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
Web Site: portal.ct.gov/csc

DRAFT

Petition No. 1429
Eversource Energy
1768 Line Upgrade Project
East Granby and Suffield

Staff Report
December 11, 2020

Introduction

On August 26, 2020, 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 modifications to a portion of its existing 1768 single circuit 115-kV Transmission Line (1768 Line) in the Towns of East Granby and Suffield, Connecticut.

On August 26, 2020, the Council sent correspondence to the Towns of East Granby and Suffield (Towns) stating that the Council has received the Petition and invited the Towns to contact the Council with any questions or comments by September 25, 2020. No comments have been received.

The Council submitted interrogatories to Eversource on October 22, 2020. Eversource submitted responses to the interrogatories on November 4, 2020.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act, an administrative agency is required to take action on a petition within 60 days of receipt, and therefore, October 25, 2020 was the deadline for action on this Petition. In response to the Coronavirus pandemic, on June 29, 2020, Governor Lamont issued Executive Order No. 7DDD that provides for a 90-day extension of statutory and regulatory deadlines for administrative agencies. Thus, the deadline under CGS §4-176(e) is extended to January 23, 2021.

The purpose of the Project is to improve system reliability by reconductoring approximately 7.0 miles of the 1768 Line within Eversource's electric transmission line right-of-way (ROW) in the Towns.

Municipal and Abutter Notice

In March 2020, Eversource consulted with the Towns regarding the proposed project and provided a briefing on the project. In August 2020, Eversource provided representatives of the Towns with written notice of the Petition filing.

During the Spring of 2020, Eversource conducted outreach to property owners located along the ROW. On August 25, 2020, Eversource provided representatives of the Towns and abutting and underlying property owners with written notice of the Petition filing. One abutter at 248 Newgate Road in East Granby submitted comments to the Council on August 30, 2020 with concerns regarding water drainage from the right-of-way that affects pastures on his property.

For the construction phase of the project, Eversource will attempt to reach property owners abutting the project prior to construction as well as during construction. Project outreach activities include mailing letters and/or post cards, and leaving door hangers. Eversource would meet with landowners on-site as needed to discuss work procedures, work limits and as well as post-construction restoration measures.

Existing Project Area

The existing project area is an approximately seven-mile portion of an electric transmission line ROW that hosts the 1768 Line and the 3216 Line, a 345-kV transmission line supported by a mix of weathering steel H-frame and monopole structures. The 1768 Line connects Southwick Substation in Southwick, Massachusetts to South Agawam Substation in Agawam, Massachusetts through Suffield to East Granby Junction in East Granby. The ROW is generally 300 feet wide with the maintained portion approximately 200 feet wide. Land use in the area of the ROW consists of a mix of rural residential use, agricultural land, forests and recreational properties.

Proposed Project

Eversource proposes to improve system reliability on the 1768 Line by replacing 556 kcmil conductor with 1272 kcmil conductor and a shield wire with two optical ground wires. Currently, the 1768 Line is supported on 68 lattice structures that were constructed in 1924. Due to their age, the structures do not meet current National Electrical Safety Code (NESC) standards or have enough structural capacity to support the new conductors. The steel structures were identified as having corrosion, overstressed members and a lack of redundant structural bracing. The replacement of the lattice structures would reduce the risk of age-related failures, mitigate safety concerns associated with additional construction loads on structure arms during routine maintenance and emergency work and ensure that both the structures and conductor meet the latest NESC and Eversource design standards.

The Project entails the following:

a) Replace 68 double-circuit steel lattice structures with weathering steel monopole structures. Generally, the structures would be constructed in a delta configuration, although some angle structures would be replaced with two-pole structures;
b) Replace the existing bundled 556 kcmil aluminum conductor steel supported (ACSS) with a single 1272 kcmil ACSS conductor;
c) Replace the existing Alumoweld overhead shield wire with two new 48-fiber optical ground wire;
d) Install new hardware, insulators, lightning arresters and counterpoise;
e) Improve and/or install access roads and work pads for construction; and
f) Tree and vegetation removal and/or trimming to for construction and/or to meet required conductor clearances.

All structure replacement work would be performed within the existing ROW. No expansion of the existing ROW or maintained corridor would be required for the Project.

The heights of the existing structures range from 70 to 100 feet above ground level (agl) and many of the replacement structures would be taller, ranging in height from 70 feet to 108 feet agl, to meet current NESC clearance requirements. In general, the replacement structures would be taller than the corresponding existing structures by less than 10 feet; however, 13 structures would be between 10 and 20 feet taller and 5 structures would be more than 20 feet taller. The replacement structures would be located in-line with and as close as possible to existing structures.

Project Construction and Work Procedures

Eversource and/or its contractors would utilize property located at 769 Silver Street in Agawam, MA for a staging/laydown area. The staging area is approximately 3 acres in size and is located in a storage lot on the property. The laydown area would be used to store construction equipment and host Project office trailers. Components removed during work may be temporarily accumulated and stored at the staging area prior to removal for salvage and/or disposal. The staging areas may also be used for parking and performing minor maintenance on construction equipment.

Construction access to the ROW would be from existing access roads extending from off-ROW areas or where the ROW intersects with a public road. Specific work areas within the ROW would be accessed via existing roads that extend along the ROW corridor or from new gravel roads that would be constructed for the Project. Some of the existing access roads may need to be graded, widened, and/or reinforced with additional material in order to accommodate the safe passage of construction vehicles and equipment. A minimum travel surface of 16 feet is required for construction vehicles although some road turning locations will be wider. Where access roads traverse streams and wetlands, temporary construction matting would be used to avoid significant disturbance to underlying surfaces and soils.

Construction areas (including access roads to be constructed and/or improved) would be isolated by establishing erosion and sedimentation controls in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* and Eversource BMPs. Typical erosion and sedimentation controls include, but are not limited to, the use of hay bales and silt fence, straw blankets, rock construction entrances, soil and slope protection, water bars, check dams, berms, swales, plunge pools, and sediment basins. A project-specific Stormwater Pollution Control Plan would be developed for registration under the Department of Energy and Environmental Protection's (DEEP) *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities*.

At each transmission line structure location, a work pad would be constructed to stage material for final on-site assembly and to provide a safe, level work base for construction equipment. Work pads for the project would be approximately 100 feet by 100 feet although in some locations the pads would be up to approximately 110 feet by 120 feet depending of specific in-field conditions. Conductor pull pads would generally be 130 feet by 80 feet. Most work pads would be graveled, though some would use temporary matting to protect sensitive resource areas such as wetlands or specific habitat areas.

All proposed structures would have drilled (caisson) foundations. Foundation work would require the use of equipment such as a mechanical excavator (drill rigs), pneumatic hammers, augers, drill rigs, dump trucks, concrete trucks, grapple trucks, and light-duty trucks. If groundwater is encountered, pumping (i.e. vacuum) trucks or other equipment would be utilized. The water would then be discharged in accordance with applicable requirements. Excavated soils would be stored or spread in upland areas within the ROW, to the extent practicable. Materials that cannot be utilized as backfill would be disposed of in accordance with applicable regulations.

New structure sections and associated hardware would be delivered by flatbed truck to each work pad for assembly by crane and bucket trucks. Supplemental grounding (i.e. counterpoise) would be installed as necessary using a quad plow-cable trencher or equivalent.

New conductors and optical ground wire would be installed after the structures are installed. The required equipment would include conductor reels, conductor pulling and tensioning rigs, guard trucks/structures, and bucket trucks. The use of helicopters is not expected to be necessary.

After the removal of the existing structures and the energizing of the lines, restoration of the ROW would commence and include removal of debris, signage, temporary fencing, and construction mats/pull pads/work pads. Disturbed areas would be restored as practical and stabilized using re-vegetation or other measures prior to the removal of temporary erosion and sediment controls. Such ROW restoration would be performed in accordance with Eversource's *2016 Best Management Practices Manual for Massachusetts and Connecticut* (Eversource BMPs) and in consultation with affected property owners.

Upon completion of the Project, access roads and work pads located in uplands would be left in place to facilitate future transmission line maintenance, unless the underlying property owner requests their removal. Gravel structure work pads in 14 upland locations and one gravel pull pad would be covered with topsoil and seeded with native warm season grass mix, upon project completion. A temporary gravel work pad would be used at Structure 3197 and would be removed upon completion of construction at the request of the property owner. Additionally, to manage storm water runoff from the proposed gravel work pad at Structure #3202 to reduce potential impacts to the abutting property (248 Newgate Road, East Granby), permanent erosion control measures (riprap swales and plunge pools) would be added at and around the proposed gravel work pad and access road.

Eversource would require its contractors to employ best practices for the proper storage, secondary containment, and handling of fuel, motor oil, grease and other lubricants, to protect water quality within the Project area.

Eversource would consult with representatives from the Towns and/or the Connecticut Department of Transportation to develop and implement traffic management procedures, if necessary. Construction warning signs would be installed along public roads near work sites and flaggers or police personnel would be used to direct traffic, as necessary.

Eversource proposes to begin work in January 2021. Normal work hours would be Monday through Saturday from 7:00 a.m. to 7:00 p.m.; however, evening and Sunday work hours may be required due to weather and/outage constraints.

Environmental Considerations

Some limited tree removal, side trimming and vegetation removal are required for the project in order to accommodate the work and to provide required safety clearances from the conductors. All tree/vegetation removal would be in upland areas with most of the clearing occurring on Eversource's property. Tree removal would convert approximately 0.53-acre of upland forest to scrub-shrub or herbaceous habitat areas and approximately 0.07-acre of forested wetland to emergent vegetation wetland areas. Given the limited extent of forest conversion to shrubland or emergent vegetation, no adverse effect to forested habitat would occur. Shrubland and early successional habitat along the ROW is beneficial for many species of wildlife.

A total of 22 wetland areas and 12 watercourses occur along the ROW. Temporary impacts to 15 wetland/watercourse areas related to the use of temporary construction matting for work pads and/or access would total approximately 5.56 acres.

New foundations for 7 replacement structures would result in a permanent wetland impact of 560 square feet. In order to minimize disturbance to wetlands, existing concrete footings for the steel lattice structures located in wetlands would be mostly be left in place, with the existing foundations removed to 12 inches below grade where feasible. Any further excavation would unnecessarily disturb surrounding wetland areas. Construction activities within wetlands and over watercourses would be conducted in accordance with Eversource's BMPs.

A total of 8 vernal pools were identified and delineated along the Project ROW. Project work would occur within one vernal pool and within the vernal pool envelopes (100 feet from the edge of the vernal pool) at 6 vernal pools. Eversource would conduct work within and adjacent to vernal pools in accordance with Eversource's BMPs as well as a Project specific Vernal Pool Protective Measures. The protective measures to be used, where feasible, include, but are not limited to, avoidance and minimization of construction activities, restricting tree clearing, avoid removing shrub vegetation within 25 feet of a vernal pool, use of temporary matting, and the installation of specific erosion and sedimentation control measures.

No 100-year flood zones are located within structure work areas. One structure and several work pads are within a 500 year flood zone in East Granby. Temporary matting would be used for work pads and construction access in these areas.

The proposed project is not located within a DEEP-designated Aquifer Protection Area, public water supply watershed lands, or any public supply reservoirs or public water supply wells.

Eversource consulted with DEEP regarding species that may be listed on the Natural Diversity Database (NDDB) within the Project area. DEEP indicated 5 species may occur within the Project area. DEEP requested a field survey for one of the five species, which Eversource performed in August 2020. The study indicated this species does not occur within the Project area. For the other four listed NDDB species, Eversource would implement DEEP recommended species-specific protection measures.

The spotted turtle, a State-listed species of special concern, was identified within the ROW near two structure locations. At these locations, protective measures would be used including the use of temporary matting from April 1 to September 30 and sweeps of the work areas prior to the installation of temporary matting.

Eversource consulted with the U.S. Fish & Wildlife Service's Information, Planning and Consultation (IPaC) service regarding federally-listed species that may be present within the project areas. The IPaC report indicated that two federally-listed Threatened Species may occur in proximity to the proposed project area, as follows;

a) Northern long-eared bat (NLEB) - There are no known NLEB maternity roost trees within 150 feet of the project area, and the nearest NLEB hibernaculum is approximately 0.4 miles to the west in Granby. Therefore, no impacts to the NLEB is anticipated.
b) Small Whorled Pogonia -The project area does not contain soils that can support populations of this plant.

Recreational resources near or within the Project ROW include the State-owned Newgate Wildlife Area, the Farmington Canal Heritage Trail, Suffield Sportsman's Association property, and the Metacomet blue-blazed hiking trail. Eversource would coordinate with the owners or managers of these public recreational areas to develop and implement measures to maintain public safety during Project construction, while also avoiding or minimizing short-term impacts to these recreational resources. The Project ROW is not near any state or local scenic roads.

No National or State Register of Historic Places properties/districts are within 500 feet of project work areas or impacted by the Project. Based on a review of historic maps, aerial photographs, and soil profiles, 23 work areas were identified as possessing a potential for moderate to high archaeological sensitivity. A subsequent field evaluation found evidence of archaeological significance at one location. Eversource would utilize fill material placed on geotechnical fabric to avoid ground disturbance in this area. Once construction is complete, the geotechnical fabric and fill material would be removed, and the ground slope restored to pre-construction conditions.

The State Historic Preservation Office concurred with the proposed archaeological resource protective measures. Although notified of the project, Eversource did not receive comment from the Tribal Historic Preservation Offices of the Mohegan Tribe of Native Americans of Connecticut and the Mashantucket Pequot Tribal Nation.

There would be no permanent changes to existing ROW sound levels after completion of the Project. 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.

The new structures would not change the existing visual character of the Project area as they would have a weathering steel finish that matches the finish of the structures on the adjacent 3216 Line and would be more streamline in appearance than the lattice structures being replaced.

Magnetic Fields

The Project route already contains an existing transmission line that emits magnetic fields (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.*

Eversource reviewed MF levels associated with the Project and are presented in the table below.

East Granby Junction to Structure 3190		West ROW Edge	Max in ROW	East ROW Edge
Magnetic Fields (mG)	Existing	4.9	47.5	2.9
	Proposed	4.6	49.0	2.8
Structure 3190 to Structure 3200		**West ROW Edge**	**Max in ROW**	**East ROW Edge**
Magnetic Fields (mG)	Existing	2.3	10.5	0.4
	Proposed	3.1	10.4	0.4
Structure 3200 to Structure 3247		**West ROW Edge**	**Max in ROW**	**East ROW Edge**
Magnetic Fields (mG)	Existing	4.6	34.5	2.9
	Proposed	4.6	35.8	2.7

All MF values would be well below the ICNIRP exposure guideline of 2,000 mG.

Recommended Condition

If approved, staff recommends including the following condition:

1. Approval of any project changes be delegated to Council staff.

Project Location