

Petition No. 1426
DG Connecticut Solar III, LLC
Development and Management Plan
341 East Road, East Windsor
DRAFT Staff Report
July 23, 2021

On May 10, 2021, the Connecticut Siting Council (Council) issued a declaratory ruling to East Windsor Solar One, LLC (EWSO), pursuant to Connecticut General Statutes §4-176 and §16-50k, for the construction, maintenance, and operation of an approximately 4.9 megawatt (MW) solar photovoltaic electric generating facility located west of the Ellington town boundary at 341 East Road in East Windsor and associated electrical interconnection.

On May 24, 2021, EWSO submitted its Development and Management (D&M) Plan for the facility.

On June 16, 2021, EWSO provided notice that the facility was transferred to DG Connecticut Solar III, LLC (DG), an affiliate of NextEra Energy Resources, LLC, on May 19, 2021. On June 21, 2021, the Council acknowledged the transfer of site ownership and control of the facility.

The project is located on a 29.1-acre site of a 147.8-acre parcel that straddles the East Windsor/Ellington Town Line. The project is entirely within the East Windsor portion of the parcel. The site consists of gentle slopes and is primarily undeveloped, active agricultural land with a farmhouse, several farm buildings and a barn. An existing electric utility right-of-way is located on the Ellington portion of the parcel.

Condition 2 of the Council's 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 facility layout, access roads, electrical interconnection including riser pole locations, fence design, equipment pads, stormwater management control structures, and final seed mix;**

The final site plan includes the final facility layout, access roads, electrical interconnection, fence design, equipment pads and stormwater management control structures.

Solar arrays will consist of 19,344 fixed tilt bi-facial solar panels, including 15,990 395-Watt direct current (DC) and 3,354 380-Watt DC panels. Inter-row spacing is approximately 17.2 feet to prevent shading.

Three equipment pads will be installed in the northwestern corner of the project area.

A 15-foot wide gravel access road extends from East Road to the center of the project area. Two perpendicular access roads extend in a north-south direction; one parallels East Road to the equipment pads and the other through the center of the project area. Approximately 2,340 linear feet of new gravel access roads will be installed.

An eight-foot high chain link fence with privacy slats will be installed along the entire northern and western fence line. A six-foot high chain link fence (no privacy slats) will be installed along the entire

eastern and southern fence line. Landscaping would be installed along the northern fence line and approximately 200 feet of the northern portion of the western fence line. Landscaping consists of a double-row of 10-foot tall emerald green arborvitae along the entire northern fence line and for the first 100-feet along the western fence line extending south from the northwestern corner of the project. Approximately 100 feet of single row emerald green arborvitae would be installed along the western fence line south of the double row landscaping.

EWSO consulted with Eversource Energy regarding the electrical interconnection and the design of the utility poles. One utility pole was eliminated as the recloser and recloser pole were removed from the utility design and replaced with a set of in-line switches. There will be a total of four utility poles installed within the fence line of the facility and one outside the fence line.

Final site plans include stormwater management control structures including a permanent grass lined stormwater basin in the southern end of the facility and an overflow weir at the southern end of the stormwater basin.

Ernst Fuzz & Buzz seed mix would be planted under and around the solar panel areas.

b) Final plans for hosting sheep grazing at the site including, but not limited to, provisions for emergency evacuation;

A Sheep Grazing and Integration Plan was provided. Managed sheep grazing will occur at the facility throughout the growing season to manage vegetation and maintain agricultural production. The facility will be divided into four paddock areas separated by a portable electric fence. The sheep will graze within one paddock area then be moved to a new paddock area every 12 days allowing each paddock area to rest for 35 days between grazing. Approximately 75 mature ewes would be on site during a growing season.

Perimeter fencing will be installed to the ground or with a maximum of one to two inch gaps at the bottom and include a tensioning wire at the bottom for chain link fencing. The Sheep Grazing and Integration Plan recommends additional fencing be installed around inverter pads and electrical outlets be installed and accessible. The D&M Plan does not include fencing around inverter pads. Drawings E301 through E303 indicate that a total of three 120 Volt 20-Amp ground fault circuit interrupter (GFCI) outlets would be installed. The final outlet locations are not detailed in the D&M Plan.

A Sheep Pasture Rotation and Grazing Plan was also included in the D&M Plan containing recommendations for the welfare of the animals that includes fresh water access. Fresh water would ideally be provided through a well water or municipal water connection; however transported water is typical of solar grazing operations. The D&M Plan does not contain a water connection to the facility.

A sheep manager will visit the flock two to three times a week to provide clean water, supplemental minerals and to do a health and management check.

Sheep do not typically chew or pull on wiring but could get tangled in loose wiring; therefore, wiring should be tightly secured.

Regarding emergency protocols, clear signage will be displayed at the entrance gate including emergency contact information for the sheep manager. In the event of an emergency, the sheep manager should be contacted immediately to determine if animals are present and to provide notification that animals may need to be removed. Portable electric fencing that is installed across site roadways will include a fence

charger by the side of the roadway that can be switched off and the fence pulled up by hand to allow passage. If possible, animals should remain within the facility during an emergency until the sheep manager can remove them safely. Sheep tend to move away from commotion; however, if a sheep does escape during the emergency, they should be monitored and pushed towards fields and away from the roads if possible.

The rotational grazing of the sheep will result in moving and distributing sheep manure at the same time. Sheep manure is typically invisible within a short period of time. Additionally, fences may be used to exclude sheep from ponds and streams. Sheep would be excluded from the stormwater management area.

c) Consultation with DEEP Stormwater Division regarding the potential impacts of sheep grazing on the site and any recommendations from DEEP, as applicable;

EWSO consulted with the Department of Energy and Environmental Protection (DEEP) Stormwater Division regarding sheep grazing. DEEP Stormwater Division recommends any surface waters should have a fenced vegetative buffer; implementation of a Grazing Management Plan if sheep are to be kept onsite on a seasonal basis; sheep stocking rates dependent on the amount of land to be grazed and the quality of the forages; and the exclusion of any sheep from all stormwater basins. DG would comply with all DEEP Stormwater Division recommendations.

d) Erosion and sedimentation control plan consistent with the 2002 Connecticut Guidelines for Erosion and Sedimentation Control including, but not limited to, temporary sediment basin details, site stabilization/seedling/growing season details prior to the installation of post driving/racking system, site stabilization measures during construction, inspection and reporting protocols, methods for periodic clearing of temporary sediment traps and swales during construction, and final cleaning of stormwater basins upon site stabilization;

An erosion and sedimentation (E&S) control plan was provided as part of the D&M Plan and is consistent with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control*. Perimeter E&S controls consisting of compost filter socks would be installed along the eastern, southern and southwestern portions of the limits of disturbance.

The temporary sediment basin will be in the southern portion of the project area and will be used as the permanent stormwater basin following construction. Sediment baffling will be installed in the southern portion of the basin.

A schedule for the inspection and maintenance of the E&S control features during construction is included in the D&M Plan.

e) Site construction detail/phasing plan including, but not limited to, construction laydown area, site clearing/grubbing, site grading, excess earth material disposal locations, site stabilization/seedling/growing season details, soil stockpile locations, and a fuel storage/spill plan that is protective of groundwater resources;

Construction of the project will be performed in two phases.

Phase 1 includes:

- a. Minimal clearing and grubbing to install construction entrances;
- b. Installation of perimeter erosion control; and

- c. Installation of a temporary sediment basin.

Phase 2 includes:

- a. Removal and disposal of demolition debris in accordance with applicable laws;
- b. Temporary seeding of disturbed areas not under construction for at least 30 days;
- c. Installation of gravel access roads, equipment pads and electrical conduit;
- d. Installation of racking posts;
- e. Installation of solar panels and completion of electrical installation;
- f. Completion of remaining site work including landscaping and stabilization;
- g. Conversion of the temporary sediment basin into the permanent stormwater basin;
- h. Final grading, raking, seeding and mulching of all disturbed areas; and
- i. Removal of perimeter erosion and sedimentation controls.

A construction laydown area consists of a 315-foot by 525-foot area within the southwestern portion of the facility area. A soil stockpile area will be just east of the construction laydown area for Phase 1 construction and in the eastern portion of the project area for Phase 2 construction.

EWSO provided a Petroleum Materials Storage and Spill Prevention Plan in the D&M.

- f) **Solar module specifications that indicate the selected solar module will not contain PFAS and will not be characterized as hazardous waste through applicable TCLP testing at the time of this decision;**

The manufacturers of the solar modules are Trina Solar Co., Ltd (Trina) and Risen Energy Co., Ltd (Risen). EWSO has provided the manufacturers' TCLP testing results for the procured solar modules that indicate the modules would not be characterized as hazardous waste if disposed under current regulations. A statement from each manufacturer is also provided that states the selected solar modules do not contain PFAS materials.

- g) **Final structural design for solar module racking system stamped by a Professional Engineer duly licensed in the State of Connecticut;**

EWSO provided the final structural design for the Trina and Risen solar module racking system stamped and signed by a Professional Engineer licensed in the State of Connecticut.

- h) **Construction traffic control plan developed in consultation with the Town;**

EWSO provided a traffic management plan that was shared with the Town for comment. Construction access will extend from East Road, in the same location as the final project access road. East Road is a two-lane Town-owned road. The access road was field reviewed by EWSO and the Town on December 3, 2020 and subsequently its location was approved by the Town Engineer with respect to sight distance.

- i) **Construction hours shall occur Monday through Saturday with any Sunday work to be requested, as necessary;**

Construction will occur Monday through Saturday from 7:00 AM to 4:00 PM; and Sunday, from 9:00 AM to 4:00 PM, if necessary. If Sunday construction hours become necessary, a request would be submitted to the Council.

- j) **Consultation with DEEP Dam Safety Division regarding permitting requirements, if any, for the proposed stormwater basin prior to site construction; and**

Any dam which impounds less than three acre-feet of water does not require a Dam Safety Construction Permit. The stormwater basin is designed to contain water at a volume of 2.27 acre-feet based on the crest elevation. DEEP Dam Safety confirmed that the project would not require a Dam Safety Construction Permit.

- k) **Post-construction Operations and Maintenance Plan that includes inspections of facility components, vegetation and stormwater basin/controls, corrective/remediation measures, and vegetation/site management procedures.**

EWSO has provided an Operations and Maintenance (O&M) Plan. A continuous remote monitoring system will be used to provide alarm and performance data for the system. A schedule of onsite inspections has been provided. Required repairs identified through remote monitoring and/or onsite inspections will be conducted in a timely manner.

DG would provide stormwater maintenance in accordance with the approved plan and as required by applicable DEEP regulations.

Vegetation maintenance would be conducted through the Livestock Grazing Program. The sheep will be used to control vegetation within the facility.

Recommendation

If approved, staff recommends the following condition:

1. Prior to commencement of construction, DG submit a plan to address recommendations for on-site water and electrical outlets included in the Sheep Grazing Plans prepared by Agrivoltaic Solutions.

Site Layout

