



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

### CERTIFIED MAIL RETURN RECEIPT REQUESTED

September 13, 2019

Kathleen M. Shanley  
Manager – Transmission Siting  
Eversource Energy  
P.O. Box 270  
Hartford, CT 06103

RE: **PETITION NO. 1376** – The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed electrical interconnection between its existing Scitico Substation located at 20 Bailey Road, Enfield, Connecticut and Nutmeg Solar, LLC's 19.6 megawatt solar photovoltaic electric generating facility located generally south of Bailey Road and east of Route 191 (Broad Brook Road) in Enfield, Connecticut consisting of modifications to the Scitico Substation, relocation of the existing No. 1976 electric transmission line that terminates at Scitico Substation, the construction, operation and maintenance of a new approximately 330-foot 115-kilovolt (kV) underground transmission line, and related substation and electric transmission line structure improvements.

Dear Ms. Shanley:

At a public meeting held on September 12, 2019, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal 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 minor project changes be delegated to Council staff;
2. 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;
3. 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, and the Town of Enfield;
4. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
5. 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;

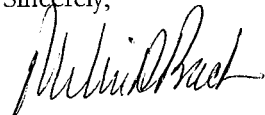


6. This Declaratory Ruling may be transferred, provided the facility owner/operator/transferor is current with payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v and the transferee provides written confirmation that the transferee agrees to comply with the terms, 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
7. 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 July 18, 2019, and additional information received August 7, 2019.

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

Sincerely,



Melanie A. Bachman  
Executive Director

MAB/MP/emr

Enclosure: Staff Report dated September 12, 2019

- c: The Honorable Michael Ludwick, Mayor, Town of Enfield  
Christopher W. Bromson, Town Manager, Town of Enfield  
Raquel Ocasio, Assistant Town Planner, Town of Enfield  
David W. Bogan, Esq., Locke Lord, LLP  
Kathryn E. Boucher, Esq., Locke Lord LLP



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### Petition No. 1376

#### Eversource

### Scitico Substation and Nutmeg Solar Interconnection Project

#### Enfield, Connecticut

#### Staff Report

September 12, 2019

### Introduction

On April 26, 2019, the Connecticut Siting Council (Council) issued a declaratory ruling in Petition No. 1352 to Nutmeg Solar, LLC (Nutmeg) approving the construction, maintenance and operation of a 19.6-megawatt AC solar photovoltaic electric generating facility to be constructed south of Bailey Road and east of Route 191 (Broad Brook Broad), and associated electrical interconnection to The Connecticut Light and Power Company d/b/a Eversource Energy's (Eversource) existing Scitico Substation at 20 Bailey Road in Enfield, Connecticut.

Page 3 of the Council's Opinion in Petition No. 1352 states that, "The Council recommends that Eversource file a Petition for a Declaratory Ruling for the underground 115-kV connection, any Eversource equipment in the Collector Substation (if applicable), and modifications to the existing Scitico Substation."

In May 2019, Eversource initiated outreach to owners of properties abutting Scitico Substation and owners of properties abutting the portion of the right-of-way (ROW) where its proposed work would occur. Also, Eversource representatives conducted door-to-door outreach to an expanded area of nearby property owners. Prior to submission of a petition to the Council, Eversource briefed Enfield officials on the project.

On July 18, 2019, the Council received a petition (Petition) from Eversource for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed electrical interconnection between its existing Scitico Substation and Nutmeg's solar photovoltaic electric generating facility. The Petition consists of modifications to the Scitico Substation, relocation of the existing #1976 Line that terminates at Scitico Substation, the construction, operation and maintenance of a new approximately 330-foot 115-kilovolt (kV) underground electric transmission line (from Nutmeg's Collector Substation to Scitico Substation), and related substation and electric transmission line structure improvements.

Formal notice of the Petition was provided to the Town of Enfield (Town) and abutting property owners on or about July 16, 2019. On July 19, 2019, the Council sent correspondence to the Town stating that the Council has received the Petition and invited the municipality to contact the Council with any questions or comments by August 17, 2019. No comments have been received to date.

On July 24, 2019, the Council issued interrogatories to Eversource. On August 7, 2019, Eversource submitted responses to Council interrogatories.

By letter dated July 24, 2019, Nutmeg requested party status. At a public meeting on August 15, 2019, the Council granted party status to Nutmeg.

Nutmeg's solar facility electrical output will feed into its approved approximately 0.86-acre fenced collector substation<sup>1</sup> (Collector Substation) that will contain a generator step-up transformer to raise the voltage from 34.5-kV to 115-kV. The Collector Substation will be located within the northern portion of the approved solar facility footprint.

Eversource's existing Scitico Substation is located on Eversource-owned property to the north of the approved solar facility footprint. Scitico Substation is a 115-kV/23-kV facility with two 115-kV transmission circuits (the #1394 Line and the #1976 Line), two 115-kV/23-kV power transformers, and eight 23-kV distribution circuits.

Land uses to the north and west of Scitico Substation are residential. The approved solar facility footprint will be located directly to the south of Scitico Substation. On the eastern side of Scitico Substation is its connection to an existing Eversource electric transmission ROW. Land use east of the ROW is residential.

### **Proposed Project**

The project is proposed to provide an electrical interconnection between Scitico Substation and the Collector Substation. The Collector Substation would interconnect to Scitico Substation via an approximately 330-foot new 115-kV underground cable. The project also requires the modification of Scitico Substation from a single-bus to a four-breaker ring configuration and the relocation of the #1976 Line and new 115-kV terminal structures at Scitico Substation. The project is currently identified in the June 2019 ISO New England Inc. (ISO-NE) Regional System Plan Project List as a generator interconnection upgrade. The ISO-NE System Impact Study report issued June 21, 2016 concluded that the project would not cause any adverse impacts to the transmission system, and no system upgrades would be required to interconnect at the designated point of interconnection.

#### *Scitico Substation Modifications*

The modifications to Scitico Substation include, but are not limited to, the following:

- a) Install a new 115-kV galvanized steel terminal structure with lightning arresters for the new location of Line No. 1976 that would be located approximately 68 feet south of the #1976 Line termination location. The height of new terminal structure would be the same height as the existing terminal structures, at about 63 feet above ground level including the lightning mast on top. The existing #1976 Line terminal structure would remain to accommodate the line switch and coupling capacitor voltage transformers (CCVTs) for the underground cable termination;
- b) Install a new 115-kV galvanized steel cable termination structure to support the new underground #1014 Line to the Collector Substation terminal structure. This structure would be approximately 19 feet tall and located approximately 4 feet to the east of the existing #1976 Line terminal;
- c) Install two 115-kV circuit breakers;
- d) Install four 115-kV manual-operated breaker disconnect switches;
- e) Install new 115-kV bus work and support structures;
- f) Install new foundations for each of the above equipment and structures;

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<sup>1</sup> Nutmeg will construct, own, and maintain the Collector Substation up to the point of change of ownership on the terminal structure of the Collector Substation. The final details of Nutmeg's Collector Substation and Nutmeg's associated equipment will be included as part of Nutmeg's Development and Management Plan for Petition No. 1352.

- g) Install one 115-kV motor-operated line disconnect switch, ground switch and three CCVTs on the new #1976 Line terminal structure; and
- h) Relocation of the wave trap from the existing #1976 Line terminal structure to the new #1976 Line terminal structure.

No expansion of the fenced substation area would be required to accommodate these modifications.

#### *Overhead Line Modifications*

The interconnection from Scitico Substation to the Collector Substation requires modifications to Eversource's existing #1976 Line. Specifically, these modifications would include, but not be limited to, the following:

- a) Replace the existing approximately 73-foot tall 115-kV wood angle Structure No. 7943A<sup>2</sup> with a new approximately 75-foot tall 115-kV weathering steel angle structure. The new Structure No. 7943A would be installed approximately 85 feet to the southeast on Eversource property to accommodate the shift in location of the new #1976 Line terminal structure;
- b) Install approximately 200 feet of new 1272 kcmil aluminum conductor, steel reinforced (ACSR) conductor and 7#8 Alumoweld shield wire between the new #1976 Line terminal structure located at Scitico Substation and the new Structure No. 7934A; and
- c) Remove the existing 7#8 Alumoweld shield wire between the existing #1796 Line terminal structure and the existing Structure No. 7943A.

#### *Underground Line Interconnection*

Eversource would install a new approximately 330-foot long single-circuit 115-kV underground electric transmission line, to be known as the #1014 Line, from Scitico Substation to the Collector Substation. Each phase of the circuit would consist of a 1000-kcmil copper conductor cable with ethylene propylene rubber (EPR) insulation. Each cable, approximately 3.5 inches in diameter, would be installed in a separate polyvinyl chloride (PVC) conduit. In addition, two 24-fiber all dielectric self-supporting (ADSS) cables for communication and a grounding conductor would be installed from the Scitico terminal structure to the Collector Substation terminal structure.

The PVC conduits would be encased in concrete to form an approximately three-foot wide duct bank, and the remainder of the trench would be backfilled with native soil. The duct bank would be buried to provide a minimum of 36 inches of cover from the top of the duct bank to the existing surface grade.

### **Project Construction and Work Procedures**

All vegetative clearing would be limited to Eversource property, Eversource ROW and a portion of a privately-owned parcel subject to a purchase option held by Nutmeg for its solar facility (to reach the Collector Substation).

Access to the proposed new and existing transmission structures and the new underground line would utilize the existing Eversource paved access road off of Bailey Road.

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<sup>2</sup> Replacement of this structure is due to the condition and age of the existing structure and to accommodate the new angle of the structure due to the new location of the #1976 Line terminal structure.

Scitico Substation and work space outside of the substation's fenced area on Eversource property would be used to store construction equipment and materials for the project. Office trailers would be located within the fenced Scitico Substation. The staging areas may also be used by construction crews for parking personal vehicles as well as for construction vehicles, and for performing minor maintenance, when needed, on construction equipment. Erosion and sedimentation controls would be installed and maintained, as needed, until project completion in accordance with Eversource's 2016 Best Management Practices Manual for Massachusetts and Connecticut (Eversource BMPs).

Erosion and sedimentation controls would be installed as necessary before commencing installation of the work pads. Excavated soils generated during construction activities would not be stored or stockpiled in wetland areas.

At the existing and new structure locations, gravel work pads would be required to provide a safe, level work base for construction equipment and to stage material for final on-site structure assembly and/or removal. There would be three work pads approximately 150 feet by 100 feet. These work pads would be gravel, and in areas that traverse a wetland, temporary construction mats would be utilized. In addition, a 200-foot by 100-foot pull pad would be required east of the new Structure No. 7943A to support the pulling of the new conductor and shield wire into the new #1976 Line terminal structure. Along the new underground cable interconnection, a 25-foot wide work pad would be installed on each side of the proposed duct bank for construction and access. These work pads would be gravel and installed in upland areas. After construction, work pads and temporary matting in wetlands would be removed.

The proposed monopole structure would have a direct-embedded foundation, and the terminal structures would have concrete foundations. The construction would require equipment such as augers, trucks for hauling excavated materials, drill rigs, cranes, and dump trucks for installing pre-cast concrete foundations and processed granular backfill. If groundwater is encountered, pumping (vacuum) trucks or other suitable equipment would be used to pump water from excavated areas before structure installation. The water would be discharged in accordance with applicable local, state, and federal requirements.

Structure sections, structure components and hardware would be delivered to the structure locations using flat-bed trucks and then assembled using cranes and bucket trucks.

After construction, the existing 73-foot wood structure would be removed completely including the pole butt. The hole would be backfilled with either crushed stone or similar backfill. The anchors would not be reused for the new pole and would be cut at 1 foot below grade and the top portions removed. The remaining lower portions of the anchors would be covered in native fill.

Construction of the duct bank and cable system would consist of the following activities:

- a) Excavate the duct bank trench;
- b) Segregate spoils for subsequent reuse during restoration;
- c) Install conduits within the trench;
- d) Place concrete around the conduits;
- e) Backfill concrete duct bank with approval material (primarily native subsoil and topsoil); and
- f) Restore affected areas by revegetating with an appropriate seed mix and stabilizing much, as appropriate.

Once the duct bank is constructed, the cable system would be installed. This work would include pulling the cable, the fiber optic cables and the ground conductor into the conduits. The cables would be terminated at Scitico and Nutmeg terminal structures. Link boxes would be installed, and the cable grounding system would be connected.

Equipment used during construction of the duct bank would consist of a concrete truck, backhoe and pickup trucks. Equipment used during installation of the cable system would consist of cable pulling winches, a cable trailer, and pickup trucks.

Restoration activities would include the removal of construction debris and temporary fencing, as well as removal of temporary construction mats and work pad areas. Areas affected by construction would be re-graded as practical and stabilized using revegetation before removing temporary erosion and sedimentation controls.

Waste material such as structure components and other construction debris would be disposed of in accordance with Eversource BMPs and applicable regulations or recycled consistent with regulations and Eversource policies. Excess soils would be managed in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (2002 Connecticut E&S Guidelines), Eversource BMPs, applicable regulations and disposal facility policies.

### **Environmental Considerations**

Clearing and vegetation removal would be required to facilitate the project. Specifically, approximately 4,351 square feet of clearing would be required to accommodate the new underground transmission line connection, and approximately 15,680 square feet of vegetation removal would be required for construction of work/pull pads and conductor clearing within Eversource's ROW associated with the existing #1976 Line. Eversource would conduct clearing and vegetation removal activities in accordance with Eversource BMPs.

Approximately 48,622 square feet (1.12 acres) of Prime Farmland Soils would have permanent impacts (primarily from gravel work pads), and approximately 1,855 square feet (0.043 acres) of Prime Farmland Soils would have temporary impacts resulting from construction matting.

No watercourses or vernal pools were identified within the proposed project area. There are no 100-year or 500-year flood zones in the proposed project area. Two wetlands were identified on Eversource property.

Of the 15,680 square feet of vegetation removal, about 155 square feet would be in forested wetland areas, resulting in the conversion of 155 square feet of palustrine forested wetlands to palustrine scrub shrub wetlands.

The proposed project would result in approximately 1,331 square feet of temporary wetland effects, which are associated with the temporary use of construction mats for the 60-foot by 40-foot work pad for removal of Structure No. 7943A. The temporary wetland impact would require the submittal of a Self-Verification Notification Form to the U.S. Army Corps of Engineers certifying compliance with the Connecticut General Permit. Work activities in wetlands, including the proposed tree clearing, would be conducted in accordance with Eversource BMPs and project permits and approvals.

The proposed project is not located within a Department of Energy and Environmental Protection (DEEP) Natural Diversity Database (NDDB) shaded area. Notwithstanding, Eversource would adhere to Nutmeg's NDDB recommended protection measures including restricting tree clearing outside of the fenced area of Scitico Substation to the winter months from November to March.

A cultural resource assessment of the project was conducted in October 2018. No cultural resources or resource areas were identified.

Project construction would conform to best management practices for erosion and sedimentation control, including the 2002 Connecticut E&S Guidelines and Eversource BMPs.

The proposed project would result in some change to the visual character of Scitico Substation and from the shift of the #1976 Line. However, such changes would not result in a significant visual impact. The Scitico Substation fenced area would not be expanded. The proposed underground line would not be visible post-construction, except for terminal structures (at the end points of the line) to be located inside the fenced Collector Substation and the Scitico Substation. The new Structure No. 7943A would be comparable in height to the existing structure to be removed, and the new structure would have a weathering steel finish for aesthetics/visual consistency because it would be a closer color match to the existing wood structure than a galvanized structure.

Noise levels associated with construction would be short-term and localized in the vicinity of the work areas. Construction noise is exempt from DEEP Noise Control Regulations. No permanent changes to noise levels are expected to result from the project. Thus, post-construction noise levels along the property boundaries for Scitico Substation would continue to comply with DEEP Noise Control Regulations.

Eversource filed a notification of proposed construction with the Federal Aviation Administration (FAA) on February 22, 2019 for the proposed replacement Structure No. 7943A. On March 14, 2019, FAA issued a Determination of No Hazard to Air Navigation for this structure. No marking or lighting would be required for this structure.

### **Magnetic Fields**

In the United States, no state or federal exposure standards for 60-hertz magnetic field (MF) based on demonstrated health effects have been established, nor are there any such standards established world-wide. However, the International Commission on Non-Ionizing Radiation Protection (ICNIRP) has established a level of 2,000 milliGauss (mG), based on extrapolation from scientific experimentation, and the International Committee on Electromagnetic Safety (ICES) has calculated a guideline of 9,040 mG for exposure to workers and the general public, and recognized in the Council's *Electric and Magnetic Field Best Management Practices for the Construction of Electric Transmission Lines in Connecticut*.

The modifications that would most contribute to changes in MF levels would be from the addition of the new underground transmission line. The maximum anticipated MF would be approximately 24.4 mG above the new #1014 Line.

The proposed structure relocations (within and outside the fenced Scitico Substation) and installation of approximately 300 feet of underground 115-kV line to connect with the Collector Substation would not be expected to materially affect magnetic fields at the boundaries of the (combined) subject property.



### **Construction Schedule**

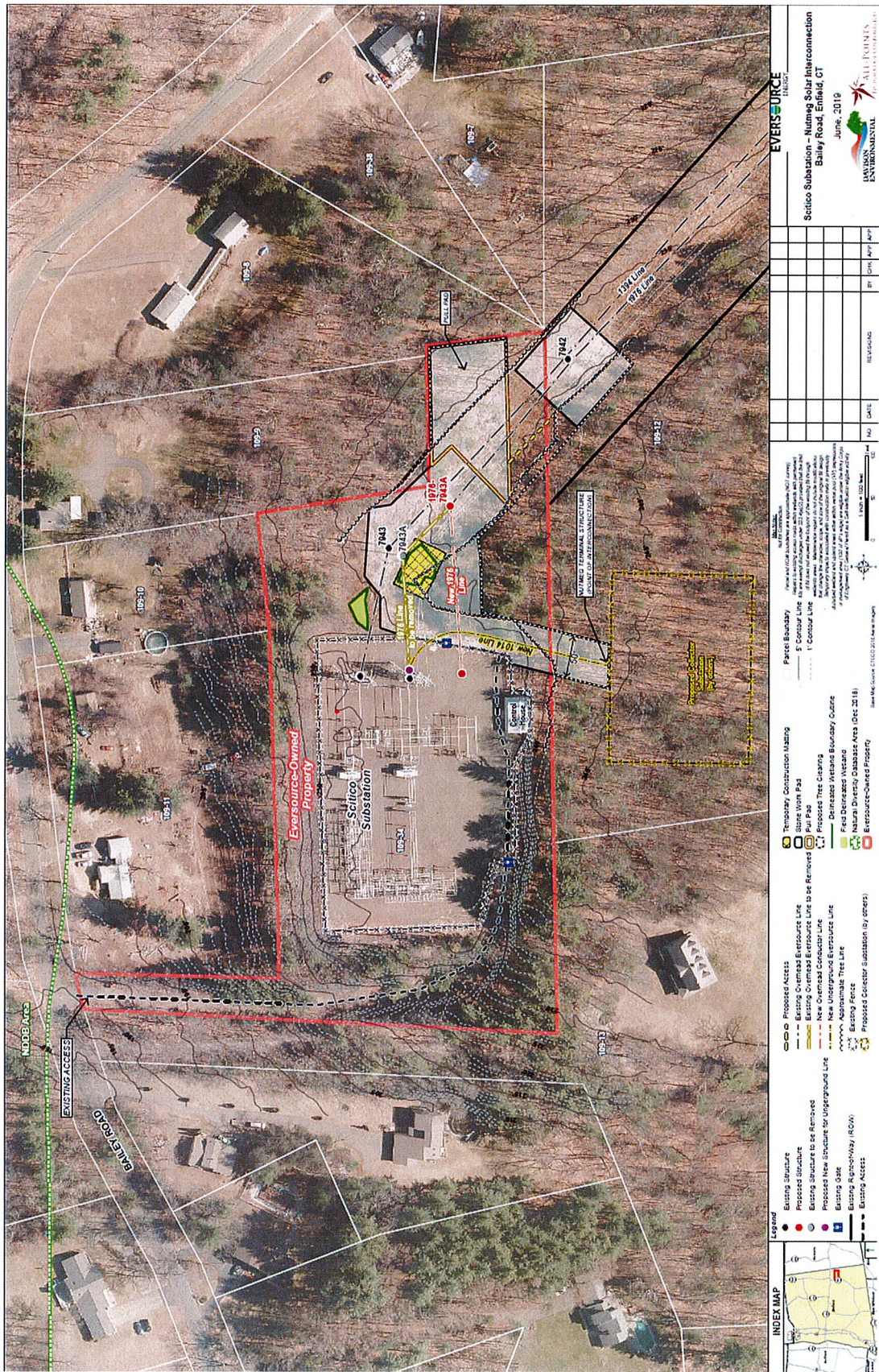
Eversource proposes to begin construction in summer 2019 and expects that the construction, including restoration, would be completed by fall 2020. Normal work hours would be from 7:00 a.m. to 7:00 p.m. Monday through Saturday. Sunday work hours may be necessary due to delays caused by inclement weather and/or outage constraints.

### **Staff Recommendations**

If approved, staff recommends the following conditions:

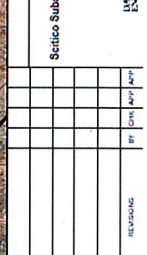
1. Approval of any minor project changes be delegated to Council staff.

# Site Plan



NO.	DATE	REVISION	BY	CHK	APP

EVERSOURCE  
**Scitico Substation - Nutmeg Solar Interconnection**  
 Bailey Road Enfield, CT  
 June, 2019



DATE: 6/13/19  
 DRAWN BY: JLB  
 CHECKED BY: JLB  
 APPROVED BY: JLB  
 TITLE: SITE PLAN

**Existing and Proposed Transmission Cross Section**

