

# STATE OF NEW HAMPSHIRE

## Inter-Department Communication

**DATE:** July 22, 2011

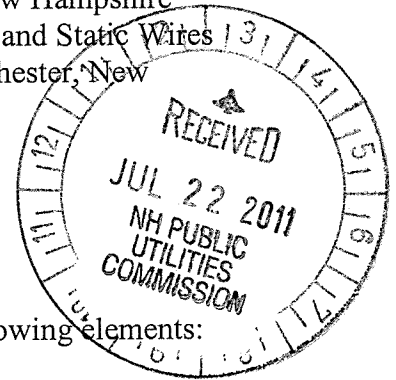
**AT (OFFICE):** NHPUC

**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 Isinglass River in the City of Rochester, 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, including two crossings in the City of Rochester over the Isinglass 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 did not previously license 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[.]

Even though PSNH will not be replacing conductors over the Isinglass River crossings, PSNH is petitioning to license these locations (structures 208-209, and structures 210-211) because of the up-rate and resulting different sag clearances. In particular, PSNH portrayed a vertical clearance of at least 19.1 and 25.1 feet from the 100-year flood elevation over the two crossings on the Isinglass River in Rochester, 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 31.7 feet with a minimum clearance to the water surface of 19.1 feet. This condition produces the greatest sag in the wires.

According to PSNH’s petition, although New Hampshire DES permits are not required, PSNH will comply with applicable DES 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.**

Staff has determined, after reviewing the petition and existing field conditions, that the Isinglass River crossings meets the intent of the statute and will

require licensing. Staff concludes that PSNH has demonstrated a public need for the crossing upgrades proposed in its petition and that approval of the petition for a license of the proposed crossings is consistent with the public interest.

**5. Recommendations and Conclusions.**

The Safety Division recommends approval of PSNH's petition for a License to Construct and Maintain Lines and Static Wires Over and Across the Isinglass River in the City of Rochester, with the following conditions:

- 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.