

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: August 29, 2019

AT (OFFICE): NHPUC

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

SUBJECT: Docket No. DE 19-095 Public Service Company Of New Hampshire
d/b/a Eversource Energy
Petition for a License to Construct and Maintain Electric Lines Over
and Across the Squamscott River in the Towns of Stratham and
Exeter, New Hampshire
Staff Recommendation

TO: Debra Howland, Executive Director
Thomas Frantz, Director, Electric Division
Richard Chagnon, Assistant Director, Electric Division
Mary Schwarzer, Staff Attorney, Legal Division

CC: Randy 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 May 14, 2019 Public Service Company of New Hampshire d/b/a Eversource Energy (ES), filed a petition pursuant to RSA 371:17 for a license to construct and maintain one 115 kV transmission line, designated as the A126 Transmission Line, over and across the public waters of the Squamscott River in the Towns of Stratham and Exeter, New Hampshire. This is a rebuild of the existing transmission line for a replacement and repair project. ES's existing A 126 transmission line is not being relocated as result of this project . The existing wood structures are being replaced with new steel structures due to age and environmental damage. The A126 Line crossing of the Squamscott River was previously licensed by the Commission under Order N0. 6668,

dated August 31, 1955, issued in Docket D-E 3442. *See* Attachment (a detailed NHPUC Safety Division map/schematic). Subsequently, in 1975, ES replaced the A16 wood poles at this crossing location with new wooden poles, which are the poles existing today. Due to inadvertence or oversight, ES did not at that time make any filing with the Commission relative to the change of the crossing structures. ES believes that this work was only to replace those poles in kind, without varying the crossing characteristics of the A126 Line. Eversource will be newly licensing the replacement crossing of the A126 under this petition.

The river crossing is located within ES's utility easements and in-line of the existing alignments. The A126 line structure on the east side of the river, Structure #155 (Str#155), will be constructed with (3) - ADL-1 CL 75 foot steel poles. The other structure on the west side of the river, Structure #156 (Str#156) will also be constructed with (3) - ADL-1 CL 90 foot steel poles creating a span of 726.41 feet between the Str#155 and Str#156. With its petition, ES provided a location map, a project plan schematic, and construction details of the structures. *See* ES Exhibit 2.

ES represents that the required technical information provided in this petition is based on the 2017 National Electric Safety Code (NESC) C2-2017. Within its petition, ES notes that the proposed crossing has been designed and will be constructed, maintained and operated in accordance with NESC code C2-2017. The A126 conductors will include (1) # 8 Alumoweld, with 7 stranding neutral cable, and (3) 477 KCML ACSR Hawk cables with 26/7 stranding. The conductors will be sagged using 285 degree F conditions at a maximum tension of 19,500 pounds. In its petition, ES provides sufficient detail to show how all required clearances from the lowest phase wire to the surface of the water will be maintained at 41.8 feet.

Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition.

The water clearances are taken from the Federal Emergency Management Agency (FEMA)'s projected 100-year flood levels. This is more conservative than the 10-year flood levels allowed by the NESC (note 12 to Table 232-i). ES uses floodwater elevations for the Squamscott River in Rockingham County that are identified on FEMA flood map #33015C0245E. The 100-year flood elevation for the river in this location is approximately 6.8 feet, and is based on the North American Vertical Datum of 1929 (NAVD88). The Safety Division verified the 6.8-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 Squamscott River

This public water crossing license application is part of the reliability replacement project on the A126 (115 kV) Transmission Line for ES and had been previously licensed by the Commission under Order N0. 6668, dated August 31, 1955, issued in Docket D-E3442. The poles were replaced in 1975; inadvertently or due to oversight ES did not make a filing with the Commission at that time. The crossing will become licensed under this petition if the Commission grants approval.

The Squamscott River, from the Junction of Little and Exeter River in the Towns of Stratham and Exeter is listed in the *Official List of Public Waters (OLPW)* under Part 2 *List of Freshwater Public Rivers and Streams*. 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>

A New Hampshire Department of Environmental Services (NHDES) Shoreland Permit by Notification application is required for construction activities in the vicinity of the Squamscott River. The permit will be submitted as part of this project.

A NHDES Standard Wetlands Permit is required for construction activities which involve the alteration of nontidal wetlands, nontidal surface waters, and banks adjacent to nontidal surface waters in excess of 20,000 square feet in the aggregate, and is applicable to the Squamscott River crossing. Both NHDES wetland permits will be submitted as part of this project.

ES asserts in the petition that the existing crossing will be exercised without substantially affecting the rights of the public in the public waters of the Squamscott 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 existing pole structures

In its petition, ES specifies that the rebuilding of these crossings will span the Squamscott River, which is within the ES utility easement in the Towns of Stratham and Exeter, NH.

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

N.H. Code of Administrative Rules Puc 306.01 requires in relevant part that:

- (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

ES states that the proposed crossing has been designed and will be constructed, maintained, and operated in accordance with 2017 National Electrical Safety Code (NESC) C2-2017.

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 C2-2017 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 rebuild and maintain a 115 kV transmission line, designated as the A126 line, in New Hampshire in the Towns of Stratham and Exeter..

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 Squamscott River. Minimum safe line clearances above the brook 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 New Hampshire Department of Transportation use and occupancy agreements be in place prior to construction of these crossings.

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 Squamscott 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 line, including neutral lines over and across the public waters of the Squamscott River, in the Towns of Stratham and Exeter, New Hampshire, as specified in the petition; and
3. Issue an Order *Nisi* and orders for its publication.

Attachment

Staff Attachment

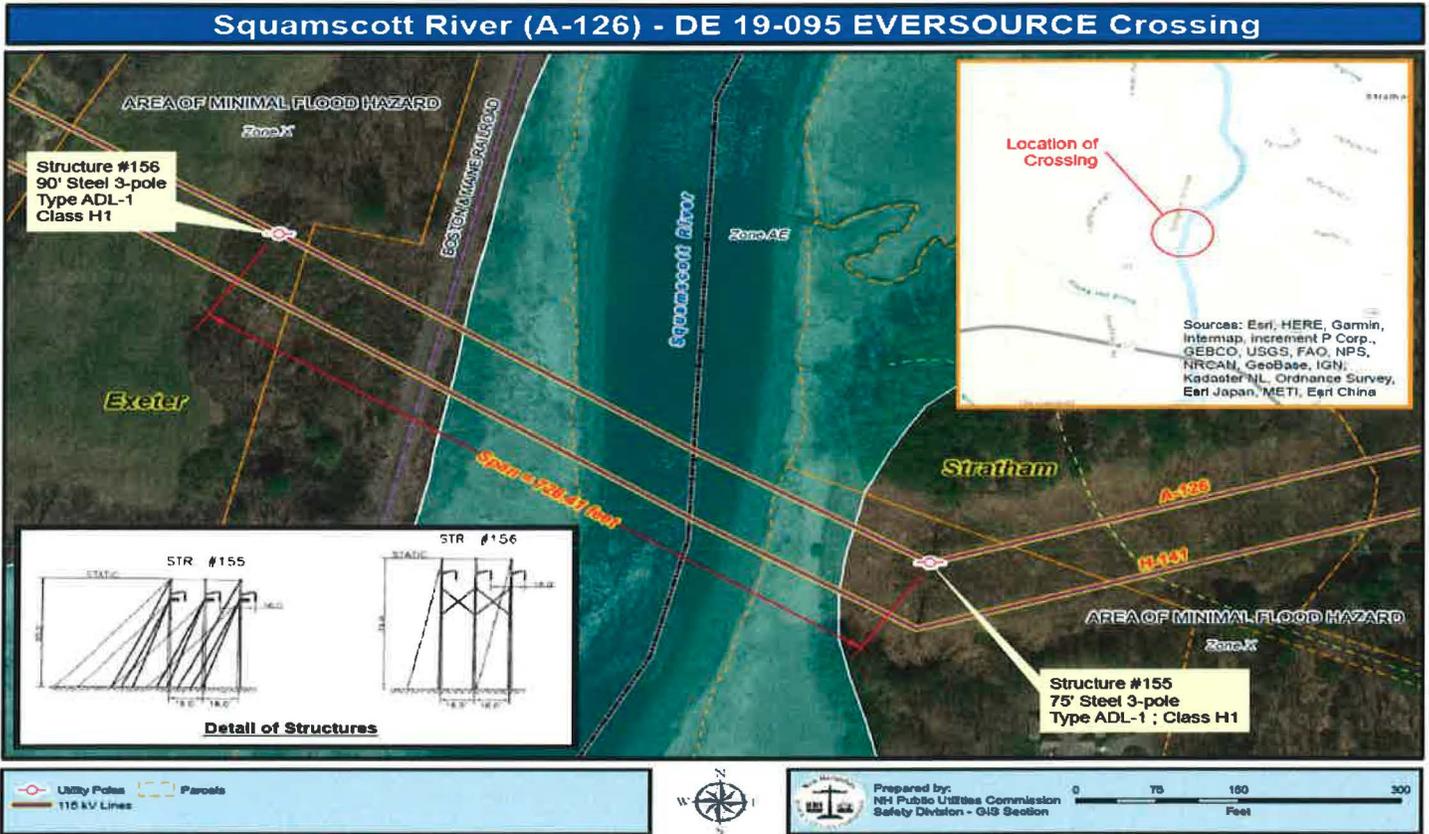


Figure 1: 115kV line, designated as the A126 Transmission Line, is a span of approximately 726.41 feet between structures # 155 and #156, across the Squamscott River in the Towns of Stratham and Exeter, NH.

Executive.Director@puc.nh.gov

amanda.noonan@puc.nh.gov

catherine.marsellos@puc.nh.gov

leszek.stachow@puc.nh.gov

Mary.Schwarzer@puc.nh.gov

ocalitigation@oca.nh.gov

randy.knepper@puc.nh.gov

robert.bersak@eversource.com

tom.frantz@puc.nh.gov