



Operations Monitoring Report

Third Quarter FY14

Prepared by:

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I. Executive Summary

A review of the fiscal year 2014 (FY14) Third Quarter performance and contract obligations between Constellation New Energy (CNE) and the Metropolitan Government of Nashville and Davidson County (Metro) is presented in this report by Thermal Engineering Group, Inc (TEG). The status of the available funds for all active capital construction and repair and improvement projects are also presented. For the fiscal year 2014 to date, CNE has satisfactorily met all of the contract obligations to Metro and has had no contract violations.

For the Third Quarter FY14, the chilled water sales decreased approximately 15% over the previous Third Quarter (FY13) due primarily to the significantly colder weather experienced during this winter. Consequently, the Third Quarter FY14 saw a decrease in cooling degree days. The peak chilled water demand for the current quarter was 10,067 tons, which is 4.8% higher than the previous Third Quarter, surprisingly.

Steam sendout for the current quarter increased by approximately 10% over the previous Third Quarter, marked by an increase in the number of heating degree days by 16%. Likewise, steam sales also increased by approximately 12.3% over the previous Third Quarter. The increase in steam sales is also attributable to the Music City Center and, to a lesser extent, the Nashville Hyatt Place, but largely due to the extremely cold temperatures during the quarter. Steam system losses, as a percentage of sendout, decreased, and the total losses decreased by approximately 19% over the previous Third Quarter. The peak steam demand for the current quarter was 170,031 pounds per hour, which represents an increase in historic Third Quarter demand by approximately 37%. The peak steam demand for this quarter was higher than all previous quarters.

The Energy Generating Facility (EGF) performance continues to surpass the System Performance Guarantee (Guaranteed Maximum Quantity or GMQ) levels. The chilled water plant electric consumption continues to perform considerably lower than the guaranteed levels and decreased from the previous Third Quarter. The steam plant electric consumption increased approximately 17% over the previous Third Quarter, but the amount of steam per unit of sales decreased by approximately 4%. The steam plant fuel efficiency has decreased marginally from the previous Third Quarter due in part to an increase in the amount of propane used during the natural gas curtailment periods. The total water consumption for the steam and chilled water plants decreased approximately 4.4% from the previous Third Quarter marked by a 48% increase in the EDS make-up for the chilled water system and a 5% decrease in the steam plant usage.

Work continued on DES Capital and Repair & Improvement Projects during the Third Quarter of FY14. Both the exterior and interior work for the Expanded Chilled Water Service to the Sheraton Hotel project (DES-103) was completed during the quarter and the exterior work schedule window was met. This project is now in close-out.

Repair and Improvements to the EDS continue as scheduled.

The current fiscal year system operating costs to date are \$13,590,361. This value represents approximately 63% of the total budgeted operating cost for FY14. The customer revenues from the sales of steam and chilled water for FY14 (to date) are \$14,000,701 which is approximately 71% of the budgeted amount. The difference between the operating costs and customer revenue is the Metro funding amount (MFA), which represents the shortfall in cash flow for the system. The MFA transferred to date for FY14 is \$1,468,725 (75% of budget). However, the actual MFA required cannot be accurately calculated due to outstanding invoices.

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II. Energy Distribution Sales and Performance

A. Chilled Water

This section of the report discusses and presents performance information regarding the operation of the EGF for the periods described. Charts and tabular data are also presented to provide a more detailed description of the actual EGF performance.

1. Sales and Sendout

A comparison for the Third Quarter chilled water sales is shown in Figure 1. This data reflects a 15% decrease in sales for the current quarter over the same quarter of the previous fiscal year. The decrease in chilled water sales is largely attributed to the significantly colder than normal weather this winter.

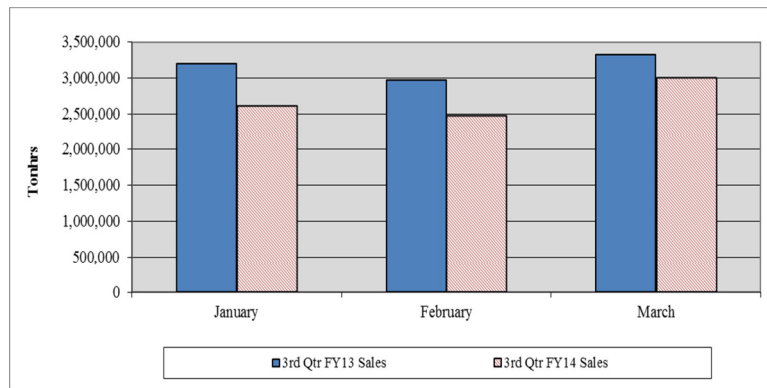


Figure 1. Third Quarter FY14 Sales Comparison

The peak chilled water demand for the current quarter was 10,067 tons, which represents a slight increase over the previous Third Quarter.

Figure 2 shows the chilled water sales, sendout and losses for the previous twelve months. The losses on this figure are defined as the difference in tonhrs per month between the recorded sendout and sales values and represent the total energy loss for chilled water in the EDS. The number of cooling degree days per month are also tracked for comparison.

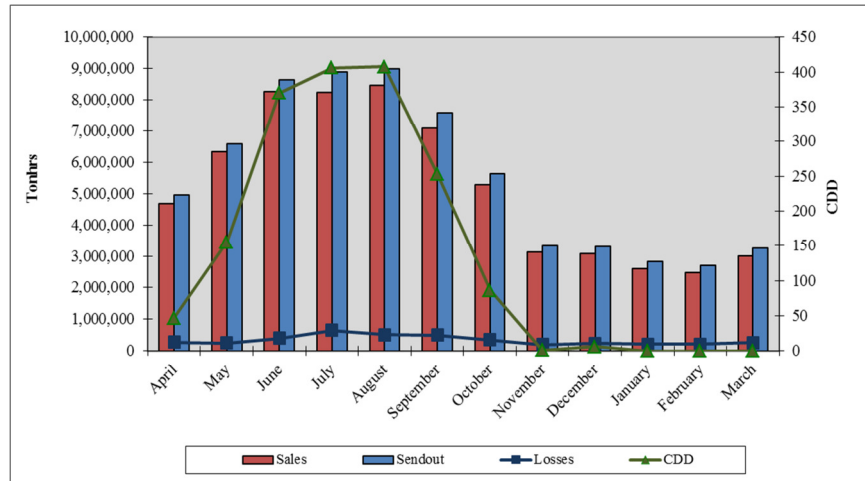


Figure 2. Chilled Water Sales, Sendout, Losses and CDD for the Previous Twelve Months

2. Losses

A comparison of the total, chilled water energy losses in the EDS for the Third Quarter is shown in Figure 3. These losses are the difference in chilled water sendout and sales.

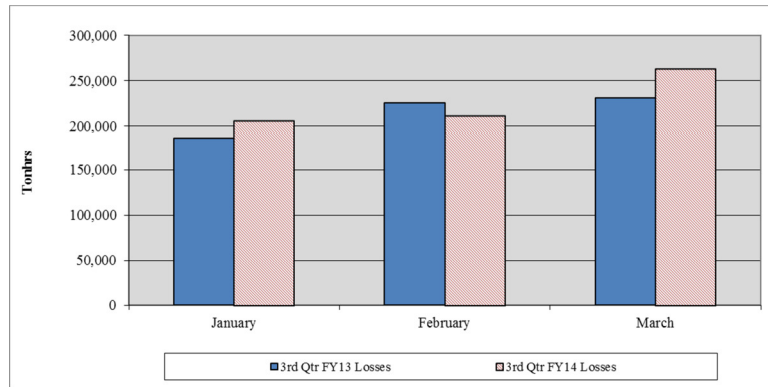


Figure 3. Chilled Water System Loss Comparison for the Third Quarter FY14

The EDS make-up increased by approximately 48% over the previous Third Quarter. However, the total EDS water usage represents only a small part of the total EGF water usage for the quarter. CNE is currently investigating potential sources of EDS water usage, such as leaks throughout the system and at customer buildings. They are proceeding by isolating different customers and sections of the distribution system which can only be done during the relatively low load periods experienced during the winter months.

The total energy losses have increased by approximately 6.4% over the previous Third Quarter, and the percent of losses as a function of sales has increased by approximately 26%. The make-up to the cooling towers decreased by approximately 14% due to the cold, dry winter air. The number of cycles of concentration in the condensing water circuit experienced a 54% increase during the current Third Quarter due to improved water chemistry in the cooling towers. The overall city water make-up comparison for the chilled water system is shown in Figure 4.

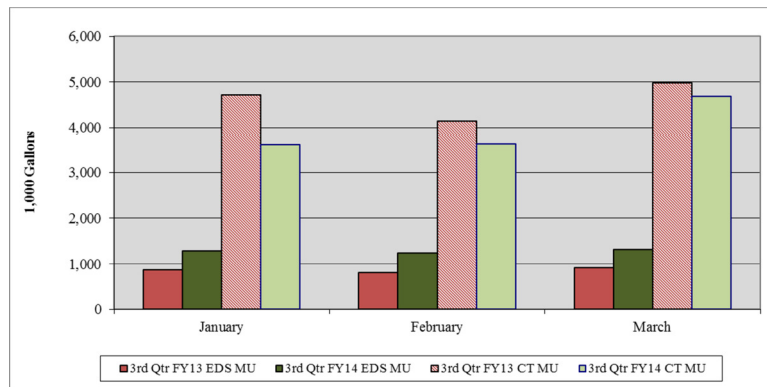


Figure 4. Chilled Water System City Water Usage Comparison

3. Performance

The performance of the chilled water aspect of the EGF is presented by the following two charts, Figures 5 and 6, for the previous twelve months. Under the management of CNE, the System Performance Guarantee levels as described in the ARMA are being achieved quite satisfactorily.

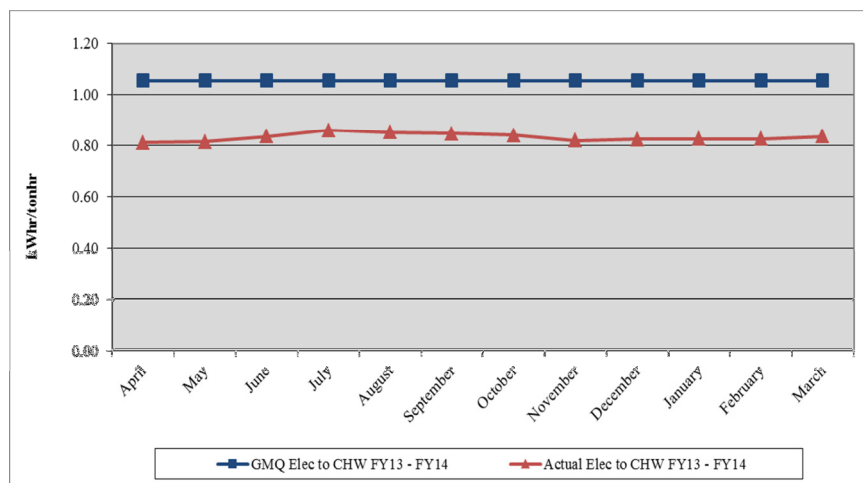


Figure 5. Chiller Plant Electric Performance Guarantee Comparison for the Previous Twelve Months

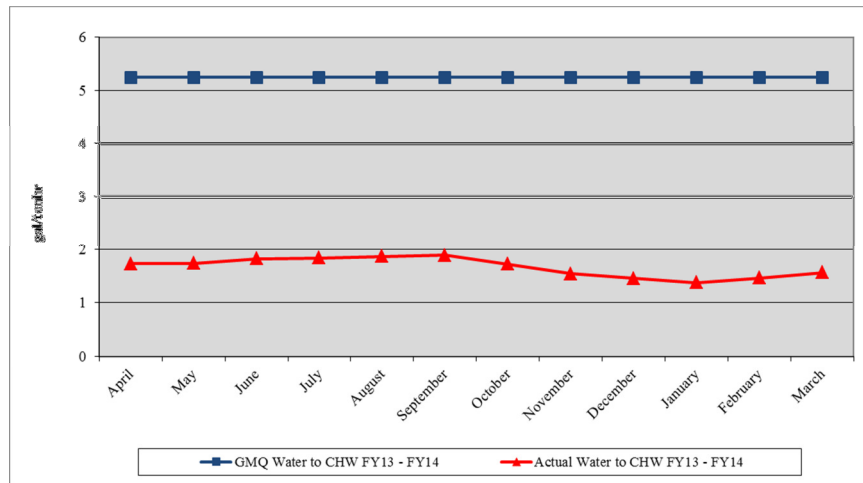


Figure 6. Chiller Plant Water Consumption Performance Guarantee Comparison for the Previous Twelve Months

The chilled water allocation of the electric consumption falls under the GMQ limit of 1.055 kWhr per tonhr for the current quarter, and no excursion is reported for the current fiscal year. The chiller plant electric usage for the current quarter decreased approximately 14% over the Third Quarter for FY13. The actual electric conversion factor increased 1.1% in the quarter to 0.830 kWhr per tonhr.

The actual chilled water plant water conversion factor increased approximately 12.6% over the previous Third Quarter. The total consumption of city water for the chiller plant for the current quarter decreased approximately 4.2% due to a decrease in the cooling tower water usage (due to cold, dry weather) and chilled water sales.

B. Steam

1. Sales and Sendout

The steam sendout increased by approximately 10.3% over the previous Third Quarter (FY13), and the sales increased by approximately 12.3% due largely to the Music City Center, the Nashville Hyatt Place and an increase in the number of heating degree days. The number of heating degree days increased by approximately 16% over the previous Third Quarter. The steam system losses decreased approximately 18.5% relative to sendout. A comparison for the Third Quarter steam sales is shown in Figure 7.

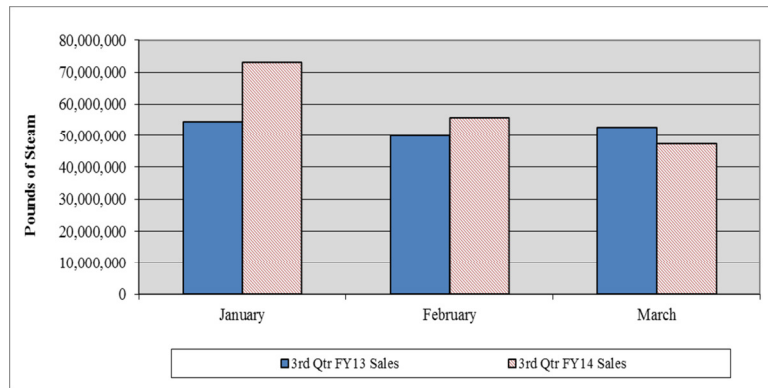


Figure 7. Steam Sales Comparison for the Third Quarter FY14

The peak steam demand for the current quarter is 170,031 pph, which reflects an approximate 37% increase in the peak steam production over the previous Third Quarter and represents the highest record steam demand at the EGF.

Figure 8 shows the steam sales, sendout and losses for the previous twelve months. The losses on this figure are defined as the difference in pounds per month between the recorded sendout and sales values and represent the total mass loss in the EDS between the EGF and the customer meters.

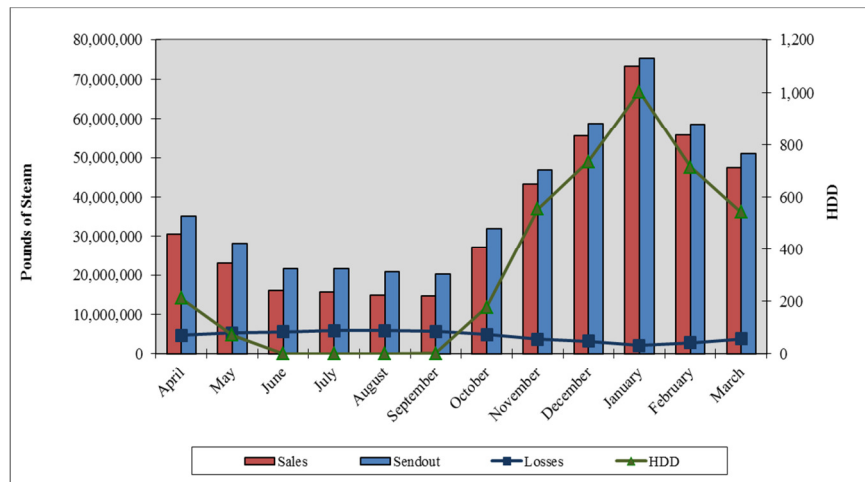


Figure 8. Steam Sales, Sendout, Losses and HDD for the Previous Twelve Months

2. Losses

A comparison of the total steam mass losses in the EDS for the Second Quarter is shown in Figure 9. The mass loss is caused by the heat loss in the EDS between the EGF and the customer meters, resulting in a mass loss at steam traps. Faulty traps, steam leaks or meter error could also be a contributing cause of these losses.

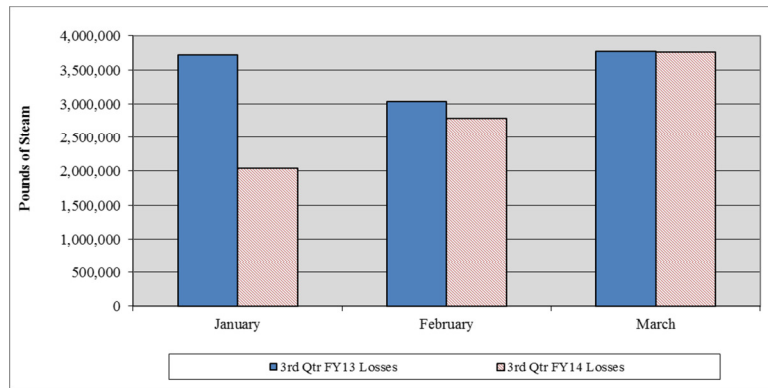


Figure 9. Second Quarter FY14 Steam System Losses

The amount of city water make-up (MU) to the steam system consists of the loss in mass between the EGF and the customers, in the condensate return from the customers to the EGF and losses at the EGF. This data is shown in the comparison of Third Quarter data in Figure 10.

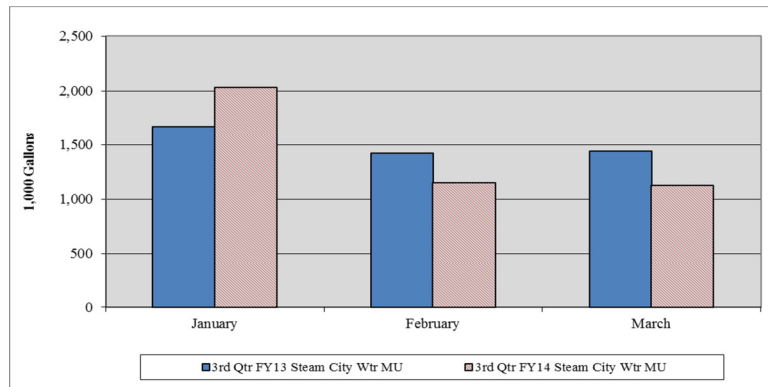


Figure 10. Third Quarter FY14 Steam System City Water Make-up Comparison

3. Performance

The performance of the steam system aspect of the EGF is presented by the following three charts, Figures 11, 12 and 13. Under the management of CNE, the System Performance Guarantee levels as described in the ARMA are being achieved satisfactorily.

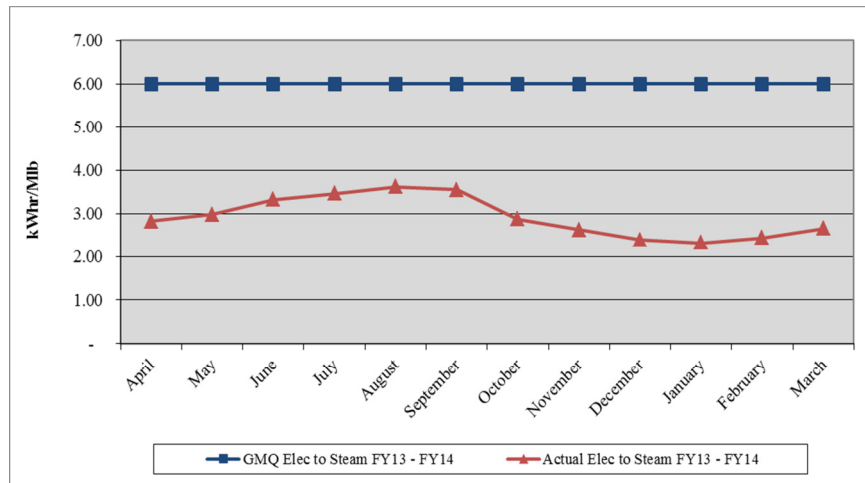


Figure 11. Steam Plant Electric Performance Guarantee for the Previous Twelve Months

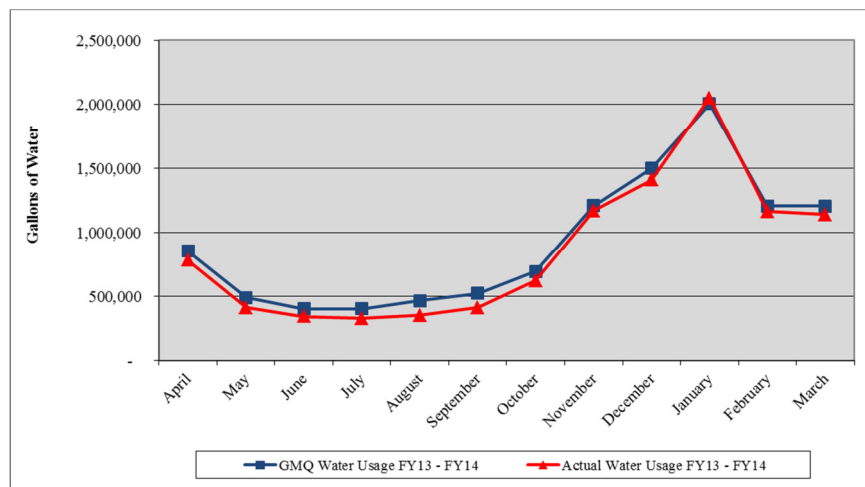


Figure 12. Steam Plant Water Performance Guarantee for the Previous Twelve Months

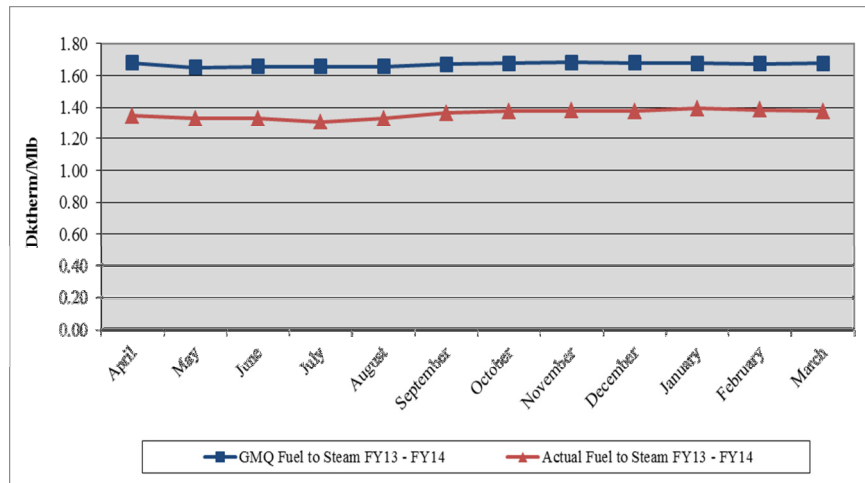


Figure 13. Steam Plant Fuel Performance Guarantee for the Previous Twelve Months

The current quarter experienced a 16.7% increase in the steam plant electric consumption while experiencing a 4% increase in the electric conversion factor. The water consumption for the steam plant decreased 5.1% this quarter as compared to the previous Third Quarter. The fuel consumption per unit of steam sales is relatively constant throughout the year and when compared to the historic data. The boiler plant fuel efficiency decreased 1.2% for the current quarter.

C. Contract Guarantee Performance

The production and sales performance for the EGF and EDS are summarized in Table 1 for the current quarter and the complete fiscal year. Additional parameters, such as cooling tower blow-down and peak demands are listed in this table, as well. Table 2 presents the Third Quarter comparisons of the Guaranteed Maximum Quantities (GMQ) of the criteria commodities (fuel, water and electricity).

Table 1. Third Quarter FY14 Production, Sales and Consumption Summary

Item	Unit	Third Quarter FY14	Third Quarter FY13	*Percent Difference
	days	90	90	0.00%
Total Electric Use	kWhrs	7,136,420	8,166,165	-12.61%
Chilled Water	kWhrs	6,704,934	7,796,407	-14.00%
Steam	kWhrs	431,486	369,758	16.69%
Total Water Use	kgal	20,043	20,960	-4.38%
Total Chilled Water	kgal	15,735	16,420	-4.17%
EDS Make-up	kgal	3,831	2,587	48.09%
Cooling Towers	kgal	11,904	13,833	-13.94%
Calc CT Evaporation	kgal	10,599	11,627	-8.84%
CT Blowdown	kgal	1,305	2,206	-40.84%
Calc # Cycles		8.12	5.27	54.10%
Steam	kgal	4,308	4,540	-5.11%
Total Fuel Use	mmBTU	256,503	229,694	11.67%
Natural Gas	mmBTU	248,615	229,497	8.33%
Propane	mmBTU	7,888	197	n.a.
Condensate Return	kgal	18,831	16,639	13.17%
	lbs	153,585,258	135,707,635	13.17%
Avg Temp	°F	168.7	168.0	0.40%
Sendout				
Chilled Water	tonhrs	8,764,200	10,137,500	-13.55%
Steam	lbs	184,898,000	167,586,000	10.33%
Peak CHW Demand	tons	10,067	9,602	4.84%
Peak Steam Demand	lb/hr	170,031	124,156	36.95%
CHW LF		40.30%	48.88%	-17.54%
Steam LF		50.34%	62.49%	-19.44%
Sales				
Chilled Water	tonhrs	8,082,547	9,497,074	-14.89%
Steam	lbs	176,315,849	157,052,250	12.27%
Losses				
Chilled Water	tonhrs	681,653	640,426	6.44%
Steam	lbs	8,582,151	10,533,750	-18.53%
		4.64%	6.29%	-26.16%
Degree Days				
CDD		0	5	-100.00%
HDD		2,259	1,949	15.91%

*positive percent difference values imply an increase from FY13 to FY14

Table 2. Third Quarter FY14 Performance Guarantee Comparison for Steam and Chilled Water

GMQ Calculations	Unit	Third Quarter FY14	Third Quarter FY13	*Percent Difference
Steam				
GMQ Elec Conversion	kWhr/Mlb	6.00	6.00	
Electric Conversion	kWhr/Mlb	2.45	2.35	3.94%
GMQ Plant Efficiency	Dth/Mlb	1.676	1.681	
Plant Efficiency	Dth/Mlb	1.387	1.371	1.22%
Actual %CR		83.06%	80.98%	2.58%
Avg CR Temp	°F	169	168	0.40%
GMQ Water Conversion	gal	4,415,193	4,494,948	
Water Conversion	gal	4,351,080	4,585,400	-5.11%
Chilled Water				
GMQ Elec Conversion	kWhr/tonhr	1.055	1.055	
Electric Conversion	kWhr/tonhr	0.830	0.821	1.05%
GMQ Water Conversion	gal/tonhr	5.25	5.25	
Water Conversion	gal/tonhr	1.95	1.73	12.60%

*positive percent difference values imply an increase from FY13 to FY14

D. Operating Costs

The fixed operating costs for the DES include the management fee to CNE, debt service payments on the bonds and engineering and administration costs and are charged to the customers relative to their contract demand. The variable costs are dependent on the amounts of steam and chilled water produced and sold to the customers. These latter costs include the utility and chemical treatment costs. The vast majority of the costs incurred for the operation of the DES are passed onto the customers in the form of the demand charges (fixed costs) and energy charges (variable costs). A summary of the total operating costs for the fiscal year to date are shown in Table 3.

The revenues shown reflect the charges to the customers for their respective steam and chilled water service. The difference between the total costs and revenues from the customers is the shortfall that must be paid by Metro. The shortfall exists, in part, due to the remaining capacity at the EGF that was included in the original construction and remains unsold. This capacity is available for potential future customers.

The system operating costs for FY14 to date are \$13,590,725. This value represents approximately 63% of the total budgeted operating cost for FY14 and includes expenses to date that have been invoiced but were not paid at the time of this report. Additional invoices that would be charged to the Third Quarter have not been issued or paid at the time of this report. The customer revenues from the sales of steam and chilled water for

FY14 are \$14,000,701 which is approximately 71% of the budgeted amount. The MFA transferred to date is \$1,468,725 (75% of budget). However, the actual MFA required cannot be accurately calculated due to the outstanding invoices.

Table 3. DES Expenses and Revenues to Date

Item	FY14 Budget	First Quarter Expenses	Second Quarter Expenses	Third Quarter Expenses	Fourth Quarter Expenses	Total Spending to Date
Operating Management Fee						
FOC: Basic	\$ 4,364,800	\$ 1,061,719	\$ 1,061,719	\$ 1,061,719	\$ -	\$ 3,185,157
9th Chiller	\$ 40,500	\$ 9,949	\$ 9,949	\$ 9,949	\$ -	\$ 29,846
C/O 6A	\$ 80,000	\$ 19,641	\$ 19,641	\$ 19,641	\$ -	\$ 58,924
C/O 6B	\$ 70,100	\$ 17,195	\$ 17,195	\$ 17,195	\$ -	\$ 51,585
C/O 7	\$ 28,100	\$ 6,478	\$ 6,478	\$ 6,478	\$ -	\$ 19,434
C/O 8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pass-thru Charges: Chemical Treatment	\$ 224,100	\$ 34,745	\$ 33,000	\$ 36,490	\$ -	\$ 104,235
Insurance	\$ 30,300	\$ -	\$ -	\$ -	\$ -	\$ -
Marketing: CES Sales Activity	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Incentive Payments	\$ -	\$ -	\$ 1,034	\$ 3,102	\$ -	\$ 4,136
FEA: Steam	\$ -	\$ 21,479	\$ 41,455	\$ 73,223	\$ -	\$ 136,157
Chilled Water	\$ -	\$ 177,131	\$ 76,916	\$ 61,059	\$ -	\$ 315,106
Misc: Metro Credit	\$ -	\$ (206,198)	\$ (116,755)	\$ (90,376)	\$ -	\$ (413,330)
ARFA	\$ -	\$ 15,420	\$ 15,420	\$ 15,420	\$ -	\$ 46,259
Deferral	\$ -	\$ -	\$ (81,651)	\$ (134,282)	\$ -	\$ (215,933)
Subtotal - Man Fee =	\$ 4,837,900	\$ 1,157,558	\$ 1,084,400	\$ 1,079,617	\$ -	\$ 3,321,576
Reimbursed Management Fee + Chem Treatment		\$ 1,333,815	\$ 1,169,338	\$ -	\$ -	\$ 2,503,153
Metro Costs						
Pass-thru Charges: Engineering	\$ 10,100	\$ 112	\$ -	\$ -	\$ -	\$ 112
EDS R&I Transfers	\$ 268,800	\$ 67,200	\$ 67,200	\$ 67,200	\$ -	\$ 201,600
Metro Marketing	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -
Project Administration	\$ 17,500	\$ -	\$ -	\$ -	\$ -	\$ -
Metro Incremental Cost	\$ 530,200	\$ 153,812	\$ 119,239	\$ 70,211	\$ -	\$ 343,262
Utility Costs: Water/Sewer	\$ 714,300	\$ 187,860	\$ 101,788	\$ 76,839	\$ -	\$ 366,487
EDS Water/Sewer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
EDS Electricity	\$ -	\$ 18,294	\$ 14,967	\$ 13,547	\$ -	\$ 46,808
Electricity	\$ 6,585,000	\$ 2,176,926	\$ 782,620	\$ 679,836	\$ -	\$ 3,639,382
Natural Gas Consultant	\$ 98,300	\$ 4,753	\$ 5,800	\$ 7,360	\$ -	\$ 17,913
Natural Gas Transport	\$ -	\$ 41,347	\$ 72,875	\$ 250,139	\$ -	\$ 364,361
Natural Gas Fuel	\$ 3,057,800	\$ 327,008	\$ 741,853	\$ 1,166,166	\$ -	\$ 2,235,027
Propane	\$ -	\$ -	\$ -	\$ 206,192	\$ -	\$ 206,192
Subtotal - Metro Costs =	\$ 11,292,000	\$ 2,977,310	\$ 1,906,342	\$ 2,537,489	\$ -	\$ 7,421,142
Subtotal - Operations =	\$ 16,129,900	\$ 4,134,868	\$ 2,990,743	\$ 3,617,107	\$ -	\$ 10,742,717
Debt Service						
2012 Bonds	\$ 3,476,000	\$ 867,688	\$ 868,988	\$ 868,988	\$ -	\$ 2,605,663
2005 Bonds	\$ 752,300	\$ 173,291	\$ -	\$ -	\$ -	\$ 173,291
2007 Bonds	\$ 215,700	\$ -	\$ -	\$ -	\$ -	\$ -
2008 Bonds	\$ 214,400	\$ -	\$ -	\$ -	\$ -	\$ -
2010 Bonds	\$ 212,100	\$ 89,050	\$ -	\$ -	\$ -	\$ 89,050
MCCC Fund	\$ 748,000	\$ -	\$ -	\$ -	\$ -	\$ -
Interest Revenue	\$ (193,400)	\$ (6,747)	\$ (6,868)	\$ (6,747)	\$ -	\$ (20,361)
MIP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Oper. Reserve Fund	\$ 93,600	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal - Capital =	\$ 5,518,700	\$ 1,123,283	\$ 862,120	\$ 862,241	\$ -	\$ 2,847,644
Total =	\$ 21,648,600	\$ 5,258,150	\$ 3,852,863	\$ 4,479,348	\$ -	\$ 13,590,361
Customer Revenues						
Taxes Collected		\$ 90,505	\$ 72,704	\$ 89,179	\$ -	\$ 252,388
Taxes Paid		\$ 89,445	\$ 77,600	\$ 58,966	\$ -	\$ 226,011
Penalty Revenues/Credits		\$ (39,129)	\$ (13,454)	\$ (3,889)	\$ -	\$ (56,473)
Energy Revenues Collected		\$ 5,255,091	\$ 4,084,421	\$ 4,691,285	\$ -	\$ 14,030,796
Revenues =	\$ 19,690,300	\$ 5,217,021	\$ 4,066,071	\$ 4,717,609	\$ -	\$ 14,000,701
Metro Funding Amount =	\$ 1,958,300	\$ 41,129	\$ (213,208)	\$ (238,261)	\$ -	\$ (410,340)

The DES serves 28 customers and 41 buildings in downtown Nashville. These customers are divided into three categories: 1) Private customers who privately own their buildings, 2) State of TN owned buildings and 3) Metro owned buildings. A summary of the annual costs for each of these three categories is presented in Table 4. These values include late fees and penalties and any unpaid balances.

Table 4. Customer Revenue Summary to Date

Building	Chilled Water			Steam		
	Total Cost	Consumption (tonhrs/yr)	Unit Cost (\$/tonhr)	Total Cost	Consumption (Mlb/yr)	Unit Cost (\$/Mlb)
Private Customers	\$ 2,487,733	12,337,092	\$ 0.2016	\$ 1,254,145	81,715	\$ 15.3477
State Government	\$ 2,436,732	10,803,428	\$ 0.2256	\$ 1,711,601	104,933	\$ 16.3114
Metro Government	\$ 3,925,860	20,218,054	\$ 0.1942	\$ 2,214,723	160,756	\$ 13.7770
New Customers	\$ 2,200,293	10,175,576	\$ 0.2162	\$ 1,119,856	91,729	\$ 12.2084
Total	\$ 8,850,325	43,358,574	\$ 0.2041	\$ 5,180,469	347,404	\$ 14.9120

Total Revenue \$ 14,030,794
 True-up and Adjustments (Net) \$ (30,093)
 Net Revenue \$ 14,000,701

III. EGF Operations

Items relating to the facility operations presented herein are derived from the monthly reports issued by CNE for FY14. Communication between TEG and CNE continues to be excellent, and CNE has reported and managed all EGF operations satisfactorily and according to the ARMA with no contract violations.

A. Reliability

The principle issues surrounding the reliable operation of the EGF relates to the ability to operate without significant interruption, exclusive of planned outages, and disruption of service to the customers. The following disruptions in service occurred during the quarter.

- During the month of January, the natural gas to the EGF was curtailed on several occasions. During these periods, the boilers had to be switched over manually to be fired from the back-up fuel, propane. During these fuel change-overs, the steam sendout pressure dropped below 150 psig.
- Due to mechanical issues at the Music City Center, which caused fluctuations in the steam demand from the EGF, the steam sendout pressure decreased below 150 psig during January until building personnel could remedy the problems.
- In February, a power failure from NES resulted in a trip in the EGF's transformer which caused the steam sendout pressure to be less than 150 psig for less than 30 minutes.
- Due to a safety relief valve and a natural gas control valve at the boilers, the steam sendout pressure dropped below 150 psig on several occasions in February. CNE has since repaired these valves and a re-occurrence is not expected.

- Excursions and disruptions in operations that have occurred throughout the year are included in the individual Monthly Operational Reports from CNE.

B. Efficiency

The operation of the EGF satisfied the guaranteed levels for all commodity usage during the quarter. There were no significant excursions above the guaranteed levels for the current quarter. A more detailed discussion of the contract guarantee performance was presented previously in this report.

C. Environment, Health and Safety

No environmental violations were reported during the quarter.

Monthly safety meetings were held on Hearing Conservation, Elevated Work Safety and Lock-out Tag-out Procedures.

CNE continues its cross-training maintenance employees to fill in as relief operators.

D. Personnel

The EGF currently has twenty-five full time employees. Of the current number of employees, seventeen were previously employed by Nashville Thermal Transfer Corporation.

E. Training

Staff training for this quarter consisted of the Health and Safety training discussed previously. CNE began cross training maintenance personnel to perform the tasks of the operators at the EGF in case of emergency or need.

F. Water Treatment

The water treatment program consists of regular testing and monitoring of the water chemistry in the steam, chilled water and condensing water systems. Chemicals are added to control the water hardness, chlorine levels and biologicals. Remote testing of the condensate at the AA Birch, Tennessee Tower and the Andrew Jackson also occurs regularly to monitor the concentration and distribution of the steam system chemicals.

- Steam System
 - The condensate return averaged approximately 83.1% of the steam sendout during the quarter which is approximately the same as the previous Third Quarter. This high percentage of condensate return is an excellent indicator of the quality of steam and condensate throughout the system.

- The steam system make-up has continued to decrease from previous years due to the repair and maintenance improvements of the EDS.
- Condensing Water System
 - The conductivity of the condensing water continues normal with only a few excursions resulting in high cycles of concentration and low blowdown rates.
- Chilled Water System
 - The control of the system chemistry continues to be excellent.

G. Maintenance and EGF Repairs

CNE continues to report on the numerous routine maintenance and preventive maintenance activities performed on the EGF primary and ancillary equipment. The principle items are discussed herein as they relate to the repair, maintenance or replacement of equipment or devices at the facility and are not considered extraordinary. The cost for these items is included as part of the FOCs.

- The automated gas valve on boiler #2 was repaired.
- A new motor for condenser water pump #4 was installed.
- The #1 sulfite pump was replaced.
- The safety relief valve on boiler #1 was repaired.
- The flush valve on the toilet in the men's restroom was repaired.
- Leaks were repaired on the chemical feed systems.
- Other minor repairs and maintenance were made during the quarter and are listed in the monthly reports issued by CNE.

H. EGF Walk-through

A quarterly Walk-through of the EGF was performed on March 25, 2014, by Kevin Jacobs, P.E. with TEG. This review involved a tour of the facility with the primary points of interest and concern noted herein.

- Many of the housekeeping items noted in the previous walk-through have been repaired or resolved.
- Some of the riser pipes in the cooling towers have been painted, but some repairs remain. CNE has dedicated itself to repaint these riser pipes as the tower basins are repaired and the fill is replaced. They estimate a complete restoration of these components over the next couple of winters.
- Other minor items remaining include:
 - Cobwebs have reformed in various places throughout the plant and on motor control center #4 located near the boilers; these should be removed. However, progress has been made in removing these cobwebs.

IV. Capital Projects

The Capital Projects discussed in this section are those projects funded through the issuance of bonds by Metro. Costs for these projects will be paid from funds already appropriated. The statuses of the projects are discussed, and the project cost-to-date and bond balances are also presented.

A. Third Quarter FY14 Open Projects

The following projects remained open at the end of the Third Quarter FY14.

1. DES033 – Manhole Lid and Ring Replacement/Restoration

This project relates to the repair and replacement of manhole lids and rings whenever Metro Public Works performs Street re-paving. This project will remain open and on-going.

2. DES077 – Music City Center Service Connection

This project will most likely be closed-out during the Fourth Quarter FY14.

3. DES090 – Manhole & Tunnel Insulation Repair (Revised from DES060)

Work associated with this project will be on-going as required.

4. DES091 – Thermal Storage and NES Time of Use Rates

Although the thermal storage aspect of this project is completed, additional investigation is currently being performed by TEG for the conversion of the current billing practices to a time of use basis matching that of the electric invoice from NES. A proposal is expected from a local programmer who may be able to implement the necessary program and programming changes to the CNE invoicing system to facilitate the necessary changes.

5. DES 098 – Nashville Hyatt Place Customer Connection

The previously noted insulation repairs were made during the quarter. This project is expected to be closed-out during the Fourth Quarter FY14.

6. DES 100 – MH-10 Roof Replacement

This project is expected to be closed-out in the Fourth Quarter FY14 upon final invoicing from CNE and an outstanding invoice from Piedmont is delivered.

7. DES 101 – MH-1 Abandonment

This project is complete and will be closed-out during the Fourth Quarter FY14.

8. DES 102 – Customer Delta T Modifications

This project has been completed and implemented on the customer invoices. However, final invoices from CNE have not been issued. Close-out is anticipated during the Fourth Quarter FY14.

9. DES 103 – Sheraton Hotel Expanded CHW Service

Both the exterior and interior work associated with this project was completed during the Third Quarter FY14 with the exterior work construction window being met. This project is now in close-out and expected to be closed during the Fourth Quarter FY14.

B. Third Quarter FY14 Closed Projects

No projects were closed during the Third Quarter FY14.

C. Capital Projects Budget

The following table summarizes the costs and remaining balance of the DES capital projects based on reported expenditures to date. Open projects or completed projects that require some additional management are shown. Total costs for projects that are closed are shown with a gray highlight. Only the funds currently available are shown.

Table 5. Capital Projects Expense Summary

DES Project #	Description	Total Budget	FY14 Spending to Date	Total Spent to Date	Remaining Balance
2010 Bond Projects					
DES070	MH 6 to 23 Cond Line	\$ 20,000	\$ -	\$ 527	\$ 19,473
DES071	Hermitage Hotel Ser Modifications	\$ 20,000	\$ -	\$ 1,119	\$ 18,881
DES072	Sheraton Strm & Cond Line	\$ 11,000	\$ -	\$ 10,462	\$ 538
DES091	NES Time of Use Electric Rate	\$ 100,000	\$ 2,857	\$ 64,616	\$ 35,384
Total Closed Projects		\$ 1,814,533	\$ -	\$ 1,814,533	\$ -
Metro Project Admin		\$ -	\$ -	\$ -	\$ -
Project Man, Development, etc		\$ 444,467	\$ -	\$ -	\$ 444,467
Total 2010 Bond		\$ 2,410,000	\$ 2,857	\$ 1,891,257	\$ 518,743
MCCC Construction Fund					
DES077	Music City Convention Center Design/Const	\$ 545,900	\$ -	\$ 453,281	\$ 92,619
DES077	MCCC Metering	\$ 121,870	\$ 10	\$ 141,711	\$ (19,841)
DES077	Bell/Clark Construction Fund	\$ 4,697,860	\$ -	\$ 4,267,623	\$ 430,237
DES098	Nashville Hyatt Service Connection	\$ 300,000	\$ 737	\$ 250,294	\$ 49,706
DES100	MH-10 Roof Repair	\$ 450,000	\$ 383,953	\$ 387,490	\$ 62,510
DES101	MH-1 Abandonment	\$ 55,000	\$ 24,788	\$ 34,197	\$ 20,803
DES102	Customer Delta T Control Modifications	\$ 30,000	\$ 5,720	\$ 5,720	\$ 24,280
DES103	Sheraton Metering Modifications	\$ 60,000	\$ 255,058	\$ 255,058	\$ (195,058)
Sub-Total Closed Projects		\$ 686,197	\$ -	\$ 679,111	\$ 7,086
Metro Project Admin		\$ 50,000	\$ 17,899	\$ 39,413	\$ 10,587
Project Man, Development, etc		\$ 1,503,173	\$ -	\$ -	\$ 1,503,173
Total MCCC Construction Fund		\$ 8,500,000	\$ 688,165	\$ 6,513,897	\$ 1,986,102

V. Energy Distribution System Repairs, Improvements, PM and Emergencies

Several EDS repairs and improvements were made during the Third Quarter. The principle items for discussion are presented in the following sections.

A. Repairs and Improvements

Several repairs were made to the EDS and at customer buildings during the quarter. The remaining value of the R&I budget at the end of the current quarter is \$148,623. Table 6 provides a summary of the FY14 expenditures and revenues to date associated with the R&I budget.

Table 6. Repair and Improvement Expenditure and Revenue Summary

Description	Date	Tracking #	Vendor	Expenditure	Transfers	Market Adjustment	Market Value	Balance
Value at end of FY13						\$ -	\$ 51,892.81	\$ 51,892.81
May 2013 CNE R&I Services	8/14/2013	DES-1700	CNE	\$ 11,540.17				
DES-095 Manhole B2-Vault leak repairs	8/14/2013	DES-1705	CNE	\$ 8,825.00				
June 2013 CNE R&I Services	9/3/2013	N/A	CNE	\$ 2,700.72				
July 2013 CNE R&I Services	9/23/2013	N/A	CNE	\$ 5,974.59				
Sub-Total First Quarter				\$ 29,040.48	\$ 67,200.00	\$ -	\$ 38,159.52	\$ 38,159.52
DES-101 Manhole 1	10/29/2013	N/A	CNE	\$ 43,300.00				
DES-101 MH1 CNB R&I	10/29/2013	N/A	CNE	\$ 3,326.66				
35965 - DES R&I 9/1	11/26/2013	DES-1762	CNE	\$ 10,984.48				
August 2013 CNE R&I Services	11/4/2013	DES-1744	CNE	\$ 6,379.18				
Sept 2013 CNE R&I Services	12/31/2013	N/A	CNE	\$ 2,626.39				
Sub-Total Second Quarter				\$ 66,616.71	\$ 67,200.00	\$ -	\$ 583.29	\$ 583.29
Oct 2013 CNE R&I Services	1/22/2014	DES-1787	CNE	\$ 4,243.64				
Nov 2013 CNE R&I Services	2/26/2014	N/A	CNE	\$ 3,781.88				
Dec 2013 CNE R&I Services	3/21/2014	N/A	CNE	\$ 1,186.73				
Sub-Total Third Quarter				\$ 9,212.25	\$ 67,200.00	\$ -	\$ 57,987.75	\$ 57,987.75
Sub-Total Fourth Quarter				\$ -	\$ -	\$ -	\$ -	\$ -
FY14 Year to Date				\$104,869.44	\$201,600.00	\$-	\$ 148,623.37	\$ 148,623.37

B. Preventive Maintenance

Preventive maintenance, tunnel and manhole inspections and reviews of customers' mechanical rooms were performed during the quarter. The principle items for discussion are presented. A more detailed review of the condition of the EDS is presented in sub-section D of this report, "EDS Walk-through."

1. EDS Tunnel and Manhole Inspections
 - a. Manhole S5 (State system) required pumping numerous times during the quarter.
 - b. Water accumulation in Manhole B2 has reduced, however it required pumping several times during the quarter.
 - c. Several traps were found not to be functioning properly; CNE needs to repair or replace these traps as soon as possible.
 - d. Structural metal in the vaults and tunnels need to be cleaned and painted.
2. Other EDS Inspections
 - a. The monthly thermographic analyses revealed new hot spots on Molloy St near MH-B4 and between MH-L and MH-K on 1st Ave.
 - b. Other minor items are included in the CNE monthly reports.

C. Emergencies

No emergencies were reported during the quarter.

D. EDS Walk-through

Due to schedule conflicts, no manholes were reviewed by TEG during the Third Quarter 2014; however, CNE continue to make their monthly inspections. Manhole reviews will be conducted during the Fourth Quarter FY14.

VI. Customer Relations

This section contains descriptions of the marketing efforts made by the DES Team during the quarter. The topics of interactions, meetings and training seminars with the customers are also discussed. There are currently 28 customers, comprised of 41 different buildings, connected to the EDS, including the Music City Center and Nashville Hyatt Place. Service to each of these buildings continues to prove satisfactory, and the responsiveness to customer issues is handled by CNE in an excellent and professional manner.

A. Marketing

The DES has placed a temporary hold on active marketing at this time due to the uncertainty of the actual steam and chilled water loads on the MCC.

B. Customer Interaction

The CNE customer service representative (CSR) continues to respond to customer issues as they arise. Much of the communication involves minor problems with the customers' heating and cooling systems that are unrelated to DES service. Other more significant issues are summarized herein.

- The CSR coordinated several meetings between the customers, CNE, TEG and the contractors for particular projects that affected the steam, condensate and/or chilled water service to the customer.
- Chilled water issues with the operation of the chilled water pump at Wells Fargo remain. The resolution and temporary changes implemented by CNE are still in place. The building owner has not yet made the permanent changes to the building controls.
- A delivery truck hit and cracked a nipple on a steam drip leg at the Citizen's Plaza during January. CNE addressed this issue expediently.
- The State cleaned several of their AHU's in several of their buildings during the quarter which required coordination with CNE for building outages.
- A chilled water leak was discovered on the vent line to LP Field and was repaired soon thereafter coordinating a shut-down with the customer.
- Other minor issues and customer interactions are noted in the monthly CNE reports.

VII. Recommendations

Based on the review of the Third Quarter EGF and prior reviews of the EDS operations, the following recommendations are made.

- Corroded structural steel within the vaults and tunnels should be cleaned and painted or replaced; TEG will coordinate this effort with CNE.
- Insulation which is absent, or in disrepair, in the vaults should be addressed through either additional capital projects, which include work within these vaults, or through DES090.
- Steam traps which need repair or replacement should be addressed as soon as possible.