



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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April 12, 2018

Kathleen M. Shanley
Eversource Energy
P.O. Box 270
Hartford, CT 06141-0270

RE: **DOCKET NO. 461A** - Eversource Energy Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a 115-kilovolt (kV) bulk substation located at 290 Railroad Avenue, Greenwich, Connecticut, and two 115-kV underground transmission circuits extending approximately 2.3 miles between the proposed substation and the existing Cos Cob Substation, Greenwich, Connecticut, and related substation improvements. Cos Cob Substation Modifications Development and Management Plan.

Dear Ms. Shanley:


At a public meeting of the Connecticut Siting Council (Council) held on April 12, 2018, the Council considered and approved the partial Development and Management Plan (D&M Plan) submitted for this project on February 20, 2018 specific to the Cos Cob Substation Modifications portion of the Greenwich Substation and Line Project with the condition that the specific location of the concrete washout station be identified prior to the commencement of concrete work.

This approval applies only to the partial D&M Plan submitted on February 20, 2018 and supplemental information dated April 3, 2018 and April 5, 2018. Requests for any changes to the partial D&M Plan shall be approved by Council staff in accordance RCSA §16-50j-62(b). Furthermore, the Certificate Holder is responsible for reporting requirements pursuant to Regulations of Connecticut State Agencies Section 16-50j-62.

Please be advised that changes and deviations from this plan are enforceable under the provisions of the Connecticut General Statutes § 16-50u. Enclosed is a copy of the staff report on this partial D&M Plan, dated April 12, 2018.

Thank you for your attention and cooperation.

Sincerely,


Robert Stein
Chairman

RS/RDM/laf

Enclosure: Staff Report, dated April 12, 2018

c: Parties and Intervenors



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Docket No. 461A Eversource Energy Partial Development and Management Plan

Cos Cob Substation Modifications Sound Shore Drive, Greenwich

**Staff Report
April 12, 2018**

Introduction

On February 20, 2018, Eversource Energy (Eversource) submitted to the Connecticut Siting Council (Council) a partial Development and Management (D&M) Plan specifically related to the Cos Cob Substation Modifications for the Greenwich Substation and Line Project (GSLP) that was approved by the Council on November 14, 2017. According to the Council's Decision and Order (D&O) Item Number 3, Eversource is to submit two D&M Plans for the GSLP, one specific to the new Greenwich Substation and other substation improvements, and one specific to the new transmission line. Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-60, a copy of which is attached, a partial or full D&M Plan shall be prepared for any proposed energy facility for which the Council issued a Certificate of Environmental Compatibility and Public Need. The submitted partial D&M Plan only pertains to improvements at the Cos Cob Substation off Sound Shore Drive in Greenwich. The submitted partial D&M Plan (Vol. 1, Part 1) does not include any construction details for the new Greenwich Substation or the new transmission line. A D&M Plan specific to those project components will be submitted at a later date.

Municipal and Other Public Consultations

Prior to submission of the partial D&M Plan, Eversource consulted with representatives of the Town of Greenwich (Town) and responded to questions and comments about the project. Eversource filed a copy of the partial D&M with the Town and all parties and intervenors listed on the service list on February 20, 2018. The Town submitted comments to the Council and the service list on March 16, 2018.

The Council submitted interrogatories to obtain additional project information on March 19, 2018. Eversource submitted responses to the interrogatories on April 3, and April 5, 2018.

Partial D&M Plan – Cos Cob Substation Modifications

The D&O requires the following information to be included in the D&M Plan:

- a. **A detailed site plan showing the placement of all substation equipment, structures, and buildings within the substation perimeter, access, provisions for storm water management and transformer oil containment and fencing;**

The Cos Cob Substation is located off Sound Shore Drive, south of the Metro-North Railroad. A separate substation operated by Metro-North Railroad is located immediately west of the substation. Both substations are bound by Cos Cob Park to the east and south. The Cos Cob Substation expansion project will remain on Eversource and State of Connecticut property and would not directly affect recreational facilities in Cos Cob Park. The substation would be expanded by approximately 0.8 acre to the south, on property permanently leased from the State of Connecticut.

After the Council's November 14, 2017 approval, Eversource modified the final design of the 1020 and 1730 terminals to use a standard circuit breaker design instead of a PassM0 circuit breaker design due to engineering difficulties associated with deployment of this technology at this location. Although the revised circuit breaker layout requires additional space for buswork, the revised layout can be accommodated within the previously proposed substation expansion area. There will be no increase in total project cost.

Cos Cob Substation modifications include, but are not limited to, the construction of the new 1703 line terminal position and the reconstruction of the 1020 terminal position. New equipment includes the following: two 115-kV circuit breakers and associated foundations; five manual disconnect switches and associated structures and foundations; two motor driven disconnect switches and associated structures and foundations, six potential transformers and associated structures and foundations; two sets of cable termination structures and foundations, new bus work, one new monopole line structure (90 feet tall), one new H-frame line structure (60 feet tall), underground conduits and duct banks, and new control and communication equipment.

Existing equipment to be removed to accommodate the new line termination equipment includes two steel A-frame structures, one wood H-frame structure, bus sections, one disconnect switch, one line trap, one wood pole and one lattice structure.

The construction area will be enclosed by temporary six-foot tall chain link fence with signage indicating a construction zone. A four-foot tall "snow fence" may be installed to provide a visual barrier between existing substation features within the construction zone. An existing six-foot tall chain link fence is located along the Cos Cob Park boundary that will serve as an additional barrier to the construction area.

The expansion area will be graded to create a level surface approximately 38 to 40 feet above mean sea level (amsl). Retaining walls will be installed along the southeast and southwest edge of the substation expansion area. A third retaining wall will be installed along the north edge of the existing access road that leads to the east access gate.

Once completed, the substation area will be surfaced with a pervious cover of crushed rock, allowing rainwater to infiltrate into underlying soils. Two permanent subsurface stormwater retention areas will be constructed in the south (64.9 cubic yards) and southeast (187.4 cubic yards) portion of the expansion area to provide additional infiltration areas. The retention areas will be composed of coarse gravel, allowing for stormwater infiltration into the surrounding soil. The retention areas have been designed in accordance with the Town of Greenwich Drainage Manual and the Standard Handbook for Civil Engineers.

A new paved access drive will be constructed on the north side of the substation expansion area. The access drive will slope downgradient to the east to an approximate elevation of 31.5 feet amsl. A curb along the south edge of the paved driveway will direct stormwater to a drywell at the base of the slope. The drywell, 10 feet in diameter and 5 feet deep, was designed in accordance with the Town of Greenwich Drainage Manual and the Standard Handbook for Civil Engineers.

Eversource will install a permanent fence around the substation expansion area consisting of an eight-foot high chain link fence of 1.25-inch mesh, topped with three strands of barbed wire. Along the southern boundary, the permanent fence will be located approximately 6 feet to 7.5 feet from the existing Cos Cob Park fence.

Potential transformers will be installed as part of the substation modification project in an elevated position, similar to that of an overhead distribution service transformer. Each transformer contains approximately 31 gallons of transformer oil contained within the unit housing.

Substation lighting will be installed within the substation expansion area for use on an as needed basis and will be installed in a downward direction to minimize illumination on adjacent property. Seven 250 watt high pressure sodium lights and one 250 watt LED floodlight fixture will be installed. This proposed lighting scheme is similar to the existing substation lighting and would only be used during non-daylight work at the substation.

- b. A detailed site plan showing the underground transmission line route, splice vaults, traffic management plan, identification of pipe jacking sites, provisions for underground cable protection, substation improvements, and equipment and material staging areas;**

For this section, only a traffic management description applies. Equipment and materials staging information is provided in **section e**.

Primary construction access to the substation construction area will use an existing paved access drive extending south through the existing substation from the Cos Cob Park/Cos Cob Substation main access driveway. An existing east access gate is used by Metro North Railroad and will not be used for this project. Peak construction activity will occur from June through September 2018. During this timeframe there will be an increased amount of truck traffic for removing spoils, pouring concrete, and delivering materials.

To minimize the potential for traffic issues during construction, Eversource will consult with Town representatives, as necessary, to implement access and traffic control measures. Such measures will include procedures for safe ingress and egress of construction equipment and other vehicles. Signs will be erected to indicate active construction. If necessary, flaggers or police personnel will be used to direct traffic.

Construction truck traffic to Cos Cob Substation will be confined to Sound Shore Drive and the I-95 exit areas off Indian Field Road. Material delivery from the pole yard laydown area at 281 Railroad Avenue will generally use smaller, single axle flat-bed trucks or pick-up trucks following Railroad Avenue to Arch Street to the I-95 exit area(s) off Indian Field Road and Sound Shore Drive. Eversource will prohibit the construction vehicles from traversing through Bruce Park.

- c. An erosion and sediment control plan that includes provision for any areas for the temporary storage of fill materials and is consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*, as amended;**

The construction area will be enclosed by erosion and sedimentation (E&S) control barriers consisting of staked hay bales and erosion control filter fabric siltation fencing. Hay bales or silt fencing will be used along the southern, southeastern and eastern perimeter of the project area. Hay bales will be used along the western project boundary. No siltation barriers are specified for the southwestern project boundary since adjacent areas beyond the project perimeter are upgradient, and thus, stormwater flows will be entering the site from higher terrain.

During construction, Eversource will implement fugitive dust emission controls during dry and/or windy conditions or during operations that can create dust such as hydraulic hammering of bedrock. Preventative dust control measures include use of mulch, temporary vegetative covers, and moistening exposed soil areas. Active dust suppression will include fine water spray near dust sources and vacuum sweepers on paved areas to remove accumulated dirt. A tracking pad with a tire wash area will be established at the construction entrance area.

A concrete truck wash-out station will be established at the site based on specific field conditions. The washout area will be established using E&S controls that conform to the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*, and Eversource's *Best Management Practices Manual for Connecticut and Massachusetts Sept. 2016*. Excess concrete will be removed for disposal from the wash out area on a daily basis.

Eversource anticipates that excavated soils will need to be managed as polluted or contaminated and thus all excavated soils will be live-loaded, covered and transported to a licensed third-party location outside of Greenwich for temporary staging and disposal characterization. Eversource will obtain a CT DEEP Contaminated Soil Transfer and Staging General Permit, if necessary.

The depth to groundwater at the site is about 20 feet. If groundwater is encountered during excavation and requires management, Eversource will pump the groundwater directly into a containment truck for appropriate off-site disposal.

The D&M Plan contains provisions for winter work including work procedures for snow removal and deicing.

d. A spill prevention and countermeasures plan;

Eversource's contractors working at the Substation will be responsible for following Eversource's BMPs for spill management and containment. BMP's include provision for vehicles and equipment re-fueling at designated locations, maintaining spill kits on-site that have emergency clean up and spill containment materials (absorbent socks and/or pillows and wipes, temporary disposal bags) and reporting procedures to the on-site construction manager and DEEP, if applicable.

e. Identification of areas for staging and equipment lay down, field office trailers, sanitary facilities and parking;

Eversource would use both the existing substation property and the pole yard at 281 Railroad Avenue as staging and material storage areas. At the Cos Cob Substation property, an approximate 11,000 square-foot area located in the southeast corner of the Metro North Railroad portion of the substation can be used as a temporary staging area for parking and storage of construction equipment and materials.

A temporary fence will be installed around the perimeter of the staging area. Temporary construction support services such as portable toilets and office trailers will be located at the staging areas. Once the Project is complete, all construction related equipment and materials will be removed from the staging areas.

f. Details for the Indian Harbor crossing including related temporary and permanent construction impacts and methods to reduce such impacts;

This item does not apply to the Cos Cob Substation Modifications portion of the Project.

g. A vegetative clearing/trimming plan;

All vegetation will be removed within the construction zone. Along the west side of the substation expansion area, existing vegetation outside of the work limits will remain. In this area, trees on Eversource property would be trimmed as necessary to prevent limbs from overhanging into the substation perimeter.

h. Restoration plan for disturbed areas and roads;

This item does not apply to the Cos Cob Substation Modifications portion of the Project.

i. A construction schedule, including construction hours;

Cos Cob Substation modification work will occur over an 18-24 month period, beginning in the second quarter of 2018. Four separate outage seasons are anticipated: Spring 2018, Fall 2018, Spring 2019 and Fall 2019. In general, with some exceptions, noisy construction work, not including the arrival or departure of work personnel, will occur between the hours of 7:00 AM and 6:00 PM, five days per week (Monday through Friday) and an 8-hour period (between 9:00 AM and 5:00 PM) on Saturdays. However, non-standard work hours may be necessary due to outage-related time constraints. Work during non-standard work hours will include, but not be limited to, work performed during scheduled outages and electrical work within control structures. Work during outages may require 24-hour work periods or on Sundays. Any noise related to construction is exempt per §22a-69-1.8 of the DEEP Noise Control Regulations. Eversource will notify the Council prior to initiating any noise generating work outside of approved work hours.

Prior to the commencement of work, Eversource will notify abutting property owners by letter and through door to door outreach. Outreach will continue through the duration of the project. A website with updated progress reports and contact information will also be established.

j. A blasting plan, if necessary;

Any bedrock encountered during excavation will be removed by mechanical means. No blasting will occur.

k. EMF Monitoring Plan;

Eversource has submitted a pre and post EMF Monitoring Plan. Post construction EMF measurements at Cos Cob Substation will include locations along the north, south and east fence lines.

l. Submission of monthly construction progress reports.

In accordance with RCSA §16-50j-62, Eversource will submit monthly construction progress reports that will summarize the status of Project construction. The reports will identify modifications to the approved D&M Plan, including both minor changes and significant changes that require Council staff approval.

The partial D&M Plan (Vol. 1, Part 1) complies with the requirements of RCSA § 16-50j-60 to 16-50j-62 and is consistent with the Council's D&O dated November 14, 2017. Council staff recommends approval of the partial D&M Plan (Vol. 1, Part 1), specific to the Cos Cob Substation Modifications.

Sec. 16-50j-60. Requirements for a Development and Management Plan (D&M Plan)

(a) Purpose.

The Council may require the preparation of full or partial Development and Management Plans (D&M Plans) for proposed energy facilities, modifications to existing facilities, or where the preparation of such a plan would help significantly in balancing the need for adequate and reliable utility services at the lowest reasonable cost to consumers with the need to protect the environment and ecology of the state.

(b) When required.

A partial or full D&M plan shall be prepared in accordance with this regulation and shall include the information described in Sections 16-50j-61 to 16-50j-62, inclusive, of the Regulations of Connecticut State Agencies, for any proposed energy facility for which the Council issues a certificate of environmental compatibility and public need, except where the Council provides otherwise at the time it issues the certificate. Relevant information in the Council's record may be referenced.

(c) Procedure for preparation.

The D&M plan shall be prepared by the certificate holder or the owner or operator of the proposed facility or modification to an existing facility. The preparer may consult with the staff of the Council to prepare the D&M plan.

(d) Timing of plan.

The D&M plan shall be submitted to the Council in one or more sections, and the Council shall approve, modify, or disapprove each section of the plan not later than 60 days after receipt of it. If the Council does not act to approve, modify or disapprove the plan or a section thereof within 60 days after receipt of it, the plan shall be deemed approved. Except as otherwise authorized by the Council, no clearing or construction shall begin prior to approval of applicable sections of the D&M plan by the Council.

(Effective March 7, 1989; Amended September 7, 2012)