

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

**Re: Concord Steam Corporation**  
**Cost of Energy**

**DG 08-\_\_\_\_\_**

**DIRECT FILED TESTIMONY**  
**OF**  
**PETER G. BLOOMFIELD**

**September 12, 2008**

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?**

1 A. Yes.

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

3 A. Yes.

4 **Q. Will the proposed change to the Company's cost of energy charge have any effect on**  
5 **the Company's profit, net income or rate of return?**

6 A. No. This is a revenue neutral change.

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

8 A. The current cost of energy charge is \$14.38 per Mlb, as approved in Order No. 24,800.

9 **Q. Why is the Company filing this cost of energy case?**

10 A. The Company's projected cost of energy for the coming 12 months is more than the  
11 actual cost of the past 12 months, such that the currently approved rate is no longer  
12 reflective of its energy costs.

13 **Q. Are there any over or under charge adjustments that need to be made to the Cost of**  
14 **Energy for the upcoming year?**

15 A. Yes, there was an over charge of \$71,171 over the previous Cost of Energy period. This  
16 is a reduction of the 2006-2007 overcharge of \$ 208,209. Due to increased fuel costs, the  
17 Company is requesting an increase in its energy charge to \$19.51/Mlb, as set forth in  
18 Schedule 1 to my testimony.

19 **Q. Please explain Schedule 1.**

20 A. Schedule1 is a table that lists the amount of steam that the Company expects to sell for  
21 the period of November 2008 through October 2009, as proformed. Also listed is the  
22 amount of fuel and the cost of the fuel that the Company expects to consume for the same  
23 period. Schedule 2 is the backup detail for Schedule 1.

1 **Q. Please explain Schedules 3 and 4.**

2 A. Schedule 3 is the worksheet showing how the steam sales figures were proformed based  
3 on the 30-year degree day average. Schedule 4 is the reconciliation of energy cost versus  
4 revenue for the 2007-2008 season. This shows an expected \$71,171 over collection for  
5 the year.

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

7 A. As set forth in Schedule 6 to my testimony, I estimate that the Company's customers will  
8 experience an approximate 18% increase in their rates. This is based upon an expected  
9 increase of approximately \$630,000 in the Company's fuel costs for the upcoming year as  
10 set forth on Schedule-1.

11 **Q. Why is the cost of energy increasing this heating season?**

12 A. The increase in cost is due to increases in the cost of all fuel, oil, gas and wood.

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

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

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

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

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

23 A. Nothing significant. The Company has been burning wood since January 1, 2004. Wood

1 has replaced oil and gas as its primary fuel, although the Company still uses some oil and  
2 gas. The Company does expect to burn natural gas this year as well as oil.

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

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

7 A. The Company has entered into contracts for its wood supply that will result in an average  
8 delivered cost of approximately \$32/ton. Of this cost, approximately \$1.00 is for the  
9 actual cost of the wood, \$15.00 is for labor and chipping and \$16.00 for transport. A ton  
10 of wood is approximately equivalent to a barrel of oil in net steam energy out of the  
11 boiler. At the present futures cost of oil at \$110/bbl, wood at \$32/ton is attractive and  
12 economical. The annual estimated energy savings to the Company's customers, including  
13 the allowance for additional direct costs associated with burning wood, is over  
14 \$2,500,000.

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

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

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

1 **filing?**

2 A. Yes. The lease of the yard and the direct cost of running the yard will be included in the  
3 cost of wood fuel. The monthly lease payment is \$11,816. The direct costs will be  
4 maintenance of the equipment, diesel fuel for the front end loader and the delivery truck,  
5 and utilities for the yard. These estimated costs are itemized on Schedule 8. The cost of  
6 labor has not been included in the cost of wood fuel.

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

8 A. The Company presently pre-purchases 25% of its wood fuel requirements and 90% of its  
9 fossil fuel requirements for the upcoming heating season. The remainder of the fuel is  
10 priced according to the estimated cost of fuel as of the time of this filing. As the great  
11 majority of the Company's consumption occurs during the heating season, any fuel cost  
12 changes later in the Company's heating season will have a small effect on the annual  
13 charge. The Company is pre-buying market wood now for use later in the heating season.  
14 The wood the Company is buying now is being stored off site for reclamation during the  
15 heating season. The Company is expecting wood to be over 70% of total fuel 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 about average. The heating degree days were within 2% of the  
3 30 year average.

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

5 A. I weather normalized the Company's actual steam sales from Sept/07 through Aug/08 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 over collect \$71,171 for the period from 11/07 to 10/08,  
16 which was 3% of its total energy charges for the year. This is itemized on attached  
17 Schedule 4, with the detail shown on Schedule 5. This over collection is due to normal  
18 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. The Company lost the Legislative Office Building summer load, and  
21 St. Johns church. We are presently adding two customers that are small office buildings.

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

23 A. The Company will try to minimize the amount of over or under collection by adjusting its

energy rates during the year as allowed by the Commission. In past years, the Commission has authorized the Company to adjust its energy rates by +/- 20%.

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

A. The Company is requesting to implement this rate on a service rendered basis as of November 1, 2008.

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

A. Yes. The Company has been continuing to upgrade underground steam lines. We are investigating a system which can insulate existing piping systems in place. We are planning on re-insulating sections of piping in the summer of 2009.

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

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

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

A. Yes, from August 2007 to July 2008 the cogeneration system has saved the Company (and ultimately its ratepayers) over \$200,000, from sales of excess electricity to ISO-NE and from avoiding buying power from Unitil. This savings is after all costs, including fuel.

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

A. Yes. The project has all of its city permits and the State and federal permits are well



1 under way. The project is arranging financing now, with the intent to start construction  
2 this year. The new plant will be in service by August of 2010, when the existing lease  
3 with the State expires. On August 28, 2008, the Company filed a Verified Petition for  
4 Approval of Transfer of Utility Assets, Distribution System Upgrades, and Steam  
5 Purchase Agreement in which it describes in further detail the new steam plant project  
6 (DG 08-107).

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

8 **A.** Yes, it does.