



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

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May 16, 2018

TO: Parties and Intervenors

FROM: Melanie Bachman, Executive Director *MB*

RE: **PETITION NO. 1342** – GRE GACRUX LLC petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 4.98-megawatt AC solar photovoltaic electric generating facility located at 232 Rimmon Road and 700 Middletown Avenue, North Haven, Connecticut.

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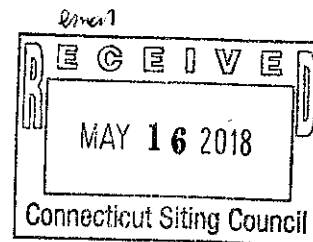
Comments have been received from the Connecticut Department of Energy and Environmental Protection, dated May 16, 2018. A copy of the comments is attached for your review.

MB/MP/lm

c: Council Members

May 16, 2018

Robert Stein, Chairman  
Connecticut Siting Council  
10 Franklin Square  
New Britain, Connecticut 06051



RE: 4.98 MW Solar Photovoltaic Electric Generation Facility  
GRE GACRUX LLC  
232 Rimmon Road and 700 Middletown Avenue, North Haven, CT  
Petition No. 1342

Dear Chairman Stein:

The Department of Energy & Environmental Protection (DEEP) has reviewed the above referenced *Petition for Declaratory Ruling* that the installation and operation of a 4.98 megawatt AC ground-mounted solar photovoltaic electric generating facility will not have substantial adverse environmental effects and will not require a *Certificate of Environmental Compatibility and Public Need*. The following comments are offered for your consideration.

The Project was selected by the DEEP under the March 2016 Connecticut Request for Proposal (RFP) for Clean Energy. Connecticut solicited and selected renewable energy projects issued pursuant to Section 1(c) of Connecticut Public Act 15-107, *An Act Concerning Affordable and Reliable Energy* ("P.A. 15-107") and Sections 6 and 7 of Connecticut Public Act 13-303, *An Act Concerning Connecticut's Clean Energy Goals* ("P.A. 13-303"). The RFP process represents an important step forward in the implementation of Governor Malloy's vision for a cheaper, cleaner, and more reliable energy future for the ratepayers of Connecticut. Bringing more grid-scale renewable energy projects on line is instrumental in furthering this vision as these resources help diversify the regional fuel mix, assist the state in meeting its commitment to procure 20% of its electricity from Class I renewable sources by 2020, and also, contribute to the state's goal of reducing carbon emissions by 80% below 2001 levels by 2050.

#### Site Visit

A field review of the site was conducted on May 3, 2018 with representatives from DEEP, CT Siting Council, Greenskies, BL Company, Catholic Cemetery Association (landowner), and Pullman & Comley LLC. The site entrance is located on Old Velvet Road, off of Middletown Avenue. The property consists of two parcels totaling 42 acres and was formally agricultural land acquired by the Catholic Cemeteries Association in 1983. Approximately 24 acres will be utilized for the project. The topography consists of gently rolling slopes ranging from an elevation of 59 to 102 feet. Three wetland areas were identified: an isolated wetland pocket is located in a stand of trees in the north central section, a low lying wetland area at the southern end of the property

collects stormwater runoff, and another low lying isolated wetland is located in the northwest corner. Site observations indicated loose soil and several ruts and rills on the property, with spotty vegetation. In order to avoid further erosion and degradation of the site, all bare areas must be stabilized with grass cover upon the completion of the project. The grass cover will help to permeate stormwater runoff and reduce pollutants therefore decreasing volume and improving water quality of the runoff. Grading the access roads shall not change/affect the existing drainage patterns. DEEP will consider these recommended techniques as part of the construction stormwater permit review.

The proposed project appears to have negligible impacts to the environment and proximal area because minimal tree cutting is proposed, the site is located away from major roads and residential developments, and the primary wetland function is stormwater collection.

### **Construction Stormwater Management**

Construction-related land disturbances of 0.5 acres or larger are regulated in Connecticut pursuant to the Connecticut Soil Erosion and Sediment Control Act under Sections 22a-325 to 22a-329, inclusive, of the Connecticut General Statutes (CGS). Construction-related land disturbances of one (1) acre or larger are also regulated under CGS Section 22a-430 and under Section 402(p) of the federal Clean Water Act and the National Pollutant Discharge Elimination System (NPDES) program. Prior to the start of such regulated activities, authorization is required from local authorities and, for larger projects, DEEP. Construction projects involving five (5) or more acres of land disturbance require an individual NPDES discharge permit from the DEEP, or may be eligible to register for coverage under DEEP's NPDES General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit).

Based upon the problems that have been encountered in regards to large areas of land disturbance at solar farm construction projects, DEEP has provided a guidance document dated September 2017 (attached).

### **Natural Diversity Database**

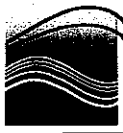
A preliminary Natural Diversity Database review dated March 22, 2018 revealed that there are known extant populations of the Eastern box turtle and ground beetle close to the boundaries of this property. Surveys are in the process of being conducted from April to June. Survey results and a final determination are pending.

Thank you for the opportunity to review this project. If there are any questions regarding these comments, please contact me at 860-424-3739 or [Linda.Brunza@ct.gov](mailto:Linda.Brunza@ct.gov) if there are any questions.

Respectfully yours,

Linda Brunza  
Environmental Analyst

Cc: Robert Klee, Commissioner



## **Stormwater Management at Solar Farm Construction Projects September 8, 2017**

Solar farms are on-the-ground installations of arrays of photovoltaic cell panels, supporting structures and related equipment for the production of electricity. As with other types of construction projects, the construction of solar farms can involve land clearing, grading, excavation, trenching, dewatering and similar activities that create land disturbances which potentially result in soil erosion and sediment discharges polluting wetlands, streams and other surface waters. Construction-related land disturbances of 0.5 acres or larger are regulated in Connecticut pursuant to the Connecticut Soil Erosion and Sediment Control Act under Sections 22a-325 to 22a-329, inclusive, of the Connecticut General Statutes ("CGS"). Construction-related land disturbances of one (1) acre or larger are also regulated under CGS Section 22a-430 and under Section 402(p) of the federal Clean Water Act and the National Pollutant Discharge Elimination System ("NPDES") program. Prior to the start of such regulated activities, authorization is required from local authorities and, for larger projects, the Connecticut Department of Energy and Environmental Protection ("Department"). Construction projects involving five (5) or more acres of land disturbance require an individual NPDES discharge permit from the Department, or may be eligible to register for coverage under the Department's NPDES General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit).

The Department has encountered repeated problems associated with solar farm construction projects covered under the general permit, from the registration process through construction activities. Although in no way an exhaustive list, the following are common problems associated with solar farm general permit registration applications and ways to address such problems:

- Applicants have been submitting registration applications that lack the requisite information or the requirements necessary for authorization under the general permit. The Department requires a complete and sufficient application when a registration application is filed, and may reject any registration application it deems to be incomplete or insufficient.
- Applicants are not adhering to the sixty (60) day/ninety (90) day time frame for Department review as required by Section 3(c) of the general permit. While the Department has on occasion shortened the review timeframe, Applicants are expected to allocate no less than the requisite time frame for the registration application review process and must plan accordingly.
- Registration applications for solar farm projects often fail to identify the project's contractor and sub-contractors. Section 5(b)(1)(viii) of the general permit mandates that this information be included in the registration application.

- Applicants have been repackaging the Siting Council submittal, which is not acceptable. Section 3(c)(2)(D) of the general permit mandates that the application submittal include only materials required to support the Stormwater Pollution Control Plan (“SWPCP”). This information must be up-to-date and accurate. Any superfluous information delays the registration application review process.
- SWPCPs for solar farm projects are often lacking sufficient detail and information. An approvable SWPCP shall include, but not be limited to, the location of all erosion, sediment and stormwater control measures including detailed design cut sheets with supporting calculations, construction means and methods, project phasing (i.e., site planning, pre-construction, construction, and post-construction stabilization, etc.), construction sequencing and a construction schedule.
- The Applicant’s design professional must be well-versed in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (“E&S Guidelines”), specifically the techniques found in Chapter 4, Large Construction Sites, the 2004 Connecticut Stormwater Quality Manual, as well as *current* best management practices (BMPs) recognized by the International Erosion Control Association (IECA), provided such BMPs are equal to or better than the E&S Guidelines.
- From the Department’s perspective, an approvable SWPCP will include methods for avoiding compaction of soils, disconnection and reduction of runoff associated with solar panel arrays, avoidance of concentration of stormwater, and other measures necessary to maintain or improve pre-construction hydrologic conditions.
- Applicants need to follow the SWPCP review checklist when preparing the SWPCP, giving specific attention to post-construction stormwater controls and the development of a detailed long-term maintenance plan to ensure that the SWPCP meets the terms and conditions of the general permit.

Subsequent to authorization for coverage under the general permit, the Registrant is responsible for ensuring compliance with all terms and conditions of the general permit and the approved SWPCP once construction has been initiated. However, for solar farm projects, Registrants often fail to comply with the terms and conditions of the general permit, including the approved SWPCP. In particular, Department staff have observed the following issues that a routine inspection protocol and proper oversight, as required under the general permit, would have prevented, including but not limited to:

- pre-construction site planning and management deficiencies (e.g., existing vegetation, scheduling, training, phasing/sequencing, tree protection, etc.)
- ineffective placement, maintenance, and/or repair of administrative/procedural, vegetative, and structural BMPs (e.g., erosion, sediment and stormwater runoff controls, good housekeeping, materials management, and training)
- lack of thorough inspections
- ineffective or untimely corrective action
- ineffective stabilization practices
- ineffective permanent post-construction controls (i.e., store, treat and direct stormwater quality and quantity to pre-construction levels)

Such issues at solar farm construction projects raise concerns, since such projects often create areas of land disruption larger than the generally accepted BMPs of five (5) acres anticipated under the general permit. As a result, any applicant seeking coverage under the general permit

for a solar farm construction project should take care to address the issues noted above. While by no means exclusive, some recommendations that should be incorporated into a SWPCP to address these issues include:

- Ensuring that only a Professional Engineer and/or Landscape Architect, as defined in Section 2 of the general permit, who meets the qualifications described in Section 5(b)(4)(A)(ii) and who has been approved in writing by the Commissioner, serve as the Commissioner's agent to inspect the site and also serve as the qualified inspector for the purposes of Section 5(b)(4) of the general permit ("authorized professional"). Such authorized professional must remain in good standing with the Connecticut Department of Consumer Protection and be technically and ethically qualified to inspect the site and be retained for the duration of the construction project until the Notice of Termination acceptable to the Commissioner has been filed as described below.
- Ensuring that the authorized professional prepare a proposed inspection checklist to assure the construction project is being conducted in compliance with the terms and conditions of the general permit, and the approved SWPCP is implemented in accordance with the general permit. The inspection checklist shall comply with Section 5(b)(4)(B)(iii) of the general permit, and include a space for the authorized professional's signature and professional stamp.
- Ensuring that the credentials for the authorized professional proposed by the Applicant and the proposed inspection checklist prepared by such authorized professional be submitted for the review and approval of the Commissioner and be included with the registration application for the general permit. No other professional may serve as the authorized professional without the prior submittal of relevant credentials and inspection checklist for the Commissioner's review and written approval.
- Ensuring that the authorized professional personally perform all pre-construction, construction, and post-construction site inspections; perform inspections at the end of any storm event whether or not such storm generates a discharge; and prepare and submit all inspection reports including the supporting inspection checklists in compliance with Sections 5(b)(4)(A) and 5(b)(4)(B) of the general permit.
- Ensuring that the authorized professional report any violations of the terms and conditions of the general permit or the SWPCP to the Commissioner's designee within two (2) hours of becoming aware of such violation, or at the start of the next business day of becoming aware of such violation outside normal business hours and shall, within five (5) days, prepare and submit a signed and stamped written report, which documents the cause of the violation, duration including dates and times, and corrective action taken or planned to prevent future occurrences.
- Ensuring that if circumstances necessitate a revision to the SWPCP, the authorized professional works with the Permittee's design professional to ensure compliance with the terms and conditions of the general permit, and any such change to the SWPCP shall be submitted for the review and written approval of the Commissioner.
- Ensure that the authorized professional reviews all stormwater monitoring reports to evaluate the effectiveness of the SWPCP and to document any adverse impacts that any stormwater controls on the construction site or discharges from the construction site may have on wetlands, streams, any other receiving waterbodies. Such evaluation shall be documented in the inspection reports and inspection checklists performed pursuant to Section 5(b)(4) of the general permit.

- Ensuring that, in the event the authorized professional identifies a violation of the terms and conditions of the general permit, the SWPCP, or otherwise identifies adverse impacts on wetlands, streams or any other receiving waterbodies, that construction activity shall immediately cease and the site stabilized until such violation or adverse impacts have been corrected.
- Ensuring that reporting and record-keeping of all inspection checklists and inspection reports comply with the requirements of Section 5(d) of the general permit, except that a copy shall also be submitted electronically to the Department within ten (10) days from the date such inspection was performed.
- Ensuring that all inspection checklists and inspection reports comply with the requirements for Certification of Documents in Section 5(i) of the general permit, including the requirement that such checklists and reports shall also be prepared, stamped and signed by the authorized professional.
- After completion of a construction project, ensuring that a Notice of Termination is filed in compliance with Section 6 of the general permit, including the requirement that such Notice of Termination be stamped and signed by the authorized professional certifying that such authorized professional has personally inspected and verified that the site has been stabilized following the first full growing season (i.e., April through October) in the year following completion of the construction project.
- Ensuring that any transfer of the registration comply with the requirements of Section 5(m) of the general permit.

These recommendations are by no means intended to be exclusive. To help address the issues noted above, the Commissioner will also be considering the posting of a performance bond or other security, in accordance with Section 22a-6(a)(7) of the Connecticut General Statutes, to assure the solar farm construction project maintains compliance with the terms and conditions of the general permit and the SWPCP.