

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: November 06, 2019**AT (OFFICE):** NHPUC

FROM: Paul Kasper 
Assistant Director - Safety Division

SUBJECT: Docket No. DE 19-118 New Hampshire Electric Cooperative, Inc.
Petition for a License to Construct and Maintain an Electric Line Under
Lake Winnepesaukee in the Town of Meredith, New Hampshire
Staff Recommendation

TO: Debra Howland, Executive Director
Thomas Frantz, Director, Electric Division
Richard Chagnon, Assistant Director, Electric Division
Lynn Fabrizio, 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 July 1, 2019, New Hampshire Electric Cooperative, Inc. filed a petition pursuant to RSA 371:17 for a license to construct and maintain a single-phase 7,200 kV distribution submarine cable, under and across the public waters of Lake Winnepesaukee in the Town of Meredith, New Hampshire. This is a rebuild of an existing cable that is 78 years old and needs to be replaced to increase service reliability. NHEC's existing line is not being relocated as result of this project. See a detailed NHPUC Safety Division map/schematic in Attachment A of this recommendation for details of the location.

The lake crossing is located on the Ahern property, Tax Map 101, Lot 11, on Pine Island located in the Town of Meredith, from NHEC Pole 11511/6 approximately 45 feet to the water's edge, and then approximately 4100' feet underneath Lake Winnepesaukee, coming onshore at Bear Island, onto the property of Nelson and Denit, Tax Map 102, Lot 14, and the cable will then be placed underground, running approximately 230 feet underground up from the shore to a riser pole , #11511/2, NHEC provided a location map, a project plan schematic and construction details of the structures as Exhibit 1 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, NHEC notes that the proposed crossing has been designed and will be constructed, maintained and operated in accordance with NESC.

The new facilities will consist of a 7,200 kV submarine cable, aluminum conductor, size 1/0, Triplex insulation with an insulation thickness of 1.720 inches (see Project Area in Exhibit A-1). Specifically, the project plans are as follows:

- NHEC will utilize the right of way from an existing easement (Exhibit C) of the petition.
- The installation process will utilize trenching and direct burial of the cable and conduit to an underwater depth of 6 feet at mean high water, per NHEC construction standard IUSUB.

The plan calls for the cable to descend from riser pole, # Pole #11511/6 located on

- Ahern Property, Tax Map 101 Lot11, on Pine Island located in the Town of Meredith, approximately 45 feet to the shoreline.
- The plan calls for the cable and conduit to extend into the lake, passing through Schedule 80 PVC conduit, to a minimum depth of 6 feet. The cable will be installed by trenching with the use of silt curtains to keep the water out during construction.
- The cable will exit the conduit and continue on the lake floor to a similar conduit leading the cable to the shore line of Bear Island, onto the property of Nelson and Denit, Tax Map 102, Lot 14, and the cable will then be placed underground, running approximately 230 feet underground up from the shore to a riser pole , #11511/2. It will be protected and the entrance and exit points by concrete cable covers that will help mitigate any potential physical damage from watercraft.
- NHEC will take ownership of the line and will be responsible for its maintenance.

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 Lake Winnepesaukee

This public water crossing license application is part of the emergency replacement project on an aging submarine cable for NHEC and had been previously licensed by the Commission. Order 3959 issued July 29, 1941 in Docket No. D-E 2119 previously licensed the crossing to Bear Island in Meredith.

NHEC asserts in the petition that the existing crossing will be exercised without substantially affecting the rights of the public in the public waters of Lake Winnepesaukee. Minimum cable clearances below the river surface and affected shorelines will be maintained at all times. The use and enjoyment of the lake by the public will not be diminished in any material respect as a result of the submarine cable crossing.

4. Review of land ownership of existing pole structures

In its petition, NHEC provided documentation of easements from the property owners as follows:

Nelson and Denit, Tax Map 102, Lot 14, Right of Way Easement Book 4609 Page 1383 (Exhibit C)

Ahern Property, Tax Map 101 Lot11, Right of Way Easement Book 239 Page 288 (Exhibit B)

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....

NHEC 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, 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 144 residences on Bear Island, the three residences on Six Mile Island and the single residence on Little Six Mile Island, NHEC proposes to rebuild and maintain a single-phase 7,200 kV Distribution Submarine Cable under Lake Winnepesaukee in Meredith, New Hampshire.

NHEC 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 Lake Winnepesaukee. Minimum safe line clearances below the lake surface and affected shorelines will be maintained at all times. The use and enjoyment of the lake by the public will not be diminished in any material respect as a result of the submarine cable crossing.

Safety Division Staff concludes the impact to the public will be *de minimis* and not measurable. Replacement of the aging existing cable is a public need. The proposed

- crossing does not appear to affect the rights of the public in the public water of Lake Winnepesaukee because minimum safe line clearances below 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 NHEC 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 NHEC a license to construct, operate and maintain a single-phase 7,200 kV distribution submarine cable, under and across the public waters of Lake Winnepesaukee in the Town of Meredith, New Hampshire, as specified in the petition; and
- 3) Issue an Order Nisi and orders for its publication.

Attachment

Attachment A

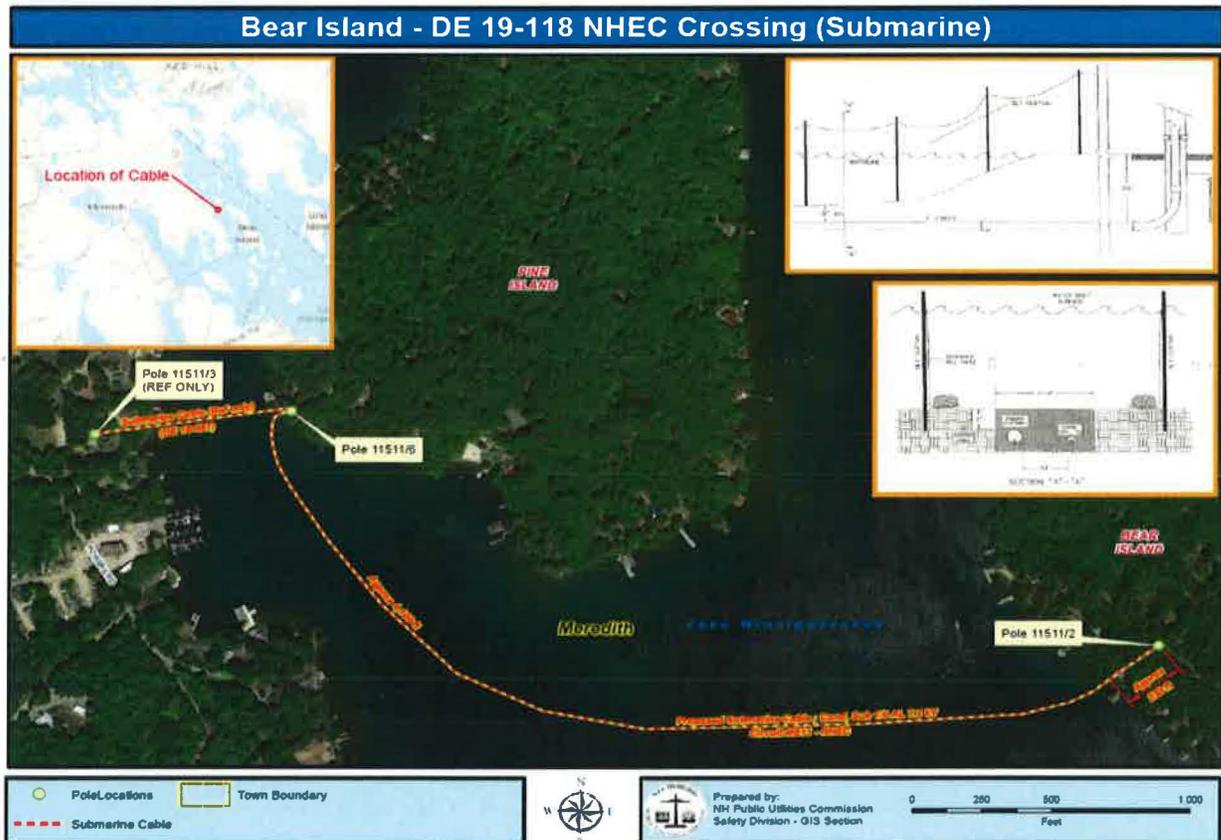


Figure 1: (2) Single-phase 7,200 kV Distribution Submarine Cables a span of approximately 4100 feet, under Lake Winnepesaukee from Pine Island to Bear Island in Meredith, NH, at the east and west banks. The structure on the west side of the lake crossing is NHEC Pole #11511/6 on Pine Island and the structure on the east side of the lake crossing, is NHEC Pole #11511/2 on Bear Island. The span of the lake crossing from pole to pole is approximately 4100 Ft.

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