

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

2 A. My name is Shauna McNair. I am employed as the Plant Administrator at the New
3 Hampshire Electric Cooperative, Inc. (“NHEC”), 579 Tenney Mountain Highway,
4 Plymouth, New 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 replace submarine the submarine cable that currently feeds from Y
11 landing on Powers Road in Meredith across Lake Winnepesaukee to Bear Island. The
12 existing cable was originally installed in 1941 and needs to be replaced. The cable supplies
13 electrical service to 144 members on Bear Island, 3 members on Six Mile Island and one
14 member on Little Six Mile Island and one member on Ozone Island. The New Hampshire
15 Electric Cooperative Inc. would create a new origination point for the submarine cable
16 starting at the Ahrens property on Pine Island using conduit already placed in 2018 under
17 Wetlands Permit File #2018-00239 at pole 11511/6, cable to cross about 4,100 feet of lake
18 bottom in public waters to serve Bear Island at pole number 11523/2, Tax Map I02 Lot 14
19 owned by Julie Knapp Nelson and Robert Lyle Denit of 56 Valley View Drive, Amherst
20 Massachusetts, 01002
21

22 The plan which is attached to this pre-filed testimony as **Exhibit A-1, Exhibit A-2, and Exhibit**
23 **A-3** shows a layout of the proposed line. The cable run is planned to begin at NHEC Pole
24 #11511/6 on Pine Island, Tax Map I01, Lot 11 in the Town of Meredith. From there, the
25 cable will enter the lake for a distance of about 4,100 feet to the shoreline of Bear Island and
26 the property of Julie Knapp Nelson and Robert Lyle Denit Tax Map I02, Lot 14, is buried
27 approximately 230 feet to pole #11523/2. NHEC will utilize an existing easement on the

1 Ahrens property on Pine Island as **Exhibit B**, as well as an existing easement on the
2 Nelson/Denit property on Bear Island, as **Exhibit C**.

3
4 **Q. Who will install the conduit and cable?**

5 A. The conduit, submarine cable and termination vault will be re-constructed by a contractor
6 from an NHEC approved listing. All of the contractors on this list have historically been
7 proven to meet NHEC construction standards and the National Electrical Safety Code.

8
9 **Q. Has a permit been obtained from the Department of Environmental Services?**

10 A. Yes. On Pine Island NHEC is using conduit already placed in 2018 under Wetlands Permit
11 File #2018-00239 at pole 11511/6 attached as **Exhibit D**. Also a copy of the Wetlands Permit
12 for Bear Island is attached as **Exhibit E** as well as the Shoreland Permit attached as **Exhibit**
13 **E-1**

14
15 **Q. How many residences will this line service?**

16 A. This line will service approximately 144 residences on Bear Island and goes on to serve
17 another 5 members on 3 other islands in this area.

18
19 **Q. Are there any abutters on Pine Island?**

20 A. Yes. The easement on this property is attached as **Exhibit B**.

21
22 **Q. Are there any abutters on Bear Island?**

23 A. Yes. The easement on this property is attached as **Exhibit C**.

24
25 **Q. Is there currently any electrical line which services Bear Island?**

26 A. Yes, but the existing cable is 68 years old and needs to be replaced to increase reliability.
27
28

1 **Q. Is Bear Island in NHEC service territory?**

2 A. Yes.

3
4 **Q. Why is this submarine cable necessary?**

5 A. The submarine cable beneath Lake Winnepesaukee is necessary in order to provide service to
6 the residences on Bear Island and also Six Mile Island, Little Six Mile Island, and Ozone
7 Island. If NHEC does not re-construct this underwater cable it cannot continue to provide
8 electrical service to these existing members.

9
10 **Q. Did you consider an overhead line?**

11 A. No, at a distance of approximately 4,100 feet for the existing cable, replacing it in the same
12 fashion with submarine cable is the only feasible solution. An overhead line would also be a
13 safety hazard for sailboats.

14
15 **Q. Do you have anything else you wish to add to your testimony?**

16 A. Yes. I would like to add the following construction details and technical specifications for
17 this project:

- 18 1. The design, construction and operation of this line will be in compliance with the National
19 Electrical Safety Code.
- 20 2. The primary feed line voltage is 7200 volts.
- 21 3. There is sufficient capacity on the existing distribution line to serve this load requirement.
- 22 4. The typical existing load is 30 amps with a maximum load capacity of 100 amps.
- 23 5. Technical specification sheet is **Exhibit F**. Cable details are as follows:
 - 24 a. Cable type - Submarine
 - 25 b. Conductor material is aluminum
 - 26 c. Conductor size is 1/0
 - 27 e. Type of insulation is Triplex
 - 28 f. Insulation thickness is 1.720 inches

1 6. The installation process will include trenching and burial of conduit/cable from pole
2 #11511/6, located on that property into the lake to an underwater depth of 6' 0" per NHEC
3 Construction Standard IUSUB (**Exhibit G**), then cable layment on the lake floor. A
4 minimum of two lengths of cable covers at each shoreline, per NHEC Construction Standard
5 U7-6B (**Exhibit H**) will be installed per design at each shoreline. From shoreline on Bear
6 Island, underground trench to a pole, #11523/2 per attached plan (**Exhibit A**). Cable/conduit
7 will have a minimum of 36" of cover in all trenches. Backfill of trenches will be with sand
8 and removed backfill less rocks.

9 7. Environmental mitigation measures will be installation of silt fence per NHEC
10 Construction Standard URD 1W-1 (**Exhibit I**).

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

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

14 10. NHEC currently has over 50 similar installations within its service territory.

15
16 **Q. Does this conclude your testimony?**

17 A. Yes, it does.

18