

DRAFT

Petition No. 1599
TRITEC Americas, LLC
0.999 MW AC Solar Photovoltaic Electric Generating Facility
Parcel No. 30-25-59, Spencer Street, Suffield, Connecticut

Staff Report
April 19, 2024

Introduction

On November 14, 2023, TRITEC Americas, LLC (TRITEC) submitted a notice of election to waive exclusion from the Connecticut Siting Council's (Council) jurisdiction, pursuant to Connecticut General Statutes (CGS) §16-50k(e), and a petition for a declaratory ruling pursuant to CGS §4-176 and §16-50k for the construction, operation and maintenance of a 0.999-megawatt (MW) AC solar photovoltaic electric generating facility and associated electrical interconnection located at Parcel No. 30-25-59, Spencer Street, Suffield, Connecticut (Petition or Project).

CGS §16-50k(e) states, "Any person intending to construct a facility excluded from one or more provisions of this chapter may, to the extent permitted by law, elect to waive such exclusion by delivering notice of such waiver to the council. Such provisions shall thereafter apply to each facility identified in such notice from the date of its receipt by the council." Under CGS §16-50i(a)(3), the Council has jurisdiction over electric generating facilities utilizing renewable energy sources with a generating capacity *of more than one megawatt*. (Emphasis added).

Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-40, on April 27, 2023 and October 26, 2023, TRITEC notified Town of Suffield (Town) officials, state officials and agencies, and abutting property owners of the notice of election to waive exclusion from Council jurisdiction and the proposed Project.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act, an administrative agency is required to take an action on a petition for a declaratory ruling within 60 days of receipt. During a regular meeting held on December 21, 2023, 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 May 12, 2024, which is the 180-day statutory deadline for a final decision under CGS §4-176(i).

The Council issued interrogatories to TRITEC on February 7, and March 22, 2024. TRITEC submitted responses to the Council's interrogatories on February 26 and April 5, 2024, respectively, one of which included photographic documentation of site-specific features intended to serve as a "virtual" field review of the Project site.

Municipal Consultation

On April 19, 2023, TRITEC discussed the Project with the Town and at the request of the Town, held a video conference on May 11, 2023 that was attended by three abutting property owners, who expressed concerns regarding visibility, property values and stormwater runoff.

On November 15, 2023, the Council sent correspondence to the Town stating that the Council has received the Petition and invited the Town to contact the Council with any questions or comments by December 14, 2023. No comments were received.

State Agency Comments

On November 15, 2023, pursuant to RCSA §16-50j-40, the Council sent correspondence requesting comments on the proposed Project from the following state agencies by December 14, 2023: Department of Energy and Environmental Protection (DEEP); Department of Agriculture (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 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, on November 17, 2023, CAA submitted comments requesting that TRITEC work with the Federal Aviation Administration (FAA) and/or CAA regarding potential reflectivity issues that could arise in the future.¹ On December 14, 2023 CEQ submitted comments related to erosion and sedimentation controls, visual impact, and farmland soils.²

No other state agencies provided written comments on the 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.³

Public Act 17-218

Public Act 17-218⁴ 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 such land as core forest.”

The proposed solar facility has a generating capacity of 0.999 MW; therefore, it is exempt from the provisions of Public Act 17-218.

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 state Comprehensive Energy Strategy (CES) examines future energy needs and identifies opportunities to reduce ratepayer costs, ensure reliable energy availability, and mitigate public health and environmental impacts. CES Strategy No. 3 is “Grow and sustain renewable and zero-carbon generation in the state and region.” The state Integrated Resource Plan assesses the state's future electric needs and a plan to meet those future needs,

¹ https://portal.ct.gov/-/media/CSC/3_Petitions-medialibrary/Petitions_MediaLibrary/MediaPetitionNos1501-1600/PE1599/ProceduralCorrespondence/PE1599_CAAComments_a.pdf

² https://portal.ct.gov/-/media/CSC/3_Petitions-medialibrary/Petitions_MediaLibrary/MediaPetitionNos1501-1600/PE1599/ProceduralCorrespondence/PE1599_CEQCommentsRecd_a.pdf

³ *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007)

⁴ Codified at Conn. Gen. Stat. §16-50k(a) and §16a-3k (2023)

including, but not limited to, pathways to achieve a 100 percent zero carbon electric supply by 2040. Furthermore, the Governor's Executive Orders and Council on Climate Change examine existing policies and identify new strategies to combat climate change. 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.

TRITEC bid the Project into the Non-Residential Renewable Energy Solutions (NRES) Program in February 2024. Eversource is scheduled to announce if the bid was selected in May 2024.

The NRES program is a successor program to the Low Emission Renewable Energy Credit and Zero Emission Renewable Energy Credit (LREC/ZREC) and Virtual Net Metering (VNM) programs to further develop the state's Class I renewable energy objectives and to encourage the participation by customers in underserved and environmental justice communities through 20-year contracts.

After the 20-year NRES contract expires, TRITEC would examine market conditions to determine if the facility will continue to operate using other revenue mechanisms or be decommissioned.

TRITEC does not intend to participate in an ISO New England, Inc. (ISO-NE) Forward Capacity Auction.

Proposed Site

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."

Under a lease agreement with the property owner, TRITEC proposes to construct the solar facility on an approximate 7.9-acre site within an 11.7-acre host identified as Parcel No. 30-25-59, Spencer Street, in Suffield.

The initial term of the lease agreement is for 21 years after construction of the Project is completed. The lease contains options for one year and five-year extensions.

The host parcel is divided into two zoning districts, R-25 Residential Zone (3.9 acres) in the northern portion and Planned Development Industrial Park Zone (7.8 acres) in the southern portion. The host parcel consists of an agricultural field with wooded areas along the perimeter. Portions of the host parcel are used by a third party to grow corn and hay. Land use surrounding the site consists primarily of residential and undeveloped fields and forest.

The Project site would be located mostly in the field portion of the host parcel and partially within both zoning districts. The site slopes downgradient to the southeast with elevations ranging from approximately 179 to 146 feet above mean sea level. Slopes within the solar array area do not exceed 9 percent.

TRITEC selected the site due to limited environmental impact, suitability, availability, and proximity to an electrical interconnection. 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 facility⁵.

The lease agreement with the property owner includes provisions related to decommissioning and site restoration at the end of the Project's useful life. At the end of the lease, TRITEC will decommission the Project and restore the site to its pre-existing condition.

Proposed Facility and Associated Equipment

The proposed 0.999 MW AC solar facility consists of 2,590 solar panels rated at 540 Watts. Other equipment includes eight 125-kW inverters and one 2,000 kVA transformer and switchgear. One 20-foot by 30-foot concrete pad and one 20-foot by 60-foot concrete pad would be installed within the fenced array area to support electrical equipment.

The solar panels would be installed on a single-axis tracker system powered by 43 tracker motors. The tracker system would be mounted on posts driven into the ground to a depth of 9 -12 feet. The motors are powered through a low-voltage service line extending from the electrical equipment pad.

At maximum tilt, the panels would be approximately 7.5 feet above grade at the highest point and 4 feet at the lowest point. The panel rows would be separated by an approximate 9-foot wide vegetated aisle.

Panel row wiring would extend along the racking system, protected by conduit to reduce potential damage from weather events, maintenance activities or animals. Wiring would transition to conduit and extend to the electrical equipment pads. From the transformer pad, an underground line would extend north along the proposed access drive to the electrical interconnection area adjacent to Spencer Street.

The proposed interconnection would consist of 5 new utility poles, at a height of approximately 35-40 feet above grade, with 3 poles on the utility side and 2 poles on the customer side. Eversource requires one pole for each piece of equipment (manual disconnect switch, recloser, primary meter). The interconnection would cross Spencer Street to an existing circuit on the north side of the road.

The utility poles were initially clustered with 10-foot spacing at the access road entrance on Spencer Street. To reduce the visual effect of the clustered poles adjacent to Spencer Street, in response to the Council's interrogatories, TRITEC submitted a revised site plan with 30 to 40-foot pole spacing, dependent on Eversource's interconnection detail.

Eversource does not pad-mount their equipment for solar projects, therefore a pole-mounted interconnection is proposed. Additionally, a pad-mount interconnection design to reduce the number of poles would be more expensive and affect the economics of the Project.

Eversource has approved the interconnection and has entered into an interconnection agreement with TRITEC. The facility interconnection would provide energy to the 36M Suffield electric distribution substation. To facilitate the interconnection to the substation, 1,000 feet of a 3-phase line extension on circuit 36M1 will be upgraded from 4.8-kV to 23-kV. A review by ISO-NE is not required.

The projected capacity factor for the proposed solar facility is approximately 24.3 percent. The power output would decline over time with an anticipated annual power output loss of approximately 0.5 percent. The site is not designed to accommodate a battery storage system.

⁵ *Corcoran v. Conn. Siting Council*, 284 Conn. 455 (2007); CGS §16-50p(g) (2019).

Access to the site will be via a new 12-foot wide, 830-foot long gravel drive extending from Spencer Street to the equipment pads in the southern portion of the site.

A seven-foot tall chain link fence would enclose the facility. TRITEC can design the fence with a six-inch gap along the bottom to allow for small wildlife passage.

The nearest residential property line and off-site residence from the proposed perimeter fence is approximately 44 feet and 106 feet, respectively, to the west at 191 Spencer Street. The nearest property line from the perimeter fence is five feet to the north at the Spencer Street right-of-way.

Construction of the facility would disturb approximately 7.9 acres, inclusive of the solar array, equipment pads, access road, and electrical interconnection.

The solar array would be installed on existing grades to the extent feasible. Grading would be required to construct the access drive and a stormwater detention basin. Construction of the site would result in a net cut of 750 cubic yards of topsoil and native silty/gravelly glacial till that would either be spread on-site or disposed of off-site.

Construction would occur over an approximately 4-month period. Typical construction hours and workdays of the week are Monday – Friday, 7:00 AM to 3:30 PM.

The estimated cost of the Project is in excess of \$3.2 million.

Public Safety

The Project would comply with the current National Electrical Code (NEC), National Electrical Safety Code, CT State Fire Prevention Code, and National Fire Protection Association codes and standards, as applicable.

The nearest federally-obligated airport is Bradley International Airport located approximately 1 mile south of the Site. The FAA notice criteria tool determined notice to the FAA is not required for the solar facility. The FAA does not require a glare analysis for solar installations that are located on non-airport land. Notice to the FAA may be required if a crane is utilized at the site during construction.

The proposed facility would be remotely monitored through a 24/7 data acquisition system. If a problem with the facility is detected, system diagnostics would remotely shut down the inverters. The solar array is divided into separate electrical units by the inverters so if one section has a fault condition and shuts down, other sections can still operate.

A manual disconnect switch would be located on-site. TRITEC would provide facility operation and safety training for local emergency responders. TRITEC would also submit an Emergency Response Plan for the facility site if the Project is approved. An electrical fire at the site typically would be allowed to burn out with water use directed at areas adjacent to the fire.

The transformer would contain a nontoxic insulating oil. If the transformer reaches a low oil level, the solar facility would shut down. A shut down would be detected by the on-site monitoring system.

The seven-foot high chain link perimeter fence complies with NEC fencing requirements⁶. Town emergency response personnel would have access to the facility site via a Knox padlock on the access gate.

The proposed facility would be in compliance with DEEP Noise Control Standards. Noise modeling indicates noise from operation of the noise generating equipment at the site would be approximately 35 dBA at the nearest residential property line (141 Spencer Street). Construction noise is exempt from DEEP Noise Control Standards.

The site is not located within a Federal Emergency Management Agency designated 100-year or 500-year flood zone.

Blasting is not required. If bedrock is encountered, the racking posts will be installed with a rock drill.

Environmental Effects and Mitigation Measures

Air and Water Quality

The Project would not produce air emissions as a result of operation.

The site is not within a DEEP-designated Aquifer Protection Area or within a public water supply watershed.

The facility would not use or discharge water during operation.

Groundwater in the area is classified as GA, suitable for drinking without treatment. Vibration from the installation of the racking system is not expected to cause sediment releases, and thus, no disruption to well water flow or quality is expected.

TRITEC performed a wetland survey in January 2022 and April 2023 that identified two forested wetland systems on the host parcel, one to the east of the existing field (Wetland 1) and one to the west that also contains an intermittent stream (Wetland 2). Both wetlands extend onto abutting properties. No vernal pools were identified on the host parcel during the surveys.

The construction limit of disturbance (LOD) would be 50 feet from both wetlands at their closest point. In compliance with the DEEP Stormwater Permit Appendix I, GCE would maintain a 50-foot wetland buffer from stormwater control features and a 100-foot wetland buffer from solar panels. The LOD would occupy 0.57 acres and 0.33 acres within 100 feet of Wetlands 1 and 2, respectively.

Stormwater

Pursuant to CGS Section 22a-430b, DEEP retains final jurisdiction over stormwater management and administers permit programs to regulate stormwater discharges. DEEP regulations and guidelines set forth standards for erosion and sedimentation control, stormwater pollution control and best engineering practices.

⁶ 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."

The DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (General Permit) requires implementation of a Stormwater Pollution Control Plan (SWPCP) to prevent the movement of sediments off construction sites into nearby water bodies and to address the impacts of stormwater discharges from a proposed project after construction is complete. In its discretion, DEEP could require an Individual Permit for discharges and hold a public hearing prior to approving or denying any General or Individual Permit (Stormwater Permit) application.

Construction of the Project would require approximately 7.9 acres of ground disturbance and thus, a DEEP-issued Stormwater Permit is required prior to commencement of construction. The Stormwater Permit and associated SWPCP incorporates Project designs consistent with the applicable *Connecticut Guidelines for Soil Erosion and Sediment Control* and the *Connecticut Stormwater Quality Manual*.

TRITEC met with the DEEP Water Permitting & Enforcement Division on October 23, 2023 to discuss the Project. DEEP did not recommend changes to the stormwater analysis prepared by TRITEC. The analysis concluded one permanent stormwater detention basin, located in the southeast corner of the site, is necessary to improve post-construction site conditions over existing drainage conditions. TRITEC has not filed an application for a Stormwater Permit to date.

To meet the requirements of the Stormwater Permit, TRITEC would install silt fencing with compost filter socks and geotextile silt fences with wings in areas with disturbance less than 1 acre during construction activities. Perimeter E&S controls would enclose the Project area to retain sediment that may result during construction work. After construction, the solar array area will be seeded with a meadow ground cover (Fuzz & Buzz mix). Areas outside of the array will be seeded with a wetland mix or pollinator buffer mix depending on location.

Forests and Parks

Approximately 0.7-acre of tree clearing would occur along forested edges of the existing field on the host parcel to construct the solar facility. No core forest would be affected by the Project.

There are no state parks or forests within 1.0 mile of the site.

Fish, Aquaculture and Wildlife

The site is not located within a DEEP Natural Diversity Database (NDDB) buffered area or adjacent to DEEP-designated cold water habitat area.

The northern long-eared bat (NLEB), a federally-listed and state-listed Endangered Species occurs in Connecticut. However, there are no known occurrences of NLEB in Suffield. By letter dated February 8, 2023, the U.S. Fish and Wildlife Service determined that the Project would not likely have an adverse effect on the NLEB, and no additional action is necessary.

Disturbed areas within the solar array would be seeded with an Ernst Fuzz and Buzz seed mix. Areas outside the solar array would be seeded with an Ernst Northeast Solar Pollinator Buffer Mix beneficial to pollinators.

The seven-foot tall chain link perimeter fence would have a six-inch gap at the bottom to allow for small animal movement.

Agriculture

The host parcel contains approximately 3.3 acres of prime farmland soil and is currently used for agricultural activities, including, but not limited to, hay and corn farming by a third party. Agricultural activities would continue on the host parcel in areas outside the site boundaries.

The lease agreement with the property owner contains provisions for agricultural co-uses at the site. TRITEC may establish apiaries within the site boundaries. Post-construction, agricultural activities would continue on the host parcel.

Scenic, Historic and Recreational Values

After reviewing the Phase IA Cultural Resources Assessment Survey of the site, SHPO submitted correspondence to TRITEC on February 23, 2024, requesting a Phase 1B archeological survey in the northwest corner of the site due to potential archaeological deposits within 300 feet of Spencer Street. The Phase 1B survey would be conducted prior to the commencement of construction activities.

Forest and shrub areas along the perimeter of the site would be maintained to the extent feasible. Residences to the west along Spencer Street and Hale Street may have some year-round views of the facility given that the residences in this area are approximately 10 to 30 feet higher in ground elevation than the site and intervening shrub vegetation is not tall enough to screen views. Some abutting properties may have seasonal views of the site.

TRITEC would install landscaping consisting of holly, spruce, hemlock and cedar along the north and northwest sides of the site. The landscaping would be 7 to 8 feet tall at planting.

To reduce the visual effect of the five new poles adjacent to Spencer Street, TRITEC proposes to increase the distance between each pole from 10 feet to 30 to 40 feet, depending on Eversource's interconnection detail.

The northern portion of Route 75 in Suffield is a State designated scenic road, located approximately 0.8 miles northeast of the site. The site would not be visible from Route 75.

The nearest recreational area is Suffield Land Conservatory open space located approximately 0.8 miles to the north of the site. There are no hiking trails in the vicinity of the site.

Operations and Maintenance

The inverters have an operational life approximately ten years and would be replaced at least once during Project operation. The tracker motors have an operational life of 30 years.

A post-construction Operations and Maintenance (O&M) Plan has been developed that includes provisions for periodic inspections of physical site features and structural and electrical components.

An evaluation of the facility and performance of preventative maintenance measures would be conducted in accordance with manufacturer's specifications. The evaluation would include the electrical system/components, physical infrastructure, and site vegetation. Replacement modules would not be stored on-site.

When necessary, modules would be cleaned using non-toxic substances.

Site vegetation would be maintained by mowing/trimming. Herbicides would be used as necessary and in accordance with applicable regulations.

Permanent exterior lighting is not proposed.

Decommissioning

The Project has an operational life of up to 30 years. At the end of the Project's useful life, it would be decommissioned by removing all equipment, including the tracking system, panels, inverters, and electrical system.

It is anticipated that the steel racking system, electrical component and wiring and solar modules would be recycled as applicable. All recyclable materials would be transported to appropriate recycling facilities. Any non-recyclable materials will be properly disposed of in accordance with applicable permits and regulations.

The transformer and interconnection equipment pads, access roads and fencing would be removed. Disturbed areas would be backfilled with soil and seeded.

The selected solar panels for the Project meet current Toxicity Characteristic Leaching Procedure (TCLP) criteria for characterization as nonhazardous waste in the event the solar panels are not recycled at the end of the Project's life.

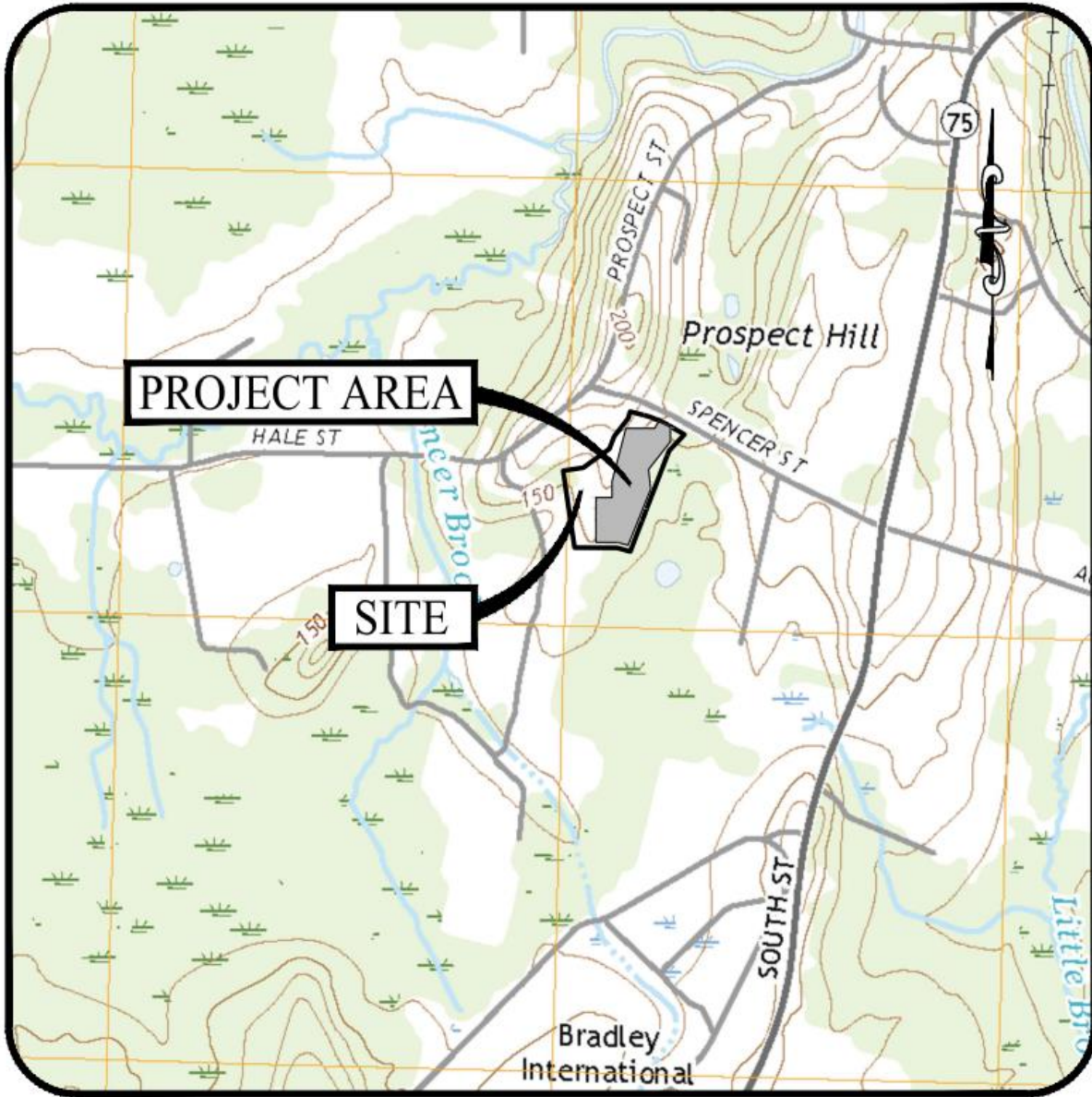
Conclusion

The Project is a grid-side distributed energy resource with a capacity of not more than sixty-five megawatts, meets DEEP air and water quality standards, 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 bid into the State's NRES Program.

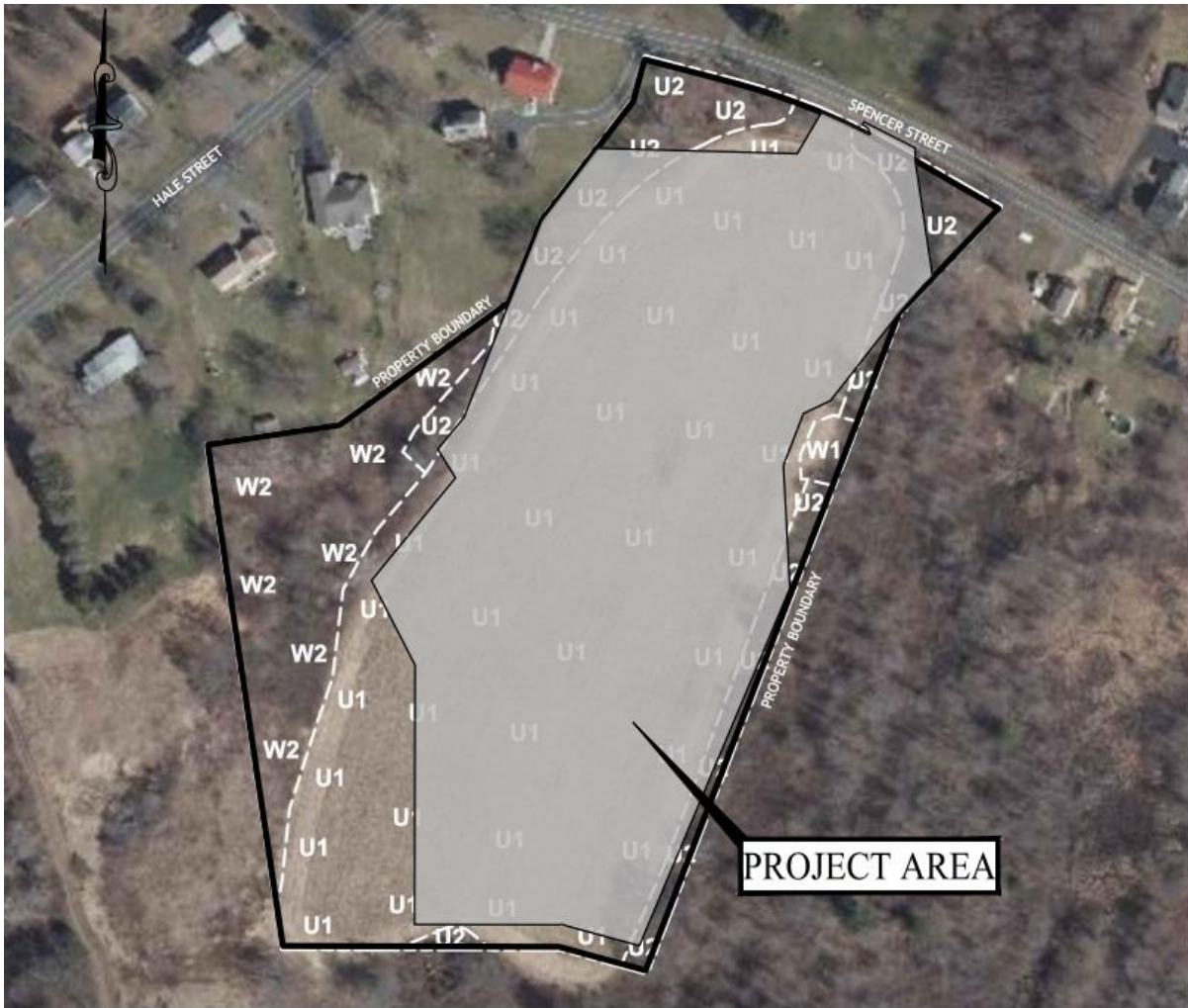
If approved, staff recommends inclusion of the following conditions:

1. Approval of any project changes be delegated to Council staff;
2. Submit a copy of the DEEP Stormwater Permit prior to the commencement of construction;
3. 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;
4. Increase the distance between the interconnection utility poles to the extent feasible;
5. Install perimeter fencing with a six-inch gap at the bottom to allow for small wildlife passage;
6. Submit an agricultural co-use plan for the site, if applicable, 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-parties within the fenced solar facility site;
7. Submit an Emergency Response Plan for the proposed facility with contact information; and
8. Provide a copy of the Emergency Response Plan to local emergency responders prior to facility operation and provide emergency response training.

Site Location

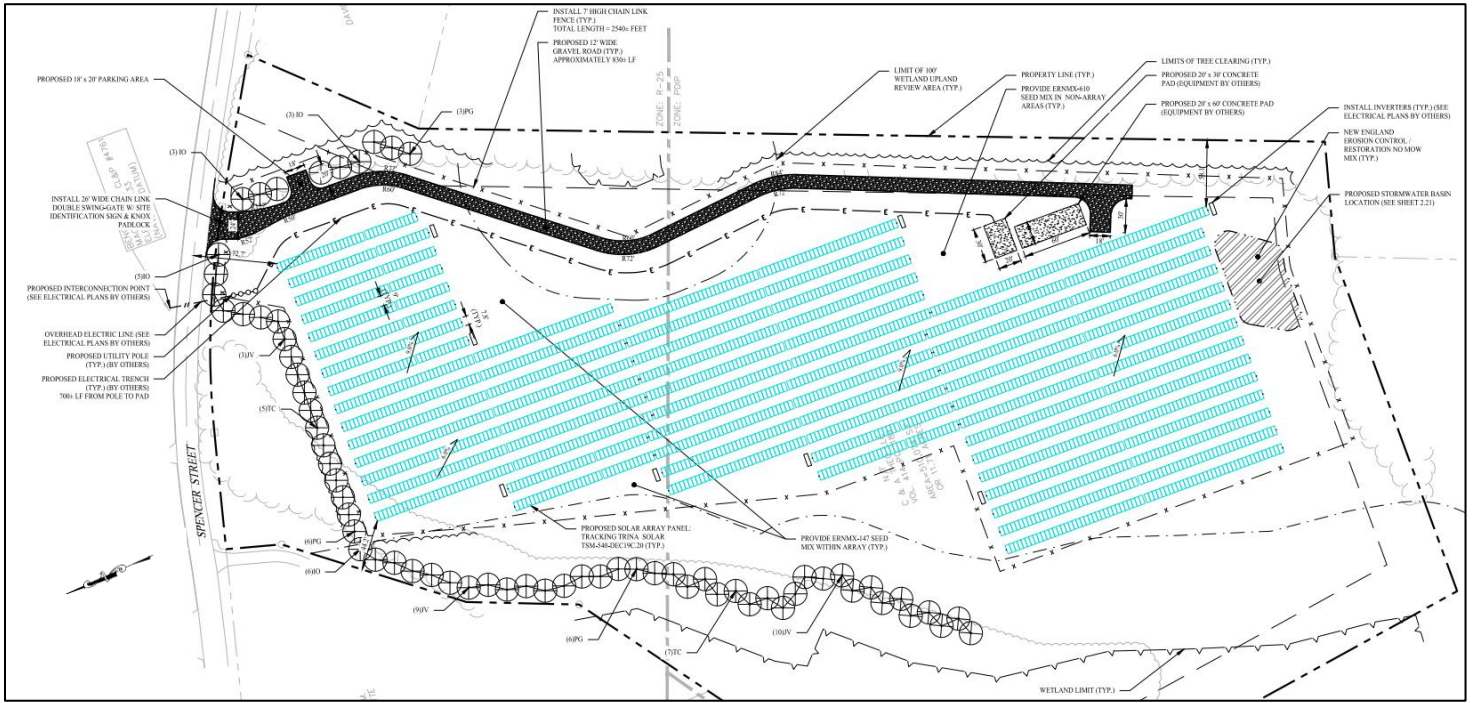


Existing Conditions



ECOLOGICAL COMMUNITY	
SYM.	NAME
UPLAND	
U1	CROPLAND
U2	WOODLAND
WETLAND	
W1	WOODLAND WETLAND
W2	WOODLAND AND SHRUBLAND WETLAND

Site Plan



LEGEND

	PROPERTY LINE
	ADJOINING LOT LINE
	ZONE LINE
	BUILDING SETBACK LINE
	LIMIT OF WETLANDS
	WETLAND UPLAND REVIEW AREA - 100 FT BUFFER
	STORMWATER BASIN AREA
	7 TALL CHAIN LINK FENCE
	OVERHEAD ELECTRIC LINE (BY OTHERS)
	ELECTRIC CONDUIT (BY OTHERS)
	TRINA 540W SOLAR MODULES
	EVERGREEN TREE
	NEW ENGLAND EROSION CONTROL / RESTORATION NO MOW MIX
	GRAVEL ROAD
	LIMITS OF TREE CLEARING
	CONCRETE PAD