

# STATE OF NEW HAMPSHIRE

## Inter-Department Communication

**DATE:** August 23, 2012

**AT (OFFICE):** NHPUC

**FROM:**  Tom Frantz – Director, Electric Division

**SUBJECT:** DE 12-065; Petition by New Hampshire Electric Cooperative for License to Cross Public Waters under RSA 371:17

**TO:** Chairman Ignatius and Commissioner Harrington



On March 14, 2012, the New Hampshire Electric Cooperative (NHEC) filed a petition with the Commission under RSA 371:17 for a license to re-locate, re-construct and maintain an electric cable and conduit under Lake Winnepesaukee in the Town of Alton, NH. As part of its petition, NHEC included the pre-filed testimony of Dean Benton, Plant Supervisor with NHEC. NHEC states in its petition that the project is intended to provide more reliable service to the residences located on Rattlesnake, Sleeper and Treasure Islands in Lake Winnepesaukee. The three islands are located in NHEC's service territory.

Staff employed the Accion Group Inc. (Accion) to review NHEC's petition. Accion filed an electronic memo of its review of NHEC's petition with Staff on August 23, 2012. Accion stated that "[T]he proposed facilities as proposed should be in conformance with the National Electrical Safety Code C2-2012, however, NHEC does not make such a definitive statement." Accion further stated that it believes the facilities are needed to meet the reasonable requirements to provide reliable electrical service to the public on the three islands: Rattlesnake, Sleeper and Treasure. Accion further goes on to recommend that the Commission approve the NHEC petition for license to relocate, reconstruct and maintain the electric cable and conduit under Lake Winnepesaukee in the Town of Alton; however, Accion states that approval should be conditional and lists five conditions as part of approving NHEC's petition.

Based on the recommendation of Accion and Staff's review of the filing, Staff recommends that the Commission grant NHEC's petition with the conditions stated in Accion's report. I have attached Accion's report to this memo.

Please contact me if you have any questions or would like to discuss this matter.

**REPORT ON ADEQUACY OF**

**NEW HAMPSHIRE ELECTRIC COOPERATIVE'S PETITION FOR LICENCE FOR ELECTRICAL FACILITIES UNDER  
AND ACROSS PUBLIC WATERS OF LAKE WINNIPESAUKEE IN THE TOWN OF ALTON NEW, HAMPSHIRE**

**DOCKET DE 12-065**

**ACCION GROUP**

**AUGUST 23, 2012**

Accion's review of the subject petition consisted of the following elements:

- Petition contents and history
- Review of public need and public impact, including applicability of other state regulations
- Conclusions
- Recommendations.

### **1. Petition Contents and History**

On March 14, 2012, New Hampshire Electric Cooperative (NHEC) filed a petition to relocate, re-construct, operate, and maintain electric cables and conduits under and across the public waters of Lake Winnepesaukee in Alton, New Hampshire (Petition). The new facilities will consist of a 7.2kV submarine 1/0 aluminum cable constructed from the mainland to Rattlesnake Island to feed the existing overhead system, continuing on to Treasure Island to feed the existing overhead system, and then continuing to Sleeper Island where the line will terminate and operate in the open position. At that location the line could be tied into the existing overhead system on Sleeper Island if required. The project also consists of a second new 7.2 kV submarine 1/0 aluminum cable from the mainland to Sleeper Island to feed the existing overhead system.

More specifically, the project begins on the mainland property of the Rattlesnake Island Association at Nowicki Point in Alton, New Hampshire at Pole #30124.2/18.1 and:

Traverses underground and in conduit for a distance of approximately 200 feet to the shore of Lake Winnepesaukee, traverses approximately 5800 feet on the lake bed to the shore of Rattlesnake Island, and then traverses approximately 210 feet underground and in conduit to Pole #303/22.

From Pole #303/22, the cable on Rattlesnake Island then traverses back through the same trench in separate conduit approximately 210 feet to the shore line, traverses approximately 5300 feet on the lake bed to the shore of Treasure Island, and then traverses a short distance underground and in conduit to Pole #30304/14.

From Pole #30304/14, the cable on Treasure Island then traverses back through the same trench in separate conduit a short distance to the shore line, traverses approximately 1360 feet on the lake bed to the shore of Sleeper Island, and then traverses a short distance underground and in conduit to Pole #30304/13.

Pole # 30304/13 on Sleeper Island is the open point in the new loop feed system.

From Pole #303/8, the second new cable on Sleeper Island then traverses underground and in conduit a short distance to the shore line, traverses approximately 2800 feet on the lake bed to the shore of the mainland, and then traverses approximately 200 feet underground and in conduit to Pole #30124/.2/18.1 in the same trench as the new cable to Rattlesnake island on the property of the Rattlesnake Island Association.

All underground sections will be buried to a depth of 3 feet – 0 inches, will extend from the shore line on the lake bed in Schedule #80 PVC conduit until a water depth of 6 feet – 0 inches from the water line (defined as mean low water table) can be achieved per NHEC Construction Standard IUSUB (Petition Exhibit I). In addition, a minimum of two concrete cable covers will be installed at every shore line as described in NHEC Construction Standard U7-6B (Petition Exhibit J).

NHEC describes conduit entering a typical body of water in its Construction Standard URD 1W-1 (Petition Exhibit K).

The Petition states that all riser poles on the islands will be existing 35 foot class 5 wood poles except on Rattlesnake Island where the riser pole will be an existing 40 foot class 4 wood pole.

The NHEC states that overhead facilities were considered for the project, but that overhead facilities are not feasible due to the distances involved.

NHEC also states that all facilities will be constructed and maintained to meet the National Electrical Safety Code.

Additionally, the NHEC states that it has the expertise to design, construct, operate, and maintain the proposed facilities as it currently maintains 53 similar installations in its service territory.

## **2. Review of Public Need and Public Impact**

NHEC states that the existing underwater facilities currently in place are aging and that the 233 customers served are at a greater risk of losing service and that the loop feed feature being constructed into the design of the project further enhances reliability for those customers.

A license is required to place electrical facilities under and across Lake Winnepesaukee as that body of water is public waters as defined in RSA 371:17 and is also listed on the Department of Environmental Service Water Division's Official List of Public Waters as revised March 1, 2011 .

NHEC requires easements to facilitate the new construction on the mainland in Alton, New Hampshire, Rattlesnake Island, Sleeper Island, and Treasure Island and has provided same as Petition Exhibits B, C, D, and E respectively.

NHEC requires Wetland and Non-Site Specific Permits from the Department of Environmental Services for the new construction and has provided approved Wetland and Non-Site Specific Permits with conditions on the mainland in Alton, New Hampshire, Rattlesnake Island, Sleeper Island, and Treasure Island as Petition Exhibit F.

### **3. Conclusions**

The proposed facilities are required to meet the reasonable requirements to provide reliable electrical service to the public on Rattlesnake Island, Sleeper Island, and Treasure Island.

The proposed facilities as proposed should be in conformance with the National Electrical Safety Code C2-2012, however the NHEC does not make such a definitive statement.

### **4. Recommendation**

Accion recommends that the Commission approve the NHEC petition for a license to construct, operate, and maintain electric lines under and across Lake Winnepesaukee in the Town of Alton, New Hampshire with the following conditions.

- a) That underwater concrete cable covers as described in NHEC Construction Standard U7-6B be installed over the cable in water until the depth from the mean low water table (water line) is three feet with a minimum of two cable covers to be installed.
- b) The Commission should require that the proposed construction be done in conformance with applicable sections of the National Electrical Safety Code C2-2012.
- c) The Commission should require that the NHEC operate and maintain the proposed facilities to the National Electrical Code C2-2012.
- d) The Commission should require that any future alterations to the proposed facilities meet the then existing provisions of the National Electrical safety Code and that requests for such alterations be submitted to the Commission for its consideration at least 60 days prior to the commencement of construction.
- e) That conformance to the conditions imposed in the Department of Environmental Service's Wetland and Non-Site Specific Permits contained in Exhibit F of the Petition is required.