

STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Re: Concord Steam Corporation
Cost of Energy

DG 09-_____

DIRECT FILED TESTIMONY
OF
PETER G. BLOOMFIELD

September 10, 2009

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 8 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, NH, and is the only steam utility in New Hampshire. It has approximately 110
20 customers, all of which are located in the City of Concord and all of which are
21 commercial or 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. **Will the proposed change to the Company's cost of energy charge have any effect on**
4 **the Company's profit, net income or rate of return?**
- 5 A. No. This is a revenue neutral change.
- 6 Q. **What is the current cost of energy charge?**
- 7 A. The current cost of energy charge is \$21.31 per Mlb, as approved in Order No. 24,800.
- 8 Q. **Why is the Company filing this cost of energy case?**
- 9 A. The Company's projected cost of energy for the coming 12 months is less than the actual
10 cost of the past 12 months, such that the currently approved rate is no longer reflective of
11 its energy costs.
- 12 Q. **Are there any over or under charge adjustments that need to be made to the Cost of**
13 **Energy for the upcoming year?**
- 14 A. Yes, there was an under charge of \$67,714 over the previous Cost of Energy period. This
15 is a change from the 2008-2009 overcharge of 26,510. Due to decreased fuel costs, the
16 Company is requesting an decrease in its energy charge to \$17.36/Mlb, as set forth in
17 Schedule-1 to my testimony.
- 18 Q. **Please explain Schedule -1.**
- 19 A. Schedule-1 is a table that lists the amount of steam that the Company expects to sell for
20 the period of November 2009 through October 2010, as proformed. Also listed is the
21 amount of fuel and the cost of the fuel that the Company expects to consume for the same
22 period. Schedule-2 is the backup detail for Schedule-1.
- 23 Q. **Please explain Schedules-3 and -4.**

1 A. Schedule-3 is the worksheet showing how the steam sales figures were proformed based
2 on the 30-year degree day average. Schedule-4 is the reconciliation of energy cost versus
3 revenue for the 2008-2009 season. This shows an expected \$67,714 under collection for
4 the year.

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

6 A. As set forth in Schedule-6 to my testimony, I estimate that the Company's customers will
7 experience an approximate 10% decrease in their rates. This is based upon an expected
8 decrease of approximately \$422,000 in the Company's fuel costs for the upcoming year
9 as set forth on Schedule-1.

10 **Q. Why is the cost of energy changing this heating season?**

11 A. The decrease in cost is due to decreases in the cost of all fuel oil and gas.

12 **Q. Are oil and gas prices affecting the price of wood for the Company?**

13 A. An increase in the cost of diesel fuel will cause an increase in the cost of wood. The
14 loggers use diesel fuel to operate the logging equipment as well as the delivery tractor
15 trailer trucks. For every \$1.00/gal increase in diesel, the cost of wood increases
16 \$2.00/ton. Wet weather can also cause an increase in the cost of wood fuel, due to
17 production problems with working in wet forest lots.

18 **Q. What different factors can affect the collection of the correct amount of energy
19 charges over the year?**

20 A. Fluctuations in the amount of steam sold and in the cost of fuel.

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

22 A. Nothing significant. The Company has been burning wood since January 1, 2004. Wood
23 has replaced oil and gas as its primary fuel, although the Company still uses some oil and

1 gas. The Company does expect to burn natural gas this year as well as oil.

2 Approximately 70% of the steam is generated by burning wood in two of the four boilers
3 used by the Company. The Company's other two boilers are used as peaking units, and
4 can burn natural gas, waste oil and oil.

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

6 A. The Company has entered into contracts for its wood supply that will result in an average
7 delivered cost of approximately \$30/ton. Of this cost, approximately \$1.00 is for the
8 actual cost of the wood, \$15.00 is for labor and chipping and \$14.00 for transport. A ton
9 of wood is approximately equivalent to a barrel of oil in net steam energy out of the
10 boiler. At the present futures cost of oil at \$65/bbl, wood at \$30/ton is attractive and
11 economical. The annual estimated energy savings to the Company's customers, including
12 the allowance for additional direct costs associated with burning wood, is over
13 \$1,200,000.

14 **Q. Are there any changes in wood storage and handling systems?**

15 A. No. The Company has been successfully operating the wood storage yard, and it has
16 gone very well. The yard gives the Company better control over its wood supply and has
17 allowed for some creative uses that have enabled the Company to keep the cost of wood
18 fuel low. The yard also allows for better timing of deliveries of wood to the plant. In
19 addition, by directly operating the wood yard, the Company has been able to use its
20 employees more efficiently. Personnel work at the yard in the winter and are able to
21 work 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 will be included in the
2 cost of wood fuel. The monthly lease payment is \$11,816. The direct costs will be
3 maintenance of the equipment, diesel fuel for the front end loader and the delivery truck,
4 and utilities for the yard. These estimated costs are itemized on Schedule-8. The cost of
5 labor has not been included in the cost of wood fuel.

6 **Q. How will you accurately estimate the cost of fuel 12 months ahead?**

7 A. The Company presently pre-purchases 25% of its wood fuel requirements and 90% of its
8 fossil fuel requirements for the upcoming heating season. The remainder of the fuel is
9 priced according to the estimated cost of fuel as of the time of this filing. As the great
10 majority of the Company's consumption occurs during the heating season, any fuel cost
11 changes later in the Company's heating season will have a small effect on the annual
12 charge. The Company is pre-buying market wood now for use later in the heating
13 season. The wood the Company is buying now is being stored off site for reclamation
14 during the heating season. The Company is expecting wood to be over 70% of total fuel
15 consumed.

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

18 A. If the Company sells less steam in a year than forecasted, the amount of energy consumed
19 is reduced as well. The reverse is also true, in that if sales increase, energy use would
20 increase. This means that variations in steam sales will have a limited effect on energy
21 recovery charges. A change in steam sales will result in a different mix of oil vs wood
22 fuel, which can change our cost forecasts.

23 **Q. How much do steam sales vary from year to year?**

1 A. Steam sales generally are within a plus or minus 5% range of the Company's projections.
2 Last heating season was average. The heating degree days were within 1% of the 30 year
3 average.

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

5 A. I weather normalized the Company's actual steam sales from Aug/08 through July/09 to a
6 30-year degree-day average. See Schedule-3.

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

8 A. The Company tracks costs all year, and if the cost of energy changes significantly from
9 expected, the Company will apply a cost of energy adjustment part way through the year
10 as authorized by the Commission. At the end of the energy cost adjustment year, the
11 Company reconciles revenues collected versus cost of fuel and will adjust the energy cost
12 calculation for the next year accordingly.

13 **Q. How did the collection of energy cost work out this past year? What was the
14 amount of over or under collection?**

15 A. The Company projects it will under collect \$67,714 for the period from 11/07 to 10/08,
16 which was less than 3% of its total energy charges for the year. This is itemized on
17 attached Schedule-4, with the detail shown on Schedule-5. This under collection is due
18 to normal fluctuations in fuel consumption, steam sales and fuel costs.

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

20 A. Not significantly. We are presently adding the Rundlett Middle school.

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

22 A. The Company will try to minimize the amount of over or under collection by adjusting its
23 energy rates during the year as allowed by the Commission. In past years, the

1 Commission has authorized the Company to adjust its energy rates by +/- 20%.

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

3 A. The Company is requesting to implement this rate on a service rendered basis as of
4 November 1, 2009.

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

6 A. Yes. The Company has been continuing to upgrade underground steam lines. We are
7 investigating a system which can insulate existing piping systems in place. We are
8 planning on re-insulating sections of piping in the summer of 2010.

9 **Q. Is there anything else as part of this filing that you would like to explain?**

10 A. Yes. As part of Commission Order 24,147, the Company is required to submit a cost
11 benefit analysis of the steam turbine cogeneration operations. As of January of 2005, the
12 "Cogen" division of the Company has been made part of the utility, and all of the costs
13 and revenues from that operation are part of the regulated company. Order 24,147
14 requires the Company to justify that this combination makes economic sense. Schedules
15 CB-1 through CB-5 provide the cost/benefit analysis with back up data.

16 **Q. Has the electric power generation operation been cost effective?**

17 A. Yes, from August 2008 to July 2009 the cogeneration system has saved the Company
18 (and ultimately its ratepayers) over \$200,000, from sales of excess electricity to ISO-NE
19 and from avoiding buying power from Unitil. This savings is after all costs, including
20 fuel.

21 **Q. Has any progress been made on the new steam plant project?**

22 A. Yes. The project has all of its city permits and the State and federal permits are well
23 under way. The project is has arranged financing, and is working to find a purchaser for

1 the electricity and RECs from the facility, with the intent to start construction this year.

2 The new plant will be in service by October of 2011.

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

4 **A.** Yes, it does.