

STATE OF NEW HAMPSHIRE**Inter-Department Communication****DATE:** January 9, 2019**AT (OFFICE):** NHPUC**FROM:** Paul Kasper 
Assistant Director – Safety Division**SUBJECT:** Docket No. DE 18-156 Public Service New Hampshire d/b/a Eversource Energy
Petition for a License to Construct and Maintain Electric Lines Over and across lands owned by the State in the Town of Goffstown, New Hampshire.**Staff Recommendation****TO:** Debra Howland, Executive Director
Thomas Frantz, Director, Electric Division
Leszek Stachow, Assistant Director, Electric Division
Mary Schwarzer, Staff Attorney**CC:** Randall Knepper, 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) not 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 October 10, 2018, Public Service New Hampshire d/b/a Eversource Energy (ES), filed a petition pursuant to RSA 371:17 for a license to re-construct, maintain and operate the Eversource 328 line, which is a 34.5 kV distribution line. This is a project to modify or rebuild (8) eight structures on its existing 328 distribution line. No conductors, shield wire or neutral wire will be replaced in the project. All wires shall be transferred from existing structures to new structures replaced at the same locations. These existing crossings have not been previously licensed by the Commission, and will become licensed under this petition if the Commission grants approval.

The existing 328 line structures and associated distribution components are approximately 40 years old, have been subject to woodpecker and other environmental damage and require replacement for the line to continue to function safely and reliably. This structure replacement and repair project is part of a capital reliability project - necessary for the 328 line to continue to meet current as well as future projected electricity demands. The 328 line is also being upgraded to allow more capacity to the Town of Goffstown from the Rimmon Substation due to an upcoming transformer retirement at the Glen Lake Substation. Additionally, underbuilt fiber optic cable is being added to the structures to allow for communication between the Rimmon Substation and the Glen Lake Substation.

The State's parcel of 19 acres of land formerly owned by Eversource at the time the existing 328 line structures were installed by Eversource, and therefore no crossing license was required at the time of original installation. Eversource subsequently sold and conveyed the land to the state in 1967, reserving from that deed¹ its easement rights and right of way for the 328 line facilities. The state thus acquired ownership and possession of the land subject to the 328 line and its structures. In 1972, the state, by the N.H. Water Resources Board, conveyed the state parcel to the New Hampshire Fish and Game Department, the present state agency with responsibility for the land management. The structure replacements of the 328 line crossings over and across this parcel will be newly licensed under this petition. Existing 328 line structures Nos. 52, 53, 53.5, and 54-58, inclusive, will be replaced with new, re-numbered structures Nos. 74-81, inclusive. The total span across NH State land is approximately 1940 ft.

State of New Hampshire Fish and Game Department, (Hillsborough County Registry of Deeds Book 1972, Page 415)

In ES Exhibit #2 Structure # 74 is constructed with 1-50 ft. steel monopole and will replace existing Structure # 52 under this petition. The structure will have conductors for the 34.5 kv 328 line consisting of Hendrix type 477 kcmil AAC cable and a .0000127 neutral wire. The fiber optic cable will be ADSS-24 Fiber OFS Type and will be vertically attached 10 ft below the conductors. The fiber optic cable clearance requirements were met using the NESC heavy conditions (0.5 inch radial ice) and at 32 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 fiber optic cable to the land surface will be maintained at (22.75 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 15.5 ft. is required by the NESC Table 232-1.

¹ State of New Hampshire Fish and Game Department Hillsborough County Registry of Deeds Book 1972, Page 415

Structure # 75 is constructed with 1-65 ft. steel monopole replacing existing structure # 53. The conductors, neutral and communication wire are attached and orientated as described for structure # 74. In its petition, ES provides sufficient detail to show how the required clearance from the fiber optic cable to the land surface will be maintained at (20.75 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 15.5 ft. is required by the NESC Table 232-1. The span between Str # 74 and Str # 75 is 395 ft.

Structure # 76 is constructed with 1-50 ft. steel monopole and will replace existing Structure # 53.5. The conductors, neutral and communication wire are attached and orientated as described for structure # 74. In its petition, ES provides sufficient detail to show how the required clearance from the fiber optic cable to the land surface will be maintained at (23.5 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 15.5 ft. is required by the NESC Table 232-1. The span between Str # 75 and Str # 76 is 274 ft.

Structure # 77 is constructed with 1-55 ft. steel monopole and will replace existing Structure # 54. The conductors, neutral and communication wire are attached and orientated as described for structure # 74. In its petition, ES provides sufficient detail to show how the required clearance from the fiber optic cable to the land surface will be maintained at (24.5 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 15.5 ft. is required by the NESC Table 232-1. The span between Str # 76 and Str # 77 is 328 ft.

Structure # 78 is constructed with 1-55 ft. steel monopole and will replace existing Structure # 55. The conductors, neutral and communication wire are attached and orientated as described for structure # 74. In its petition, ES provides sufficient detail to show how the required clearance from the fiber optic cable to the land surface will be maintained at (27.75 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 15.5 ft. is required by the NESC Table 232-1. The span between Str # 77 and Str # 78 is 281 ft.

Structure # 79 is constructed with 1-45 ft. steel monopole and will replace existing Structure # 56. The conductors, neutral and communication wire are attached and orientated as described for structure # 74. In its petition, ES provides sufficient detail to show how the required clearance from the fiber optic cable to the land surface will be maintained at (24.5 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 15.5 ft. is required by the NESC Table 232-1. The span between Str # 78 and Str # 79 is 271 ft.

Structure # 80 is constructed with 1-40 ft. steel monopole Pole and will replace existing Structure # 57. The conductors, neutral and communication wire are attached and orientated as described for structure # 74. In its petition, ES provides sufficient detail to show how the required clearance from the fiber optic cable to the land

surface will be maintained at (18 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 15.5 ft. is required by the NESC Table 232-1. The span between Str # 79 and Str # 80 is 189 ft.

Structure # 81 is constructed with 1-40 ft. steel monopole and will replace existing Structure # 58. The conductors, neutral and communication wire are attached and orientated as described for structure # 74. In its petition, ES provides sufficient detail to show how the required clearance from the fiber optic cable to the land surface will be maintained at (18 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 15.5 ft. is required by the NESC Table 232-1. The span between Str # 80 and Str # 81 is 215 ft.

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 State of New Hampshire owned land crossing location

This State of New Hampshire owned land crossing license application is part of the re-construction of the existing ES 328 distribution line (34.5kV) for ES and had not been previously licensed by the Commission.

ES asserts in the petition that the proposed crossings will be exercised without substantially affecting the rights of the public in State of New Hampshire owned land crossings. Minimum safe line clearances above the land surface will be maintained at all times. The use and enjoyment of the land 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 land crossing are on the State of New Hampshire owned land in the Town of Goffstown, New Hampshire

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

N.H. Code of Administrative Rules Puc 306 requires:

- (a) each utility shall construct, install, operate and maintain its plant, structures and equipment and lines, as follows:
 - (1) In accordance with good utility practice;
 - (2) After weighing all factors, including potential delay, cost and safety issues, in such a manner to best accommodate the public; and
 - (3) To prevent interference with other underground and above ground facilities, including facilities furnishing communications, gas, water, sewer or steam service.
- (b) For purposes of this section, “good utility practice” means in accordance with the standards established by:
 - (1) 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 2012 National Electrical Safety Code C2-2012.

Safety Division Staff reviewed the specifications related to the design and re-construction of this crossing project as provided in the petition, the attachments, and all supplemental support documents, and found them to be in conformance with the applicable sections of NESC code 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 re-construct and maintain a three-phase 34.5 kV distribution line, designated as the 328 line and a fiber optic cable in the Town of Goffstown This distribution line is an integral part of ES’s electric distribution 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 State lands in Goffstown, a which is the subject of this petition. Minimum safe line clearances above the land surfaces will be maintained at all times. The use and enjoyment by the public of these lands will not be diminished in any material respect as a result of the modification and replacement of the existing overhead line crossings.

This project does not require use and occupancy agreements be in place prior to construction of this crossing from the New Hampshire Department of Transportation.

A NHDES Standard Wetlands Permit application was submitted and accepted as complete by NHDES on July 5, 2018 (see NHDES File # 2018-02003).

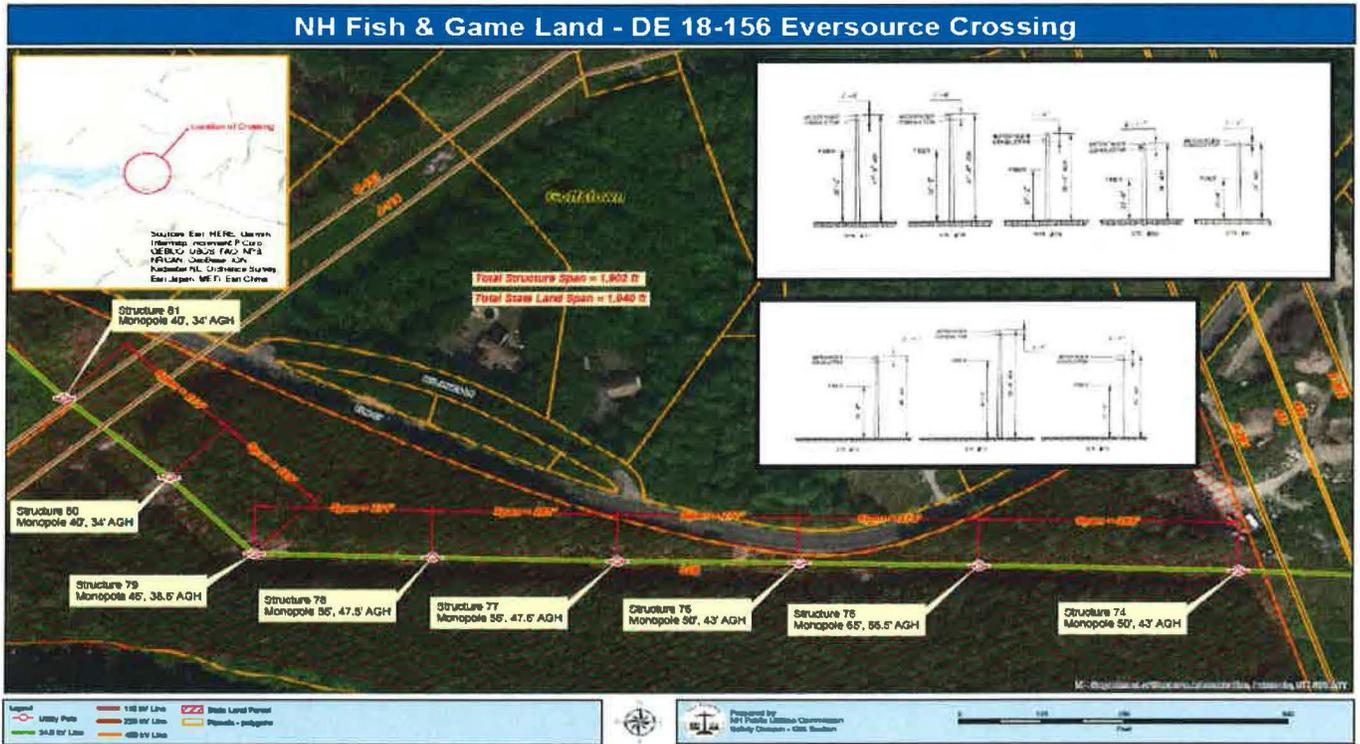
Safety Division Staff concludes the impact to the public will be *de minimis* and not measurable. The crossings do not appear to affect the rights of the public in the State lands because minimum safe line clearances above the land surface will be maintained at all times.

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 ES requests in this docket may be exercised without substantially affecting the public rights in State lands which are the subject of the petition;
- 2) Grant ES a license to construct, operate and maintain electric lines, including neutral over and across the State lands in the Town of Goffstown New Hampshire, as specified in the petition; and
- 3) Issue an Order Nisi and orders for its publication.

Staff Attachment



Public Land is State owned. A portion of the 19 acre parcel is shown above as hash marks identified in the petition and engineering drawings as State of New Hampshire Fish and Game Department, (Hillsborough County Registry of Deeds Book 1972, Page 415). The parcel is located west of Elm Street in the Town of Goffstown. The project will require the Commission to grant a public land crossing license related to this parcel. The license will be for the 34.5 kv 328 distribution line from Structure # 74 to Structure # 81 approximately 1940 feet.

SERVICE LIST - EMAIL ADDRESSES - DOCKET RELATED

Pursuant to N.H. Admin Rule Puc 203.11 (a) (1): Serve an electronic copy on each person identified on the service list.

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FILING INSTRUCTIONS:

- a) Pursuant to N.H. Admin Rule Puc 203.02 (a), with the exception of Discovery, file 7 copies, as well as an electronic copy, of all documents including cover letter with:**
- DEBRA A HOWLAND
EXECUTIVE DIRECTOR
NHPUC
21 S. FRUIT ST, SUITE 10
CONCORD NH 03301-2429
- b) Serve an electronic copy with each person identified on the Commission's service list and with the Office of Consumer Advocate.**
- c) Serve a written copy on each person on the service list not able to receive electronic mail.**