



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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VIA ELECTRONIC MAIL & CERTIFIED MAIL RETURN RECEIPT REQUESTED

January 18, 2022

Lee D. Hoffman, Esq.
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3702
lhoffman@pullcom.com

RE: **PETITION NO. 1466** – Greenskies Clean Energy 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 2.5-megawatt AC solar photovoltaic electric generating facility located at Treat Farm, 361 Old Tavern Road, Orange, Connecticut, and associated electrical interconnection.

Dear Attorney Hoffman:

At a public meeting held on January 13, 2022, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal meets air and water quality standards of the Department of Energy and Environmental Protection and would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need, with the following conditions:

1. Approval of any project changes be delegated to Council staff;
2. If developed, submit the Farm Co-use Plan with a document that shall indemnify and hold harmless the Council, its agents, representatives and employees from any and all losses, claims, actions, costs and expenses, judgments, subrogations, or other damages resulting from any injury to a person or to property arising out of the presence of third-party farmers within the fenced solar facility site;
3. Submit an SPCC Plan that includes, but is not limited to, a fuel storage section;
4. Use meshless erosion control blankets or 100 percent natural fiber erosion control blankets at the site;
5. The facility owner/operator shall file an annual report on a forecast of loads and resources pursuant to Conn. Gen. Stat. §16-50r;
6. Submit a Landscaping Plan;
7. Submit a Soil Contact Best Practices Plan;
8. Submit Toxicity Characteristic Leaching Procedure (TCLP) test results for the selected solar panels that indicate the modules will not be characterized as hazardous waste under current regulatory criteria prior to the commencement of construction;
9. Submit the final structural design for the racking system stamped by a Professional Engineer duly licensed in the State of Connecticut prior to commencement of construction;

10. Submit a copy of the DEEP Stormwater Permit prior to the commencement of construction;
11. Submit the Final Interconnection Plan/Electrical Drawings as approved by The United Illuminating Company, prior to construction. If the Final Interconnection Plan is modified to include additional riser/utility poles beyond the three that were specified on Electrical Drawing Sheet E-100, submit a detailed report explaining the rationale for the additional riser/utility poles to facilitate the project interconnection;
12. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable;
13. Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, the Town of Orange and the City of Milford;
14. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
15. The facility owner/operator shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v;
16. This Declaratory Ruling may be transferred, provided the facility owner/operator/transferor is current with payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v and the transferee provides written confirmation that the transferee agrees to comply with the terms, limitations and conditions contained in the Declaratory Ruling, including timely payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v;and
17. If the facility owner/operator is a wholly owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer.

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 petition dated October 6, 2021 and additional information received on November 18, 2021.

Enclosed for your information is a copy of the staff report on this project.

Sincerely,



Melanie A. Bachman
Executive Director

MAB/RDM/lm

Enclosure: Staff Report dated January 13, 2022

c: Service List dated October 13, 2021

The Honorable James M. Zeoli, First Selectman, Town of Orange (jzeoli@orange-ct.gov)

The Honorable Benjamin G. Blake, Mayor, City of Milford (bblake@ci.milford.ct.us)



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Petition No. 1466

Greenskies Clean Energy, LLC

Treat Farm, 361 Old Tavern Road, Orange

Staff Report

January 13, 2022

Introduction

On October 6, 2021, the Connecticut Siting Council (Council) received a petition (Petition) from Greenskies Clean Energy, LLC (GCE) for a declaratory ruling pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k for the construction, operation and maintenance of a 2.5-megawatt (MW) alternating current (AC) solar photovoltaic electric generating facility located at Treat Farm, 361 Old Tavern Road, Orange, Connecticut, and an associated electrical interconnection (Project).

Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-40 on or about September 21, 2021, GCE notified Town of Orange (Town) officials, City of Milford officials (within 2,500 feet of the proposed site), state officials and agencies, the site property owner and the abutting property owners of the proposed project.

The Council issued interrogatories to GCE on October 28, 2021. On November 18, 2021 GCE submitted responses to the Council's interrogatories, of which one included photographic documentation of site-specific features intended to serve as a "virtual" field review of the project.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act (UAPA), an administrative agency is required to take an action on a petition for a declaratory ruling within 60 days of receipt. On December 3, 2021, pursuant to CGS §4-176(e), the Council voted to set the date by which to render a decision on the Petition as no later than April 4, 2022, which is the 180-day statutory deadline for a final decision under CGS §4-176(i).

Municipal Consultation

GCE began discussions with Town officials on May 24, 2021. A follow up meeting was held on June 16, 2021. GCE conducted outreach to City of Milford officials in August 2021.

On May 25, 2021, GCE mailed letters to site abutters that provided an overview of the proposed project. Based on this mailing, GCE spoke with six neighbors, and provided written information to two of the neighbors via email. The neighbors requested general project information. One neighbor requested that the project be relocated.

On October 8, 2021, the Council sent correspondence to the Town and the City of Milford stating that the Council has received the Petition and invited both municipalities to contact the Council with any questions or comments by November 5, 2021. No comments were received from the municipalities.

State Agency Comments



On October 8, 2021, the Council sent correspondence requesting comments on the proposed project from the following state agencies by November 5, 2021: Department of Energy & Environmental Protection (DEEP); DOAg; Department of Public Health (DPH); Council on Environmental Quality (CEQ); Public Utilities Regulatory Authority (PURA); Office of Policy and Management (OPM); Department of Economic and Community Development (DECD); Department of Emergency Services and Public Protection (DESPP); Department of Consumer Protection (DCP); Department of Labor (DOL); Department of Administrative Services (DAS); Department of Transportation (DOT); the Connecticut Airport Authority (CAA); and the State Historic Preservation Office (SHPO).

In response to the Council's solicitation, the CEQ submitted comments on October 29, 2021¹ that relate to potential wildlife impacts, wetland and watercourse buffers, a farm co-use plan and future restoration of prime farmland soils.

No other state agencies provided written comments on the proposed project.

While the Council is obligated to consult with and solicit comments from state agencies by statute, the Council is not required to abide by the comments from state agencies.²

Public Act 17-218

Public Act (PA) 17-218³ requires "for a solar photovoltaic facility with a capacity of two or more megawatts, to be located on prime farmland or forestland, excluding any such facility that was selected by DEEP in any solicitation issued prior to July 1, 2017, pursuant to section 16a-3f, 16a-3g or 16a-3j, the DOAg represents, in writing, to the Council that such project will not materially affect the status of such land as prime farmland or DEEP represents, in writing, to the Council that such project will not materially affect the status of land as core forest." PA 17-218 requires a project developer to obtain a letter from DOAg **OR** DEEP. GCE has secured written confirmation from both DOAg and DEEP.

Pursuant to CGS §16-50x, the Council has exclusive jurisdiction over the construction, maintenance and operation of solar photovoltaic electric generating facilities throughout the state. PA 17-218 requires developers of solar facilities with a generating capacity of more than 2 megawatts (MW) to obtain a written determination from DOAg or DEEP that the project would not materially affect the status of land as prime farmland or core forest prior to submission of a petition for a declaratory ruling to the Council. PA 17-218 does not confer the Council's exclusive jurisdiction over the construction, maintenance and operation of solar photovoltaic electric generating facilities throughout the state upon DOAg or DEEP. PA 17-218 also does not permit DOAg or DEEP to impose any enforceable conditions on the construction, maintenance and operation of solar photovoltaic electric generating facilities under the exclusive jurisdiction of the Council.

Public Benefit

The project would be a distributed energy resource facility as defined in CGS § 16-1(a)(49). CGS § 16a-35k establishes the State's energy policy, including the goal to "develop and utilize renewable energy resources, such as solar and wind energy, to the maximum practicable extent." The 2018 Comprehensive Energy Strategy (2018 CES) highlights eight key strategies to guide administrative and legislative action over the next several years. Specifically, Strategy No. 3 is "Grow and sustain renewable and zero-carbon

¹ *pe1466-sacredpi-ceq-20211029-.pdf (ct.gov)*

² *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007)

³ Codified at Conn. Gen. Stat. §16-50k(a) and §16a-3k (2019)

generation in the state and region.” Furthermore, on September 3, 2019, Governor Lamont issued Executive Order No. 3, which calls for the complete decarbonization of the electric sector by 2040. The proposed facility will contribute to fulfilling the State’s Renewable Portfolio Standard and Global Warming Solutions Act as a zero emission Class I renewable energy source.

GCE was awarded two ZREC⁴ contracts with The United Illuminating Company (UI) under the state’s Low and Zero Emissions Renewable Energy Credit Programs (LREC/ZREC Program) to sell the renewable energy credits from the facility. The LREC/ZREC Program was developed as part of Public Act 11-80, “An Act Concerning the Establishment of the [DEEP] and Planning for Connecticut’s Energy Future.” The LREC/ZREC Program is not among the competitive energy procurement programs that are exempt from PA 17-218.

The two ZREC contracts, executed on October 22, 2020, are for the entire 2.5 MW nameplate capacity of the facility and have a non-extendable term of 15-years. The delivery term start date for the contract is October 22, 2022. At the end of the ZREC contract period, GCE would seek other revenue mechanisms for the energy produced by the facility. GCE also has a virtual net metering (VNM) agreement with the Connecticut State Colleges and Universities.

The proposed facility interconnection would be reviewed by UI, and as part of that review, ISO-NE would review the project to determine if there is as an impact to the transmission system.

GCE would not participate in the ISO-NE Forward Capacity Auction.

The Project has a minimal operational life of 20 years but may operate for 25 to 30 years. The use of the facility after expiration of ZREC contract would depend on energy market conditions at the time. If revenue from energy sales is not viable at that time, the project would be decommissioned.

Proposed Site

Pursuant to a lease agreement with the property owner, GCE proposes to construct the solar facility on an 8.5 acre site⁵ located on an 87-acre parcel.

The host parcel, known as the “Treat Farm” abuts the north side of Old Tavern Lane. It consists of a mix of agricultural land, forest and wetlands and is developed with two houses, and five accessory buildings (barn, sheds, retail farm stand), accessed from Old Tavern Road. The host parcel is currently part of the Public Act 490 program. It will continue to be used for agriculture. The property owners have not sold any development rights to DOAg as part of the State Program for the Preservation of Agricultural Land. They are not interested in selling any development rights to DOAg for the Program.

The host property is zoned residential (RES). Surrounding land use consists primarily of single-family residences. Peck Place School, an elementary school, is located approximately 1,000 feet to the north of the Site.

⁴ Zero emission renewable energy credit (ZREC) contracts are limited to 1 MW, and LREC contracts are limited to 2 MW. (CGS §16-244r).

⁵ RCSA §16-50j-2a(29), “Site” means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located.

GCE pursued the site because the property is suitable to support the Project, is proximate to existing electrical infrastructure and would have a minimal environmental impact. Pursuant to CGS §16-50p(g), the Council has no authority to compel a parcel owner to sell or lease property, or portions thereof, for the purpose of siting a facility.⁶

Proposed Project

The Project would occupy 8.7 acres within a field area in the central portion of the host parcel.

It consists of the installation of 5,760 photovoltaic modules rated at 550 Watts. The panels would be arranged in linear rows, oriented to the south at a fixed 25° angle. The rows of panels would be separated by 14-foot wide aisles. The modules would be installed approximately 10 feet above final grade with a ground clearance of approximately two to three feet. The modules would be supported on a racking system attached to posts driven into the ground. Twenty 125 kW inverters would be installed throughout the array and mounted to or adjacent to the racking structure.

Project switchgear and transformers would be installed on three concrete pads. A majority of the wiring would be installed on the racking system. Where wiring is not installed on the racking system, it would be installed underground in conduit.

The Project is not designed to support a battery storage system. The current power purchase agreements do not have a provision for battery storage and the proposed inverters are not designed to accommodate battery energy storage. However, if batteries are contemplated at a future date, a separate interconnection application with properly designed equipment could be developed. The project cannot act as a microgrid because there is no direct energy load adjacent to the site and there is no energy storage component.

The facility would have an anticipated service life of 20 to 30 years. The Project capacity factor is approximately 19.7 percent, including standard loss assumptions such as shading, voltage line losses, soiling, anticipated downtime, transformer efficiency etc. The power output would decline over time with an anticipated annual power output loss of approximately 0.5 percent.

The proposed Project would interconnect to the existing UI distribution system (Circuit 3653). The demarcation point of ownership between the Project and UI would be the production meters located on the Project site. Approximately 2,000 linear feet of the single phase circuit would be upgraded to 3-phase. The circuit extends to Woodmont Substation in Milford. No substation upgrades are expected. A Distribution System Impact Study and a Facility Study would be conducted by UI and is necessary to finalize interconnection details.

The site would be accessed from an existing gravel road/farm roads on the host parcel. GCE would construct a 15-foot wide, approximately 1,000 linear foot gravel drive extending from several existing outbuildings to, and through the center of, the solar field. The access drive provides centralized access to the proposed solar array, electrical equipment, and stormwater detention basins.

The solar field would be enclosed by a seven-foot high chain link fence. Access would be controlled by a locking vehicle access gate. Four other gates would provide access to the perimeter stormwater basins.

⁶ *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007); CGS §16-50p(g) (2019).

The project site is located on a shallow knoll that slopes mostly to the east and west with grades ranging from 3 to 8 percent. Geotechnical subsurface investigations indicate that the site is composed of topsoil underlain with sandy loam and cobbles.

Earthwork would include excavation and grading to develop stormwater control basins/swales. The Project would require approximately 1,500 cubic yards of cut and 500 cubic yards of fill associated with excavation and grading to develop stormwater control basins/swales. Excess cut would be used by the landowner. No grading is proposed within the solar field area as site slopes are conducive to the installation of the racking system.

Construction is expected to start by Spring/Summer 2022 with completion in the Fall of 2022. Typical construction hours and days of the week are as follows: Monday – Saturday 7:00 AM to 5:00 PM.

A site construction phasing plan has been developed that includes two main construction phases. Phase 1 includes all work necessary to establish sediment basins and other erosion control measures at the site, followed by stabilization. Phase 2 includes site infrastructure installation, final site stabilization and facility testing.

The estimated cost of the project is approximately \$6.5 million.

Public Safety

The proposed project would comply with the National Electrical Code, National Electrical Safety Code and National Fire Protection Association codes and standards, as applicable. A 15-foot minimum aisle width would be maintained between the perimeter fence and the solar panels, in accordance with the CT State Fire Prevention Code, Section 11.12.3 – Ground Mounted Photovoltaic System Installations. Crop production within the fenced solar facility is not anticipated to have an impact on fire safety.

The nearest federally-obligated airport to the site is Tweed-New Haven Airport, which is 10 miles south of the Project. Given this distance and according to Federal Aviation Administration (FAA) criteria, the Project would not be a Hazard to Air Navigation or require an FAA glare analysis.

The Facility would be remotely monitored and would have the ability to remotely de-energize in the event of a fault or other power outage event and/or emergency. GCE would contact and offer training to local emergency responders. GCE expects the Town Fire Marshall would perform a site walk of the facility.

The solar field would be enclosed by a 7-foot high chain link fence⁷. The main entrance to the Facility would be gated, limiting access solely to authorized personnel. Access to the facility for emergency responders would be via a Knox padlock.

The proposed facility would be in compliance with DEEP Noise Control Standards. Project-related operational noise would be from the facility inverters which emit a maximum sound level of approximately 55 dBA at a distance of 3.3 feet. Project-related operational noise at the nearest property line (residential, 363 feet to the south) is not expected to exceed 12 dBA, below the DEEP Noise Control Standard of the 61

⁷ Section 691.4(2) of the National Electrical Code (NEC), 2020 Edition notes that, "Access to PV electric supply stations shall be restricted by fencing or other adequate means in accordance with 110.31..." Section 110.31 notes that for over 1,000 Volts, "...a wall, screen, or fence shall be used...A fence shall not be less than 7 feet in height or a combination of 6 feet or more of fence fabric and a 1 foot or more...utilizing barbed wire or equivalent."

dBA for a commercial emitter to a residential receptor during the day. The inverters are inactive at night and would not emit noise. Construction noise is exempt from DEEP Noise Control Standards.

Two wetland corridors on the host parcel are within a Federal Emergency Management Agency designated 500-year-flood zone. The Site itself is not located within a flood zone.

The stormwater basins would have to be registered with the DEEP Dam Safety Program. A dam safety permit for the basins is not required.

GCE conducted a Phase 1 Environmental Assessment of the host property in 2020 which identified two Areas of Concern (AOC) related to agricultural use and farm equipment. AOC 1 is from the potential use of pesticides in the agricultural areas of the site. To address this AOC, a Spill Prevention, Control and Countermeasure Plan (SPCC) and Soil Contact Best Practices Plan would be developed for the Project. AOC 2 is an old farm equipment storage area but this area is located outside of the Project limits and would not be disturbed.

Environmental Effects and Mitigation Measures

Historic and Recreational Resources

GCE performed Phase 1A and Phase 1B Cultural Resources Assessments at the site. The assessments determined the Orange Center Historic District, listed on the National Register of Historic Places is approximately 0.8 mile north from the proposed facility. The Project would have no effect on the historic district. The host property, Treat Farm, is listed on the State Register of Historic Places. The nearest historic structure from the proposed facility, an English barn, is located approximately 300 feet to the south of the perimeter fence. GCE would plant evergreens between the barn and proposed facility to provide screening to this historic resource. The barn is not within the site lease area.

Based on a review of historic maps, aerial photographs, and soil profiles, approximately 7 areas of the proposed site possessed a potential for moderate to high archaeological sensitivity. GCE would perform archeological surveys in these locations prior to the commencement of construction

By letter dated September 21, 2021, SHPO concurred with the findings of the Phase 1A and Phase 1B surveys and the recommended visual screening of the English barn and the proposed archeological investigations.

No public parks or other publicly accessible recreation resources are located adjacent to the site.

Visibility

The proposed project would be screened from adjacent properties and roads by topography and existing intervening vegetation except for spot views from the south and east. GCE would install landscaping to screen the facility from the English barn on the property. No other landscaping is proposed.

The site would be largely screened from Old Tavern Road, located over 500 feet south of the proposed site. Existing vegetation and outbuildings would screen most of the views of the facility from the road. No town-designated scenic roads are located near the site.

No exterior lighting is proposed.

Agriculture

The subject property contains prime farmland soils according to mapping maintained by the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS). Under PA 17-218, “prime farmland” means land that meets the criteria for prime farmland as described in 7 Code of Federal Regulations (C.F.R.) 657, as amended from time to time. 7 C.F.R. 657 defines prime farmland in relevant part as “land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses.”

The property is currently used to grow hay and harvest Christmas trees. The proposed solar facility would occupy field areas currently used for a recreational corn maze, produce crops and non-farmed land. The Treat Farm owners intend to gradually transition to growing more produce on the host parcel over the next few years. The Treat Farm owners are not interested in growing crops within the fenced solar facility.

The entire host parcel is mapped as prime farmland soil. The project would occupy approximately 8.2 acres of prime farmland. During construction, prime farmland soils would be removed from the surface and spread onsite.

By letter dated October 6, 2021 pursuant to PA 17-218, DOAg indicated that the project would not have a material effect on the status of prime farmland as long as an agricultural co-use plan is implemented, as follows:

- a. develop a farm plan in consultation with the US Department of Agriculture’s Natural Resources Conservation Service (NRCS) within the project fence line;
- b. allow new or smaller growers/farmers to utilize available space within the 8.2 acre fenced solar facility for crop production and work with NRCS on a marketing campaign to attract growers/farmers to utilize such land;
- c. develop crop irrigation practices within the array area in consultation with the NRCS. Measures could include collection of water directly from the drip edge of the solar panels or utilizing on-site stormwater basins; and
- d. incorporate pollinator habitat as part of the project, and place bee hives at the project fence line.

GCE proposes to allow third party farmers to grow crops within the fenced solar facility. The lease agreement with the property owner allows for sub-leasing by GCE to others. No such sub-lease agreements have been executed to date, but GCE anticipates that multiple growers would use the site. Liability associated with any accidents or injuries from agricultural activities would be covered by the sublease agreements.

GCE would allow crop production in the 14-foot wide aisles between the solar panel rows. This aisle width was determined to optimize the facility design and farming activities. Approximately 34 rows would be made available for third party crop production. There would be enough sunlight between 10:00 am and 2:00 pm to sustain crops. No crops would be grown beneath the panels.

A detailed Farm Co-use Plan would be developed once the third-party farmers and available solar rows for crop production are identified. GCE would not charge the third-party farmers for use of the land but may charge for agricultural improvements such as irrigation. Pesticides and herbicides may be used by the third-party farmers. GCE would ensure that the third party farmers utilize such materials with permission from the landowners and in accordance with applicable laws and regulations, including, but not limited to, the Federal Insecticide, Fungicide and Rodenticide Act.

For public safety purposes, the Farm Co-use Plan would include an electrical safety plan that would instruct third party farmers to maintain safe separation distance from the above ground main service lines and avoid digging in certain areas. GCE would comply with the Council's White Paper on the Security of Siting Energy Facilities, dated October 8, 2009,⁸ regarding third-party use of the fenced solar facility. GCE would meet the main elements of the plan which include planning, preparedness, response and recovery when preparing the final Farm Plan. To reduce any physical security risk associated with third party access to an electric generating facility site, GCE would perform due diligence on prospective third-party farmers and provide training.

Pursuant to CGS §16-50x, the Council has exclusive jurisdiction over the proposed solar electric generating facility "site." Under RCSA §16-50j-2a(29), "site" means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located. The Council does not have jurisdiction or authority over any portion of the host parcel beyond the boundaries of the project "site." This includes portions of the parcel retained by the landowner and portions of the parcel the landowner may lease to third parties. Once a facility is decommissioned, the Council no longer has jurisdiction or authority over the project "site."

Core Forest

Under PA 17-218, "core forest" means unfragmented forest land that is three hundred feet or greater from the boundary between forest land and nonforest land, as determined by the Commissioner of DEEP. UCONN's Center for Land Use Education and Research defines "core forest" as forested areas that are essentially surrounded by more forested areas and fall into three classes – small core forest, medium core forest and large core forest. Small core forest is comprised of core forest patches that are less than 250 acres. Medium core forest is comprised of core forest patches that are between 250-500 acres. Large core forest is comprised of core forest patches that are greater than 500 acres. Forestland that does not meet the definition of core forest is considered "edge forest". Edge forest is a forested area extending up to 300 feet from a non-forest feature such as a road.

The Project would not require tree clearing. By letter dated August 2, 2021, pursuant to PA 17-218, DEEP indicated that the proposed project will not materially affect the status of core forest.

Wetlands and Watercourses

The Petitioner performed wetland and watercourse delineations at the site in November 2019. Three wetlands (W1, W2, & W3) were identified on the host parcel. W1 is a forested wetland that extends through the western side of the parcel. W2 is a forested wetland that is located in the eastern portion of the parcel. W3 is a small isolated wetland located in the existing agricultural field where the solar facility would be developed. W3 has been disturbed from past agricultural activities.

The solar facility is located in an agricultural field between W1 and W2. An undisturbed 50-foot buffer would be maintained between W1 and W2 and the Project Limit of Disturbance (LOD). Work occurring from 50 to 100 feet of W1 and W2 consists mainly of the installation of the stormwater management system and perimeter fencing. A 100-foot buffer would be maintained between the solar panels and W1 and W2.

⁸ *whiteppr FINAL (ct.gov)*

Due to the location of W3 within the existing field, a 50-foot buffer would be maintained from W3 to the solar panels. W3 would be enclosed within the solar array perimeter fence to create a more streamlined fence alignment.

As designed, the proposed Project wetland buffers conform to DEEP Stormwater Permit requirements. Redesigning the project to maintain 100-foot wetlands buffers would result in a loss of project output and revenue.

Vernal Pools

A vernal pool (VP) survey was conducted in April 2021 that identified four cryptic VPs within W1. All four VPs contained egg masses for the spotted salamander. Wood frog tadpoles were found in one of the four pools. Three of the four VPs were identified as high quality Tier 1 pools with the remaining pool classified as a marginal Tier III pool.

Vernal pool habitats include a vernal pool envelope (VPE), which extends from the VP edge to a distance of 100 feet, and Critical Terrestrial Habitat (CTH) which extends from 100 feet to 750 feet from the VP edge. Both the VPE and CTH protect the water quality of the pools for VP obligate species.

Land use surrounding the VPs within W1 indicate the site and surrounding areas do not provide exemplary habitat for these obligate vernal pool species. Actual habitat use is presumed to be limited to the drier areas of W1 and its associated forested area due to the use of most of the upland areas on the host property for agricultural activities.

The Project would not impact the VPE associated with any of the four VPs. The CTH of the four VPs contain active agricultural land that is not optimal habitat for VP species. The Project would be constructed on a portion of the existing fields, thus, no optimal habitat for VP obligate species would be disturbed. Site construction would be conducted in accordance with the 2015 Vernal Pool Best Management Practices of the US Army Corps of Engineers in that a forested connectivity corridor would be maintained between the four VPs.

To protect wetland and watercourses during construction, the Petitioner would establish erosion and sedimentation controls consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*. GCE would use meshless erosion control netting to avoid potential entanglement of amphibian and reptile species that may inhabit the site area. Meshless netting is recommended by the U.S. Fish and Wildlife Service as a wildlife friendly erosion control measure.

Wildlife

GCE received a DEEP Natural Diversity Data Base (NDDB) Determination letter, dated November 17, 2020, that identified three State-listed Special Concern species as occurring in the vicinity of this project site; the eastern box turtle, the wood turtle and the brown thrasher.

DEEP recommended turtle protection measures, including but not limited to, conducting work within the turtles' active season from April 1 to October 30, having an on-site biologist perform site inspections, establishment of exclusionary fencing, and limiting equipment use within 50 feet of streams and brooks.

GCE would implement a turtle protection plan during site construction that includes, but is not limited to, exclusionary fencing and work zone inspections by the contractor.

The brown thrasher nests in shrubs, thickets, and brush, especially in hedgerows adjacent to open fields. This habitat type would not be affected by project construction and thus no impacts to this species are expected.

The solar array perimeter fence would be installed so that a 4 to 6 inch gap would be maintained between the fence fabric and ground for small wildlife movement.

Air Quality

The Project would not produce air or water emissions as a result of operation. The solar project would not produce air emissions of regulated air pollutants or greenhouse gases during operation.

Water Quality

The site parcel is not within a DEEP-designated Aquifer Protection Area or a mapped Public Drinking Supply Watershed. No impacts to private wells or groundwater in the area are anticipated.

The facility would not use or discharge water during site operations.

A small amount of fuel for construction equipment would be stored on site. GCE would include a fuel storage section within the SPCC plan for the site.

Stormwater

Pursuant to CGS Section 22a-430b, DEEP retains final jurisdiction over stormwater management and administers permit programs to regulate stormwater pollution. DEEP regulations and guidelines set forth standards for erosion and sedimentation control, stormwater pollution control and best engineering practices. The DEEP Individual and General Permits for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (Stormwater Permit) requires implementation of a Stormwater Pollution Control Plan to prevent the movement of sediments off construction sites into nearby water bodies and to address the impacts of stormwater discharges from a project after construction is complete. A DEEP-issued Stormwater Permit is required prior to commencement of construction.

A construction sequence is included on the site plans that include the establishment of erosion control measures that comply with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*, construction and installation of a sediment basins followed by installation of site infrastructure.

Once the facility is completed and the site stabilized, the stormwater management system would consist of five grass-lined stormwater management basins and associated swales along the eastern and western portions of the site. Wetlands downgradient of the basins would be protected by buffers that conform to DEEP Stormwater Permit requirements and basin volumes that are designed to mitigate peak runoff rates and treat water quality generated from the development area.

GCE met with the DEEP Stormwater Division on June 21, 2021 to review the Project. There were no major project modifications suggested at the meeting. DEEP Stormwater staff requested information regarding past disturbance to W3 and topographic information regarding the site's upland area. A Stormwater permit

application was filed with DEEP. GCE revised the stormwater permit calculations to account for row crops within the array area. The revised calculations would not require an increase in stormwater detention capacity.

Operation and Maintenance

A post-construction Operations and Maintenance Program has been established that includes provisions for periodic inspections of physical site features and structural and electrical components. A field visit to check mechanical and vegetative site conditions would be performed quarterly. Grass in the solar field area would be mowed at least twice per year.

An evaluation of facility components and preventative maintenance activities would be conducted in accordance with manufacturer recommendations.

Module cleaning would be conducted on an as needed basis with water that is trucked into the site.

Decommissioning

Project decommissioning will involve removal and disposal or recycling of all above-surface project components. All recyclable materials will be transported to the appropriate nearby recycling facilities. Any non-recyclable materials will be properly disposed of at a nearby landfill. The transformer and interconnection equipment pads would be removed. Underground infrastructure within a two-foot depth would be removed. The access road may remain in place depending on future site use by the landowner. Disturbed areas would be backfilled with native soil and stabilized with a seed mix approved by the landowner.

GCE has not selected a manufacturer for the solar panels. GCE would ensure the selected panels pass a Toxicity Characteristic Leaching Procedure (TCLP) test that indicates the panels would not be characterized as hazardous waste at the time of disposal, under current testing criteria.

Conclusion

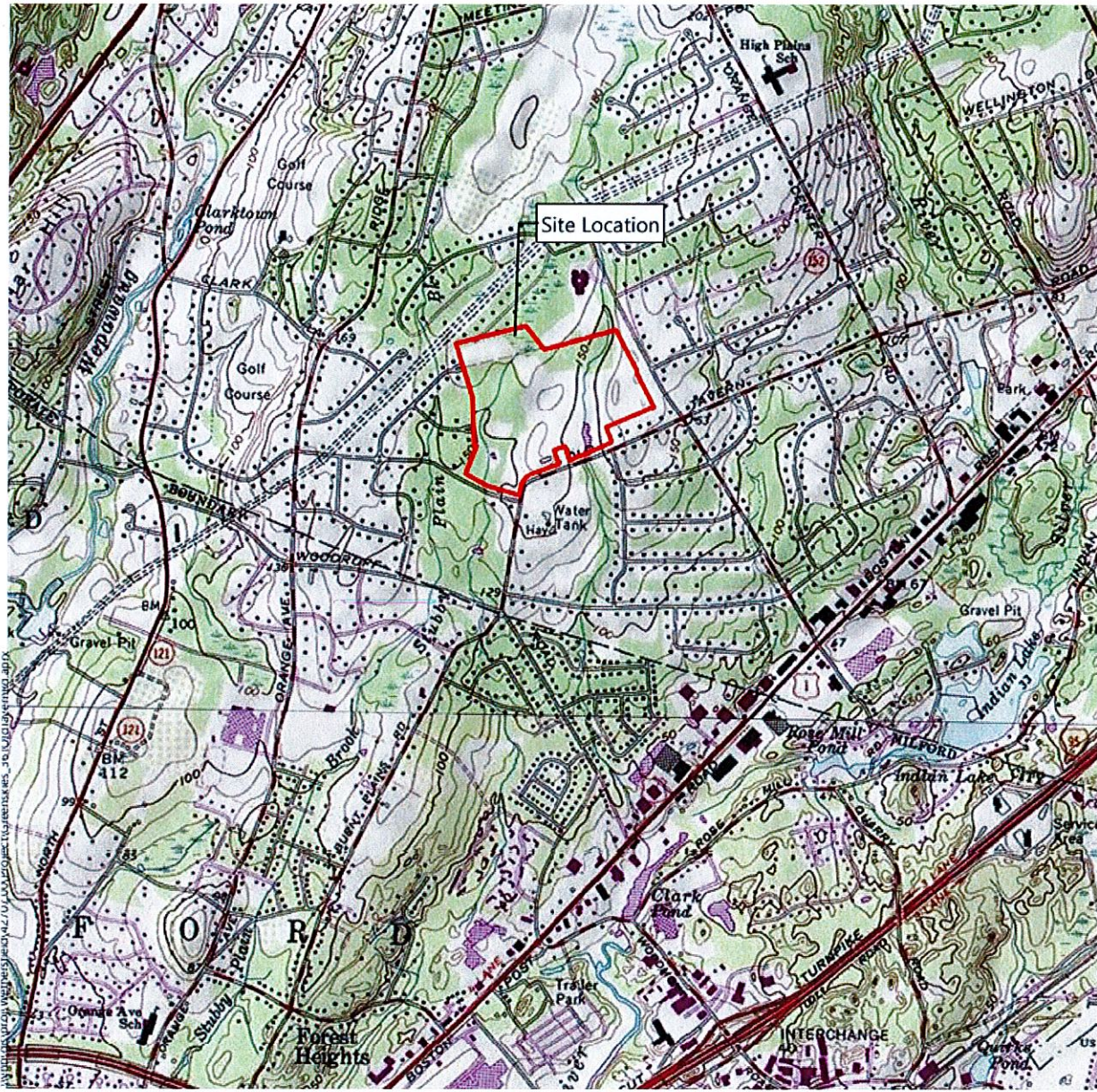
The project is a grid-side distributed resource with a capacity of not more than sixty-five megawatts, meets air and water quality standards of the DEEP, and would not have a substantial adverse environmental effect. The proposed project will not produce air emissions, will not utilize water to produce electricity, was designed to minimize environmental impacts, and furthers the State's energy policy by developing and utilizing renewable energy resources and distributed energy resources. Furthermore, the project was selected under the state's LREC/ZREC Program and would further the state's VNM program.

Recommendations

If approved, staff recommends the following conditions:

1. Approval of any project changes be delegated to Council staff;
2. If developed, submit the Farm Co-use Plan with a document that shall indemnify and hold harmless the Council, its agents, representatives and employees from any and all losses, claims, actions, costs and expenses, judgments, subrogations, or other damages resulting from any injury to a person or to property arising out of the presence of third-party farmers within the fenced solar facility site;
3. Submit an SPCC Plan that includes, but is not limited to, a fuel storage section;
4. Use meshless erosion control blankets or 100 percent natural fiber erosion control blankets at the site;
5. The facility owner/operator shall file an annual report on a forecast of loads and resources pursuant to Conn. Gen. Stat. §16-50r;
6. Submit a Landscaping Plan;
7. Submit a Soil Contact Best Practices Plan;
8. Submit Toxicity Characteristic Leaching Procedure (TCLP) test results for the selected solar panels that indicate the modules will not be characterized as hazardous waste under current regulatory criteria prior to the commencement of construction;
9. Submit the final structural design for the racking system stamped by a Professional Engineer duly licensed in the State of Connecticut prior to commencement of construction; and
10. Submit a copy of the DEEP Stormwater Permit prior to the commencement of construction.

Site Location



Site Location

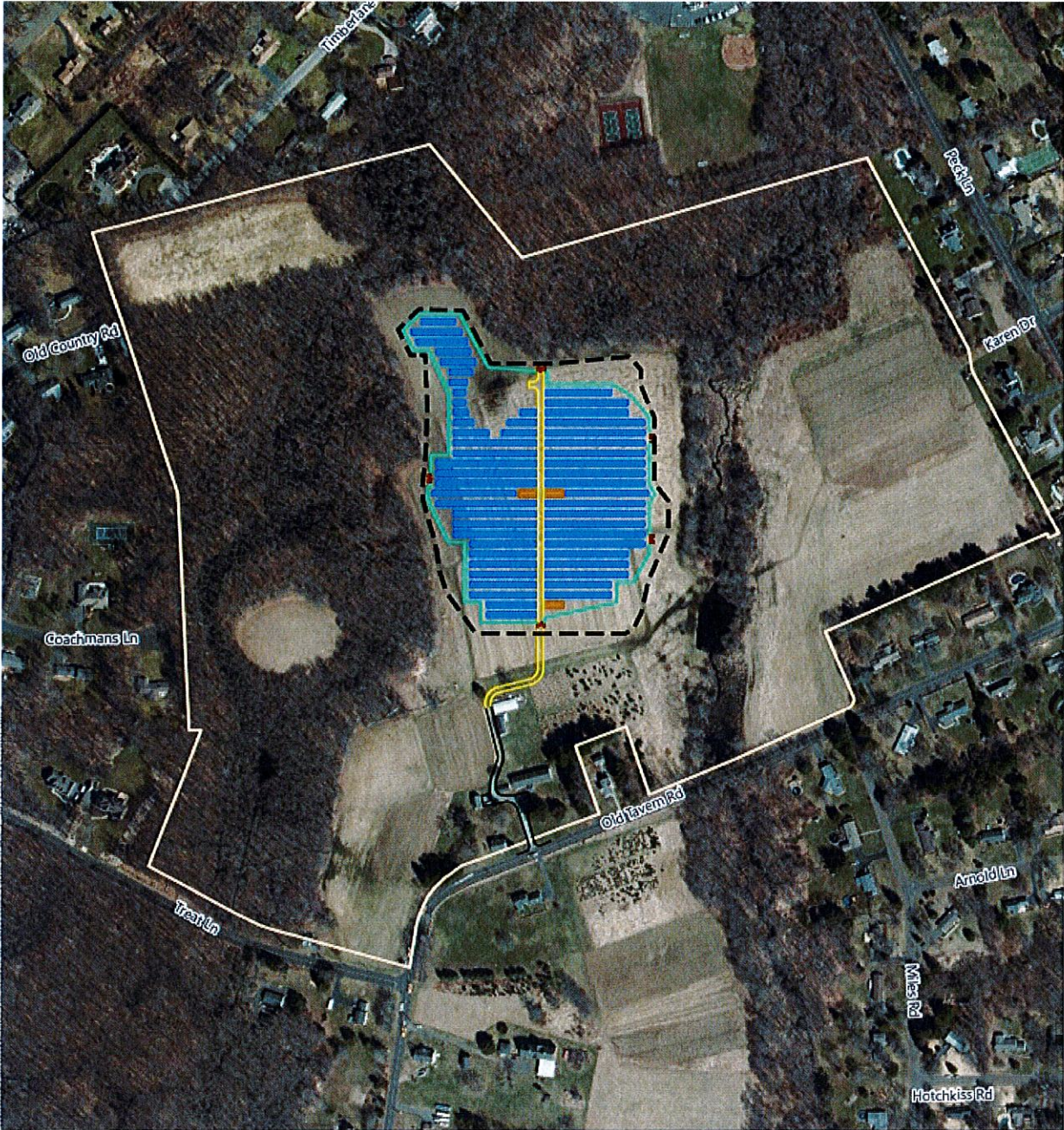
USA Topo Maps

Greenskies Solar

Orange, Connecticut

USGS Site Location Map

Site Layout



- ↑
- 0 200 400 800 Feet
- - - Limit of Work
- Parcel Boundary
- Solar Panels
- Equipment Pads
- Gate
- Site Security Fence
- Existing Farm Road
- Proposed Access Road

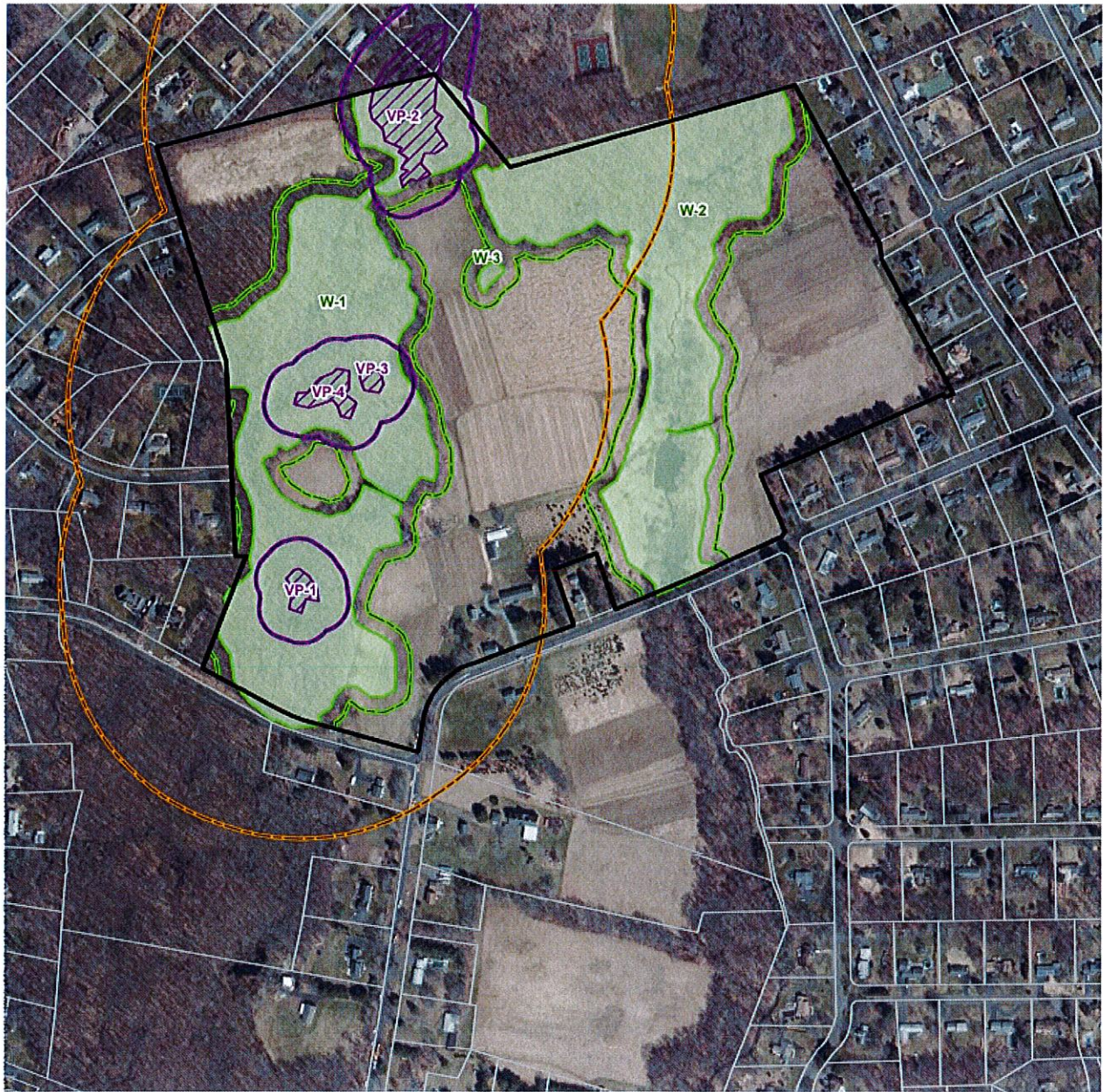
Greenskies Solar

Orange, Connecticut

Proposed Project Layout

Source: VHB, CTDEEP, ESRI

Wetland Delineation



↑ 0 250 500 1000 Feet

Greenskies Solar | Orange, Connecticut

Project Site	Delineated Wetland Edge	50' Wetland Buffer
Parcel Boundary	Wetland Resource Area	100' Vernal Pool Envelope
Delineated Vernal Pool Resource Area		750' Critical Terrestrial Habitat Zone

Wetland and Vernal Pool Resource Areas

