

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: November 30, 2020

AT (OFFICE): NHPUC

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

SUBJECT: Docket No. DE 20-180 Public Service New Hampshire d/b/a Eversource Energy
Petition for a License Amendment to Construct and Maintain Electric Lines Over and across the public waters of the Isinglass River in the City of Rochester, New Hampshire
Staff Recommendation

TO: Debra Howland, Executive Director
Thomas Frantz, Director, Electric Division
Richard Chagnon, Assistant Director, Electric Division
Lynn Fabrizio, Staff Attorney
Randall Knepper, Director, Safety Division
Paul Kasper, Assistant 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) 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 November 9, 2020, Public Service New Hampshire d/b/a Eversource Energy (ES), filed a petition for a license amendment pursuant to RSA 371:17 to construct, maintain and operate the Eversource C129 line over two public water crossings, which is a three phase 115 kV transmission line. This is a project to replace four (4) existing wood structures with steel structures along with the replacement of two (2) existing shield wires with communications fiber optical ground wire (OPGW).

The two crossings over the Isinglass River in Rochester were previously licensed by the PUC as noted in Docket 11-073 pursuant to Order 25,261.

This rebuild project is part of a capital reliability project necessary for the C129 line to continue to meet current as well as future projected electricity demands.

The scope of this project is located to the south of Flagg Road and east of Stillwater Circle in Rochester beginning at Structure 208 then traversing northeast to Structures 209, 210, and 211 thereby creating two public water crossings. See a detailed NHPUC Safety Division map/schematic in the Attachment of this recommendation.

In ES Exhibit #2, original wood Structure #208 will be replaced with (2)-65.5 ft. OAL Type T, Class H-1 steel poles. All (3) existing ACSR 795 kcmil conductors for the C129 line will be transferred to the new structures with replacement of the (2) existing shield wires with (2) 48 fiber optical ground wire (OPGW). Both telecommunication lines 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. In its petition, ES provides sufficient detail to show how the required clearance from the conductor cables to the 100-year flood elevation water surface will be maintained at (23.9 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 18.6 feet clearance is required by the NESC Table 232-1 for water areas not suitable for sail boating.

Original wood Structure #209 will be replaced with (2)-65.5 ft. OAL Type T, Class H1S steel poles. All (3) existing ACSR 795 kcmil conductors for the C129 line will be transferred to the new structures with replacement of the (2) existing shield wires with (2) 48 fiber optical ground wire (OPGW). Both telecommunication lines will be vertically attached above the conductors. This crossing creates a total span of 459.3 ft. between structures 208 and 209 with 139 ft. spanning public waters.

In ES Exhibit #3, original wood Structure #210 will be replaced with (2)-70 ft. OAL Type T, Class H1S steel poles. All (3) existing ACSR 795 kcmil conductors for the C129 line will be transferred to the new structures with replacement of the (2) existing shield wires with (2) 48 fiber optical ground wire (OPGW). Both telecommunication lines 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. In its petition, ES provides sufficient detail to show how the required clearance from the conductor cables to the 100-year flood elevation water surface will be maintained at (20.7 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 18.6 feet clearance is required by the NESC Table 232-1 for water areas not suitable for sail boating.

Original wood Structure #211 will be replaced with (2)-61 ft. OAL Type T, Class H1 steel poles. All (3) existing ACSR 795 kcmil conductors for the C129 line will be transferred to the new structures with replacement of the (2) existing shield wires with (2) 48 fiber optical ground wire (OPGW). Both telecommunication lines will be vertically attached

above the conductors. This crossing creates a total span of 582.3 ft. between structures 210 and 211 with 235.1 ft. spanning public waters. All (4) replacement structures will be relocated within 10 ft. of their current locations.

The water clearances to the projected 100-year flood elevations were confirmed by Safety Division staff. 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).

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 Isinglass River in Rochester.

These two public water crossings were previously licensed by the PUC in DE 11-073, Commission Order 25, 261.

The Isinglass River, from the juncture of Nippo Brook in Barrington is listed under the category "Public Rivers And Streams" in the Official List of Public Waters (OLPW), under the category "List of freshwater Public Rivers and Streams". The entire list of public waters can be accessed through the following web link:

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

The crossing project requires a New Hampshire Department of Environmental Services statutory permit by notification (SPN) and shoreland permits by notification (PBN) due to the impact as a result of this rebuild project. ES asserts these will be obtained prior to commencement of this project.

The U.S. Army Corps of Engineers (USACOE) does not regulate the subject portion of the Isinglass River in Rochester as a federal-designated navigable water. Therefore, no crossing permit is required from USACOE.

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 Isinglass 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 re-construction of these water crossings is over the public waters of the Isinglass River in the City of Rochester, 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 crossings have 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 rebuild and maintain a three-phase 115 kV transmission line, designated as the C129 line, conductors, and related fiber optic communication cables over and across

public waters of the Isinglass River in the City of Rochester, New Hampshire. This transmission line is an integral part of ES's electric transmission system in this 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 Isinglass River. Minimum safe line clearances above the river surface and affected shorelines will be maintained at all times, the use and of which is the subject of this petition. The use and enjoyment by the public of these waters will not be diminished in any material respect as a result of the modification and replacement of the existing overhead line crossings.

Safety Division Staff concludes the impact to the public will be de minimis and not measurable. The crossings do not appear to affect the rights of the public in the State lands because minimum safe line clearances above the land surface will be maintained at all times.

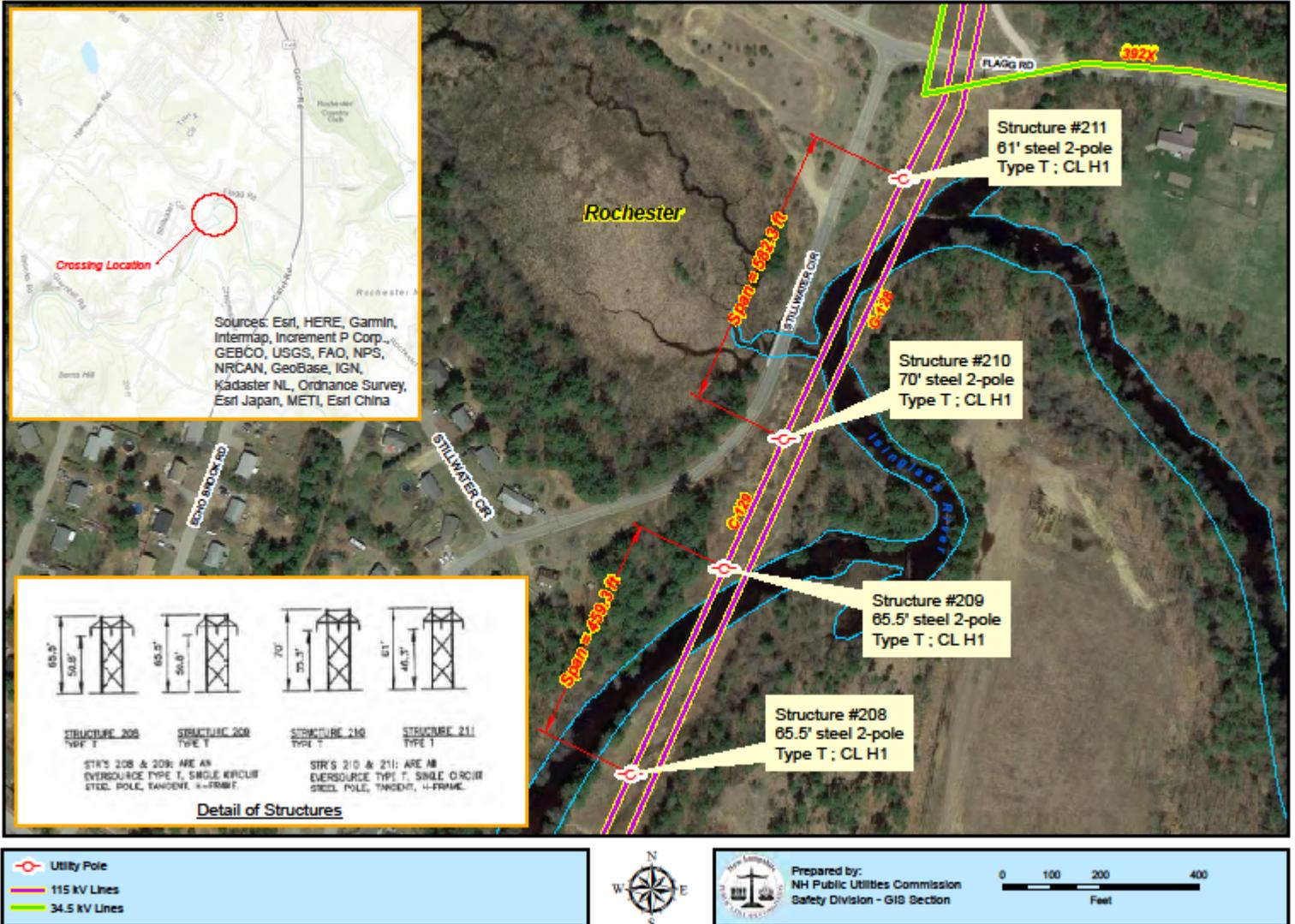
Staff Recommendation:

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

Attachment

Isinglass River - DE 20-180 Eversource Crossing



Public Water as shown above identified in the petition and engineering drawings as State of New Hampshire. The public water crossings are located in the City of Rochester. The project will require the Commission to grant a water crossing amended license related to this project. The license will be for the 115 kV C129 transmission line from Structure # 208 northeast to Structure # 209 spanning approximately 459.3 feet with 139 feet crossing public waters. The second crossing from Structure # 210 northeast to Structure # 21 spanning approximately 582.3 feet with 235.1 feet crossing public waters over the Isinglass River.

Executive.Director@puc.nh.gov
amanda.noonan@puc.nh.gov
catherine.marsellos@puc.nh.gov
Erik.newman@eversource.com
Kenneth.Walsh@puc.nh.gov
lynn.fabrizio@puc.nh.gov
ocalitigation@oca.nh.gov
Paul.Kasper@puc.nh.gov
randy.knepper@puc.nh.gov
richard.chagnon@puc.nh.gov
susan.gagne@puc.nh.gov
tom.frantz@puc.nh.gov