

STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Re: Concord Steam Corporation
Cost of Energy

DG 10-_____

DIRECT PRE-FILED TESTIMONY
OF
PETER G. BLOOMFIELD

September 10, 2010

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 \$19.89 per Mlb, as approved in Order No. 25,036.

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, we are estimating that there will be an over charge of \$9,874 over the previous Cost
15 of Energy period. This is a change from the 2009-2010 under charge of \$31,747. Due to
16 decreased fuel costs, the Company is requesting a decrease in its energy charge to
17 \$16.64/Mlb, as set forth in 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 2010 through October 2011, 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 2009-2010 season. This shows an expected \$9,874 over collection for the
4 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 4% overall decrease in their total bill. This is based upon an
8 expected decrease in the Company's fuel costs for the upcoming year as set forth on
9 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 fuels: wood, oil and gas.

12 **Q. Can oil and gasoline prices affect the price of wood for the Company?**

13 A. A change in the cost of diesel fuel will cause a corresponding increase or decrease in the
14 cost of wood. The loggers use diesel fuel to operate the logging equipment as well as the
15 delivery tractor trailer trucks. For every \$1.00/gal increase in diesel, the cost of wood
16 increases \$2.00/ton. Wet weather can also cause an increase in the cost of wood fuel, due
17 to 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. There have been no significant changes from the prior year. The Company has been
23 burning wood since January 1, 2004. Wood has replaced oil and gas as the primary fuel,

1 although the Company still uses some oil and gas. The Company does expect to burn
2 more natural gas this year and reduce the amount of oil burned due to the lower price of
3 natural gas. The Company procures natural gas through a competitive bid process. This
4 year the Company has contracted with Santa Energy. Approximately 70% of the steam is
5 generated by burning wood in two of the four boilers used by the Company. The
6 Company's other two boilers are used as peaking units, and can burn natural gas, waste
7 oil and oil.

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

9 A. The Company has entered into contracts for its wood supply that will result in an average
10 delivered cost of approximately \$32/ton. Of this cost, approximately \$1.00 is for the
11 actual cost of the wood, \$13.00 is for labor and chipping and \$12.00 for transport. A ton
12 of wood is approximately equivalent to a barrel of oil in net steam energy out of the
13 boiler. At the present cost of oil at \$88/bbl and gas at \$7.50/MMBtu, wood at \$32/ton is
14 attractive and economical. The annual estimated savings to the Company's customers,
15 including the allowance for additional direct costs associated with burning wood, is over
16 \$600,000.

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

18 A. No. The Company has been successfully operating the wood storage yard, and it has
19 gone very well. The yard gives the Company better control over its wood supply and has
20 allowed for some creative uses that have enabled the Company to keep the cost of wood
21 fuel low. The yard also allows for better timing of deliveries of wood to the plant. In
22 addition, by directly operating the wood yard, the Company has been able to use its
23 employees more efficiently. Personnel work at the yard in the winter and are able to

1 work at the plant in the summer for maintenance.

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

4 A. Yes. The lease of the yard and the direct cost of running the yard are included in the cost
5 of wood fuel. The monthly lease payment for the wood yard is \$11,816. The direct costs
6 are the maintenance of the equipment, diesel fuel for the front end loader and the delivery
7 truck, and utilities for the yard. These estimated costs are itemized on Schedule-8. As
8 reflected on Schedule-8, the expected use of diesel fuel will increase from the prior year
9 due to more fuel being delivered to the yard and less direct to the plant due to the
10 expected reduction in the BCAP program. In addition, the Company incurred \$900 in
11 costs for a software consultant to modify the truck scale data base program to allow the
12 system to accept additional suppliers and different grades of fuel. The cost of labor has
13 not been included in the cost of wood fuel which is consistent with how the costs of
14 operating the wood yard have been treated in prior cost of energy proceedings.

15 **Q. What is the BCAP program and how does it affect wood supply?**

16 A. Biomass Crop Assistance Program is a subsidy paid by USDA through FSA to wood fuel
17 suppliers. This was a new program last year which ran from February through April of
18 2010 and resulted in our using more wood direct from the woods to the plant than was
19 anticipated. As a result, we cycled less wood through the wood yard over a three month
20 period of February through April.

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

22 A. The Company presently pre-purchases 25% of its wood fuel requirements and 90% of its
23 fossil fuel requirements for the upcoming heating season. The remainder of the fuel is

1 priced according to the estimated cost of fuel as of the time of this filing. As the great
2 majority of the Company's consumption occurs during the heating season, any fuel cost
3 changes later in the Company's heating season will have a small effect on the annual
4 charge. The Company is pre-buying market wood now for use later in the heating
5 season. The wood the Company is buying now is being stored off site for reclamation
6 during the heating season. The Company is expecting wood to be over 70% of total fuel
7 consumed.

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

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

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

16 A. Steam sales generally are within a plus or minus 5% range of the Company's projections.
17 Last heating season was well below average. The heating degree days were 88% of the
18 30 year average, and the steam sales were reduced accordingly.

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

20 A. I weather normalized the Company's actual steam sales from Aug/09 through July/10 to a
21 30-year degree-day average. See Schedule-3.

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

23 A. The Company tracks costs all year, and if the cost of energy changes significantly from

1 expected, the Company will apply a cost of energy adjustment part way through the year
2 as authorized by the Commission. At the end of the energy cost adjustment year, the
3 Company reconciles revenues collected versus cost of fuel and will adjust the energy cost
4 calculation for the next year accordingly.

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

7 A. The Company projects it will over collect \$9,874 for the period from 11/09 to 10/10,
8 which was less than 2% of its total energy charges for the year. This is itemized on
9 Schedule-4, with the detail shown on Schedule-5. This under collection is due to normal
10 fluctuations in fuel consumption, steam sales and fuel costs.

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

12 A. Not significantly. We are adding McCloud's Florist as of October, 2010 and have added
13 the Rundlett Middle school as of August 15, 2010.

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

15 A. The Company will try to minimize the amount of over or under collection by adjusting its
16 energy rates during the year as allowed by the Commission. In past years, the
17 Commission has authorized the Company to adjust its energy rates by +/- 20%.

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

19 A. The Company is requesting to implement this rate on a service rendered basis as of
20 November 1, 2010.

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

22 A. Yes. The Company has been continuing to repair and upgrade underground steam lines.
23 We are investigating a system which can insulate existing piping systems in place. We

1 will be submitting a plan to the Commission for approval to use Federal grant money to
2 fund a complete steam system thermal study to better track and control system line
3 losses.

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

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

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

12 A. Yes, from August 2009 to July 2010 the cogeneration system has saved the Company
13 (and ultimately its ratepayers) over \$50,000, from sales of excess electricity to ISO-NE
14 and from avoiding buying power from Unitil. This savings is after all costs, including
15 fuel, are taken into account.

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

17 A. Yes. The project has all of its city permits and the State and federal permits are well
18 under way. 73% of the power output of the facility has been sold under a 20 year
19 contract. The project has arranged financing, and is working to find a purchaser for the
20 remainder of the electricity and RECs from the facility, with the intent to start
21 construction this year. The new plant will be in service by Fall of 2012.

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

23 A. Yes, it does.