

THE STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

**PETITION OF NEW ENGLAND POWER COMPANY D/B/A NATIONAL GRID
FOR LICENSES TO CONSTRUCT AND MAINTAIN ELECTRIC LINES OVER
AND ACROSS PUBLIC WATERS IN THE TOWNS OF
WALPOLE AND SURRY, NEW HAMPSHIRE**

TO THE PUBLIC UTILITIES COMMISSION:

New England Power Company d/b/a National Grid ("NEP"), a public utility engaged in the transmission of electricity in the State of New Hampshire, hereby petitions the Public Utilities Commission ("Commission" and/or "PUC"), pursuant to RSA 371:17, for a license to construct and maintain electric lines over and across the public waters of the Connecticut River and the Cold River in the Town of Walpole, New Hampshire and the Ashuelot River in the Town of Surry, New Hampshire. In support of its petition, NEP states as follows:

1. In order to meet the reasonable requirements of service to the public, NEP operates and maintains two 115kV transmission lines (I-135N line and J-136N) between Flagg Pond Substation in Fitchburg, Massachusetts and Bellows Falls Substation No. 14 in Rockingham, Vermont. Both the I-135N line and the J-136N line were constructed in 1927. The lines cross the Connecticut River between the Bridge Street Bridge to the north and the discharge from the Bellows Falls Hydroelectric Station to the south. This area of the Connecticut River only receives flow during high flow periods because the water is diverted through the generation station on a daily basis. After crossing the Connecticut River, the I-135N line and the J-136N line share the same double circuit

towers (See Exhibit A) and span a distance of approximately 52 miles. The lines also cross the Cold River approximately 800 feet north of the Route 12A Bridge. Both the I-135N and the J-136N lines also cross the Ashuelot River in Surry, New Hampshire. The exact locations of the crossings are shown on plans which are attached to the following Exhibits -- I-135N Exhibits -- B: Connecticut River; C: Cold River; D: Ashuelot River; J-136N Exhibits -- E: Connecticut River; F: Cold River; G: Ashuelot River.

2. Construction and maintenance of what are now known as the I-135N line and the J-136N line was approved by the then New Hampshire Public Service Commission ("PSC") in Order No. 2,471 dated October 6, 1932. The I-135N and J-136N crossings of the Connecticut, Cold and Ashuelot Rivers have not been previously licensed by the Commission.¹

¹ On October 20, 1947, the PSC requested all electric and telephone utilities to provide certain information with respect to the crossing of public waters. A list of rivers constituting "public waters" was provided and it included the Connecticut River. In response to the PSC inquiry, Bellows Falls Hydro Electric Corporation filed a list of its crossings including the I-135N and J-136N Connecticut River crossing at Walpole. By letter dated February 17, 1948 the Commission engineer indicated "Your understanding that these crossings do not constitute crossings over 'public waters' as defined in Revised Laws of New Hampshire is noted and you are advised that your Company need take no further action in this matter until such time as you hear further from the commission." Also, pursuant to the PSC's October 20, 1947 letter, Connecticut River Power Company filed a similar report of its crossings, together with plans which included the Ashuelot River crossing by the I-135 line and J-136N line, indicating the Company's understanding that the crossing was not of a public water. In 1953, the Commission once again ordered public utilities to obtain authority for all existing crossings for which previous authority had not been granted. See PUC Order No. 6,217 (1953). In that order, the Commission stated that "the portions of those streams which are commonly used for navigation are prescribed as public waters" under RSA 371:17. NEP provided the Commission with a list of river crossings, including the I-135N and J-136N Connecticut and Ashuelot River crossings, but explained to the Commission that none of the rivers listed were commonly used for navigation. In 1955, the Commission granted licenses for seven of the crossings that NEP had identified but did not require that the I-135N and J-136N line crossings at the Connecticut and Ashuelot Rivers be licensed. See PUC Order No. 6,664 (1955). Since 1955, NEP has relied upon the Commission's determination and has not sought licenses for these crossings. However, in recent orders, the Commission has "prescribed" numerous crossings to be crossings over and across public waters without regard to whether these waters are navigable. See PUC Order No. 24,661 (2006); PUC Order No. 24,570 (2005); PUC Order No. 24,523 (2005); PUC Order No. 23,480 (2000). Accordingly, NEP is petitioning the Commission for a license to construct and maintain electric lines over and across the Connecticut, Cold and Ashuelot Rivers in Walpole, New Hampshire as part of its proposed reconductoring project.

3. In order to improve the reliability of NEP's electric transmission system in southwestern New Hampshire, NEP proposes to reductor the I-135N line. The I-135N reductoring is a high priority project because it eliminates low voltage and thermal capacity limitations identified in the ISO-NE Regional System Plan. Presently, a low voltage situation occurs as the result of a double circuit tower outage on the I-135S and J-136S lines on the system between the Flagg Road Substation and Pratts Junction. Currently, the low voltage problem is managed by load shedding. Voltage and thermal issues can also develop as the result of the loss of Vermont Yankee 345/115kV transformer, the 115kV K-186 line or the 355kV 340 line.

4. The nearly 80 year old I-135N line consists of 4/0 copper phase conductors (some sections have been replaced with 336.4 kcmil ACSR conductors), and two ½" HS galvanized steel shieldwires. The line is supported by double circuit galvanized lattice steel towers with grillage foundations, and a few single circuit lattice steel towers. Each lattice tower has been analyzed for structural adequacy based on individual wind and weight span, and National Grid's Standard Loading Conditions. The analysis shows that the lattice towers can be reinforced and reused. Some members within each of the lattice towers will be replaced with slightly larger members (1/8" thicker) or higher grade steel members as shown in Figure 1, Exhibit A. A few of the lattice towers require additional weight in the form of concrete collars which will be installed below grade around the tower legs, as shown in Figure 2, Exhibit A.

The entire line will be reducted with 795 kcmil ACSR, 26/7, "Drake" phase conductors at a rating of 140°C. One of the two ½" HS galvanized steel shieldwires (the

one on the I-135N line side) will be replaced with 3/8" EHS galvanized steel. Two double circuit steel pole structures, direct buried, will also be reused.

5. At this time, the J-136N line will continue to be operated as currently configured.

6. NEP's engineers have designed the I-135N Connecticut, Cold and Ashuelot River crossings to be in compliance with the 2007 National Electrical Safety Code ("NESC") C2-2007.

7. NEP has filed or is in the process of filing all applicable permit applications including wetland applications.

8. NEP owns permanent easements for its lines and facilities on both sides of the public water bodies at the proposed crossing locations. The proposed work will be conducted within the scope of these easements.

9. The specific technical information necessary to evaluate the I-135N river crossings is contained in Exhibits B, C and D.

10. The specific technical information necessary to evaluate the J-136N river crossings is contained in Exhibits E, F and G.

11. NEP submits that the licenses petitioned for herein may be exercised without substantially affecting the rights of the public in the public waters of the Connecticut and Cold Rivers. Minimum safe line clearances above the surface of the rivers and affected shorelines will be maintained at all times. The use and enjoyment by the public of these two rivers will not be diminished in any material respect as a result of the overhead line crossings. In fact, these lines have been in service in the same

location for nearly 80 years, and have not diminished in any market report the use and enjoyment of these rivers by the public.

WHEREFORE, NEP respectfully requests that the Commission:

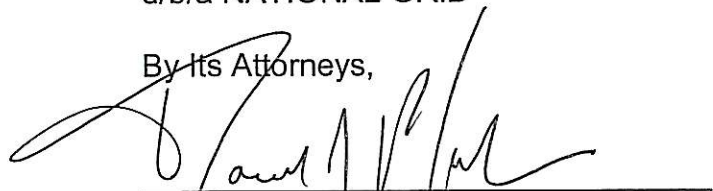
- A. Find that the licenses petitioned for herein may be exercised without substantially affecting the public rights in the public waters which are the subject of this petition;
- B. Grant NEP licenses to construct and maintain electric lines over and across the public waters of the Connecticut and Cold Rivers in Walpole, New Hampshire, and the Ashuelot River in Surry, New Hampshire, as specified in the petition;
- C. Issue an Order Nisi and orders for its publication; and
- D. Grant such other relief as is just and proper.

Dated at Concord this 16th day of January, 2008.

Respectfully submitted,

NEW ENGLAND POWER COMPANY
d/b/a NATIONAL GRID

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