

In The Matter Of Underwater Crossing Of Squam Lake
(NH Electric Cooperative, Inc.)
Prefiled Testimony of Dean Benton
December 29, 2014

1 **Q. Please state your full name and occupation.**

2 A. My name is Dean Benton. I am employed as the Plant Administrator at the New Hampshire
3 Electric Cooperative, Inc. ("NHEC"), 579 Tenney Mountain Highway, Plymouth, New
4 Hampshire, 03264-3154.

5
6 **Q. Are you familiar with the matter which is the subject of this petition?**

7 A. Yes, I am.
8

9 **Q. Please describe the proposed project.**

10 A. The project is intended to provide electrical service to a residence located on Long Island in
11 Squam Lake in the Town of Holderness. The plan which is attached to this prefiled
12 testimony as Exhibit A shows a layout of the proposed line. The cable run is planned to
13 begin at NHEC Pole #3508.1/8.1 on Long Island in the Town of Holderness. From there, the
14 cable will enter the lake for a distance of about 400 feet to the shore line of the Peter
15 Coolidge property also on Long Island, to a new concrete vault #3508.1/8.9 to be constructed
16 on Long Island. The member's meter will be a short distance from the vault. One new
17 easement is needed for the construction of this new line, and has been obtained from Peter J.
18 Coolidge, (Exhibit B). NHEC will also utilize the right of way from an existing easement
19 signed by Harold J. and Helen I. Coolidge, (attached as Exhibit C).
20

21 **Q. Who will install the conduit and cable?**

22 A. The conduit, submarine cable and termination vault will be constructed by a contractor from
23 an NHEC approved listing. All of the contractors on this list have historically been proven to
24 meet NHEC construction standards and the National Electrical Safety Code. NHEC will
25 inspect the installation prior to energizing, and ownership of the line then will be formally
26 transferred to NHEC for long term maintenance and repair.
27
28

1 **Q. Has a permit been obtained from the Department of Environmental Services?**

2 A. Yes. Copies of the needed Wetlands Permits are attached to this petition, the permits are
3 attached as Exhibit D and Exhibit E.
4

5 **Q. How many residences will this line service?**

6 A. This line will service one residence on Long Island, on the property of Peter Coolidge.
7

8 **Q. Are there any abutters on Long Island?**

9 A. Yes. There is one abutter on the Long Island portion located in Holderness where the
10 proposed cable installation will take place, the Utopia/Long Island Land Company, LLC.
11 There are other abutters on the Center Harbor portion of the island- over a quarter of a mile
12 from the proposed construction.
13

14 **Q. Is there currently any electrical line which services Long Island?**

15 A. Yes.
16

17 **Q. Is Long Island in NHEC service territory?**

18 A. Yes.
19

20 **Q. Why is this submarine cable necessary?**

21 A. The underground line beneath Squam Lake is necessary in order to provide service to the
22 residence on Long Island. If NHEC does not construct this underwater line, the residence on
23 Long Island will not receive a properly sized electrical service from NHEC.
24

25 **Q. Did you consider an overhead line?**

26 A. Yes. However, obtaining a right of way to construct a primary line was not possible. The
27 underground conduit proposed here is the only technically sound solution, will not be

1 obtrusive to the general public, and will minimize the chance that the cable will interfere with
2 the public safety or the public enjoyment of Squam Lake or the surrounding shorelines.

3
4 **Q. Do you have anything else you wish to add to your testimony?**

5 **A.** Yes. I would like to add the following construction details and technical specifications for
6 this project:

7 1. The design, construction and operation of this line will be in compliance with the National
8 Electrical Safety Code. The cable installation will provide electrical power to one residence
9 owned by Peter Coolidge. This will be the only load on the proposed line at this time.

10 2. The primary feed line voltage is 7200 volts.

11 3. There is sufficient capacity on the existing distribution line to serve this load requirement.
12 The typical existing load is 30 amps with a maximum load capacity of 100 amps.

13 4. The secondary line feed on Long Island will be one (1) 200 amp service to a residence @
14 120/240 volts.

15 5. The cable manufacturer is Okonite. Technical specification sheet is at Exhibit F. Cable
16 details are as follows:

17 a. Cable type - Submarine

18 b. Conductor material is aluminum

19 c. Conductor size is 1/0

20 e. Type of insulation is Triplex

21 f. Insulation thickness is 1.720 inches

22 6. The installation process will include trenching and direct burial of conduit/cable from pole
23 # NHEC located Long Island to an underwater depth of 6' 0" per NHEC Construction
24 Standard IUSUB (Exhibit G), then cable layment on the lake floor. A minimum of two
25 lengths of cable covers at each shoreline, per NHEC Construction Standard U7-6B (Exhibit
26 H) will be installed per design at each shoreline. From shoreline on Long Island,
27 underground trench to concrete vault per attached plan (Exhibit A). Cable/conduit will have

1 a minimum of 36" of cover in all trenches. Backfill of trenches will be with sand and
2 removed backfill less rocks.

3 7. Environmental mitigation measures will be installation of silt fence per NHEC
4 Construction Standard URD 1W-1 (Exhibit I) and approved Wetlands Permits, (Exhibits D
5 and E).

6 8. Schedule #80 PVC conduit will be used for construction.

7 9. No new riser pole is required for this installation since the cable will terminate at a
8 concrete vault.

9 11. Equipment used to install the cable will be a backhoe and barge. Cable will be hand laid
10 by men on the barge. Cable covers will be placed by mechanical means.

11 12. NHEC currently has over 50 similar installations within its service territory.

12
13 **Q. Does this conclude your testimony?**

14 **A. Yes, it does.**