



Metro Nashville

DISTRICT ENERGY SYSTEM

Metro District Energy System Advisory Board Regularly Scheduled Meeting of August 20, 2015 Minutes of Meeting

The meeting was held at the Energy Generation Facility at 90 Peabody Street Nashville, TN 37210

Facilitators: Harry Ragsdale, DES Project Contract Administrator and Kevin Jacobs, Thermal Engineering Group

Board Members Present:

Karen Bennett
Jim Thiltgen (*on behalf of James Harbison*)
Tom Eddlemon (*on behalf of Richard Riebeling*)
Richard Fletcher
Brian Taylor
Glen Mohon (*on behalf of Nancy Whittemore*)

Board Members not Present:

Yuri Cunza
James Harbison
Tom Turner
Richard Riebeling
Alan Robertson
Nancy Whittemore

Others Present:

Tim Hestle, CNE
Kevin Jacobs, TEG
Bob Lackey, DES Liaison
Seretha Nobbin, DES Advisory Board Secretary
Harry Ragsdale, TEG
Randy Pomeroy PMC

The Fourth Quarter DES Advisory Board Meeting was called to order by the Chair and began at 10:01 A.M.

A motion to approve the March 5, 2015, and May 21, 2015, Board Meeting was made, seconded and approved by the board.

At the request of the Chair, Mr. Ragsdale proceeded with the presentation to the Board.

Mr. Ragsdale reviewed the customer cost comparison table for the previous twelve months. On an aggregate basis for the previous twelve (12) months, this year versus last year, there was a marginal increase in consumption for the Private customers for both steam and chilled water usage. For the State and Metro, there was a material reduction in both steam and chilled water usage which resulted in an aggregate reduction of about a 7% from the previous year's consumption for steam and 3% reduction in chilled water. The largest contributor to the aggregate change in steam usage is related to the Music City Center's high occupancy leading to a reduced heating load. The aggregate unit price increased primarily as a result of the decrease in consumption.

Mr. Ragsdale discussed the contractor's performance for this past quarter noting that the contractor's performance remains very consistent and in compliance with their contractual obligations.

Mr. Jacobs reported the performance measurement on the electric conversion for steam. The units are in kilowatt hours of electricity per Mlb of steam. The blue line in the graph represents a fixed number based on the contract guarantee and the red line is performance variable. CNE's performance is very consistently



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below the guarantee, which is largely due to the amount of steam sales. The greater the gap is between guaranteed value and the actual value, the greater potential CNE has for receiving their performance bonus and the lower the cost of energy to the customers.

Mr. Jacobs noted similar results for the plant efficiency for the fuel to steam. The guarantee for the efficiency for the water to steam was established with very little room for improvement and CNE maintains a favorable value.

Performance measures for electric to chilled water and water to chilled water were also reported as favorable.

Mr. Jacobs reported CNE is doing a very good job on the water treatment. The quality of the steam and condensate are very consistent and no issues with the iron deposits in the condensate were reported. The chiller's condenser water circulates through the cooling tower and CNE is doing a very good job with maintaining the quality of the condenser water. However, in the chilled water, some bacteria were discovered growing in a couple of the customer buildings heat exchangers and it appears to have impacted the system's Delta-T. Although not determined to be wide spread, CNE began introducing a biocide into the chilled water the spring. The first treatment performed in April most likely killed most of the localized bacteria and the Delta-T has improved. A consistent dosage of the treatment will be implemented to make sure it does not return.

Mr. Jacobs reported this quarter's EGF walkthrough found the facility in very good condition. The walk through the EDS noted there continue to be issues with the water infiltration into some of the vaults.

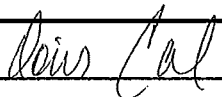
Mr. Jacobs reviewed actual gas spending relative to the FY15 budget. Fuel consumption was higher than budgeted (*without contingency*) as a result of higher steam sales due to colder weather; however, the plant efficiency as a result of higher steam production was improved. Fuel costs were generally on budget for the fiscal year when the price and consumption contingencies are included. Gas pricing remains low and flat.

Mr. Jacobs discussed the FY15 costs to date and compared them to the budgeted values. All costs were within the budget. Mr. Jacobs then reviewed the approved budget for FY16 which remains very close to last fiscal budget and reflects a decrease from the previous year of nearly 1/2 percent.

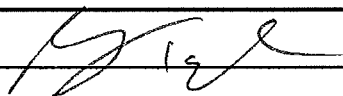
Mr. Ragsdale and Mr. Jacobs discussed other opportunities being planned. They have been informed of a hotel being planned and MDHA is planning an office building across the street.

Without further discussion, and upon a motion, the meeting was adjourned by the Chair.

The next Board Meeting will be held Thursday, November 19, 2015 at 10:00 A.M.



Seretha Nobbin, DES Advisory Board Secretary

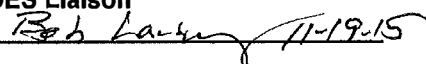
Approved: 

Brian Taylor, Vice Chair, DES Advisory Board

Date: 11/19/15

Date: November 19, 2015

Approved: _____

Bob Lackey, DES Liaison
Date:  11-19-15