

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: April 7, 2021

AT (OFFICE): NHPUC

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

SUBJECT: Docket No. DE 21-064 Public Service New Hampshire d/b/a Eversource Energy
Petition for License to Construct and Maintain Electric Lines Over and Across Public Waters in Northfield and Franklin and State Owned Land in Franklin, New Hampshire
Staff Recommendation

TO: Debra Howland, Executive Director
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Richard Chagnon, Assistant Director, Electric Division
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Randall Knepper, Director, Safety Division
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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) 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 March 24, 2021, Public Service New Hampshire d/b/a Eversource Energy (ES), filed a petition for a license pursuant to RSA 371:17 to construct, maintain and operate the Eversource F139 Line, which is a three phase 115kV transmission line, over and across the public waters in Northfield and Franklin and State owned land in Franklin.

The public water crossing encompassing the Merrimack River, which crosses the border of Northfield and Franklin, was previously licensed in PUC Docket 76-22 pursuant to Order 12-219. The State owned land in Franklin, which encompasses a portion of the Northern Rail Trail, was not previously licensed and the line construction pre-dated state ownership.

ES asserts this project scope is the result of a scheduled maintenance project for the F139 Line that will replace the existing two wood Structures #280 and #281 with steel structures. The existing three conductors and two static wires will be transferred to the new steel structures. Both static wires will be vertically attached above the conductors.

The scope of this project begins in Northfield at Structure #280, which is east of where the line crosses Route 3 in Franklin, approximately 1.05 miles north of the intersection of Route 3 and Stirrup Iron Road in Boscawen. The F139 Line then crosses the Merrimack River northwest traversing across State owned land and ultimately crossing State owned land identified as the Northern Rail Trail.

As shown in ES Exhibit #2, Structure 280 is to be constructed of (3)-52.0 ft. AGH Type ADS-1, CL H3 steel poles. The structure will have conductors for the 115 kV F139 transmission line consisting of (3) 795 kcmil ACSR 36/1 cables. The static wires will consist of (2) 7#8 Alumoweld cables, 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 following NESC Table 232-1 required clearances from the conductor cables to the noted surfaces will be maintained:

- to the water surface will be maintained at 33.9 feet; 30.1 feet is required for water areas suitable for sailing with 20 to 200 acres;
- to the land surface will be maintained at 26.3 feet; 16.1 feet is required for spaces subject to pedestrians or restricted traffic only;
- to the rail surface will be maintained at 36.3 feet; 28.1 feet is required to track rails of railroads.

Structure #281 is to be constructed with (3)-52.0 ft. AGH Type ADS-1, CL H3 steel poles. The structure will have conductors for the 115 kV F139 transmission line consisting of (3) 795 kcmil ACSR 36/1 cables. The static wires will consist of (2) 7#8 Alumoweld cables, which both will be vertically attached above the conductors. This crossing creates a total span of 737.9 ft. between Structures #280 and 281 with 226.1 ft. spanning public water, 195.1 feet spanning State owned land, and 35.9 feet spanning the Northern Rail Trail, which is also State-owned land (total 231 feet over state land). 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 Northfield and Franklin and State owned land in Franklin.

The public water crossing encompassing the Merrimack River, which crosses the border of Northfield and Franklin, was previously licensed in PUC Docket 76-22 pursuant to Order 12-219. The State owned land in Franklin, which encompasses a portion of the Northern Rail Trail, was not previously licensed and the line construction pre-dated state ownership.

ES was issued a license from Western Union Telegraph Company in 1967 for the railroad corridor that is now the Northern Rail Trail.

ES asserts environmental impact as a result of this project and that permits will be obtained from the NH Department of Environmental Services prior to commencement of this project.

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 Northfield and Franklin and State owned land in Franklin, 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 wood structures with steel structures and transfer existing conductors and static wires and maintain a three-phase 115 kV transmission line designated as the F139 Line over and across the public waters of the Merrimack River in Northfield and Franklin and State owned land in Franklin, New Hampshire. This crossing also encompasses the Northern Rail Trail. 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 Northfield and Franklin and State owned land in Franklin. Minimum safe line clearances above the water and land will be maintained at all times. The use and enjoyment of the public waters and State owned land 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 crossing does not appear to affect the rights of the public in the public waters and on the State owned land because minimum safe line clearances above the water and land surfaces will be maintained at all times.

Staff Recommendation:

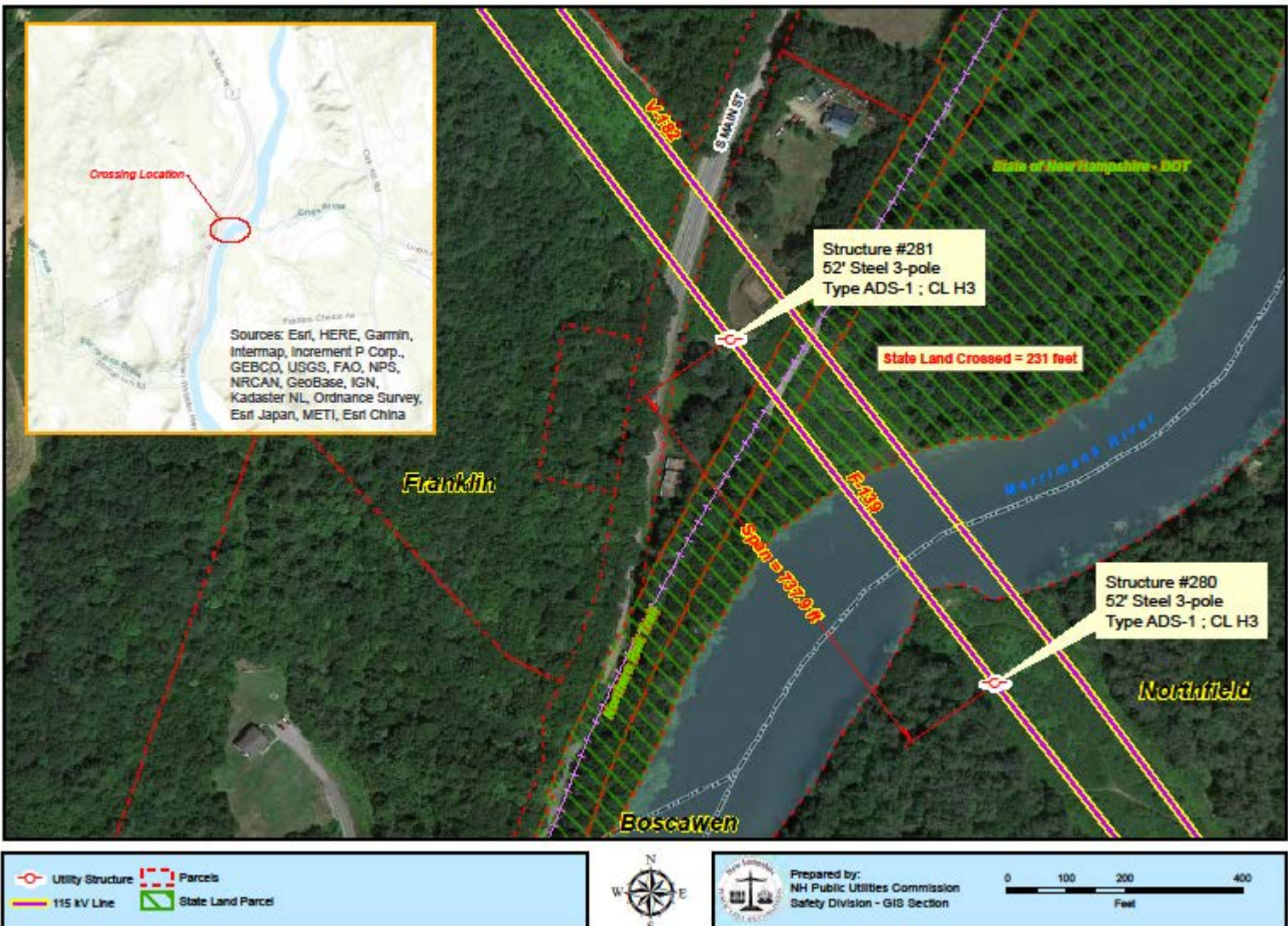
Based on the results of its review of the petition, its attachments, and all other supporting documents filed to this docket, the Safety Division Staff recommends that the Commission:

- 1) Find that the license ES requests in this docket may be exercised without substantially affecting the public rights in the public waters and State owned land, which is the subject of the petition;
- 2) Grant ES a license to construct, operate and maintain electric lines over and across the public waters in Northfield and Franklin and State owned land in Franklin, New Hampshire, as specified in the petition;

- 3) Issue an Order Nisi and orders for its publication.

Attachment

Merrimack River / State Land - NHDOT - DE 21-064 Eversource Crossing



Public waters and State owned Land as shown above identified in the petition and engineering drawings as State of New Hampshire and located in Northfield and Franklin. The project will require the Commission to grant a license related to this project. The license will be for the 115 kV F139 transmission line from Structure #280 northwesterly to Structure #281. This crossing over the Merrimack River in Northfield and Franklin and the State owned land in Franklin spans approximately 737.9 feet with 226.1 feet crossing public waters and 231 feet crossing State owned land, which also encompasses the Northern Rail trail.

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