

# DRAFT

**Petition No. 1487**  
**TRITEC Americas, LLC Solar Facility**  
**254 Putnam Road, Pomfret, CT**

**Staff Report**  
**June 3, 2022**

## **Introduction**

On February 10, 2022, the Connecticut Siting Council (Council) received a petition from TRITEC Americas, LLC (TRITEC) for a declaratory ruling pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k for the construction, operation and maintenance of a 1.97-megawatt alternating current (AC) solar photovoltaic electric generating facility located at 254 Putnam Road, Pomfret, Connecticut, and associated electrical interconnection (Petition or Project).

Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-40 on or about June 1, 2021, TRITEC notified the abutting property owners and Town of Pomfret (Town) officials and Town of Putnam officials,<sup>1</sup> state officials and agencies of the proposed project.

The Council issued interrogatories to TRITEC on March 22, and April 21, 2022. TRITEC submitted responses to the Council's interrogatories on April 19, and May 12, 2022, respectively, one of which included photographic documentation of site-specific features intended to serve as a "virtual" field review of the project. In addition, the May 12, 2022 submittal included revised site plans that specified a different panel model, modifying the output of the facility from 1.97 MW to 1.99 MW.

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 April 7, 2022, 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 August 9, 2022, which is the 180-day statutory deadline for a final decision under CGS §4-176(i).

## **Municipal Consultation**

TRITEC held two video conferences that included the Town First Selectman and interested abutting property owners on June 10, and June 28, 2021. At these meetings two residential abutters expressed concern regarding visibility of the Project from Wrights Crossing Road. The Connecticut Audubon Society (CAS) expressed concern regarding the potential effect on birds.

On February 15, 2022, the Council sent correspondence to the Town and the Town of Putnam stating that the Council has received the Petition and invited the municipalities to contact the Council with any questions or comments by March 12, 2022. No comments were received.

## **State Agency Comments**

On February 15, 2022, pursuant to RCSA §16-50j-40, the Council sent correspondence requesting comments on the proposed project from the following state agencies by March 12, 2022: Department of Energy & Environmental Protection (DEEP); Department of Agriculture (DOAg); Department of Public Health (DPH); Council on Environmental Quality (CEQ); Public Utilities Regulatory Authority (PURA);

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<sup>1</sup> The Town of Putnam is within 2,500 feet of the proposed facility.

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, CEQ submitted comments on February 23, 2022<sup>2</sup> related to potential impacts to wildlife, prime farmland soils, and groundwater.

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.<sup>3</sup>

### **Public Act 17-218**

Effective July 1, 2017, Public Act 17-218 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." The proposed facility has a generating capacity of 1.99 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 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 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.

TRITEC was awarded a 15-year contract with The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) under the state's Low and Zero Emissions Renewable Energy Credit Programs (LREC/ZREC Program) to sell the renewable energy credits (RECs) 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 creates a market-driven bidding process for renewable energy projects ranging from rooftop solar panels to fuel cells to compete to obtain a 15-year revenue stream from the sale of renewable energy credits (RECs) to the electric utilities. It requires Eversource and the United Illuminating Company to procure Class I RECs under 15-year contracts with owners or developers of renewable energy projects in the state. After TRITEC's ZREC contract expires, TRITEC would continue to operate the solar facility under the terms of the lease with the property owner.

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<sup>2</sup>[CEQ Comments 02/23/22](#)

<sup>3</sup> *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007)

The LREC/ZREC Program is not among the competitive energy procurement programs that are exempt from Public Act 17-218.<sup>4</sup>

The Petitioner would not participate in the ISO-New England, Inc. Forward Capacity Auction.

### **Proposed Site**

Pursuant to a lease agreement with the property owner, TRITEC proposes to construct the solar facility on an approximate 14.3-acre site<sup>5</sup> on a 215.6-acre parcel located at 254 Putnam Road in Pomfret. The host parcel, zoned rural residential, is located between Putnam Road and Wrights Crossing Road. It is an active farm operation and contains a farmhouse and associated buildings.

The Project would be located in an agricultural field in the southern portion of the parcel, adjacent to Wrights Crossing Road. The field is on a south facing hill that rises from an elevation of approximately 350 feet above mean sea level (amsl) to 414 feet amsl.

Surrounding land use consists of undeveloped woodland, agricultural and rural residential. The nearest property line from the solar facility perimeter fence is approximately 88 feet to the south-southeast at 611 Wrights Crossing Road. The nearest off-site residence to the facility is located approximately 750 feet to the east at 740 Wrights Crossing Road.

TRITEC selected the site due to site availability, limited environmental impact, site suitability, and the 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 facility.<sup>6</sup>

The initial term of the lease is 20 years. The lease can be extended for two successive renewal terms of five years each. At the end of the lease, TRITEC must decommission the project and restore the site to its pre-existing condition.

### **Proposed Project**

Initially, the proposed 1.97 MW AC solar facility consisted of a total of 5,472 solar panels with 2,880 panels rated at 570 Watts and 2,592 panels rated at 400 Watts. On May 12, 2022, TRITEC submitted a revised site plan that included 4,970 panels rated at 540 Watts, for a Project total of 1.99 MW AC.

The panels would be installed in eight solar array sections, with each section supported by a dedicated inverter installed on 10-foot by 15-foot concrete pads. The panels would be installed facing south on a single-axis tracking system that would move east to west. The panels would be installed at a 30 degree angle, approximately 8 feet above grade at the highest point and 2.5 feet above grade at the lowest point.

Panel row wiring would extend along the racking system to reduce potential damage from weather events, maintenance activities, or animals. From collection points at the end of the panel-rows, underground wiring would extend to the inverter pads and switchgear/transformer pads at the north end of the array. From the transformers, an underground line would extend for approximately 2,800 feet through existing agricultural fields to the interconnection point on Putnam Road.

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

<sup>5</sup> 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.

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

The proposed electrical interconnection would require 18 new utility poles to interconnect the 8 solar array areas; 10 utility poles would be owned by Eversource and 8 would be owned by TRITEC. Two of the 18 utility poles would be installed along Putnam Road with the remaining aligned in a double row extending into the host property.

Eversource requires each solar array area to have its own overhead wire connection and an associated meter supported by a single pole. Two additional Eversource poles would support reclosure and disconnect equipment. The 8 utility poles owned by TRITEC would consist of circuit collection poles with disconnect switches.

TRITEC is consulting with Eversource to determine if the number of Eversource's utility poles can be reduced. Due to the Project configuration and utility safety concerns, the number of utility poles owned by TRITEC cannot be reduced.

A pad-mounted interconnection to reduce the number of poles from 18 to 10 would cost approximately \$450,000.

From the interconnection location, an overhead electric line would connect to an existing 23-kV overhead distribution circuit that extends along Putnam Road. TRITEC has completed the interconnection agreement with Eversource. No upgrades to Eversource's existing electric distribution system are required to support the Project.

The capacity factor for the Project is approximately 23.8 percent and includes loss assumptions such as shading, soiling, reflection, inverter losses, wiring, and temperature variation. The single-axis tracking system contributes to a higher capacity factor. The power output would decline over time with an anticipated annual power output loss of approximately 0.5 percent.

The proposed Project is not designed to support a microgrid or a battery storage system.

Access to the solar facility would be from a new 16-foot wide, 1,185-foot long gravel driveway extending uphill from Wrights Crossing Road. The driveway would extend along the southwest edge of the facility before turning northeast through the center to access in the inverter/transformer pads. Stormwater control swales would be installed along the access road.

The facility would be enclosed by a seven-foot tall chain link fence with a 4 to 6 inch gap between the mesh and the ground to allow for small wildlife movement.

Earthwork at the site is required for installation of the access road and stormwater control swales. The project would require 930 cubic yards of cut and 745 cubic yards of fill for a net cut of 185 cubic yards. Most of the project would be constructed on grades of 5 to 10 percent but some areas reach a grade of 17 percent.

Construction would occur over a 3 to 4 month period. Typical construction hours and work days of the week are as follows: Monday – Saturday, 7:00 AM to 5:00 PM.

The estimated cost of the project is approximately \$6,343,400.

## **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. TRITEC designed the system in accordance with the CT State Fire Prevention Code, Section 11.12.3 - Ground Mounted Photovoltaic System Installations by including a 15-foot wide perimeter access aisle around each array and seeding the solar array areas with low growing vegetation.

The nearest federally-obligated airport to the site is Danielson Airport located 4.9 miles southeast of the site. Under Federal Aviation Administration (FAA) criteria, the Project would not be a Hazard to Air Navigation or require a FAA glare analysis.

The Facility would be remotely monitored through a data acquisition system capable of detecting weather, energy production, and safety concerns related to grid outages or faults. If a problem with the facility is detected, system diagnostics and/or facility shutdown can be performed remotely. Personnel would be dispatched to the site if an issue cannot be resolved.

Manual disconnect switches are located on-site. TRITEC would ensure local emergency responders receive facility operation and safety training.

The Project would be enclosed by a seven-foot high chain link fence.<sup>7</sup>

The proposed facility would be in compliance with DEEP Noise Control Standards. The nearest inverter is 360 feet from Wrights Crossing Road. The inverters do not operate at night. 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.

## **Environmental Effects and Mitigation Measures**

### *Historic and Recreational Resources*

The SHPO submitted correspondence to TRITEC on March 29, 2022, indicating that the proposed project would not affect historic properties or archeological resources. No further action was recommended.

An open space parcel owned by the Wyndham Land Trust is located to the south of the site, across Wrights Crossing Road. The Project would be visible from trails on the open space parcel.

The Airline State Park Trail is approximately 0.38 mile southeast of the Site. The Project would not be visible from the trail.

### *Visibility*

The proposed facility would be visible from Wrights Crossing Road, Putnam Road, Tyrone Road (west of the site) and from adjacent open field areas. Several residential and farm properties to the north, northeast and northwest of the site would have seasonal views of the facility and/or year-round views of the utility poles.

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<sup>7</sup> 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."

No state or local designated scenic roads or scenic areas are located adjacent to the Site.

### *Agriculture*

The host parcel contains prime farmland soils according to mapping maintained by the United States Department of Agriculture (USDA) Natural Resource Conservation Service. 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 site is located on an active farm and would be constructed on 7.2 acres of prime farmland soil. The property owner would continue to operate a farm on the remaining portion of the property.

The property is currently enrolled in the Public Act 490 Program for agricultural land tax abatement. Once constructed, the solar facility portion of the property would not be eligible for the program.

Livestock grazing is not proposed for the Project area.

### *Wetlands and Watercourses*

TRITEC performed a wetland and watercourse survey at the host parcel in March 2021 that identified six wetland areas on the host parcel. Several of the wetlands are seep areas within existing agricultural fields. A forested wetlands is located along the east property boundary. A stream (Bark Meadow Brook) with an associated wetland is located in the central and western portion of the property.

One of the wetlands (Wetland 2) is approximately 26 feet northeast of a proposed swale associated with the solar array area. This portion of Wetland 2 is in a hayfield and eventually drains to a forested portion of the wetland further to the east.

The interconnection route would require approximately 250 linear feet of disturbance to a wetland (Wetland 6) to install the underground interconnection cable. Wetland 6 is in a field area east of a farm pond on the property. During trenching, excavated material would be stockpiled and replaced, followed by wetland restoration with an appropriate seed mix.

No other wetland or watercourse areas are within 100 feet of the project development area.

A vernal pool (VP) was identified in the forested portion of Wetland 2. The proposed project development area is 435 feet west of the vernal pool and no impact is expected.

### *Wildlife*

On June 22, 2021, DEEP issued a Preliminary Natural Diversity Data Base (NDDB) Assessment that identified 18 State-listed species that may occur at or near the host property. These species include birds, bats, amphibians, reptiles, invertebrates and plants. In addition to these species, the NDDB assessment included the presence of a State-listed owl roost. To prevent impacts to state-listed species, DEEP requested either site surveys be conducted to confirm the presence of identified species or protection plans be developed on the presumption the identified species are present on the site.

TRITEC conducted site-specific surveys for these species and submitted the results to DEEP. A Final DEEP NDDB Determination letter for the Project has not yet been issued.

A State-Listed Bird Species Assessment was conducted by Davison Environmental in 2021, with consultation with a representative of the CAS regarding the distribution of State-listed bird species in the site area. The assessment determined the site has habitat to support grassland birds, two State-listed birds, the Savannah sparrow and the bobolink, were also identified as occurring on-site. Development of the Project would result in the loss of 15.5 (12.5-acres of direct impact and 3.0-acres of indirect impact) acres of grassland bird habitat out of a larger 85 acres of grassland bird habitat managed as a hayfield by the landowner. To reduce potential impacts to the grassland birds, Davison Environmental recommended that construction be performed outside of the breeding season (April 1 through August 30) if possible. If the construction timeline overlaps with this restriction, then grassland bird deterrence measures should be employed from May 20 to August 20 to prevent nesting within the site area.

Post-construction protection measures for these species include, but are not limited to, solar field mowing/disturbance restrictions and the prevention of woody vegetation from growing within the field area.

Reptile surveys for the State-listed spotted turtle and wood turtle determined that although the Project site does not offer suitable habitat for these species, due to the proximity to a wetland area where they may occur, species protective measures were recommended that include isolation measures, education, and reporting.

Site-specific surveys determined development of the Project would not impact the remaining species identified in the DEEP NDDB Preliminary Assessment.

The northern long-eared bat (NLEB), a state-listed Endangered Species and federally-listed Threatened Species, is known to occur in Connecticut. However, the nearest known NLEB habitat resource is located more than 10 miles from the site and no impact to NLEB is expected. A US Fish and Wildlife Service NELB impact permit is not required.

TRITEC would use a Fuzz and Buzz seed mix that contains pollinator species to enhance wildlife value.

#### *Forest*

No forest would be removed to develop the Project. Several trees between the existing field and Wrights Crossing Road would be removed to develop the facility access drive. One tree would be removed within the solar array area.

#### *Air Quality*

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

#### *Water Quality*

The site is not within a DEEP-designated Aquifer Protection Area. The nearest Public Drinking Supply Watershed is located approximately 1.4 miles to the northwest.

The property owner's residence and other area residences are served by private water wells. TRITEC does not expect any impact to the wells through the installation of project racking posts.

A Petroleum Materials Storage and Spill Prevention Plan has been developed for the project to protect water resources.

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

### 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. 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 project after construction is complete. The SWPCP incorporates project designs consistent with the *2002 Guidelines* and the *2004 Connecticut Stormwater Quality Manual (2004 Stormwater Manual)*

A DEEP-issued General Permit is required prior to commencement of construction activities commencement of construction activities, as defined in the General Permit. 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 application.

TRITEC has not discussed the Project with the DEEP Stormwater Division to date. TRITEC would meet with DEEP once a General Permit application is filed.

TRITEC performed a stormwater analysis that concluded the grass surface of the solar field would improve upon existing stormwater runoff conditions in the hayfield and therefore no post-construction stormwater detention basins would be required. TRITEC proposes to construct two grass lined swales along the access road with swale extensions below the uppermost solar field area to divert any runoff into the main swales. The swales would feature stone check dams to slow down the water velocity prior to discharge at a controlled outflow structure.

### **Operation and Maintenance**

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 annually by on-site personnel. The evaluation would include the electrical system/components, physical infrastructure, and site vegetation. Replacement modules would not be stored on-site.

The O&M Plan includes provision for mowing restrictions to reduce impacts to grassland bird species that may use the site. Signs would also be installed on the fence in the array area to remind maintenance personnel of these restrictions. Pesticides and herbicides would not be used at the site.

Module cleaning would only be conducted on an as needed basis using water. Snow removal is not anticipated.

### **Decommissioning**

The Project has a minimal operational life of 20 years, but may operate for 25 to 30 years based on lease options. At the end of the Project's useful life, the Project would be decommissioned and the site restored to its original condition. Project decommissioning would include removal and disposal or recycling of all above-surface project components. It is anticipated decommissioning would be completed within 8 weeks.



All recyclable materials would be transported to appropriate recycling facilities. Any non-recyclable materials will be properly disposed of at a nearby landfill (estimated 5 percent of material). The transformer and interconnection equipment pads would be removed. Underground infrastructure would be removed to a depth of three feet. The utility poles related to the interconnection would be removed at the request of the property owner.

Disturbed areas would be backfilled with native soil, stabilized and seeded. Any compacted areas that could inhibit the growth of new vegetation would be aerated.

The selected solar panels for the Project (as revised on May 12, 2022) 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**

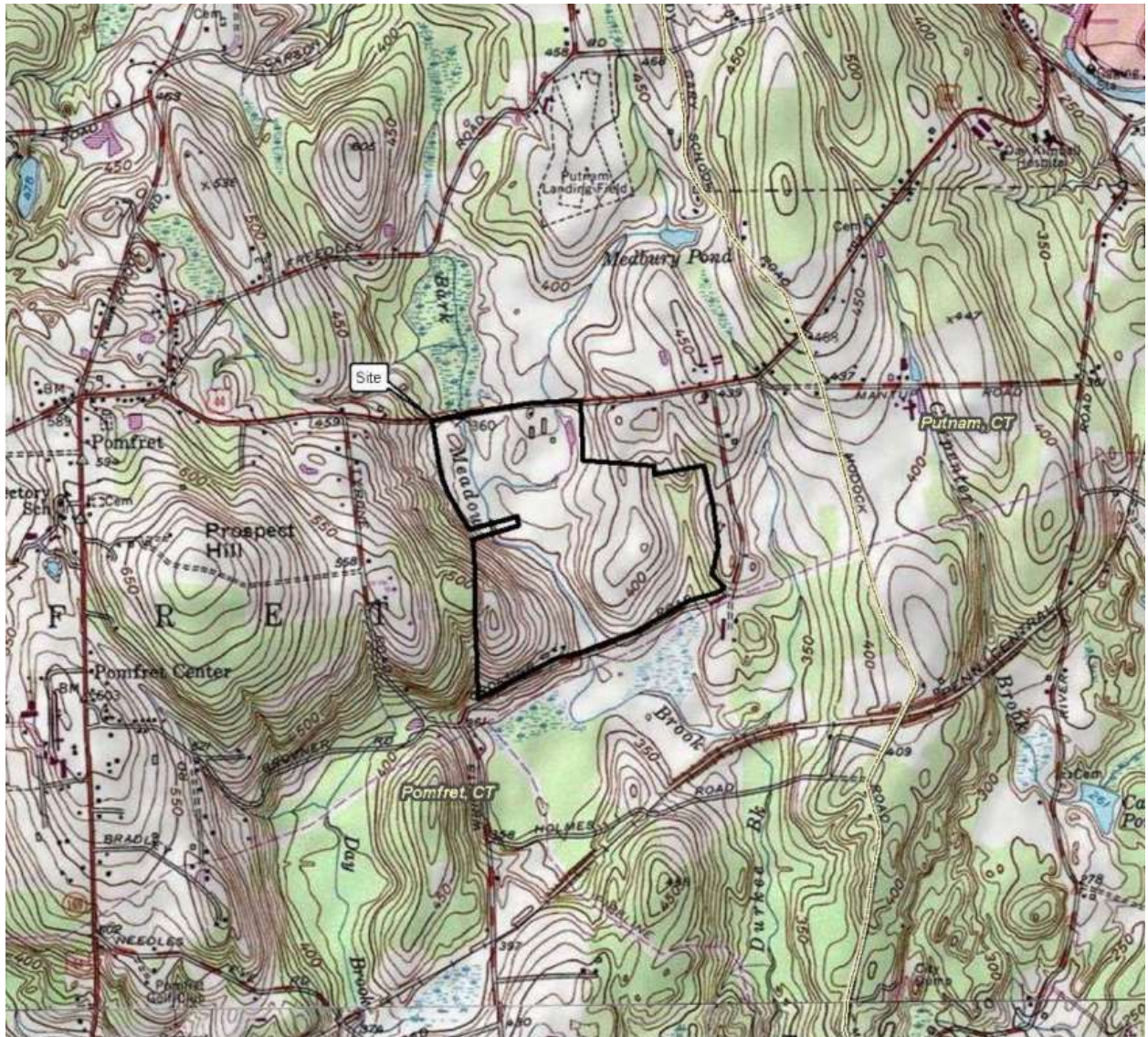
The project is a grid-side distributed resource with a capacity of not more than sixty-five megawatts, meets air and water quality standards of the DEEP, and would not have a substantial adverse environmental effect. The proposed project will not produce air emissions, will not utilize water to produce 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.

### **Recommendations**

If approved, staff recommends 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 a copy of the Final DEEP NDDDB Determination letter prior to commencement of construction;
4. 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;
5. Utilize a pollinator seed mix within the solar array area; and
6. Consultation with Eversource to minimize visibility of the electrical interconnection and submission of the final design plans, if applicable, prior to commencement of construction.

### Site Location



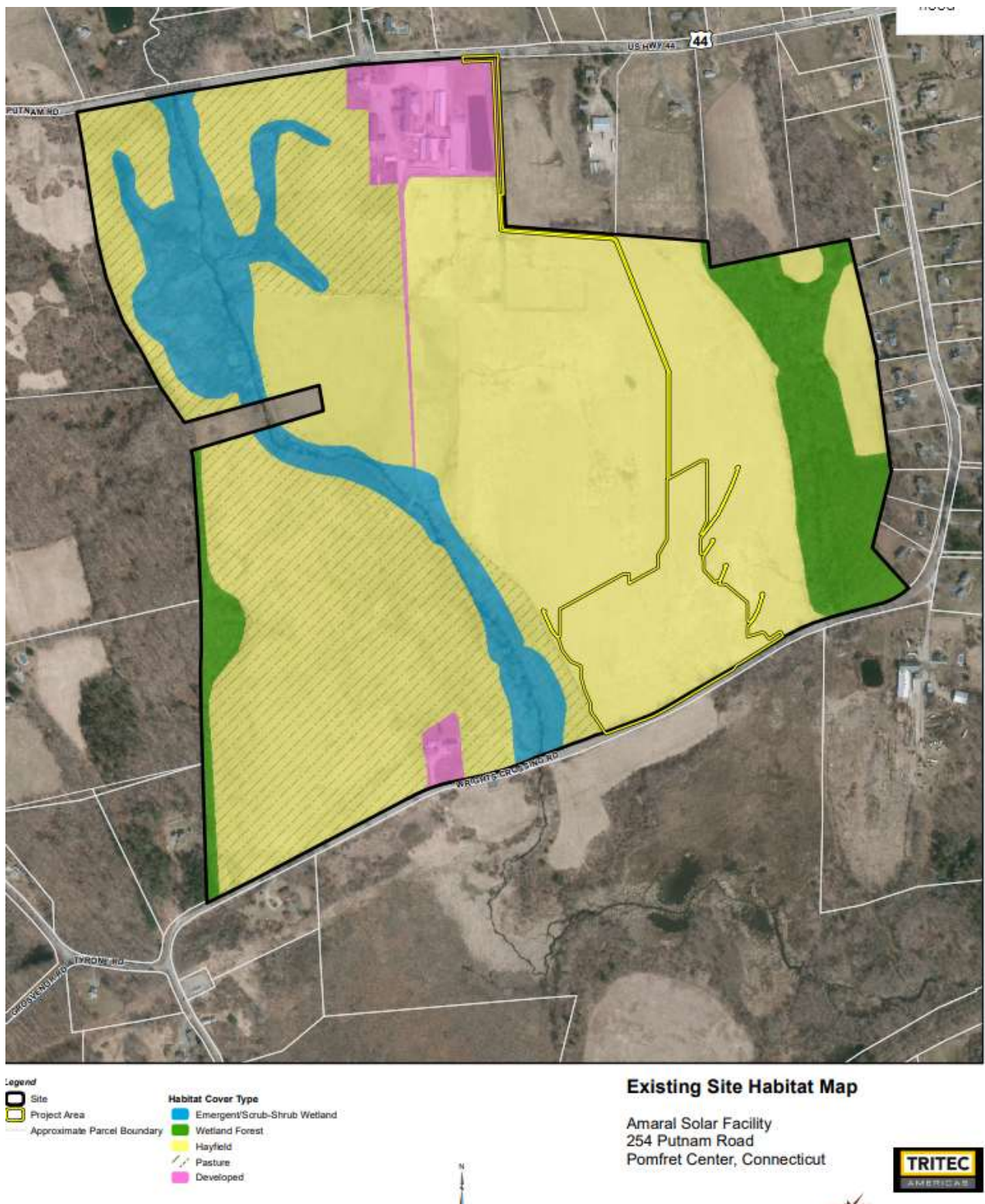
#### Legend

-  Site
-  Municipal Boundary

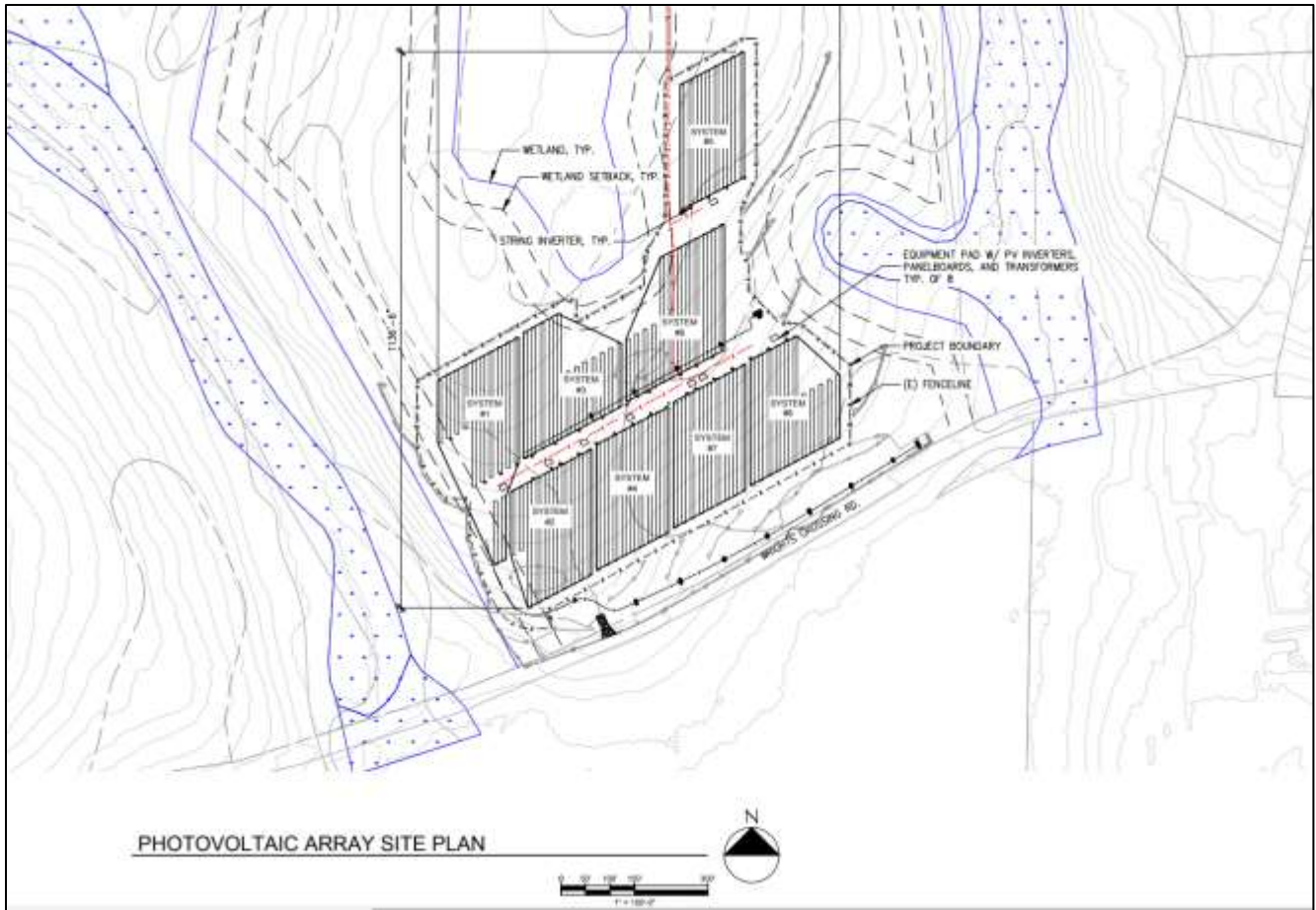




## Host Property- Existing Conditions

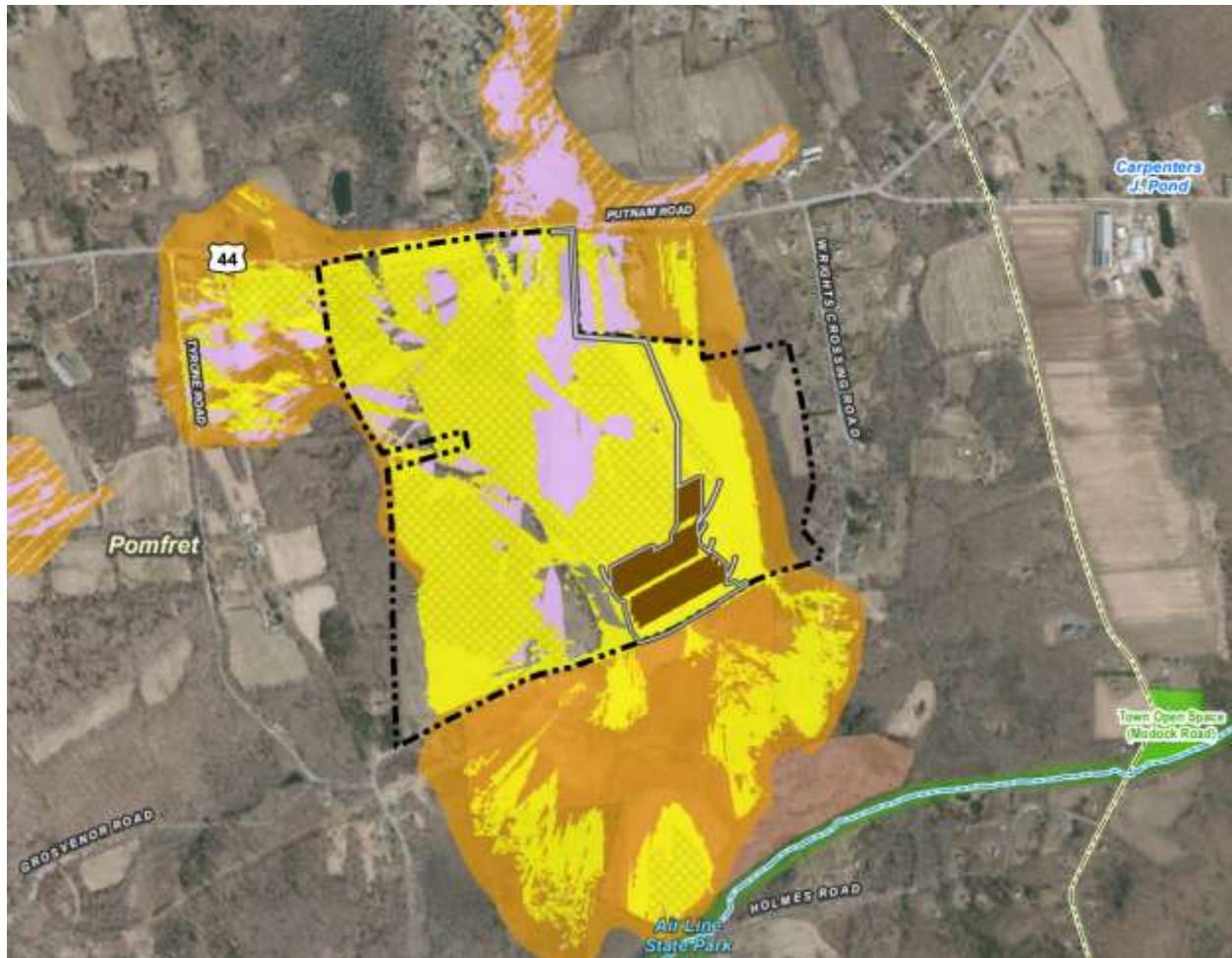


## Site Layout





## Site Visibility



### Legend

- |   |                                      |
|---|--------------------------------------|
| Site  | Trail                                |
| Limit of Disturbance  | Scenic Highway                       |
| Solar Modules   | DEEP Boat Launches                   |
| Study Area (1-Mile Radius)                                      | Municipal and Private Open Space     |
| Municipal Boundary  | State Forest/Park                    |
| <b>Predicted Year-Round Visibility (281 Acres Total)</b>        |                                      |
| Proposed Modules and Utility Poles (118 Acres)                  | <b>Protected Open Space Property</b> |
| Proposed Modules Only (106 Acres)                               |                                      |
| Proposed Utility Poles Only (57 Acres)                          |                                      |
| <b>Areas of Potential Seasonal Visibility (195 Acres Total)</b> |                                      |
| Proposed Modules and Utility Poles (155 Acres)                  | Federal                              |
| Proposed Utility Poles Only (40 Acres)                          | Land Trust                           |
|   | Municipal                            |
|   | Private                              |
|   | State                                |