

DRAFT

**Petition No. 1534
Groton Utilities
Buddington Substation
1090 Buddington Road, Groton, CT**

**Staff Report
October 7, 2022**

Introduction

On August 2, 2022, the Connecticut Siting Council (Council) received a petition from Groton Utilities (GU) for a declaratory ruling pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k, for the proposed modifications to Buddington Substation located at 1090 Buddington Road in Groton, Connecticut (Petition or Project).

Buddington Substation is a 69-kV to 115-kV substation owned by GU located at the corner of Buddington Road and Gold Star Highway in Groton. GU is a member of the Connecticut Municipal Electric Energy Cooperative (CMEEC).

On July 27, 2022, in compliance with Regulations of Connecticut State Agencies (RCSA) §16-50j-40, GU provided notice of the proposed Project to the Town of Groton (Town), which is also the only abutting property owner. No comments from the Town were received.

On August 3, 2022, the Council sent correspondence to the Town and copied the City of Groton (a subdivision of the Town) stating that the Council has received the Petition and invited the Town to contact the Council with any questions or comments by September 1, 2022. No comments from the Town were received.

The Council submitted interrogatories to GU on September 13, 2022. GU submitted responses to the interrogatories and supplemental Project information on September 27, 2022.

On August 25, 2022, the Council on Environmental Quality submitted comments on the Project regarding GUs' Best Management Practices (BMPs) Manual, the Department of Energy and Environmental Protection (DEEP) Natural Diversity Database (NDDDB) and excavated soils at the site.¹ Under CGS §16-50x, the Council retains exclusive jurisdiction over the existing substation facility. The Council cannot delegate its statutory authority to any other entity and it is not required to abide by comments from state agencies.²

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. On September 29, 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 January 29, 2023, which is the 180-day statutory deadline for a final decision under CGS §4-176(i).

¹ Under RCSA §16-50j-40, neither GU nor the Council is required to provide notice to the state agencies listed in CGS §16-50j(g) when a petition for a declaratory ruling for modifications to an *existing facility* is submitted to the Council.

² *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007)

The purpose of the Project is to improve system reliability by upgrading the 400 Line terminals within the substation from 69-kV to 115-kV in order to operate the 400 Line at 115-kV. Conversion of the 400 Line to 115-kV was approved by the Council on February 26, 2021 in GU Petition 1436. It operates at 69-kV but will operate at 115-kV once the proposed Project is completed.³

The Project would enhance reliability by allowing for automated switching to recover lines taken out of service by weather or system issues, options for switching necessary for maintenance and testing at the 33-kV level in the Buddington Substation, options for delivery to other parts of the Eversource transmission system through the addition of tie breakers on the 400 Line 115-kV terminal, and the installation of modern circuit breakers and protection and controls equipment.

Municipal and Abutter Notice

Prior to the filing of the Petition with the Council, GU contacted the Groton Town Manager to discuss the Project. On July 27, 2022, GU mailed letters describing the Project to the Town, which is the only abutting property owner. No comments from the Town were received.

Existing Project Area

Buddington Substation is a 69-kV to 115-kV substation on property owned by GU located at the corner of Buddington Road and Gold Star Highway (Route 184) in Groton. The parcel is zoned commercial and abuts other commercial properties. The nearest residential property is located approximately 167 feet to the northeast, across Route 184.

The substation was constructed in 1950 and is enclosed by a six-foot tall chain link fence. Three transmission lines terminate at the substation; the 400 Line (currently operates at 69-kV), the 1280 Line (115-kV), and the 1410 line (115-kV).

Proposed Project

The project is being proposed to implement part of a solution determined by ISO New England, Inc. (ISO-NE) to address low and high voltage criteria violations in the Mystic to Kent County, Rhode Island transmission line corridor identified by the 2027 Eastern Connecticut Reliability Needs Assessment and the Eastern Connecticut 2029 Solutions Study. To facilitate operation of the 400 Line at 115-kV, GU would convert the 400 Line terminal equipment at the substation from 69-kV operation to 115-kV operation. Once the work is complete, the 400 Line would be redesignated as the 1911 Line from the Eversource/CMEEC operational boundary (Ledyard-Groton town line) to Buddington Substation. The 400 Line designation would remain in Eversource's operational territory.

The Project is identified in the June 2022 ISO-NE Regional System Plan Project List.

All work will occur within the existing substation footprint. No expansion of the substation footprint is necessary. No reconductoring or transmission structure work is required on the 400 Line outside of the substation. The Petition 1436 project, which includes upgrades to the 400 Line, is under construction with anticipated completion in November 2022.

The following equipment modifications are proposed:

- a) Partially demolish and rebuild the existing 400 Line terminal to operate at 115-kV;

³ Conversion of the 400 Line to 115-kV at Eversource's Gales Ferry Substation was approved by the Council on May 13, 2022 in Petition 1484.

- b) Install a new 115-kV bus;
- c) Install a new 115-kV circuit breaker;
- d) Relocate the existing 400 Line transformer within the substation on a new concrete pad;
- e) Reconnection of the high voltage tap on the 1X transformer from 67-kV to 110-kV; and
- f) Re-termination of the 400 Line to the new 115-kV bus.

The total estimated cost of the Project is approximately \$5.8M. The Project is a Pool Transmission Facility (PTF)⁴ for which the entire cost is eligible for regionalization.

Project Construction and Work Procedures

GU would utilize the existing substation access drive extending from Buddington Road. GU would stage materials on the substation property. Equipment, components and hardware would be delivered to the substation using flatbed trucks. New substation components would be either pre-assembled or assembled on-site prior to installation. All construction and site grading to establish new foundations would occur within the existing fenced area.

Environmental Effects and Mitigation Measures

Construction would conform to the 2002 *Connecticut Guidelines for Soil Erosion and Sediment Control* and GU's Best Management Practices. Erosion and sediment control (E&S control) measures include hay bales/silt fencing around the perimeter of the fenced substation area. A gravel anti-tracking mat would be installed at the entrance to the substation. Any soil disturbed by the Project would be seeded for permanent stabilization prior to removal of E&S controls. Temporary E&S control measures would remain in place until Project work is complete and all disturbed areas have been stabilized.

All work would be within the existing substation fence. No tree clearing is required.

There are no wetlands or 100-year flood zones within 100 feet of the existing substation fence.

The Project is not located within a DEEP-designated Aquifer Protection Area.

Soil cores were collected in areas of foundation installation. Excavated soils will be backfilled. Any excess soil would be temporarily stockpiled and sampled for contaminants. Soil that is reusable will be stored on site for use as fill in future projects. Soils that area characterized as hazardous will be removed and disposed of in accordance with applicable regulations.

The substation is within a DEEP NDDDB area for the spotted turtle. Habitat for the turtle consists of small streams and associated forested wetlands. DEEP issued a NDDDB determination for the Petition 1436 Project on August 20, 2020 which included the Buddington Substation area. DEEP provided notice to GU on June 9, 2022 stating that an updated NDDDB determination is not required. All work would occur within a fenced substation and no adverse effect to the turtle is expected.

The substation is within a New England Cottontail (NEC) Focus Area. All work would be within the substation fence and no impact to NEC habitat is expected.

A Phase 1A Cultural Resources Assessment of previously recorded archaeological and historical resources was completed as part of Petition 1436 included the Buddington Substation area. No National or State Register of Historic Places properties/districts are within 500 feet of the substation.

⁴ ISO-NE defines Pool Transmission Facility as 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 visual impact of the project would be minimal as the site has been used as a substation since 1950. The new equipment within the substation is similar in appearance to existing substation equipment that will be replaced. The tallest new structure within the substation is 85 feet above ground level, the same height as adjacent, existing A-frame structures within the substation.

Public Safety

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.

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

Construction Schedule

Construction would begin in late 2022 with completion by July 2023. Normal work hours would be Monday through Saturday from 7:00 AM to 7:00 PM. Sunday work hours may be necessary to maintain the construction schedule or to perform work during scheduled outages.

Conclusion

If approved, staff recommends the following condition:

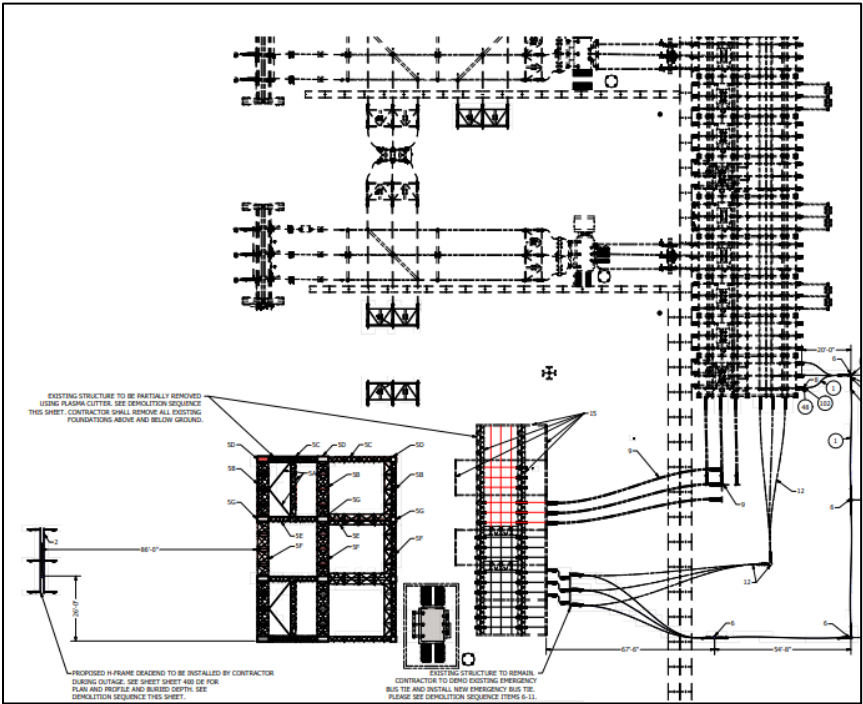
1. Approval of any project changes be delegated to Council staff.

Site Location



* Work is within the substation permitter only. Transmission structures #144 and #7453 are associated with Petition 1436.

Existing Configuration



Proposed Configuration

