

# STATE OF NEW HAMPSHIRE

## Inter-Department Communication

**DATE:** August 29, 2019  
**AT (OFFICE):** NHPUC

**FROM:** Paul Kasper *PK*  
Assistant Director – Safety Division

**SUBJECT:** Docket No. DE 19-110 Public Service New Hampshire d/b/a  
Eversource Energy  
Petition for a License to Construct and Maintain Electric Lines Over and  
Across Land Owned by the State in the Town of Fitzwilliam, New  
Hampshire  
**Staff Recommendation**

**TO:** Debra Howland, Executive Director  
Thomas Frantz, Director, Electric Division  
Richard Chagnon, Assistant Director, Electric Division  
David Wiesner, Director, Legal Division  
Randall Knepper, Director, Safety Division

The Safety Division's review of the above petition consisted of the following elements:

- Petition contents and history;
- Applicable state statutes;
- Review of the existing crossing(s) not licensed by the PUC;
- 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. Petition contents and history

On June 11, 2019, Public Service Company of New Hampshire d/b/a Eversource Energy (ES), filed a petition pursuant to RSA 371:17 for a license to re-construct, maintain, and operate the Eversource 379 Line, which is a 345 kV transmission line. This is a project to modify or rebuild two structures on the existing 379 transmission line. No conductors, shield wire, or neutral wire will be replaced in the project. All wires will be transferred from existing structures to new structures replaced at the same locations.

The 379 Line crossing of the State's land parcel in the Town of Fitzwilliam, New Hampshire was not previously licensed, because the parcel was in private ownership when the 379 Line was originally constructed, and therefore no Commission license was required. According to ES, the existing 379 Line structures and associated transmission

components are approximately 49 years old, have been subject to environmental damage and require replacement for the line to continue to function safely and reliably. The structure replacement and repair project is part of a capital reliability project that is necessary for the 379 Line to continue to meet current as well as future projected electricity demand. See the detailed NHPUC Safety Division map/schematic in the attachment of this recommendation.

As shown in ES Exhibit #2, Structure # 446 is constructed with 2-85 ft. CL H1 LD steel poles. The structure will have conductors for the 345 kV 379 transmission line consisting of (3) 850.8 kcmil ACSR 45/7 cables and (1) #8 Alumoweld 7 stranding neutral wires. The fiber optic cable will be (1) OPGW Fiber and will be vertically attached above the conductors. The conductor cable clearance requirements were met using the National Electrical Safety Code (NESC) conditions at 285 deg F. This scenario was the governing condition, which yielded the greatest sag and lowest clearance. In its petition, ES provides sufficient detail to show how the required clearance from the conductor cables to the land surface will be maintained at (28.5 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 18 feet clearance is required by the NESC Table 232-1.

Structure # 447 is also to be constructed with 2-85 ft. CL H1 LD steel poles. The structure will have conductors for the 345 kV 379 transmission line consisting of (3) 850.8 kcmil ACSR 45/7 cables and (1) #8 Alumoweld 7 stranding neutral wires. The fiber optic cable will be (1) OPGW Fiber and will be vertically attached above the conductors. The conductor cable clearance requirements were met using the NESC conditions at 285 deg F. This scenario was the governing condition, which yielded the greatest sag and lowest clearance. In its petition, ES provides sufficient detail to show how the required clearance from the conductor cables to the land surface will be maintained at (28.5 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 18 feet clearance is required by the NESC Table 232-1. The crossing creates a total span of 517.61 ft. between the two structures.

## **2. New Hampshire statutes applicable to petition**

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, it shall petition the commission 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 commission may prescribe. Every corporation and individual desiring to cross any public water or land for any purpose herein defined shall petition the commission for a license in the same manner prescribed for a public utility.

371:20 Hearing; Order. The commission shall hear all parties interested; and, in case it shall find that the license petitioned for, subject to such modifications and conditions, if any, and for such period as the commission may determine, may be exercised without substantially affecting the public rights in said waters or lands, it shall render judgment granting such license. Provided, however, that such license may be granted without hearing when all interested parties are in agreement and in cases involving filings made under RSA 371:17-a and RSA 371:17-b. The executive director of the commission may issue licenses under RSA 371:17-a and RSA 371:17-b.

### **3. Review of land ownership of proposed pole structures**

In its petition, ES specifies that the re-construction of the 379 Line crossing will cross state-owned land in the Town of Fitzwilliam.

### **4. Review of NESC code requirements as described in Puc 300**

Under N.H. Code Admin. Rules Puc 306, each utility is required to construct, install, operate and maintain its plant, structures and equipment and lines, as follows:

In accordance with good utility practice;

After weighing all factors, including potential delay, cost and safety issues, in such a manner to best accommodate the public; and

To prevent interference with other underground and above ground facilities, including facilities furnishing communications, gas, water, sewer or steam service.

For purposes of that section, “good utility practice” means in accordance with the standards established by the “National Electrical Safety Code C2-2017.”

ES states that the current crossings have been designed and will be re-constructed, maintained, and operated in accordance with the NESC C2-2017.

Safety Division Staff reviewed the specifications related to the design and re-construction of this crossing project as described in the petition, the attachments, and all supplemental support documents, and found them to be in conformance with the applicable sections of NESC C2-2017 and Puc 300.

### **5. Review of public need and public impact**

In order to meet the reasonable requirements of electric service to the public, ES proposes to re-construct and maintain a three-phase 345 kV transmission line, designated as the 379 line, and a related fiber optic cable, over and across land owned by the State in the Town of Fitzwilliam. The 379 transmission line is an integral part of ES’s electric transmission system in the region.

ES asserts in the petition that the proposed licenses for this crossing may be exercised without substantially affecting the rights of the public in the state-owned land in Fitzwilliam. Minimum safe line clearances above the land surface will be maintained at all times. The use and enjoyment by the public of the land will not be diminished in any material respect as a result of the modification and replacement of the existing overhead line crossings.

The crossing project does not require use and occupancy agreements from the New Hampshire Department of Transportation to be in place prior to construction.

Safety Division Staff has concluded that the impact to the public will be *de minimis* and not measurable. The crossing does not appear to affect the rights of the public in the state-owned land because minimum safe line clearances above the land surface will be maintained at all times.

**Staff Recommendation:**

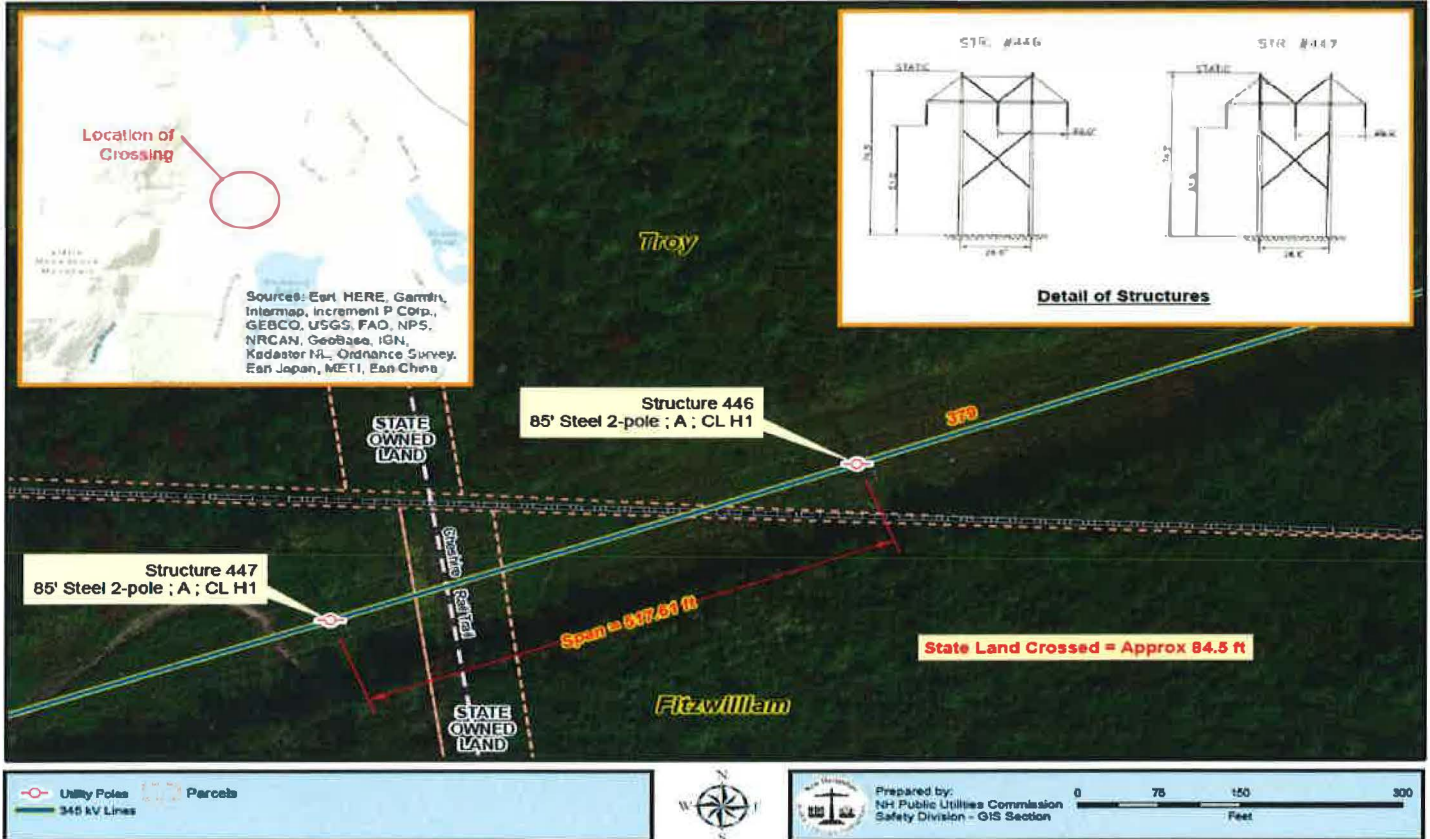
Based on the results of its review of the petition, attachments, and all other supporting documents submitted in connection with this docket, the Safety Division Staff recommends that the Commission:

- 1) Find that the crossing license requested by ES may be exercised without substantially affecting the public rights in the state-owned land which are the subject of the petition;
- 2) Grant ES a license to construct, operate, and maintain electric lines, including neutral and fiber optic cable, over and across the state-owned land in the Town of Fitzwilliam, as specified in the petition; and
- 3) Issue an order *nisi* granting the crossing license, and orders for the publication of that order.

Staff Attachment

Attachment

## NH State Land (379) - DE 19-110 EVERSOURCE Crossing



**Public Land** that is state-owned land is shown in the petition and engineering drawings as State of New Hampshire. The parcel is located in the Town of Fitzwilliam. The project will require the Commission to grant a public land crossing license related to this parcel. The license will be for the 345 kV 379 transmission line from Structure # 446 to Structure # 447, crossing approximately 84.5 feet of state-owned land in the Town of Fitzwilliam.

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