

STATE OF NEW HAMPSHIRE

Intra-Department Communication

DATE: December 07, 2021

AT (OFFICE): NH Dept. of Energy

FROM: Paul Kasper
Division of Enforcement

SUBJECT: CR2021-20 Eversource Energy
Petition for License to Construct and Maintain Electric Lines Over and Across
State Owned Land in Portsmouth, New Hampshire
Division of Enforcement,

Safety Bureau Recommendation

TO: Jared Chicoine, Interim Commissioner, Department of Energy
Christopher Ellms, Jr., Deputy Commissioner, Department of Energy

CC: Thomas Frantz, Director of Regulatory Division
Richard Chagnon, Regulatory Division
Lynn Fabrizio, Division of Enforcement

The Division of Enforcement'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 12, 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 3135 Line, which is an existing three phase 345kV transmission line that crosses State land in Portsmouth is known as Great Bog property and is owned by New Hampshire Fish and Game.

On November 17, 2021, Eversource filed a replacement petition as requested by Safety Bureau to account for clarification on prior licenses, amendments, and facility changes.

The existing crossings over State land was not previously licensed for unknown reasons, according to the petition.

This proposed project is to replace (2) existing weathered steel structures (Str# 105 and #106) with new weathered steel structures. The (3) existing transmission conductors, (1) existing shield wire, and (1) OPGW 74 fibers will remain unchanged and will be transferred to the new structures.

Common to all these noted structures, existing conductors consist of (3) ACSR 1113 54/19 kcmil conductors, (1) existing 7 No. 8 Alumoweld shield wire, and (1) OPGW 72 Fiber wire will be transferred with the shield wire and OPGW wire being vertically attached above the conductors.

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 crossings within this petition. This scenario was the governing condition, which yielded the greatest sag and lowest clearance. Only 24.8 feet clearance is required by the NESC Table 232-1 for other areas traversed by vehicles, such as cultivated, grazing, forest, and orchard lands, industrial sites, and commercial sites. Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition.

The scope of this project begins at Structure #101 which is located approximately 4,800 feet from where the line crosses Ocean Road, which is approximately 650 ft. southeast from the intersection of Ocean Road and Buckminster Way. The crossing extends approximately 4,511 feet northeast and ends at the southern edge of Greenland Road (aka NH State Route 33), where the line crosses approximately 500 feet west of the intersection of Greenland Road and Dodge Ave.

The land crossing spans 5190.3 feet between Structures #101 and #108 with 4511.1 feet spanning State owned land. See Safety Map #1.

The following table provides the summary of this petition with all crossings to include structure numbers, types, spans, ES design criteria, and NESC compliance:

Dept. of Energy Safety Bureau Summary Table

Eversource 3135 Line - State Land Crossings						
Structure	Type	Span (Pole to Pole)	Distance (feet)	Minimum NESC Table 232-1 Clearance (ft.)	ES Vertical Design Clearance (ft.)	Complies with NESC Table 232-1 (Y/N)
101	95.5' steel dual pole, Type HF	101-102	930.6	24.8	36.1	Y
102	97.5' steel dual pole, Type HF					
103	92.0' steel dual pole, Type HF	102-103	891.6	24.8	31.5	Y
104	84.5' steel dual pole, Type HF	103-104	671.6			
105	83.5 steel dual pole, Type HF	104-105	700.4	24.8	34.4	Y
106	83.5' steel dual pole, Type HF	105-106	724	24.8	32.8	Y
107	81.0' steel dual pole, Type HF	106-107	705.9	24.8	32.4	Y
108	93.5' steel dual pole, Type HF	107-108	709.2	24.8	44.8	Y

2. New Hampshire statute referenced in petition (as modified by N.H. House Bill 2 on June 3, 2021)

371:17 Licenses for New Poles (2021, 91:260, eff. July 1, 2021)

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

The State-owned land crossing span in Portsmouth was not previously licensed.

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

4. Review of land ownership of proposed pole structures

In its petition, Eversource specifies that the structures and wires pursuant to this petition cross State-owned land in Portsmouth, 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 3135-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 Portsmouth. The Company asserts in its petition that the existing crossings will be exercised without substantially affecting public rights in the identified State land located in Portsmouth.

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

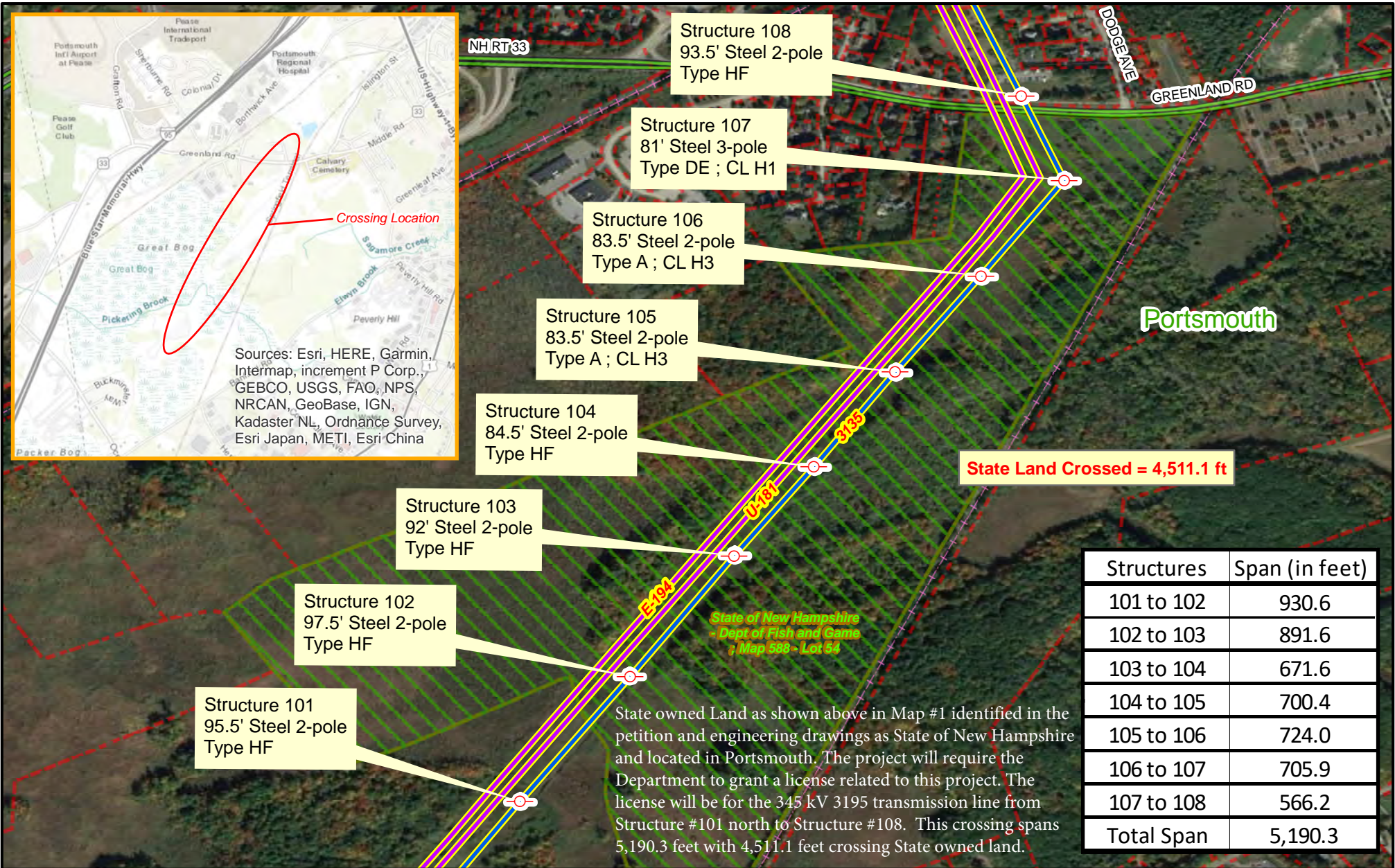
Safety Bureau Recommendation:

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

- 1) Find that the license Eversource requests in this petition may be exercised without substantially affecting the public rights in State owned land; 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 in Portsmouth, New Hampshire, as specified in the petition.






Attachments

State Land (Dept of Fish & Game) - CR 2021-020 Eversource Crossing



Structures	Span (in feet)
101 to 102	930.6
102 to 103	891.6
103 to 104	671.6
104 to 105	700.4
105 to 106	724.0
106 to 107	705.9
107 to 108	566.2
Total Span	5,190.3

State owned Land as shown above in Map #1 identified in the petition and engineering drawings as State of New Hampshire and located in Portsmouth. The project will require the Department to grant a license related to this project. The license will be for the 345 kV 3195 transmission line from Structure #101 north to Structure #108. This crossing spans 5,190.3 feet with 4,511.1 feet crossing State owned land.

-  Utility Structure
-  State Land Parcel
-  345 kV Lines
-  Town Parcel
-  115 kV Lines



Prepared by:
NH Department of Energy
Enforcement Division
Safety Bureau

