STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Pennichuck East Utility, Inc.

Petition for Authority to Issue Long Term Debt
CoBank and Intercompany Loans

Regulatory Compliance, Maintenance, and Nonrecurring Capital

DW 14-___

DIRECT PREFILED TESTIMONY OF JOHN J. BOISVERT

October 6, 2014

Professional and Educational Background

Q. What is your name and what is your position with Pennichuck East Utility, Inc.?

A. My name is John J. Boisvert. I am the Chief Engineer of Pennichuck Water Works, Inc. ("PWW"), which provides services to Pennichuck East Utility, Inc. ("PEU" or the "Company") pursuant to a management allocation agreement. I have worked for PWW since February 1, 2006. I am a licensed professional engineer in New Hampshire and Maine.

Q. Please describe your educational background.

A. I have a Bachelor of Science degree and a Master of Science degree in Civil Engineering from the University of New Hampshire in Durham, New Hampshire. I also have a Masters degree in Environmental Law and Policy from Vermont Law School in South Royalton, Vermont.

Q. Please describe your professional background.

A. Prior to joining PWW, I served as a Team Leader for Weston & Sampson Engineers of Portsmouth, New Hampshire in their Water Practices Group from 2000 to 2006. Prior to Weston & Sampson I was employed by the Layne Christensen Company of Shawnee Mission, Kansas as Regional Manager for their Geosciences Division in Dracut, Massachusetts from 1994 to 2000. I completed graduate school in 1992 and was employed by Hoyle, Tanner, & Associates of Manchester, New Hampshire as a Project Engineer from 1992 to 1994. Prior to entering full time graduate programs at the University of New Hampshire and Vermont Law School I was employed by Civil Consultants of South Berwick,

Maine as a Project Engineer from 1986 to 1989 and by Underwood Engineers of Portsmouth, New Hampshire as a project Engineer from 1985 to 1986.

Q. What are your responsibilities as Chief Engineer of the Company?

A. As Chief Engineer, I am responsible for the planning, design, permitting, construction, and startup of major capital projects, including pipelines, reservoirs/dams, building structures, pumping facilities, treatment facilities, and groundwater supplies. I provide regular technical assistance to PWW's Water Supply Department, Operations Department, Customer Service Department, and Senior Management.

Q. What is the purpose of your testimony?

A. I will be describing the capital expenditures that the Company is seeking to finance through CoBank

Q. Please define what is meant by Regulatory Compliance Capital, Maintenance Capital and Nonrecurring Capital.

A Regulatory Compliance Capital relates to funds used to ensure regulatory compliance with Federal and State drinking water laws and regulations, NHPUC rules, and other environmental requirements associated with drinking water. Maintenance Capital relates to funds used to repair or replace aging infrastructure and plant and equipment. Nonrecurring Capital is for projects that are necessary for the function of the Company but may or may not be directly related to regulatory compliance or maintenance of an existing asset.

Q What are the specific assets or projects that this funding request will cover?

Regulatory Compliance Capital Projects

Locke Lake Airstrip Station Arsenic Treatment ($150,000)

The Airstrip well is one of the larger producing wells in the Locke Lake system. Untreated raw water drawn from this well contains arsenic above the primary standard of 10 parts per billion (ppb) set by the Safe Drinking Water Act (SDWA) and manganese above the secondary standard of 0.05 parts per million (ppm). The Company uses an ion exchange system to reduce arsenic to levels below the SDWA standard. Adsorptive ion exchange media is used to "filter" arsenic. The media is a disposable product that requires a very costly change-out when its ability to effectively filter arsenic levels is "spent." Additionally, the Company cannot add disinfection to this well at this time because of the presence of manganese. The challenge for the Company is to provide a way to filter manganese from the water, while providing a less expensive alternative to the adsorptive media presently used. The Company has a treatment alternative in service at the Locke Lake Peacham Road Treatment Facility; the process is co-precipitation. Standard (reusable with backwash) iron and manganese filtration media is used with chlorination and iron addition to co-filter iron and arsenic at the same time. The effectiveness of the co-precipitation process at the Airstrip Station was pilot tested by Company staff and it was confirmed to be scalable to the Airstrip Station. It is anticipated that the new process will treat arsenic at one tenth of the ongoing operating cost of the existing adsorptive media system.

Installation/Replacement of Treatment Equipment ($40,000)

Installation of new or additional treatment at existing Company facilities to respond to quality changes in source water or other conditions in the Company's community water systems. This may include the addition of disinfection (chlorination), the addition of filtration to reduce raw water iron & manganese, ion exchange for arsenic reduction, softening, and chemical feed and storage systems. Operations staff regularly inspect and evaluate the performance of water treatment equipment in all of the Company's facilities. Throughout the course of the year, minor repairs are made when needed and the overall condition and effectiveness of filters, softeners, monitoring equipment, and storage equipment is evaluated. Equipment that requires an increasing level of repair, or equipment that has reached obsolescence, is inventoried and scheduled for replacement. During the past three years, 2011 through 2013, PEU expended approximately $150,000, or $50,000 annually, on treatment equipment, including one unplanned upgrade. The Company is currently evaluating which systems to upgrade during 2014 and which systems to upgrade in 2015 and later.

Lead Free Meter Exchanges ($115,000)

The SDWA was revised in 2011 to require that all wetted surfaces of pipes, fittings, and fixtures meet the definition of "lead free" in accordance with NSF International (NSF) and American National Standards Institute (ANSI) Standard NSF/ANSI 372 Annex G. Water meters are encompassed by this standard. The company is in the process of exchanging lead containing meters with lead free meters at the testing intervals required by NHPUC 600. The Company anticipates exchanging 590 meters in 2014 (installing 590 lead free meters as a replacement

for the retirement of 590 meters containing lead.). This replacement rate is consistent with the requirements of CHAPTER Puc 600 Section 605.04 Test Schedules for Meters. Puc 605.04 requires that the Company periodically remove and test meters. All 5/8 inch and ¾ inch meters are required to be removed and tested every 10 years and more frequently for larger meters. The rate of replacement (approximately 590 per year) coincides with the removal and testing schedule of Puc 605.04.

Maintenance Capital

Chemical Feed Pump Replacement ($45,000)

Chemical feed pumps for various chemical injection associated water treatment and disinfection are in place at nearly all of the Company's community water systems. This capital expenditure covers the replacement of out dated or un-repairable feed pumps in twenty (20) of our community water systems during 2014. Operations staff regularly inspect and evaluate the performance of chemical feed pumps in all of the Company's facilities. Throughout the course of the year, minor repairs are made when needed and the overall condition and effectiveness of the each pump is assessed. Pumps that require an increasing level of repair, or pumps that have reached obsolescence, are inventoried and scheduled for replacement.

Spruce Pond CWS SCADA Integration ($20,000)

This project includes the purchase of equipment and programming that will directly connect/integrate the SCADA at the Spruce Pond Station, located in

Windham, directly to the master system at the Company's Nashua treatment facility, enabling 24 hour monitoring and control of this station.

Thurston Woods Arsenic Treatment Piping Modifications ($8,000)

The current system does not consistently assure arsenic removal below SDWA standards. This capital project will allow the treatment system to alternate between arsenic lead and lag vessel, further assuring arsenic removal to meet SDWA standards. In addition, the piping improvements will include additional couplings to facilitate the periodic and necessary replacement of the filter media.

Storage Tank Painting ($40,000)

This project calls for the cleaning and recoating of two buried steel water storage tanks located at the Sunrise Estates Community Water System ("CWS") in Middleton, NH. Cleaning and repainting will extend the life of the tanks.

Well Redevelopment ($20,000)

Over time, wells lose capacity from mineral deposits plugging or restricting the flow of water through bedrock fractures and pumping equipment. Redevelopment is required to restore well capacity. This project relates to the redevelopment of one well at the Stone Sled CWS and one well at the White Rock CWS, both located in Bow, in 2014.

Distribution System Component Replacements

Hydrant Replacements ($7,500)

As a part of the Company's ongoing hydrant replacement program, the Company anticipates replacing two hydrants in response to age and performance. The Company budgets this work based on past experience and evaluates the priority of

which hydrants to replace based on age, condition, and the availability of replacement parts. This work is done in accordance with the hydrant maintenance and inspection requirements of Puc 606.03.

Valve Replacements ($30,000)

As a part of the Company's ongoing gate valve replacement program, the Company anticipates replacing 12 main line gate valves, in response to age and performance. The Company has budgets this work based on past experience and evaluates the priority of which gate valves to replace in accordance with the valve maintenance and inspection requirements of Puc 606.04.

Nonrecurring Capital

North Country Operations Building Design and Permitting ($25,000)

With the growth of the Company's North Country operations (particularly Barnstead and Middleton), additional operations facility space and structures are needed to support the work flow. The upgraded facility will include a building to house staff (including sanitary and locker facilities), garage facilities to store vehicles out of the weather, equipment and materials storage (covered and uncovered), and emergency power. This item covers the cost of design and permitting at the most cost effective location of the two sites that have been identified at Locke Lake in Barnstead.

Abandoned Station Demolitions ($100,000)

Over time, due to system (source) interconnection, several of the company's community water systems have been merged. Many of the original stations,

though out of service, remain on the sites. This project relates to the demolition of facilities located in Derry, Conway, Barnstead, Londonderry, and Windham.

Water Main Upsizing ($24,500)

Water main upsizing is capital that the Company contributes for a developer to upsize the diameter of water main completed as part of a main extension. The Company considers upsizing of a developer-installed main if it will benefit existing customers by improving supply capacity, pressure, and improved fire protection, or if the main extension is part of a larger supply plan. This could include closing "dead ends" by looping pipe or facilitating the interconnection of water systems, both of which would improve water supply reliability for existing customers. The contribution by the Company is for the difference in material costs only; for example, the difference in cost between 8-inch diameter pipe material and 12-inch diameter pipe material.

Q. Does this complete your testimony?

A. Yes.