

Concord Steam
DG 14-233

Cost of Energy Staff Data Requests – Set 1,

Date Request Received: 9/17/14
Request No. Staff 1-16

Date of Response: 10/2/14
Witness: Peter Bloomfield

REQUEST:

16. Please provide responses to the following inquiries regarding the Company's operations, propounded pursuant to NH RSA 374:4 (Duty to Keep Informed), with an accompanying motion for confidential treatment, if appropriate to protect confidential business information:

- (a) Please provide a narrative description of what protocols Concord Steam has developed for managing a catastrophic failure of its boiler(s) or other major plant components, especially during the heating season, with special attention to the ongoing provision of safe and reliable service to its customers.
- (b) Please provide a narrative description of Concord Steam's current business plan, with special attention to:
 - (i) its plans to comply with pollution-control requirements;
 - (ii) its expectations for maintaining access to adequate financing for its capital investment needs;
 - (iii) the overall operational status of its current physical plant at Pleasant Street, and its business relationships with the State of New Hampshire and the City of Concord, and their respective agencies;
 - (iv) expected rate changes and bill impacts; and
 - (v) a five year timeline of financings, start and end dates of capital improvements and rate changes.

RESPONSE:

- a) Concord Steam has a significant amount of redundancy in the plant to ensure continued operation in the event of equipment failure. There are three boilers, each boiler is rated at 50,000 pounds of steam per hour, and our peak steam load is approximately 110,000 pounds of steam per hour. This peak load only occurs for 2-3 hours on the coldest mornings, with a total of no more than 12 hours per year at this generation rate.

If we were to have a catastrophic failure of one of the boilers, we would still be able to meet steam demand. However, if necessary, we are prepared to rent a temporary boiler. A 50,000 pound per hour boiler can be rented for \$22,000 per month with a one time \$19,000 shipping and set up installation fee.

If there were a significant electrical failure with the incoming electrical power or transformer, we will still be able to run without interruption using the emergency diesel generator until replacement switchgear or transformer can be installed.

b)

i) In order to meet emission regulations, the company has two options:

1) Stop burning wood and go to 100% natural gas. All three boilers are now capable of operating at full load on natural gas. If we were to do this, the cost of fuel would be expensive [REDACTED]

2) Install new pollution control equipment on the two wood fired boilers. An electrostatic precipitator would be required and if we were to do this we would also install an SCR to control NOx and CO. This would qualify the plant's steam output for thermal REC's. The total installed capital cost for this project would [REDACTED]. In order to provide a wider revenue base to pay for this equipment, the company would also install a small condensing automatic extraction steam turbine generator. This will add an [REDACTED] to the total capital cost but it will allow facility to operate at a more constant output year-round. Attached is the application we submitted [REDACTED]. This explains the project in more detail.

ii) The company has been working with [REDACTED] for conventional financing, with [REDACTED] as possible bond underwriters, and [REDACTED]

iii) The company has begun making major repairs and upgrades to the existing plant that have been postponed and put off for the last seven years. Just this year the # 5 boiler has had a new natural gas burner installed and the # 6 oil system has been decommissioned. A new deaerating feed water heater has been installed, the smokestack has had significant repairs completed and a number of efficiency upgrades are underway as well. Some of the additional improvements and capital projects that are planned for the next few years are re-tubing # 6 boiler, replacing the headers on # 5 boiler, roof repairs, and finishing the abatement of asbestos in the plant.

CSC continues to have an excellent working relationship with both the City of Concord and State of NH. We understand that both of those governmental agencies would like to see lower rates and we have been diligently working to that end and are certain that both agencies believe that to be the case. We have had conversations with State of NH General Services department regarding the renewal of a long-term lease at the facility and that has been well received. Completing the work as defined in [REDACTED] is paramount to us getting to the competitive rates that

would help us maintain a healthy customer base, including retaining critical customers like the City and the State.

iv) We do not expect any significant rate changes either up or down until the new project is completed. At that time we hope for a significant reduction in the rates to our customers. A description of this project is attached in the form of the [REDACTED]. We expect this will result in rates to our customers of [REDACTED], but we would not expect the new project to become operational until sometime in 2016.

v) Projected timeline for project:

Permitting, preliminary design, contracts, approvals	[REDACTED]
Close financing	[REDACTED]
Order equipment	[REDACTED]
Start of on-site construction	[REDACTED]
Air pollution control equipment on site	[REDACTED]
Installation of APC equipment complete	[REDACTED]
Turbine generator and equipment on site	[REDACTED]
Turbine generator installed	[REDACTED]
#6 boiler online	[REDACTED]
#5 boiler online	[REDACTED]

**Concord
Steam**



A handwritten signature in black ink, appearing to read 'Peter Bloomfield', written over a horizontal line.

Peter Bloomfield

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[Redacted]



[Redacted]



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[REDACTED]



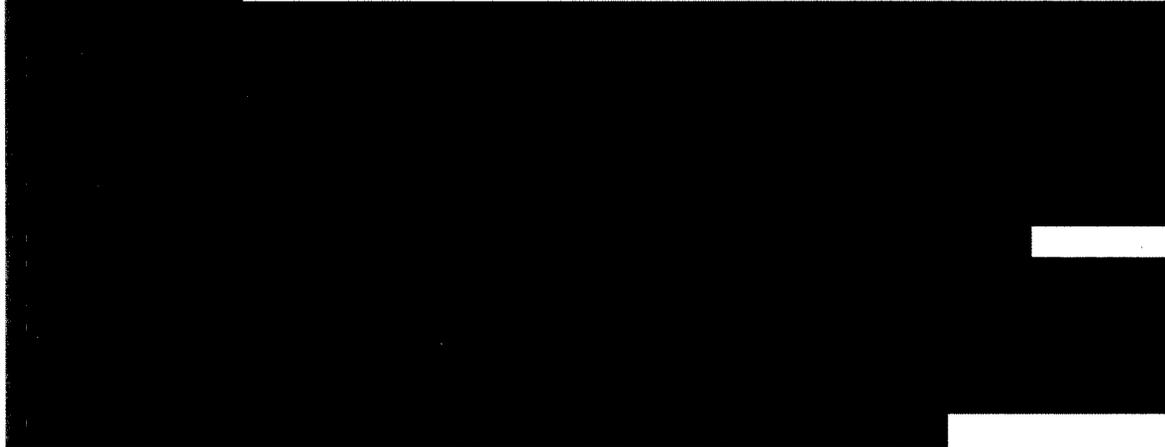
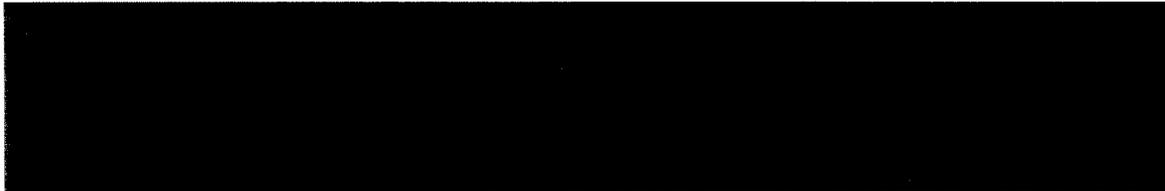
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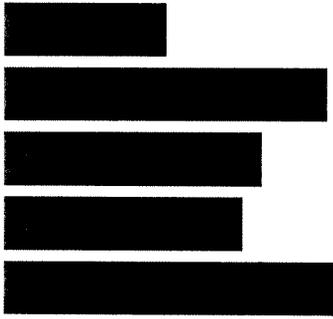
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MONITOR EDITORIAL

A new steam plant worth paying more

By Monitor staff
May 15, 2011

Concord's downtown is the heart of the city. The pipes connecting its buildings to Concord Steam are the arteries and veins that warm that heart. Decisions made in coming weeks will have an enormous impact on the economic health of Concord's downtown and the price the city and state will pay to heat and light their buildings. Government officials and the utility should make every reasonable effort to keep the city's heart healthy.

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Concord Steam needs to move from the state hospital campus to land it purchased in the old South End rail yards. Heating with the steam produced by the company's aged facility has become so costly that some of its customers are switching to natural gas. If customers continue to leave, the price of steam will continue to climb, and the viability of Concord Steam as a going concern will eventually be in jeopardy.

Higher steam prices make for higher rents, which make for more empty storefronts. If Concord Steam were to close up shop, some downtown property owners could afford to convert their buildings' heating system. Others, perhaps, could not. Landlords who did switch from steam to gas heat would have to recoup their investment by charging higher rents. More empty storefronts.

The utility wants to build an efficient, \$70 million cogeneration plant that would enable it to sell steam for 30 percent less and produce nine times more electricity than its current facility. To get the money it needs to do so, Concord Steam needs long-term contracts to sell electricity at a price that will be above market rates. How much more will be clear in a few weeks, when power suppliers, including presumably one with a contract to provide electricity generated by Concord Steam, submit bids to the state.

The equation used by city and state officials to decide how much extra it makes sense to pay to make the new power plant possible is complex and filled with variables. How much, for example, would it cost to convert the heating system at Concord High School and Rundlett Middle School High, for example? What effect will building the new plant have on property values? What about the effect of not building it? What value should be placed on heating with a renewable fuel whose production creates jobs in New Hampshire? City and state officials are struggling to make the numbers work.

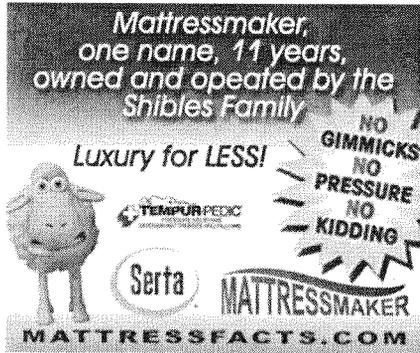
If the new plant is built, the price of steam would come down and the need to convert hundreds of large heating systems would be avoided.

The city would get far more tax revenue, and more downtown sidewalks could be warmed in winter rather than plowed. A new power plant near the South End Marsh could also lead to the redevelopment of what is now a blighted area. The site would be perfect for alternative energy industries or greenhouses warmed by the power plant's waste heat. More jobs and more tax revenue, at least potentially.

The upsides of building a new plant - and downsides of not doing so - are so large that the city and state government should be willing to pay more and enter into a long-term contract. The question is: How much more?

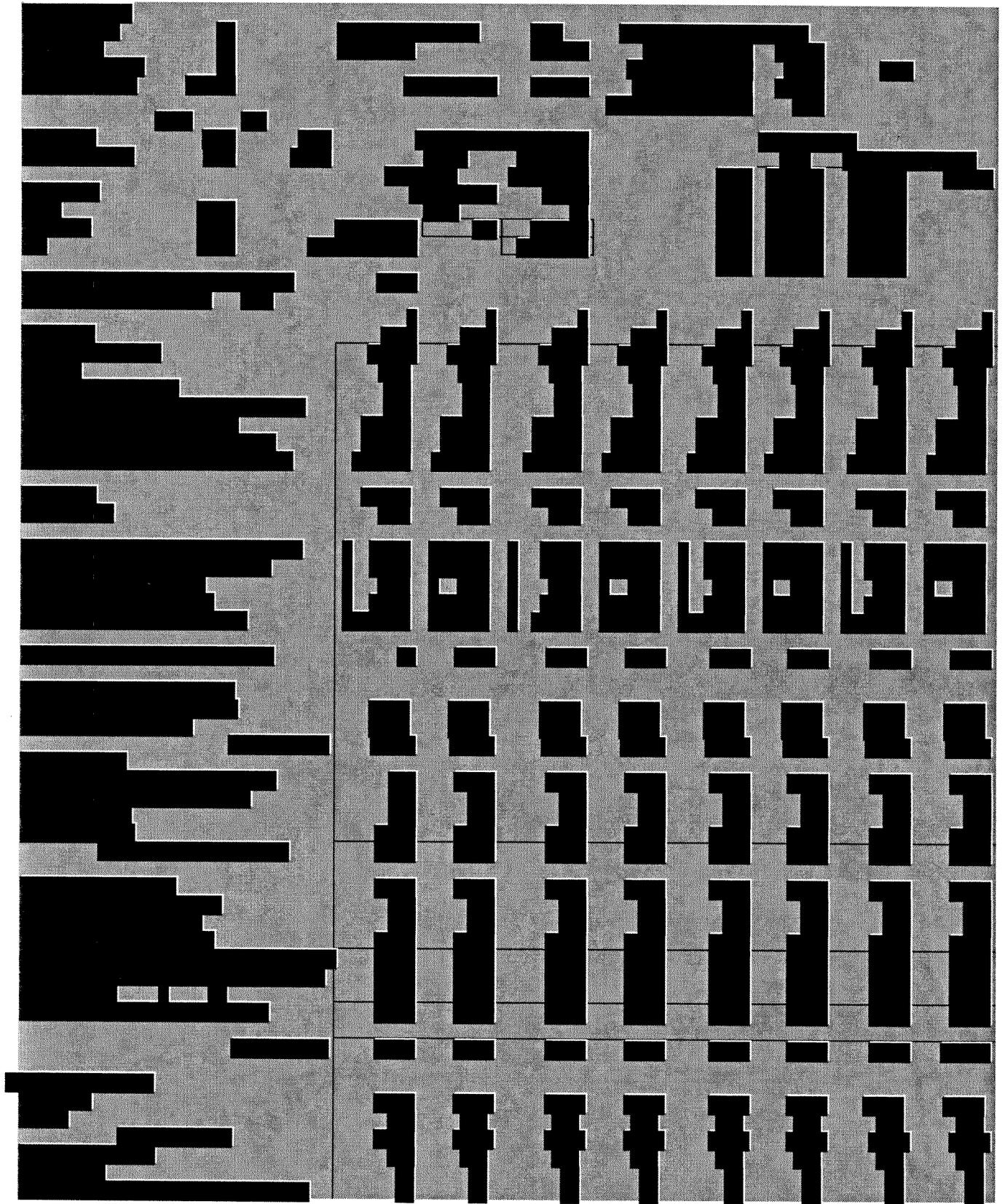
If, when the bids come in, the numbers don't work, the city, the state and the rest of Concord Steam's customers will have to come up with a Plan B before the heart of the city stops beating.

TAGGED Environmental Issues Energy Savings New Hampshire regional authority State



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