

# STATE OF NEW HAMPSHIRE

## Inter-Department Communication

**DATE:** June 21, 2021

**AT (OFFICE):** NHPUC

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

**SUBJECT:** Docket No. DE 21-094 Public Service New Hampshire d/b/a  
Eversource Energy  
Petition for License Amendment to Construct and Maintain Electric  
Lines Over and Across Lake Winnisquam in Belmont, 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, revisions, 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 May 6, 2021, Public Service New Hampshire d/b/a Eversource Energy (ES), filed a petition for a license amendment pursuant to RSA 371:17 to construct, maintain and operate the Eversource J125 Line, which is a three phase 115kV transmission line, over and across the public waters in Belmont.

On June 4, ES filed replacement exhibits resulting from errors identified by Safety Division that required corrections to design tensions.

The public water crossing encompasses a portion of the public waters of Lake Winnisquam in Belmont with the original line construction was previously licensed in

PUC Docket DE 75-149 pursuant to Order 11,949. ES did not obtain a license for reconstruction work performed in 2002.

ES asserts this project scope is the result of ongoing field inspections that determined existing laminated wood Structures #100 and #102 will be replaced with steel structures and the existing mid-span Structure #101 will be eliminated. The three existing conductors, one existing static wire, and one existing fiber OPGW will be transferred to the new replacement structures.

The scope of this project begins at Structure #100 approximately 2,500 feet northeast where the J125 Line crosses over the intersection of Grey Rocks Road and Dorway Drive in Belmont. The J125 Line then crosses Lake Winnisquam heading northeast to Structure #102.

Common to all structures, conductors for the 115 kV J125 transmission line will consist of (3) 795 kcmil ACSS 26/7 cables. The communication wire will consist of (1) 12 fiber OPGW and the static wire will consist of (1) 7 #8 Alumoweld cable, 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 35.8 feet over Lake Winnisquam.

As shown in ES Exhibit #2, Structure #100 will be constructed of (3)-88.0 ft. AGH Type ADS-2, CL H3 steel poles. Structure #102 will be constructed of (3)-92.5 ft. AGH Type ADS-2, CL H3 steel poles. This crossing creates a total span of 1149.4 feet with 939.9 feet spanning Lake Winnisquam. 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 Belmont.**

The public water crossing encompassing Lake Winnisquam was previously licensed in PUC Docket DE 75-149 pursuant to Order 11,949.

Lake Winnisquam is listed under the category “Public Lakes and Ponds” in the NH 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>

ES asserts environmental impact as a result of this project and that permits will be obtained from NHDES prior to work commencing.

The U.S. Army Corps of Engineers (ACOE) does not regulate the subject portion of Lake Winnisquam as navigable waters.

**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 Belmont, 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 two existing laminated wood structures with steel structures, transfer existing conductors, static wire, and communications cable, and maintain a three-phase 115 kV transmission line designated as the J125 Line over and across the public waters of Lake Winnisquam in Belmont, 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 Belmont. 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 crossing.

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.

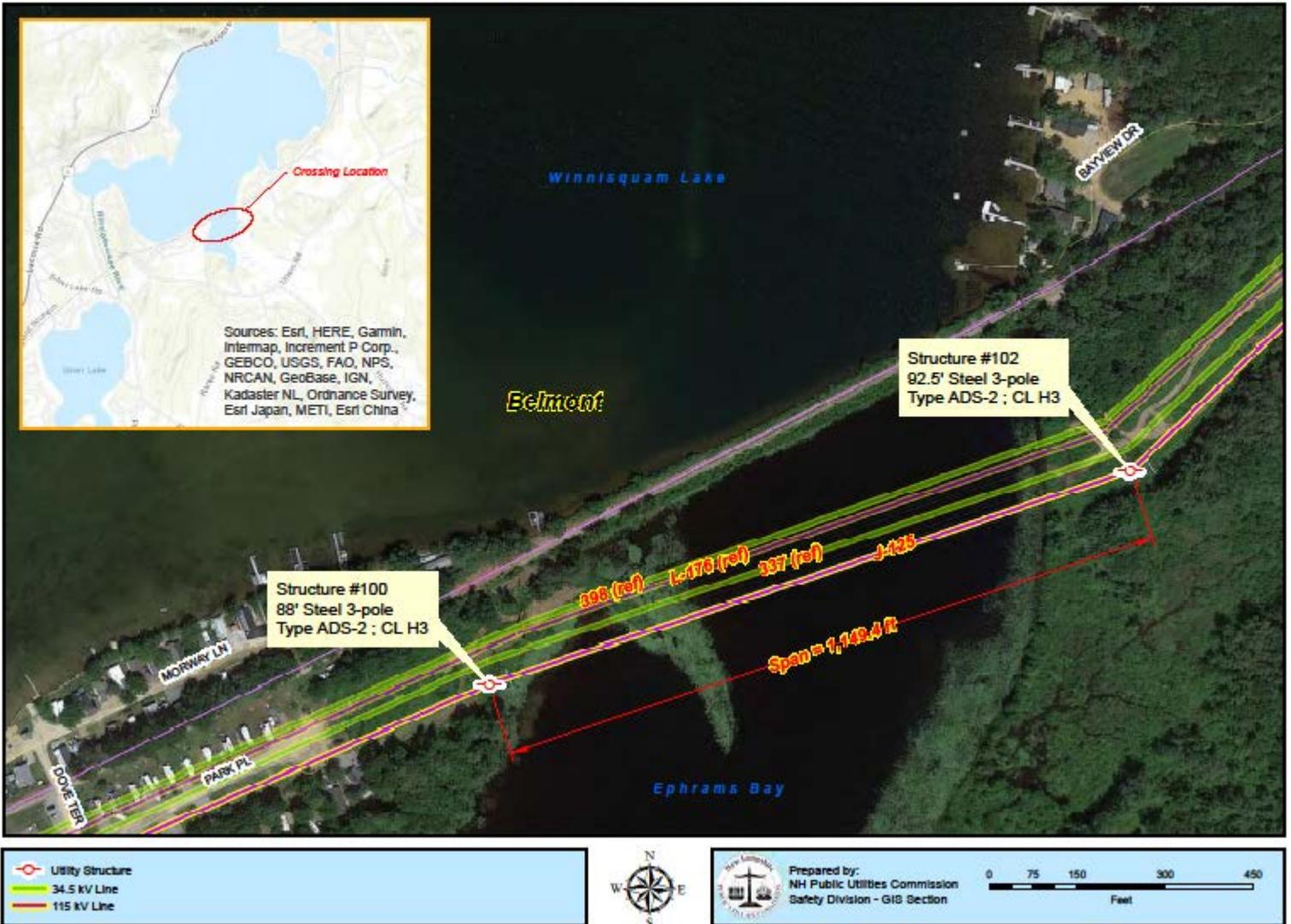
### **Staff Recommendation:**

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 amendment 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 communications cables over and across the public waters in Belmont, New Hampshire, as specified in the petition;
- 3) Issue an Order Nisi and orders for its publication.

Attachment

# Winnisquam Lake/Ephrams Bay - DE 21-094 Eversource Crossing



**Public waters** as shown above identified in the petition and engineering drawings as State of New Hampshire and located in Belmont. The project will require the Commission to grant an amended license related to this project. The license will be for the 115 kV J125 transmission line from Structure #100 northeast to Structure #102. The crossing over Lake Winnisquam spans 1149.4 feet with 939.9 feet spanning public waters.

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