

STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Re: Concord Steam Corporation
Cost of Energy

DG 16 - _____

DIRECT PRE-FILED TESTIMONY
OF
PETER G. BLOOMFIELD

August 31, 2016

1 **Q. Please state your name and address.**

2 A. My name is Peter G. Bloomfield. My business address is P.O. Box 2520, Concord, NH
3 03302.

4 **Q. How are you associated with Concord Steam Corporation?**

5 A. I am President of Concord Steam Corporation (the “Company”).

6 **Q. Please describe your education and professional background.**

7 A. I graduated from Union College in 1976 with a BS in Mechanical Engineering. I am a
8 registered Professional Engineer in New Hampshire, New York, and Colorado. I have
9 been employed as an engineer in the steam and power industry since college. I became
10 President of the Company in the fall of 1986.

11 **Q. What is the purpose of your testimony?**

12 A. The purpose of my testimony is to provide support for the Company’s cost of energy
13 request for the upcoming heating season. I will present documents and other information
14 in support of the Company’s request, and explain the development of the cost of energy
15 charges and a calculation of the proposed charge. The exhibits that I am presenting
16 consist of Schedules-1 to 9 as further described below.

17 **Q. Please describe the Company and its customers.**

18 A. Concord Steam provides district steam service from its facility at Pleasant Street in
19 Concord, New Hampshire, and is the only steam utility in the state. It has 85 customers,
20 all of which are located in the City of Concord and all of which are commercial or
21 institutional customers, with the exception of one residential customer.

22 **Q. Are you familiar with the books and records of the Company?**

23 A. Yes.

1 **Q. Has this filing been prepared by you or under your supervision?**

2 A. Yes.

3 **Q. What is the current cost of energy charge?**

4 A. The current cost of energy charge is \$30.26 per Mlb (thousand pounds). In Order No.
5 25,835, the Commission approved a charge of \$25.22 and permitted the Company to
6 adjust the charge upwards or downwards as necessary within 20% of the approved
7 charge. The current cost of energy charge reflects that there have been three adjustments
8 during the year. In December the COE was raised \$0.39 to \$25.61 and in February, the
9 COE was raised by \$2.64 to \$28.25. The Company has just increased the COE to \$30.26
10 for service rendered starting September 1.

11 **Q. What was the amount of the over or under collection during the past year that the**
12 **Company proposes to reconcile through the Cost of Energy charge for the upcoming**
13 **year?**

14 A. The Company estimates that there will be an under collection of \$68,195 from the 2015-
15 2016 Cost of Energy period. This is a change from the 2014-2015 under collection of
16 \$68,591. Due to anticipated fuel costs and the production expenses that the Company
17 proposes to include in the cost of energy, the Company is requesting a change in its cost
18 of energy charge from \$30.26/Mlb to \$23.73/Mlb, as set forth in Schedule-1 to my
19 testimony.

20 **Q. Please explain Schedule -1.**

21 A. Schedule-1 is a table that lists the amount of steam that the Company forecasts it will sell
22 during the period of November 2016 through May 2017, on a weather normalized basis.
23 Also listed is the amount of fuel and the cost of the fuel that the Company expects to

1 consume for the same period. Schedule-2 is the backup detail for Schedule-1.

2 **Q. Please explain Schedules-3 and -4.**

3 A. Schedule-3 is the worksheet showing how the steam sales figures were performed based
4 on the 30-year degree day average. Schedule-4 is the reconciliation of actual energy cost
5 versus revenue for the 2015-16 season. This shows an expected \$68,195 under collection
6 for the year.

7 **Q. How will this change to the Company's cost of energy charge affect its customers?**

8 A. As set forth in Schedule-6 to my testimony, the Company estimates that its customers
9 will experience a 5% decrease in their total bill. The detail is as set forth on Schedule-6.

10 **Q. Aside from the need to reconcile the over recovery from the prior period cost of**
11 **energy, what are the other principal changes in the cost of energy for the upcoming**
12 **heating season?**

13 A. The decrease in cost is primarily due to a reduction in natural gas prices.

14 **Q. Are there any changes in types of fuel being used at Concord Steam?**

15 A. No. The Company has been burning wood since January 1, 2004. Wood is the primary
16 fuel, although the Company will use natural gas during the peak heating season for peak
17 shaving and backup and will use gas exclusively during April and May. We are planning
18 to stop burning wood in April as part of the closure of the company. This is necessary in
19 order to prepare to turn a clean functional steam plant back to the State upon the
20 completion of the lease, and is part of the agreement with Liberty. The Company
21 procures natural gas through a competitive bid process. This year the Company has
22 selected Direct Energy as a supplier for the year. Approximately 55% of the steam will
23 be generated by burning wood in two of the three active boilers used by the Company.

1 The Company's other boiler is used as a peaking unit, and can burn natural gas.

2 **Q. What are the expected savings due to burning wood instead of oil and gas?**

3 A. The Company has entered into contracts for its wood supply that will result in an average
4 delivered cost of approximately \$28/ton. Of this cost, approximately \$1.00 is for the
5 actual cost of the wood, \$14.00 is for labor and chipping and \$13.00 for transport. A ton
6 of wood is approximately equivalent to 7 Decatherms (MMBtu) of gas in net steam
7 energy output from the boiler. At the present cost of gas at \$8.43/MMBtu (\$55/ton
8 equivalent), wood at total combined cost of \$35/ton is attractive and economical. The
9 annual estimated savings to the Company's customers, including the allowance for
10 additional direct costs associated with burning wood, is over \$400,000.

11 **Q. Are there any changes in the Company's wood storage and handling systems?**

12 A. No. The Company has been successfully operating the wood storage yard, and it has
13 gone very well. The yard gives the Company better control over its wood supply and has
14 allowed for some creative uses that have enabled the Company to keep the cost of wood
15 fuel low. The yard also allows for better timing of deliveries of wood to the plant. In
16 addition, by directly operating the wood yard, the Company has been able to use its
17 employees more efficiently. Even though we expect to burn less wood this year, the
18 wood fuel used during the peak heating season months will be the same as usual. This
19 requires the continued use of the wood yard for this year, in order to be assured of an
20 adequate wood fuel supply. Personnel work at the yard in the winter and are able to work
21 at the plant in the summer for maintenance.

22 **Q. Are any of the costs associated with operation of the wood yard included in this**
23 **filing?**

1 A. Yes. The lease of the yard and the direct cost of running the yard are included in the cost
2 of wood fuel. The monthly lease payment for the wood yard is \$11,816. The direct costs
3 are the maintenance of the equipment, diesel fuel for the front end loader and the delivery
4 truck, and utilities for the yard. These estimated costs are itemized on Schedule-8. The
5 cost of labor has not been included in the cost of wood fuel which is consistent with how
6 the costs of operating the wood yard have been treated in prior cost of energy
7 proceedings.

8 **Q. What other operating costs are included in the COE?**

9 A. The other operating costs are detailed in Schedule 9. These costs are ash disposal, State
10 of NH air permit fees, water and sewer costs, and boiler water treatment chemicals. The
11 inclusion of these costs were approved in 12-242, Order #25,499.

12 **Q. How will you estimate the cost of fuel for the coming 7 months?**

13 A. The Company presently locks in the price of 95% of its natural gas requirements for the
14 upcoming heating season. The remainder of the fuel is priced according to the estimated
15 cost of fuel as of the time of this filing. As the great majority of the Company's
16 consumption occurs during the heating season, any fuel cost changes later in the COE
17 year will have a small effect on the annual charge. The Company will be pre-buying
18 market wood in November for use later in the heating season. The wood will be stored
19 off site for reclamation during the heating season. The Company is expecting wood to be
20 over 55% of total fuel consumed.

21 **Q. How will a change of annual steam sales affect the recovery of actual energy costs?**

22 A. If the Company sells less steam in a year than forecasted, the amount of energy consumed
23 is reduced as well. The reverse is also true, in that if sales increase, energy use would

1 increase. This means that variations in steam sales will have a limited effect on energy
2 recovery charges. However, line losses do remain constant and are not significantly
3 affected by steam sales or weather. Therefore, a significant reduction in sales results in
4 an under collection of the cost of energy. A change in steam sales can also result in a
5 different mix of gas vs. wood fuel, which can change our cost forecasts.

6 **Q. How did you calculate your steam sales projections?**

7 A. The Company weather normalizes its Company's actual steam sales from August 31,
8 2015 through July 2016 to a 30-year degree-day average. See Schedule-3.

9 **Q. How will you account for over or under collection of annual energy costs?**

10 A. The Company tracks costs every month, and if the cost of energy changes significantly
11 from the forecast, the Company will apply a cost of energy adjustment within the
12 adjustment band authorized by the Commission. At the end of the cost of energy year,
13 the Company reconciles revenues collected versus the actual cost of energy and will carry
14 forward a positive or negative balance as an adjustment to the energy cost calculation for
15 the next year accordingly.

16 **Q. What was the amount of over or under collection, if any, for the 2015-2016 cost of
17 energy year?**

18 A. As I noted earlier, the Company projects it will under collect \$68,195 for the period from
19 November 1, 2015 to October 31, 2016, which is 2.2% of its total energy charges for the
20 year. This is itemized on Schedule-4, with the detail shown on Schedule-5.

21 **Q. Has the number of customers changed over the past year?**

22 A. The Company will have lost five customers for this heating season. The YMCA,
23 Merrimack County courthouse, and three commercial customers.

1 **Q. What does the Company project for the upcoming heating season?**

2 A. The Company assumes a normal heating season, and will try to minimize the amount of
3 over or under collection by adjusting its energy rates during the year as allowed by the
4 Commission. In past years, the Commission has authorized the Company to adjust its
5 energy rates upwards or downwards by 20%. The Company requests that the
6 Commission allow us to continue this practice, especially in light of the upcoming plant
7 closure in May.

8 **Q. When does the Company seek to implement this new rate?**

9 A. The Company is requesting that the rate be implemented on a service rendered basis as of
10 November 1, 2016.

11 **Q. Has the Company taken any steps to reduce losses of steam in its system?**

12 A. Yes. The Company has continued to repair and upgrade underground steam lines. This
13 is an ongoing process that is part of the Company's standard maintenance procedures.
14 The Company continues to use a thermal camera to document the conditions of its lines,
15 and has used it to pinpoint the locations of leaks that showed up as hot spots, which are
16 then repaired. A leaking expansion joint was replaced this past year, and several sections
17 of underground pipe were replaced and reinsulated as part of normal maintenance.

18 **Q. What plans are there for the shutdown of the system?**

19
20 A. We are working with customers to ensure that all buildings will have heat for the 2017
21 heating season, and for those customers that use steam for non-heating use, we are
22 making sure that they will have a source of steam before the shutdown on May 31, 2017.

23 **Q. Does this conclude your direct testimony?**

24 A. Yes, it does.