

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: February 5, 2016

AT (OFFICE): NHPUC

FROM: Robert Wyatt *RW*
Assistant Director – Safety Division

SUBJECT: Docket No. DE 15-235 PSNH d/b/a Eversource Energy
Petition for a License to Construct and Maintain Electric Lines Over
and Across the Newfound River in the Town of Bristol, New
Hampshire
Staff Recommendation

TO: Debra Howland, Executive Director
Randall Knepper, Director, Safety Division
Thomas Frantz, Director, Electric Division
Leszek Stachow, Assistant Director, Electric Division
David Shulock, Director, Legal 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 June 15, 2015, PSNH d/b/a Eversource Energy (PSNH), filed a petition pursuant to RSA 371:17 for a license to construct and maintain a three-phase 12.47 kV distribution line, designated as the 20W2 circuit, over and across the public waters of the Newfound River in the Town of Bristol, New Hampshire.¹ This is a new line for a new circuit. PSNH's existing 18W1 circuit is being split into two smaller circuits (20W1 and 20W2) in order to improve service reliability. See a detailed NHPUC Safety Division map/schematic in Attachment A of this recommendation.

¹ Staff notes that there has been regular communication with PSNH throughout the period since the petition was filed, during which the Company has worked to secure two other documents necessary for this project to move forward: an easement from a private property owner; and a pole license from the Town of Bristol, NH.

The proposed crossing is located approximately 59 feet northwest of the Pleasant Street/Route 104 bridge and will span approximately 184 feet between two new wood structures. The structure on the southwest side of the river, number 20W2/2, is a medium corner structure, constructed with a single Class-2, 50 foot tall CCA pole. The structure on the northeast side of the river, number 1/18X, is a large corner structure, constructed with a single Class-2, 50 foot tall CCA pole with a push brace. PSNH provided a location map, a project plan schematic and construction details of the structures as figures 1 through 5 in its attachment to the petition.

The required technical information provided in this petition is said to be based on the 2007 National Electric Safety Code (NESC) C2-2007. Later in its petition PSNH notes that the proposed crossing has been designed and will be constructed, maintained and operated in accordance with NESC. In a subsequent telephone conversation with David M. Still, P.E., the Eversource engineer for this project, Staff received confirmation that the Company's technical information will be based on the 2012 National Electric Safety Code (NESC) C2-2012. The design criteria used for the conductors transmitting electrical power at 12.5 kV will be 477 ACSR cable with 18/1 stranding. The neutral will be 4/0 ACSR cable with 6/1 stranding. The conductors will be sagged using NESC Heavy Loading conditions (0 Degrees Fahrenheit, 4 pounds psf wind loading, and ½" radial ice) at a maximum tension of 3,000 pounds. The neutral will be sagged using NESC Heavy Loading conditions (0 Degrees Fahrenheit, 4 pounds psf wind loading, and ½" radial ice) at a maximum tension of 2,000 pounds. In its petition, PSNH provides sufficient detail to show how all required clearances from phase wires to the surface of the water will be maintained.

The water clearances are taken from the projected 10 year flood levels. PSNH uses flood water elevations for the Newfound River in Grafton County that are identified on FEMA flood map #33009C1178E. The 10-year flood elevation for the river in this location is approximately 455 feet, and is based on the North American Vertical Datum of 1929 (NAVD29). The design flood level, as defined by NESC (note 19 to Table 232-1) is approximately 44+/- acres and for purposes of calculating surface area for clearance, the 10-year flood area is used as suggested by NESC (note 18 to Table 232-1).

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 Newfound River

This public waters crossing license application is part of the new 20W2 circuit for PSNH and has not been previously licensed by the Commission.

The Newfound River, from the outflow of Newfound Lake in New Hampshire is listed under the category “Public Rivers and Streams” in the Official List of Public Waters (OLPW) and falls under the jurisdiction of the Comprehensive Shoreland Protection Act, RSA 483-B:4, XVI(c). 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>

PSNH 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 Newfound 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, PSNH specifies that the construction of this crossing will span the Newfound River, which is adjacent to its Bristol substation on Route 104. Proposed structure #20W2/2 will be located on the southwesterly side of the river within existing property owned in fee by the PSNH. Proposed structure #1/18X will be located on the northeasterly side of the river within the Town of Bristol (municipal) street right of way (Lake Street). At the time PSNH filed its petition for this crossing, it had a pending application with the Town of Bristol to secure a pole license for structure #1/18X.

Additionally, PSNH noted in its petition that the crossing wires will pass aurally over a parcel of private property identified on Bristol Tax Map 113 as Lot 20, before reaching structure #1/18X.

Regarding the two unresolved land rights issues related to this project, PSNH informed Safety Division Staff in a conversation on January 25, 2016 that: 1) a copy of the pole license is expected to be issued by the Town of Bristol within two weeks; 2) PSNH has acquired permanent easement rights over the private parcel identified on Bristol Tax Map 113 as Lot 20 from the current property owner; and 3) PSNH will be filing to this docket a copy of both the pole license from the Town of Bristol and the easement from the private property owner within the next few weeks.

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....

PSNH 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, PSNH proposes to construct and maintain a three-phase 12.47 kV distribution line, designated as the 20W2 circuit, in Bristol, New Hampshire. The 20W2 circuit is an integral part of PSNH’s electric distribution system in the area. PSNH’s existing 18W1 circuit is being divided into two smaller circuits (20W1 and 20W2) to help correct reliability issues that result from operating this distribution line as one large circuit.

PSNH 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 Newfound 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 not require permits necessary for construction of this crossing from either the New Hampshire Department of Environmental Services or 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 Newfound 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 PSNH 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 PSNH a license to construct, operate and maintain electric lines, including neutral over and across the public waters of the Newfound River in Bristol, New Hampshire, as specified in the petition; and
- 3) Issue an Order Nisi and orders for its publication.

Attachment

Attachment A

Q:\Safety\GIS DATA\Electric\River Crossings

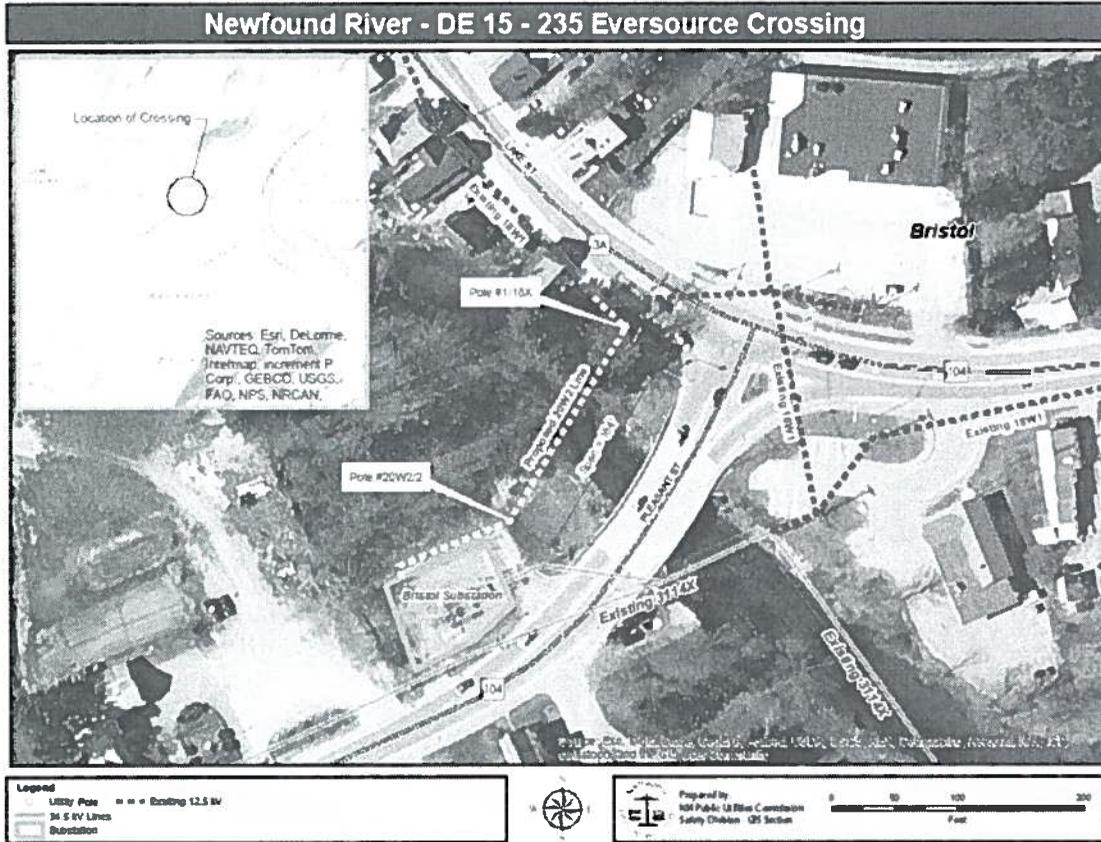


Figure 1: 12.5kV, designated as the 20W2 Line, a span of approximately 184 feet, across the Newfound River in Bristol, NH. The structure on the southwesterly side of the river is a medium corner structure, designated #20W2/2 and will be constructed with a single Class-2, 50 foot tall, CCA pole. The structure on the northeasterly side of the river, designated #1/18X shall be a large corner structure, constructed with a single Class-2, 50 foot tall, CCA pole with a push brace.

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@nu.com
leszek.stachow@puc.nh.gov
michael.sheehan@libertyutilities.com
ocalitigation@oca.nh.gov
randy.knepper@puc.nh.gov
tom.frantz@puc.nh.gov

Docket #: 15-235-1 Printed: February 05, 2016

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.**