

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 THE SQUAMSCOTT RIVER IN THE TOWNS OF STRATHAM
AND EXETER, NEW HAMPSHIRE, AND OVER AND ACROSS LAND OWNED BY
THE STATE OF NEW HAMPSHIRE IN THE TOWN OF SANDOWN, 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 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 the public waters of the Squamscott River in the Towns of Stratham and Exeter, New Hampshire, and over and across certain land owned by the State of New Hampshire (“State”) in the Town of Sandown, New Hampshire and in support of this petition states as follows:

1. In order to meet the reasonable requirements of service to the public, Eversource has previously constructed and currently operates and maintains an overhead 115 kV electric transmission line, designated as the Eversource H141 Line, over and across the Squamscott River in the Towns of Exeter and Stratham, New Hampshire and over and across certain land owned by the State in the Town of Sandown, New Hampshire. The thread of the Squamscott River in the subject river crossing location is the town boundary line between Exeter and Stratham. The State’s land parcel consists of a former Boston and Maine Corporation railroad bed, situated easterly of Fremont Road in Sandown, is designed on Sandown’s tax records as Map 20, Lot 26, and is currently part of the Fremont Branch of the Rockingham Recreational Rail Trail. The H141 Line was originally constructed in 1950 and is constructed primarily of wooden transmission structures. The H141 Line crossing of the Squamscott River has been previously licensed by the Commission under Order No. 6668, dated August 31, 1955, in Docket D-E3442. The H141 crossing of the State’s land parcel has not been previously licensed by Eversource.¹
2. Eversource is commencing a project to replace deteriorating existing wooden pole structures with steel structures on portions of the existing H141 Line, which will impact the crossing locations and crossing structures which are the subject of this petition. Certain of the existing H141 Line wood transmission line structures are between approximately 19 and 69 years old and have been subject to environmental damage and require replacement or modification with new steel structures for the line to continue to function safely and reliably. This structure replacement and repair project is part of a reliability project necessary for the H141 Line to continue to meet current as well as future

¹ Although Eversource has been unable to clearly identify the State’s source of title to the former Boston and Maine railbed, presumably a crossing license for this State parcel was either not required because it was not in State ownership at the time of the H141 Line construction in 1950, or the crossing was not licensed due to mistake, inadvertence or oversight by Eversource at the time of construction. The H141 Line crossing of the State’s land will be newly licensed under this petition.

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, replacement steel structures. All existing Squamscott River and State land crossing wood H141 Line crossing structures will be replaced with steel structures. It should be noted that, with respect to the Squamscott River crossing, existing Structure 137 is original, however Eversource has determined that existing Structure 138 was replaced in 2000; due to inadvertence or oversight, this replacement was not licensed with the Commission. Similarly, with respect to the State land crossing, both existing Structures 270 and 271 were determined to have been replaced in 1978, again without being licensed with the Commission. All of these existing wood structures are now being replaced as part of the current Eversource H141 Line Project, and are being licensed under this petition.

3. The attached Exhibit #1 – Overview Map, shows the general location of the H141 Line crossing of the Squamscott River in Exeter and Stratham and the State land crossing in Sandown to be rebuilt as part of Eversource’s project. The design and proposed construction of the replacement crossings for the H141 Line over the Squamscott River and State land will be in accordance with the National Electrical Safety Code (NESC), as shown on the Eversource Plan and Profile Drawings for the Squamscott River crossing (attached as Exhibit #2), and as shown for the State land crossing (attached as Exhibit #3).
4. Wire and structure specifications for the Squamscott River crossing are as follows:
 - a. Wire:
 - i. Shield Wire: 7#8 Alumoweld
 - ii. Optical Ground Wire: 84 Fiber
 - iii. Transmission Wire: 336.4 kcmil 26/7 ACSR Linnet
 - b. Structure Types and Pole Heights: From north to south:
 - i. Str 137: 3-Pole ADL-1 CL H1 Steel, 3-80’ OAL (70.0’ AGH, Stratham, NH)
 - ii. Str 138: 2-Pole Type T CL H1 Steel, 2-90’ OAL (79.0’ AGH, Exeter, NH)
5. Wire and structure specifications for the State land crossing are as follows:
 - a. Wire:
 - i. Shield Wire: 7#8 Alumoweld
 - ii. Optical Ground Wire: 84 Fiber
 - iii. Transmission Wire: 336.4 kcmil 26/7 ACSR Linnet
 - b. Structure Types and Pole Heights: From north to south:
 - i. Str 270: 2-Pole THS CL H1 Steel, 2-70’ OAL (61.0’ AGH)
 - ii. Str 271: 2-Pole THS CL H1 Steel, 2-70’ OAL (61.0’ AGH)
6. The location of the structures creates the following crossing spans:
 - a. Squamscott River crossing - 763.90 linear feet (H141 Structure 137 to Structure 138)
 - b. State land crossing – 408.79 linear feet (H141 Structure 270 to Structure 271)
7. All conductors have been drawn in Exhibits #2 and #3 to show the maximum sag conditions in reference to the waters of the Squamscott River and to the surface of the State land, respectively.

8. Eversource will maintain and operate the clearance of the wire crossing over the Squamscott River at a height no less than is required by the 2017 National Electrical Safety Code (NESC, Table 232-1). The Squamscott River crossing requires a minimum of 18.6 feet for 115 kV open supply conductors over water areas not suitable for sail boating. The minimum height over the Squamscott River is depicted on the attached profile drawing (Exhibit# 2), which shows the lowest conductor sag point with the River at 100-year flood elevation, at a clearance of 37.2 feet.
9. For the Squamscott River crossing, the 100-year flood level was established based upon FEMA flood zone maps for the crossing area (Zone AE, effective date: May 17, 2005). This elevation is based on the national Geodetic Vertical Datum of 1988 (NAVD88). For the purposes of calculating clearance, the 100-year flood elevation was used, as it was readily available. This is higher than the 10-year flood elevation required by NESC and provides a conservative clearance requirement.
10. Eversource will maintain and operate the clearances of the crossing over the State land locations at a height no less than is required by the 2017 National Electric Safety Code (NESC, Table 232-1), which is 9.5 feet to ground for insulated communication cable and 20.1 feet to ground for 115 kV open supply conductors over a vehicle/horse accessible area. The minimum height over the State land is depicted on the attached profile drawing (Exhibit #3), which shows the lowest conductor sag point over the State land at a clearance of 32.6 feet.
11. A New Hampshire Division of Environmental Services (NHDES) Shoreland Permit by Notification application is required for construction activities in the vicinity of the Squamscott River. A NHDES Shoreland Permit by Notification will be submitted as part of this project.
12. A NHDES Standard Dredge and Fill Wetland Permit is required for the portion of the project in Stratham and a NHDES Utility Maintenance Notification Permit is required for the portion of the project in Exeter. Both NHDES wetland permits will be submitted as part of this project.
13. A NHDES Standard Dredge and Fill Wetland Permit is required for the portion of the project in Sandown. The NHDES wetland permit has been obtained and is Permit # 2018-01688.
14. It is not anticipated that abutters on either side of the Squamscott River or State land crossings will be affected by this petition, as the H141 Line is an existing line, and all crossing structures are being replaced and rebuilt within Eversource's existing utility corridor. The existing utility corridor on each side of the Squamscott River and of the State land, and the location of each of the crossing structures being replaced, are comprised of existing easements owned by Eversource to operate and maintain transmission lines. There is also an active Boston and Maine Corporation railroad bed on the westerly side of the Squamscott River crossing (Exeter), situated between the River and Structure 138, for which Eversource has an existing crossing license agreement with the Boston and Maine for its H141 Line.
15. Eversource submits that the license petitioned for herein may be exercised without substantially affecting the rights of the public in the public waters of the Squamscott River, or in the State's land parcel. Minimum safe line clearances above the River surfaces and affected shorelines, and the surface of the State's land parcel, will be maintained at all times. The use and enjoyment of the

public of the River and of the State's land parcel will not be diminished in any material respect as a result of these overhead line crossings.

WHEREFORE, Eversource respectfully requests that the Commission:

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

Dated at Manchester, New Hampshire this 13th day of MAY, 2019.

Respectfully submitted,

PUBLIC SERVICE COMPANY OF
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EVERSOURCE ENERGY

By Its Attorney



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