



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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CERTIFIED MAIL RETURN RECEIPT REQUESTED

April 20, 2015

John R. Morissette
Manager, Transmission Siting & Permitting
Eversource Energy
P.O. Box 270
Hartford, CT 06141-0270

RE: **PETITION NO. 1140** – Eversource Energy petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed reconductoring of a portion of an existing 115-kV transmission line extending from Barbour Hill Substation in South Windsor to Manchester Substation in Manchester, Connecticut and modifications to Barbour Hill Substation and Manchester Substation.

Dear Mr. Morissette:

At a public meeting held on April 16, 2015, 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:

- Landscaping at Barbour Hill Substation through a landscaping plan to be submitted to the Council;
- Eversource shall ensure adequate security measures are installed for the project, including material used for equipment enclosures;
- 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.
- 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.
- 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 February 27, 2015.

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

Very truly yours,



Robert Stein
Chairman

RS/CMW/lm

Enclosure: Staff Report dated April 16, 2015

- c: The Honorable Jay Moran, Mayor, Town of Manchester
- Scott A. Shanley, General Manager, Town of Manchester
- James Davis, Zoning Enforcement Officer, Town of Manchester
- The Honorable M. Saud Anwar, Mayor, Town of South Windsor
- Matthew B. Galligan, Town Manager, Town of South Windsor
- Michele R. Lipe, AICP, Town Planner, Town of South Windsor



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Petition No. 1140

The Connecticut Light and Power Company d/b/a Eversource Energy Manchester and South Windsor, Connecticut

Staff Report

April 16, 2015

On February 27, 2015, the Connecticut Siting Council (Council) received a petition from The Connecticut Light and Power Company doing business as Eversource Energy (Eversource) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for proposed modifications to Manchester Substation in Manchester, Barbour Hill Substation in South Windsor, and the 1763 Line extending between the two substations. Council members Phil Ashton and Daniel Lynch and Council staff member Christina Walsh conducted a field review of the proposed project on March 30, 2015. John Morissette, Ervin Qrya, Paul Melzen, and Justin Adams represented Eversource at the field review.

The proposed project is required to eliminate potential transmission system thermal and voltage criteria violations that would be caused by an over-lapping loss of two of the four transmission elements that serve the Manchester-Barbour Hill area.

The project would consist of three components: modifications to Barbour Hill Substation located at 124 Barber Hill Road in South Windsor; modifications to Manchester Substation located at 250 Olcott Street in Manchester; and the replacement of conductors of the 115-kV 1763 Line in the existing Eversource right-of-way (ROW) in South Windsor and Manchester.

Barbour Hill Substation is a 345-kV to 115-kV bulk substation that currently contains three 345- to 115-kV single-phase 200 Megavolt Ampere (MVA) autotransformers, a spare 345- to 115-kV single-phase 200 MVA autotransformer, two 345-kV transmission lines, six 115-kV transmission lines, and two 23-kV distribution circuits. Eversource proposes modifications to Barbour Hill Substation that would include:

- a) the installation of three new 345- to 115-kV single-phase autotransformers with vibration isolation pads;
- b) the installation of one 345-kV circuit breaker and two 115-kV circuit breakers;
- c) the installation of one 345-kV disconnect switch, five 115-kV disconnect switches and the removal of one 115-kV disconnect switch;
- d) the installation of two 345-kV motor-operated disconnect switches;
- e) the installation of six 345-kV coupling capacitor voltage transformers;
- f) the installation of two 345-kV strain-bus structures and strain bus;
- g) the installation of three 115-kV potential transformers;
- h) the installation of six 60-foot lightning masts;
- i) the installation of one 345-kV A-frame terminal structure and the relocation of the 3557 Line from the existing structure to this new structure;
- j) the relocation of one 345- to 115-kV spare autotransformer with new foundation and oil containment system;
- k) the relocation of a distribution line supplying power to the substation;
- l) the removal of existing structure 8529 on the 3557 Line and replacement with a new 345-kV self-supported three-pole steel structure on drilled shaft foundations;
- m) the removal of two existing 60-foot lightning masts and one existing 45-foot lightning mast; and
- n) the installation of foundations for various equipment and structures, underground conduits, wave trap, lightning arrestors, mounting and support beams, relay/controls and cables for new equipment.



CONNECTICUT SITING COUNCIL

Affirmative Action / Equal Opportunity Employer

Manchester Substation is a 345- to 115-kV bulk substation with three 345- to 115-kV transformers, five 345-kV transmission lines, six 115-kV transmission lines and twelve 23-kV distribution circuits. Eversource proposes modifications to Manchester Substation that would include:

- a) the relocation of one 345-kV circuit breaker next to its existing location to create adequate space for the installation of an additional 345-kV circuit breaker on a new foundation; and
- b) the installation of one battery control enclosure on new foundation.

The reconductoring of the 1763 Line would include the replacement of 795-kcmil 45/7 aluminum core steel reinforced conductor with 795-kcmil 26/7 aluminum conductor steel supported conductor for approximately eight miles supported on 74 existing transmission structures within Eversource's ROW. The existing structures are double-circuit lattice towers from Manchester Substation to Structure 6273 and double-circuit H-frame structures from Structure 6272 to Structure 6220D, which is a steel transition monopole on Eversource's property. This portion of the project would also include the replacement of the underground 2000-kcmil copper ethylene propylene rubber cable with 3500-kcmil copper cross-linked polyethylene copper cable from Structure 6220D to the termination structure within Barbour Hill Substation.

During construction, Eversource would evaluate the existing transmission structures to ensure that their structural integrity complies with its storm hardening requirements. To the extent any components of the transmission structures are damaged, those portions would be replaced during the reconductoring portion of the project.

Sound levels at the property lines of both substations would continue to meet state and local noise ordinances. There would be no measurable change to sound levels along the transmission corridor following reconductoring.

The proposed equipment within each of the substations would be no taller than existing substation equipment and would be similar in appearance. There would be no expansion of the fenced areas of either the Barbour Hill or Manchester Substations.

Both Barbour Hill and Manchester Substations have existing low level lighting for security. Additional low level lighting may be added in the area of new equipment installations. Other lighting may be added to allow for night work under abnormal or emergency conditions.

Existing access roads would be used to access transmission structures for reconductoring. However, short spurs would be required to access 18 structures. The spur lengths range from approximately 50 to 300 feet. Access to four additional structures would require construction matting to the structure from local roads.

Construction at the existing transmission structures would require construction mats in wetlands and/or gravel in upland areas to create an approximately 65-foot by 65-foot level area. Conductor pull pads require an approximately 65-foot by 150-foot area using construction mats in wetland areas and gravel in upland areas.

Clearing associated with the proposed reconductoring would be contained within the existing right-of-way and would be similar to routine vegetation management and structure maintenance. Additional clearing would be needed to clear overgrowth at the base of the existing structures, work pad and conductor pull pad locations; and to enable the construction of spur access roads to existing structure locations.

Within the reconductoring portion of the ROW several wetland systems and watercourses were identified. No excavation or tree clearing would occur within wetlands or watercourses. Potential vernal pools were identified, which would be confirmed in a survey in the spring of 2015. If they are confirmed as vernal pools, Eversource would take the following precautions to protect these resources:

- a) No matting would be installed within a vernal pool area, and no permanent alteration of habitat would occur within 100 feet of the vernal pool boundary.
- b) No tree clearing or grading in upland areas would occur within 750 feet of a vernal pool.
- c) The appropriate measures would be implemented to ensure there are no impediments to amphibian migration into and out of vernal pools.
- d) Erosion and sediment controls would be installed around work pad areas and along access roads to minimize the potential for sediment deposition into wetlands. Such controls would be removed after final site stabilization.

Temporary wetland impacts would be associated with the installation of mats for access to structures within the existing maintained ROW. No in-stream work would be necessary as a temporary bridge would span Plum Gulley Brook to access structures.

State-listed endangered, threatened, or special concern species were identified in the area of the reconductoring. While Eversource would not list the names of those species due to a data-sharing agreement with the Connecticut Department of Energy and Environmental Protection (CT DEEP), it agrees to comply with the recommendations of CT DEEP.

A portion of the project would fall within a CT DEEP mapped critical habitat area associated with the Hockanum River. No tree clearing would occur within this habitat area and construction activities would occur within the maintained ROW or an existing off-ROW access road. The proposed project is not expected to impact the critical habitat area.

Erosion and sedimentation (E&S) control measures would be installed in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* and Eversource's best management practices. Temporary E&S controls would remain in place until construction is complete and all disturbed areas are stabilized.

An archaeological assessment of the reconductoring portion of the project identified areas of moderate to high potential for archaeological sensitivity. Eversource would use construction matting to avoid or mitigate ground disturbance in these areas. The substation areas were not assessed for archaeological or historical significance because the areas were previously disturbed by construction.

Two municipal parks and several Town of South Windsor Open Space parcels exist along the project route. Additionally, a portion of the reconductoring route is along the Hockanum River Trail. Eversource would minimize impact to these areas.

Eversource proposes a staging area on its own property at 653 Nutmeg Road N in South Windsor, which is an industrially-zoned parcel. The staging area would be used to store construction materials, equipment, tools, and supplies for the project. E&S controls would be installed at the staging area, as necessary, and maintained until construction completion.

Construction hours would typically occur Monday through Saturday from 7:00 a.m. to 7:00 p.m. Construction is expected to begin in spring of 2015 and be completed during December 2016.

Eversource has consulted with the towns of Manchester and South Windsor and provided notice to all property owners that own land abutting the ROW or either substation. The Council has received comments from several property owners in the area of Barbour Hill Substation. Nearby property owners are concerned about noise, visibility, lighting and impact on property values. Eversource met with concerned residents on March 27, 2015.

Council staff recommends approval of the project with the following conditions:

1. Landscaping at Barbour Hill Substation through a landscaping plan to be submitted to the Council;
and
2. Eversource shall ensure adequate security measures are installed for the project, including material used for equipment enclosures.