Introduction

Q. Mr. Vaughan, please state your full name and business address.

A. My name is Donald J.E. Vaughan. My business address is 37 Northwest Drive, Plainville, Connecticut 06062.

Q. By whom are you employed and in what capacity?

A. I am President and CEO of New England Service Company, Inc. ("NESC"). In that capacity, I am responsible for management oversight of all aspects of the operations of its subsidiaries, namely; Valley Water Systems in Connecticut, Colonial Water Company, Mountain Water Systems and Plymouth Water Company in Massachusetts, and Abenaki Water Company in New Hampshire. My responsibility also includes management of NESC's non-regulated activities.

Q. Please describe your educational background and professional experience.

A. I have a Bachelor of Science degree in Civil Engineering from Northeastern University and a Master of Business Administration from Nichols College. I am a registered professional engineer. From 1976 to 1980, I served as the Director of Water Operations for the City of Worcester. In that capacity, I was involved in all phases of supply and distribution activities. Subsequently, I was employed by Citizen's Utilities as Assistant General Manager for California Water Properties. I also served as President and General Manager of Southbridge Water Supply and as the Superintendent of Supply Operations for Aquarion Water Company with responsibilities primarily in Connecticut. In 1992, I joined Plainville Water Company (now Valley Water Systems, Inc.). In 1996, I managed the formation of New England Service Company which now holds the subsidiaries noted above.

Q. Have you previously testified before the New Hampshire Public Utilities Commission or other regulatory bodies?

A. Yes, I have provided testimony to the Massachusetts Department of Public Utilities ("DPU"), the New Hampshire Public Utility Commission ("PUC"), and the Connecticut Public Utility Regulatory Authority ("PURA") on several prior occasions.

Q. Please describe the purpose of your testimony.

A. My testimony is to provide background information and support that will assist understanding of the following subjects: (1) the Rosebrook Water System's (RWS) need for a rate adjustment, and; (2) the capital expenditures that have taken place since Abenaki Water Company ("AWC", or the "Company") acquired RWS in September of 2016 and the resulting operational efficiencies which have and will continue to provide direct benefits to customers, and; (3) a proposed capital investment plan for 2018-2020 designed to realize even greater plant optimization through necessary and prudent improvements that, for the most part, address the extreme pressure gradient issue, and; (4) substantiation for AWC's acquisition price of RWS as well as the ensuing system (customer) benefits and sustaining its viability.

Q. Please provide a brief discussion of the Rosebrook Water System.

A. Rosebrook, after several years of languishing under ownership which had its focus on business interests elsewhere, was acquired by Abenaki Water Company on September 23rd, 2016. Abenaki acquired Rosebrook's assets through Wells Fargo Bank, which held the rights of the system previously owned by an equity group then having title to the present Omni properties.

The entire resort area is anchored by the Mt. Washington Hotel, which serves as the economic engine to Bretton Woods. The Rosebrook Water System is an essential part and a necessary asset to the present and future environmental health of the region from many perspectives.

The system itself is an operating sub-division of Abenaki Water Co. It produces, treats, and distributes drinking water to approximately 410 metered customers consisting of 390 residential

(mostly second and seasonal homes) and 20 commercial entities. About 60% of total water demands comes from the Omni Hotel properties.

Rosebrook's physical plant is composed of two wells, a 650,000 gallon storage tank, and mostly ductile iron distribution piping ranging from 8" to 16" in diameter. Public fire protection is provided through about 65 hydrants and several internal sprinkler systems.

While there is a small, local Abenaki operating office located in the service area, the system's principal administrative, customer service, and accounting functions take place at 32 Artisan Court, in Laconia.

Q. What test year has the Company selected and what was the test year in its previous rate docket?

A. In this filing, the Company is using the twelve months ending 9/30/17. In Rosebrook Water Company's previous rate case, the test year ending 12/31/11 was used.

Q. Why is AWC requesting new rates for the Rosebrook Water System?

A. AWC recognizes that unless it files a rate application as soon as possible its financial viability will be endangered. At this juncture, the Rosebrook Water System on a stand-alone basis is providing an insufficient return. This insufficient return is clearly dragging down the performance of AWC as a whole. The company estimates that with this filing, approved permanent rates will not go into effect until sometime near the end of 2018 or during the 1st quarter of 2019. That said, AWC must be focused on submitting the filing as soon as possible, particularly subsequent to making considerable capital expenditures, and because with a year's period of ownership, it can credibly document RWS' known and measurable operating and maintenance expenses. Furthermore, the Company is in a position to show firm, pro forma expenses for the twelve months following the test year based on its first hand and intimate knowledge of the Rosebrook system.

Q. What return on equity is the Company seeking?

A. The factors cited in the following are some of the significant reasons why the Company is requesting a ROE of 11.6%.

(1) In this significant and unique area of the state, proper operation of the water system is absolutely essential and a necessity to the everyday and on-going tourism, commercial, and seasonal recreational activities of Bretton Woods. It is an economic engine and source of employment in an otherwise remote area and hence, the requirement for an optimally performing Rosebrook Water System. To achieve this objective, Rosebrook must continually invest in its infrastructure, which it has already done in the test year and subsequently.

For Rosebrook to adequately invest (after attracting and earning capital) it must provide a return to incent those who are providing the funds. If it cannot do that, then it is financially impaired in making ongoing plant improvements. Those investors, also, will look elsewhere for appropriate market returns.

(2) Risks related to the system are many. Much of them are due to:

(a) The system is in an isolated region in the state. As such, among other things, recruiting and retaining skilled, qualified personnel are very difficult due to the sparse labor pool.

(b) The sub-alpine environment and steep terrain make for difficult winter operating and maintenance conditions in addition to those posed by extreme hydraulic pressures.

(c) As virtually a stand-alone system, its small size is the primary factor in revenue and expense volatility which is caused by costly weather events, malfunctions and main breaks. For example, on November 3rd, 2017, a powerful storm blasted the area forcing the Omni Mt. Washington Hotel, the company's biggest customer, to shut down for several days. Various other similarly cost intensive events have occurred, impacting the Company.

(d) Prior to the acquisition of Rosebrook, it had virtually no debt and was owned with almost 100% equity. Accordingly, the Company had a very high cost of capital. Post-acquisition under Abenaki, the capital structure is significantly leveraged toward debt and consequently will have a much lower cost of capital to the benefit of its customers. On the other side of the debt, AWC's creditor for the Rosebrook system (CoBank) will be keenly observing the Company's ability to earn a risk-adjusted return that allows it to service its obligations and concurrently properly fund its capital program.

As an aside, the Company firmly believes its requested ROE is justified due to the risk associated with its size. Therefore, it is currently collaborating with two other small water companies in engaging a cost of capital expert witness to prepare testimony focused on size premium. The companies expect a petition covering the subject will be filed with the Commission in the next 45-60 days.

In summary, the company requests a reasonable opportunity to earn a competitive return on its invested capital that will allow a successful start to its essential capital program going forward (see PFT following).

Q. What are your comments on Rosebrook's rate structure?

A. The Rosebrook system has unique water demand characteristics that might be expected with a ski resort. Several of the residences are occupied on a vacation rental basis while others are available for longer-term tenancy. Many of the residences are used as secondary homes for the owners. Consequently, water demand varies (peak demand occurs in February) depending on snow and general weather conditions which in turn have a direct link to rental activity as well as Omni Hotel occupancy. This combination of factors, particularly for a smaller system, imposes a fair degree of revenue volatility on system financials.

When Rosebrook's monthly base charge for a 5/8" meter ($9.91) is considered, it is apparent that in aggregate, revenue from this category is disproportionately low compared to on-going

operating costs. As this situation continues, dependence on volumetric charges increases when expected water demand decreases. Hence, revenue stability becomes a constant concern for Rosebrook which must balance fair and equitable rate structures versus the necessity to cover increasing infrastructure and supply costs. As volatility occurs, and demand lowers, the difficulty in covering fixed costs increases and Rosebrook becomes subject to insufficient returns adversely affecting continued investment. This then precipitates the need for a future resource-consuming rate filing.

To avoid this condition, and to better provide Rosebrook with more stable revenues, we urge approval of the base charge increase as proposed by Stephen P. St. Cyr whose recommendation is nearby. This proposal will assist in stabilizing revenues going forward while easing the volumetric charges proposed but necessary to satisfy the requested revenue requirement.

Q. Does AWC have any employees?

A. It does not. The long distances and travel time between AWC's operating systems would make it cost prohibitive (and nearly impossible) to assign a dedicated company employee to properly cover the service areas. This would be especially true for operator availability to function on a stand-by basis. Secondly, there is not a sufficient amount of field, administrative and financial work to warrant a full time person to perform all duties, nor is there a single person with the necessary qualifications and experience to fulfill all the responsibilities. Consequently, AWC utilizes the talent pool from NESC. For example, there are at least two people available to project manage plant improvements and address O&M responsibilities. Please refer to the affiliate agreement which is included as Exhibit 1.

Q. Since AWC acquired ownership of the Rosebrook system, what has been the extent of the Company's investment in its plant?

A. Rosebrook has directed funds concentrating largely on metering plant. The Company determined that this particular area had the highest priority for beginning investments.

As reported in the Staff Audit Division's May 2013 examination, Rosebrook's entire data collection and billing procedure was overdue for significant and cost-effective upgrades. The process as it existed was resource draining. We agreed.

Installation of radio read meters have been completed for nearly 100% of the customers. This project is enabling more accurate invoicing, virtual elimination of estimated bills, facilitation of monthly billing, earlier homeowner detection of leaks, the ability to calculate unaccounted for water on a monthly basis, and over the long-term, a reduction in operating expenses. Importantly also, it secures accurate and timely revenue recognition which is vital in enabling the company to meet all other financial obligations, including continued investment.

One other priority allocation of capital has been for the evaluation, planning, and engineering of a system-wide pressure reduction project. Over $25,000 has been invested in this very significant initiative, and although not yet used and useful, it lays the groundwork for what we would call, as a minimum, phase one of an essential pressure reduction effort. We use the term "phase one" because at this juncture, we cannot accurately predict the Omni Hotel's expansion plans and the timetable associated with them. However, whether or not the expansion plans materialize, Rosebrook *must* follow through on a system-wide pressure reduction project. As an essential part of the project, Rosebrook has already completed a hydraulic model which will be invaluable for the engineering to follow.

Q. Please elaborate on the pressure reduction project.

A. The effort surrounding the initiative to reduce the extreme high pressure in certain locations of the system stems from the original design location of the 650,000 gallon storage tank. In more technical terms, we estimate that the single hydraulic gradient controlling the system is in the vicinity of 200 ft. higher than what is considered operationally safe. For example, pressures in

the low elevations of the system, such as at the Omni Mt. Washington Hotel, far exceed the state maximum standard of 100psi.

Operation of the system at pressures bordering 200psi, since its inception, has had a history of negative consequences. These, in one way or another, have been examples of the difficulties and hazardous aspects of system operation. Noteworthy events having taken place include:

- Rosebrook Water Company was informed their commercial package and commercial auto policy, running from 6/23/15 to 6/23/16 would not be renewed. This event was triggered by an extensive damage claim by Rosebrook following a water hammer incident which flooded several townhouses during a hydrant flushing operation.
- In 2010, a high pressure event during a repair at Abenaki's well house caused major damage to that facility and forced the Mt. Washington Hotel to close for three days.

The system pressure consequences, history, and implications into the future are well known and we believe must be satisfactorily addressed. To be specific, there have been several water pressure incidents in the recent past that have adversely impacted the hotel and ancillary buildings, some more severely than others, but still continuing on a random basis and all adding to unanticipated operating costs and service issues for the resort complex and residences. As mentioned, these troublesome consequences have included ongoing sprinkler system issues, water hammer occurrences, residential damage, as well as insurance coverage complications.

The Department of Environmental Services (DES) has been well aware of the situation for some time. In their sanitary survey report, dated August 4, 2014, they concluded "pressure in the distribution system, as a result of storage tank elevation, is much higher than necessary for adequate water service and fire flow. This pressure presents serious questions about power consumption and about safety of the operation when making pipe repairs. We urge the system

owner to consider alternate ways of using the existing tank and adopting a lower pressure gradient."

In support of the pressure reduction project, we have included correspondence from DES, dated 1/26/17 and Twin Mountain Fire Department dated 2/25/17 as Exhibits 2 and 3, respectively.

Because of all contained in the preceding, we initiated a study by engaging Horizons Engineering from Littleton, to assist us with solving the problem once and for all. Horizons has provided us with a proposal (approximately $80,000) to prepare an engineering design and construction documents to build 3-4 coordinated pump stations, pressure reducing valve and vaults, among other items that will solve this major problem. In phase one of the engineering drawings, Horizons has identified the physical locations for all the infrastructure associated with the improvements to the project. Having contacted the property owners, Abenaki is working on finalizing details with each to obtain easements. Furthermore, Abenaki has developed a hydraulic model that provides various flow rates at numerous pressure levels expected under any number of operating conditions, thus verifying the solution. To date Abenaki has invested approximately $25,000 to conclude the phase one portion of the project.

Venturing forward into the final phase of the engineering design portion of the work represents a significant financial commitment. In addition to the design cost, the Horizon's report estimates construction cost at about $1.4MM. Given the very nature of a conceptual estimate, we would take a more conservative approach and suggest that the proposed construction might be more likely in the $1.5-2MM. range. Only project bids will narrow the cost down to what will be closer to the actual amount.

Q. With the understanding of the pressure reduction project, what are Abenaki's plans for capital additions for 2018 and later years?

A. Included with this testimony is Exhibit 4, which lays out the company's plans for the next 4 years. As expected, the pressure reduction project has the biggest capital expenditure. It is not exactly known what elements of the project will cost, but that information (project bids) will be available before this docket is complete.

In order to make this rate filing as efficient as possible, the company requests step increases for improvements beyond the test year which will be used and useful for the ultimate benefit of Rosebrook's customers.

Q. Does Abenaki plan to seek recovery of transaction costs incurred in the acquisition of Rosebrook?

A. Yes, as it indicated it would in testimony filed in the DW 16-448 acquisition proceeding. In that docket, the company had little control over the length of the acquisition proceeding, the discovery/hearing period or the amount of resources required in the effort, all of which had a direct bearing on the total expense. Please refer to the testimony of Steve St. Cyr which further details this request.

Q. Does the Company seek recovery of the acquisition premium which was an element of the transaction?

A. As indicated earlier, Rosebrook was a floundering, directionless water utility whose owners were struggling with foreclosure pressures. Absent was any semblance of efficiency or sign of leadership. Abenaki viewed Rosebrook as a system that over time would provide synergies and cost savings to all its customers in addition to those of Rosebrook.

Because the transaction was consummated, it secured for Rosebrook an entity having a team of seasoned operators and managers who have already had a positive impact on system performance.

Abenaki seeks recovery of the acquisition premium in regulatory alignment with jurisdictions such as in Massachusetts and Connecticut. Abenaki has already incurred financial losses subsequent to its ownership, and requests, as incentive to own and stabilize poorly managed systems, recovery of the premium paid.

In the final analysis, Rosebrook was an example of a struggling, underperforming water system. The sellers were no longer interested in managing the company and wanted to move on to other things. When considering the entire transaction from start to finish, Abenaki is the right owner to provide the investments necessary for the future of the system.

Q. Does this conclude your testimony?

A. Yes.

Agreement

Between

New England Service Company and Abenaki Water Company

Whereas, New England Service Company is a Connecticut Corporation, duly authorized to conduct its business in New Hampshire under the name "NESC Water" (hereinafter "NESC"), and,

Whereas, Abenaki Water Company (hereinafter "AWC") is a New Hampshire Corporation operating water and wastewater systems under the jurisdiction of the N.H. Public Utilities Commission and Department of Environmental Services, and,

Whereas, AWC is a wholly owned subsidiary of NESC and desires certain water and sewer services, and,

Whereas, NESC is a corporation which furnishes certain water and waste water services, and

Now therefore, this agreement is made effective this 26th day of August, 2017 between NESC and AWC and all provisions of this agreement shall commence fully in force on August 26, 2017 as follows.

a) Scope of services to be provided by NESC for AWC which owns and operates White Rock Water System in Bow, the water and wastewater systems of Lakeland Water System in Belmont and the Rosebrook Water System in Bretton Woods.

1. Stand-by duty on a continuous basis (24/7) for emergencies and unexpected or non-scheduled necessary work.
2. Meter reading on a monthly, quarterly, or as needed basis.
3. Routine system rounds such as facility checks and monitoring water quality, sewer system monitoring, and oversight and overview of distribution and collection systems.
4. Regulatory and compliance reporting.
5. Shut offs and turn on of water services for, as an example, overdue payments, new services.
6. Flushing annually and more frequently as appropriate for water mains and maintenance of quality.
7. Valve exercising.
8. On site/field resolution of water quality and service issues.
9. Providing miscellaneous on-site customer service as required.

10. Performing ongoing cross-connection inspections.

11. Inspection of wastewater pumping and collection systems including manhole flows.

12. Other routine, periodic, and related tasks as necessary.

b) Qualifications of operating personnel provided by NESC:

1. The chief operator shall have as a minimum, Grade II distribution and treatment licenses. Any operations conducted by lesser grade personnel shall be the responsibility and under the review of the chief operator.

2. Wastewater pump station maintenance shall be performed by licensed domestic and industrial pump installers.

c) Insurance

1. Liability insurance – while this agreement remains in force, NESC shall have personal injury and property/liability insurance of at least $1,000,000 in the aggregate and not less than $500,000 per occurrence. Similarly, subcontractors employed shall have the same levels or more of insurance.

2. Workman's compensation – NESC shall continuously maintain workman's compensation insurance for all its employees/operators involved with this agreement. Workman's compensation coverage shall at least equal the maximum statutory limit provided for by law. Furthermore, NESC shall not employ subcontractors in the performance of its duties under this agreement unless said contractors provide the same workman's compensation coverage as NESC.

d) Termination

1. By mutual agreement – all provisions of this agreement shall become null and void in the event the parties mutually agree in writing to terminate this agreement, setting forth the agreement and the effective date of such termination. Likewise, the parties may modify this agreement in part or its entirety by mutual and simultaneous agreement at any time.

2. By one party notice – either party may terminate all provisions of this agreement by giving a notice of termination in writing to the other party. In such an event, a full termination of this agreement shall occur within sixty (60) days of the receipt of such notice by the party served. Between the receipt of a notice of termination and the expiration of the sixty (60) day period, both parties shall be bound by all provisions of this agreement.

e) The following schedule of charges rendered by NESC and paid to NESC shall be increased by 2.5% annually:

1. For AWC's Lakes Region and area water and waste water systems

a) Regular work hours - Operator $75 per hour

b) NH Administrative Support/Accounting
*To be billed at Cost plus Benefits and Overhead

c) NH Administrative Support for Billing Procedures $60 per hour
*To include time spent driving to and for post office

d) Overtime work hours - Operator (usually for emergency and unplanned jobs) $112 per hour

e) Overtime work hours – Administrative Support/Accounting
*To be billed at Cost plus Benefits and Overhead

f) On call coverage (24/7) to be billed through payroll hours on a weekly basis as outlined below for each Water System

*Lakeland Water – 1.0 hours
*Lakeland Sewer - .50 hours
*White Rock - .50 hours

g) All other labor to be billed at cost

2. For AWC's Northern Region (Rosebrook)

a) Regular work hours - Operator $75 per hour

b) NH Administrative Support/Accounting
*To be billed at Cost plus Benefits and Overhead

c) NH Administrative Support for Billing Procedures $60 per hour
*To include time spent driving to and for post office

d) Overtime work hours - Operator (usually for emergency and unplanned jobs) $112 per hour

e) Overtime work hours – Administrative Support/Accounting
*To be billed at Cost plus Benefits and Overhead

f) On call coverage (24/7) to be billed through payroll hours on a weekly basis as outlined below for each Water System

*Rosebrook Water – 2.0 hours

g) All other labor to be billed at cost

In Witness thereof, NESC and AWC have hereunto affixed their signatures as of the date above first written.

Alex Crawshaw, President
Abenaki Water Company

Donald Vaughan, President
New England Service Company

The State of New Hampshire
Department of Environmental Services

Clark B. Freise, Assistant Commissioner

January 26, 2017

Alex Cranshaw
Abenaki Water Co.
37 Northwest Drive
Plainville, CT 06062

Subject: Rosebrook Water (0382010)
Pressure Reduction Project

Dear Mr. Cranshaw:

We understand that you are in the process of presenting drinking water system upgrades to the community. The biggest issue that you plan to address is the high pressure areas throughout the system and in some locations are high enough to pose safety concerns. A normal system pressure range recommended by this department is 60 to 80 psi, with a minimum and maximum of 35 psi and 100 psi, respectively. It is our understanding that the existing water system owned by Rosebrook Water can exceed 200 psi in some locations. This extremely high pressure creates a safety risk, increased water loss through water main breaks or leaks, increased operating costs, and the necessity of home pressure reducing valves (PRVs). You have also indicated that the system lost insurance coverage because of numerous claims caused by the excessive pressure.

We are in support of and recommend system modifications which will reduce the public health risk and will maintain pressures within the recommended range. Not only will this provide for a safer and less costly system to operate, it also creates the ability for the operating company to take back ownership of system maintenance from home and commercial owners who are currently maintaining their own PRVs.

If you have any questions, please do not hesitate to reach out to me at Randal.Suozzo@des.nh.gov or 271-1746.

Sincerely,

Randal A. Suozzo, P.E.
NHDES Drinking Water & Groundwater Bureau

ec: Don Vaughan, Abenaki Water Company

Twin Mountain Fire Department

Twin Mountain. Fire Department
PO Box 119
104 Route 3 North.
Twin Mountain, NH 03595

Phone: 603-846-5545
FAX: 603-278-7944
email: twinmountainfirerescue@townofcarroll.org

February 25, 2017

Mr. Donald J. T. Vaughan
Abenaki Water Company
37 Northwest Drive
Plainville, CT 06062

Re: Rosebrook Water System

Dear Mr. Vaughan:

The Twin Mountain Fire Department is a municipal department providing fire protection services for Bretton Woods, served by the Rosebrook water system. As presently configured, the Rosebrook system has pressures as high as 200 psi in some areas. This pressure is excessively high and potentially dangerous from the perspective of operating fire hydrants and other equipment. Typically, municipal systems operate between 50 and 75 psi which is generally adequate for fire fighting purposes.

As the current owner and operator of the Rosebrook system, Abenaki has presented a plan for improvements to the system that would lower the maximum pressure to 100 psi while still maintaining adequate fire flows. The Twin Mountain Fire Department supports this project and believes that it would improve safety and reliability of the system.

Respectfully,

Jeremy Oleson
Fire Chief

Cc: TMFD - File

Exhibit 4
Abenaki Water Company
Projected Capital Program for the Rosebrook System
Estimated Company Investments in Present Day Dollars
November 14, 2017

Project No.	Project Description	2018	2019	2020	2021	Comments
1.	Purchase and install miscellaneous meters.	$5,000	$7,500	$7,500	$7,500	Replace existing and install new meters as they become inoperative or as new customers occur.
2.	Install SCADA system.	$20,000	-	-	-	Facilitate remote data access to enable operator to proactively monitor system as well as to be timely alerted.
3.	Lower certain company-owned services and install curb stops. Also, replace or install new services.	$15,000	$15,000	$17,500	$20,000	System has a history of service freeze-ups. New customers are expected to come online.
4.	Invest in Horizons pressure reduction design.	$70,000	-	-	-	Complete phase two of the pressure reduction proposal. Furnish engineering plans and specifications.
5.	Construct one to two pump stations in connection with above. Obtain easements.	$100,000	$500,000	$500,000	$500,000	All investments in relation to pressure reduction project. Install pump station, pipelines, pressure reduction valves, instrumentation, etc.
	Total utility plant Improvements*	**$210,000****	**$522,500**	**$525,000**	**$527,500**	

* Subject to local and state reconstruction and paving projects, governmental mandates, operational maintenance, and regulatory changes. Does not include capitalized labor and overheads.

** Source of funds as approved in this docket:

Depreciation:	$ 64,000
½ Net Income:	$ 18,000
Debt:	$128,000
	$210,000