

STATE OF NEW HAMPSHIRE

Intra-Department Communication

Date: September 11, 2023

At (Office): NH Dept. of Energy

From: Bryan J Flynn B J F
Utility Analyst IV – Enforcement Division

Subject: **CRE 2023-020** Eversource Energy
Application for License to Construct and Maintain Electric Lines Over and Across
State-Owned Land in Portsmouth, New Hampshire

Staff Recommendation

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

CC: Thomas Frantz, Director of Regulatory Support Division
Paul Kasper, Director of Enforcement Division
Elizabeth Nixon, Director of Electric Regulatory Support Division
Andrew Harmon, Hearings Examiner, Enforcement Division

Review by the Enforcement Division of the above application consisted of the following elements:

- Application contents, revised application contents, and history.
- Applicable State statutes.
- Review of existing crossing(s) previously licensed by the State of New Hampshire, if any.
- Review of land ownership and 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
- Recommendations

1. Application Contents and History

On August 23, 2023, Public Service Company of New Hampshire d/b/a Eversource Energy (ES), submitted an application, pursuant to RSA 371:17, for a license to construct and maintain a portion of the Eversource U181 Line. The ES U181 Line is a 115 kV transmission line that crosses State-owned land in the City of Portsmouth, New Hampshire. Eversource requests that the Department of Energy (the Department) grant a license for the purpose of necessary structure replacements at the referenced crossing locations. Enforcement Division staff have reviewed the application, exhibits, and all additional supporting documents.

Through asset condition inspections, ES has determined that the existing wood structures 44, 45, and 48-54 need to be replaced in order to continue to function safely and reliably. The wood structures will be replaced with weathering steel equivalents that shall be located within 10' of existing structure locations. Structures 46, 47, 55, and 56 were replaced from wood to weathering steel in 2017 within 10' of the prior structure location. The existing three conductors and two shield wires will remain unchanged in the course of performing the replacement work.

The location of the State-owned land crossing has been depicted on the Overview Map submitted by ES as exhibit 1 and a more detailed location description is as follows:

Exhibits 2 and 3 submitted by ES illustrate where the U181 Line crosses State-owned property in the City of Portsmouth between Structures 44 and 56, known as the Great Bog property, owned by New Hampshire Fish and Game. The crossing starts along the southern edge of Greenland Road Ave (aka NH Route 33) where the line crosses approximately 550 feet west of the intersection of Greenland Road and Dodge Ave. The crossing extends approximately 4,400 feet south to the property boundary of Map 282, Block 5 in the City of Portsmouth, which is approximately 4,800 feet from where the line crosses Ocean Road, which line crossing location is approximately 650 southeast from the intersection of Ocean Road and Buckminster Way.

- The proposed structure locations from 44-56 create a total span of 5,070.4 feet with 4,400 feet crossing State-owned land

The following table illustrates the structure and span details provided in the application, as well as required NESC clearances and the design clearances at each crossing span:

| Eversource Energy U181 Line Crossing Proposed Design Details CRE 2023-020 | | | | | | |
|------------------------------------------------------------------------------|----------------|---------------|-----------------|-------------------------------------------|----------------------------|--------------------------|
| Structure Number | Structure Type | Measured Span | Distance (Feet) | NESC Table 232-1 Minimum Clearance (Feet) | ES Design Clearance (Feet) | Complies with NESC 232-1 |
| 44 | Type T Steel | 44-45 | 337.6 | 20.1 | 45.9 | Y |
| 45 | Type T Steel | 45-46 | 416.8 | 20.1 | 39.3 | Y |
| 46 | SDA-2 Steel | 46-47 | 436.5 | 20.1 | 28.9 | Y |

| Structure Number | Structure Type | Measured Span | Distance (Feet) | NESC Table 232-1 Minimum Clearance (Feet) | ES Design Clearance (Feet) | Complies with NESC 232-1 |
|------------------|----------------|---------------|-----------------|-------------------------------------------|----------------------------|--------------------------|
| 47 | Type T Steel | 47-48 | 440 | 20.1 | 24.8 | Y |
| 48 | Type T Steel | 48-49 | 398.1 | 20.1 | 31.4 | Y |
| 49 | Type T Steel | 49-50 | 291.6 | 20.1 | 39.4 | Y |
| 50 | Type T Steel | 50-51 | 577.8 | 20.1 | 28.7 | Y |
| 51 | Type T Steel | 51-52 | 369.2 | 20.1 | 32.2 | Y |
| 52 | Type T Steel | 52-53 | 361.8 | 20.1 | 27.1 | Y |
| 53 | Type T Steel | 53-54 | 404.3 | 20.1 | 26.6 | Y |
| 54 | Type T Steel | 54-55 | 545.8 | 20.1 | 25.7 | Y |
| 55 | SRAX Steel | 55-56 | 491.2 | 20.1 | 35.5 | Y |
| 56 | SRAX Steel | | | | | |

2. New Hampshire statute referenced in application (modified by NH House Bill 1258, August 22, 2022)

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, modify a previously licensed installation, or license a previously constructed installation, it shall apply to the department of energy 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 department of energy may prescribe. Every corporation and individual desiring to cross any public water or land for any purpose herein defined shall apply to the department of energy for a license in the same manner prescribed for a public utility. The department of energy may condition any license issued under this paragraph in any manner necessary to assure that the license may be exercised without substantially affecting the public rights in public waters or state-owned lands. Using a non-adjudicative process, the department of energy may reject incomplete or improperly filed applications, and shall, also using non-adjudicative process, issue or deny the license within 90 days of receiving a complete application and all information subsequently requested of an applicant.

3. Review of existing license(s) and permissions previously granted by the State of New Hampshire, including additional permitting requirements, for these crossings over State-owned land in Portsmouth, New Hampshire.

Originally constructed in 1950, the ES U181 Line, which crosses State-owned land in Portsmouth, New Hampshire between Structures 44-56, was not previously licensed. Maintenance and replacement work on Structures 46, 47, 55, and 56 was completed in 2017 without licensure due to an oversight. As a result of this application, the U181 Line will be fully licensed.

A NHDES Utility Maintenance Notification (UMN) was obtained by Eversource for temporary impacts associated with the structure replacements completed in 2017, UMN # 2017-00116. A New Hampshire Department of Environmental Services (NHDES) Standard Dredge and Fill (SDF) permit will be required for impacts associated with the structure replacements of this project. Eversource states in the application that one will be obtained prior to commencement of construction.

4. Review of land ownership at proposed pole structures

The structure replacement project is to be accomplished within existing right-of-way easements thereby mitigating impacts and concerns of property owners affected by the project scope. A list of abutters is not required.

5. Review of National Electric Safety Code (NESC) requirements as described in PUC 300

The wire specifications and loading condition used to establish maximum sag for the relevant crossing spans are as indicated on Profile View and Cable Schedule of Exhibit 2 and 3 submitted by ES. All conductors and wires have been drawn to show the minimum clearance at maximum sag conditions in reference to the State-owned land crossing.

Eversource will maintain and operate the clearances of the crossings at a height no less than what is required by the 2012 National Electrical Safety Code (NESC, Table 232-1), which is 20.1' for 115 kV conductor over other areas traversed by vehicles, such as cultivated, grazing, forest and orchard lands, industrial sites, commercial sites, etc. The actual minimum height over the State-owned land is depicted on the attached Exhibit 2 and 3, submitted by ES, and exceeds the respective minimum requirements.

Enforcement Division staff reviewed the specifications of the proposed replacement work and proposed structure locations and found them to be in conformance with N.H. admin. Rule PUC 306. The minimum clearance requirements based on the design conditions at 285 deg F above ground elevation have been met. Staff verified the depicted sag clearances using Sag10 commercial software with the data inputs provided in the application.

6. Review of public need and impact

The Eversource U181 Line supplies electricity between Schiller Station and Ocean Road substation in Portsmouth, New Hampshire. The line provides continuous energy to the grid from a biomass boiler and additional capacity during peak usage. Eversource attests that the license to

maintain and construct a portion of that line, if granted, may be exercised without substantially affecting the use and enjoyment of State-owned land. The Enforcement Division's review of design specifications verified that minimum safe clearances above State-owned land will be maintained during and after structure replacement; and therefore, determines that public use and enjoyment of said land will not be diminished in any respect as a result of the proposed project.

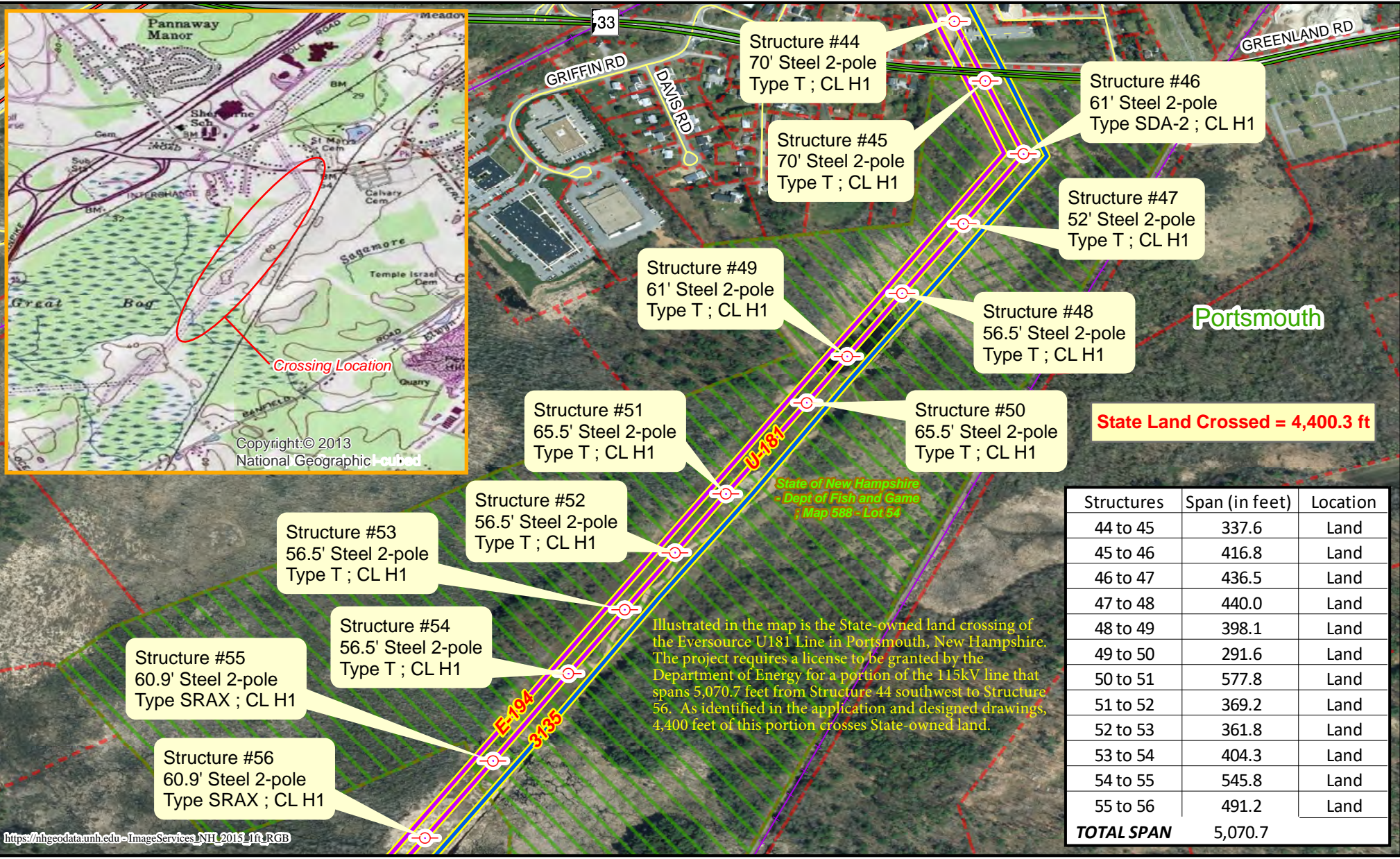
7. Enforcement Division Recommendations

Based on the results of its review of the application, attachments, and all other supporting documents, the Enforcement Division recommends that the Department:

1. Find that the license Eversource requests in the application may be exercised without substantially affecting public rights on State-owned land; and
 2. Grant Eversource a license to construct and maintain electric lines pursuant to RSA 371:17 and PUC 306.01, over and across State-owned land in the City of Portsmouth, New Hampshire, as specified in the application.
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Attachment:

State Land (Dept of Fish & Game) - CRE 2023-020 Eversource Crossing



https://nhgeodata.unh.edu/ImageServices/NH_2015_1ft_RGB

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



Prepared by:
NH Department of Energy
Enforcement Division

