

THE STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

PETITION OF PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/B/A
EVERSOURCE ENERGY FOR LICENSE TO CONSTRUCT AND MAINTIN ELECTRIC
LINES OVER AND ACROSS THE LAMPREY RIVER IN THE TOWN OF DEERFIELD,
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 a license to construct and maintain electric lines over and across the public waters of the Lamprey River in the Town of Deerfield, 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 345 kV electrical transmission line, designated as the Eversource 391 Line, over and across the Lamprey River in the Town of Deerfield, New Hampshire. The 391 Line was originally constructed in 1970, and is constructed primarily of wooden transmission structures. The existing crossing of the 391 Line has not been previously licensed with the Commission.¹
2. Eversource is commencing a project to modify or rebuild a number of the structures on its existing 391 Line, which will impact the crossing location and crossing structures which are the subject of this petition. Certain of the existing 391 Line wood transmission line structures are approximately 49 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 391 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, replacement steel structures. Both existing Lamprey River wooden 391 Line crossing structures will be replaced with steel structures.
3. The attached Exhibit #1 – Overview Map, shows the general location of the 391 Line crossing of the Lamprey River in Deerfield as part of Eversource's project. The design and proposed construction of the replacement crossing for the 391 Line over the Lamprey River will

¹ Due to oversight or the application of different public water or navigability criteria at the time of original construction, the existing 391 Line crossing was not previously licensed with the Commission; however, the rebuilt crossing will be licensed under this petition.

be in accordance with the National Electrical Safety Code (NESC), as shown on the Eversource Plan and Profile Drawing for the Lamprey River crossing, attached as Exhibit #2.

4. Wire and structure specifications for the Lamprey River crossing are as follows:
 - I. Wire:
 - i. Shield Wire: 7#8 Alumoweld
 - ii. Transmission Wire: 850.8 kcmil ACSR 45/7 Buzzard
 - II. Structure Types and Pole Heights: From north to south
 1. Str 216: A 2-Pole LD Steel, 2-105' OAL (92.5' AGH)
 2. Str 217: A 2-Pole LD Steel, 2-80' OAL (70' AGH)
5. The location of the structures creates the following crossing span:
 - a. Lamprey River: 926.29 feet (structure to structure)
6. All conductors and wires have been drawn in Exhibit #2 to show the maximum sag conditions in reference to the waters of the Lamprey River.
7. Eversource will maintain and operate the clearance of the crossing over the Lamprey River at a height no less than is required by the 2017 National Electrical Safety Code (NESC, Table 232-1). The Lamprey River crossing requires a minimum of 27.2 feet for 345 kV open supply conductors over water areas not suitable for sail boating. The minimum height over the River is depicted on the attached Exhibit #2, which shows the lowest conductor sag point with the River at 100 year flood elevation, at a clearance of 33.0 feet.
8. For the Lamprey River crossing, the 100 year flood level was established based upon a combination of field survey, and FEMA flood zone maps for that area (Zone X and Zone A, effective date: May 17, 2005). This elevation is based on the North American Vertical Datum of 1988 (NAVD 88). 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.
9. A New Hampshire Division of Environmental Services (NHDES) Shoreland Permit by Notification application is required for construction activities in the vicinity of the Lamprey River. A NHDES Shoreland Permit by Notification will be submitted as part of this project.
10. There are no proposed wetland impacts in the Town of Deerfield. As a result, no NHDES wetlands permit is required for the project in the Town of Deerfield.
11. It is not anticipated that abutters on either side of the Lamprey River crossing will be affected by this petition, as the 391 Line is an existing line, and the crossing structures are being replaced and rebuilt within Eversource's existing utility corridor. The existing utility corridor on each side of the Lamprey River, and the location of each of the crossing structures being replaced, is owned in fee by Eversource.

12. 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 Lamprey River. Minimum safe clearances above the water will be maintained at all times. The use and enjoyment by the public of the Lamprey River will not be diminished in any material respect as a result of the replacement of the 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 public waters which are the subject of this petition;
2. Grant Eversource a license to construct and maintain electric lines over and across the Lamprey River as identified and described in this petition; and
3. Issue an Order Nisi and orders for its publication.

Dated at Manchester, New Hampshire, this 10th day of April, 2019

Respectfully submitted,
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
D/B/A EVERSOURCE ENERGY
By its Attorney



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