

## **DRAFT**

### **Petition No. 1455**

#### **The Connecticut Light and Power Company d/b/a Eversource Energy Mystic Substation - 148 Greenmanville Avenue, Stonington, Connecticut**

#### **Staff Report July 23, 2021**

### **Introduction**

On June 3, 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 the proposed modifications to Mystic Substation located at 148 Greenmanville Avenue in Stonington, Connecticut.<sup>1</sup>

Mystic Substation is located on an approximately 10-acre Eversource-owned property located west of Greenmanville Avenue and north of Pleasant Street in the Mystic section of Stonington. Two 115-kilovolt (kV) transmission lines (1280 Line and 1465 Line) terminate at the substation. The substation currently contains 115-kV, 34.5-kV, and 13.8-kV equipment.

On May 28, 2021, in compliance with Regulations of Connecticut State Agencies §16-50j-40, Eversource provided notice of the proposed project to the Town of Stonington (Town) and abutting property owners. Two abutting property owners on Pleasant Street contacted Eversource with concerns about the Project, specifically electric and magnetic field safety, visual impacts and existing noise from within the substation. Eversource has been in contact with these abutters to address their concerns.

On June 7, 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 July 3, 2021. No comments from the Town were received.

The Council submitted interrogatories to Eversource on June 29, 2021. Eversource submitted responses to the interrogatories on July 13, 2021.

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, August 2, 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 October 31, 2021.

### **Proposed Project**

The project is being proposed to implement a solution determined by ISO New England, Inc. (ISO-NE) in its 2027 Eastern Connecticut Reliability Needs Assessment to address low and high voltage criteria violations in the Mystic to Kent County, Rhode Island transmission line corridor. To mitigate the identified contingencies, Eversource would install three new single phase 1% series reactors and associated equipment on the 1465 Line. The project is identified in the June 2021 ISO-NE Regional System Plan Project List.

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<sup>1</sup> Earlier modifications to the existing substation were approved by the Council on August 28, 2008 in Petition 860. Evergreen plantings were installed along the north and south substation boundaries that are maintained in accordance with NESC standards.

Specifically, Eversource proposes the following modifications to Mystic Substation:

- a) Install three new single phase 1% series reactors on the 1465 Line;
- b) Install one substation terminal structure;
- c) Install one 115-kV 3000A three-phase circuit switcher;
- d) Install three new lightning arrestors;
- e) Install approximately 600 feet of 1590 ACSR strain bus conductor;
- f) Install one motor-operated 115-kV, 3000A disconnect switch;
- g) Install one 115-kV, 3000A three-phase manually operated disconnect switch;
- h) Remove existing Power Line Carrier equipment;
- i) Install necessary fiber connections from the 1465 Line terminal to the Relay Control Enclosure;
- j) Update the relay settings for primary and backup relays;
- k) Expand the substation by approximately 3,600 square feet to the east under the 1465 Line to facilitate the series reactor installation;
- l) Install underground conduits and cable for the new equipment;
- m) Install lighting within the expansion area;
- n) Extend the ground grid into the substation expansion area;
- o) Replace existing battery bank/charger to accommodate the new loads from the reactor installation; and
- p) Install hydrogen detection and battery monitor system for the new battery bank.

Most of the proposed project is located within the existing, fenced substation footprint, except for the 3,600 square foot expansion area. The expansion area would consist of an 80-foot by 45-foot area that would be enclosed by a seven-foot high chain link fence (1¼ inch mesh) and one foot barbed wire on top, which is consistent with the existing substation fence.

The total estimated cost of the project is approximately \$5.75M. Of the total, \$971,000 is associated with distribution facilities and would be recovered by Eversource customers. The remaining costs would be regionalized pending a review by ISO-NE but is anticipated costs would be allocated as follows: Eversource customers - 32.6%; other Connecticut customers - 4.8%; and other New England customers - 62.6%.

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

During construction, Eversource would utilize the existing substation access drive (aka Morgan Street) extending east from Greenmanville Avenue. Eversource would stage materials within the existing substation yard. Equipment, components and hardware would be delivered to the substation using flatbed and light duty 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**

Construction of the expansion area would require the removal of brushy vegetation and one tree.

Construction 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.

No wetlands or Federal Emergency Management Agency-designated 100 year/500-year flood zones are within or near the expansion area.

The project is not located within a Department of Energy and Environmental Protection (DEEP)-designated Aquifer Protection Area. The project would not affect groundwater or surface water resources.

The project is located within the DEEP-designated coastal area boundary.

According to the DEEP Natural Diversity Database, no state-listed species are within the project area.

A Phase 1A Cultural Resources Assessment of previously recorded archaeological and historical resources was completed during April 2021 and is on file with the Connecticut State Historical Preservation Office. Based on a preliminary assessment of the substation expansion area in early May 2021, a field review of the expansion area was conducted which determined there was a no/low sensitivity for cultural resources in the area and no further surveys were recommended.

The overall visual impact of the project would be minimal. The new equipment is similar in appearance to existing substation equipment and the new terminal structure is 68 feet tall, 7 feet taller than existing substation equipment. The south side of the existing substation, facing the abutting residences on Pleasant Street, contains a dense area of shrubs and trees. Eversource would remove brush under the existing transmission lines entering the substation and within the expansion area. To reduce visibility of the substation expansion area, Eversource, in consultation with concerned abutters, would develop a visual mitigation plan consisting of landscape plantings that are compatible with Eversource's equipment and operations.

Eversource would install lighting within the expanded substation footprint for safety and security purposes. Task lighting would be installed at 25 feet above ground level on the terminal structure and would be controlled by manual switch. Switch activated LED safety lighting would also be installed. Lighting is designed not to extend beyond the substation footprint.

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. Although the new series reactors emit noise, noise would be negligible at the abutting property line, and therefore, post-construction noise levels would comply with DEEP Noise Control Regulations.

Electric and magnetic fields (EMF) levels at boundaries of the substation property would not change as a result of the project. On June 24, 2021, at the request of one abutting property owner, Eversource conducted a pre-construction EMF measurement on the abutter's property. Eversource would conduct post-construction measurements, if requested.

### **Construction Schedule**

If approved, construction would begin in September 2021 and would be completed by June 2022. Normal work hours would be Monday through Saturday from 7:00 a.m. to 7:00 p.m. Sunday and/or evening work hours (after 7:00 p.m.) may be necessary to maintain the construction schedule or to perform work during scheduled outages. The Town's zoning regulation does not specify any construction work hours.

### **Staff Recommendation**

If approved, staff recommends the following conditions:

1. Approval of any project changes be delegated to Council staff; and
2. Submit a copy of the final visual mitigation plan.



**Figure 1. Site Location**