

**THE STATE OF NEW HAMPSHIRE
BEFORE THE
DEPARTMENT OF ENERGY**

NEW ENGLAND POWER COMPANY

CRE 2024 - 012

**APPLICATION OF NEW ENGLAND POWER COMPANY FOR A LICENSE TO
CONSTRUCT AND MAINTAIN ELECTRIC LINES OVER AND ACROSS PUBLIC
WATERS IN HINSDALE, NEW HAMPSHIRE**

Pursuant to RSA 371:17 and En 1503.01, New England Power Company (“NEP” or “the Company”), a public utility engaged in the transmission of electricity in the State of New Hampshire, hereby submits an application to the Department of Energy (“Department”), for a license to construct and maintain electric lines over public waters in Hinsdale. In support of this application NEP states as follows:

1. NEP previously constructed and currently operates and maintains overhead 69 kV electrical transmission lines, designated as the A1/B2 Lines, which were originally built in 1909-1910. The A1/B2 Lines begin at NEP’s existing Vernon No. 13 switchyard in Vernon, Vermont, cross the Connecticut River into Hinsdale, New Hampshire, cross the Connecticut River again into Vernon, Vermont, and run for approximately 2.5 miles in Vermont to the Connecticut River, where they cross the Connecticut River back into New Hampshire, ultimately terminating in Massachusetts. The total length of the lines, including multiple taps in Massachusetts, is approximately 64.2 miles. The public water crossing at the Connecticut River, which is the subject of this Application, was originally licensed by the New Hampshire Public Utilities Commission in 1953 in Order #6217. A copy of the Order is attached as Exhibit 5 to this Application (the Order identifies the A1/B2 Lines as V-W 1908.).

2. In order to meet the requirements for reasonable service to the public, and as part of its ongoing asset condition inspection program, NEP determined that certain existing structures along the two public water crossing spans that are the subject of this application, specifically existing Structures 4, 5, 41, and 42, need to be replaced promptly to continue to function safely and reliably. The existing A1 and B2 lines are prone to outages due to lightning strikes, avian interaction, and contact from vegetation. The existing conductor has also been in service for over 100 years and is beginning to approach the end of its expected asset life and has become a constraint, limiting the amount of renewable energy that can connect to the 69kV system in the region.

3. Replacement structures 7, 8, 41, and 42 will be vertically configured double circuit steel davit arm monopole structures with a weathering steel finish that will be located generally 25 feet ahead or behind the existing lattice tower structures supporting the A1 and B2 Lines. The existing 2/0 copper conductor on both circuits will be replaced with new 795 MCM ACSS “Drake” (26/7) conductor and the existing single shield wire will be replaced with two fiber optic ground wires (OPGW). The new lines will be operated at 69 kV, although they have been designed to a 115 kV standard, consistent with long-term planning needs. NEP’s assessment of the potential need to operate these lines at 115 kV is supported by the initial results of the 2050 Transmission Study recently released by ISO New England. The replacement structures are proposed to be renumbered during the Project as engineering has allowed for the elimination of select structure along the length of the Project.

4. The two locations associated with this application where the existing lines cross public waters, which are the subject of this application, are depicted on the Overview Map attached hereto as Exhibit 1 and a more detailed location description is as follows:

- The A1 and B2 lines cross the Connecticut River in two distinct locations. All of the rebuilt water crossings associated with the A1 and B2 lines will feature new 795 MCM ACSS “Drake” conductor and two OPGW shield wires.
 - The A1 and B2 lines cross the Connecticut River in two locations, the first is between existing lattice tower Structures 4 and 5. Existing structure 4 is located in Hinsdale, NH and existing structure 5 is located in Vernon, VT. The proposed design calls for the installation of a new vertically configured double circuit steel davit arm suspension monopole structure located 25 feet back (west) of existing Structure 4 and a new vertically configured double circuit steel davit arm dead-end monopole structure located 25 feet ahead (east) of existing Structure 5.
 - The second Connecticut River crossing is between existing lattice tower structures 41 and 42. Existing structure 41 is located in Vernon, VT and existing structure 42 is located in Hinsdale, NH. The proposed design calls for the installation of a new vertically configured double circuit steel davit arm dead-end monopole structure approximately 25 feet back (west) of existing Structure 41 and a new vertically configured double circuit steel davit arm suspension monopole structure approximately 25 feet ahead (east) of existing Structure 42.

5. Wire specifications and loading condition to establish maximum sag for the crossing span that is the subject of this application is described in the Profile View and Cable Schedule in Exhibits 2 and Exhibit 3. The flood elevation used to determine the clearance over the Connecticut River is illustrated in the Profile View in Exhibits 2 and Exhibit 3.

6. The location of structures and max sag conditions creates the following crossing span:

a) Public Water Crossing: Connecticut River in Hinsdale (Exhibit 2)

- (1) Structures: 7 to 8
- (2) Structure Span (ft): 821
- (3) Public Water Span (ft): 460
- (4) Drawing Number: NE-B-000035 Sheet 1

b) Public Water Crossing: Connecticut River in Hinsdale (Exhibit 3)

- (1) Structures: 41 to 42
- (2) Structure Span (ft): 757
- (3) Public Water Span (ft): 475
- (4) Drawing Number: NE-B-000036 Sheet 1

7. All conductors and wires have been drawn on Exhibit 2 and Exhibit 3 to show the minimum clearance at maximum sag conditions in reference to the public water crossings. NEP relied on FEMA flood maps when establishing flood elevations for the water crossing spans, as indicated in Note 6 to Exhibit 2 and Exhibit 3.

8. Consistent with its requirement pursuant to En 306.01 (a) to “construct, install, operate and maintain its plant, structures and equipment” in accordance with “good utility practice,” NEP will maintain and operate the clearances of the crossings at a height no less than what is required by the 2023 National Electrical Safety Code (NESC, Table 232-1) which is the applicable governing code with respect to conductor clearance to underlying and adjacent features associated with the Project. The actual minimum height over the public waters is depicted on the attached Exhibits 2 and Exhibit 3 and exceeds the respective minimum requirements.

9. New Hampshire Department of Environmental Services (“NHDES”) issued an Alteration of Terrain permit for the scope of the work discussed in the Application on January 24, 2024. In addition, NHDES issued a Standard Dredge and Fill permit for this scope of work on January 12, 2024. NEP also obtained coverage under a Shoreland Permit by Notification filed with NHDES on March 16, 2023 for the scope of the work discussed in this Application.

10. The U.S. Army Corps of Engineers (“ACOE”) regulates the Connecticut River as navigable waters. The scope of the work discussed in this Application at the subject crossing locations was reviewed by the ACOE, which issued a license under the ACOE New Hampshire Programmatic General Permit #6.

11. The structure replacement work will be accomplished within existing right-of-way easements thereby mitigating impacts and concerns of property owners affected by the project scope. An abutter list for the public water crossing is attached as Exhibit 4.

12. Inasmuch as the crossings will be constructed consistent with the National Electrical Safety Code, NEP submits that the license applied for herein may be exercised without substantially affecting the use and enjoyment of the public waters because safe clearances will be maintained at all times and appropriate precautions to ensure the safety of recreational users will be undertaken while the work is performed.

WHEREFORE, NEP respectfully requests that the Department:

1. Find that the proposed crossings are necessary in order to meet the reasonable requirements of service to the public and that the license applied for herein may be exercised without substantially affecting the public rights in the public water crossings which are the subject of this application; and
2. Grant NEP a license to construct and maintain electric lines over and across public waters described in this application.

Respectfully submitted,
NEW ENGLAND POWER COMPANY

By its Attorneys,

McLANE MIDDLETON,
PROFESSIONAL ASSOCIATION

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