



*Steam and Power Generation*

**Concord Steam**  
P.O. Box 2520  
Concord, NH 03302-2520  
Fax: 603. 224. 7816  
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October 15, 2015

Debra A. Howland  
Executive Director and Secretary  
New Hampshire Public Utilities Commission  
Walker Building  
21 South Fruit Street, Suite 10  
Concord, NH 03301

**Re: DG 14 - 233 Report on status of Repowering Concord Steam**

Dear Ms. Howland:

As ordered in 25-728, Concord is providing this status report.

New Plant/Repowering –

We continue to work with TD Bank Securities on financing the construction of the rebuilt plant with a combination of taxable and tax free bonds. TD Securities has been selected to be the underwriter for the bonds. Two weeks ago they confirmed that the expected terms for the debt will be 5.8% on the tax free portion (8.9% on taxable for a blended rate of 6.3%) with a 20 year amortization and that there is still a strong market for the private placement of these bonds. There will be a small portion (10-15%) that will either be taxable bonds or bank debt, but the specific percentage has not been determined yet. The primary issue continues to be whether the State will stay with steam or not. This will delay financing until it is resolved.

We have gotten bids from contractors on the repowering of the facility, and the summary of estimated costs are attached. The total cost of the project is now estimated to be approximately \$23,000,000.

We are finalizing some of the details of the PPA with NHEC about the sale of the excess electricity and RECs from the facility. We are working with NHEC to finalize the purchase of the power that we would generate. The PPA contract still has to have some details worked out on price and conditions.

The State issued an RFP last spring to determine the cost/saving resulting from the conversion of the State buildings from steam to gas, and the response due date was September 23. Concord Steam submitted a proposal for a 10 year contract at a significantly reduced price from the present steam price. Our proposal and a summary of our analysis of the economics of steam vs gas is attached. We are expecting the cost of steam to our customers to be 30% less than the present rate. This is primarily due to two reasons, the plant efficiency will improve significantly with the plant rebuild, and the revenue from thermal RECS, both of these will serve to reduce the cost of energy.

**Concord  
Steam**



The State has indicated that they will consider any proposal we bring them, but one of the State's major concerns is that they not be the only entity that commits to a long term (10 yr) contract. To offset The State's concerns, we have been working with the School board, the City and several downtown building owners to develop long term contracts, contingent on the State staying a customer and the upgrades to the plant being completed. We have a signed long term contract with the Concord School District, which is our second largest customer, and are working with the City to do the same. We will be submitting the contract with the School District to the Commission for approval in the next few days.

[REDACTED]

[REDACTED]

[REDACTED]

**Current Operations -**

Our annual summer maintenance season is over. heating season is approaching and we are preparing for that.

Yours Truly,

A handwritten signature in cursive ink, appearing to read "Peter Bloomfield".

Peter Bloomfield, P.E.  
President

Concord Steam Capital Cost estimate

|  |    |            |
|--|----|------------|
| General Conditions, project management |    | 2,850,000  |
| Site work                              |    | 250,000    |
| Concrete                               |    | 550,000    |
| Building and finishes                  |    | 150,000    |
| Equipment                              |    | 7,385,000  |
| Rebuild breeching                      |    | 400,000    |
| Controls + CEM                         |    | 250,000    |
| Mechanical                             |    | 1,722,000  |
| Electrical                             |    | 1,150,000  |
| Startup and Commissioning              |    | 255,000    |
| Subtotal                               |    | 14,962,000 |
| Engineering                            |    | 850,000    |
| Subtotal                               |    | 15,812,000 |
| Construction Manager OH&P              | 6% | 948,720    |
| Total Construction contract            |    | 16,760,720 |
| Retube #1, new burner                  |    | 350,000    |
| Upgrade #5                             |    | 100,000    |
| Well                                   |    | 150,000    |
| Oil tanks cleanup and retirement       |    | 50,000     |
| Demo/asbestos abatement                |    | 450,000    |
| Interconnect                           |    | 467,000    |
| Permitting                             |    | 40,000     |
| Legal                                  |    | 100,000    |
| Engineering                            |    | 100,000    |
| Building permit                        |    | 100,000    |
| Builders risk insurance                |    | 150,000    |
| Miscellaneous/Contingency              |    | 1,300,000  |
|  |    | 20,117,720 |
| construct loan interest                |    | 1,100,000  |
| Cost of financing                      |    | 760,000    |
| Debt service reserve                   |    | 1,000,000  |
| TOTAL                                  |    | 22,977,720 |
| Contingency equity                     |    | 2,000,000  |



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September 22, 2015

**VIA HAND DELIVERY**

Ms. Karen Rantamaki  
Deputy Commissioner  
Department of Administrative Services  
25 Capitol Street  
Concord, NH 03301

**Re:    Department of Administrative Services RFP #2015-176**

Dear Ms Rantamaki,

The recent RFP as referenced requires that respondents to the proposal are only considered responsive if the proposal as submitted included eliminating steam from all of the facilities referenced. That requirement effectively made it impossible for Concord Steam to submit a responsive proposal. We believe that other consideration should be made to allow Concord Steam to provide an alternative to the standard approach as outlined in the RFP.

We would like to suggest an alternative concerning development of long-term energy savings by way of an arrangement between Concord Steam and the State. We understand that the Department is reviewing its energy efficiency options, including reviewing and analyzing the results of the RFP with respect to energy savings, and we would like to continue to cooperate with you to develop a proper baseline against which to achieve and measure savings with respect to heating options.

Concord Steam is proposing a 10 year contract for the supply of steam to the State, beginning in 2017. The Base (or Usage) rate would start at \$24/Mlb and increase each year by a CPI inflator. The Cost of Energy is projected to be \$5.72/Mlb, for an all-in rate for steam of \$29.72 for the first year, or a reduction of 36% from current rates. This significant reduction in energy rate is a result of the improved efficiency of the rebuilt plant and the additional income to the company from Renewable Energy Certificates that the rebuilt plant will qualify for. Concord Steam has signed a 13 year contract with the Concord School District along these same lines, and is working with the City and major commercial customers on similar 10 year contracts.

We would like to also offer to maintain the mechanical steam system equipment at a cost to be wrapped into a fixed monthly fee that can include labor and replacement parts. We would maintain the traps, valves, pumps, heat exchangers, and other mechanical steam system equipment. This would not include pipe repair, controls, or instrumentation. This would make the contract between Concord Steam and the State of NH reflective of the existing requirements in the RFP where the successful ESCO is required to provide on going maintenance and insure for proper operation of the mechanical system installed.

We have refined the preliminary analysis that we provided to you last May for your consideration, both in connection with review and analysis of the Department's RFP and with respect to discussions regarding possible future contractual arrangements between the State and Concord Steam. As shown in the attached analysis, our fundamental point is that the proper baseline for comparison of steam and natural gas options must assume that our proposed improvements are placed in service with the projected 36% decrease in steam costs, and that energy efficiency improvements that result from the RFP process also need to be recognized. When the environmental, energy and economic benefits of our proposed project are taken into account, the projected annual savings decline significantly and the "payback" period correspondingly increases.

The attached analysis compares three scenarios for comparing the costs of steam vs. natural case: (1) the original analysis you provided to us, which did not take into account the impacts of our projected improvements; (2) our proposal, which does take these impacts into account, as well as adjusting the steam usage for an average heating year; and (3) a third column which allows for efficiency improvements as a result of the RFP process.

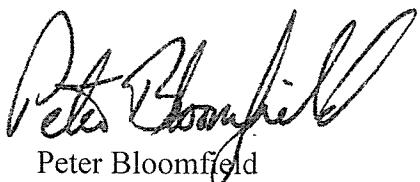
The bottom line is that, with these refinements, it is questionable whether the proposed installation of brand new boilers and related capital improvements, fired by natural gas, would satisfy the 20-year payback requirement to be treated as an "energy cost saving measure." Further, this analysis is based solely on the "internal" project comparisons, and does not take into account any of the very important "external" impacts that would result from such a change. As you know, these "external" impacts include the loss of 18 direct jobs at Concord Steam, and an additional almost 70 indirect jobs, primarily in the wood industry in the mid-New Hampshire region. "External" costs would also include the loss of an historic, regulated public utility that has provided environmentally-sound wood-fired heat to our community for almost 80 years, and the resulting economic impact on the downtown businesses.

We are interested in discussing the terms of a long-term steam supply contract with the State that would include price stability provisions for the entire term, which could further distinguish our improved steam proposal from a natural gas scenario.

We would like to discuss this analysis further with you prior to the finalization of the review of the RFP if possible. We are in the process of preparing our comprehensive financing proposal materials, including our application to the BFA and the NHPUC, and it is very important that we are able to engage with you on this analysis and to get some insights into the kind of longer-term arrangements for both the steam supply and lease that the State may desire.

Thank you.

Sincerely,



Peter Bloomfield  
President

cc: M. Connor

**COMMENTS ON DEPARTMENT COST COMPARISON -- "INTERNAL" PROJECT COSTS ONLY**

|  | Department<br>(Current Price) | CS Proposal | Explanation   | Correction for<br>system<br>improvements | Explanation  |
|--|-------------------------------|-------------|---|--|--|
| <b>Assumptions</b>                               |                               |             |   |  |  |
| Total CS Steam Sales (mlbs)                      | 137,000                       | 130,000     | <i>CS adjusted steam sales 30 year degree day average</i>           | 124,424                                  |  |
| State Consumption (mlbs) 7/1/13 to 6/30/14       | 61,152                        | 55,765      | <i>Steam sales to state adjusted for 30 year degree day average</i> | 50,189                                   | 10% reduction in State building steam use due to projected energy efficiency |
| State % of Total                                 | 44.6%                         | 42.9%       |   | 40.3%                                    |  |
| Natural Gas Boiler Efficiency %                  | 90.0%                         | 90.0%       |   | 90.0%                                    |  |
| State Natural Gas Consumption Equiv (therms)     | 792,938                       | 723,086     |   | 650,778                                  |  |
| Cost (\$) / Steam Unit (mlbs)                    |                               |             |   |  |  |
| Energy   | 25.10                         | 5.72        |   | 5.72                                     |  |
| Base   | 21.50                         | 24.00       |   | 24.00                                    |  |
| Total  | 46.60                         | 29.72       |   | 29.72                                    |  |
| Cost (\$) / Natural Gas Unit (therm)             |                               |             |   |  |  |
| Supply   | 0.67                          | 0.67        |   | 0.67                                     |  |
| Delivery   | 0.30                          | 0.30        |   | 0.30                                     |  |
| Total  | 0.97                          | 0.97        |   | 0.97                                     |  |
| Additional Operating Costs on Natural Gas        | 52,500                        | 52,500      |   | 52,500                                   |  |
| <b>Lost Revenue Items</b>                        |                               |             |   |  |  |
| Annual PUC Fee                                   | 16,000                        | 16,000      |   | 16,000                                   |  |
| Utility Property Tax                             | 37,000                        | 37,000      |   | 37,000                                   |  |
| BET  | 9,000                         | 9,000       |   | 9,000                                    |  |
| Lease of Steam Plant                             | 101,000                       | 101,000     |   | 101,000                                  |  |
| Air Emission Fee                                 | 75,000                        | 75,000      |   | 75,000                                   |  |
| Total Income Items                               | 238,000                       | 238,000     |   | 238,000                                  |  |
| State Portion of Income Items                    | 106,235                       | 102,093     |   | 96,002                                   |  |
| Total State Lost Revenue                         | 131,765                       | 135,907     |   | 141,998                                  |  |
| <b>Comparison Analysis</b>                       |                               |             |   |  |  |
| Steam  |                               |             |   |  |  |
| Units  | 61,152                        | 55,765      |   | 50,189                                   |  |
| Price / Unit                                     | 46.60                         | 29.72       |   | 29.72                                    |  |
| Steam Cost / Year                                | 2,849,683                     | 1,657,336   |   | 1,491,602                                |  |
| Natural Gas                                      |                               |             |   |  |  |
| Units  | 792,938                       | 723,086     |   | 650,778                                  |  |
| Price / Unit                                     | 0.97                          | 0.97        |   | 0.97                                     |  |
| NG Cost / Year                                   | 769,149                       | 701,394     |   | 631,254                                  |  |
| Additional Operating Costs                       | 52,500                        | 52,500      |   | 52,500                                   |  |
| State Lost Revenue                               | 131,765                       | 135,907     |   | 141,998                                  |  |
| Total Additional Cost                            | 184,265                       | 188,407     |   | 194,498                                  |  |
| Total Annual NG Cost                             | 953,415                       | 889,801     |   | 825,753                                  |  |
| Annual Savings from Conversion                   | 1,896,269                     | 767,535     |   | 665,850                                  |  |
| <b>Payback Calculation (RSA 21-J:19-b, I)</b>    |                               |             |   |  |  |
| Assumed Project and Debt Service Cost            |                               |             |   |  |  |
| Capital cost to Install 30 Boiler Systems        | 8,500,000                     | 8,500,000   |   | 8,500,000                                |  |
| Interest Rate                                    | 3.0%                          | 3.0%        |   | 3.0%                                     |  |
| Term   | 5                             | 14          |   | 17                                       |  |
| Annual Payment                                   | 1,856,014                     | 752,474     |   | 645,596                                  |  |
| Interest Payment                                 | 780,069                       | 2,034,634   |   | 2,475,140                                |  |
| Total Project and Debt Service Cost              | 9,280,069                     | 10,534,634  |   | 10,975,140                               |  |
| Annual Savings from Conversion w/o. debt service | 1,896,269                     | 767,535     |   | 665,850                                  | Does not account for shared savings with ESCO                                |
| Total Annual Savings with debt service           | 40,255                        | 15,061      |   | 20,253                                   |  |
| Estimated Years to Recover Total Project Cost    | 4.9                           | 13.7        |   | 16.5                                     |  |