Q. Please state your full name and occupation.

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

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

A. Yes, I am.

Q. Please describe the proposed project.

A. The project is intended to replace submarine cable that was found to have a deteriorating neutral, (a condition that if not replaced could cause voltage problems in the future) so that NHEC can continue to provide electrical service to residences located on Mink Island in Lake Winnipesaukee in the Town of Gilford. The plan which is attached to this pre-filed testimony as **Exhibit A** shows a layout of the proposed line. The cable run is planned to begin at NHEC Pole #11528/17 on the Melvin Property, Tax Map 245, Lot 8 on Mark Island in the Town of Gilford. From there, the cable will enter the lake for a distance of about 640 feet to the shoreline of Mink Island and the property of Joanne Pike and Greg M. Dickinson, Tax Map 245, Lot 29, to a concrete vault #11528/18. NHEC will utilize existing easements for the properties involved, attached as **Exhibit B** for Mark Island and **Exhibit C**.

Q. Who will install the conduit and cable?

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

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

A. Yes. Copies of the Wetlands Permits are attached to this petition, the permit for Mark Island is attached as **Exhibit D-1 and D-2** and the permit for Mink Island is attached as **Exhibit E-1 and E-2.**

Q. How many residences will this line service?

A. This line will service 18 residences on Mink Island.

Q. Are there any abutters on Mark Island?

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

Q. Are there any abutters on Mink Island?

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

Q. Is there currently any electrical line which services Mink Island?

A. Yes, but the cable was found to have a deteriorating neutral.

Q. Is Mink Island in NHEC service territory?

A. Yes.

Q. Why is this submarine cable necessary?

A. The submarine cable beneath Lake Winnipesaukee is necessary in order to provide service to the residences on Mink Island. If NHEC does not re-construct this underwater cable it cannot continue to provide electrical service to its existing members.

Q. Did you consider an overhead line?

A. No, at a distance of approximately 640 feet for the existing cable, replacing it in the same fashion with submarine cable is the only feasible solution. An overhead line would also be a safety hazard for sailboats.

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

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

1. The design, construction and operation of this line will be in compliance with the National Electrical Safety Code.
2. The primary feed line voltage is 7200 volts.
3. There is sufficient capacity on the existing distribution line to serve this load requirement.
4. The typical existing load is 30 amps with a maximum load capacity of 100 amps.
5. Technical specification sheet is **Exhibit F**. Cable details are as follows:
   a. Cable type - Submarine
   b. Conductor material is aluminum
   c. Conductor size is 1/0
   e. Type of insulation is Triplex
   f. Insulation thickness is 1.720 inches
6. The installation process will include trenching and burial of conduit/cable from pole #, located on that property into the lake to an underwater depth of 6' 0" per NHEC Construction Standard IUSUB (**Exhibit G**), then cable layment on the lake floor. A minimum of two lengths of cable covers at each shoreline, per NHEC Construction Standard U7-6B (**Exhibit H**) will be installed per design at each shoreline. From shoreline on Mink Island, underground trench to concrete pad per attached plan (**Exhibit A**). Cable/conduit will have a minimum of 36" of cover in all trenches. Backfill of trenches will be with sand and removed backfill less rocks.

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

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

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

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

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

Q. Does this conclude your testimony?

A. Yes, it does.