

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: November 23, 2011

AT (OFFICE): NHPUC

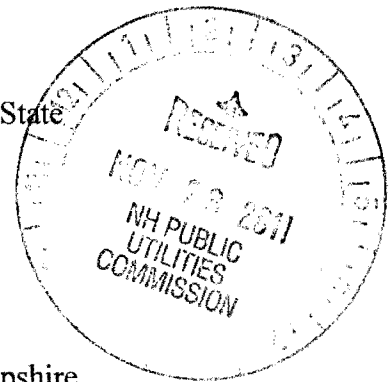
FROM: Randy Knepper, Director, Safety & Security *RSK*

SUBJECT: Docket No. DE 11-167 Public Service Company of New Hampshire
Petition for a License to Construct and Maintain Electric Lines Over and
Across Ainsworth Pond in the Town of Jaffrey, New Hampshire

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

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

- Petition contents and history
- Review of land ownership of existing pole structures.
- Review of public need and public impact, including applicability of State regulations
- Conclusions and Recommendations



1. **Petition contents and history.**

- On July 27, 2011, Public Service Company of New Hampshire (PSNH) filed a petition to construct and maintain two electric lines over and across Ainsworth Pond in the Town of Jaffrey. PSNH currently operates and maintains a previously constructed three-phase 34.5 kV distribution line, designated as the 382 circuit, from the PSNH Monadnock Substation in Troy, New Hampshire, to the PSNH Jaffrey Substation in Jaffrey, New Hampshire. This distribution line, as currently constructed, crosses over Ainsworth Pond (also known as Greene Wildlife Pond) in Jaffrey.
- PSNH has determined it is necessary to construct and maintain a second three-phase 34.5 kV distribution line, which will be designated as the 3235 circuit, to alleviate projected overload conditions on the existing 382 line and serve the distribution load in the Monadnock area in a reliable manner. Both lines will be located in the existing right of way.
- To accommodate the relocation of an osprey nest on one of the existing 382 line crossing structures, PSNH intends to rebuild the

existing 382 line crossing in conjunction with the construction of the new 3235 line crossing.

- The work required to relocate the osprey nest is being coordinated with the New Hampshire Audubon Society with a proposed relocation date of October 2011, once the ospreys have left the nest for the season.
- PSNH has obtained a New Hampshire Department of Environmental Services wetlands permit (No. 2011-00021) as well as an Army Corps of Engineers permit (No. NAE-2011-00187) for the permanent and temporary wetland impacts associated with the construction.
- The proposed new crossings for the 382 and 3235 lines will each occur between two new three-pole wood structures with span lengths of approximately 6780 and 685 feet, respectively. The proposed conductor and neutral for both crossings will be 477 ACSR with 26/7 stranding. The conductors and neutral will be sagged using NESC Heavy Loading conditions (0 degrees F, 4 pounds psf wind loading, ½" radial ice) at a maximum tensions of 5,500 pounds.
- Based on NH DES review, applicable 10-year flood water elevations for Ainsworth Pond were determined to be 2.7 feet below the crest of the dam, which corresponds to a height of 1044.3 feet.
- The maximum sags of the phase and neutral wires and minimum clearances for the proposed crossings were determined and designed using the above design criteria.
- According to the petition, the existing crossing over Ainsworth Pond in the Town of Jaffrey has not been previously licensed by the Public Utilities Commission. PSNH notes that its petition requests licensing of the rebuild of the 382 line crossing at Ainsworth Pond, along with the new 3235 line.
- Ainsworth Pond is listed as Wildlife Pond on the Department of Environmental Services (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 one hundred foot wide PSNH rights of way located on the east and west sides of Ainsworth Pond.

3. Review of public need and public impact.

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

Staff has determined, after reviewing the petition and existing field conditions, that the Ainsworth Pond crossing requires a license under RSA 371:17. Staff concludes that PSNH has demonstrated a public need for the proposed crossing and that approval of the petition for a license of the proposed crossing is consistent with the public interest.

4. Recommendations and Conclusions.

The Safety Division recommends approval of PSNH's petition for a license to construct and maintain electric lines over and across Ainsworth Pond in the town of Jaffrey, with the following conditions:

- a) The Commission should require that all future alterations to the crossing that may affect the public 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.