



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

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### CERTIFIED MAIL RETURN RECEIPT REQUESTED

February 2, 2018

Kathleen M. Shanley  
Eversource Energy  
56 Prospect Street  
P.O. Box 270  
Hartford, CT 06103

RE: **PETITION NO. 1337** - The Connecticut Light and Power Company d/b/a Eversource Energy petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed Stepstone to Green Hill Substation Upgrade Project that includes replacement of approximately 5.6 miles of its existing No. 1508 115-kilovolt (kV) electric transmission line structures within existing Eversource electric transmission line right of way between Stepstone Substation located at 50 Stepstone Road, Guilford, Connecticut and Green Hill Substation located at 775 Green Hill Road, Madison, Connecticut, and related electric transmission line structure improvements.

Dear Ms. Shanley:

At a public meeting held on February 1, 2018, 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:

1. Use of Silt socks or comparable material in place of silt fencing to demarcate the line of construction and prevent migration of sediment or construction materials into wetlands and watercourses;
2. Approval of any minor project changes and additional staging areas be delegated to Council staff;
3. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable;
4. Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, and the Town of Guilford;
5. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;

6. 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;
7. 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; and
8. 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.

The Council recommends Eversource consider the feasibility of shifting Structure No. 5924 to the Southwest, to the extent practicable, to avoid wetland disturbance. 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 November 21, 2017, and additional information received January 3, 2018.

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

Sincerely,

Handwritten signature of Robert Stein in black ink, with the initials "HAB" written in the upper right corner of the signature.

Robert Stein  
Chairman

RS/FOC/bm

Enclosure: Staff Report dated February 1, 2018

- c: The Honorable Matthew T. Hoey III, First Selectman, Town of Guilford  
George Kral, Town Planner, Town of Guilford  
Regina Reid, Zoning Enforcement Officer, Town of Guilford  
The Honorable Thomas Banisch, First Selectman, Town of Madison  
David Anderson, Town Planner, Town of Madison



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### Petition No. 1337

### The Connecticut Light and Power Company d/b/a Eversource Energy Madison and Guilford, Connecticut

#### Staff Report

February 1, 2018

#### Introduction

On November 21, 2017, 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 Stepstone to Green Hill Substation Upgrade Project that includes replacement of approximately 5.6 miles of its existing No. 1508 115-kilovolt (kV) electric transmission line (1508 Line) structures within existing Eversource electric transmission line right of way (ROW) between Stepstone Substation located at 50 Stepstone Road, Guilford, Connecticut and Green Hill Substation located at 775 Green Hill Road, Madison, Connecticut, and related electric transmission line structure improvements. Council member Larry Levesque and Council staff member Fred Cunliffe conducted a field review of the proposed project on December 13, 2017. Helen Taylor, Joel Szarkowicz, Ervin Qyra and Liz Hale for Eversource, Matt Davison of Davison Environmental (on behalf of Eversource) and Clint Haverkamp of the Guilford Fire Department attended the field review.

The Council issued interrogatories to Eversource on December 14, 2017. On January 3, 2018, the Petitioner submitted responses to the Council's first set of interrogatories. On January 18, 2018, pursuant to Connecticut General Statutes (CGS) §4-176(e) of the Uniform Administrative Procedure Act (UAPA), which requires an administrative agency to take action on a petition within 60 days of receipt, the Council voted to set the date by which to render a decision on the above-referenced petition by May 18, 2018. May 18, 2018, is the statutorily-mandated 180-day decision deadline for this petition under CGS §4-176(i).

The purpose of the project is to replace all but one of the structures along approximately 5.6 miles of the 115-kV 1508 Line, located entirely within the ROW between Stepstone Substation, in Guilford and Green Hill Substation, in Madison. The 1508 Line was originally constructed in 1982 on 59 single-circuit wood structures with laminated wood arms and two steel structures. Recent inspections found that structure tops and the laminated wood arms of 58 wood monopole structures and one three-pole wood angle structure are in need of replacement due to deterioration.

In addition, it was found that the original design load assumptions of the existing structures applied when the line was constructed in 1982 were incorrect and do not meet the design requirements of the 1981 edition of the National Electric Safety Code ("NESC"). As a result, Eversource is proposing to also include replacement of the two existing steel monopole structures along with the wood structures. Structure 5902 (previously a wood structure) was replaced with a steel structure in 2009 (Council Docket No. 326) and would not be replaced.

Details of the Project scope would comply with the 2017 NESC and be as follows:

- a) Replacement of 58 existing single-circuit wood monopole structures with 58 single circuit weathering steel monopole structures,

- b) Replacement of one existing wood single-circuit three-pole structure (structure 5926) with one three-pole weathering steel structure,
- c) Replacement of two existing single-circuit steel monopole structures (painted green) with two single-circuit weathering steel monopole structures,
- d) Replacement of the existing 7#8 Alumoweld ground wire with two fiber optic ground wire ("OPGW") along the 1508 Line,
- e) Installation of lightning arresters on every third structure, and
- f) The existing 115-kV 795 kcmil conductors would be relocated to the new structures.

The proposed project is identified on the ISO-NE Regional System Plan Project List-October 2017 Update.

### Construction Methods

Eversource would be storing equipment and materials at the Stepstone Substation. Additional temporary staging areas would be selected from available parcels in the vicinity of the project area. Eversource would consult with local municipal officials and provide notice to the Council when additional staging areas are identified. An environmental review of each potential staging area would be completed and erosion and sedimentation controls (E&S Controls) would be used in accordance with Eversource's 2016 Best Management Practices Manual for Massachusetts and Connecticut (Eversource BMPs) at the staging areas.

Tree clearing within the existing ROW would result in a total forest conversion (to scrub-shrub or herbaceous habitat) area of approximately 1.7 acres. Converting forest to shrubland, or emergent vegetation along the transmission line ROW is expected to modify, but not adversely impact, habitat. No tree clearing is proposed in wetlands. Tree clearing is required, along with vegetation removal, to accommodate access road installation and improvements, work and pull pad installations. Eversource would conduct tree clearing and vegetation removal activities in accordance with its BMPs.

Following vegetation removal, E&S Controls would be installed in accordance with the 2002 *Connecticut Guidelines for Soil Erosion and Sediment Control* and Eversource BMPs. Typical E&S controls include, but are not limited to, the use of hay bales, silt fence, straw blankets, check dams, berms, swales, and sediment basins. Temporary E&S controls would remain in place until construction is complete and all disturbed areas are stabilized.

The project would utilize existing and new permanent and temporary access roads. Permanent access road installation and improvements would involve the placement of gravel and typically include removing vegetation growth and grading the area to a width of approximately 16 to 20 feet (with additional width needed at turning or passing locations). Access roads would typically be gravel. Access roads and work pads located within improved residential, commercial, or industrial areas would typically be removed and restored unless the property owner requests that they remain in place. However, construction mats would be used where access roads traverse streams or wetlands.

A typical (upland) installation of a work pad at a structure location begins with the removal of vegetation, if necessary. The typical work pad size is approximately 80 feet by 80 feet, but it varies according to site conditions on the ROW. If not already level, the work pad site would then be graded to create a level work area, and the upper three to six inches of topsoil would be removed and replaced with a filter and rock base. The topsoil would be temporarily stockpiled within the ROW, typically near the work pad.

The proposed structures would have direct-embedded foundations, except structure 5915, which would have a drilled shaft foundation. Replacement structure sections would be delivered to the individual structure locations using flat-bed trucks and assembled on-site using a crane and bucket trucks. After assembly, the area around the foundation would be backfilled with processed gravel.

The proposed structures would be located in-line with the existing structures, approximately 10-15 feet from the existing structure to be replaced, except for structures 5952, 5960, and 5961. Structure 5952 is proposed to be shifted away from a vernal pool. Structure 5960 would be located approximately 80 feet to the west from its existing location onto an adjacent property in order to mitigate impacts to a private driveway and a rock wall. Both affected property owners are in agreement with the new location. Structure 5961 would be relocated approximately 35 feet to the east onto Eversource property, due to the proximity of an existing private driveway.

Upon completion of structure installation, the existing conductors would be transferred over from the existing structures to the new replacement structures. Pullers, tensioners and helicopters will be used for the OPGW installation.

After the line is energized, the existing structures would be demolished and removed. Waste materials, such as structure components and any other construction debris would be disposed of in accordance with Eversource BMPs, applicable regulations and disposal facility policies.

ROW restoration activities would include the removal of construction debris, signs, flagging, and temporary fencing, as well as the removal of construction mats, pull pads and structure work pads that are designated for removal. Areas affected by construction would be re-graded as practical and stabilized using revegetation or other measures before removing temporary E&S Controls.

Eversource anticipates beginning construction during the winter of 2017/2018 and completing construction by summer of 2018. Normal construction hours would be Monday through Saturday 7:00 a.m. to 7:00 p.m. Sunday hours may be necessary due to unforeseen conditions such as inclement weather, outage constraints, and/or critical path activities.

### **Environmental Effects and Mitigation Measures**

In a letter to Eversource, the Connecticut Department of Energy and Environmental Protection's (DEEP) Natural Diversity Database (NDDB) identified State-listed endangered, threatened, or special-concern species in the vicinity of the proposed project area and provided recommendations for their protection. Eversource will adhere to DEEP's NDDB recommendations and any additional protection strategies that may be identified by DEEP.

The U.S. Fish & Wildlife Service's Information, Planning, and Consultation Service indicated that two federally threatened species, the northern long-eared bat ("NLEB") and red knot (a shorebird species), may be present in proximity to the Project area. The NLEB was also state-listed endangered in August 2015. Based on consultation between Eversource and CT DEEP regarding state-listed species, there are no known NLEB species occurrences or hibernacula in the vicinity of the Project area. Red knot utilizes shoreline habitat, which is not present within the Project area.

Heritage Consultants, LLC (Heritage) performed preliminary archaeological and historical resources assessment of the proposed project area. Heritage determined no state or National Register of Historic Places listed properties or historic districts are located within 500 feet of the centerline of the electric transmission line ROW in the Project area. However, Heritage's review recommended a Phase 1B cultural

resources reconnaissance survey (shovel testing) for areas of moderate to high potential for yielding intact archaeological deposits at 20 structure locations and associated access roads. Heritage completed ten of twenty shovel test pit locations at the time of filing the petition. Other test locations are situated on lands owned by the State of Connecticut. A Phase 1B survey of these locations could not proceed without Eversource obtaining permission from the State of Connecticut to complete the required survey. Eversource reported during the field review that the Phase 1B survey has been completed and no impact is expected to archaeological and historical resources.

A total of 24 wetlands were identified in or proximate to the project area. Permanent wetland impacts would be associated with the replacement of three existing structures—5950, 5952 and 5955—which are located in Wetland 22. The placement of these structures would result in approximately a total of 60 square feet of permanent wetland impacts. In order to minimize disturbance to wetlands, the existing wood structures would be cut approximately 10 inches above grade and removed. The pole butts would be left in place. Replacement Structure 5952 was not initially identified as a structure having permanent wetland impacts. This structure is proposed to be shifted, as mitigation to vernal pool impacts, and would remain in Wetland 22. The permanent wetland impact would be similar to the other two structures (20 square feet each).

Temporary wetland impacts would be associated with the use of construction mats for access roads and work pads. Such temporary impacts would involve a total area of approximately 1.28 acres. Eversource stated during the field review that it would submit Self-Verification Notification Forms to the U.S. Army Corps of Engineers once a construction contractor is selected. Any work within wetland systems would be conducted in accordance with Eversource BMPs.

Potential vernal pools were identified during wetland delineations conducted in 2016. Vernal pool surveys were performed March 2 and July 8, 2017 by Davison Environmental (DE). Vernal Pool 1 (VP1) is located in wetland 14 near structure 5929 in Guilford. This wetland has been subject to historic disturbance associated with ROW access road construction, which has altered its hydrology and likely contributed conditions which are suitable for vernal pool indicator species. Wood frogs were observed in this vernal pool. VP2 and VP3 are located near Structures 5951 and 5952 in Madison. These pools are cryptic and located within Wetland 22, a seasonally flooded wetland located within both the maintained ROW, and off-ROW forested areas. VP 3 contained abundant spotted salamander larvae, and recently metamorphosed wood frogs were found around the margins of the vernal pool.

Existing Structure 5929, its work pad and access to this structure directly abuts VP 1 on the south side. Existing access to Structures 5951 and 5952 are bordered by VP 2 to the west and VP 3 to the east. The three existing structures are located within the 100-foot Vernal Pool Envelope (VPE). The work pads for the replacement Structures 5951 and 5929 are within the VPE. DE has provided recommended best management practices (VP BMPs) to avoid or minimize impacts to the vernal pools. The VP BMPs include the following: during construction, work within vernal pool depressions will be avoided; temporary matting would be utilized for work pad construction, no new access shall be constructed or gravel fill deposited within the VPE; except in work pad locations, existing scrub-shrub vegetation within 25 feet of the vernal pool shall be maintained; E&S Controls shall be maintained along existing access and be designed in a manner that allows unencumbered amphibian access to the vernal pool; plastic netting shall not be used; and E&S Controls shall be removed upon final re-vegetation and stabilization of the ROW. In response to Council interrogatory no. 1, Eversource proposes to relocate Structure 5952 approximately 280 feet east from its existing location and eliminate Structure 5953. This alternative shift of the structure and work pad would be outside the VPE to VP 3 and also would not require tree clearing or a structure height increase.

Also, Eversource notes that, should work occur during the active vernal pool season (i.e. March through June), Eversource would implement measures to facilitate unencumbered amphibian access to and from the vernal pools such as silt fencing or elevated matting.

Nine watercourses and one unnamed pond are within the project area. Most of the watercourses within the project ROW would be avoided altogether. No new access road or work pad watercourse crossings are required. Two existing access road watercourse crossings will be utilized during construction – one stone (hardbottom) crossing of stream no. 3 between structures 5923 and 5924 and one culvert crossing of stream no. 4 along an off-ROW access road from Podunk Road.

One replacement structure is proposed to be located within a 100-year flood zone, and four replacement structures are proposed to be located within the 500-year flood zone. In addition, work activities and materials would be located within the 100-year flood zone at proposed structures 5916 and 5935. Eversource would utilize its BMPs to minimize any impacts in these areas including the use of construction mats for work pads to ensure that hydrology is not adversely affected. All construction mats would be removed after the Project is complete. Areas of disturbance would be promptly stabilized in order to minimize the potential for soil erosion and the discharge of sediment into nearby resource areas. Prior to significant storm events, Eversource will secure the construction mats to impede lateral movement during temporary flooding. In areas where gravel is used for access, grading and soil removal would occur prior to installation, to ensure no net increases in fill. Accordingly, the Project would have a de minimis effect on the flood storage capacity of the affected flood zones.

A review of the most recently (February 2017) updated Aquifer Protection Areas (“APA”) mapping maintained by the CT DEEP, indicates that a portion of Stepstone Substation is located within the DEEP-designated Pinewood Level A Aquifer Protection Area (APA), and portions of the project ROW in Guilford overlap a town designated Groundwater Protection District (GPD). Construction activities would conform to Eversource’s BMPs, as well as to other plans such as the Stormwater Pollution Control Plan and Spill Prevention Plan to protect the APA and GPD. For example, best practices for the proper storage, secondary containment and handling of diesel fuel, motor oil, grease and other lubricants, would be used to protect water quality within the APA and GPD. The project would not be located within a public water supply watershed, and no public supply reservoirs or public water supply wells are located within the proposed project area. Residences within the Project area are generally served by private water supply wells.

The electric and magnetic fields (EMF) in the transmission line ROW would be expected to remain unchanged. The maximum existing magnetic field level in the ROW is approximately 30.6 milligauss (mG). Post-construction, this would increase to approximately 31.3 mG under average annual load conditions. Thus, all projected magnetic field levels identified in Eversource’s EMF Analysis would remain far below the International Commission on Non-Ionizing Radiation Protection acceptable exposure level of 2,000 mG for the general public as recognized in the Council’s “Electric and Magnetic Field Best Management Practices for the Construction of Electric Transmission Lines in Connecticut.”

Noise associated with construction would be exempt per DEEP Noise Control Standards. After completion of the project, there would be no changes to the existing sound levels along the transmission corridor. Thus, the project would continue to comply with DEEP Noise Control Standards as applied to these facilities.

Existing 115-kV transmission structures along the 1508 Line range in height from 51 feet to 101 feet above ground level (agl). The replacement structures, except for eleven that would remain the same height, would range in height from 52 feet to 108 feet agl. All replacement transmission structures would utilize weathering steel which would weather/oxidize to a red/brown color, similar to the wooden structure to be removed. While maximum structure heights would increase, the weathering steel color would fit in with the character of the surrounding wooded area to reduce visual impacts and/or maintain aesthetics.

#### **Municipal and abutter notice**

Eversource consulted with the Towns of Guilford and Madison collectively referred to as the Towns (Towns). Formal notice of the Petition was provided to the Towns and abutting property owners on or about November 21, 2017. The Council has not received any comments from abutters or the Towns to date.

Staff recommends including the following condition:

1. Approval of any minor project changes and additional staging areas be delegated to Council staff.