

**STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION**

Re: Pennichuck East Utility, Inc.

2011 SRF Financing of Community Water Booster Station and Water Storage

Tank Replacement in the Liberty Tree Water System

DW 11-

DIRECT PRE-FILED TESTIMONY OF DONALD L. WARE

May 18, 2011

1 **Professional and Educational Background**

2 **Q. What is your name and what is your position with Pennichuck Water Works,**
3 **Inc.?**

4 A. My name is Donald L. Ware. I am the President of Pennichuck East Utility, Inc. (the
5 “Company”). I have worked for the Company since 1995. I am a licensed
6 professional engineer in New Hampshire, Massachusetts and Maine.

7 **Q. Please describe your educational background.**

8 A. I have a Bachelor in Science degree in Civil Engineering from Bucknell University in
9 Lewisburg, Pennsylvania and I completed all the required courses, with the exception
10 of my thesis, for a Masters degree in Civil Engineering from the same institution. I
11 have a Masters in Business Administration from the Whittemore Business School at
12 the University of New Hampshire.

13 **Q. Please describe your professional background.**

14 A. Prior to joining Pennichuck, I served as the General Manager of the Augusta Water
15 District in Augusta, Maine from 1986 to 1995. I served as the District’s engineer
16 between 1982 and 1986. Prior to my engagement with the District, I served as a
17 design engineer for the State of Maine Department of Transportation for six months
18 and before that as a design engineer for Buchart-Horn Consulting Engineers from
19 1979 to 1982.

1 **Q. What are your responsibilities as President of the Company?**

2 A. As President, I am responsible for the overall operations of the Company, including
3 water quality and supply, distribution, engineering and water system capital
4 improvements. With regard to capital improvements overseen by the Company's
5 Engineering Department, I work closely with the Department and the Company's
6 Chief Engineer regarding project selection, project design, project management and
7 construction management.

8 **Q. What is the purpose of your testimony?**

9 I will be describing the Company's project to replace the pump house, treatment
10 facilities and water storage tanks in addition to adding an emergency generator in the
11 Liberty Tree Water System located in Raymond, New Hampshire for which the
12 Company seeks approval to finance with loan funds issued by the New Hampshire
13 Department of Environmental Services (NHDES) through the State Revolving Loan
14 Fund (SRF). Please see schedule DLW-1 for the NHDES final 2010 DWSRF project
15 priority ratings which reflects the Liberty Tree Water System's eligibility.

16 **Q. What are the terms of the SRF loan?**

17 A. The SRF loan will be for \$400,000 for a term of 20 years with a level total payment
18 and a maximum interest rate of 2.864%. Due to the current level of water rates in
19 relation to Median Household Income in this community, the loan will have 35%
20 principal forgiveness meaning that \$140,000 of the principle due will be forgiven
21 over the life of the loan (\$7,000 per year).

1 **Q. Could you please describe why the Company believes it needs to replace**
2 **community water booster station and the water storage tanks in the Liberty**
3 **Tree Water System?**

4 A. The existing Liberty Tree community water system was built in 1973. The existing
5 atmospheric tanks were installed at that time. The existing pump house was
6 constructed of poured in place concrete and was built in 1986 to replace the original
7 station. The walls and roof of the existing building are heavily spalled. The existing
8 electrical conduit is heavily rusted. The existing hydro-pneumatic tank cast into the
9 wall of the station and is in poor condition with heavy pitting on the exterior. The
10 existing atmospheric tanks are buried outside the station and do not penetrate the
11 station wall. The existing roof membrane is in need of replacement. The well water,
12 which is high in hardness, iron and manganese is currently treated through a softening
13 system which is marginal in its ability to treat the existing levels of hardness, iron and
14 manganese. Given the levels of hardness, iron and manganese a dual treatment
15 system consisting of a MTM system to remove iron and manganese followed by a
16 softener is what is required to treat the well water at this location. The existing
17 building is not large enough to house the addition of the MTM system. The existing
18 pump house does not have emergency power and no provisions to hook up a portable
19 emergency generator during a power outage.

20 **Q. What is the Company's estimate of the cost to replace the community water**
21 **booster station and the water storage tanks in the Liberty Tree Water System?**

1 A. The Company estimates that the cost to replace the community water booster station
2 and the water storage tanks in the Liberty Tree Water System will be approximately
3 \$603,000 including a 20% contingency.

4 **Q. Has the Company looked at alternatives to the recommended onsite replacement**
5 **of the existing treatment facilities?**

6 Yes, the Company looked at the potential of interconnecting the Liberty Tree
7 community water system with the Town of Raymond Water System. There are two
8 possible points on the Raymond system where this interconnection could be made;
9 one at the intersection of Old Fremont Road and Batchelder Road and one at the
10 intersection of Manchester Road and Old Scribner Road. The interconnection
11 between the Liberty Tree Community Water System and Old Fremont at Batchelder
12 Road intersection involves the installation of a meter pit and approximately 6,100 LF
13 of water main through an area with a large amount of ledge. The estimated cost of
14 the interconnection is approximately \$1,270,000 plus a purchased water cost of \$3.80
15 per 1000 gallons of water. The interconnection between the Liberty Tree Community
16 Water System and Manchester at Old Scribner Road intersection involves the
17 installation of a meter pit and approximately 4800 LF of water main through an area
18 with a large amount of ledge and a 400' sleeved crossing of Route 101 where it
19 crosses under Manchester Road. The estimated cost of the interconnection is
20 approximately \$1,049,000 plus a purchased water cost of \$3.80 per 1000 gallons of
21 water. The Manchester Road interconnection has a substantially higher life cycle cost
22 than the on site station rebuild which has an estimated capital cost of just over
23 \$600,000. The estimated annual cost of the interconnection is \$16.33 per PEU

1 customer per year versus the estimated annual cost of the onsite rebuild of \$10.67/ per
2 PEU customer per year. See Exhibit DLW-2 for this comparison.

3 **Q. When does the Company need approval of this financing request?**

4 A. The NHDES would like to finalize the loan documents associated with this loan by
5 August 1, 2011. The NHDES cannot finalize the loan documents without the
6 NHPUC approving the proposed financing for this project. The NHDES has
7 indicated that it would like the Company to have NHPUC approval of the proposed
8 financing by July 29, 2011 in order to have the approval completed prior to the
9 finalization of the loan.

10 **Q. What is the timeline for this project?**

11 A. The list below provides an estimated timeline for the proposed Liberty Tree
12 community water booster station and water storage tanks replacement project:

- 13 1. Company Board Resolution approving SRF loan –
14 Authorization by Consent. Complete by June 15, 2011.
- 15 2. Complete Engineering Design for replacement booster station and
16 water storage tanks – June 15, 2011.
- 17 3. NHDES approval of proposed design – July 1, 2011.
- 18 4. Bid replacement booster station and water storage tank
19 replacement project – July 1, 2011.
- 20 5. NHPUC approval of Financing – July 29, 2011.
- 21 6. Sign SRF Loan Documents – August 1, 2011.
- 22 7. Open Bids for replacement booster station and water storage
23 tank replacement project – August 1, 2011.

1 7. Complete Company, NHDES bid review and award contract –
2 August 15, 2011.

3 8. Contractor begin construction – September 12, 2011

4 9. Project substantial completion – March 30, 2012.

5 **Q. Does this complete your testimony?**

6 A. Yes.

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