

DE 03-220

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

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

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

O R D E R N O. 24,291

March 9, 2004

On November 20, 2003, Public Service Company of New Hampshire (PSNH or Petitioner) filed a petition under RSA 371:17 with the New Hampshire Public Utilities Commission (Commission) for a license to construct and maintain a three-phase aerial electric line with a neutral over and across the Cocheco River in the City of Rochester, New Hampshire. PSNH supplemented its petition on January 23, 2004.

PSNH states that a new 34.5 kilovolt (kV) distribution line that will connect the PSNH Rochester Substation to the existing PSNH Portland Street Substation. The new line will be designated the 362 line and will traverse a distance of 1.6 miles. The new 362 line crossing will be located on the northerly side of the existing 340 34.5 kV line crossing of the Cocheco River (Licensed in 1975 under Order No. 11,825 issued in Docket DE 75-87). The new construction is necessary due to load growth and distribution system loading requirements. Specifically, based on load growth expected in the Rochester area

and PSNH system design requirements, the 34.5 kV 340 distribution line will exceed its capabilities by the summer of 2004. The new facilities will parallel the 340 line and relieve the overload condition.

In support of its petition, PSNH submitted the location and a plan and profile drawing of the crossing. PSNH proposes to build one new crossing of the Cocheco River for the new 362 34.5 kV distribution line. The construction will consist of structure #20, a 60-foot, 3-pole dead end structure on the easterly side of the crossing and structure #21, a 70 foot, 3-pole dead end structure on the westerly side of the crossing. The span between these two structures will be 607 feet. The three-phase conductors will be 477 MCM 18/1 ACSR conductors, constructed in a horizontal configuration, tensioned to 3,000 pounds, and sagged to National Electrical Safety Code, ANSI C2-2002 (NESC) Heavy Loading (0 degrees F, 4 pounds per square foot wind loading, and $\frac{1}{2}$ inch radial ice) conditions. The maximum phase conductor sag of 33.0 feet will occur at a conductor temperature of 284 degrees F (27.3 feet at NESC Heavy Loading). At this elevated conductor temperature, phase conductors remain 33.0 feet above the Cocheco River normal high water level of 218.20 feet and 29.0 feet above the ground surface of the island in the middle of the Cocheco River. The single neutral conductor will be 4/0 6/1 ACSR, constructed 7.5 feet below the phase conductors, tensioned to

2,000 pounds, and sagged to NESC Heavy Loading conditions. The maximum sag of the neutral conductor at 120 degrees F will produce a 25.5 foot clearance to the Cocheco River normal high water level of 218.20 feet and a 21.5 foot clearance to the ground surface of the island in the middle of the Cocheco River. PSNH has determined that according to NESC Table 232-1, Note 19, the design water surface area for the crossing is 17.0 acres. For water areas of less than 20 acres that are suitable for sailing, NESC (Table 232-1) requires that the primary conductor and neutral conductor clearances to the water surface are 20.5 feet and 17.5 feet, respectively. Table 232-1 also requires that the clearance to the ground surface of the island be 18.5 feet and 15.5 feet for the phase conductors and neutral, respectively, if roads are present.

According to PSNH, all crossing construction will be in upland areas and the installation methods to be used in the construction of the 362 distribution line will avoid impacts to any wetlands in the areas of the crossing; therefore, no wetlands permits are required. PSNH states that PSNH owns the property where structure #20 will be constructed and that it owns permanent easement rights for the construction, operation, and maintenance of overhead electric lines where structure #21 will be constructed. PSNH also 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 crossing.

PSNH 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 provided, the Commission prescribes the part of the Cocheco River under the proposed aerial electric lines as being "public waters" under RSA 371:17.

The Commission has reviewed the filing and supplemental information provided by PSNH and based on that information and Staff's recommendation, we find that PSNH's proposal for a new crossing is 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's rights in the waters of the Cocheco River. We find, therefore, that the

crossing is in the public good. 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 Cocheco River in Rochester, New Hampshire depicted on plans and drawings submitted November 20, 2003, supplemented on January 23, 2004, and on file with this Commission; and it is

FURTHER ORDERED, that all construction and future reconstruction to this approved crossing 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 this approved crossing 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 Rochester, (ii) New Hampshire Attorney General and the owners of the land bordering on said public waters at the location of the river crossing, 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 schedules a hearing or 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 and Secretary