Petition No. 1417
DG Connecticut Solar II, LLC
Development &Management Plan
669 Platt Road, Watertown
DRAFT Staff Report
March 5, 2021

On December 3, 2020, the Connecticut Siting Council (Council) issued a Declaratory Ruling to Watertown Solar One, LLC and VCP, LLC d/b/a Verogy (WSO), pursuant to Connecticut General Statutes §4-176 and §16-50k, for the construction, maintenance, and operation of an approximately 1.975 megawatt (MW) alternating current (AC) solar photovoltaic electric generating facility at 669 Platt Road, Watertown, Connecticut. In its Declaratory Ruling, the Council required WSO to submit a Development and Management Plan (D&M Plan). On January 8, 2021, WSO submitted its D&M Plan for this project.

Also on January 8, 2021, in compliance with Condition 7 of the Council's Declaratory Ruling, WSO notified the Council that ownership and control of the facility was transferred to DG Connecticut Solar II, LLC (DG).

The project will be on an approximately 154-acre parcel zoned Residential R-70. The parcel contains the Mt. Olivet Cemetery which is located north of the proposed site. The site is located immediately south of the southwestern corner of the cemetery access drive. The site contains a largely cleared grass area in the center with undeveloped/wooded areas along the southern, eastern and western sides.

The Declaratory Ruling requires 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 design plans and interconnection route, fence design compliant with the National Electric Code, final site seeding, landscape planting/berm details and equipment pads;

The final site plans illustrate the site design, solar array arrangement, access roads, electrical design and interconnection route, perimeter fencing, site seeding, landscape planting/berm details, and equipment pads.

The site design was modified by reducing the total number of solar panels from 7,176 to 7,020. The original configuration consisted of 1,560 panels of 380 Watts each and 5,616 panels of 390 Watts each. In the D&M Plan, the configuration is 1,404 bifacial panels of 380 Watts each and 5,616 bifacial panels of 400 Watts each. Thus, the inclusion of 400 Watt panels allows for a net reduction in panel quantity while keeping the total DC MW approximately the same at 2.78 MW.

The solar field will occupy a 16.7 acre area. Inter-row spacing is 16 feet. The width of the panel rows is 11.4 feet. The solar arrays will be fastened to ground mounted racking that will be attached to screw anchors.

The site will be accessed via the existing cemetery access road. A new approximately 940-foot long and 15-foot wide gravel access will be constructed from the southwest corner of the cemetery access road and will turn to the east and then continue south through the center of the solar array area. The new access drive will include a "hammer head" turnaround near the southern limits of the project area.

A seven-foot high chain link fence, compliant with the National Electrical Code, will enclose the solar array area. A four to six inch wildlife gap will be included under the fence.

A 17-foot by 14-foot concrete equipment pad will be located in the northeastern corner of the fenced facility and next to the inverters.

DG has included its electrical design plans including the interconnection route which will run underground to the northeast from the equipment pad area to along the southern side of the cemetery access road towards Platt Road. Near Platt Road, it will convert to overhead and utilize four new poles to facilitate the interconnection to existing electrical distribution.

DG will utilize a Showy Northeast Native Wildflower Seed Mix at the site which includes pollinator-friendly species.

A grass-covered berm will be constructed in the northern limits of the project area. The berm will range from 790-foot elevation at its lowest point to 807-foot elevation at its highest point; thus, due to topography it would have a height of roughly 7 feet on the west end and 17 feet on the east end of the berm. Forty-six arborvitaes will be planted on top of the berm. A smaller berm (about two feet less in maximum height) will be constructed in the northwestern limits of the project area. Four additional arborvitaes will be planted on top of this berm.

b. Final structural design (for the racking system) stamped by a Professional Engineer duly licensed in the State of Connecticut;

DG submitted its final design plans including the racking system. DG also included a structural analysis report stamped by a Professional Engineer that certifies that the racking system design complies with the International Building Code.

c. Copy of DEEP Stormwater Permit;

DG submitted a Notice of Permit Authorization, dated December 23, 2020, from the Department of Energy and Environmental Protection (DEEP), Water Permitting and Enforcement Division of the Bureau of Materials Management and Compliance Assurance issuing a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities for the Project.

d. Construction site plans that comply with 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, site stabilization seeding/growing season details, and details regarding construction-related environmental mitigation measures;

The D&M Plan includes construction related details as well as environmental mitigation measures.

DG's Stormwater Pollution Control Plan was submitted to DEEP as part of the Stormwater Permit review. The Stormwater Permit was issued on December 3, 2020. See Section (c) above.

A 2.35-acre laydown area will be located within the solar array footprint.

Total tree clearing area will be approximately 14.16 acres. Clearing areas within the solar array and access drive footprint will be cleared and grubbed. An approximately 2.83 acre area within the southern limits of the disturbance area (largely for shade mitigation purposes) will be cleared, but stumps will remain.

The D&M Plan indicates that the closest wetland (Wetland 4) will have a 50-foot buffer to the eastern limits of disturbance at its closest point.

A total of three grass-lined stormwater basins will be installed outside of the fenced solar array area: one to the northeast (B-1), one to the southwest (B-2) and one to the northwest (B-3). The stormwater basins will be used as temporary sediment basins/traps. Baffles will be installed within the basins/traps.

Cut and fill will be balanced at the site at 14,015 cubic yards.

The site plans include details of erosion and sediment (E&S) controls including the use of compost filter socks, silt fence, temporary sediment basins, and a construction vehicle tracking pad.

Condition No. 2 of the Council's Declaratory Ruling states, "Upon completion of the land clearing and grading efforts, all distributed areas shall be seeded and stabilized through a growing season (i.e. Spring or Fall) before commencement of construction of the solar arrays and related equipment." In the D&M Plan, DG notes that the DEEP-issued Stormwater Permit does not require that the project be constructed in phases nor does it require submission of evidence of full site stabilization prior to commencement of construction of solar facility infrastructure. Pursuant to the approved Stormwater Permit, Section 5(b)(2)(A)(i), erosion and sediment control plans include interim and permanent soil stabilization practices for the management of disturbed areas and any soil stockpiles. Once all construction activities have ceased or when final grades are reached, site stabilization and protection practices, as specified in DEEP guidelines will be implemented. Once the site is stabilized for a minimum of one growing season (at least three months), DG must have the site inspected to confirm final stabilization, which shall be noted in its Notice of Termination form filed with DEEP.

Environmental mitigation includes on-site environmental monitoring; wetland, vernal pool, and species protection measures; and a Petroleum Materials Storage and Spill Prevention Plan to prevent and mitigate on-site fuel spills. All Points Technology (APT) will serve as an on-site environmental monitor for the project specific species protection measures. APT will provide contractor training, barrier inspections, species identification and relocation, monitoring of E&S controls adjacent to wetland resources, and inspection reporting.

e. Post-construction site maintenance and vegetation management plan;

The facility will be monitored 24 hours per day, 7 days per week for system performance. Personnel will be dispatched to the site for system maintenance and/or repairs if necessary.

Site inspections will be conducted several times per year for site components, infrastructure and site vegetation. Specific facility components will be inspected in accordance with an Operations and Maintenance schedule. Site maintenance and repairs would occur as necessary.

The stormwater management system will be inspected periodically in accordance with an inspection schedule developed as part of the DEEP Stormwater Permit.

Vegatation around and under the solar arrays will be mowed two to three times annually or as necessary. Grass will be re-planted in bare areas to ensure that erosion control is maintained.

f. Contact information for the construction contractor;

The construction contractor and contact information for the project has been provided.

g. Post-construction site maintenance and vegetation management plan;

See Section (e) above.

h. Construction with the DEEP Dam Safety program regarding permitting requirements, if any, for the proposed stormwater basins prior to site construction.

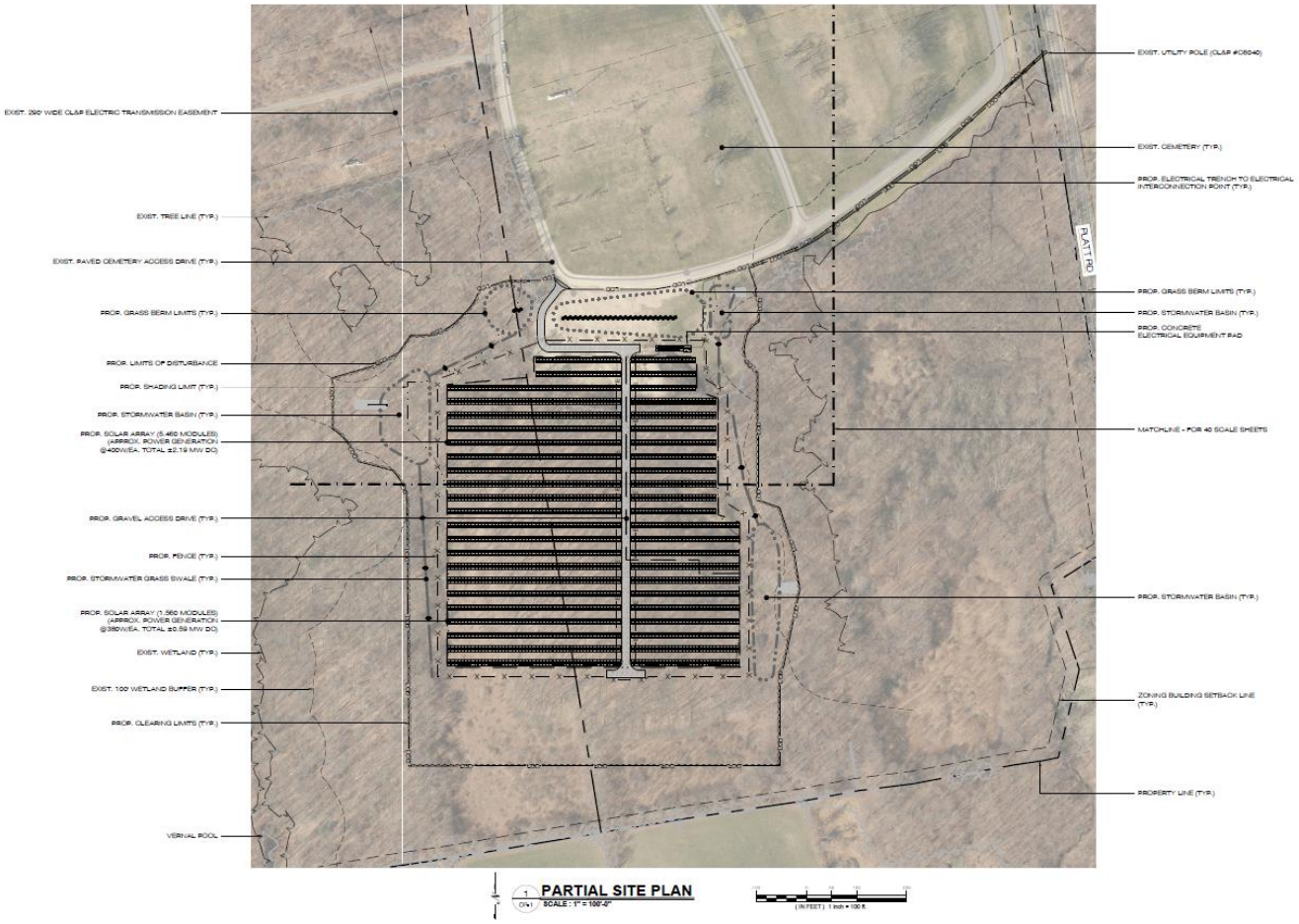
DG consulted with the DEEP Dam Safety program and was advised that, based on the new guidance, solar facility site stormwater basins that are designed to impound less than 3 acre-feet of water at maximum storage elevation would not need a DEEP Dam Safety Permit. DG's stormwater basins for this project will impound less than 3 acre-feet of water, and thus, a DEEP Dam Safety Permit is not required.

Recommendation

If approved, staff recommends the following condition:

1. Revise and submit Sheets OP-1, SP-1 and SP-2 to reflect the updated solar panel quantities/wattages in the notes.

Site Layout


EXIST. 250' WIDE CLAP ELECTRIC TRANSMISSION EASEMENT
EXIST. TREE LINE (TYP.)
EXIST. PAVED CEMETERY ACCESS DRIVE (TYP.)
PROP. GRASS BERM LIMITS (TYP.)
PROP. LIMITS OF DISTURBANCE
PROP. SHADING LIMIT (TYP.)
PROP. STORMWATER BASIN (TYP.)
PROP. SOLAR ARRAY (5,460 MODULES) (APPROX. POWER GENERATION @400W/EA. TOTAL ±2.19 MW DC)
PROP. GRAVEL ACCESS DRIVE (TYP.)
PROP. FENCE (TYP.)
PROP. STORMWATER GRASS SWALE (TYP.)
PROP. SOLAR ARRAY (1,560 MODULES) (APPROX. POWER GENERATION @380W/EA. TOTAL ±0.59 MW DC)
EXIST. WETLAND (TYP.)
EXIST. 100' WETLAND BUFFER (TYP.)
PROP. CLEARING LIMITS (TYP.)
VERNAL POOL
EXIST. UTILITY POLE (CLAP #C6040)
EXIST. CEMETERY (TYP.)
PROP. ELECTRICAL TRENCH TO ELECTRICAL INTERCONNECTION POINT (TYP.)
PLATT RD
PROP. GRASS BERM LIMITS (TYP.)
PROP. STORMWATER BASIN (TYP.)
PROP. CONCRETE ELECTRICAL EQUIPMENT PAD
MATCHLINE - FOR 40 SCALE SHEETS
PROP. STORMWATER BASIN (TYP.)
ZONING BUILDING SETBACK LINE (TYP.)
PROPERTY LINE (TYP.)
1
C1.1
PARTIAL SITE PLAN
SCALE: 1" = 100'-0"
(IN FEET) 1 inch = 100 ft.