap. If approved, Staff recommends CS to revise the fence design on Plan C-029.

Recommendations

If approved, staff recommends following conditions:

1. Provide a copy of the DEEP Stormwater Permit authorization prior to the commencement of construction;
2. Provide the number of 475 Watt and 375 Watt panels to be installed at the site;
3. Revise and submit Site Plan Sheet C-029 Solar Array Fence detail to include a minimum six-inch gap between the ground and the bottom of the fence;
4. Incorporate native pollinator species into the post-construction site stabilization seed mix;
5. Provide an Operations and Maintenance Plan with inspection/maintenance protocols for site equipment, roads, fencing, solar field areas and stormwater management system; and
6. Provide contact information for the construction contractor.

Site Layout



- | | |
|--------------------------------|---------------------|
| Limit of Work/Development Area | Watercourse |
| Project Site | Wetland Boundary |
| Chain Link Fence | 100-Year Floodplain |
| Vegetative Screening | Panels |
| Stormwater Feature | Wetland Area |
| 200-foot Buffer Zone | Equipment Pad |
| 100-foot Buffer Zone | Vernal Pool |
| 50-foot Buffer Zone | Switchyard |
| 200-foot Vernal Pool Buffer | |
| 2-foot Contour | |