

# STATE OF NEW HAMPSHIRE

## Inter-Department Communication

**DATE:** January 15, 2019

**AT (OFFICE):** NHPUC

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

NHPUC 15JAN19PM4:10

**SUBJECT:** Docket No. DE 18-186 Public Service New Hampshire d/b/a Eversource Energy  
Petition for a License to Construct and Maintain Electric Lines Over and Across the Ammonoosuc River in the Town of Bethlehem, New Hampshire  
**Staff Recommendation**

**TO:** Debra Howland, Executive Director  
Thomas Frantz, Director, Electric Division  
Leszek Stachow, Assistant Director, Electric Division  
Susan Amidon, Staff Attorney, Legal Division

**CC:** 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 Statute;
- Review of the existing crossing(s) already 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 December 14, 2018, Public Service New Hampshire d/b/a Eversource Energy (ES), filed a petition pursuant to RSA 371:17 for a license to construct and maintain a three-phase 34.5 kV distribution line, designated as the 348X3 circuit, over and across the public waters of the Ammonoosuc River in the Town of Bethlehem, New Hampshire. This section of ES's existing 348X3 circuit is being upgraded from single-phase power to three-phase power as a result of a power requirement of a new customer. The existing 348X3 Line crossing was not previously licensed by the Commission; however, the rebuild of this crossing will be licensed under this petition. See a detailed NHPUC Safety Division map/schematic in the Attachment of this recommendation.

In its petition, ES states that the poles for this crossing are jointly owned with Consolidated Communications, and are located in the Consolidated Communications maintenance area. The poles are located within the State of New Hampshire right of way for Old NH Route 302, and will be subject to the New Hampshire Department of Transportation utility agreements. Consolidated Communications will be resetting the poles and will apply for new pole licenses.

The proposed crossing is located north of the Main Street/Route 302 Bridge and will span approximately 256 feet between two new wood poles. The structure on the west side of the river, pole #352/68, is a tangential structure, constructed with a single Class-1, 50 ft tall single wood pole. The structure on the eastern side of the river, pole #352/70, is a tangential structure, constructed with a single Class-1, 50 ft tall single wood pole. ES provided a location map, a project plan schematic and construction details of the structures as Exhibits 1 through 3 in its attachment to the petition.

The required technical information provided in this petition is said to be based on the 2012 National Electric Safety Code (NESC) C2-2012. Within its petition, ES notes that the proposed crossing has been designed and will be constructed, maintained and operated in accordance with NESC. The design criteria used for the conductors transmitting electrical power at 34.5 kV will be three Phase Hendrix type 1/0 spacer cable. The neutral will be 1/0 ACSR cable. All clearance requirements were met using the NESC heavy conditions (0.5 inch radial ice) and at 32 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 all required clearances from neutral wires to the surface of the water will be maintained at (38 feet), far above the required 17 ft. defined by NESC.

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). ES uses floodwater elevations for the Ammonoosuc River in Grafton County that are identified on FEMA flood map #33009C0145E. The 100-year flood elevation for the river in this location is approximately 1180 feet, and is based on the North American Vertical Datum of 1929 (NAVD29). The Safety Division verified the 1,180-foot flood level from the FEMA flood 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 Ammonoosuc River**

This public waters crossing license application is part of the rebuild of the 348X3 circuit for ES and had not been previously licensed by the Commission.

The Ammonoosuc River, From the White Mountain National Forest boundary near Lower Falls in Carroll to the confluence with the Connecticut River in Haverhill. Effective 8/10/07 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:

<http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/olpw.pdf>

ES asserts in the petition that the proposed crossing will be exercised without substantially affecting the rights of the public in the public waters of the Ammonoosuc River. Minimum safe line clearances above the river surface and affected shorelines will be maintained at all times. The use and enjoyment of the river by the public will not be diminished in any material respect as a result of the overhead line crossing.

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

In its petition, ES specifies that the construction of this crossing will span the Ammonoosuc River, which is adjacent to the Old NH Route 302 Bridge. Proposed pole #352/68 will be located on the west side of the river within existing State of NH right of way. Proposed structure pole #352/70 will be located on the east side of the river within the State of NH right of way.

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

N.H. Code of Administrative Rules Puc 306 requires:

(a) each utility shall construct, install, operate and maintain its plant, structures and equipment and lines, as follows:

(1) In accordance with good utility practice;

- (2) After weighing all factors, including potential delay, cost and safety issues, in such a manner to best accommodate the public; and
  - (3) To prevent interference with other underground and above ground facilities, including facilities furnishing communications, gas, water, sewer or steam service.
- (b) For purposes of this section, “good utility practice” means in accordance with the standards established by:
- (1) The National Electrical Safety Code C2-2012....

ES states that the proposed crossing has been designed and will be constructed, maintained and operated in accordance with 2012 National Electrical Safety Code C2-2012.

Safety Division Staff reviewed the specifications related to the design and construction of this crossing project as provided in the petition, the attachments, and all supplemental support documents, and found them to be in conformance with the applicable sections of NESC code 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 construct and maintain a three-phase 34.5 kV distribution line, designated as the 348X3 circuit, in Bethlehem, New Hampshire. The 348X3 circuit is an integral part of ES’s electric distribution system in the area.

ES asserts in the petition that the proposed license for this crossing may be exercised without substantially affecting the rights of the public in the public waters of the Ammonoosuc River. Minimum safe line clearances above the river surface and affected shorelines will be maintained at all times. The use and enjoyment of the river by the public will not be diminished in any material respect as a result of the overhead line crossing.

This project does require use and occupancy agreements be in place prior to construction of this crossing from the New Hampshire Department of Transportation.

Safety Division Staff concludes the impact to the public will be *de minimis* and not measurable. The proposed crossing does not appear to affect the rights of the public in the public water of the Ammonoosuc River because minimum safe line clearances above the water surface will be maintained at all times. Shorelines will not be affected by this project.

**Staff Recommendation:**

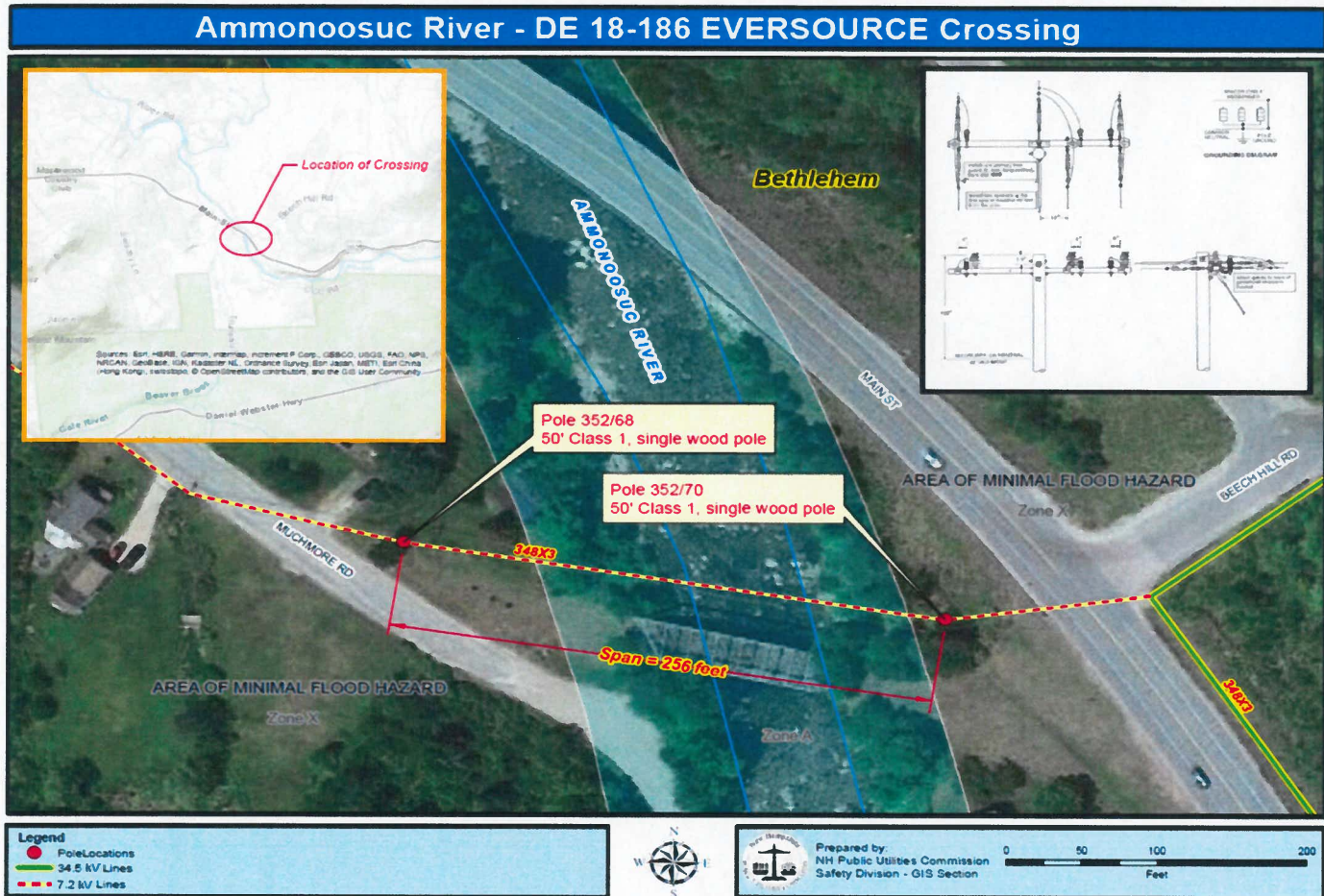
Based on the results of its review of the petition, its attachments, and all other supporting documents filed to this docket, the Safety Division Staff recommends that the Commission:

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

Attachment



# Attachment



**Figure 1:** 34.5 kV line, designated as the 348X3 circuit, a span of approximately 256 feet, across the Ammonoosuc River in Bethlehem, NH. The structure on the east side of the river is a 50 ft Class 1 single wood pole, designated pole #352/70. The structure on the west side of the river, designated pole #352/68 shall be a similar tangential structure, constructed with a 50 ft Class 1 single wood pole. The crossing is approximately 141 feet over the Ammonoosuc River at this location

---

**SERVICE LIST - EMAIL ADDRESSES - DOCKET RELATED**

---

**Pursuant to N.H. Admin Rule Puc 203.11 (a) (1): Serve an electronic copy on each person identified on the service list.**

Executive.Director@puc.nh.gov  
amanda.noonan@puc.nh.gov  
christopher.allwarden@eversource.com  
leszek.stachow@puc.nh.gov  
ocalitigation@oca.nh.gov  
randy.knepper@puc.nh.gov  
suzanne.amidon@puc.nh.gov  
tom.frantz@puc.nh.gov

Docket #: 18-186-1      Printed: January 15, 2019

**FILING INSTRUCTIONS:**

- a) Pursuant to N.H. Admin Rule Puc 203.02 (a), with the exception of Discovery, file 7 copies, as well as an electronic copy, of all documents including cover letter with:**

DEBRA A HOWLAND  
EXECUTIVE DIRECTOR  
NHPUC  
21 S. FRUIT ST, SUITE 10  
CONCORD NH 03301-2429

- b) Serve an electronic copy with each person identified on the Commission's service list and with the Office of Consumer Advocate.**
- c) Serve a written copy on each person on the service list not able to receive electronic mail.**