

STATE OF NEW HAMPSHIRE

Intra-Department Communication

DATE: November 4, 2022

AT (OFFICE): NH Dept. of Energy

FROM: Gary Raymond GMR
Utility Analyst IV – Division of Enforcement

SUBJECT: CRE 2022-025 Eversource Energy
Application for License to Construct and Maintain Electric Lines Over and
Across Public Waters in Winchester, New Hampshire
Staff Recommendation

TO: Jared Chicoine, Commissioner, Department of Energy
Christopher Ellms, Jr., Deputy Commissioner, Department of Energy

CC: Thomas Frantz, Director of Regulatory Support Division
Paul Kasper, Director, Enforcement Division
Elizabeth Nixon, Director-Electric Regulatory Support Division
Andrew Harmon, Hearings Examiner, Enforcement Division

Review by the Division of Enforcement (DOE) of the above application consisted of the following elements:

- Application contents, replacement application contents, and history;
- Applicable State statutes;
- Review of the existing crossing(s) previously licensed by the PUC, if any;
- Review of land ownership of existing pole structures;
- Review of NESC code requirements as described in Puc 300;
- Review of public need and public impact, including applicability of other State regulations; and
- Conclusions and Recommendations.

1. Application contents and history.

On October 24, 2022, Public Service New Hampshire d/b/a Eversource Energy (Eversource, ES or the Company) filed an application for a license pursuant to RSA 371:17 to install and maintain an OPGW wire on the Eversource 381 Line, an existing 345kV transmission line, over and across public water and state-owned land in Winchester, New Hampshire.

As part of its ongoing efforts to improve system reliability, Eversource is replacing an existing shield wire on the 381 Line with an OPGW wire between the Vernon Substation in Vernon, Vermont and the Northfield Mountain Substation in Northfield, Massachusetts. The existing pole

top ADSS shield wire will be removed and replaced with an OPGW wire having the specifications and configuration shown on the Cable Schedule and Structure Details in Exhibit 2. The three existing phase conductors and the existing static wire at the crossing spans shall remain unchanged.

The conductor cable clearance requirements pursuant to the National Electrical Safety Code (NESC) based on the design conditions at 285 deg F. have been met. This scenario was the governing condition which yielded the greatest sag and lowest clearance. Pursuant to NESC, the minimum clearances for a 345kV line are 23.3 feet for water areas not suitable for sail boating or where sail boating is prohibited, 32.8 feet for wires over track rails of railroads, and 24.8 feet for other areas traversed by vehicles, such as cultivated, grazing, forest, and orchard land, industrial sites, commercial sites, etc. in respect to the state-owned lands. The actual minimum height over the public water and state-owned lands are depicted in Exhibit 2 submitted by ES and exceed the respective minimum requirements. Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the application.

Wire specifications and loading conditions to establish maximum sag for the crossing spans that are the subject of this application are as indicated on Profile View and Cable Schedule of Exhibit 2 submitted by ES. The water clearances are taken from the projected 100-year flood levels. This is more conservative than the 10-year flood levels allowed by the NESC (note 18 to Table 232-1). The 100-year flood elevation for the subject portion of the Ashuelot River was derived from FEMA's National Flood Hazard Layer Firmette, 01/16/2020.

The locations of the public water and state-owned land crossings that are the subject of this application are depicted on the Overview Map in Exhibit 1 submitted by ES and the DOE Map attached to this recommendation.

The 381 Line crosses public waters of the Ashuelot River and state-owned lands owned and operated by both the NH DOT (Map 7, Lot 69) and by NH Department of Natural and Cultural Resources (DNCR) also known as the Ashuelot Rail Trail in the Town of Winchester between Structures 28 and 31. The span commences approximately 2,300 feet east from the intersection of Lost Road and Ashuelot Main Street (aka NH Route 119).

The location of Structures 28 to 30 creates a total span of 544.9 feet, with a span of 246.3 feet over and across state-owned land.

The location of Structures 30 to 31 creates a total span of 606.8 feet, with a span of 95.1 feet over and across the Ashuelot River.

The location of Structures 30 to 31 creates a total span of 606.8 feet, with a span of 110.9 feet over and across state-owned land.

The following table provides the summary of this crossing application, setting forth the structure numbers, types, spans, ES design criteria, and NESC compliance confirmation.

Department of Energy Enforcement Division Summary Table

Eversource 381 - State Lands and Waterbody Crossing Details					
Structures	Type	Span Distance (feet)	Minimum NESC Table 232-1 Clearance (ft.)	ES Vertical Design Clearance (ft.)	Complies with NESC Table 232-1 (Y/N)
28-30 State Land	28 – 77.5' Steel SEA-HF 29 – 85' Steel SEA-HF 30 – 70' Steel SEA-HF	544.9	24.8	46.1	Y
30-31 Water	30 – 70' Steel SEA-HF 31 – 90.2' Steel SEA-HF	606.8	23.3	106	Y
30-31 State Land	30 – 70' Steel SEA-HF 31 – 90.2' Steel SEA-HF	606.8	32.8	74.4	Y

2. New Hampshire statute referenced in application (as modified by N.H. House Bill 1258 on August 22, 2022).

371:17 Licenses for New Poles – Whenever it is necessary, in order to meet the reasonable requirements of service to the public, that any public utility should construct a pipeline, cable, or conduit, or a line of poles or towers and wires and fixtures thereon, over, under or across any of the public waters of this state, or over, under or across any of the land owned by this state, modify a previously licensed installation, or license a previously constructed installation, it shall apply to the department of energy for a license to construct and maintain the same. For the purposes of this section, “public waters” are defined to be all ponds of more than 10 acres, tidewater bodies, and such streams or portions thereof as the department of energy may prescribe. Every corporation and individual desiring to cross any public water or land for any purpose herein defined shall apply to the department of energy for a license in the same manner prescribed for a public utility. The department of energy may condition any license issued under this paragraph in any manner necessary to assure that the license may be exercised without substantially affecting the public rights in public waters or state-owned lands. Using a non-adjudicative process, the department of energy may reject incomplete or improperly filed applications, and shall, also using non-adjudicative process, issue or deny the license within 90 days of receiving a complete application and all information subsequently requested of an applicant.

371:17 Licenses for New Poles (eff. Aug. 20, 2022)

3. Review of existing license(s) and permissions previously granted by the PUC for this location over public waters and state-owned lands in Winchester, New Hampshire.

The public water crossing at the Ashuelot River was previously licensed in 2019 under DE 19-099 (Order No. 26,327).

The Ashuelot River from the dam at Butterfield Pond in Washington to the confluence with the Connecticut River in Hinsdale, New Hampshire is listed under the category “Public Rivers and Streams” in the Official List of Public Waters (OLPW). The entire list of public waters can be accessed through the following web link:

<https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/olpw.pdf>

Eversource asserts that a New Hampshire Department of Environmental Services (NHDES) Statutory Permit Notification (SPN) will be required for temporary impacts associated with temporary work areas at specific structure locations and will be obtained prior to commencement of construction. Due to the aerial nature of the work, temporary work areas on either side of the Ashuelot River are not necessary, thus a NHDES Shoreland Permit by Notification (PBN) is not required.

The U.S. Army Corps of Engineers (ACOE) does not regulate the subject portion of the Ashuelot River as navigable waters. As a result, a crossing permit from ACOE is not required.

4. Review of land ownership of proposed pole structures.

In its application, Eversource specifies that the OPGW installation work will be accomplished within existing right-of-way easements, thereby mitigating impacts and concerns of property owners affected by the project scope.

5. Review of NESC code requirements as described in Puc 300.

The Enforcement Division staff reviewed the specifications related to the OPGW installation work of this crossing project as described in the application, attachments, and all supplemental support documents filed by the Company and found them to be in conformance with N.H. Admin. Rule Puc 306 and applicable sections of NESC C2-2012.

6. Review of public need and public impact.

The 381 Line is an integral part of Eversource’s existing electric transmission system in New Hampshire. The crossing location identified in the application is located in the town of Winchester, New Hampshire. The Company asserts in its application that the existing crossing will be exercised without substantially affecting public rights in the identified public water and state-owned lands in New Hampshire.

The Enforcement Division staff verified that minimum safe line clearances above the public waters will be maintained at all times and determined that the license of the proposed OPGW installation work may be exercised without substantially affecting the public rights in public water or state-owned lands.

7. Enforcement Division Recommendation:

Based on the results of its review of the application, attachments, and all other supporting documents, the Enforcement Division recommends that the Department.

- 1) Find that the license Eversource requests in this application may be exercised without substantially affecting the public rights in public waters or state-owned lands; and
- 2) Grant Eversource a license to construct and maintain electric lines pursuant to RSA 371:17 and Puc 306.01, over and across public water and state-owned land in Winchester, New Hampshire as specified in the application.

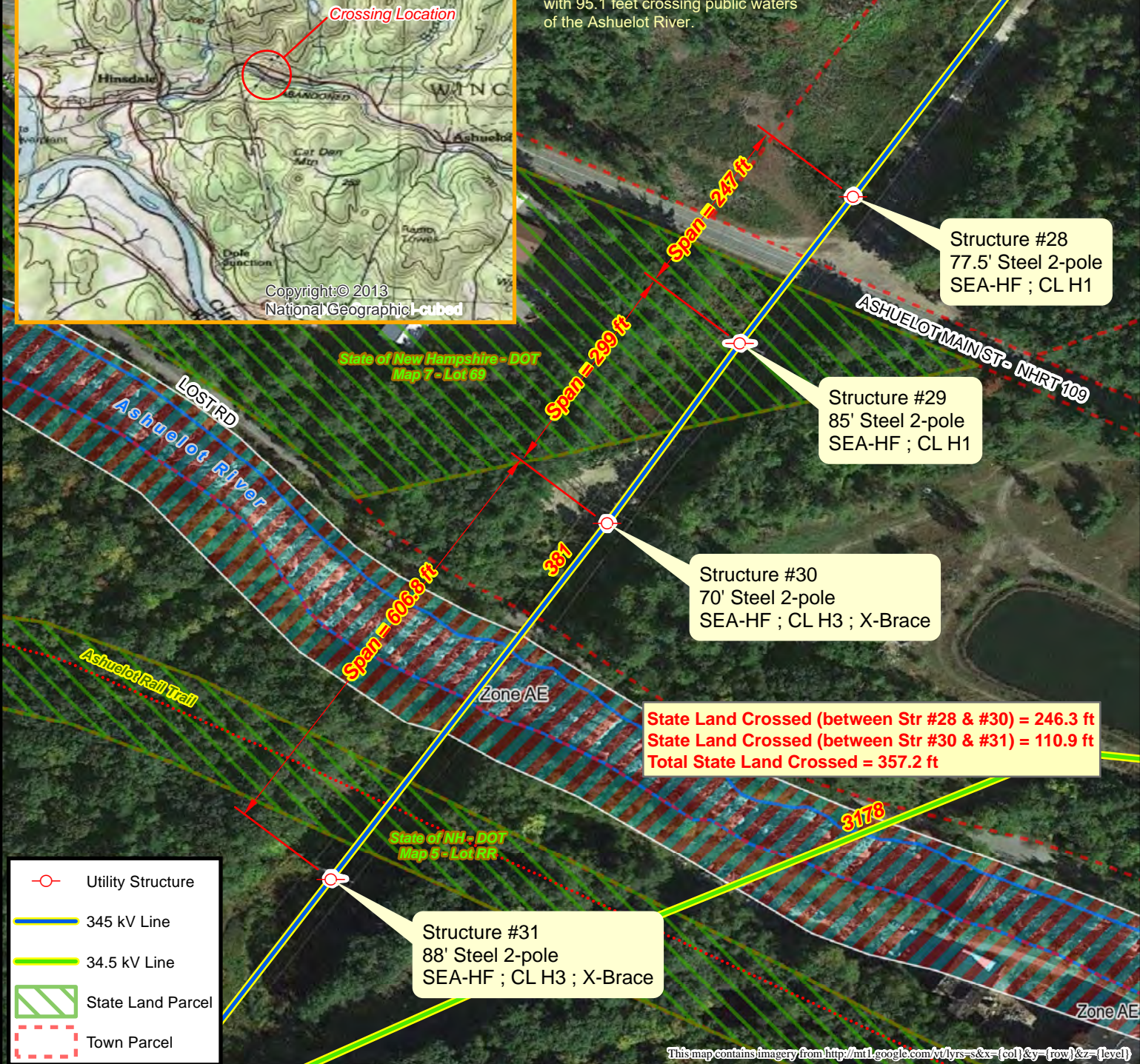
Attachment:

State Land (NHDOT) & Ashuelot River CRE 2022-025 Eversource Crossing



Public Water as shown below in Map identified in the application and engineering drawings as State of New Hampshire and located in Winchester. The project will require the Department to grant a license for the 345 kV transmission line from Structure 30 south to Structure 31. This crossing spans 606.8 feet with 95.1 feet crossing public waters of the Ashuelot River.

State-Owned Lands as shown below in Map identified in the application and engineering drawings as State of New Hampshire and located in Winchester. The project will require the Department to grant a license for the 345 kV transmission line from Structure 28 south to Structure 31. This crossing spans 1,151.7 feet with 357.2 feet crossing state-owned lands.



- Utility Structure
- 345 kV Line
- 34.5 kV Line
- State Land Parcel
- Town Parcel

Flood Hazard Zones

- Regulatory Floodway
- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard



Prepared by:
NH Department of Energy
Enforcement Division
Safety Bureau

This map contains imagery from <http://mtl.google.com/vt/lyrs=s&x={col}&y={row}&z={level}>