



# 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](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

### CERTIFIED MAIL RETURN RECEIPT REQUESTED

December 9, 2016

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

RE: **PETITION NO. 1259** - Eversource Energy petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed Thames River Crossing Structure Replacement Project that includes replacement and re-conductoring of four double-circuit electric transmission line structures along approximately .5 miles of existing Eversource right of way between Montville and Ledyard, Connecticut, and related transmission line structure improvements.

Dear Ms. Shanley:

At a public meeting held on December 8, 2016, 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 off-road construction equipment that meets the latest EPA or California Air Resources Board standards, or in the alternative, equipment with the best available controls on diesel emissions, including, but not limited to, retrofitting with diesel oxidation catalysts, particulate filters and use of ultra-low sulfur fuel;
2. Compliance with the provisions of Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies that limit the idling of mobile sources to 3 minutes;
3. Approval of any minor project changes be delegated to Council staff;
4. Provide to the Council a copy of any State Historic Preservation Office recommended mitigation measures;
5. 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;
6. 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 Towns of Montville and Ledyard;

7. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
8. 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;
9. 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
10. 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 October 21, 2016.

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

Very truly yours,



Robert Stein  
Chairman

RS/RDM/cm

Enclosure: Staff Report dated December 8, 2016

- c: The Honorable Michael Finkelstein, Mayor, Town of Ledyard  
Charles Karno, Planning Director, Town of Ledyard  
The Honorable Ronald K. McDaniel, Mayor, Town of Montville  
Marcia Vlaun, Town Planner, Town of Montville



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**Petition No. 1259**  
**Eversource Energy**  
**100/1410 Lines Thames River Crossing Project**  
**Staff Report**  
**December 8, 2016**

### Introduction

On October 21, 2016, 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 two transmission lines spanning the Thames River in the Towns of Ledyard and Montville. On November 18, 2016, Council member James Murphy and Council staff member Robert Mercier conducted a field review of the proposed project with Eversource Project Siting Specialist Helen Taylor and other Eversource project representatives.

### Proposed Project

The purpose of the proposed project is to replace four double circuit lattice structures that were constructed in 1921 that span the Thames River. The structures support the 100 Line, a 69-kV transmission line located on the south side of the structures, and the 1410 Line, a 115-kV transmission line located on the north side of the structures. The structures are in poor condition and need to be replaced to maintain electric system reliability.

Specifically, the Project entails the following components:

- a. Replacement of double circuit lattice structure 7012 (77 feet tall) with two single-circuit galvanized steel monopoles (85 feet tall) on the Montville side of the river. The two new structures would be installed 35 feet north of the existing structure;
- b. Replacement of double-circuit steel lattice structure 7013 (255 feet tall) with a double-circuit galvanized steel monopole (250 feet tall) on the Montville side of the river. The new structure would be installed 5 feet east and 35 feet north of the existing structure;
- c. Replacement of double-circuit steel lattice structure 7014 (179 feet tall) with a double-circuit galvanized steel monopole (210 feet tall) on the Ledyard side of the river. The new structure would be installed 25 feet east and 60 feet south of the existing structure;
- d. Replacement of double-circuit steel lattice structure 7015 (76 feet tall) with two single-circuit galvanized steel monopoles (90 feet tall) on the Ledyard side of the river. The new structures would be installed 15 feet east and 15 feet south of the existing structure;
- e. Replacement of the existing 556 kcmil 24/7 ASCR conductors for both lines with new 1590 kcmil 54/19 ACSS conductors connecting the replaced structures (0.5 mile). Additionally, new optical ground wire and shield wire would be installed between the new structures; and
- f. Repainting of transmission structures 7010 and 7011.

The height of the new structures is based on site topography as well as conductor clearance requirements set forth in the 2012 National Electrical Safety Code and Eversource's U.S. Army Corp of Engineers Permit for crossing the Thames River. The span to span crossing of the Thames River is over 1,200 feet in length.

### **Project Construction and Work Procedures**

All work would occur within an existing Eversource right-of-way (ROW) that is 200 feet wide on the east side of the river (Ledyard) and 230 feet wide on the west side of the river (Montville). The ROW also contains an additional existing 115-kV transmission line (Line 1280) supported by its own set of lattice structures. Existing gravel access roads would be used for construction. The access roads may need some improvements such as the installation of new gravel to create a stable base or to widen the travel surface to 16-20 feet.

Rock/gravel work pads would be constructed at each structure location and would vary in size depending on the specific work required. Work pads in slope areas adjacent to structures 7012 and 7014 would utilize native fill to create a level work area. A temporary retaining wall would be installed at structure 7012 to further stabilize the area. Work pads adjacent to structures 7014 and 7015 (east of the river) would remain in place. Works pads for structures 7012 and 7013 (west of river) would be removed. Temporary gravel pull pads would be established adjacent to the structure work areas.

New structure components would be delivered in sections by truck and stored at a nearby staging area along with other project materials and hardware. On the Montville side of the river, Eversource would establish a 360-foot by 100-foot staging area in a nearby agricultural field. On the east side of the river, Eversource is negotiating with Dow Chemical to establish a staging area at their facility located north of the ROW.

Drilled shaft foundations are proposed for all new structures. Structure sections would be assembled by crane at each work pad followed by the installation of insulators and connecting hardware. Once the new steel monopoles and conductors are in place and operational, Eversource would remove the existing structures and conductors to be either recycled or disposed of in accordance with Eversource BMPs and applicable regulations. The existing lattice tower foundations would be removed to one foot below grade.

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, including lawn areas maintained by underlying land owners. Temporary E&S controls would remain in place until construction is complete and all disturbed areas are stabilized.

Eversource proposes to begin work in early February 2017 with completion in the fall of 2017. 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, delays caused by weather, and line outages.

### **Environmental Considerations**

Land use adjacent to the ROW includes rural residential, agricultural, vacant land, and railroad corridors. No designated recreational or scenic areas are within the project area.

No wetlands are located within the Project area. One Structure, #7013, is within a Federal Emergency Management Agency designated 100-year flood zone. Eversource would install the new structure so that the top of the foundation is one foot above the flood zone.

Approximately 0.8 acre of woodland would be cleared on the north side of the ROW between structures 7012 and 7013 and on the north side of Structure 7014. Some trees would be removed or trimmed along the access roads to create enough space for construction vehicles.

No public water supply reservoirs are located in the vicinity of the proposed Project. The Project is not located within an aquifer protection area. A private well is located in the work pad area associated with Structure 7013. The well is a secondary water source for the underlying landowner. Eversource is consulting with the landowner regarding the closure or restoration of this well after completion of the Project.

No known species listed on the DEEP Natural Diversity Database are within the Project area. A fish species listed on the NDDDB that occurs in the Thames River would not be impacted by the Project.

The visual impact of the replacement project would be negligible as the new structures are only slightly higher than the existing structures. Additionally, the existing ROW has been in existence since 1918. Two existing structures are presently lit under Federal Aviation Administration (FAA) aviation hazard criteria, one on either side of the river. A solar power system with battery storage powers the existing beacons on Structure 7014.

FAA hazard determinations for this Project require that replacement structures 7013 and 7014 utilize dual medium intensity beacon lighting systems for structure aviation hazard warnings. The existing solar power system would be utilized for the new beacon lighting system (Structure 7014). The FAA also requires Eversource to install lighted and unlighted aviation hazard marker balls on the conductors spanning the river.

Cultural resource surveys identified several historic features (foundation, well, iron ring) within the proposed gravel work pad at Structure 7013. Eversource would take appropriate measures to minimize disturbance to these features. An area of archeological interest was identified near replacement Structures 7013 and 7012. Any access road improvements necessary in these areas would use matting to prevent disturbance to any potential subsurface archeological deposits. Eversource is coordinating with the State Historic Preservation Office (SHPO) regarding any additional mitigation requirements for the identified cultural resources.

Construction-related noise is exempt per DEEP noise regulations. Notwithstanding, any construction-related noise would be short-term and localized in the vicinity of work sites. There would be no permanent changes to the existing sound levels along the transmission ROW after completion of the Project.

### **Magnetic Fields**

Eversource reviewed magnetic field (MF) levels associated with the Project. The Project route already contains an existing transmission line that emits MF. In the United States, no state or federal exposure standards for 60-hertz MF based on demonstrated health effects have been established, nor are there any such standards established world-wide. However, the International Commission on Non-Ionizing Radiation Protection (ICNIRP) has established a level of 2,000 milliGauss (mG), based on extrapolation from scientific experimentation, and the International Committee on Electromagnetic Safety (ICES) has calculated a guideline of 9,040 mG for exposure to workers and the general public, and recognized in the Council's *Electric and Magnetic Field Best Management Practices for the Construction of Electric Transmission Lines in Connecticut*.

Calculations performed by Eversource indicate the Project would not adversely alter existing MF levels at the edges of the ROW under normal loading conditions. Pre-construction MF values range from 0.5 mG to 2.3 mG whereas post-construction MF values would range from 0.5 mG to 3.6 mG.

### **Municipal and Abutter Notice**

Eversource began Project consultation with the Towns of Montville and Ledyard prior to submitting the Petition to the Council. Formal notice of the Petition was provided to both Towns and abutting property owners on or about October 21, 2016. The Council has not received any comment regarding the Project to date.

### **Recommended Conditions**

If approved, staff recommends including the following conditions:

- a. Use of off-road construction equipment that meets the latest EPA or California Air Resources Board standards, or in the alternative, equipment with the best available controls on diesel emissions, including, but not limited to, retrofitting with diesel oxidation catalysts, particulate filters and use of ultra-low sulfur fuel;
- b. Compliance with the provisions of Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies that limit the idling of mobile sources to 3 minutes;
- c. Approval of any minor project changes be delegated to Council staff; and
- d. Provide to the Council a copy of any SHPO recommended mitigation measures.



# Transmission Structure Replacement - Ledyard (east of Thames River)



CURRENT TOWN(S): LEDYARD

THAMES RIVER CROSSING  
PROJECT  
EVERSOURCE ENERGY  
100 & 1410 Transmission Lines  
SHEET 4 of 5

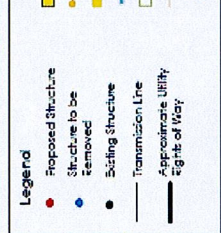
**EVERSOURCE ENERGY**  
GZA GeoEnvironmental, Inc.  
Engineers and Scientists  
www.gza.com

Map Labels  
100 Line List ID  
Data Source: GSA, BROWNS, CT DEEP, FEMA, State  
Base Map: Occulted from Esri Online Mapping Service

Proposed Temporary Construction Mat  
Remaining Wet  
Railroad  
Rare Species Habitat  
Proposed Sill Pad  
Proposed Work Pad  
Proposed Staging Area

Proposed Clearing Area  
Gate  
Access-Building  
Town Line Boundary  
Parcel Boundary  
100-yr Floodline  
Staging Wet Location

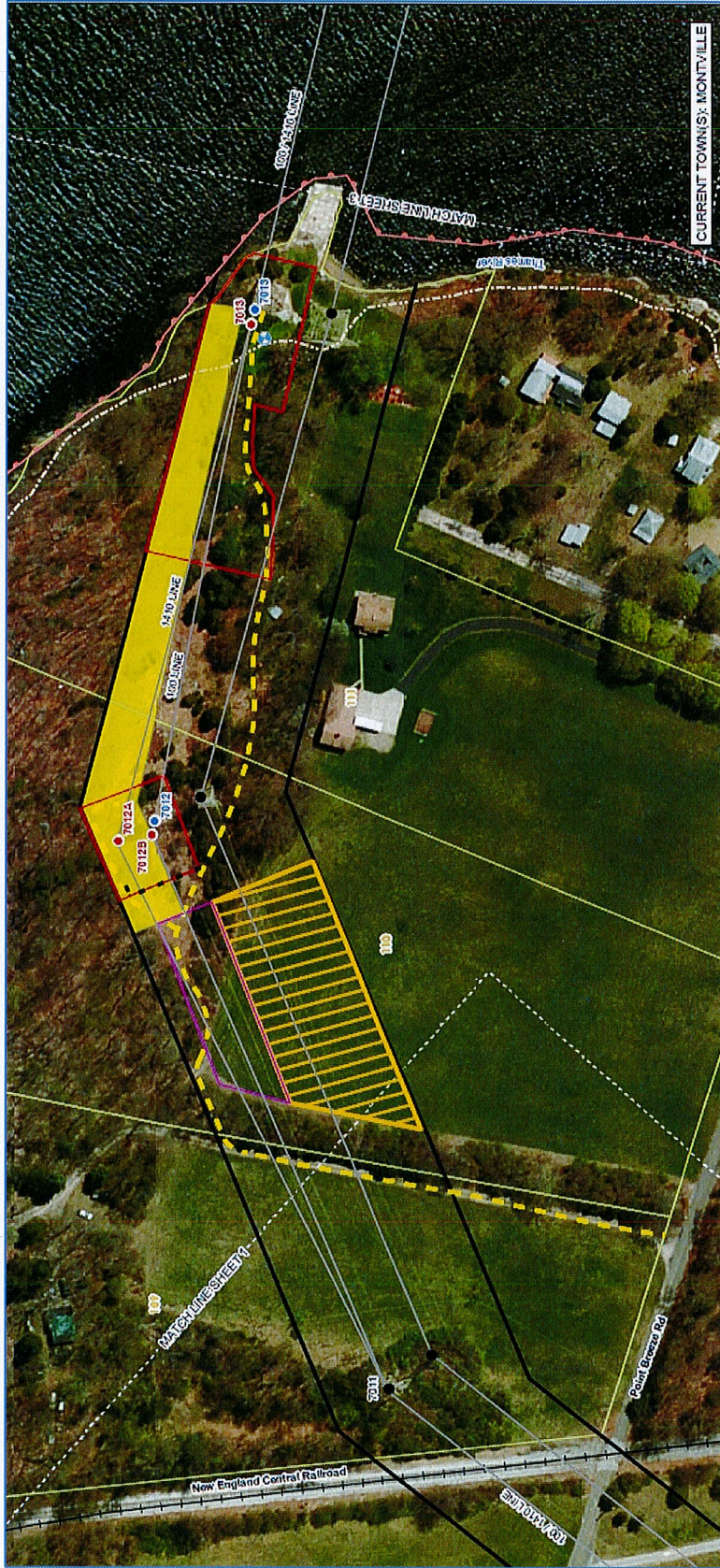
Proposed Structure  
Structure to be Removed  
Existing Structure  
Transmission Line  
Approximate Utility Right of Way



Legend



Transmission Structure Replacement – Montville (west of Thames River)



		<p><b>Legend</b></p> <ul style="list-style-type: none"> <li>Proposed Structure</li> <li>Structure to be Removed</li> <li>Existing Structure</li> <li>Transmission Line</li> <li>Approximate Utility Rights of Way</li> </ul>		<p><b>Proposed Clearing Area</b></p> <ul style="list-style-type: none"> <li>Gate</li> <li>Access/Easement</li> <li>Town Line Boundary</li> <li>Parcel Boundary</li> <li>100-yr Floodzone</li> <li>Scaling Well Location</li> </ul>		<p><b>Proposed Temporary Construction Mat</b></p> <ul style="list-style-type: none"> <li>Retaining Wall</li> </ul>		<p><b>Map Labels</b></p> <p>Line ID</p> <p>100 Line</p>		<p><b>Scale</b></p> <p>0 50 100 Feet</p>		<p><b>EVERSOURCE ENERGY</b></p> <p>GZA Geo-Environmental, Inc. Engineers and Scientists</p>		<p><b>THAMES RIVER CROSSING PROJECT</b></p> <p>EVERSOURCE ENERGY 100 &amp; 1410 Transmission Lines</p>		<p><b>SHEET 2 of 5</b></p>	
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