



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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CERTIFIED MAIL RETURN RECEIPT REQUESTED

November 17, 2015

Richard J. Reed, PMP
Vice President-Engineering and Project Excellence
The United Illuminating Company
180 Marsh Hill Road
Orange, CT 06477

RE: **PETITION NO. 1189** – The United Illuminating Company petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to the existing Mix Avenue Substation located at 690 Mix Avenue, Hamden, Connecticut and related improvements to existing electric transmission line circuits from Mix Avenue Substation to Glen Lake Junction and from June Street Substation to Pease Road.

Dear Mr. Reed:

At a public meeting held on November 12, 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 final stormwater management plans stamped by a Professional Engineer and landscaping plans (i.e. upgrades to existing tree buffer) be submitted to the Council;
- Utilize consistent fence design;
- 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 Hamden;
- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- 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 September 4, 2015 and additional information received on October 13, 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 November 12, 2015

- c: The Honorable Curt B. Leng, Mayor, Town of Hamden
Leslie Creane, Town Planner, Town of Hamden
Amy Hicks, Analyst-Public Outreach and Permitting, UI
James R. Morrissey, Esq., Attorney, UI



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Petition No. 1189

The United Illuminating Company

Mix Avenue Substation

Mix Avenue, Hamden

Staff Report

November 12, 2015

On September 4, 2015, The United Illuminating Company (UI) submitted a petition (Petition) to the Connecticut Siting Council (Council) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to the existing Mix Avenue Substation and related improvements to existing electric transmission line circuits from Mix Avenue Substation to Glen Lake Junction and from June Street Substation to Pease Road. This petition was field reviewed on October 5, 2015 by Michael Perrone of the Council staff. James Morrissey, Esq., Attorney, UI; Syed Rahman, Project Engineer, UI; Yan Lachowicz, Project Manager, UI; Shawn Crosbie, Environmental Analyst, UI; Tony Buccheri, Director of Project Management; Racpa Anderson, Manager – Transmission and Substation Engineering; Samantha Marone, Permitting and Public Outreach, UI; and Holly Masi, Zoning Enforcement Officer, Town of Hamden also attended the field review.

The ISO New England Inc. (ISO-NE) Southwest Connecticut Transmission Needs Assessment Study identified that, under certain contingency scenarios, low voltages can occur in the Mix Avenue – Sackett Substation electric transmission corridor. This study also revealed a need to restrict the flow of power between the Mix Avenue and Sackett Substations in order to maintain the thermal ratings of the transmission corridor. In order to mitigate the low voltages that can occur at the Mix Avenue Substation and restrict the flow of power between the Mix Avenue and Sackett Substations, UI proposes upgrades to the Mix Avenue Substation. These upgrades will further defer the need to upgrade transmission lines between Mix Avenue Substation and Glen Lake Junction and between Mix Avenue Substation and Sackett Substation.

The Mix Avenue Substation site is located in a residential (R-3) zone on a 2.8-acre parcel directly west of Mix Avenue with frontage along Mix Avenue. The surrounding area is residential in nature. Condominiums are located to the north and south of the site. Other residential structures are located to the east, on the opposite side of Mix Avenue. Directly west of the site is existing transmission line right of way (ROW) and existing trees that abut the ROW.

Specifically, UI proposes to install two 115 kilovolt (kV), 20 megavolt-ampere (MVA) capacitor banks and one 7.5 Ohm series reactor at the Mix Avenue Substation. In order to accommodate the installation of such equipment, the proposed project would require the expansion of the existing substation yard to include the installation of one new 115-kV gas circuit breaker, three 115 kV circuit switchers, buswork, seven new lightning masts, foundations, stormwater drainage system, and expansion of the existing control enclosure or “control house.” Other modifications include but are not limited to installation of a second battery bank to eliminate a single source point of failure, upgrade to AC station service to accommodate additional relay panels, replacement of transformer motor operated disconnect switches and associated support structures, upgrade miscellaneous structural components to meet current codes, addition/replacement of potential transformers and current capacitance transformers as needed; and installation of additional substation yard fence, video cameras, motion monitors, and public address system as part of UI’s security initiative. The heights of new equipment would be comparable to that of existing equipment. The tallest components inside the substation would remain as the existing and proposed lightning masts (approximately 55 feet high) for lightning safety.



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UI proposes to install a new prefabricated control enclosure approximately 60 feet by 19 feet in front of the existing control house. UI would utilize an architectural design such that the control house would continue to look like a house with a sloped roof, similar to the existing control house. This approach is expected to maintain and/or improve aesthetics as viewed by residences across the street. The existing paved access/turnaround area adjacent to Mix Avenue and next to control house would be upgraded.

The existing fenced substation would be expanded to the west. The incremental substation footprint would have maximum dimensions of roughly 145 feet measured in an east-west direction and about 160 feet measured in the north-south direction. The existing chain link fence has 2-inch mesh and is 14 feet tall topped with barbed wire. The expanded fence design is proposed to match the existing fence design for uniformity.

In addition, the replacement and relocation of two #1610 line transmission structures directly to the west of the site, but still on the subject property, would also be required. Existing structure GL 26 is located about 284 feet to the west of the existing substation fence line. Existing structure GL 27 is located about 54 feet to the west of the existing substation fence line. Temporary structures would be needed in the interim until the permanent connections are complete. The structure work would be completed in the following order:

- a) UI would first install new dead-end structure GL 26 (a 65.5-foot wood, 3-pole structure with steel cross-arms and wood braces) and remove existing structure GL 26.
- b) UI would install temporary wood structures A and B.
- c) UI would transfer conductors to new GL 26, temporary structure A, temporary structure B, and Mix Avenue substation.
- d) UI would install new structure GL 27 (a 65-foot steel monopole structure) and remove existing structure GL 27.
- e) UI would install temporary structure C.
- f) UI would transfer conductors to new GL 27 and temporary structure C.
- g) UI would remove temporary structure A.
- h) UI would complete other electrical work.
- i) UI would, lastly, remove temporary structures B and C.

The visual impact of the structure replacements is not expected to be significant because the final configuration includes structure replacements rather than additions, and the new structures are comparable in height to the existing structures. In addition, there is an existing vegetative buffer on both sides of the ROW.

In order to integrate the communications, protection and control requirements of the new equipment with the existing transmission system, the existing shield wire along the #1610 line circuit would be replaced with new optical fiber ground wire (OPGW). Specifically, the new OPGW would be required for two separate sections of the #1610 line circuit. The first span would run along the approximately 2.86 mile #1610 circuit from Mix Avenue Substation west to Glen Lake Junction. The second span would run along the #1610 line from June Street Substation to a location approximately 0.75 miles west to Pease Road. The visual impact is not expected to be significant because the existing phase conductors are more readily visible than the OPGW to replace the existing shield wire on tops of the structures. UI provided prospective routes and pull sites within the ROW. UI will evaluate and implement least environmental disturbance during installation of the OPGW.

The stormwater drainage system would likely require connection to existing drainage facilities located within the property boundaries of the adjacent abutter located directly to the south. UI is in the process of negotiating an easement for such purpose or alternatively stormwater would be pumped out to Mix Avenue.

UI plans to register with the Department of Energy and Environmental Protection (DEEP) under the General Permit for the Discharge of Stormwater and Remediation Wastewaters from Construction Activities and Stormwater Pollution Control Plan. Further, erosion and sediment controls would be established and monitored consistent with the *Connecticut Guidelines for Soil Erosion and Sediment Control*, (as amended).

The project would comply with DEEP Noise Control Standards and the equivalent local Town of Hamden noise control standards.

The worst-case increase in magnetic field levels (MF) under peak load conditions would be at the southern edge of the expanded substation perimeter. Such MF would increase from 3.4 milliGauss (mG) to 21.4 mG post-project. This is far below the International Commission on Non-ionizing Radiation Protection acceptable exposure level of 2,000 mG for general public as recognized in the Council's "Electric and Magnetic Field Best Management Practices for the Construction of Electric Transmission Lines in Connecticut."

The site is not located within a ¼ mile of the shaded area of the DEEP's Natural Diversity Database. The closest wetland is 580 feet to the west of the existing substation. Construction would occur no closer than about 349 feet from this wetland. No adverse impacts are anticipated due to the distance. Approximately 15 trees with a diameter of six inches or greater would be removed to construct the proposed substation expansion. However, such tree removal is largely to the west of the existing substation and is not expected to materially affect the buffer between the substation and residential properties to north and south of the site. Furthermore, UI plans to plant about 15 additional trees on the north side of the substation to supplement the existing tree buffer.

UI conducted a cultural resource review and submitted it to the State Historic Preservation Office (SHPO) for review. SHPO responded and indicated that, "No historic properties will be affected by this project. No further review is requested."

If approved, construction is expected to commence in March 2016 with project completion by year-end 2016. Normal work hours for construction will be between 7:00 a.m. and 5:00 p.m. Work would proceed on Monday through Friday, excluding some holidays. The proposed work hours may include evening and weekend work hours on a temporary and case-by-case basis in order to complete critical work.

A letter from Mayor Jackson (dated April 14, 2015) is in the Petition filing expressing that safe and reliable electric service is in the best interest of all parties. On May 26, 2015, UI held an "Open House" to present the project and answer questions. Abutting property owners and Mayor Pascarella were invited.

Notice of the project was provided to the Town of Hamden, abutting property owners, and required state officials on or about September 4, 2015. By email dated September 15, 2015, abutter Malcolm and Amy Friedman inquired about the positive and negative aspects of this project. UI subsequently reached out to the Friedmans to discuss the project.

UI contends that this project would not have a substantial adverse environmental effect.

If approved, staff recommends that the final stormwater management plans stamped by a Professional Engineer and landscaping plans (i.e. upgrades to existing tree buffer) be submitted to the Council.