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STATE OF NEW HAMPSHIRE
BEFORE THE
NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

RE: CONCORD STEAM CORPORATION

DG 16 - 294

PREFILED DIRECT TESTIMONY
OF
PETER BLOOMFIELD, P.E.

March 16, 2016

1 **I. INTRODUCTION AND OVERVIEW OF TESTIMONY**

2
3 Q: Please state your name and address.

4 A: My name is Peter G. Bloomfield. My business address is P.O. Box 2520, Concord,
5 New Hampshire 03302.

6 Q: How are you associated with Concord Steam Corporation?

7 A: I am President of Concord Steam Corporation (the "Company").

8 Q: Please describe your education and professional background.

9 A: I graduated from Union College in 1976 with a B.S. in Mechanical Engineering. I
10 am a registered Professional Engineer in New Hampshire, New York, and
11 Colorado. I have been employed as an engineer in the steam and power industry
12 since I graduated from college. I became president of the Company in the fall of
13 1986.

14 Q: Are you familiar with the books and records of the Company?

15 A: Yes.

16 Q: Has a substantial portion of the Company's rate filing been prepared by you or
17 under your supervision?

18 A: Yes.

19 Q: What is the purpose of your testimony?

20 A: The purpose of my testimony is to provide support for the Company's request
21 for an increase in its permanent rates in this case. I will present documents and
22 other information in support of the Company's rate request, and explain the
23 development of the revenue requirement and the calculation of proposed rates.
24 In addition, I will explain Schedule A and Schedules 1 through 6, which are
25 attached to my testimony.

26 **II. THE COMPANY'S NEED FOR RATE RELIEF**

27 Q: Please describe the Company and its customers.

28 A: Concord Steam provides district steam service from its facility at Pleasant Street
29 in Concord, New Hampshire, and is the only steam utility in New Hampshire. It
30 has 85 customers, all of which are located in the City of Concord. The Company

1 has one residential customer, the remainder are all commercial or institutional
2 customers.

3 Q: When did the Company last change its usage rates?

4 A: The Company's last usage rate case was in 2012 (DG 12-242); the rates established
5 in that proceeding became effective May 1, 2013, pursuant to Order No. 25,499.
6 There have been no changes in the Company's usage rates since then.

7 Q: Why is the Company filing this rate case?

8 A: The Company is filing this rate case because its adjusted rate of return for the test
9 year of 2015 was 0.04%. The Company has had reduced revenues and increased
10 expenses and has not made its allowed rate of return. The largest increases in
11 expenses have been in property taxes and insurance. The Company's test year
12 operating expenses are summarized in Schedule 1. There has also been a 4%
13 decrease in the amount of steam sold, even after allowing for weather
14 normalization, which reduces our usage rate income.

15 Q: How is this filing structured?

16 A: The primary filing is for the Company's operations for the next two years, in
17 anticipation of the plant rebuild and the new construction entering to service in
18 2018/19. The Company has two paths forward that are possible. One is a
19 rebuilding of the existing steam plant with improvements and efficiency
20 upgrades, and the other is closure of the company. The path selected will be
21 largely dependant on the State of NH's decision on whether to convert all of its
22 buildings to natural gas. The State of NH is the single largest customer of the
23 Company. The first scenario is if the State chooses to remain with steam. This
24 requires a two-step process in our rate tariff. The construction will take about 2
25 years, during which time the facility will continue to operate and supply steam
26 to its customers. A rate increase is needed for that two-year period of time due
27 to an increase in operating costs over the past four years. The other scenario is
28 for the situation where the State chooses to convert to gas, in which case the
29 plant will be closed down and phased out over 18 months.

30 Q. What is the situation with the State?

1 A. The State issued an RFP for third parties to convert all of the State's buildings
2 from steam to natural gas with a sample look at 7 buildings. The RFPs were
3 submitted in September and the Department of Administrative Services plans to
4 complete its analysis by March. The State plans to contract with one of the RFP
5 responders to perform an in depth engineering study of all 28 of the State's
6 buildings to determine an accurate cost the proposed improvements and a
7 guaranteed level of savings for the State. This second level of report is to be due
8 in October of 2016.

9 Q: Have there been any changes in operation at the Company's facility?

10 A: No. The Company has two boilers able to burn both wood chips and natural gas
11 as fuel. There is a third boiler that only burns gas and is used for peaking and
12 backup. Wood waste has been the primary fuel source for Concord Steam since
13 2003. The plant can also meet 100% of its load requirements by burning natural
14 gas.

15 Q: Please summarize your computation of the Company's revenue deficiency.

16 A: Schedule A summarizes the computation of revenue deficiency. The Company's
17 thirteen month average rate base is \$5,905,585. The rate base has been multiplied
18 by a proposed rate of return of 7.80% which results in a required test year net
19 income of \$460,533. The Company's adjusted actual net operating income for the
20 proformed test year was \$2,287. The sum of the required income, the adjustment
21 for tax effect, less the proformed income, results in a total revenue deficiency of
22 \$760,481. The Company is requesting a rate increase of only \$750,702. The
23 reasons for the lower rate of return are described later in this testimony.

24 Q. What would be the percentage increase in rates based on this revenue increase?

25 A. The requested increase in rates will result in a 12.8% overall increase over
26 Concord Steam's current operating revenues for the test year ending December
27 31, 2015.

28 **III. REVENUE AND EXPENSES**

29 Q: Please describe the test year utility operating income of the Company.

1 A: Schedule 1, Operating Income Statement, provides information as to the income
2 for the test year ended December 31, 2015 as proformed. The schedule is
3 structured as required by PUC 1604.07. The proforma adjustments made to the
4 Operating Income Statement are described in Schedules 1.1 through 1.5.

5 Q: What adjustments were made to the Company's test year revenues?

6 A: As set forth in Schedule 1.1, the Company made the following adjustments:

7 1.) Corrections in projected steam sales for known increases and decreases in
8 customer base for 2015; and

9 2.) Allowance for adjustment of the test year steam sales for weather
10 normalization (See Schedule 1C).

11 Additional proforma adjustments are reflected in the following schedules:

12 Schedule 1.1 describes the proforma adjustments to the Company's revenues and

13 Schedule 1.2 details the adjustments made to expenses for the test year. The non-
14 fuel costs for generating additional proformed steam sales are listed.

15 Schedule 1.3 is a supporting exhibit for administrative and general expenses.

16 Schedule 1.4 calculates the variable production cost of steam.

17 Schedule 1-5 is the adjustments to the COE

18 Schedules 1A and 1B detail test year property taxes and payroll expenses
19 respectively.

20 Schedule 1C is the correction for degree days (see below).

21 Schedule 1D defines the test year income taxes.

22 Q: Have you adjusted test year revenues as a result of warmer than average
23 temperatures during the test year?

24 A: Yes.

25 Q: Please describe this weather adjustment.

26 A: The test year of 2015 was 5.7 % warmer than average. In order to adjust the
27 steam sales of 2015 to reflect those of an average year, the Company first
28 subtracted from each month's total the steam sold that was not used for heating

1 (e.g., laundry, hot water) to determine the corrected steam sales figure.¹ The
2 Company then multiplied the monthly steam heating sales by the ratio of the 30
3 year degree day average for that month to the actual heating degree days of that
4 month in 2015. Because of the extremely cold months on January and February,
5 and a mild Fall, the resulting degree day adjustment in annual steam sales for
6 2015 is actually a decrease of 3,548 Mlbs. This calculation is set forth in Schedule
7 1C. This methodology is consistent with that which the Company applied in its
8 previous rate case.

9 Q: Did the Company make any other adjustments to steam sales for the proformed
10 year?

11 A: Yes.

12 Q: Please explain these adjustments.

13 A: As the cost of steam has increased, some customers have converted to gas. The
14 net effect to the proformed year, including customer changes and degree day
15 corrections, is an decrease in sales of 5,184 Mlbs. See Schedules 1.1 and 1C
16 attached hereto.

17 Q: Has the Company requested the full amount of revenue increase that would be
18 supported by standard rate making methodology?

19 A: No. The COE for the next heating season, 11/16 - 10/17, is expected to drop by
20 about \$7/Mlb, because we have already contracted for natural gas for that period
21 with a significant reduction in cost compared to the present year. We are
22 limiting our increase in Usage rate to be equal to or less than the decrease in
23 COE, so that the net effect on our customers is negligible.

24 **IV. RATE BASE**

25 Q: Please describe the rate base calculation.

26 A: The rate base used in the computation of the revenue deficiency is calculated in
27 Schedule 3 to this testimony. It is based upon the average of the investment in

¹ The Company's heating season is defined as all months except June, July and August. May and September are "shoulder months", where there may or may not be heat sold in these months due to variations in the weather

1 plant in service less accumulated depreciation over the 12-month period ended
2 December 31, 2015, using thirteen points in time, as detailed in Schedule 3B. The
3 cash working capital component of the rate base is calculated in Schedule 3A,
4 based upon a 12.5% (1 1/2 month) level of recurring operation and maintenance
5 expense; this approach was recommended by Commission Staff and has been
6 adopted by the Commission in the Company's usage rate cases since 1985.

7 **V. RATE OF RETURN**

8 Q: How did you determine a rate of return?

9 A: The Company's capital structure during the test year consisted of equity
10 (67.74%), short term debt (17.46%), and long term debt (3.06%) as shown on
11 Schedule 6. The Company's proposed allowed rate of return, as calculated on
12 Schedule 6, is 7.80%. The cost of equity used in the computation, 9.75%, is
13 reasonable based on what has been approved by the Commission in its previous
14 rulings.

15 Q: What rate of return is requested?

16 A: 7.70%

17 Q: Why?

18 A: Because this is the rate which would result in no increase in overall rates to our
19 customers for the 16/17 heating season.

20 **VI. RATE DESIGN**

21 Q: Please describe the Company's rate structure.

22 A: Presently, the Company has a declining block usage rate, a meter charge, and an
23 energy charge for all customers.

24 Q: Would these rates be changed by the Company's proposed revenue
25 increase?

26 A: No. The rate structure will remain the same.

27 Q: Is the Company requesting a change to its meter charge?

28 A: No.

29 Q: In your opinion, are the Company's proposed rates just and reasonable?

1 A. Yes. All of the costs incurred by the Company that are included in this rate filing
2 are prudent and should be included in permanent rates.

3 Q. On what basis will the proposed rate increase become effective?

4 A. The Company is requesting that the rate increase be effective on a “service
5 rendered” basis.

6 **VII. CONCORD STEAM REPOWERING**

7 Q. What is the status of the new Concord Steam plant?

8 A. We are working on financing of the project. This is dependant on whether the
9 State remains on steam and whether it will be a tariff customer or enters into a
10 long term contract with the Company. Generate, an equity investor, requires
11 that the State sign a long-term contract for them to move forward with the
12 investment. Since Michael Connor of Administrative Services said in the IR 16-
13 202 hearing that the State should not enter into any long-term contracts for
14 energy, we have been working on alternate funding with TD Securities on bond
15 financing. We have been told that if the State does not convert to natural gas
16 and remains on steam as a tariff customer, TD will still be able to place the
17 bonds. The cost will be higher (100 - 150 basis points) than if the State signed a
18 contract, but they believe that the bonds are salable. A decision will not be able
19 to be made on the project until the State decides to remain with steam, which at
20 this time is now expected to be November 2016. If the project moves forward,
21 the plant is expected to come on line in 2019.

22 Q. What is the status of the Company’s lease with the State of New Hampshire for
23 of its Pleasant Street facility?

24 A. The State has agreed to extend the lease as we need, depending on the direction
25 the Company will take in the future.

26 Q. Will the Company be filing for new rates when the rebuilt plant is on line?

27 A. Yes. The Company will continue to operate the Pleasant St. plant, but will also
28 be operating a non-regulated department with the expanded production of
29 electricity. Included in the filings in this case is a set of preliminary schedules of
30 the expected rate structure for the rebuilt plant. These schedules are all labeled

1 as “repower” in the heading. This filing is preliminary, as the actual construction
2 and financing costs are not finalized, but is submitted for preliminary review and
3 consideration of the Commission.

4 Q: What is planned for the rebuilding of the plant?

5 A: The two wood fired boilers will be rebuilt better than new, including a new
6 vibrating grate stoker in #6 boiler. New pollution control equipment, an
7 electrostatic precipitator and a selective catalytic reduction system for control of
8 NOx and CO will be added to the two wood fired boilers. This will allow the
9 facility to meet the new Federal EPA emission standards and will enable the
10 output of the facility to qualify for RECs, electric and thermal. The upgrades to
11 the facility will also significantly increase the efficiency of the plant.

12 Q: What will be the effect on Usage rates?

13 A: Usage rates will be approximately \$26/Mlb, depending on final construction and
14 financing costs, which is less than the requested rate in this petition. This can be
15 done, even with the cost of the \$23,000,000 investment, because of the sale of
16 electricity to the NHEC. This additional revenue source helps cover some of the
17 fixed costs of operation, debt service, and will smooth out the seasonal
18 fluctuations in revenue.

19 Q: What will be the effect on the cost of energy?

20 A: The cost of energy will be significantly reduced, from \$28/Mlb to \$6/Mlb. This
21 is due to two factors. The energy efficiency of the facility will be improved by
22 20%, and the revenue from sale of the thermal RECs will reduce the cost to
23 customers by approximately \$10/Mlb. We will also be burning more wood and
24 less natural gas for additional savings in the COE.

25 Q: What is the expected all-in rate for customers with the repowered plant in
26 operation?

27 A: We are expecting the all-in steam rates to our customers to be \$32-\$34/Mlb.

28 Q: Does this conclude your direct testimony?

29 A: Yes, it does.

30