



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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September 16, 2016

Kathleen M. Shanley
Manager-Transmission Siting-CT
Eversource Energy
56 Prospect Street
Hartford, CT 06103

RE: DOCKET NO. 466 - The Connecticut Light & Power Company d/b/a Eversource Energy Certificate of Environmental Compatibility and Public Need for the Frost Bridge to Campville 115-kilovolt (kV) electric transmission line project that traverses the municipalities of Watertown, Thomaston, Litchfield, and Harwinton, which consists of (a) construction, maintenance and operation of a new 115-kV overhead electric transmission line entirely within existing Eversource right-of-way and associated facilities extending approximately 10.4 miles between Eversource's existing Frost Bridge Substation in the Town of Watertown and existing Campville Substation in the Town of Harwinton; (b) related modifications to Frost Bridge Substation and Campville Substation; and (c) reconfiguration of a 0.4 mile segment of two existing 115-kV electric transmission lines across the Naugatuck River in the Towns of Litchfield and Harwinton within the same existing right-of-way as the new 115-kV electric transmission line.

Dear Ms. Shanley:

At a public meeting of the Connecticut Siting Council (Council) held on September 15, 2016, the Council considered and approved the Development and Management (D&M) Plan submitted for this project on July 27, 2016, 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; and
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.

This approval applies only to the D&M Plan submitted on July 27, 2016. Requests for any changes to the D&M Plan shall be approved by Council staff in accordance RCSA §16-50j-62(b). Furthermore, the Certificate Holder is responsible for reporting requirements pursuant to Regulations of Connecticut State Agencies Section 16-50j-62.

Please be advised that changes and deviations from this plan are enforceable under the provisions of the Connecticut General Statutes § 16-50u. Enclosed is a copy of the staff report on this D&M Plan, dated September 15, 2016.

Thank you for your attention and cooperation.

Very truly yours,



Robert Stein
Chairman

RS/RDM/cm

Enclosure: Staff Report, dated September 15, 2016

c: Parties and Intervenors

The Honorable Michael R. Criss, First Selectman, Town of Harwinton
Michael J. Orefice, Planning Chairman, Town of Harwinton
The Honorable Leo Paul, Jr., First Selectman, Town of Litchfield
Dennis Paul Tobin, Ph.D., Land Use Director, Town of Litchfield
The Honorable Edmond V. Mone, First Selectman, Town of Thomaston
Mary Ann Chinatti, Director of Planning & Development, Town of Thomaston
The Honorable Thomas L. Winn, Town Council Chairman, Town of Watertown
Charles Frigon, Town Manager, Town of Watertown
Mark Massoud, Land Use Administrator, Town of Watertown

<p>DOCKET NO. 466 - The Connecticut Light & Power Company d/b/a Eversource Energy Certificate of Environmental Compatibility and Public Need for the Frost Bridge to Campville 115-kilovolt (kV) electric transmission line project that traverses the municipalities of Watertown, Thomaston, Litchfield, and Harwinton, which consists of (a) construction, maintenance and operation of a new 115-kV overhead electric transmission line entirely within existing Eversource right-of-way and associated facilities extending approximately 10.4 miles between Eversource's existing Frost Bridge Substation in the Town of Watertown and existing Campville Substation in the Town of Harwinton; (b) related modifications to Frost Bridge Substation and Campville Substation; and (c) reconfiguration of a 0.4 mile segment of two existing 115-kV electric transmission lines across the Naugatuck River in the Towns of Litchfield and Harwinton within the same existing right-of-way as the new 115-kV electric transmission line.</p>	<p>} Connecticut</p> <p>} Siting</p> <p>} Council</p> <p>} September 15, 2016</p>
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Development and Management Plan

Frost Bridge to Campville 115-kV Project

Staff Report

Introduction

On July 27, 2016, Eversource Energy (Eversource) submitted to the Connecticut Siting Council (Council) a Development and Management (D&M) Plan for the construction of the Frost Bridge to Campville 115-kilovolt (kV) electric transmission line project that traverses the municipalities of Watertown, Thomaston, Litchfield, and Harwinton. The project consists of (a) construction, maintenance and operation of a new 115-kV predominantly overhead electric transmission line entirely within existing Eversource right-of-way and associated facilities extending approximately 10.4 miles between Eversource's existing Frost Bridge Substation in the Town of Watertown and existing Campville Substation in the Town of Harwinton; (b) related modifications to Frost Bridge Substation and Campville Substation; and (c) reconfiguration of a 0.4 mile segment of two existing 115-kV electric transmission lines on common structures across the Naugatuck River in the Towns of Litchfield and Harwinton within the same existing right-of-way (Project). As required by the Council's Decision and Order, Eversource simultaneously submitted two D&M Plans for this Project; one specific to the proposed substation improvements and one specific to the proposed construction of the new transmission line and related improvements to existing transmission lines. Both D&M Plans conform to the Council's Decision and Order and the details of both D&M Plans are summarized in this staff report.

Permits and Agency consultations

During the preparation of the D&M Plans, Eversource consulted with state and federal agencies, including United States Army Corp of Engineers (USACE), United States Fish and Wildlife Service, Connecticut Department of Energy and Environmental Protection (DEEP), Public Utilities Regulatory Authority, Connecticut Department of Transportation, Connecticut State Historic Preservation Office (SHPO), and the Connecticut Department of Agriculture.

Eversource received DEEP and USACE permits, including:

1. The DEEP *General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities* for the management of discharge of stormwater and dewatering wastewaters from construction sites; and
2. United States Army Corp of Engineers Clean Water Act Section 404 Permit.

Municipal and other public consultations

During the preparation of the D&M Plans, Eversource consulted with representatives of the four municipalities traversed by the 115-kV transmission line and the City of Waterbury and the Town of Plymouth, as both of these municipalities are within 2,500 feet of the Project. Copies of the draft D&M Plan were issued to all six municipalities.

Eversource met with Town of Harwinton representatives on June 6, 2016. Eversource incorporated specific requests from the Town of Harwinton into the D&M Plans, as follows:

- Saturday work start time of 8 AM rather than 7 AM;
- Locking gates and barriers along the ROW near Valley Road;
- Specific truck traffic patterns for Wildcat Hill Road;
- Evaluation of the removal of gravel access roads and work pads on an individual basis and the consideration of the application of topsoil/seedling on top of any access roads or work pads that remain in place.

Eversource met with representatives from the towns of Watertown and Litchfield on June 13, 2016. As a result of these meetings, Eversource will provide copies of the biweekly environmental reports and monthly construction progress reports to all four municipalities traversed by the project. Eversource will establish a web address on its website which will link to a Project specific webpage containing the D&M Plan and contact information.

Community outreach during the construction process

Eversource has conducted community outreach during the Project planning and siting processes. Outreach efforts will continue throughout construction and will include notification of upcoming construction activities to affected stakeholders.

Eversource will hold briefings with landowners most affected by construction of the project and other stakeholders to provide updates on the construction progress, milestones and timelines. Project representatives will also contact adjacent landowners to discuss construction activities and questions or concerns.

Schedule

Construction activities are expected to begin in the fourth quarter of 2016 and be completed by mid-2018, including restoration activities. Project construction will require some line outages of existing transmission and distribution lines within the Project ROWs. Line outages must be coordinated with and approved by the Connecticut Valley Electric Exchange (CONVEX).

Construction work will typically occur between 7:00 a.m. and 7:00 p.m., six days per week (Monday through Saturday). However, certain activities may require work outside of the typical construction hours, in some cases on a 24-hour basis and/or on Sundays. Such non-typical work includes activities that must be performed during a CONVEX-approved outage.

General Project Overview

The new 115-kV transmission line will be designated as the 1304 Line and will extend for 10.4 miles. It will exit the Frost Bridge Substation in Watertown as an underground XLPE cable for 0.1 mile, then transition to an overhead line constructed in existing Eversource right-of-way to the Campville Substation in Harwinton.

The new overhead line will be supported on 97 new weathering steel monopoles in either a delta or vertical conductor configuration. One existing structure near the Frost Bridge Substation will be replaced and relocated to accommodate the new line configuration. Additionally, two lattice towers that support both the existing 1191 and 1921 lines over the Naugatuck River will be replaced with four monopole structures to separate the two lines off common structures, thereby eliminating a potential contingency. No other portions of these two transmission lines share a common structure within the Project area.

Prior to submission of the D&M Plan to the Council, Eversource examined potential methods to reduce the height of the proposed structures by either installing mid-span structures or modifying 10 structures from tangent structures to strain structures. Neither option is feasible as 40 more structures would be required for the mid-span design option and the cost of additional foundation work for strain structures would increase Project costs by \$800,000 for a modest decrease structure height.

The Frost Bridge Substation modifications include the expansion of the one-position 115-kV bay to a two-position 115-kV bay, installation of a new 115-kV circuit breaker, two switches, three lightning arrestors, three capacitor voltage transformers and one wave trap. New equipment would also be installed within the existing control house. All work will be performed within the existing fenced area of the substation except for two new terminal structures to be installed on Eversource property, adjacent the substation fence. After construction is complete, Eversource will install landscaping along the fenceline facing Frost Bridge Road.

The existing Campville Substation will be expanded by 90 feet to the east, increasing the fenced substation area by approximately 0.4 acre to accommodate expansion of the ring bus and the installation of new switches, capacitor voltage transformers, circuit breakers and other associated equipment. Eversource will install a chain link fence around the expansion area of two-inch or less mesh.

General Construction Procedures

The D&M Plan contains site plans for provisions for access roads and structure foundations. Preliminary locations for staging areas, contractor yards, field office trailers, sanitary facilities and parking areas have been identified but final locations will be selected by the construction contractor. Once locations are finalized, Eversource will submit detail regarding these support areas for Council staff review and approval prior to use.

Eversource will construct the Project in several stages, some overlapping in time. The following generally summarizes the sequence of construction activities for both the ROW and substation components:

- Prepare Project support sites (e.g., storage, staging and laydown areas).
- Establish construction field office area(s), typically including space for an office trailer, equipment storage and maintenance, sanitary facilities, and parking.
- Survey and stake the Project boundaries, vegetation clearing boundaries, limits of disturbance, excavation areas, and new structure locations.
- Mark the boundaries of previously delineated wetland and watercourse areas, including vernal pools.
- Identify and mark areas to be avoided or otherwise protected (e.g., sensitive cultural or environmental resource areas).
- Identify other areas, as appropriate, where special construction considerations will apply (e.g., areas that require particular construction treatment pursuant to landowner agreements).
- Perform vegetation clearing and site preparation, as needed.
- Install erosion and sedimentation controls.
- Construct new access roads or improve existing roads. Prepare level ROW work pads as

necessary at new structure sites and conductor pulling sites (and, later, guard structure or equivalent sites).

- Construct foundations and install/assemble new structures or equipment.
- Install shield wires and conductors.
- Install structure grounding systems, including counterpoise (where needed).
- Remove temporary roads and construction debris.
- Restoration of disturbed sites. Install landscaping.
- Maintain temporary erosion and sediment controls until vegetation is re-established or disturbed areas are otherwise stabilized.

Rock removal

Bedrock encountered during construction will be removed by mechanical methods. If blasting is required, Eversource will retain a certified blasting contractor that will develop a site specific blasting plan in compliance with state and local regulations. Pre-and post-blast surveys would be conducted as well as community outreach to local officials and area landowners. If blasting is required, Eversource will submit the blasting plan to the Council prior to blasting activities.

Access Roads and Work Pads

Existing access roads will be used to the greatest extent possible; however, a majority of existing roads will require resurfacing and some re-grading. Access roads will have a typical travel width of 16-20 feet to accommodate heavy construction equipment. In some areas, off-ROW access roads will be necessary to avoid rugged terrain or sensitive environmental or cultural resources. Eversource has provided off-ROW access road information within the D&M Plan.

Gravel work pads will be established at each transmission structure location to create a stable, level construction area. Excavated soil at each pad location will be stockpiled for reuse or spread in upland areas. Work pads will typically measure 100 feet by 100 feet for tangent structures and 100 feet by 200 feet for deadend structures. Gravel pull pads, measuring 100 feet by 300 feet will also be established at certain intervals to accommodate truck mounted conductor pulling equipment.

Following construction, access roads and work pads located in upland areas will be left in place unless directed to be removed by the landowner. Access roads located in active agricultural areas or within lawn or other improved areas will be removed unless directed by the landowner to remain in place. All pull pads will be removed.

Erosion and Sedimentation control measures will be in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*, Eversource Best Management Practices, and DEEP and USACE permit conditions. Project soil areas of high erosion potential have been identified on Project maps.

Prior to construction, Eversource will notify Town police departments and request enforcement of no trespass provision on the ROW, including on land it leases. During construction, Eversource will post no trespass, construction zone and other hazard warning signs along the Project route, as appropriate. Once construction is completed, signs, gates and fences will be installed along ROW access points upon coordination with or at the request of the underlying landowner.

Wetlands and Watercourses

The overhead portion of the new transmission line will span 58 waterbodies, including 20 perennial waterbodies and 38 intermittent watercourses. No new transmission line structures will be located within waterbodies or watercourses and no access will be required across the larger watercourses traversed by the ROW (Branch Brook, Northfield Brook and the Naugatuck River). Temporary construction access will be required across smaller streams and will consist of temporary culverts or timber mats. One culvert on an existing on-ROW access road will be replaced with a properly sized open bottom structure to allow for greater flow volume.

The Project will affect 48 wetland areas, 28 of which will be impacted from temporary construction matting associated with access roads and work pads. Construction impacts include the clearing of 6.7 acres of forested wetlands in the ROW that will revert to shrub-scrub vegetation, and 2.7 acres of temporary impact associated with timber mats. Minimal filling (1,481 square feet) would be required for the installation of one new structure (no. 95) and improvements to a culvert on an existing access road in Harwinton.

Wetland restoration will include stabilization by seeding and maintenance of erosion and sedimentation controls until final stabilization is achieved. Additionally, Eversource will implement a Wetland Invasive Species Control Plan to minimize the potential establishment of wetland invasive species. Measures include cleaning of equipment and any other materials (including wood mats) to remove excess soil, debris, and vegetation before being deployed to the Project ROW as well as cleaning of construction materials that are moved from Project areas known to contain invasive species.

The Project area contains 21 vernal pools. Of these four vernal pools will be cleared of trees for ROW clearance requirements. One vernal pool depression may be impacted by temporary matting associated with the construction of one structure adjacent to the vernal pool. Three decoy vernal pools identified in access roads will be removed by improving road drainage in these locations. Eversource has provided a Vernal Pool Avoidance and Minimization Measures section within the D&M Plan to establish site specific protocols for construction activities that may directly or indirectly affect vernal pools. Protocols include syncopated silt fencing, avoiding shrub removal, and avoiding vernal pool depression impacts from matting, machinery and tree felling, where practical.

Rare and endangered species

Eversource has provided site specific protection measures for five species listed on the Natural Diversity Database that are known to occur or could occur within the Project area. The provisions are species specific and generally consist of the following elements: contractor awareness, work period restrictions, silt fence details, flagging of critical habitat, minimization of habitat disturbance to the extent practical, and reporting to DEEP.

Public trails and recreational areas

The new transmission line will cross several public trails and recreational areas. Eversource will deploy appropriate signage, barriers, and reroute trails or access points, if feasible, to minimize disruption to recreational areas and access points.

Cultural Resources

Eversource, in coordination with SHPO, previously surveyed the ROW for cultural resources. Although no archaeological sites or features of importance were identified during the surveys, Eversource will have a

professional archeological firm available to respond to any potential archeological resources that are discovered during construction.

Vegetative Clearing

Construction of the project will require vegetation removal along the ROW to allow for the installation of the new transmission line, to provide and maintain access to transmission line structures, and to provide safe distances between the conductors and adjacent forest vegetation. Eversource has provided a Vegetation Clearing Plan that specifies clearing limits and methods to ensure compliance with established minimum vegetation clearances for construction and operation of the new transmission line as well as to maintain compliance with applicable state and federal Project permits.

Mechanical methods will be used for clearing. Desirable low growing species will be retained to the extent practical. Stumps will remain in place unless stump removal is necessary for road or work pad construction.

Along stream banks and within wetlands, low-growing vegetation will be maintained to the extent practicable. Near streams, vegetation removal will be performed selectively, preserving desirable vegetation within a 25-foot-wide riparian zone on either side of the stream bank. In wetlands, vegetative clearing will be conducted using methods to minimize vehicle rutting of wetland soils.

Vegetation removal in and around vernal pool habitats will be limited to the extent practicable. In locations where access across vernal pools is unavoidable, lower impact clearing techniques and/or temporary swamp mats, corduroy roads, or equivalent will be used to support vehicles and equipment. Eversource will attempt to schedule clearing activities to avoid amphibian breeding and migration seasons, to the extent practical. Eversource will also consider work during frozen ground conditions, if construction and/or transmission line outage schedules allow.

The clearing contractor will be responsible for the disposition of waste wood that is not claimed by the underlying property owner. Wood disposition could include chipping, Project construction use, or removal off-site for forest product use.

Spill Prevention and Countermeasures Plan

As part of its D&M Plan, Eversource submitted a Spill Prevention and Countermeasures Plan (SPCP). The SPCP describes measures to minimize potential for a spill of petroleum products or hazardous or toxic substances and, if a spill does occur, to contain the release of the spill and minimize effects. Additionally, Eversource included provisions for construction equipment and vehicle washing in designated locations with wash water control and containment.

Independent Environmental Inspector

Eversource will retain an independent environmental inspector during construction of the Project, subject to Council approval. The inspector will monitor construction of the new 115-kV transmission line and double circuit separation at the ROW crossing over the Naugatuck River. The inspector will provide a bi-weekly monitoring report to the Council and affected municipalities. Additionally, the inspector will coordinate with Eversource's Project specific environmental compliance monitor and report any observed practices that are inconsistent with Project approvals and permits to the monitor for further action.

D&M Plan Changes

All D&M Plan changes that are deemed "significant" in accordance with RCSA § 16-50j-62, will be submitted to the Council for approval prior to implementation of the change. A significant change to the project is one that would substantially reduce environmental protection, substantially increase potential public concern, or result in a meaningful effect on the environment, the public, or other project permits and approvals.

Significant change to the D&M Plan will be categorized as either "urgent" or "non-urgent." If a change is deemed urgent, and it cannot wait until the next Council meeting for consideration, Eversource will provide verbal notification of the change to Council staff and request expeditious approval of the change. If verbal permission is granted, Eversource will continue construction as stated in the approved change and file documentation regarding the change with 48 hours. If verbal permission is not granted or if the change is not urgent, Eversource will file documentation regarding the change and hold construction on that portion of the project until the Council reviews the change.

Non-significant changes to the D&M Plan will be documented. Although changes that are not deemed significant will not be submitted to the Council for approval, Eversource will document all changes in its monthly construction progress reports.

Post-Construction EMF Monitoring Plan

Consistent with the Council's D&O, Eversource has submitted a post-construction Electric and Magnetic Field Monitoring Plan for the Project. Electric and magnetic field measurements will be made on the existing ROW to compare actual levels to calculated levels. Eversource will collect measurements in three previously identified Focus Areas, as follows; the ball field in Veterans Memorial Park in Watertown, a residential area on Walnut Hill Road in Thomaston with 12 residences and a residential area on Campville Road in Litchfield with 19 residences. Within 12 months of the in-service date of the new 115-kV line, Eversource will submit a report to the Council containing the results of the measurements with comparisons to predicted values.

Reports

The following reports will be provided to the Council:

1. **A Monthly Construction Progress Report:** As required by RCSA § 16-50j-62(b)(3), this report will summarize construction progress as well as any identify changes and deviations to the approved D&M Plan. A copy will also be provided to the affected municipalities.
2. **A Bi-Weekly Independent Environmental Inspector Report:** As required by the D&O condition 4, this report will describe the status of construction and associated environmental protection measures. A copy will also be provided to the affected municipalities.
3. **A Final Report:** As required by RCSA § 16-50j-62(c), Eversource will provide this report no later than 180 days after completion of all site construction and rehabilitation. The report will identify:
 - a) All agreements with abutters or property owners regarding special maintenance precautions
 - b) Significant D&M Plan changes necessary due to property rights/ landowner concerns or for other reasons.
 - c) The location of any construction materials left in place.
 - d) The location of areas where special plantings and reseeding have been performed.
 - e) The actual construction cost of the facility.

4. An **Operating Report**: As required by the D&O condition 8, Eversource will provide this report within three months after the conclusion of the first year of the operation of all project facilities, and annually thereafter for three years. The report will describe the overall condition, safety, reliability, and operation of the transmission systems.

Recommendations

Council staff recommends approval of the Project 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; and
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.