



# STATE OF NEW HAMPSHIRE

Inter-Department Communication

**DATE:** March 26, 2012

**AT (OFFICE):** NHPUC

**FROM:** Randy Knepper, Director of Safety

A handwritten signature in black ink, appearing to read "R. Knepper".

**SUBJECT:** Docket DE 11-060 Public Service Company of New Hampshire  
Petition for a License to Construct and Maintain Electric Lines Over and  
Across the Sagamore Creek in the City of Portsmouth, 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 March 24, 2011, Public Service Company of New Hampshire (PSNH) filed a petition to construct and maintain electric lines over and across the Sagamore Creek in the City of Portsmouth. PSNH currently operates and maintains a previously constructed three-phase 12.47 kV distribution line, designated as the 2W4 circuit, in Portsmouth, New Hampshire. This distribution line, as currently constructed, crosses over the Sagamore Creek at a location approximately six feet east of the Route 1A (Sagamore Avenue) bridge.
- PSNH has determined it is necessary to relocate the 2W4 distribution line by shifting it slightly further east (approximately six feet) of the current crossing location in order to accommodate the New Hampshire Department of Transportation (NHDOT) proposed bridge widening.

- The Sagamore Creek crossing will span approximately 463 feet between 2 new wooden poles: Pole # 136/49 on the southerly end and Pole #136/46 on the northerly end of Sagamore Creek. The creek crossing will be approximately 330 feet. PSNH states the conductors shall be 336 ASCR with 18/1 stranding. This equates to approximately 0.365 pound/ft with 0.684 inch diameter for each of the three conductors. The neutral shall be 4/0 with 6/1 stranding with equivalent weight of 0.291 pound/ft with a 0.563 inch diameter.
- DE 76-106 Order No. 12,399 licensed the construction of a neutral wire for an existing line on September 8, 1976.
- The water crossing location listed in the petition is listed as a Tidal Water on the DES official list of public waters in which RSA 371:17 is applicable see:  
<http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/olpw.pdf>

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

PSNH states the new poles associated with the proposed crossing are to be located within the street right of way for Sagamore Av. A pole license application has been submitted to the City of Portsmouth and is pending issuance and approval of the City Council.

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

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;

In particular, PSNH portrayed a vertical clearance for the lowest 4/0 ACSR, 6/1 stranding neutral wire of at least 25 feet, meeting the minimum clearance of 15.5 feet from Route 1A Sagamore Bridge. In addition, the neutral wire will have at least 39.5 feet from the 100-year flood elevation, over the

Sagamore Creek, exceeding the required minimums of 25.5 feet for a ten year flood level. The 90 degrees F operating conditions results in the minimum clearance for the neutral wire.

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.

According to PSNH's petition, neither New Hampshire DOT nor DES permits are required.

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

Staff has determined, after reviewing the petition and existing field conditions, that the Sagamore Creek crossing meets the intent of the statute and will require licensing. Staff concludes that PSNH has demonstrated a public need for the crossing proposed in its petition and that approval of the petition for a license of the proposed crossing is consistent with the public interest.

A field review conducted by the Safety Division noted that phone and cable television facilities were located on the existing poles. A review of the franchise territories indicates that FairPoint and Comcast are on the existing poles. It should be noted that each of these facilities would need to submit respective petitions for license to cross the Sagamore Creek. To date, the Safety Division has not found any written documentation confirming that either utility has ever been granted a license for its existing crossing by the PUC pursuant to RSA 371:17 to cross public waters at this location. This should not preclude PSNH from installing the proposed construction.

#### **5. Recommendations and Conclusions.**

The Safety Division recommends approval of PSNH's petition for a License to construct and maintain electric lines over and across the Sagamore Creek in the City of Portsmouth, 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.