

DE 03-225

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

**Petition for License to Construct and Maintain Electric Lines
Over and Across the Public Waters of the Ashuelot River
in the City of Keene, New Hampshire**

**Order Nisi Granting License to Construct and Maintain Electric
Lines Over and Across Public Waters**

O R D E R N O. 24,292

March 9, 2004

On November 24, 2003, Public Service Company of New Hampshire (PSNH or Petitioner) filed a petition under RSA 317:17 with the New Hampshire Public Utilities Commission (Commission) for a license to construct and maintain electric lines over and across the Ashuelot River at two separate locations in the City of Keene, New Hampshire. Supplemental information was filed by PSNH on January 23, 2004. PSNH states that the new line will be an integral part of its distribution system serving customers in the Towns of Alstead, Gilsum, Marlow, Nelson, Roxbury, Stoddard and Sullivan.

PSNH proposes to build a new 12.47 kilovolt (kV) distribution line to connect the PSNH Emerald Street Substation to an existing 12.47 kV line, the W-14 line. The new overhead line will be designated the W-13 line and will traverse a distance of 2.5 miles in an existing PSNH right-of-way. The first new W-13 line crossing (Crossing A) will be located on the westerly side of the existing L-163 115 kV line crossing of the

Ashuelot River, just south of West Street, and will consist of structures #17 and #18. The second crossing (Crossing B) will be located on the northerly side of the existing L-163 115 kV line crossing of the Ashuelot River, just west of New Hampshire Route 12A, and will consist of structures #53 and #54.

PSNH states that new construction is necessary due to load growth. PSNH calculates that, based on load growth expected in the Keene area and PSNH system design requirements, the existing W-14 distribution line will exceed its normal load capabilities by the summer of 2004. PSNH states that the new facilities will parallel the W-14 line and relieve the expected overload condition.

According to PSNH, there will be two new crossings of the Ashuelot River for the new W-13 line. The construction of Crossing A will consist of structure #17, an existing 60 foot dead end steel structure on the southerly side of the crossing, and structure #18, a new 65 foot, red cedar class 2 pole located on the northerly side of the crossing. The span between these two structures will be 295 feet.

The three-phase conductors will be 477 MCM 18/1 ACSR conductor, constructed in a vertical configuration, tensioned to 3,000 pounds, and sagged to National Electrical Safety Code (NESC), ANSI C2-2002 Heavy Loading conditions (0 degrees F, 4 pounds per square foot wind loading, and ½ inch radial ice). The

maximum phase conductor sag of 9.92 feet (6.54 feet at NESC Heavy Loading) will occur at a conductor temperature of 212 degrees F. At this elevated conductor temperature, phase conductors remain 39.0 feet above the Ashuelot River annual high water level. PSNH has determined that according to NESC Table 232-1, Note 19, the design water surface area for the crossing is 18.2 acres. For water areas of less than 20 acres that are suitable for sailing, NESC (Table 232-1) requires that the primary conductor clearances to the water surface be 20.5 feet. PSNH points out that the planned clearance exceeds the NESC standard.

The construction of Crossing B will consist of structures #53 and #54, both 55-foot red cedar class 2 poles. The span between these two dead end structures will be 270 feet, approximately. The three phase conductors will be 477 MCM 18/1 ACSR conductor, constructed in a vertical configuration, tensioned to 3,000 pounds, and sagged to NESC Heavy Loading conditions. The maximum phase conductor sag of 7.80 feet (5.78 feet at NESC Heavy Loading) will occur at a conductor temperature of 212 degrees F. At this elevated conductor temperature, phase conductors remain 32.0 feet above the Ashuelot River annual high water level.

The single neutral conductor will be 4/0 MCM ACSR 6/1, constructed seven feet below the phase conductors, tensioned to 2,350 pounds, and sagged to NESC Heavy Loading conditions. The

maximum sag of the neutral conductor at 120 degrees F is 6.00 feet and will produce a 29.0-foot clearance to the Ashuelot River annual high water level. For water areas of less than 20 acres that are suitable for sailing, NESC (Table 232-1) requires that the neutral conductor clearances to the water surface be 17.5 feet. PSNH notes that the proposed PSNH has determined that according to NESC Table 232-1, Note 19, the design water surface area for the crossing is 12.1 acres. As in Crossing A, PSNH states that the proposed construction of the second exceeds applicable NESC standards for water crossings.

According to PSNH, all crossing construction will be in upland areas and the installation methods to be used in the construction of the W-13 distribution line will avoid impacts to any wetlands in the areas of the crossing; therefore, no wetlands permits are required. PSNH has stated that PSNH owns permanent easement rights for the construction, operation, and maintenance of overhead electric lines where Crossing A (structures #17 and #18) and Crossing B (structures #53 and #54) will be constructed.

PSNH states that the use and enjoyment by the public of these waters will not be diminished in any material respect as a result of the proposed aerial line crossings. PSNH further attests that the construction of the aerial electric lines will meet or exceed the requirements of the National Electrical Safety Code, ANSI C2-2002.

RSA 371:17 provides in part that whenever it is necessary, in order to meet the reasonable requirements of service to the public, that any public utility should construct a line of poles or towers and wires and fixtures thereon over or across any of the public waters of New Hampshire, it shall petition the Commission for a license to construct and maintain the same. "Public waters," as defined in RSA 371:17, means "all ponds of more than ten acres, tidewater bodies, and such streams or portions thereof as the Commission may prescribe." Based on the information presented, the Commission prescribes the part of the Ashuelot River under the proposed aerial electric lines as being "public waters" under RSA 371:17.

Based on the information presented by PSNH and Staff's recommendation, the Commission finds such crossing necessary for PSNH to meet the reasonable requirements of reliable service to the public within PSNH's authorized franchise area and the requested license may be exercised without substantially affecting the public rights in the waters of the Ashuelot River. We find that the crossing is in the public good and we will approve the petition on a Nisi basis in order to provide any interested party the opportunity to submit comments on said petition or to request a hearing.

Based upon the foregoing, it is hereby

ORDERED NISI, that subject to the effective date below, PSNH is authorized, pursuant to RSA 371:17 et seq., to construct, maintain and operate the aerial electric lines over and across the Ashuelot River in Keene, New Hampshire depicted on plans and drawings submitted November 24, 2003, supplemented on January 23, 2004, and on file with this Commission; and it is

FURTHER ORDERED, that all construction and future reconstruction to these approved crossings shall conform to the requirements of the NESC and all other applicable safety standards in existence at that time; and it is

FURTHER ORDERED, that the petitioner operates these new crossings in conformance with the NESC; and it is

FURTHER ORDERED, that the Petitioner shall provide a copy of this order to the (i) City Clerk of Keene, (ii) New Hampshire Attorney General and the owners of the land bordering on said public waters at the location of the river crossings, pursuant to RSA 371:19, and (iii) pursuant to RSA 422-B:13, New Hampshire Department of Transportation and the Office of Secretary, U.S. Department of Commerce, by first class mail, no later than March 19, 2004, and to be documented by affidavit filed with this office on or before April 2, 2004; and it is

FURTHER ORDERED, that the Petitioner shall cause a copy of this Order Nisi to be published once in a statewide newspaper

of general circulation or of circulation in those portions of the state where operations are conducted, such publication to be no later than March 19, 2004 and to be documented by affidavit filed with this office on or before April 2, 2004; and it is

FURTHER ORDERED, that all persons interested in responding to this petition be notified that they may submit their comments or file a written request for a hearing on this matter before the Commission no later than March 26, 2004; and it is

FURTHER ORDERED, that any party interested in responding to such comments or request for hearing shall do so no later than April 2, 2004; and it is

FURTHER ORDERED, that this Order Nisi shall be effective April 8, 2004, unless the Petitioner fails to satisfy the publication obligation set forth above or the Commission provides otherwise in a supplemental order issued prior to the effective date.

By order of the Public Utilities Commission of New
Hampshire this ninth day of March, 2004.

Thomas B. Getz
Chairman

Susan S. Geiger
Commissioner

Graham J. Morrison
Commissioner

Attested by:

Debra A. Howland
Executive Director & Secretary