

THE STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION

PETITION OF PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/B/A  
EVERSOURCE ENERGY FOR LICENSES TO CONSTRUCT AND MAINTAIN ELECTRIC  
LINES OVER AND ACROSS LANDS OWNED BY THE STATE IN THE TOWNS OF  
TILTON AND BELMONT, AND THE CITY OF LACONIA, NEW HAMPSHIRE.

TO THE PUBLIC UTILITIES COMMISSION:

Public Service Company of New Hampshire d/b/a Eversource Energy (Eversource), a public utility engaged in the generation, transmission, distribution and sale of electricity in the State of New Hampshire, hereby petitions the Public Utilities Commission ("Commission"), pursuant to RSA 371:17, for licenses to construct and maintain electric lines over and across certain lands owned by the State of New Hampshire ("State") in the Towns of Tilton and Belmont, and in the City of Laconia, New Hampshire, and in support of this petition states as follows:

1. In order to meet the requirements for reasonable service to the public, Eversource has previously constructed and currently operates and maintains overhead electric lines over and across certain lands now owned by the State at seven (7) locations in the Towns of Tilton and Belmont, and in the City of Laconia, New Hampshire. The existing electric lines consist of the Eversource L176 transmission line (115 kV), in a double-circuited structure configuration with either Eversource's Line 398 or Line 3216, both of which are 34.5 kV distribution lines. Line 3216 is a section from Eversource's Webster Substation to L176 Structure 44, a portion of the line formerly known as Line 398, and which was created when sectionalizing equipment was installed. Line 398 is the portion that runs from L176 Structure 44 to the Eversource Laconia Substation, and was not renamed. At the seven State land locations which are the subject of this petition, the L176 is double-circuited with the underbuilt Line 398.
  2. Eversource is commencing a project to modify or rebuild a number of the structures on its existing L176 transmission line, which will impact the seven State land locations which are the subject of this petition. Certain of the existing L176 wood transmission line structures and associated distribution components are approximately 40 years old, have been subject to woodpecker and other environmental damage, and require replacement or modification for the lines to continue to function safely and reliably. This structure replacement and repair project is part of a capital reliability project necessary for the L176 transmission line to continue to meet current as well as future projected electricity demands. No conductor, shield wire or neutral wire will be replaced as part of this project; instead, existing conductors and wires will be transferred to the new, replaced structures.
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3. The seven State land locations which are the subject of this petition are listed in Table 1 attached to this petition.<sup>1</sup> The locations of each of the land crossings are shown on the USGS location drawings attached hereto as Figures 1 through 7, inclusive, and on the plan and profile drawings attached hereto as Exhibits 1 through 8, inclusive.<sup>2</sup>
4. The modification and rebuild of the L176 transmission line over the above referenced seven State land locations in Tilton, Belmont, and Laconia, as shown in the attached plan and profile drawings, Exhibits 1 through 8, has been designed and will be constructed in accordance with the National Electrical Safety Code (NESC).
5. Wire and structure specifications:
  - a. NHDOT Property Crossing, Tax Map R18, Lot 16, Tilton (Exhibit 1):
    - i. Wire:
      1. Shield Wire: 7#8 Alumoweld
      2. Transmission Wire: 795 kcmil ACSR 26/7
      3. Distribution Wire: 477 kcmil ACSR 26/7
    - ii. Structure Types and Pole Heights: From west to east
      1. Str 60: DC-RA 2-Pole, 2-75' AGH (existing to remain)
      2. Str 61: DCST-2 Monopole, 100' OAL (84' AGH)
      3. Str 62: DCST-1 Monopole, 105' OAL (88.5' AGH)
      4. Str 63: DCST-1 Monopole, 85' OAL (70' AGH)
      5. Str 64: DCST-1 Monopole, 95' OAL (79' AGH)
  - b. NHDOT Property Crossing, Interstate 93, Tilton (Exhibit 2):
    - i. Wire:
      1. Shield Wire: 7#8 Alumoweld
      2. Transmission Wire: 795 kcmil ACSR 26/7
      3. Distribution Wire: 477 kcmil ACSR 26/7
    - ii. Structure Types and Pole Heights: From west to east
      1. Str 63: DCST-1 Monopole, 85' OAL (70' AGH)
      2. Str 64: DCST-1 Monopole, 95' OAL (79' AGH)
      3. Str 65: DCST-1 Monopole, 100' OAL (84' AGH)
      4. Str 66: DCST-1 Monopole, 100' OAL (84' AGH)
      5. Str 67: DCST-1 Monopole, 95' OAL (79' AGH)
  - c. NHDOT Property Crossing, Tax Map R19, Lot 14A, Tilton (Exhibit 3):

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<sup>1</sup> These State land crossings have not been previously licensed by the Commission, due either to oversight, or because the lands involved were in private ownership at the time of the original construction of the existing lines and no Commission crossing license was required. The replacement of these crossings in connection with the L176 project will be fully licensed under this petition.

<sup>2</sup> Figure 5 and Exhibit 5 also depict the location of the L176 project water crossing of the Winnepesaukee River in the Towns of Belmont and Tilton, which is the subject of another crossing petition filed by Eversource on April 30, 2018, and now pending at the Commission (Commission Docket DE 18-079).

- i. Wire:
  - 1. Shield Wire: 7#8 Alumoweld
  - 2. Transmission Wire: 795 kcmil ACSR 26/7
  - 3. Distribution Wire: 477 kcmil ACSR 26/7
- ii. Structure Types and Pole Heights: From west to east
  - 1. Str 69: DC-RA 2-Pole, 2-70' AGH (existing to remain)
  - 2. Str 70: DCST-1 Monopole, 90' OAL (75' AGH)
  - 3. Str 71: DCST-2 Monopole, 100' OAL (84' AGH)
  - 4. Str 72: DCST-1 Monopole, 90' OAL (75' AGH)
- d. NH Bureau of Railroads Crossing, Tax Map U04, Lot 73 (Railroad), Tilton (Exhibit 4):
  - i. Wire:
    - 1. Shield Wire: 7#8 Alumoweld
    - 2. Transmission Wire: 795 kcmil ACSR 26/7
    - 3. Distribution Wire: 477 kcmil ACSR 26/7
  - ii. Structure Types and Pole Heights: From west to east
    - 1. Str 83: DCST-2 Monopole, 85' OAL (70' AGH)
    - 2. Str 84: DCRA 2-Pole, 1-70' AGH & 1-75' AGH (existing to remain)
- e. NHDES Water Resources Division Property Crossing, Tax Map R21, Lot 07, Tilton (Exhibit 5):
  - i. Wire:
    - 1. Shield Wire: 7#8 Alumoweld
    - 2. Transmission Wire: 795 kcmil ACSR 26/7
    - 3. Distribution Wire: 477 kcmil ACSR 26/7
  - ii. Structure Types and Pole Heights: From west to east
    - 1. Str 91: DCST-1 Monopole, 95' OAL (79' AGH)
    - 2. Str 92: DCSDE-1 Monopole, 110' OAL (89' AGH)
    - 3. Str 93: DC-RA 2-Pole, 2-80' AGH (existing to remain)
- f. NHDES Water Resources Division Property Crossing, Tax Map R21, Lot 06, Tilton (Exhibit 5):
  - i. Wire:
    - 1. Shield Wire: 7#8 Alumoweld
    - 2. Transmission Wire: 795 kcmil ACSR 26/7
    - 3. Distribution Wire: 477 kcmil ACSR 26/7
  - ii. Structure Types and Pole Heights: From west to east
    - 1. Str 92: DCSDE-1 Monopole, 110' OAL (89' AGH)
    - 2. Str 93: DC-RA 2-Pole, 2-80' AGH (existing to remain)
- g. NHDES Dam Bureau Property Crossing, Tax Map 117, Lot 005, Belmont (Exhibit 5):

- i. Wire:
      - 1. Shield Wire: 7#8 Alumoweld
      - 2. Transmission Wire: 795 kcmil ACSR 26/7
      - 3. Distribution Wire: 477 kcmil ACSR 26/7
    - ii. Structure Types and Pole Heights: From west to east
      - 1. Str 92: DCSDE-1 Monopole, 110' OAL (89' AGH)
      - 2. Str 93: DC-RA 2-Pole, 2-80' AGH (existing to remain)
      - 3. Str 94: DCST-1 Monopole, 75' OAL (61' AGH)
  - h. State of NH Property Crossing, Tax Map 490, Lot 303-5, Laconia (Exhibits 6 and 7):
    - i. Wire:
      - 1. Shield Wire: 7#8 Alumoweld
      - 2. Transmission Wire: 795 kcmil ACSR 26/7
      - 3. Distribution Wire: 477 kcmil ACSR 26/7
    - ii. Structure Types and Pole Heights: From west to east
      - 1. Str 148: DCST-1 Monopole, 90' OAL (75' AGH)
      - 2. Str 149: DCST-1 Monopole, 85' OAL (70' AGH)
      - 3. Str 150: DCST-1 Monopole, 90' OAL (75' AGH)
      - 4. Str 151: DCST-2 Monopole, 85' OAL (70' AGH)
      - 5. Str 152: DCST-2 Monopole, 90' OAL (75' AGH)
  - i. NHDOT Property Crossing, Routes 106 and US-3, Laconia (Exhibit 8):
    - i. Wire:
      - 1. Shield Wire: 7#8 Alumoweld
      - 2. Transmission Wire: 795 kcmil ACSR 26/7
      - 3. Distribution Wire: 477 kcmil ACSR 26/7
    - ii. Structure Types and Pole Heights: From west to east
      - 1. Str 152: DCST-2 Monopole, 90' OAL (75' AGH)
      - 2. Str 153: DC-SDE-1 Monopole, 75' AGH
      - 3. Str 154: DCST-1 Monopole, 95' OAL (79' AGH)
      - 4. Str 155: DCST-1 Monopole, 100' OAL (84' AGH)
- 6. The location of the structures creates the following crossing spans:
  - a. NHDOT Property Crossing, Tax Map R18, Lot 16, Tilton (Exhibit 1):
    - i. Structures: 60.8-63+
    - ii. Structure Span (ft): 1,774.71
    - iii. Public Land Span (ft): 1,040
  - b. Interstate 93 (Exhibit 2):
    - i. Structures: 63.2-64
    - ii. Structure Span (ft): 458.38
    - iii. Public Land Span (ft): 458.38

- c. NHDOT Property Crossing, Tax Map R19, Lot 14A, Tilton (Exhibit 3):
  - i. Structures: 69.8-71
  - ii. Structure Span (ft): 1,147.77
  - iii. Public Land Span (ft): 525
- d. NH Bureau of Railroads Crossing, Tax Map U04, Lot 73 (Railroad), Tilton (Exhibit 4):
  - i. Structures: 83.4-83.9
  - ii. Structure Span (ft): 357.04
  - iii. Public Land Span (ft): 100
- e. NHDES Water Resources Division Property Crossing, Tax Map R21, Lot 07, Tilton (Exhibit 5):
  - i. Structures: 91.5-92.4
  - ii. Structure Span (ft): 1,507.99
  - iii. Public Land Span (ft): 500
- f. NHDES Water Resources Division Property Crossing, Tax Map R21, Lot 06, Tilton (Exhibit 5):
  - i. Structures: 92.5-92.7
  - ii. Structure Span (ft): 567.49
  - iii. Public Land Span (ft): 125
- g. NHDES Dam Bureau Property Crossing, Tax Map 117, Lot 005, Belmont (Exhibit 5):
  - i. Structures: 92.8-93+
  - ii. Structure Span (ft): 567.49
  - iii. Public Land Span (ft): 125
- h. State of NH Property Crossing, Tax Map 490, Lot 303-5, Laconia (Exhibits 6 and 7):
  - i. Structures: 148.6-151.7
  - ii. Structure Span (ft): 1,736.88
  - iii. Public Land Span (ft): 1,350
- i. Routes 106 and US-3, Laconia (Exhibit 8):
  - i. Structures: 153-155+
  - ii. Structure Span (ft): 1,569.67
  - iii. Public Land Span (ft): 850

7. All conductors have been drawn in Exhibits 1 through 8 to show the maximum sag conditions in reference to the State lands.

8. Eversource will maintain and operate the clearances of the wire crossings over the subject land locations at a height no less than is required by the 2017 National Electrical Safety Code (NESC, Table 232-1) which is 18.5 feet to ground for 34.5kV open supply conductors

and 20.1 feet to ground for 115kV open supply conductors over any vehicle/horse accessible areas.

9. A NHDES Standard Wetlands Permit is required for construction activities which involve the alteration of nontidal wetlands, nontidal surface waters, and banks adjacent to nontidal surface waters in excess of 20,000 square feet in the aggregate, and is applicable to the State land locations identified in Figures 1, 3, 6 and 7. A permit application was submitted on August 10, 2017 and approved by NHDES on October 24, 2017 (see NHDES File # 2017-02402).
10. NHDOT crossing permits are required for the crossings of Interstate 93, NH Route 132 (shown on Figure 3 and Exhibit 3), NH Route 106 and US Route 3. Permits were approved by NHDOT on November 17, 2017 for NH Route 6 (Permit #03-235-0335 and #03-245-0336) and for NH Route 132 (Permit #03-451-0618), on March 9, 2018 for NH Route 3 (Permit #03-24-0337), and on April 6, 2018 for Interstate 93 (Northbound Lane #03-451-0620, Southbound Lane #03-451-0621).
11. It is not anticipated that the State lands being crossed will be affected, as these are existing lines. Eversource owns or is believed to own permanent easement rights, or maintains other crossing privileges, over the State land locations being crossed.
12. Eversource submits that the license petitioned for herein may be exercised without substantially affecting the rights of the public in the State lands in Tilton, Belmont, and Laconia which are 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.

WHEREFORE, Eversource respectfully requests that the Commission:

1. Find that the license petitioned for herein may be exercised without substantially affecting the public rights in the State lands which are the subject of this petition;
2. Grant Eversource licenses to construct and maintain electric lines over and across the State lands as identified and described in this petition; and
3. Issue an Order Nisi and orders for its publication.

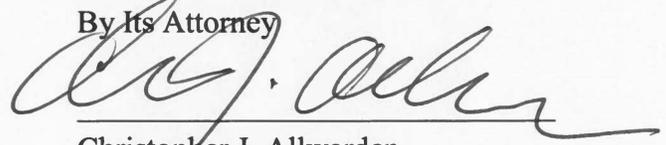
[SIGNATURE PAGE FOLLOWS]

Dated at Manchester, New Hampshire this 10<sup>th</sup> day of May, 2018.

Respectfully submitted,

PUBLIC SERVICE COMPANY OF  
NEW HAMPSHIRE D/B/A  
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