



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

CERTIFIED MAIL RETURN RECEIPT REQUESTED

March 20, 2017

Kathleen M. Shanley
Manager-Transmission Siting
Eversource Energy
P.O. Box 270
Hartford, CT 06141

RE: **PETITION NO. 1286** - Eversource Energy petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed West Brookfield Reliability Project that includes reconductoring of approximately 1.4 miles of its existing No. 1887 115-kilovolt (kV) electric transmission line within existing Eversource electric transmission line right of way between the existing West Brookfield Substation located at 83 Prange Road and the existing West Brookfield Junction near Pocono Road in Brookfield, Connecticut, installation of two 14.4 Megavolt Ampere Reactive (MVAR) capacitor banks at the West Brookfield Substation located at 83 Prange Road, Brookfield, Connecticut and related substation and transmission line structure improvements.

Dear Ms. Shanley:

At a public meeting held on March 16, 2017, 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. Approval of any minor project changes be delegated to Council staff;
2. Submission of fence realignment details to allow for continued use of an on-site exterior daycare recreational area at 4 Woodcreek Road in Brookfield;
3. Submission of a Development and Management (D&M) Plan specific to the West Brookfield Substation expansion for Council review and approval prior to the commencement of substation construction. The D&M Plan shall include:
 - a) construction plans for site clearing, grading, and erosion and sedimentation controls consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*, as amended; and
 - b) a site plan depicting the locations and specifications of the access road, permanent water drainage and stormwater controls, retaining walls, substation equipment, lighting, fencing, access gate(s), and landscaping; and
 - c) details for a vehicle access gate to be installed at the new substation driveway entrance at Prange Road;
4. 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;

5. 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 Brookfield;
6. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
7. 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;
8. 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
9. 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 January 13, 2017 and the D&M Plan specific to the West Brookfield substation expansion that is to be submitted to and approved by the Council per Condition Nos. 2 and 3.

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

Very truly yours,



Robert Stein
Chairman

RS/RDM/lm

Enclosure: Staff Report dated March 16, 2017

- c: The Honorable Stephen C. Dunn, First Selectman, Town of Brookfield
Francis Lollie, Zoning Enforcement Officer, Town of Brookfield
Alice Dew, Wetlands Enforcement Officer & Land Use Manager, Town of Brookfield
Susan Bellion, Eversource Energy
Greg Van Antwerp (via email)



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Petition No. 1286
Eversource Energy
West Brookfield Reliability Project
Staff Report
March 16, 2017

Introduction

On January 13, 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 that no Certificate of Environmental Compatibility and Public Need is required for the West Brookfield Reliability Project in the Town of Brookfield (Project). Council member Robert Hannon, Council Executive Director Melanie Bachman and Council staff member Robert Mercier conducted a field review of the proposed project on February 23, 2017 with Eversource representatives Kathleen Shanley, Sue Bellion, Ian Cole, Mark Wayne, Doug Czarnomski, and Chris Soderman. Mr. and Mrs. Greg Van Antwerp of 87 Prange Road attended the field review at the West Brookfield Substation portion of the Project. Ms. Annette Tryon-Cozier of 20 Flax Hill Road attended the field review stop along the right-of-way at Hollis Drive.

Proposed Project

The purpose of the proposed project is to eliminate potential transmission system thermal and voltage criteria violations identified in the June 2014 Southwest Connecticut Area (SWCT) Needs Assessment performed by ISO New England (ISO-NE) and in subsequent analyses by Eversource. To resolve the identified issues, ISO-NE developed the SWCT Solutions Study in February 2015 that listed the proposed Project as necessary to maintain grid reliability. The proposed Project would replace the conductors on a 1.4-mile segment of the 1887 Line, a 115-kilovolt (kV) transmission line, from West Brookfield Substation to West Brookfield Junction, and expand the West Brookfield Substation to accommodate two 14.4 megavolt-ampere reactive (MVAR) capacitor banks. Both components of the Project are currently identified in the October 2016 ISO-NE Regional System Plan Project List as a reliability upgrade with an expected in-service date for the West Brookfield Substation portion of the Project as December 2017 and the 1887 Line portion of the Project as December 2018.

1887 Line Upgrade

The work would occur in existing Eversource right-of-way (ROW) between the West Brookfield Substation at 83 Prange Road in Brookfield and West Brookfield Junction at 170 Pocono Road in Brookfield. Land use in the ROW area includes residential, commercial and undeveloped land. The ROW is 100 feet wide and generally maintained at this width to accommodate the 1887 Line and the 1618 Line, a second 115-kV transmission line located on the north side of the ROW. The existing transmission structures within the ROW consist of a mix of double-circuit wood H-frame structures, wood poles and galvanized and painted steel monopoles.

The 1887 Line portion of the Project entails the following components:

- a) Replacement of an existing wood three-pole dead end structure (structure 2690) with a new three-pole direct embedded weathering steel structure. The height of the existing structure is approximately 57 feet above ground level. The new proposed structure height would be approximately 91 feet tall, 34 feet taller than the existing structure;

- b) Removal of an existing three-pole wood dead end structure (structure 2689) which, along with the increase in the height for structure 2690, would result in an increase in the span length between structures 2690 and 2688, providing improved conditions for construction and maintenance work;
- c) Removal of the existing 1887 Line 336-kcmil aluminum-conductor steel-reinforced cable (ACSR), related insulator and hardware, and shield wire from the existing structures between West Brookfield Substation and West Brookfield Junction;
- d) Installation of new 556-kcmil aluminum-conductor steel-supported (ACSS) and optical ground wire on the 1887 Line between West Brookfield Substation and West Brookfield Junction;
- e) Installation of 35-foot long X-brace reinforcements on existing wood H-frame structures (structures 2691 through 2696 and 2688);
- f) Replacement of down guy cables and anchors on structure 2695;
- g) Installation of down guy insulator on structure 2696; and
- h) Replacement of the existing pole top cable tie with steel angle tie on structure 2689A.

West Brookfield Substation

The existing West Brookfield Substation is a 115-kV to 13.8-kV substation that has two 115-kV transmission lines, two 115-kV to 13.8-kV transformers and six 13.8-kV distribution circuits. Access to the existing substation is from a substation access gate along Prange Road. To accommodate the expansion of the substation to the northeast, Eversource purchased a residential parcel at 85 Prange Road that contains a single family house. The residence would be demolished and the property re-graded to accommodate the substation expansion. The L shaped parcel is set back from Prange Road and is mostly east of a developed residential parcel at 87 Prange Road (Van Antwerp residence). Due to the proximity of the abutting residence and scope of construction, staff recommends that Eversource submit a Development and Management Plan specific to the West Brookfield Substation expansion for Council review and approval prior to the commencement of substation construction.

The West Brookfield Substation portion of the Project entails the following components;

- a) Installation of two 115-kV 14.4-MVAR capacitor banks;
- b) Installation of two 115-kV pothead structures;
- c) Installation of 14 115-kV lightning arresters;
- d) Installation of one 115-kV, 2000-A manual operated vertical break disconnect switch;
- e) Installation of one 115-kV, 2000-A 40-kA three phase circuit breaker;
- f) Installation of three air core current limiting reactors;
- g) Installation of two 115-kV rated resistive potential device;
- h) Installation of two 115-kV circuit switchers;
- i) Installation of three 65-foot tall lightning masts with lights mounted on lower levels for the protection of new equipment and substation lighting;
- j) Installation of foundation, grounding, underground conduits, bus supports, relay/controls and cables to accommodate the equipment listed above;
- k) Expansion of the existing substation yard to the northeast by a maximum dimension of approximately 156 feet to the north and 185 feet to the east to accommodate the new capacitor banks and associated equipment;

- l) Construction of a new gravel substation access drive with two new gates, one accessing the new capacitor bank portion of the substation and one accessing the north side of the existing substation; and
- m) Installation of a retaining wall on portions of the northern and eastern sides of the new expanded substation yard. The heights of the retaining walls would vary between approximately 5 and 8 feet. A new fence of similar height and appearance to the existing fence would be positioned on top of the retaining wall and along the expanded substation perimeter.

Project Construction and Work Procedures

Construction areas would be isolated by establishing erosion and sedimentation controls (E&S controls) in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* and Eversource's Best Management Practices (Eversource BMPs). Typical E&S controls include, but are not limited to, the use of hay bales and silt fence, check dams, berms, swales, and sediment basins. Following the completion of construction, seeding and mulching would occur to permanently stabilize previously disturbed areas. Temporary E&S controls would remain in place until construction is complete and all disturbed areas are stabilized.

Eversource would use the existing 85 Prange Road driveway to access the substation expansion area during and post-construction. The existing driveway would be widened to the south, requiring the removal of mature trees lining the driveway, to accommodate construction equipment. At the east end of the new access drive, retaining walls would be installed as the driveway slopes downgradient to the new substation yard. The retaining walls would also extend along the west edge of the property to support the hillside west of the expanded substation. The concrete retaining walls would vary in height from 5 to 8 feet. Cut and fill for the substation expansion would be balanced.

Construction along the ROW would utilize existing access roads that may need to be graded, widened, and/or improved in order to be used safely and effectively during construction. Improvements would include clearing adjacent vegetation and establishing a 16 to 20-foot wide gravel travel surface. In areas where existing access roads traverse streams or wetlands, temporary construction mats would be utilized to reduce disturbance to underlying soils.

At each transmission line structure site, a 100-foot by 100-foot (typical) work pad would be established to accommodate construction materials and equipment. Cross-brace members would be installed with a bucket truck. Guying work on structures 2695 and 2696 would utilize a backhoe or mini-excavator. Replacement structure 2690 would be assembled and installed with a crane.

Work pads located in upland locations would be composed of gravel and left in place unless removal is requested by the underlying landowner. Larger pull pads would be constructed in certain locations in the ROW to facilitate line pulling activities. Work/pull pads located in wetland areas would be constructed of temporary matting or temporary gravel.

The installation of the overhead conductors would require the use of special pulling and tensioning equipment, which would be positioned at the work/pull pad locations. Helicopters may be used for conductor pulling activities. Once the new lines are energized, the old conductors, associated equipment, and decommissioned structures would be removed and either recycled or disposed of in accordance with Eversource BMPs and applicable regulations.

Road crossings would be coordinated with the Department of Transportation and/or the municipalities. The Project would traverse some maintained lawn areas and gardens that exist in the ROW. Eversource would coordinate with affected property owners for construction access/activities and for the restoration of disturbed areas upon completion of construction. Construction in the ROW would require the removal of a fence that is associated with a daycare facility on Woodcreek Road. Eversource is consulting with the daycare owner to ensure the daycare can still operate an outdoor recreation area during construction.

Eversource would establish an approximate 2 acre staging area near the Project area for the storage of materials and to serve as central contractor operations area. Eversource anticipates beginning construction of the substation in the Spring of 2017 and the transmission line in the Spring of 2018. Completion of both portions of the Project is anticipated by the Fall of 2018. Normal work hours would be Monday through Saturday from 7:00 a.m. to 7:00 p.m. Sunday work hours or hours beyond normal work hours may be required for time sensitive work or during scheduled line outages.

Environmental Considerations

Approximately 0.7 acre of woodland would be removed for the expansion of the substation. An additional 0.2 acre of woodland would be removed in the ROW at Brookfield Junction. All other areas within the ROW consist of shrub vegetation typical of managed ROWs, portions of which would be cleared for the Project. All clearing within work zones would be conducted in accordance with Eversource's BMPs. Off-ROW clearing and/or tree trimming would be required to widen access roads, where necessary. Eversource would coordinate with affected property owners to provide replacement plantings in areas where existing landscaping or visual buffers are removed during construction.

The Project ROW contains 10 wetland areas that are predominately hillside seepage wetlands or within riparian corridors. The Project would result in 22,000 square feet of temporary wetland impacts associated with construction mats. Temporary matting would be removed upon completion of construction and disturbed wetland areas would be restored in accordance with Eversource BMPs. No vernal pools were identified within the Project area.

Three watercourses would be crossed using stream-crossing techniques detailed in Eversource's BMPs. Work would occur in three areas identified as 500 year flood zones and two areas identified as 100 year flood zones, portions of which are also designated floodways. Existing access roads extend along the ROW within the flood zones. Secured temporary matting would be used around the structures within the flood zones to minimize flood displacement. No public water supply reservoirs are located in the vicinity of the proposed Project. The Project is not located within an aquifer protection area.

The Project area contains potential habitat for one federally-listed endangered/threatened species. Eversource would consult with the Department of Energy and Environmental Protection (DEEP) and the U.S. Fish and Wildlife Service to ensure project activities minimize potential impact to this species. No known state-listed species occur within the Project area.

There are no designated scenic resources within the Project area. The visual impact of the re-conductoring portion of the Project would be negligible as there is little change to the existing structures with the exception of the new H-frame cross braces. The visual impact of new replacement structure 2690 would be minimal given that it is located at the edge of a steep grade with woodland buffering on either side. The visual impact of the new substation expansion would be generally limited to the abutting residence at 87 Prange Road and from the rear yard of 67 North Mountain Road. Eversource would consult with the abutting residents to determine appropriate landscape plantings to enhance substation screening.

No properties identified on the National Register of Historic Places occur within 500 feet of the Project area. Initial cultural resources surveys identified four potential archeological sites within the Project area with moderate to high archeological sensitivity. Eversource would use construction matting in these areas to reduce disturbance to any potential archeological deposits.

Construction-related noise is exempt per DEEP noise regulations. Notwithstanding, any construction-related noise would be short-term and localized to the vicinity of work areas. There would be no permanent change to the existing sound levels along the transmission ROW or at the West Brookfield Substation after completion of the project.

Changes to magnetic field (MF) levels associated with the Project would be negligible at the edge of the ROW. Post-construction, MF levels would be approximately 20 milliGauss (mG) directly under the new conductors and approximately 6 to 8 mG at the edge of the ROW, well below the guideline exposure levels established by the International Commission on Non-Ionizing Radiation Protection (2,000 mG) and the International Committee on Electromagnetic Safety (9,040 mG). MF levels along the substation perimeter would be negligible except where the conductors enter the substation.

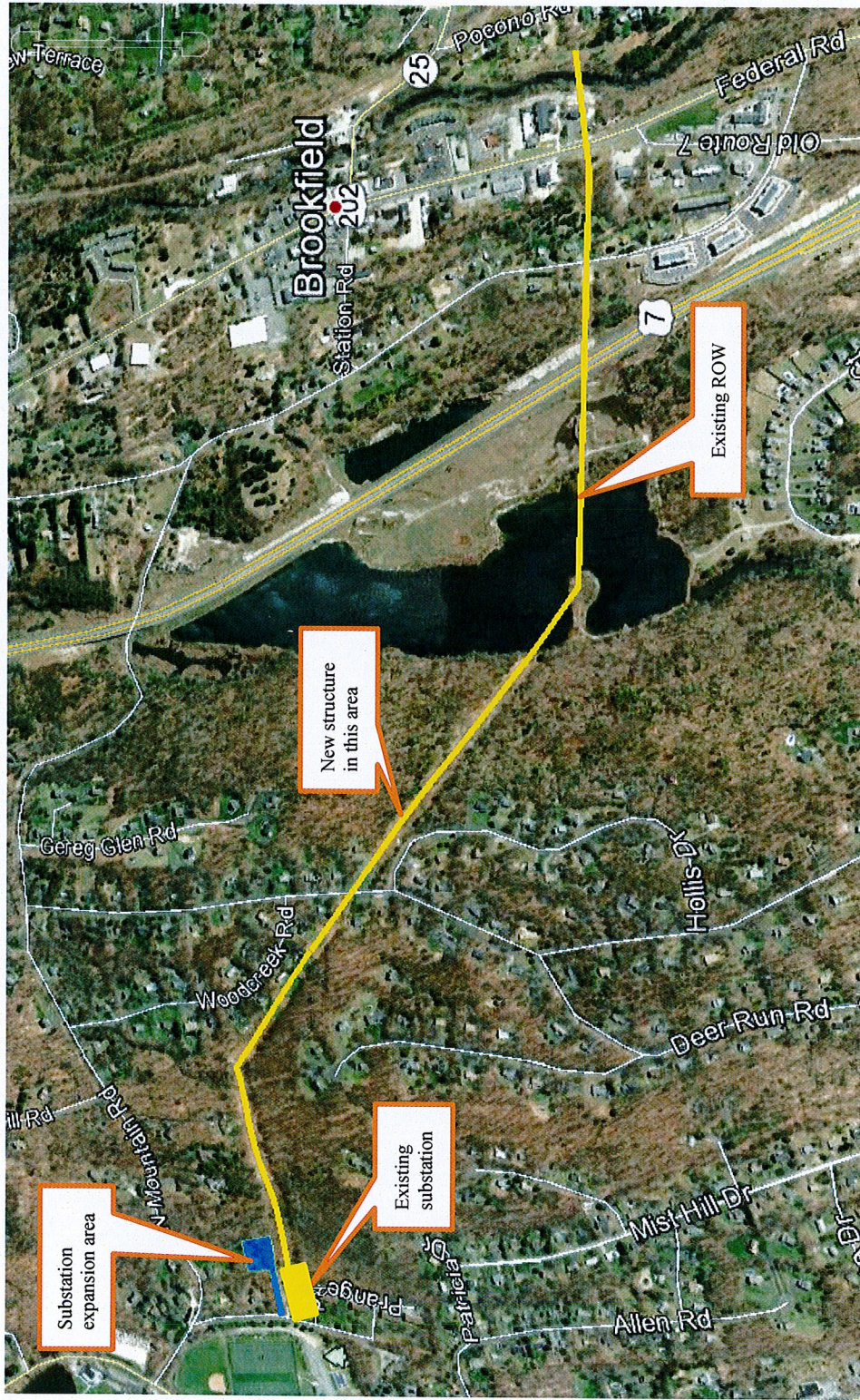
Municipal and Abutter Notice

Eversource began Project consultation with the Town of Brookfield on March 8, 2016. Outreach to property owners along the route began in April 2016 and continued through June 2016. Minor modifications to access roads and work pads were made based on these consultations, where conditions allowed. Formal notice of the Petition was provided on or about January 9, 2017.

Recommended Conditions

If approved, staff recommends including the following conditions:

1. Approval of any minor project changes be delegated to Council staff;
2. Submission of fence realignment details to allow for continued use of an on-site exterior daycare recreational area at 4 Woodcreek Road in Brookfield;
3. Submission of a Development and Management (D&M) Plan specific to the West Brookfield Substation expansion for Council review and approval prior to the commencement of substation construction. The D&M Plan shall include:
 - a. construction plans for site clearing, grading, and erosion and sedimentation controls consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*, as amended;
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 - c. details for a vehicle access gate to be installed at the new substation driveway entrance at Prange Road.



Project Route – West Brookfield Substation to West Brookfield Junction. (google earth image – locations are approximate)