

DRAFT

Petition No. 1453
The Connecticut Light and Power Company d/b/a Eversource Energy
Killingly Substation, 257 Tracy Road, Killingly, Connecticut
Staff Report
July 23, 2021

Introduction

On April 30, 2021, the Connecticut Siting Council (Council) received a petition (Petition) from The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for proposed modifications to its existing Killingly Substation located at 257 Tracy Road in Killingly, Connecticut. The Killingly Substation was approved by the Council on May 11, 2005 in Docket 302. Modifications to the substation required for the construction, maintenance and operation of the Interstate Reliability Project were approved by the Council on December 27, 2012 in Docket 424.

Killingly Substation is located on an approximately 5.6-acre, Eversource-owned property located west of Tracy Road in Killingly and southwest of Park Road in Putnam. The substation is accessed from a driveway extending southwest from Park Road. Killingly Substation currently contains one 345-kV to 115-kV transformer, two 345-kV transmission circuits and four 115-kV transmission circuits.

On April 30, 2021, in compliance with Regulations of Connecticut State Agencies §16-50j-40, Eversource provided notice of the proposed project to the Town of Killingly (Town), and abutting property owners.

On May 4, 2021, 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 May 30, 2021. No comments from the Town were received.

On May 26, 2021, the Council on Environmental Quality (CEQ) submitted comments on the proposed project regarding its location within a Department of Energy and Environmental Protection's (DEEP) Natural Diversity Data Base (NDDDB) buffer area.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act, an administrative agency is required to take action on a petition within 60 days of receipt, and therefore, June 29, 2021 was the deadline for action on this Petition. In response to the Coronavirus pandemic, Governor Lamont issued Executive Order No. 7, as subsequently extended, that provides for a 90-day extension of statutory and regulatory deadlines for administrative agencies. Thus, the deadline under CGS §4-176(e) is extended to September 27, 2021.

Proposed Project

The Project is being proposed to implement a solution to improve system reliability determined by ISO New England, Inc. (ISO-NE) in its Eastern Connecticut 2029 Needs Assessment for the Montville Substation to Killingly Substation corridor. The needs assessment identified multiple thermal overloads and low voltage violations due to the reliance on a single 115-kV line that interconnects with multiple substations and a weak 69-kV network from the Montville Substation.

To alleviate the identified contingencies, the proposed Project includes the addition of a 25.2 mega volt-amperes reactive (MVAR) capacitor bank to the A1 bus at Killingly Substation. The project is identified in the March 1, 2021 Eversource Ten-Year Forecast of Electric Loads and Resources and in the June 2021 ISO-NE Regional System Plan Project List.

Specifically, Eversource proposes the following modifications to Killingly Substation:

- a) Install one new 25.2 MVAR capacitor bank;
- b) Install one 115-kV manual operated disconnect switch;
- c) Install one 115-kV independent pole operated synchronous close breaker;
- d) Install three air core current limiting reactors;
- e) Install four 115-kV rated lightning arrestors;
- f) Install one new 115-kV rated resistor potential device;
- g) Expand the fenced area of the Substation in the northern corner by approximately 0.16 acre; and
- h) Install one retaining wall along the expansion area, approximately 200 feet long.

All Project work would be located on Eversource property. Most of the proposed project is located within the existing fenced substation footprint, except for the expanded fenced area and associated retaining wall.

The proposed retaining wall would be approximately 200 feet long and would range in height from 5 to 20 feet above ground level. A new perimeter fence would be installed on top of the retaining wall. The substation expansion area would be filled to create a level area to locate the proposed new equipment and allow vehicle movement within the substation.

Installation of the proposed equipment would require new concrete foundations. Groundwater encountered would be pumped and discharged in accordance with applicable local, state and federal requirements. Excavated soils generated during construction would be stored/spread in an upland area within Eversource's property, to the extent practicable, or disposed in accordance with applicable regulations. The area around the installed equipment will be backfilled and graded with crushed stone.

The total estimated cost of the project is approximately \$3.8M. The project is a pool transmission ~~pool~~ facility¹ and such costs would be regionalized pending a review by ISO-NE.

Project Construction and Work Procedures

During construction, Eversource would utilize the existing substation access drive extending west from Park Road. Eversource would stage materials on its property and within the existing substation yard. Equipment, components and hardware would be delivered to the substation using flatbed utility trucks. New substation components would be either pre-assembled or assembled on-site prior to installation.

The expansion area would be cleared and graded. After component installation, disturbed areas would be backfilled and graded with crushed stone.

Environmental Effects and Mitigation Measures

The expanded areas of the substation would require the removal of about 800 square feet of vegetation on Eversource's property.

A wetland is located approximately 600 feet northwest of the existing substation footprint. No direct wetland impacts would result from the proposed project.

¹ Per page 22 of the 2019 ISO-NE Regional System Plan, PTFs are facilities rated 69-kV or above owned by the participating transmission owners over which ISO-NE has operating authority in accordance with the terms set forth in the Transmission Operating Agreements.

The project would conform to the 2002 *Connecticut Guidelines for Soil Erosion and Sediment Control* and Eversource's Best Management Practices. Typical erosion and sediment control (E&S control) measures include, but are not limited to, straw blankets, hay bales, compost filter socks, silt fencing and gravel anti-tracking pads. Following completion of construction, seeding and mulching or finished surface treatments would be completed to permanently stabilize the areas disturbed by the work outside of the substation fence. Temporary E&S control measures would remain in place until project work is complete and all disturbed areas have been stabilized.

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

The project is not located within a DEEP-designated Aquifer Protection Area. The project would not affect groundwater or surface water resources.

The Project is located within a DEEP NDDB buffer area. Based on prior survey work in this area conducted for Council Docket Nos. 370 and 424, no adverse impacts to State-listed species or their habitats are anticipated. The substation expansion area is mostly within an existing cleared area, except for an 800 square-foot area composed of small trees. Condition No. 1 of the Council's Docket 302 Decision and Order states "The Certificate Holder shall perform all tree clearing outside of the breeding seasons of the brown thrasher and the whip-poor-will to minimize the effects on those species." The whip-poor-will breeds from approximately late May through July. The brown thrasher breeds from approximately mid-April through August." Eversource expects to start construction in September.

A Phase 1A Cultural Resources Assessment of previously recorded cultural resources was completed during March 2021. Eversource is awaiting concurrence from SHPO that the Project would have no adverse impacts to cultural resources. During the proceedings held on Docket 302, a Phase I Cultural Resources Reconnaissance Survey identified a single archaeological site and one historic structure. Based on the survey results, SHPO concluded that construction of the substation would have no adverse impacts to cultural resources. During the proceedings held on Docket 424, the modifications to Killingly Substation occurred on previously disturbed, developed portions of the site.

The Project would result in some minor changes to the visual character of the substation, but the changes are not significant as the proposed equipment would not exceed the height of existing substation equipment. The Substation is largely surrounded by forest and commercial buildings and is only visible from certain locations along Park Road.

Eversource would install lighting within the expanded substation footprint for safety and security purposes.

Noise levels associated with construction would be temporary and typical of construction activities. Noise associated with construction activities is exempt from DEEP Noise Control Regulations. Post-construction noise levels would comply with DEEP Noise Control Regulations.

Electric and magnetic field levels at boundaries of the substation property would not change as a result of the project.

Construction Schedule

If approved, construction would begin in September 2021 and would be completed by year-end 2021. Normal work hours would be Monday through Saturday from 7:00 a.m. to 7:00 p.m. Sunday work hours or evening 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 project changes be delegated to Council staff; and
2. Submit the retaining wall and fence detail prior to commencement of construction.

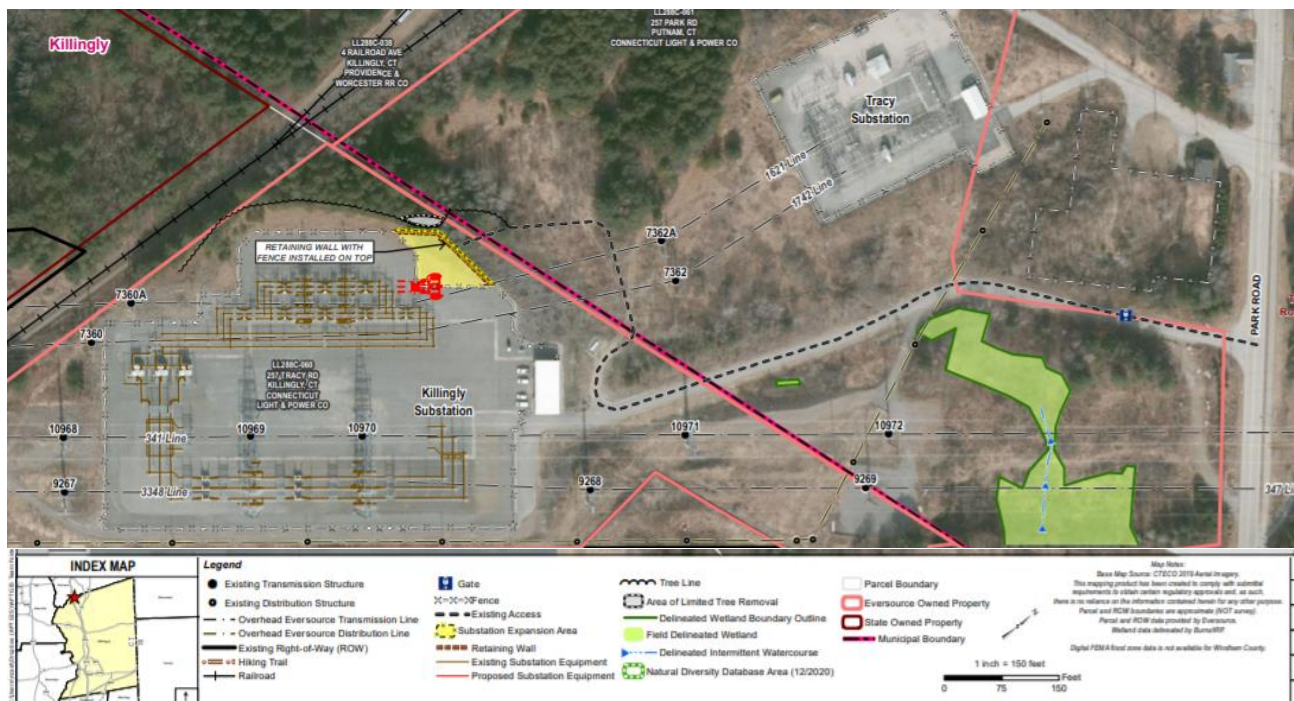


Figure 1. Site Location