

**Petition No. 1310A**  
**Quinebaug Solar, LLC**  
**Partial Development and Management Plan**  
**Site Clearing, Substation and Switching Station**  
**north of Wauregan Road, Canterbury & south of Ruskstela Road and Allen Hill Road, Brooklyn**  
**DRAFT Staff Report**  
**November 13, 2020**

On April 24, 2020, the Connecticut Siting Council (Council) issued a declaratory ruling to Quinebaug Solar, LLC (Quinebaug), pursuant to Connecticut General Statutes §4-176 and §16-50k, for the construction, maintenance, and operation of an approximately 49.36 MW solar photovoltaic electric generating facility located generally north of Wauregan Road in Canterbury and near Ruskstela Road and Allen Hill Road in Brooklyn, and associated electrical interconnection including the Quinebaug Collector Substation (QCS), Eversource's Canterbury Switching Station (CSS), connections to existing transmission, and transmission upgrades in the City of Norwich. On October 8, 2020, Quinebaug submitted the first phase of its Development and Management (D&M) Plan (Partial D&M Plan) for project tree clearing and the construction of the QCS and CSS. The Partial D&M Plan was filed due to the need to begin clearing within the seasonal window, which is from October through March, for the protection of tree-roosting bat species and also due to the lead time required for the construction of QCS and CSS.

On November 4, 2020, the Council submitted interrogatories to Quinebaug on the Partial D&M Plan. On November 12, 2020, Quinebaug submitted its responses to the Council's interrogatories.

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, the solar arrays, landscape plantings, fence design, location of locked indoor area for storage of fuel, oil, paint and other hazardous materials, and the electrical connection to and including the Quinebaug Collector Substation and Eversource Canterbury Switching Station;**

No solar arrays will be constructed at this time as part of the Partial D&M Plan. The final solar array plans will be included in a future section of the D&M Plan.

No landscape plantings are proposed around QCS and CSS. Final landscaping plans associated with the solar arrays will be included in a future section of the D&M Plan.

QCS has an irregular shaped compound with a gravel base and will be surrounded by a seven-foot tall chain link fence with one foot of barbed wire on top. The total QCS footprint is roughly one acre, with the fenced compound considerably smaller in area. QCS includes a 34.5-kV to 115-kV generator step-up transformer (GSU transformer), as well as a high-voltage circuit breaker, disconnect switch and instrument transformers and a control enclosure. The tallest piece of equipment within QCS would be the static mast (for lightning protection) that will reach a height of about 70 feet.

CSS will be installed immediately south of QCS. CSS will be rectangular in shape with an area of roughly one acre with a traprock base and surrounded by a seven-foot tall chain link fence with one foot of barbed wire on top. CSS will include the following equipment:

- a) Three 115-kV circuit breakers with foundations;
- b) Six circuit breakers with manually operated disconnect switches;

- c) Three motor operated disconnect switches;
- d) Three station service voltage transformers;
- e) Nine capacitor coupled voltage transformers;
- f) One wave trap;
- g) Two line terminal structures;
- h) Bus work, bus support and switch support structures and foundations;
- i) One 24-foot by 40-foot by 12-foot high pre-fabricated control enclosure; and
- j) Lightning masts, if necessary.

The tallest structures inside CSS will be the terminal structures with a height of about 55 feet. The lightning masts, if necessary, will be of a comparable height to the terminal structures.

Staff suggests including a condition that the location of any storage for fuel, oil, paint and other hazardous materials associated with the Partial D&M Plan be submitted to the Council. Staff also suggests including a condition that a copy of the Spill Prevention Control and Countermeasures Plan for the GSU transformer be submitted to the Council.

**b) Final construction hours and days of the week;**

Site clearing and construction of QCS and CSS is scheduled to commence in November 2020. Construction hours will be Monday through Saturday between 7:00 a.m. and 7:00 p.m. Work on Sundays would occur on an as-needed basis, between the hours of 8:00 a.m. and 5:00 p.m. Construction of QCS and CSS are expected to be completed by October 2021, with the exception of final details and establishment of vegetation cover, which are expected to be completed by Spring 2022.

**c) Construction traffic control plan;**

Access to the project site will be from the two existing access points located off of Wauregan Road. Access to the substation and switchyard area will also be via Wauregan Road. Project contractors will be responsible for access and traffic control measures including working with representatives of the Towns of Brooklyn and Canterbury as necessary.

Since the project does not propose any work within a travel lane or shoulder, traffic control patterns are not expected to be necessary. Signs will be erected to identify active construction zones and will be consistent with federal, state and local standards.

Contractors will be responsible for providing notice to the municipalities of any projected heavy truck traffic days, e.g. material deliveries involving semi-trucks, large concrete pours or removal of excess cut material.

Delivery of large equipment for the substation and switchyard such as transformer, control enclosures, and switchgear will be subject to oversize load permits issued by the Connecticut Department of Transportation. Contractors will work closely with both towns to coordinate these large deliveries.

**d) Copies of the DEEP General Permits from QS and Eversource;**

Quinebaug registered for the Stormwater Permit for this project on July 19, 2020. The permit application is currently under DEEP review. Based on Quinebaug's consultations with DEEP, permit approval is anticipated within the next several weeks.

Staff suggests including a condition that the DEEP Stormwater Permit be submitted to the Council prior to commencement of any work identified in the Partial D&M Plan.

**e) Erosion and sedimentation control plan consistent with the 2002 Connecticut Guidelines for Erosion and Sedimentation Control including, but not limited to, seeding the site for stabilization purposes prior to installation of racking systems and panels, and utilization of silt socks or similar manufactured product in conjunction with silt fence in areas of disturbance close to wetlands;**

Quinebaug has provided its erosion and sedimentation (E&S) control measures for QCS and CSS construction as well as for the vegetative clearing areas. The E&S control plans are consistent with the 2002 Connecticut Guidelines for Erosion and Sedimentation Control and were submitted to DEEP as part of the stormwater permit review process.

**f) Site clearing, grubbing, stabilization, and stormwater controls phasing plan including, but not limited to, delineation between cleared areas with grubbing and areas where stumps are to remain and elevations of all spillways for consistency with design details;**

Site clearing for the entire project will be performed in the areas identified in light blue on the Limit of Vegetation Clearing drawing provided in the Partial D&M Plan. The total amount of clearing has been reduced from 73 acres to 55 acres due to layout changes to protect herpetofauna including the eastern spadefoot. Minimal clearing is required at the QCS/CSS site. See attached figure titled "Site Clearing Areas."

While a contractor and its final equipment have not yet been selected, Quinebaug anticipates using a variety of equipment for tree cutting and removal including hand tools (e.g. chain saws), feller bunchers, tracked and wheeled skidders and forwarders, as well as handling and processing equipment such as chippers, loader cranes, log trucks and trailer trucks.

No stumping or grubbing is planned at this time. Grubbing, site stabilization and stormwater phasing will be included in a future section of the D&M Plan. Tree clearing operations include tree cutting under frozen conditions. If reliably frozen conditions do not exist, or if tree cutting in some areas would result in ground disturbance or rutting, then stormwater controls would be installed prior to such ground disturbance.

**g) DEEP-approved stormwater management plan consistent with the 2004 Connecticut Stormwater Quality Manual, including an analysis on the potential impact of driveways on stormwater flows, including but not limited to, potential diversion of stormwater away from wetlands;**

Quinebaug's stormwater permit filing is currently under review by DEEP. Quinebaug anticipates receiving such permit within the next few weeks.

Staff suggests including a condition that the final, DEEP-approved stormwater management plan be submitted to the Council prior to the commencement of construction.

**h) Final plans to comply with the March 5, 2020 DEEP NDDDB Determination;**

For compliance with the March 5, 2020 DEEP Natural Diversity Database determination, the following protective measures for state-listed listed species will be implemented as part of the Partial D&M Plan:

- a) Tree clearing will be restricted to November through March for the protection of state-listed tree roosting bat species;
  - b) No tree clearing will occur within any of the mapped resource protection areas;
  - c) For the American kestrel, a state-listed Species of Special Concern, an on-site environmental monitor will be employed to monitor the activity of such species and guide construction personnel regarding avoidance activities. Monitoring will occur from March through July to coincide with the start of the American kestrel nesting season;
  - d) Exclusion fencing will be installed at the onset of the spring amphibian migratory season (i.e. early March) with installation activities completed prior to the time amphibian migration activities around vernal pools begin at the site;
  - e) On-site monitoring of vernal pools, eastern spadefoot (a state-listed Endangered Species) and other wildlife species will commence with the installation of exclusion fencing and will continue throughout summer 2021. Additional environmental monitoring associated with the remaining portions of the project will be submitted in a future section of the D&M Plan; and
  - f) The final eastern spadefoot protection plans, as approved by DEEP, have been included in the Partial D&M Plan.
- i) Plans to comply with the recommendations from DEEP outlined in “Stormwater Management at Solar Farm Construction Projects” dated September 8, 2017 and new DEEP Stormwater guidance on storm farm development, as applicable;**

Quinebaug’s stormwater permit is currently under review by DEEP. Quinebaug anticipates receiving such permit within the next few weeks.

- j) Final Vegetation Management Plan including, but not limited to, provisions for frequency of mowing and vegetation maintenance that incorporate any DEEP-required seasonal restrictions, post-construction site inspections, and removal of any accumulated sediment and debris that could affect stormwater patterns;**

The final vegetation management plans will be included in a future section of the D&M Plan.

**k) Invasive Species Management Plan; and**

A vegetation management plan with an invasive species management plan will be provided as part of a future section of the D&M Plan.

- 1) **Final plans for pollinator species including landscape plantings and identification of the final seed mix under and around the solar panels.**

Pollinator plants associated with the planting plan will be provided in the vegetation management plan as part of a future section of the D&M Plan.

### **Recommendations**

If approved, staff recommends the following conditions:

1. Submit the final location(s) of any storage for fuel, oil, paint and other hazardous materials associated with the Partial D&M Plan;
2. Submit the DEEP stormwater permit prior to the commencement of construction;
3. Submit the final, DEEP-approved stormwater management plan prior to the commencement of construction; and
4. Submit a copy of the Spill Prevention Control and Countermeasures Plan for the GSU transformer.

## Site Clearing Areas



### Quinebaug Collector Substation and Canterbury Switching Station

