

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

**PENNICHUCK WATER WORKS, INC.
PETITION FOR SPECIAL CONTRACT
WHOLESALE SERVICE TO THE TYNGSBOROUGH WATER DISTRICT**

DOCKET NO. DW 15-___

**DIRECT TESTIMONY OF
CHRISTOPHER P.N. WOODCOCK**

MAY 1, 2015

**Woodcock & Associates, Inc.
18 Increase Ward Drive
Northborough, MA 01532**

1 **Q: Please state your name and business address?**

2 A: My name is Christopher P.N. Woodcock and my business address is 18 Increase
3 Ward Drive, Northborough, Massachusetts 01532.

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

5 A: I am the President of Woodcock & Associates, Inc., a consulting firm specializing in
6 water and wastewater rate and financial studies.

7 **Prior Experience**

8 **Q: Please describe your qualifications and experience.**

9 A: I have undergraduate degrees in Economics and in Civil Engineering from Tufts
10 University in Medford, Massachusetts. After graduating in 1974, I was employed by
11 the environmental consulting firm of Camp, Dresser, and McKee Inc. (now CDM-
12 Smith). For approximately 18 months, I worked in the firm's environmental engi-
13 neering group performing such tasks as designing water distribution and transmis-
14 sion pipes, sewer collection and interception systems, pumping facilities and por-
15 tions of a wastewater treatment facility. From approximately January 1976, I
16 worked in the firm's management and financial consulting services group, gaining
17 increasing responsibility. At the time of my resignation, I was a corporate Vice
18 President and appointed the leader of the group overseeing all rate and financial
19 studies. In my career, I have worked on approximately 500 water and wastewater
20 rate and financial studies, primarily in the United States, but also for government
21 agencies overseas. I also have worked on a number of engineering and financial
22 feasibility studies in support of revenue bond issues, I have helped draft and review

1 revenue bond indentures, and I worked on several valuation studies, capital im-
2 provement financing analyses, and management audits of public works agencies.
3 In addition to my professional experience I have held elected and appointed posi-
4 tions on municipal boards overseeing public works functions.

5 **Q: Have you previously testified before state regulatory commissions or courts**
6 **on rate related matters?**

7 A: Yes, in addition to testimony I have provided before the New Hampshire Public Utili-
8 ties Commission (PUC or Commission), I have provided testimony on rate related
9 matters before utility commissions in Rhode Island, Maine, Massachusetts, Con-
10 necticut, New York, Maryland, Texas, and Alberta, Canada. I have been retained
11 as an expert witness on utility rate related matters in proceedings in state courts in
12 Arkansas, Florida, Massachusetts, Michigan, New Jersey, Maryland, Ohio, Virginia,
13 California, and Pennsylvania, as well as the Federal Court in Michigan. I have been
14 selected for several arbitration panels related to disputes over water rates and
15 charges; I have provided testimony on rate related matters to the Michigan and
16 Massachusetts legislatures, and I have provided testimony at administrative hear-
17 ings on a number of occasions.

18 **Q: Do you belong to any professional organizations or committees?**

19 A: Yes, I am a member of the Water Environment Federation, the Rhode Island Water
20 Works Association, the Massachusetts Water Works Association, the New England
21 Water Works Association, and the American Water Works Association. For the Wa-
22 ter Environment Federation, I was a member of the committee that prepared the
23 manual on Wastewater Rates and Financing. I am past chairman and a current

1 member of the New England Water Works Association's Financial Management
2 Committee. In my capacity as Past President of the New England Water Works As-
3 sociation, I also sat on the Board of Directors as well as chairing and sitting on a
4 number of other administrative committees. For the American Water Works Asso-
5 ciation, I am past chairman of the Financial Management Committee and the Rates
6 and Charges Committee that has prepared the manuals on Revenue Requirements,
7 Water Rates, Alternative Rate Structures, and Water Rates and Related Charges. I
8 have been reappointed to and am currently the longest standing member of the
9 AWWA Rates & Charges Committee.

10 **Q: What is your role in this proceeding?**

11 A: I was retained by Pennichuck Water Works, Inc. (PWW or the Company) to analyze
12 the cost of providing bulk water to the Tyngsborough Water District (Tyngsborough
13 or the District).

14 **Q: How did you do this?**

15 A: I used the Company's most recent cost of service study, which was filed in PUC
16 Docket No. DW 10-091, as the basis for my analysis. I used the revenues that were
17 stipulated by the parties in the May 2011 Settlement Agreement.

18 **Q: What were the results of your analysis?**

19 A: I found that the Company could provide water to Tyngsborough at a rate advanta-
20 geous to both parties. The Company can recover its cost to provide water, plus a
21 contribution to fixed costs that benefits PWW's other customers. Tyngsborough can
22 purchase water from the Company at a rate less than its current supplier charges.
23 As a result, both parties would benefit from this arrangement.

1 **Q: Have you prepared schedules that present your analysis?**

2 A: I developed six schedules from the cost of service study in Docket DW 10-091. I
3 added columns to the earlier cost of service study to represent non-retail costs.
4 These are costs unrelated to retail service provided by the Company and, therefore,
5 represent costs that Tyngsborough should bear. I allocated these amounts to base,
6 maximum day, and maximum hour cost components. The non-retail costs that
7 Tyngsborough bears include supply, treatment, and transmission costs, but ex-
8 cludes retail system costs such as billing and collection, services and meters, and
9 local distribution costs.

10 **Q: How did you allocate the non-retail costs?**

11 A: I followed the approach used in Docket No. DW 10-091. In a number of cases, I de-
12 rived new percentages to account for the exclusion of retail costs from the analysis.
13 In cases where an allocation factor was derived on the exhibits, I retained those
14 percentages and showed the new allocation factors for the non-retail costs on the
15 same line.

16 **Q: Please describe the schedules you prepared.**

17 A: Schedule 1 presents the rate base. As noted above, I used the same schedule pre-
18 sented in the last cost of service filing, but I added four new columns (shaded in
19 light blue) that show the total amount that Tyngsborough should bear (non-retail
20 costs) plus the amounts allocated to the base and extra capacity demands.
21 For many items, I could directly assign the asset values as retail or non-retail relat-
22 ed. The costs that Tyngsborough should bear include the costs applicable to all
23 customers ("non-retail costs"). Supply mains, for example, apply to all customers.

1 On the other hand, some assets, such as pumping equipment, need to be analyzed
2 to determine the amounts related to retail service and to non-retail service. The
3 Company provided the data to make these determinations.

4 Page 3 of Schedule 1 includes the allocation of the accumulated depreciation re-
5 serve, acquisition adjustments, rate base additions, and rate base deductions. The
6 bottom of page 3 presents the overall rate base allocations.

7 **Q: Please describe Schedule 2.**

8 A: Schedule 2 presents the allocation of the total revenue requirements. Once again, I
9 first determined the costs that Tyngsborough should bear and then allocated those
10 to base, maximum day, and maximum hour cost components. In some cases, this
11 required identifying the facilities that would be used by Tyngsborough. For exam-
12 ple, Tyngsborough would use pumping facilities at the treatment plant, but not all
13 the distribution pumps. Accordingly, the Company provided me the costs of the
14 Amory pumping station.

15 **Q: Please describe Schedule 3.**

16 A: Schedule 3 looks at salary costs. For pumping salaries, I used the value of assets
17 applicable to non-retail service to derive the amount that would be applicable, in
18 part, to Tyngsborough. For transmission and distribution pipe, the Company pro-
19 vided detailed pipe data, which enabled me to determine the core system share of
20 each size pipe serving all customers, including Tyngsborough. From this analysis, I
21 determined that 12.5% of the core system pipe serves Tyngsborough. I used this
22 factor to allocate transmission and distribution salary costs.

1 **Q: Please describe Schedule 4**

2 A: Schedule 4 is the same schedule included in the original filing in Docket No. DW 10-
3 091, which I used as the basis for allocating the non-retail costs. On page 2, I show
4 the percentages used to allocate the non-retail costs.

5 **Q: What does Schedule 5 show?**

6 A: Schedule 5 shows the average day (base), maximum day, and maximum hour de-
7 mands by each customer class or group. The amounts are the same as those pre-
8 sented in the Docket No. DW 10-091, except that I added the demands from
9 Tyngsborough. The Tyngsborough volumes are based on the capacities the District
10 requested from the Company, which are also reflected in the proposed special con-
11 tract. This schedule shows the percentage of each cost component (base, maxi-
12 mum day, and maximum hour) that should be allocated to Tyngsborough to derive
13 the overall revenue requirements recoverable from the District.

14 **Q: What does Schedule 6 present?**

15 A: Schedule 6 summarizes the costs that were allocated to Tyngsborough. It summa-
16 rizes the non-retail costs by cost component (from Schedule 2) and then distributes
17 a share to Tyngsborough based on the proportion of each used by Tyngsborough.
18 Taking the total of these costs (\$255,485), divided by the annual sales (121,992
19 hundred cubic feet), results in the proposed rate of \$2.094/ccf.

20 **Q: Does this conclude your testimony?**

21 A: Yes it does.