

# STATE OF NEW HAMPSHIRE

## Inter-Department Communication

**DATE:** April 29, 2021

**AT (OFFICE):** NHPUC

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

**SUBJECT:** Docket No. DE 21-076 Public Service New Hampshire d/b/a  
Eversource Energy  
Petition for Amended License to Construct and Maintain Electric Lines  
Over and Across the Nashua River in Nashua and Merrimack River in  
Nashua and Hudson, New Hampshire  
**Staff Recommendation**

**TO:** Debra Howland, Executive Director  
Thomas Frantz, Director, Electric Division  
Richard Chagnon, Assistant Director, Electric Division  
Lynn Fabrizio, Staff Attorney  
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 Statute;
- Review of the existing crossing(s) previously 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 April 14, 2021, Public Service New Hampshire d/b/a Eversource Energy (ES), filed a petition for a license pursuant to RSA 371:17 to construct, maintain and operate the Eversource G192 Line, which is a three phase 115kV transmission line, over and across the public waters in Nashua and Hudson.

The public water crossing encompassing the Nashua River in Nashua was previously licensed in PUC Docket DE 96-370 pursuant to Order 22,454. The public water crossing encompassing the Merrimack River in Nashua and Hudson was previously licensed in PUC Docket 76-22 pursuant to Order 12-219.

ES asserts this project scope is the result of ongoing field inspections that determined existing wood Structure #5 will be replaced with a weathered steel structure for the Merrimack River crossing. Structure #6 on this crossing was replaced in 2017 without a license reportedly due to an oversight. This G192 project maintenance scope also includes the removal of the ADSS underbuilt wire and the replacement of the existing two pole top shield wires with OPGW communications wire. The three existing conductors will be transferred to the new replacement Structure #5.

The scope of this project begins where the G192 line originates at the Bridge Street Substation in Nashua, located off Bridge Street. The line extends east crossing the Nashua River between Structures #1 and #2 then traversing across the Pan-Am railroad toward Structure #5 eastward across the Merrimack River from Nashua into Structure #6 in Hudson.

Common to all structures, conductors for the 115 kV G192 transmission line will consist of (3) 795 kcmil ACSR 26/7 cables. The communications wires will consist of (1) 144 fiber OPGW and (1) 48 fiber OPGW, which both 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. Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. In its petition, ES provides sufficient detail to show how the NESC Table 232-1 required clearance of 18.6 feet from the conductor cables to the water areas not suitable for sail boating will be maintained at 25.0 feet over the Nashua River. Although the required NESC 30.1 foot clearance to the waters over the Merrimack River will be maintained at 36.9 feet, clearance for the Merrimack River crossing is further restricted by the U.S. Army Corps of Engineers (USACOE) to no less than 20.0 feet from the closest bridge. ES will maintain a clearance of 21 feet to the bridge elevation.

As shown in ES Exhibit #2, Structure #1 was constructed of (3)-52.0 ft. AGH Type DA, CL 3 wood poles. Structure #2 was constructed of (3)-56.0 ft. AGH Type DA, CL 3 wood poles. This crossing creates a total span of 685.35 feet with 107.34 feet spanning the Nashua River.

As shown in ES Exhibit #3, Structure #5 will be constructed of (3)-88.0 ft. AGH Type ADS-1, CL H1 weathered steel poles. Structure #6 was constructed of (3)-65.0 ft. AGH Type SDA-1, CL H1 weathered steel poles. This crossing creates a total span of 749.24 ft. between Structures #5 and #6 with 614.47 ft. spanning the Merrimack River. See attached PUC Safety Map.

## **2. New Hampshire statute referenced in 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 existing license(s) and permissions previously granted by the PUC for this location of the Public Waters in Nashua and Hudson.**

The public water crossing encompassing the Nashua River in Nashua was previously licensed in PUC Docket DE 96-370 pursuant to Order 22,454.

The public water crossing encompassing the Merrimack River, which crosses the border of Nashua and Hudson, was previously licensed in PUC Docket 76-22 pursuant to Order 12-219.

The Nashua River in Nashua, from the Massachusetts Border including the Nashua Canal, is listed under the category "Public Rivers and Streams" in the Official List of Public Waters (OLPW), under the category "List of Freshwater Public Rivers and Streams". The designated segment of the Merrimack River in Nashua and Hudson, from the Bedford/Merrimack town line to the New Hampshire/Massachusetts state line is listed under the same category. 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>

ES asserts no environmental impact as a result of this project with the exclusion of the previously replaced Structure #6, which required NHDES permitting.

The USACOE does regulate the subject portion of the Merrimack River as navigable waters, which ES asserts a self-verification process under the USACOE.

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

In its petition, ES specifies that the replacement of the structures is over public waters in Nashua and Hudson, New Hampshire.

### **5. 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 crossing has 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.

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

In order to meet the reasonable requirements of electric service to the public, ES proposes to replace one existing wood structure with a steel structure, transfer existing conductors, remove the underbuilt cables, replace static wires with communications cables and maintain a three-phase 115 kV transmission line designated as the G192 Line over and across the public waters of the Nashua River in Nashua and the Merrimack River in Nashua and Hudson, New Hampshire. This transmission line is an integral part of ES’s electric transmission system in this area.

ES asserts in the petition that the existing crossing will be exercised without substantially affecting the rights of the public in the public waters in Nashua and Hudson. Minimum safe line clearances above the water will be maintained at all times. The use and enjoyment of the public waters by the public will not be diminished in any material respect as a result of the overhead line crossings.

Safety Division Staff concludes the impact to the public will be de minimis and not measurable. The crossings do not appear to affect the rights of the public in the public waters because minimum safe line clearances above the water will be maintained at all times.

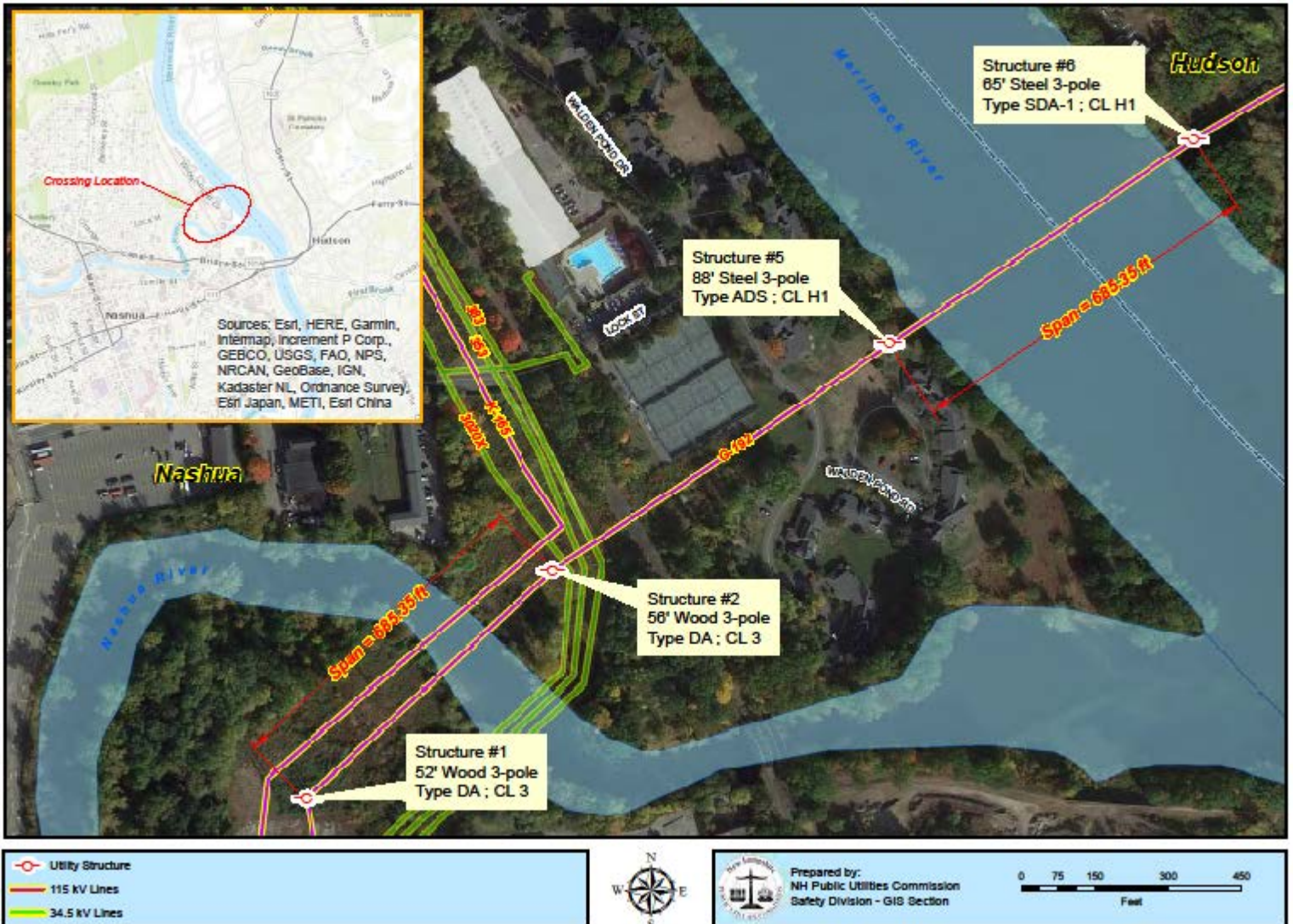
### **Staff Recommendation:**

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

- 1) Find that the license ES requests in this docket may be exercised without substantially affecting the public rights in the public waters, which is the subject of the petition;
- 2) Grant ES an amended license to construct, operate and maintain electric lines and telecommunications cables over and across the public waters in Nashua and Hudson, New Hampshire, as specified in the petition;
- 3) Issue an Order Nisi and orders for its publication.

Attachment

## Nashua River & Merrimack River - DE 21-076 EVERSOURCE Crossing



**Public waters** as shown above identified in the petition and engineering drawings as State of New Hampshire and located in Nashua and Hudson. The project will require the Commission to grant an amended license related to this project. The license will be for the 115 kV G192 transmission line from Structure #1 northeast to Structure #2 and Structure #5 to Structure #6. The crossing over the Nashua River spans approximately 685.35 feet with 107.34 feet spanning public waters. The crossing over the Merrimack River spans approximately 749.24 feet with 614.47 feet crossing public waters.

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