

# STATE OF NEW HAMPSHIRE

## Inter-Department Communication

DATE: July 22, 2011

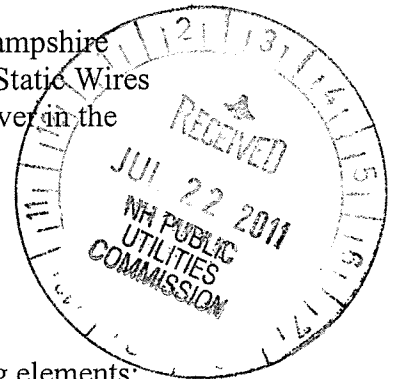
AT (OFFICE): NHPUC

FROM: Randy Knepper, Director Safety Division



SUBJECT: Docket No. DE 11-073 Public Service Company of New Hampshire  
Petition for a License to Construct and Maintain Lines and Static Wires  
Over and Across the Bean River, North River, and Little River in the  
Town of Nottingham, New Hampshire

TO: Debra Howland, Executive Director  
Tom Frantz, Director, Electric Division  
Lynn Fabrizio, Staff Attorney



The Safety Division review of the above petition consisted of the following elements:

- Petition contents and history
- Review of existing crossing(s) already licensed by the PUC
- Review of land ownership of existing pole structures.
- Review of NESC code requirements as described in Puc 300 rules
- Review of public need and public impact, including applicability of other State regulations
- Conclusions and recommendations

### 1. Petition contents and history.

On April 5, 2011, Public Service Company of New Hampshire (PSNH) filed a petition to construct and maintain electric lines and static wires over and across 7 bodies of water. Three of these crossings are in the Town of Nottingham over the Bean River, North River, and Little River. These river crossings comprise a portion of line C-129 which PSNH currently operates and maintains as a 115 kV transmission line. The Commission has not previously licensed these existing overhead crossings.

PSNH has determined it is necessary to upgrade the C-129 line in order to meet the reasonable requirements of service to the public. The upgrade is necessitated by load growth in the seacoast area of New Hampshire and the installation of an additional autotransformer at Deerfield Substation in Deerfield, New Hampshire.

PSNH proposes a construction start for the C-129 line upgrade of approximately September 5, 2011, and an in service date of the new Deerfield transformer of December 2012.

**2. Review of land ownership of existing pole structures.**

PSNH owns permanent easements, not less than 150 feet wide, at all of the proposed crossing locations. PSNH states all crossings will be constructed within these easements.

**3. Review of NESC code requirements as described in Puc 300.**

The applicable Commission rule states as follows:

N.H. Code of Administrative Rules PART Puc 306.01 Standard Practice in Construction, Operation and Maintenance.

(a) Each utility shall construct, install, operate and maintain its plant, structures and equipment and lines, as follows:

- (1) In accordance with good utility practice;
- (2) After weighing all factors, including potential delay, cost and safety issues, in such a manner to best accommodate the public; and
- (3) To prevent interference with other underground and above ground facilities, including facilities furnishing communications, gas, water, sewer or steam service.

(b) For purposes of this section, “good utility practice” means in accordance with the standards established by:

- (1) The National Electrical Safety Code C2-2002[.]

The upgrading of the C-129 line will require reconductoring of one location (structures 2 1-22) on the Bean River, one location (structures 47-53) on the North River, and one location (structures 77-79) on the Little River in the Town of Nottingham.

In its petition, PSNH portrayed vertical clearances of:

- a. at least 27.3, 28.8, 18.9, and 25.9 feet from the 100-year flood elevation over the crossings on the North River in Nottingham, meeting the required minimum of 18.6 feet for water areas not suitable for sailboating. The maximum conductor sag for 285 degrees F weather (maximum operating temperature based on PSNH transmission standards) will be approximately 38 feet with a minimum clearance to the water surface of 18.9 feet. This condition produces the greatest sag in the phase wires.
- b. at least 27.3 feet from the 100-year flood elevation over the crossing on the Bean River in Nottingham, meeting the minimum required 115 kV conductor clearance for water surface areas less than 20 acres of 22.1 feet. The maximum conductor sag for 285 degrees F weather (maximum operating temperature based on PSNH transmission

standards) will be approximately 14 feet with a clearance to the water surface of 27.3 feet. This condition produces the greatest sag in the phase wires.

According to PSNH's petition, although New Hampshire DES permits are not required, PSNH will comply with DES rule requirements, including Administrative Rule PART Env-Wq 1406.

The Safety Division review of the petition and attachments found them to be in conformance with the applicable sections of the NESC code C2-2002.

**4. Review of public need and public impact.**

Based on its review of the petition and existing field conditions, Staff believes that a license is not required for the proposed crossing over the Little River in the Town of Nottingham. Although PSNH has demonstrated a public need for the crossing upgrades proposed in its petition and Staff has determined that the proposed upgrades are in compliance with applicable safety codes, this "river" is a very small body of water that is not likely to implicate any public use. (See attached photograph.) In addition, this segment of the Little River is not included in the March 1, 2011 Official List of Public Waters compiled by the DES. As a result, Staff concludes that this river crossing does not meet the intent of the statute with respect to the licensing requirements of crossings over public waters, and that approval of the proposed upgrades is consistent with the public interest.

Based on the same review of the petition and existing field conditions, Staff has determined that the Bean River and North River crossings meet the intent of the statute and require licensing. Staff concludes that approval of PSNH's petition for a license of the proposed crossings over those rivers is consistent with the public interest.

**5. Recommendations and Conclusions.**

The Safety Division recommends the Commission approve without requiring a license the proposed crossing upgrades over and across the Little River in the Town of Nottingham.

The Safety Division further recommends approval of PSNH's petition for a License to Construct and Maintain Lines and Static Wires Over and Across the Bean River and North River in Town of Nottingham, with the following conditions:

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- a) The Commission should require that all future alterations, that may affect the public, to the crossing conform to the requirements of both the 2002 and 2007 editions of the NESC and be resubmitted to the Commission 60 days prior to the alteration.
- b) PSNH should be required to maintain and operate the crossings in conformance with the NESC or risk future revocation of the license.