



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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www.ct.gov/csc

CERTIFIED MAIL RETURN RECEIPT REQUESTED

June 15, 2015

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

RE: **PETITION NO. 1154** – Eversource Energy petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to the existing Haddam Substation and associated 345-kV and 115-kV transmission lines located at 1384 Saybrook Road, Haddam, Connecticut.

Dear Mr. Morissette:

At a public meeting held on June 11, 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:

- The facility owner/operator shall provide a landscape plan to improve aesthetics directly outside of the retaining wall including the aesthetic/architectural details of the retaining wall in order to further reduce its visual impact, and provide a copy of the plan to party, Fritz A. Dahlgren;
- 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;
- 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 Haddam;
- 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; and
- 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 April 20, 2015.

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

Very truly yours,



Robert Stein
Chairman

RS/MP/lm

Enclosure: Staff Report dated June 11, 2015

- c: The Honorable Melissa Schlag, First Selectman, Town of Haddam
Elizabeth Glidden, Town Planner, Town of Haddam
Keith R. Ainsworth, Esq., Evans, Feldman & Ainsworth, LLC



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Petition No. 1154

Eversource

Haddam Substation

Staff Report

June 11, 2015

On April 20, 2015, 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 that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to the existing Haddam Substation located at 1384 Saybrook Road and associated transmission lines in the Town of Haddam.

This Petition was field reviewed by Council member Robert Hannon and Michael Perrone of the Council staff on May 27, 2015. The following individuals from Eversource also attended the field review: John Morissette, Project Manager, Transmission Siting; Kenneth Roberts, Jr., Transmission Projects; Paul Melzen, Substation Engineer; Ervin Qyra, Engineer, Transmission Line Engineering; and Brian Benito, Jr., Senior Environmental Specialist. The following individuals from the Town of Haddam also attended the field review: Liz Glidden, Town Planner; and Jim Puska, Zoning Enforcement Officer/Wetlands Enforcement Officer. Abutting property owner Fritz Dahlgren also attended the field review.

Based on the results of the Greater Hartford and Central Connecticut (GHCC) Area Needs Assessment (dated May 2014) and in accordance with the GHCC Solutions Study (dated February 2015), the purpose of the project detailed in the Petition is to eliminate identified potential transmission system thermal and voltage criteria violations caused by the loss of the existing Haddam Substation 345-kV to 115-kV autotransformer.

Specifically, the modifications to Haddam substation would include but not be limited to the following:

- removal of one 345-kV disconnect switch;
- installation of three new single-phase autotransformers with vibration isolation pads as well as firewalls and an oil containment system;
- installation of three new 345-kV circuit breakers;
- installation of ten new 345-kV disconnect switches;
- installation of two new motor-operated disconnect switches;
- installation of nine new 345-kV coupling capacitor voltage transformers;
- installation of two new 115-kV strain-bus structures and strain bus;
- installation of three new 115-kV potential transformers;
- installation of four 110-foot tall lightning masts;
- installation of two 345-kV terminal structures;
- installation of one 345-kV galvanized three-pole single-circuit structure; and
- installation of other miscellaneous equipment such as underground conduits, wave trap, lightning arrestors, mounting and support beams, relay/controls, and cables to accommodate the new equipment, and foundations for the new structures.

None of the new equipment within the substation would be taller than the tallest existing equipment within the exiting substation.

To accommodate the additional substation equipment, Eversource would expand the southeastern section of the substation to the east. This new section would have an area of roughly one acre, and it would be

surrounded by a 7-foot chain link fence with a one and a quarter inch mesh and one foot of barbed wire on top.

There is a significant and steep "drop off" in ground elevation immediately southeast of the proposed substation. Thus, in order to stabilize the subsurface for the expansion of the substation, a retaining wall would be installed along the perimeter of the expansion area (to the southeast of the existing substation) and below the ground level of the substation fence. The retaining wall would have a total length of 350 feet. The height of the wall would vary in accordance with the existing slope from one foot (at the top of the slope) to a maximum of 40 feet (at the bottom of the slope).

The existing 115-kV #1772 line entering the substation on the east side would be relocated slightly. Specifically, the existing 115-kV double-circuit lattice structure #3486 located to the east of the substation would be removed. Two new 115-kV galvanized steel single-circuit structures would be installed approximately 15 feet and 100 feet north, respectively, from the existing #3486 structure. The new structures would be approximately 20 feet taller than the existing 70-foot #3486 structure. The #1772 line would be re-conducted with a change from aluminum conductor steel reinforced (ACSR) to aluminum conductor steel supported (ACSS) and an upgrade to the shield wire for a distance of about 1000 feet to reach an existing transmission structure #9815 (to remain).

The existing 345-kV #348 transmission line would be reconfigured from a tap configuration to a loop configuration. Specifically, the existing 345-kV line (which enters the east side of the substation) would be reconfigured so that it terminates at a new terminal structure in the southeastern portion of the substation. The existing 345-kV #348 transmission line (which enters the west side of the substation) would be reconfigured such that it would terminate at a new three-pole single-circuit structure and then attach to an existing terminal structure.

All new transmission structures would be galvanized steel to match the existing structures inside and adjacent to the substation. The worst-case magnetic field increases would occur at the southern property line. At this property line, magnetic fields would increase from 6.1 mG to 19.3 mG.

Sound levels at all points along the substation property lines would continue to meet local and State noise regulations. There would be no measurable changes to sound levels along the transmission corridor after the completion of the project.

The substation currently has low level lighting (on a timer) for safety and security purposes. Additional low level lighting may be installed in the vicinity of the new equipment locations. Additional lighting may be installed to allow for work at night.

The project is located adjacent to the 100-year Federal Emergency Management Agency flood zone. However, no new structures are proposed within the flood zone.

Eversource's archaeological consultant, Heritage Consultants, LLC, determined that the substation area and its immediate surroundings retain little, if any, potential to yield intact cultural deposits. As a result, no additional archeological research is recommended prior to upgrading the substation facilities.

The project is not located with the shaded area of the Connecticut Department of Energy and Environmental Protection's Natural Diversity Database.

Approximately 0.42 acres of tree clearing would occur within the existing right-of-way and on Eversource property. About 3,654 square feet of tree clearing would occur in wetlands (i.e. secondary impacts) on the adjacent easement parcel owned by Dahlgren. The tree clearing is needed to provide overhead and side clearances for conductors. No direct impacts to wetlands are proposed on the adjacent parcel. Eversource would only remove trees greater than 15 feet in height and would allow low-maturing tree species and shrubs

to remain. Tree removal would be conducted by hand, and stumps and roots would remain in order to minimize disturbance to wetland soils.

Construction of the project would conform to Eversource's Best Management Practices and the 2002 Connecticut Guidelines for Erosion and Sedimentation Control for erosion and sedimentation (E&S) controls. Silt fence would be installed prior to construction to demarcate the line of construction and prevent migration of sediment or construction materials into the wetland. Temporary E&S control measures would be inspected and maintained throughout the project to ensure their integrity and effectiveness. The temporary E&S controls would remain in place until the project work is complete and all disturbed areas have been stabilized.

The visual impact of the equipment upgrades and/installations is not expected to be significant because the site is already a developed substation, and the heights of the new equipment inside the substation would not exceed the maximum existing equipment height. The two new 115-kV transmission structures (to be located outside of the substation) would be about 20 feet taller than the existing 70-foot structure. However, the new structures would be monopoles which have a more narrow visual profile than the existing lattice tower to be removed. Furthermore, existing vegetation exists around most of the substation, except for the existing transmission line right-of-way. However, despite the existing vegetation, Council staff is concerned about the possible visual impact of the retaining wall, as viewed from the Dahlgren residence at 14 Beckwith Road because of its maximum height of 40 feet.

While the maximum height of the wall likely cannot be reduced because of the difference in elevation, Eversource will investigate methods to improve the aesthetics of the retaining wall and mitigate the visual impact. This would include but not be limited to color/texture schemes, the possibility of a gradual "stepped" design (rather than a single vertical wall) to reach the height, and/or landscape plantings to improve aesthetics.

Eversource provided notice to the Town of Haddam and abutting property owners on April 16, 2015. The Town Planner of Haddam indicated that she has no objection to the proposed project. Eversource consulted with abutting property owners, Mr. and Mrs. Smigel, to address their concerns about visibility and electric and magnetic fields.

Abutting property owner Fritz Dahlgren is concerned about the aesthetics and possible property value and EMF health impacts associated with the project. Specifically, Mr. Dahlgren submitted written comments on June 8, 2015. Mr. Dahlgren owns 11 acres between the substation and the wetlands that empty into the Connecticut River. Mr. Dahlgren has performed numerous landscaping and other aesthetic upgrades to his property such as planting over 100 trees, many of which are flowering trees, built hundreds of feet of stone walls, flagstone steps and patios, over 1,000 daffodils and over 60 feet of a flower garden. Given the proximity to a pond and wetlands, Mr. Dahlgren also sees a significant amount of wildlife in the area. With the proposed expansion, Mr. Dahlgren contends that a continuously running stream from the bank into the wetlands will be affected. Also, the proposed transmission structure will be visible from the Connecticut River. Mr. Dahlgren believes that the Gateway Commission should be involved.

With the Haddam substation expansion, Mr. Dahlgren is concerned about a possible drop in property values, health issues associated with EMF, and he contends that the house would be "unlivable" for a year during construction. Mr. Dahlgren suggests that Eversource reconfigure the expansion and lines such that the substation does not expand to the south or buy his home.

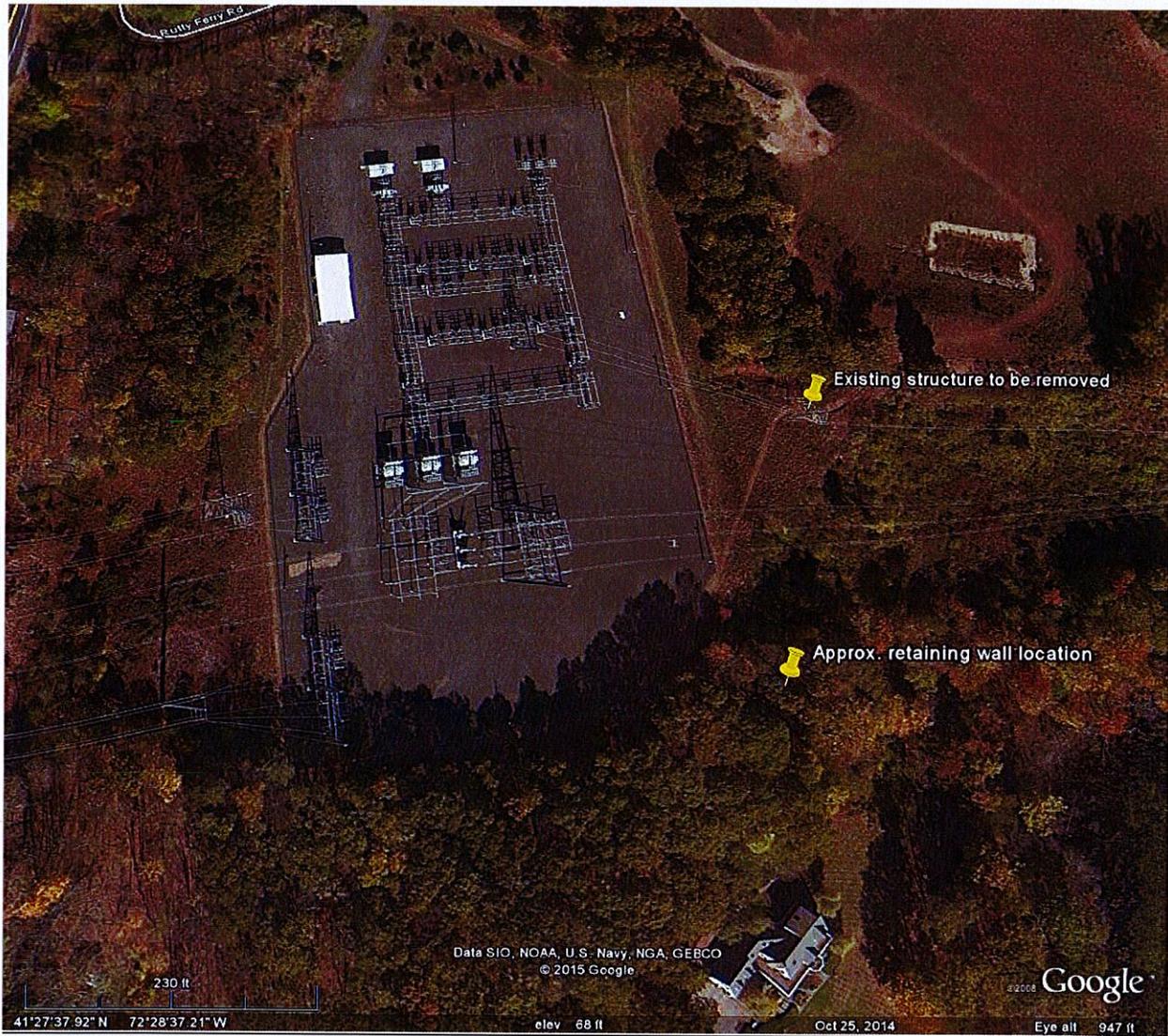
Eversource notes that there is not a "continuously running stream" onto the wetlands. The area Mr. Dahlgren refers to is actually a seasonal groundwater seep breaking through the slope and flowing into a forested wetland. The groundwater would continue to seep through the proposed retaining wall and flow to the wetland post-construction. Therefore, the project would not affect the hydrologic conditions of the wetlands on Eversource property or that of the adjacent wetland following construction. Eversource further

notes that there would not be any direct impacts to wetlands on the Dahlgren property. Approximately 870 square feet of wetlands would be permanently impacted on Eversource property due to the placement of permanent clean fill for the construction of the retaining wall. All activity would be conducted from the upland area and would not require the placement of construction mats in wetlands.

Eversource representatives are working with abutting property owner M&T Properties LLC (M&T) (located directly to the east/northeast of the substation) on a license agreement that would allow M&T to blend the grading along the property line. Currently, there is a steep slope on both sides of the property line and blending the grade will create a gentle slope between the properties. This work will require clearing and regrading on Eversource property and M&T's property along the property line. The impacted area on Eversource's property will be re-vegetated and landscaped upon completion of the re-grading.

Eversource proposes to begin construction during the summer 2015 and expects that the construction would be completed by the end of 2016. Staff suggests including a condition that Eversource provide a landscape plan to improve aesthetics directly outside of the retaining wall and include the aesthetic/architectural details of the retaining wall in order to further reduce its visual impact.

Existing Substation Site



(Orientation: Top of photo is north)