

# STATE OF NEW HAMPSHIRE

## Inter-Department Communication

**DATE:** September 9, 2020  
**AT (OFFICE):** NHPUC

**FROM:** Kenneth Walsh *KGW*  
Utility Analyst IV – Safety Division

**SUBJECT:** Docket No. DE 20-073 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 Goffstown and Hooksett, New Hampshire  
**Staff Recommendation**

**TO:** Debra Howland, Executive Director  
Thomas Frantz, Director, Electric Division  
Richard Chagnon, Assistant Director, Electric Division  
Mary Schwarzer, Hearings Examiner, Legal Division  
Randall Knepper, Director, Safety Division  
Paul Kasper, Assistant 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 May 19, 2020, 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 0161 Line, which is a 115 kV transmission line. This is a project to replace one structure in Goffstown and two structures in Hooksett on the existing 0161 transmission line. All wires will be transferred from the existing structure to the new structure replaced at the same location.

The 0161 Line crossing of the State's land parcel in the Town of Hooksett, New Hampshire predates the State of New Hampshire acquiring title and therefore, was not

required to be licensed. The 0161 land crossing in Goffstown appears not to have been licensed, but will be licensed by this petition.

According to ES, the existing 0161 Line project includes replacement of one structure (#72) in Goffstown. This structure is approximately 46 years old, has been subject to environmental damage and require replacement for the line to continue to function safely and reliably. The existing 0161 Line (2) wood structures in Hooksett had been replaced in 2017 prior to this after-the-fact petition. In addition to this after-the-fact petition, ES seeks to license the replacement of one of two shield wires with fiber OPGW telecommunications cable spanning structures #20 and 21 in Hooksett as this work was completed in 1992. The structure replacement and repair project is part of a capital reliability project that is necessary for the 0161 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, Hooksett Structure # 20 was constructed of (1) 66 ft. OAL Type ST-1, CL H9 steel pole. The structure has conductors for the 115 kV 0161 transmission line consisting of (3) 795 kcmil ACSR 26/7 cables. The static cable consist of (1) 72 Fiber OPGW, which was 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 (52.3 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 16.1 feet clearance is required by the NESC Table 232-1.

Hooksett Structure # 21 was constructed with (1)-88.5 ft. OAL Type ST-1, Class H9 steel pole. The structure has conductors for the 115 kV 0161 transmission line consisting of (3) 795 kcmil ACSR 26/7 cables. The static cable consist of (1) 72 Fiber OPGW, which was vertically attached above the conductors. This crossing creates a total span of 396.6 ft. between structures 20 through 21 with 20.5 ft. spanning state-owned land.

As shown in ES Exhibit #3, Goffstown Structure 72 is to be constructed of (1) 79 ft. OAL Type ST-1, Class H 9 steel pole. The structure will have conductors for the 115 kV 0161 transmission line consisting of (3) 795 kcmil ACSR 26/7 cables. The static cable will consist of (1) 7#8 Alumoweld cable, which 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 (45.5 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 20.1 feet clearance is required by the NESC Table 232-1.

Goffstown Structure 73 is an existing structure constructed of (1) 85 ft. OAL Type SDE steel pole. The structure has conductors for the 115 kV 0161 transmission line consisting of (3) 795 kcmil ACSR 26/7 cables. The static cable consist of (1) 7#8 Alumoweld cable, which was vertically attached above the conductors. This crossing creates a total span of 344.1 ft. between structures 72 through 73 with 225.3 ft. spanning state-owned land.

## **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.

**Source.** 1921, 82:1. PL 244:8. RL 294:16. 1951, 203:48 par. 17. 1953, 52:1, eff. March 30, 1953. 2013, 82:1, eff. June 19, 2013.

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

In its petition, ES specifies that the re-construction of the 0161 Line crossing will cross state-owned lands in the Towns of Hooksett and Goffstown.

## **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 C2-2012."

ES states that the current crossings have been designed and will be re-constructed, maintained, and operated in accordance with the NESC C2-2012.

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 C2-2012 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 115 kV transmission line, designated as the 0161 line, and all existing cables, over and across lands owned by the State in the Towns of Hooksett and Goffstown. The 0161 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 lands in Hooksett and Goffstown. 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 proposed structure replacements of the existing overhead line crossings.

The crossing project required a New Hampshire Department of Environmental Services statutory permit by notification (SPN), formerly Utility Maintenance Notification (UMN), if construction access and work activities involve the temporary minor alteration of non-tidal wetlands, non-tidal surface waters, and banks adjacent to non-tidal surface waters and is applicable to the public water crossings. ES obtained a UMN in 2017 for the impacts associated with the replacement of structures 20 and 21 in the Town of Hooksett (UMN# 2017-187). ES asserts SPN's are not required for the proposed structure replacement in Goffstown.

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:**

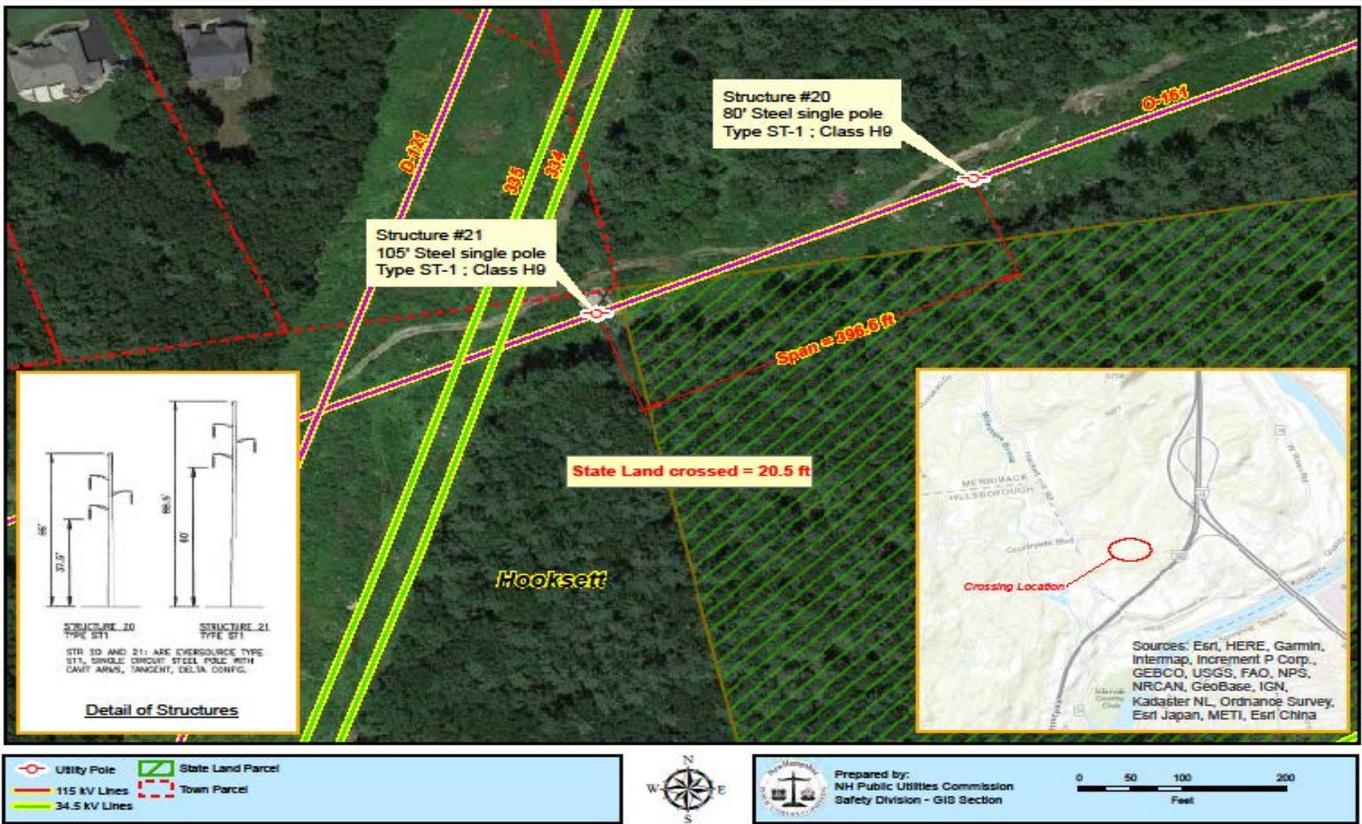
Based on the results of its review of the petition, attachments, and all other supporting documents submitted in connection with this docket, the Safety Division Staff recommends that the Commission:

- 1) Find that the crossing license requested by ES in this docket may be exercised without substantially affecting the public rights in state-owned lands which are the subject of the petition;

- 2) Grant ES a license to construct, operate, and maintain electric lines and telecommunication cables over and across the state-owned lands in the Town of Hooksett and Goffstown, as specified in the petition; and
- 3) Issue an order *nisi* granting the crossing license, and orders for the publication of that order.

Staff Attachments

## NH State Land - DE 20-073 EVERSOURCE Crossing - Map 1



**Public Land that** is state-owned land as shown in green hash marks in the petition and engineering drawings as State of New Hampshire. The parcel is located in the Town of Hooksett. The project will require the Commission to grant a public land crossing license related to this parcel. The license will be for the 115 kV 0161 transmission line from Structure # 20 to Structure # 21, crossing approximately 20.5 feet of state-owned land in the Town of Hooksett.



**Public Land** that is state-owned land as shown in green hash marks in the petition and engineering drawings as State of New Hampshire. The parcel is located in the Town of Goffstown. The project will require the Commission to grant a public land crossing license related to this parcel. The license will be for the 115 kV 0161 transmission line from Structure # 72 to Structure # 73, crossing approximately 225.3 feet of state-owned land in the Town of Goffstown.

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