

DE 04-005

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

Petition for License to Construct and Maintain Electric Lines  
Over and Across Lands Owned by the State of New Hampshire  
in the Town of Mason, New Hampshire

Order Nisi Granting License to Construct and Maintain Electric  
Lines Over and Across Lands Owned by the State of New Hampshire

O R D E R   N O.   24,293

March 9, 2004

On January 9, 2004 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 lands of the Russell-Abbott State Forest and the Jason-Russell State Forest in the Town of Mason, New Hampshire. The land in both forests is owned by the State of New Hampshire. PSNH supplemented its petition on January 23, 2004.

PSNH proposes to build a new 34.5 kilovolt (kV) distribution line in the towns of Milford and Mason, New Hampshire that will connect the PSNH Milford Substation to the existing PSNH Greenville Substation. The new line will be designated the 3155 line and will traverse a distance of 9.0 miles in an existing PSNH right-of-way. The new 3155 line will be located on the southerly side of line 379, the existing 345 kV line. The Commission previously licensed the construction and

crossing of State of New Hampshire owned lands by PSNH for line 379 at these two locations by Order No. 9,965, dated May 19, 1970, issued in Docket D-E5850.

PSNH states that the new line construction is necessary due to load growth and distribution system switching requirements in support of the distribution system serving the Milford and Mason areas. More specifically, PSNH has determined that the existing 379 distribution line loading will soon exceed PSNH design specifications. The proposed new 3155 line will mitigate the expected violation of PSNH design criteria and provide additional power to the Milford, Mason, Brookline, and Greenville areas.

PSNH's support for its petition included a description of the location and a plan and profile drawing of the crossings. There will be a new 4,450 foot crossing of the Russell-Abbott State Forest (Crossing A) consisting of structures #118 through #133 for the new 3155 line. The construction will consist of western red cedar poles between 45 and 70 feet tall. The line will be located within the 170 foot right-of-way, 60 feet to the south of the centerline of, and generally parallel to line 379 (the existing 345 kV line) 25 feet from the edge of the right-of-way.

PSNH states the three-phase conductors will be 477 MCM 18/1 ACSR conductors, constructed in a vertical 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 ½ inch radial ice) conditions. The maximum phase conductor sag of 10.0 feet will occur at a conductor temperature of 284 degrees F (9.00 feet at NESC Heavy Loading). The single neutral conductor will be 4/0 6/1 ACSR, tensioned to 2,038 pounds, positioned below the phase conductors, and sagged to NESC Heavy Loading conditions. NESC (Table 232-1) requires that the primary conductor and neutral conductor clearances to ground surface to be 18.5 feet and 15.5 feet, respectively, when traversing forest land or where it is subject to truck traffic. PSNH is constructing this line such that the clearance at the maximum sag conditions to the ground surface will be 20.0 feet for the phase conductors and 17.0 feet for the neutral conductor.

PSNH filed with the Commission a copy of a letter agreement with the New Hampshire Department of Resources and Economic Development, dated November 20, 2003, which grants PSNH's request for permission to cross the lands owned by the State of New Hampshire.

PSNH also will construct a new 450-foot crossing of the Jason-Russell State Forest (Crossing B) consisting of structures #141 through #143 for the new 3155 distribution line. The construction will consist of western red cedar poles between 45

and 70 feet tall. The line will be located within the 170 foot right-of-way, 60 feet to the south of the center line of, and generally parallel to the existing 379 line (25 feet from the edge of the right-of-way).

The three-phase conductors will be 477 MCM 18/1 ACSR conductors, constructed in a vertical configuration, tensioned to 3,000 pounds, and sagged to NESC Heavy Loading conditions. The maximum phase conductor sag of 10.0 feet will occur at a conductor temperature of 284 degrees F (9.00 feet at NESC Heavy Loading). The single neutral conductor will be 4/0 6/1 ACSR, tensioned to 2,038 pounds, positioned below the phase conductors, and sagged to NESC Heavy Loading conditions. NESC (Table 232-1) requires that the primary conductor and neutral conductor clearances to ground surface to be 18.5 feet and 15.5 feet, respectively, when traversing forest land or where it is subject to truck traffic. PSNH is constructing this line such that the clearance at the maximum sag conditions to the ground surface will be 20.0 feet for the phase conductors and 17.0 feet for the neutral conductor.

According to PSNH, most crossing construction will be in upland areas. One location requires a wetlands permit and the installation methods to be used in the construction of the 3155 distribution line are designed to avoid impacts to any other wetlands in the vicinity of the crossings. PSNH received from

the Department of Environmental Services a Wetlands and Non-Specific Permit identified as Number 2003-2591 to meet that requirement. PSNH filed a copy of such Permit with the Commission.

PSNH states that it owns permanent easement rights for the construction, operation, and maintenance of overhead electric lines where structures #118 - #133 and #141 - #143 will be constructed. PSNH has also stated that the use and enjoyment by the public of these lands will not be diminished in any material respect as a result of the proposed aerial line crossings.

PSNH has attested that the construction of the aerial electric line 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 lands owned by the State of New Hampshire, it shall petition the Commission for a license to construct and maintain the same. Based on the information presented, the Commission prescribes the part of the Russell-Abbott and Jason-Russell State Forests under the proposed aerial electric lines as being "land owned by this state" under RSA 371:17.

Based on the information presented by PSNH and Staff's recommendation, the Commission finds such crossings necessary for PSNH to meet the reasonable requirements of reliable service to the public within PSNH's authorized franchise area and that the requested license may be exercised without substantially affecting the public rights in the lands of the Russell-Abbott and Jason-Russell State Forests. We find, therefore, that the crossings are 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 State of New Hampshire lands in Mason, New Hampshire depicted on plans and drawings submitted January 9, 2004, 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 operate these approved crossings in conformance to the requirements of the

NESC; and it is

**FURTHER ORDERED**, that the Petitioner remain in compliance with the written letter agreement with the State of New Hampshire, acting by and through the Department of Resources and Economic Development dated November 20, 2003 filed as part of its petition; and it is

**FURTHER ORDERED**, that the Petitioner remains in conformance with the Wetlands and Non-Site Specific Permit Number 2003-2519; and it is

**FURTHER ORDERED**, that the Petitioner shall provide a copy of this order to the (i) Town Clerk of Mason, (ii) New Hampshire Attorney General and the owners of the land bordering on said public lands at the location of the 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.

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Thomas B. Getz  
Chairman

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Susan S. Geiger  
Commissioner

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Graham J. Morrison  
Commissioner

Attested by:

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Debra A. Howland  
Executive Director & Secretary