The Division of Enforcement’s review of the above petition consisted of the following elements:

- Petition contents, replacement petition contents, and history.
- Applicable State statute.
- Review of the existing crossing(s) previously licensed by the PUC, if any.
- 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 December 3, 2021, Public Service New Hampshire d/b/a Eversource Energy (Eversource, or the Company) filed a petition for a license pursuant to RSA 371:17 to construct and maintain the Eversource O154 Line, which is an existing 115kV transmission line that crosses State land, and public waters in Stark, New Hampshire. The State-owned land and public waters that is the subject of this petition have not been previously licensed as they are the original structures.
The proposed project for the O154 encompasses a full line rebuild. All 11 structures at the State-owned land crossing span will be replaced with weathering steel equivalents having the design and specifications depicted and noted in the Structure Details of Exhibits 3 through 5 and the Structure Detail column of Exhibit 7. The replacement structures will be renumbered as detailed under the Structure Table enclosed herewith as Exhibit 7. The project also includes replacement and renumbering of the two structures supporting one public water crossing span, as depicted in the Structure Detail of Exhibit 2 and as noted under the Exhibit 7 Structure Table. The proposed project also encompasses reconductoring the three existing conductors with new specifications as detailed under the Cable Schedule on Exhibits 2 through 6 hereto. Additionally, both pole top mounted shield wires will be replaced with two OPGW communication cables having the specifications noted in the said Cable Schedules. All structure replacements will be located within 10 feet of the existing locations, with the exception of new Structure 78 and 80, which are being moved approximately 30 feet west to minimize impacts to wetlands for this project and future maintenance. Changes in structure heights required to meet current safety and reliability clearance requirements for the replacement cables and new structure locations and also to address uplift considerations specific to the surrounding terrain are detailed under the enclosed Structure Table as Exhibit 7.

Common to structures #37 thru #39, #55 thru #59, and #73 thru #83 are new conductors which will consist of (3) ACSR 1272 kcmil 54/19 conductors, and (2) two new 48 Fiber OPGW communications cables.

The conductor cable clearance requirements were met using the National Electrical Safety Code (NESC) based on the design conditions at 285 deg F. for all land crossings within this petition. This scenario was the governing condition, which yielded the greatest sag and lowest clearance. Only 20.1 feet clearance is required by the NESC Table 232-1 for other areas transversed by vehicles, such as cultivated, grazing, forest, and orchard lands, industrial sites, commercial sites, etc. Only 18.6 feet is required for water areas not suitable for sailboating or where sailboating is prohibited. Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition.

The one public water crossing and two State owned land crossing spans that are the subject of this petition are depicted on Exhibit 1 as a high-level perspective of the locations. Additional site location descriptions of the span location are as follows. Exhibit 2– The O154 Line crosses the Upper Ammonoosuc River (143’ wide) in the Town of Stark between Structures 38 and 39, approximately 880 feet southwest of the where the O154 Line crosses Northside Road, which is approximately 3,400 feet southeast from the intersection of Lee Hill Road and Northside Road. Exhibit 3 & 6 – The O154 Line crosses a State-owned land parcel, identified as Percy State Forest, in the Town of Stark between Structures 55 and 59, which starts approximately 1.41 miles east of where the O154 Line crosses Northside Road, which is approximately 3,400 feet southeast from the intersection of Lee Hill Road and Northside Road. The crossing extends approximately 1,800 east where it ends approximately 2,200 feet west of where the O154 Line crosses Christine Lake Road, which is approximately 425 feet north from the intersection of Christine Lake Road and Percy Road. Exhibits 4 to 6 – The O154 Line crosses a State-owned land parcel, identified as Nash Stream Forest Natural Area, in the Town of Stark between Structures 73 and 83, which starts approximately 0.95 miles east from where the O154 Line
crosses Christine Lake Road, which is approximately 425 feet north from the intersection of Christine Lake Road and Percy Road. The crossing extends approximately 4,149 feet east and ends approximately 1,400 feet west from where the O154 Line crosses Bell Hill Road, which is approximately 530 feet south from the intersection of Bell Hill Road and Pike Pond Road.

The water crossing over the Ammonoosuc River in Stark spans 642.6 feet between Structures #37 and #38 with 143.4 feet spanning public waters. See Safety Map #1.

The land crossing in Stark spans 2,158.8 feet between Structures #55 and #59 with 1,799.5 feet spanning State owned land. See Safety Map #2.

The land crossing in Stark spans 4,509.2 feet between Structures #73 and #83 with 4,149.2 feet spanning State owned land. See Safety Map #3.

The following table provides the summary of this petition with all crossings to include structure numbers, types, spans, ES design criteria, and NESC compliance:
2. New Hampshire statute referenced in petition (as modified by N.H. House Bill 2 on June 3, 2021)


3. Review of existing license(s) and permissions previously granted by the PUC for these locations of the State-owned land and public water in Stark.

The O154 Line had not been previously licensed as noted in this petition.

In Stark, the Ammonoosuc River, Juncture of Stony Brook in Berlin in “Public Rivers and Streams” in the Official List of Public Waters (OLPW). The entire list of public waters can be accessed through the following web link:


Eversource asserts that environmental impacts will require permits from the NH Department of Environmental Services and that the Company will obtain these before commencing work.

The U.S. Army Corps of Engineers (ACOE) does not regulate the subject portion of the Ammonoosuc River as navigable waters.
4. **Review of land ownership of proposed pole structures**

In its petition, Eversource specifies that the unlicensed structures to be replaced pursuant to this petition cross State-owned land and public waters in Stark, New Hampshire.

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

The Safety Bureau reviewed the specifications related to the design and re-construction of this crossing project as described in the petition, attachments, and all supplemental support documents and corrections filed by the Company and found them to be in conformance with N.H. Admin. Rule Puc 306 and applicable sections of NESC C2-2012.

6. **Review of public need and public impact**

The O154 transmission line is an integral part of Eversource’s existing electric transmission system in New Hampshire. The crossing locations identified in the petition are in Stark. The Company asserts in its petition that the existing crossings will be exercised without substantially affecting public rights in the identified State land and public waters in Stark.

The Safety Bureau verified that minimum safe line clearances above the land and public waters will be maintained at all times and determined that public use and enjoyment of the State-owned land and public water will not be diminished in any material respect as a result of the proposed overhead line crossings.

**Safety Bureau Recommendation:**

Based on the results of its review of the petition, attachments, and all other supporting documents, the Safety Bureau recommends that the Department:

1) Find that the license Eversource requests in this docket may be exercised without substantially affecting the public rights in State owned land and public waters; and

2) Grant Eversource a license to construct, install, operate, and maintain electric lines and communication cables pursuant to RSA 371:17 and Puc 306.01, over and across State owned land and public water in Stark, New Hampshire as specified in the petition.

Attachments
Public waters as shown in this Map identified in the petition and engineering drawings as State of New Hampshire and located in Stark. The project will require the Department to grant a license related to this project. The license will be for the 115 kV O154 transmission line from Structure #37 to Structure #38. This crossing spans 642.6 feet with 143.4 feet crossing the Ammonoosuc River.
State owned land as shown in this Map identified in the petition and engineering drawings as State of New Hampshire and located in Stark. The project will require the Department to grant a license related to this project. The license will be for the 115 kV O154 transmission line from Structure #55 to Structure #59. This crossing spans 2,158.8 feet with 1,799.5 feet crossing State owned land.
State owned land as shown in this Map identified in the petition and engineering drawings as State of New Hampshire and located in Stark. The project will require the Department to grant a license related to this project. The license will be for the 115 kV O154 transmission line from Structure #73 to Structure #83. This crossing spans 4,509.2 feet with 4,149.2 feet crossing State owned land.