

**State of New Hampshire
Public Utilities Commission**

**Application of
Abenaki Water Company
For Approval of a Rate Adjustment**

Direct Joint Testimony of Robert Gallo and Donald J.E. Vaughan

DW 20-112

Introduction

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

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

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

5 A. I am Vice President of operations at New England Service Company, Inc. ("NESC"). In
6 that capacity, I am responsible for management oversight of all aspects of the operations
7 of its subsidiaries, namely; Valley Water Systems in Connecticut and Colonial Water
8 Company in Massachusetts, Mountain Water Systems in Massachusetts and Abenaki
9 Water Company in New Hampshire.

10 **Q. Please describe your educational background and professional experience.**

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

21 **Q. Mr. Gallo, please state your full name and business address.**

1 A. My name is Robert J, Gallo. My business address is 37 Northwest Drive, Plainville,
2 Connecticut.

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

4 A. I am Vice President of Engineering at the New England Service Company, Inc.
5 ("NESC"). In that capacity, I am responsible for the management oversight of all capital
6 projects, engineering evaluation and design. My duties extend to all NESC subsidiaries,
7 namely; Valley Water Systems in Connecticut, Colonial Water Company in
8 Massachusetts, Mountain Water Systems in Massachusetts and Abenaki Water Company
9 in New Hampshire.

10 **Q. Please describe your educational background and professional experience.**

11 A. I hold an Associates of Arts degree from Ocean County College in Toms River, New
12 Jersey, and I have a Bachelor of Science in Civil & Environmental Engineering from the
13 University of Vermont, in Burlington, Vermont. From 1999 to 2002 I was employed as
14 an engineering technician by the City of Burlington Department of Public Works, where I
15 was involved in water system modeling, water main installation inspection,
16 administration of the annual paving program and pavement evaluation, including the
17 management of the pavement management computer software. From 2003 to 2004 I was
18 employed by Strand Associates, Inc., in Louisville, Kentucky. During my tenure at
19 Strand Associates I was on contract to the Louisville Metropolitan Sewer District, where
20 my duties included the inspection and record keeping for the construction of sewer
21 collection/pump station systems, stormwater conveyance and treatment systems, and
22 erosion control systems on various projects. From 2004 to 2011 I was employed by
23 Trudell Consulting Engineers in Williston, Vermont. My work at Trudell Consulting, as

1 a project manager, involved most aspects of land development and permitting, including
2 utility modeling and design (water, sanitary sewer, stormwater), roadway, grading, and
3 erosion control design. Another facet to the position was extensive regulatory permitting
4 with local, State and Federal agencies. From 2011 to 2019 I was employed by AI
5 Engineers, Inc. in Middletown, Connecticut, where I was the Director of Civil
6 Engineering and Surveying Services. My duties included the technical, operational and
7 managerial oversight of the department. Typical design work included underground
8 utility design (sanitary sewer, water and stormwater), roadway design, bridge design
9 support services and site design/permitting. I am a registered Professional Engineer in
10 Vermont, New Hampshire, Massachusetts and New York.

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

13 A. I have testified before the New Hampshire Public Utilities Commission. I have also
14 provided expert witness testimony in Vermont Superior Court.

15 **Q. Please describe the purpose of your testimony.**

16 A. My testimony is to provide background information to assist understanding of: (1)
17 Abenaki Water Company's ("the Company") need for a rate adjustment; (2) capital
18 expenditures transacted and operations which have been employed to improve service;
19 (3) a proposed capital plan designed to realize future optimal operations through prudent
20 investment; and, (4) the benefits of consolidation and rate unification.

21 **Q. What is the test year the Company will be using in this application?**

1 A. The Company is using the twelve months ending December 31, 2019 for Lakeland Water
2 (“LL Water”) and Lakeland Sewer (“LL Sewer”) and White Rock (“WR”) and the twelve
3 months ended April 30, 2020 for Tioga Gilford Village (“TGV”) and Tioga Belmont
4 (“TB”) It is using the twelve months ended April 30, 2020 for TGVe and TB because
5 there is only 8 months of actual data under the Company’ s ownership as of December
6 31, 2019

7 **Q. When was the Company’s last rate adjustment petition submitted and ordered?**

8 A. The Company’s first petition for a rate adjustment for LL Water and LL Sewer and WR
9 was submitted July 23rd, 2015 and the commission rendered an order June 3rd, 2016 as
10 DW 15-199.

11 **Q. Why is the Company now requesting an adjustment in rates?**

12 A. As stated earlier, the Company’s last rate filing was July 23rd, 2015. It will have been
13 more than five years when a future, permanent rate adjustment will take place and in
14 between these years the Company has made plant investments and incurred rising
15 operating costs. Consequently, the Company seeks to recover those costs and capital
16 expenditures in order to maintain its viability atLL Water, LL Sewer WR, TGV & TB.
17 LL Sewer, WR, TGV & TB are experiencing returns far less than satisfactory.

18 **Q. Please explain the benefits of rate unification as the Company has requested.**

19 A. As previously testified, rate unification is a pricing methodology that already exists in
20 even the smallest of water systems under the Commission’s Jurisdiction. It is
21 significantly common in the gas and electric utilities. Accordingly, Abenaki and its
22 customers will benefit over time via more stable rates and mitigated increases influenced

1 by a combination of scale and single tariff pricing. Even within large water systems,
2 socialization of prices currently exists when considering the cost of service to supply,
3 say, one group of customers benefitting from a pump station; or another which receives
4 water from an unusually long pipe line; over an array of other consumers. Further,
5 exceptionally expensive main breaks, protracted leak detection in search of destabilizing
6 water losses, or mandated/necessitated capital improvements can occur in any system at
7 any location with little or no notice.

8 Additionally, the costs of regulatory (rate case) expense, audits, and administrative filings
9 can be shared by customers on an equal basis that will limit exposure to these
10 expenditures. Effectively, rate unification eases the impact of expenses by spreading
11 costs over the entire customer base rather than directing it to the few.

12 **Q. Please provide an overview of the plant, operations, and issues of the individual**
13 **systems subject to this filing.**

14 **A.** Four water operating systems are involved in this rate application, namely; White Rock,
15 Lakeland, Tioga Gilford Village and Tioga Belmont.

16 The White Rock system is located in Bow and has approximately 95 customers. Its
17 groundwater is sourced from 3 bedrock wells and processed through an arsenic treatment
18 plant. Storage is contained in two 15,000-gallon buried atmospheric tanks which have
19 been recently inspected and proposed for lining, as shown on the enclosed capital plan. A
20 manifold has recently been installed (part of the Company's 2020 improvements) which
21 allows for isolating each tank for shutdown, while keeping the other in service.

22 The bedrock wells are extraordinarily deep with one drilled over 1,000 ft. On a sustained
23 basis, which can occur with an undetected leak or under drought conditions, the

1 Company has observed that these wells can only produce a combined 12-15 gallons per
2 minute, which is unsatisfactory for a system of this size. Historically, the system has
3 frequently operated under a supply deficit which has necessitated tanker truck deliveries
4 of purchased water. This has occurred several times over the past and has forced the
5 Company to defer these expenses (which are large and unpredictable costs) so that they
6 may be amortized over time.

7 The distribution system was constructed using inferior water works materials consisting
8 of fused/glued PVC, nylon connecting fittings, and typically polyethylene services. The
9 entire distribution system is fragile and prone to leaks. Particularly problematic are the
10 nylon fitting's which are highly susceptible to cracking and ultimately failing. A picture
11 showing such a fitting is attached as Exhibit 1. Accumulation of small undetected leaks
12 (and they are difficult to detect) of say 4 -5 gallons per minute can represent 40 to 50% of
13 production, and which is recorded as unaccounted/non-revenue water. Leak detection on
14 this system is continual and at a significant on-going cost. Due to the tentative
15 sustainability of adequate supplies and the leak prone condition of the distribution
16 system, the Company has messaged customers requesting no outdoor water use.

17 In view of the foregoing, the Company has included in the capital plan a search for a new
18 water source, the potential for treatment improvements (additionally the need to meet
19 new arsenic standards of 5ppb in 2021) and gradual upgrades to the distribution system.
20 However, the Company has reconsidered the plan, particular with respect to the search
21 for new supplies and the associated risk of success/ failure in drilling productive bedrock
22 wells. The cost of drilling unsuccessfully (a high probability) is a transferable cost to
23 customers and is on which the Company would like to minimize. That message was

1 conveyed in a virtual meeting with members of the Village Shores Estates; customers of
2 the Company, on August 20th, 2020 and the consensus was to seek multi-system funding
3 for improvements. Accordingly, the Company has scaled back its capital plan for the
4 White Rock system. In the meantime, operation of the system is precarious, subject to
5 the significant frailties of the aforementioned infrastructure.

6 As shown on the capital plan and based upon the Company's internal study which
7 appears as Exhibit 2, the Company has planned to replace two pressure reducing valves.
8 At the same time, the Company would install at least two main line valves for the express
9 purpose of having better ability to isolate sections of the system thereby improving leak
10 detection ability.

11 The Tioga Gilford Village system serves about 39 customers using production from two
12 wells. Treatment is by filtration which is presently being evaluated and proposed on the
13 capital plan. Consideration of the filter media is also in process to lower Radium 226 and
14 228 levels. The distribution system is marginal at best and is composed of a variety of
15 materials including iron, PVC, and polyethylene.

16 Tioga Belmont is a similar operating system of about 22 customers with a filtration
17 system treating water from two bedrock wells. Total storage capacity is about 4,500
18 gallons which is insufficient, and became painfully apparent this past year due to the
19 extended existence of an undetected leak. Purchased water brought in by a 6,000-gallon
20 tank truck could not be fully accommodated by the storage tank. The distribution system
21 is subpar, being composed of PVC, nylon fittings and polyethylene.

22 Capital improvements for this system include up to a 12,000-gallon storage tank as well
23 as treatment/ filtration improvements and are shown on the 5-year capital plan.

1 The Lakeland system is one that has approximately 160 water customers and 158
2 customers served by the Company's sewer collection system. During the course of 2020,
3 the Company installed a much-needed grinder pump at its sewer pump station. The water
4 distribution system is composed of PVC mains. Source water is from two wells. Capital
5 improvements scheduled for the system include VFD pump/motors, strategic isolation
6 (main) valves and flushing blow-offs.

7 **Q. What was the benefit of the meter installation project at the Tioga systems?**

8 A. As was the case in a similar project completed earlier at the White Rock and Lakeland
9 systems, radio read meters were installed in the Tioga systems to reduce overall meter
10 reading expense, produce more financially manageable bills on a monthly basis and
11 allowed the calculation of unaccounted for water more frequently. Additionally, radio
12 read bills allow customers earlier recognition of internal plumbing leaks.

13 Generally speaking, there are few billing complaints when customers are billed on a
14 monthly basis.

15 **Q. Please comment on the projected capital program?**

16 A. The capital projects shown on Exhibit 3 are generally the ones mentioned in the
17 preceding, and which the Company regards as having priority until some incident
18 requires an addition superseding it. The plan is brief, by no means comprehensive and
19 goes out only three years, which in itself stretches the Company's ability to target
20 specific projects in light of other capital needs coming to the fore instead. Suffice it to say
21 that the mentioned four systems are needy, making them highly capital intensive. The
22 needs in the respective systems are virtually interchangeable in their importance.

1 **Q. Does this conclude your testimony?**

2 A. Yes.

3

4 LIST OF ATTACHMENTS

5 Exhibit 1

6 Exhibit 2

7 Exhibit 3