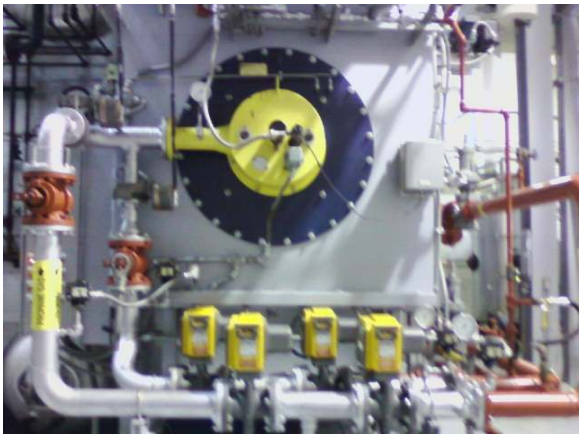
Metro Nashville
DISTRICT ENERGY SYSTEM



Operations Monitoring Report

Third Quarter FY12

Prepared by:

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May 1, 2012

I. Executive Summary

A review of the fiscal year 2012 (FY12) Third Quarter performance and contract obligations between Constellation 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 2012, CNE has satisfactorily met all of the contract obligations to Metro and has had no contract violations.

For the Third Quarter FY12, the chilled water sales increased by approximately 18.4% over the previous Third Quarter (FY11). The Third Quarter FY12 saw a significant increase in cooling degree days from the previous Third Quarter. The peak chilled water demand for the current quarter was 11,274 tons, which is approximately 15.5% higher than the previous Third Quarter.

A decrease in the steam sendout for the current quarter of approximately 15% over the previous Third Quarter is noted along with a 29% decrease in heating degree days. Likewise, steam sales also decreased by approximately 17% over the previous Third Quarter. Steam system losses were approximately 10% of the sendout, which was slightly higher than in the previous Third Quarter (relative to sendout). The peak steam demand for the current quarter was 116,813 pounds per hour, which represents an approximate 5.8% decrease from the previous Third Quarter.

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 but was slightly higher than the value from the previous Third Quarter. The steam plant electric consumption decreased approximately 10.3% over the previous Third Quarter. The steam plant fuel efficiency has decreased marginally from the previous Third Quarter. The total water consumption for the steam and chilled water plants increased approximately 12.8% from the previous Third Quarter marked by a 60% increase in EDS make-up for the chilled water system. However, the steam plant make-up decreased by approximately 35% over the previous Third Quarter.

Work continued on DES Capital and Repair & Improvement Projects during the Third Quarter of FY12. No projects were closed during the Third Quarter. Work was started on DES087 while work continued on DES048, 076, 077, 080, 090, 091, 093 and 094 during the Third Quarter FY12. The installation of the new EGF chilled water pumps was completed during the quarter in anticipation of service to the new Music City Convention Center in April 2012. Repair and Improvements to the EDS continue as scheduled.

The current fiscal year system operating costs to date are $12,601,780. This value represents approximately 60% of the total budgeted operating cost for FY12. The customer revenues from the sales of steam and chilled water for FY12 (to date) are $12,025,567 which is approximately 65% 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 the First Quarter FY12 is $1,772,250 (75% of budget). However, the actual MFA required cannot be accurately calculated due to the 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 an increase in sales for the current quarter over the same quarter of the previous fiscal year by 18.4%. The quarter also experienced a significant increase in the number of cooling degree days.

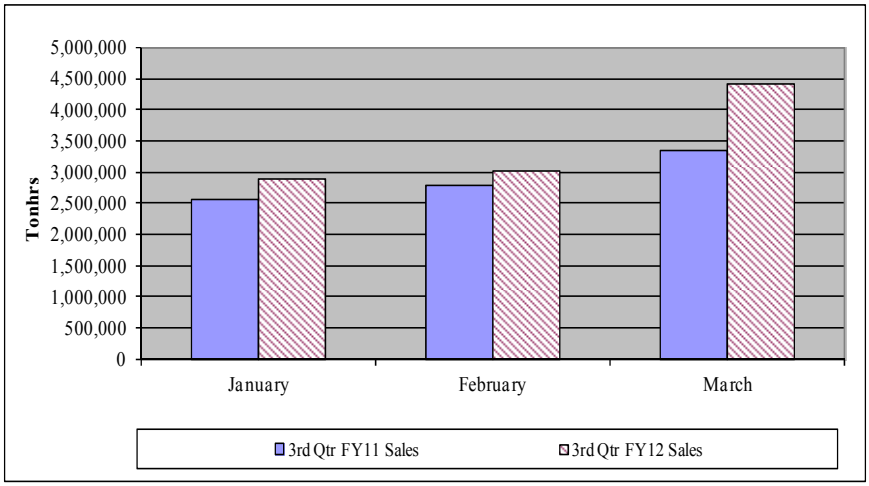

Figure 1. Third Quarter FY12 Sales Comparison

The peak chilled water demand for the current quarter is 11,274 tons. This peak demand is approximately 15.5% higher than in 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.

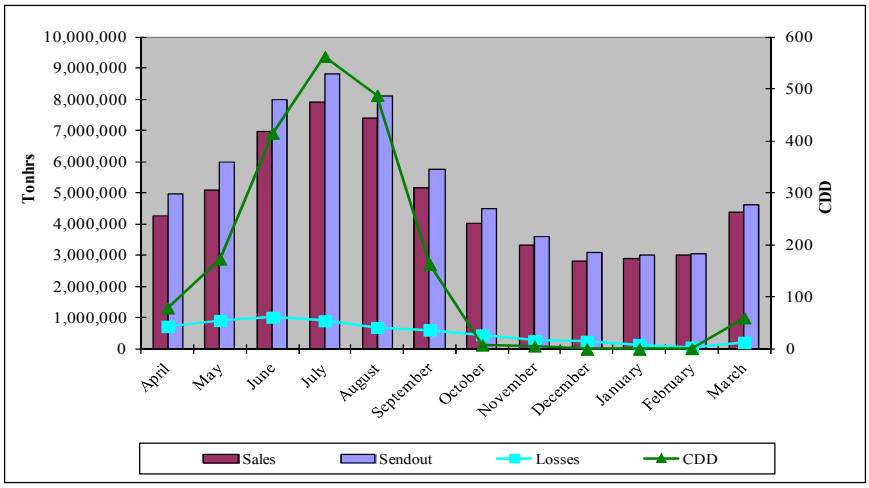

Figure 2. Chilled Water Sales, Sendout, Losses and CDD for the Previous Twelve Months

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. During the quarter, the new flow meter in the EGF chilled water line began being used to measure the total chilled water sendout. The use of this more accurate meter contributes to the significant decrease in recorded losses for the quarter.

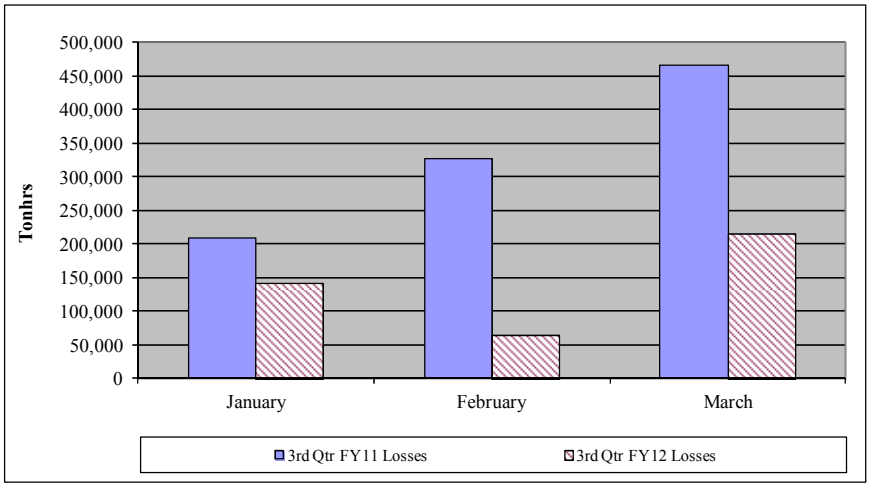

Figure 3. Chilled Water System Loss Comparison for the Third Quarter FY12

The EDS make-up increased by approximately 60% over the previous Third Quarter. This increase may be indicative of an additional leak in the system; a significant leak was discovered in 3rd Ave near the Criminal Justice Building and

repaired recently. The corresponding decrease in EDS make-up will not be reflected until the Fourth Quarter report.

The total energy losses have decreased by approximately 58% over the previous Third Quarter. The make-up to the cooling towers increased by approximately 27% (due to an increase in chilled water sales). The number of cycles of concentration in the condensing water circuit experienced a 3% increase during the current Third Quarter. The overall city water make-up comparison for the chilled water system is shown in Figure 4.

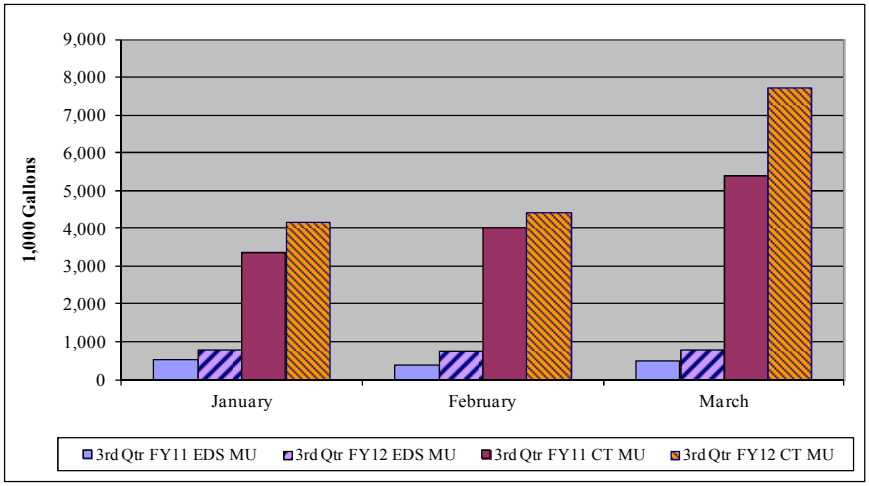

Figure 4. Chilled Water System City Water Usage Comparison

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.

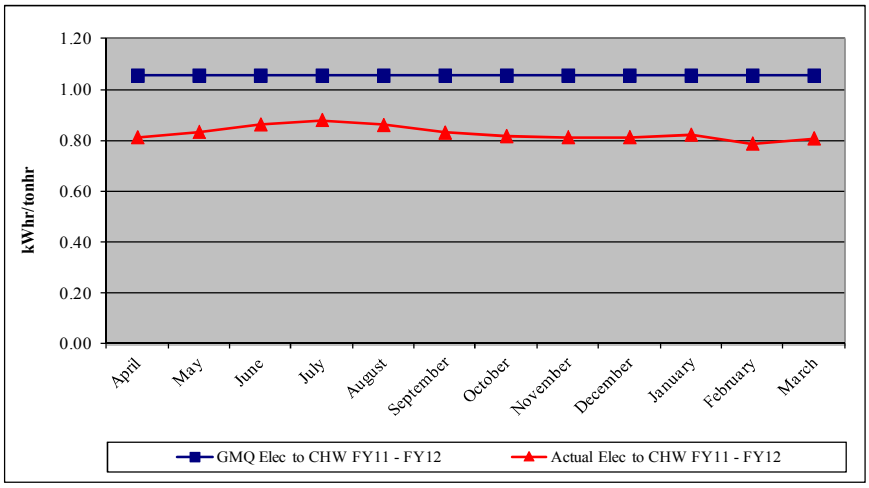

Figure 5. Chiller Plant Electric Performance Guarantee Comparison for the Previous Twelve Months

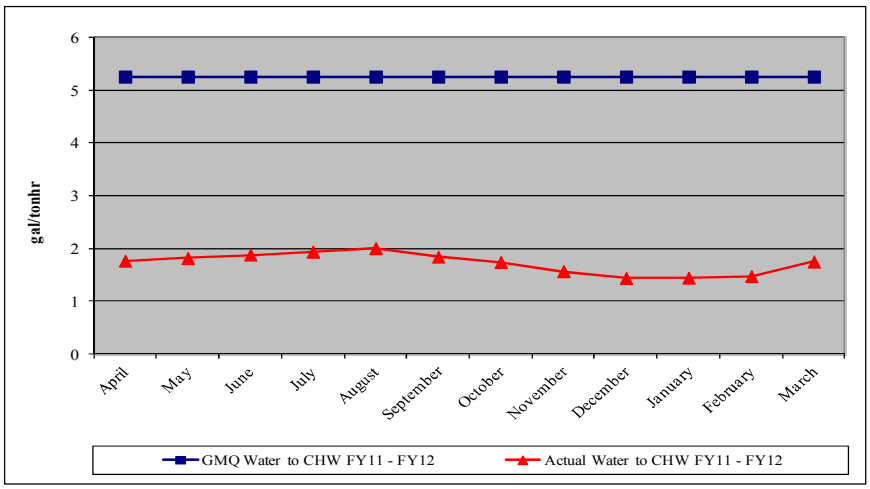

Figure 6. Chiller Plant Water Consumption Performance Guarantee Comparison for the Previous Twelve Months

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 increased approximately 20% over the Third Quarter for FY11 due to a significant increase in chilled water sales and cooling degree days. The actual electric conversion factor increased 2.3% in the quarter.

The actual chilled water plant water conversion factor increased approximately 10.2% over the previous Third Quarter. The total consumption of city water for the chiller plant for the current quarter is approximately 12.8% higher than that for the previous Third Quarter, but this increase is due largely to an increase in chilled water sales.

B. Steam

1. Sales and Sendout

The steam sendout decreased by approximately 15% over the previous Third Quarter (FY11), and the sales decreased by approximately 17%. The steam system losses increased approximately 21% relative to sendout. The number of heating degree days have decreased by 29% over the previous Third Quarter. A comparison for the Third Quarter steam sales is shown in Figure 7.

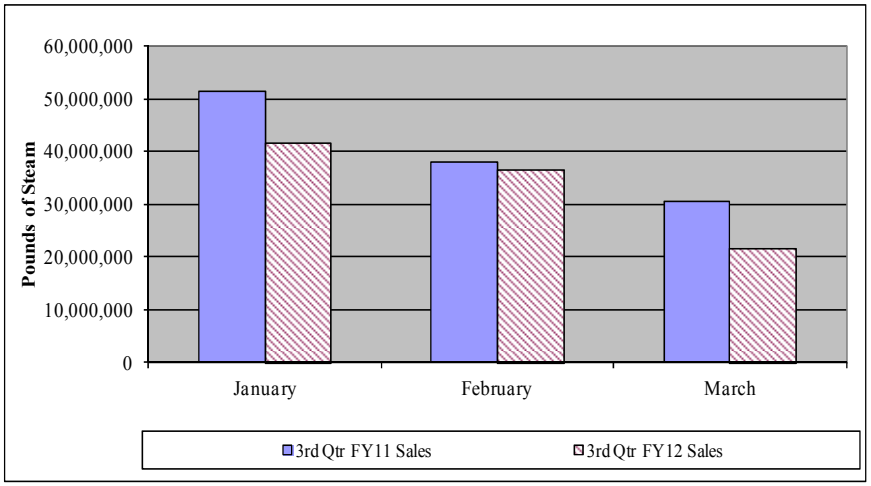

Figure 7. Steam Sales Comparison for the Third Quarter FY12

The peak steam demand for the current quarter is 116,813 pph, which reflects an approximate 5.8% decrease in the peak steam production over the previous Third Quarter.

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.

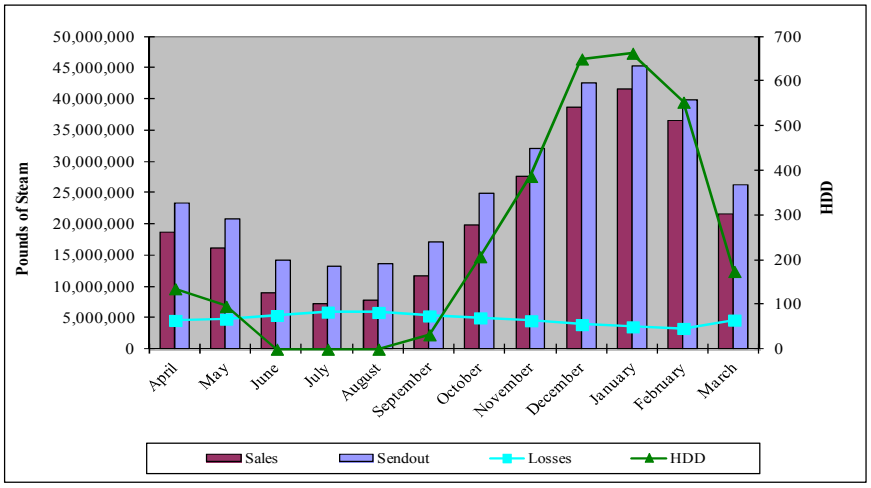

Figure 8. Steam Sales, Sendout, Losses and HDD for the Previous Twelve Months

2. Losses

A comparison of the total steam mass losses in the EDS for the Third 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.

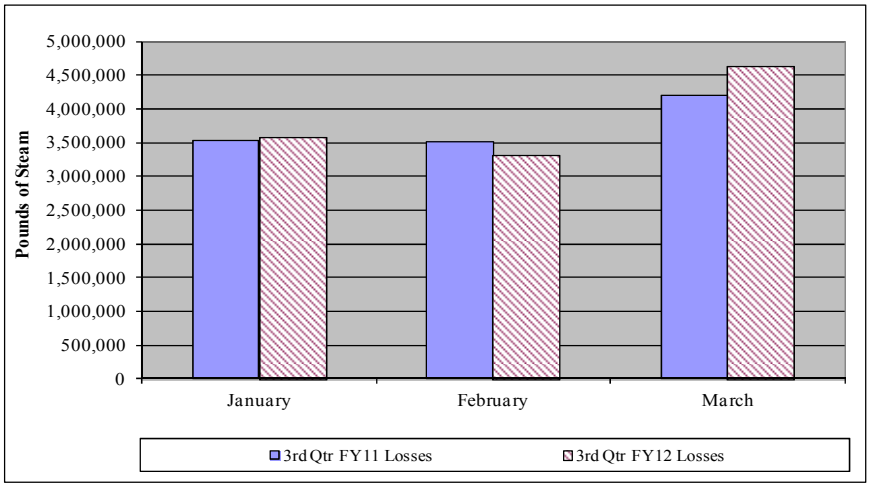

Figure 9. Third Quarter FY12 Steam System Losses

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 depicts a decrease in city water make-up to the steam system of approximately 35% for the current

quarter. This dramatic reduction in city water make-up is due to the relative low volume of steam sendout and the high volume of condensate return.

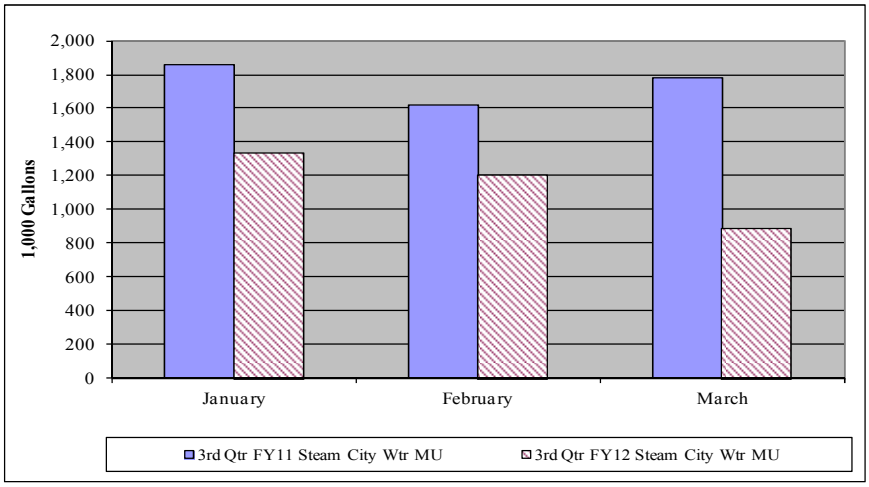

Figure 10. Third Quarter FY12 Steam System City Water Make-up Comparison

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.

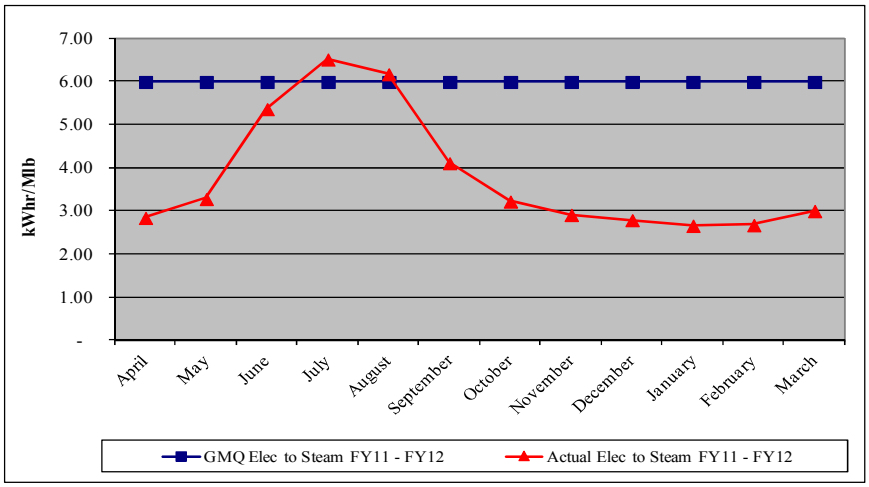

Figure 11. Steam Plant Electric Performance Guarantee for the Previous Twelve Months

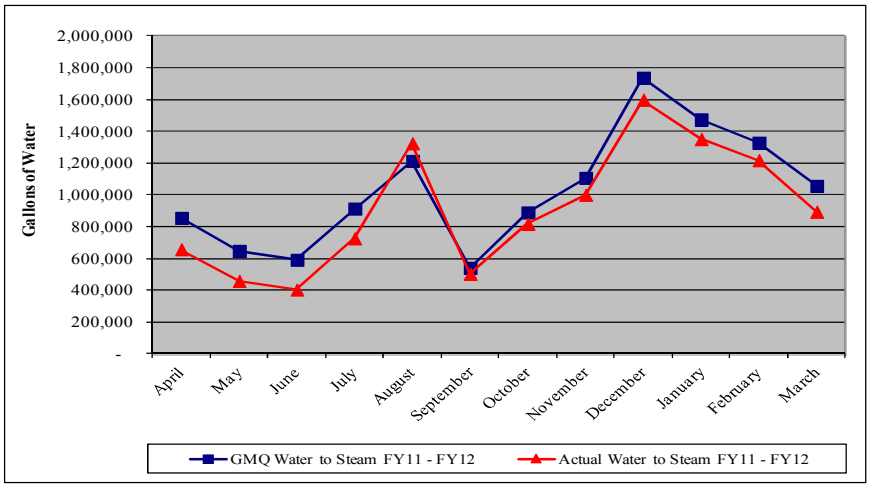

Figure 12. Steam Plant Water Performance Guarantee for the Previous Twelve Months

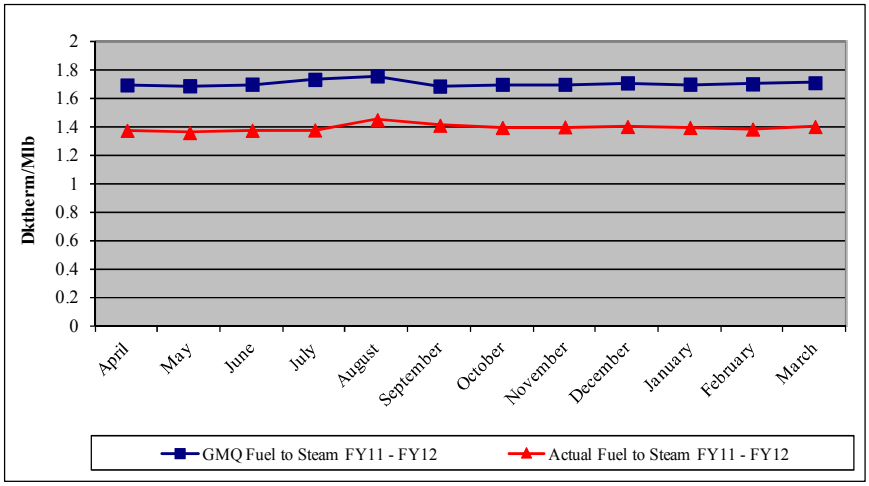

Figure 13. Steam Plant Fuel Performance Guarantee for the Previous Twelve Months

The current quarter experienced a 10% decrease in the steam plant electric consumption while experiencing a 7.7% increase in the electric conversion factor, which is indicative of lower than normal steam production. The water consumption for the steam plant decreased 35% 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 increased slightly 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. Additional parameters, such as cooling tower blow-down and

peak demands are listed in this table, as well. Table 2 presents the Third Quarter comparison of the Guaranteed Maximum Quantities (GMQ) of the criteria commodities (fuel, water and electricity).

Table 1. Third Quarter FY12 Production, Sales and Consumption Summary

Item	Unit	Third Quarter FY12	Third Quarter FY11	*Percent Difference
	days	91	90	1.11%
Total Electric Use	kWhrs	8,551,134	7,144,178	19.69%
Chilled Water	kWhrs	8,277,104	6,838,860	21.03%
Steam	kWhrs	274,030	305,318	-10.25%
Total Water Use	kgal	21,990	19,492	12.82%
Total Chilled Water	kgal	18,565	14,233	30.44%
EDS Make-up	kgal	2,304	1,440	60.00%
Cooling Towers	kgal	16,261	12,793	27.11%
Calc CT Evaporation	kgal	13,945	10,923	27.67%
CT Blowdown	kgal	2,316	1,870	23.85%
Calc # Cycles		6.02	5.84	3.08%
Steam	kgal	3,425	5,259	-34.87%
Total Fuel Use	mmBTU	154,893	180,672	-14.27%
Natural Gas	mmBTU	154,597	180,471	-14.34%
Propane	mmBTU	296	201	n.a.
Condensate Return	kgal	10,298	11,312	-8.96%
	lbs	83,989,759	92,258,976	-8.96%
Avg Temp	°F	158.7	165.0	-3.84%
Sendout				
Chilled Water	tonhrs	10,693,200	9,675,300	10.52%
Steam	lbs	111,341,000	131,049,000	-15.04%
Peak CHW Demand	tons	11,274	9,760	15.51%
Peak Steam Demand	lb/hr	116,813	123,938	-5.75%
CHW LF		43.43%	45.89%	-5.37%
Steam LF		43.64%	48.95%	-10.85%
Sales				
Chilled Water	tonhrs	10,270,322	8,677,051	18.36%
Steam	lbs	99,816,478	119,797,832	-16.68%
Losses				
Chilled Water	tonhrs	422,878	998,249	-57.64%
Steam	lbs	11,524,522	11,251,168	2.43%
		10.35%	8.59%	20.56%
Degree Days				
CDD		61	14	335.71%
HDD		1,390	1,956	-28.94%

*positive percent difference values imply an increase from FY11 to FY12

Table 2. Third Quarter FY12 Performance Guarantee Comparison for Steam and Chilled Water

GMQ Calculations	Unit	Third Quarter FY12	Third Quarter FY11	*Percent Difference
Steam				
GMQ Elec Conversion	kWhr/Mlb	6.00	6.00	
Electric Conversion	kWhr/Mlb	2.75	2.55	7.72%
GMQ Plant Efficiency	Dth/Mlb	1.703	1.709	
Plant Efficiency	Dth/Mlb	1.391	1.379	0.91%
Actual %CR		75.43%	70.40%	7.15%
Avg CR Temp	°F	159	165	-3.84%
GMQ Water Conversion	gal	3,856,609	5,469,513	
Water Conversion	gal	3,459,250	5,311,590	-34.87%
Chilled Water				
GMQ Elec Conversion	kWhr/tonhr	1.055	1.055	
Electric Conversion	kWhr/tonhr	0.806	0.788	2.25%
GMQ Water Conversion	gal/tonhr	5.25	5.25	
Water Conversion	gal/tonhr	1.81	1.64	10.20%

*positive percent difference values imply an increase from FY11 to FY12

D. Operating Costs

The operating costs for the DES include the management fee to CNE, debt service payments on the bonds and engineering and administration costs. 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 FY12 to date are $12,601,780. This value represents approximately 61% of the total budgeted operating cost for FY12 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 FY12 are $12,025,567 which is approximately 65% of the budgeted amount. The MFA

transferred to date is $1,772,250 (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		FY12 Budget	First Quarter Expenses	Second Quarter Expenses	Third Quarter Expenses	Fourth Quarter Expenses	Total Spending to Date	% of Budget
Operating Management Fee								
FOC:	Basic	$ 4,123,000	$ 1,017,034.26	$ 1,017,034.26	$ 1,017,034.26	$ -	$ 3,051,102.78	74.00%
	9th Chiller	$ 38,300	$ 9,529.74	$ 9,529.74	$ 9,529.74	$ -	$ 28,589.22	74.65%
	C/O 6A	$ 75,600	$ 18,814.74	$ 18,814.74	$ 18,814.74	$ -	$ 56,444.22	74.66%
	C/O 6B	$ 66,200	$ 16,471.41	$ 16,471.41	$ 16,471.41	$ -	$ 49,414.23	74.64%
Pass-thru Charges:	Chemical Treatment	$ 186,600	$ 17,018.05	$ 27,815.27	$ 22,871.82	$ -	$ 67,705.14	36.28%
	Insurance	$ 28,500	$ -	$ -	$ -	$ -	$ -	0.00%
Marketing:	CES Sales Activity	$ -	$ -	$ -	$ -	$ -	$ -	n.a.
	Incentive Payments	$ -	$ -	$ -	$ -	$ -	$ -	n.a.
FEA:	Steam	$ -	$ 12,506.87	$ 32,049.45	$ 37,329.79	$ -	$ 81,886.11	n.a.
	Chilled Water	$ -	$ 151,805.21	$ 74,760.38	$ 83,005.88	$ -	$ 309,571.47	n.a.
Misc:	Metro Credit	$ -	$ (183,311.41)	$ (98,300.85)	$ (88,816.04)	$ -	$ (370,428.30)	n.a.
	ARFA	$ -	$ 14,770.83	$ 14,770.83	$ 14,770.83	$ -	$ 44,312.49	n.a.
	Deferral	$ -	$ -	$ (47,574.51)	$ (120,335.67)	$ -	$ (167,910.18)	n.a.
	Subtotal - Man Fee =	**$ 4,518,200**	**$ 1,074,640**	**$ 1,065,371**	**$ 1,010,677**	**$ -**	**$ 3,150,687**	**69.73%**
Reimbursed Management Fee + Chem Treatment			$ 1,255,638.33	$ 1,163,671.57	$ 367,023.93	$ -	$ 2,786,333.83	0.00%
Metro Costs								
Pass-thru Charges:	Engineering	$ 27,000	$ 10,398.14	$ (1,797.00)	$ 72.20	$ -	$ 8,673.34	32.12%
	EDS R&I Transfers	$ 254,500	$ 63,624.99	$ 63,624.99	$ 63,624.99	$ -	$ 190,874.97	75.00%
	Metro Marketing	$ 15,500	$ -	$ -	$ -	$ -	$ -	0.00%
	Project Administration	$ 30,700	$ -	$ -	$ -	$ -	$ -	0.00%
	Metro Incremental Cost	$ 488,600	$ 123,322.42	$ 103,227.10	$ 70,410.01	$ -	$ 296,959.53	60.78%
Utility Costs:	Water/Sewer	$ 597,700	$ 167,065.58	$ 81,813.20	$ 72,037.26	$ -	$ 320,916.04	53.69%
	EDS Water/Sewer	$ -	$ 13.34	$ 13.34	$ -	$ -	$ 26.68	n.a.
	EDS Electricity	$ -	$ 16,245.83	$ 16,487.65	$ 16,778.78	$ -	$ 49,512.26	n.a.
	Electricity	$ 5,192,900	$ 1,956,010.36	$ 730,662.30	$ 802,566.82	$ -	$ 3,489,239.48	67.19%
	Natural Gas Consultant	$ 92,700	$ 4,357.50	$ 3,847.50	$ 8,861.25	$ -	$ 17,066.25	18.41%
	Natural Gas Transport	$ -	$ 33,351.62	$ 57,444.77	$ 62,090.09	$ -	$ 152,886.48	n.a.
	Natural Gas Fuel	$ 3,846,600	$ 282,156.22	$ 615,593.89	$ 667,022.26	$ -	$ 1,564,772.37	40.68%
	Propane	$ -	$ -	$ -	$ 14,798.61	$ -	$ 14,798.61	n.a.
	Subtotal - Metro Costs =	**$ 10,546,200**	**$ 2,656,546**	**$ 1,670,918**	**$ 1,778,262**	**$ -**	**$ 6,105,726**	**57.90%**
	Subtotal - Operations =	**$ 15,064,400**	**$ 3,731,186**	**$ 2,736,288**	**$ 2,788,939**	**$ -**	**$ 9,256,413**	**61.45%**
Debt Service	2002 Bonds	$ 4,377,100	$ 926,092.32	$ 1,049,592.18	$ 1,049,592.18	$ -	$ 3,025,276.68	69.12%
	2005 Bonds	$ 306,200	$ -	$ -	$ 104,987.30	$ -	$ 104,987.30	34.29%
	2007 Bonds	$ 227,800	$ 224,150.00	$ -	$ -	$ -	$ 224,150.00	98.40%
	2008 Bonds	$ 220,500	$ -	$ -	$ -	$ -	$ -	0.00%
	2010 Bonds	$ 682,100	$ -	$ -	$ 36,838.27	$ -	$ 36,838.27	5.40%
	Interest Revenue	$ (110,000)	$ (12,918.75)	$ (28,767.19)	$ (3,970.21)	$ -	$ (45,656.15)	41.51%
	MIP	$ -	$ (23.07)	$ (139.66)	$ (66.68)	$ -	$ (229.41)	n.a.
	Oper. Reserve Fund	$ -	$ -	$ -	$ -	$ -	$ -	n.a.
	Subtotal - Capital =	**$ 5,703,700**	**$ 1,137,301**	**$ 1,020,685**	**$ 1,187,381**	**$ -**	**$ 3,345,367**	**58.65%**
	Total =	**$ 20,768,100**	**$ 4,868,486**	**$ 3,756,974**	**$ 3,976,320**	**$ -**	**$ 12,601,780**	**60.68%**
Customer Revenues								
	Taxes Collected		$ 95,295.87	$ 72,193.02	$ 71,570.95	$ -	$ 239,059.84	n.a.
	Taxes Paid		$ 96,352.00	$ 75,702.00	$ 48,140.00	$ -	$ 220,194.00	n.a.
	Penalty Revenues		$ 9,312.86	$ 13,694.65	$ 11,553.09	$ -	$ 34,560.60	n.a.
	Energy Revenues Collected		$ 4,660,810.82	$ 3,636,748.97	$ 3,674,581.14	$ -	$ 11,972,140.93	n.a.
	Revenues =	**$ 18,405,100**	**$ 4,669,067.55**	**$ 3,646,934.64**	**$ 3,709,565.18**	**$ -**	**$ 12,025,567.37**	**65.34%**
	Metro Funding Amount =	**$ 2,363,000**	**$ 199,419**	**$ 110,039**	**$ 266,755**	**$ -**	**$ 576,213**	**24.38%**

The DES serves 26 customers and 40 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. The new Music City Convention Center is anticipated to become a temporary chilled water customer in the Fourth Quarter with permanent service anticipated in FY13. 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	$ 2,960,866	14,425,853	$ 0.2052		$ 1,147,626	66,607	$ 17.2298
State Government	$ 2,606,942	12,611,888	$ 0.2067		$ 1,486,011	77,839	$ 19.0909
Metro Government	$ 2,502,906	13,869,680	$ 0.1805		$ 1,301,335	68,325	$ 19.0462
New Customers	$ 977,325	4,675,438	$ 0.2090		$ 183,596	11,134	$ 16.4898
Total	**$ 8,070,714**	**40,907,421**	**$ 0.1973**		**$ 3,934,972**	**212,771**	**$ 18.4940**

Total Revenue	**$**	**12,005,686**
True-up and Adjustments (Net)	**$**	**19,881**
Net Revenue	**$**	**12,025,567**

III. EGF Operations

Items relating to the facility operations presented herein are derived from the monthly reports issued by CNE for FY12. 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.

- In January, the boilers tripped twice for 45 minutes each time. The first occurrence was due to operator error and the second was due to a faulty feedwater regulating valve. The valve was since repaired.
- The sendout steam pressure dipped below 150 psig one two occasions in February while performing the annual combustion analysis.
- The chilled water supply temperature rose above 43.3°F on several occasions in March. The causes were related to a faulty automated chilled water valve not opening which caused delays in starting an additional chiller.
- Other minor occurrences of higher than normal chilled water supply temperatures are included in the 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 Third 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 PPE and Electrical/Arc Flash Safety and Elevated Work Safety.

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.

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 steam and condensate system had excellent chemistry for most of the quarter.
  - The condensate return averaged 75.4% of the steam sendout during the quarter.

- Condensing Water System
  - The conductivity of the condensing water continues to be 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 strainers on the condenser water pumps 3, 4 and 5 were cleaned.
- The flat gaskets on several of the chillers were replaced.
- A circuit board was replaced on Chiller 1A and the thrust bearings were replaced on Chillers 5A and 5B.
- A new isolation valve was installed on the cooling tower make-up piping.
- New VFD cooling water lines were installed and insulated.
- 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 27, 2012, 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 empty boxes and other items are still being stored in the electric room. These items need to be removed.
- The insulation on Chiller #1 evaporator and on Chillers #3 and #4 are in need of repair. Constellation intends to make these repairs prior to the cooling season.
- A hanger on a small diameter city water line was missing near the ceiling along the south wall of the chiller plant.
- Other minor items remaining include:
    - Corrosion is noted to have returned on the riser piping in the cooling towers; these may soon need cleaning and re-painting;
    - Cobwebs have reformed in various places throughout the plant and on MCCC 4 located near the boilers; these should be removed.

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 FY12 Open Projects

The following projects remained open at the end of the Third Quarter FY12.

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.

2. DES048 – Tunnel Lighting & Electrical Upgrades Phase III

Work began on this project during the Third Quarter FY12. It is anticipated that the work will be completed during the 4th Quarter FY12.

3. DES076 – Manhole S4A Rehabilitation

The work was substantially completed during the Third Quarter FY12. Cost substantiation documents must be reviewed, approved and delivered to the State for their review. The total cost for this project is expected to be reimbursed by the State of Tennessee since the vault structure belongs to them and not the DES. It is hoped that this project will be closed during the Fourth Quarter FY12.

4. DES077 – Music City Center Service Connection

Although a few punchlist items remain, a certificate of substantial completion was issued in the Second Quarter FY12. Start-up of the new steam and condensate lines occurred on October 2, 2011. However due to some issues with the new steam line, the steam and condensate were shut down in January 2012 and are anticipated to be energized again during the Fourth Quarter.

Additional aspects of this project include the MCCC metering station, the cooling tower testing and the modification of the EGF chilled water pumps. The work on the MCCC metering station is scheduled to begin in April 2012 with chilled water service anticipated on May 1.

The work on the new chilled water pumps was completed during the Third Quarter. Each of the new pumps has successfully been hydraulically tested. A failure on the motor for pump #3 prompted the immediate shutdown on the motor and subsequent replacement. The replacement is covered under warranty and is scheduled to be installed during the Fourth Quarter.

5. DES080 – Misc. Manhole & Tunnel Safety Repairs

As a result of the ongoing review of the manholes and tunnels, some safety items have been noted that require attention. This project was established to address these items.

This project was bid and awarded during the First Quarter FY12. Work began during the Second Quarter FY12 and the contracted work was substantially completed during the Third Quarter FY12. Some additional items were added to the contract. It is anticipated that these additional items will be completed during the Fourth Quarter FY12.

6. DES087 – Exploratory Excavation & Repairs at Manhole D (CJC)

An exploratory dig at Manhole D to find the source of a chilled water leak was begun during the Third Quarter FY12. Gaskets at a tee fitting were found to be leaking. Isolation of this portion of the chilled water piping was required and the gaskets were replaced. It is anticipated that this project will completed and closed during the Fourth Quarter FY12.

7. DES088 – Andrew Jackson Steam Tunnel PRV Control

This work was completed by the contractor during the Third Quarter. A few punchlist items remained at the end of the quarter and are expected to be addressed during the Fourth Quarter.

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

The contracted work was completed during the Third Quarter FY12; however, additional items were added to the project. It is anticipated that this work will be completed during the Fourth Quarter FY12. Work associated with this project will be ongoing as required.

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

The evaluation of the feasibility of thermal storage is on-going.

10. DES092 – Sheraton Chilled Water Pumps

This work was completed by the contractor during the Third Quarter. The pumps were successfully started and tested and appear to be functioning properly.

11. DES093 – Manhole 6 Repair and Structural Rehabilitation

The traps in Manhole 6 were not functioning, and there is a condensate leak in this manhole which has existed for some time. In addition, the structural steel in this manhole needs cleaning and painting. Due to the immediate need for the replacement of the traps, this project was undertaken to address the additional items which need to be repaired. Work began and was substantially completed on this project during the Second Quarter FY 12. Due to the discovery that the insulation blankets which were ordered for the slip joints did not meet the

specification, replacement blankets had to be ordered. Once these replacement blankets are received and installed, this project can be closed. It is anticipated that this will occur during the Fourth Quarter FY12.

12. DES 094 – Molloy Street Exploratory Dig

As a result of the monthly thermographic surveys, a new "hot spot" appeared just east of Manhole B2. In addition, the vent and drain of the underground steam line was observed emitting steam, indicating that there was a breach in the steam line's conduit system. The first phase of this work was started and substantially completed during the Second Quarter FY12. Several conduit breaches were repaired; however, steam is still being vented from the conduit. Based on this observation, it is believed that additional conduit breaches exist on the pipeline where it crosses 1st Avenue South. Because this excavation will be deeper than the previous excavations, the primary contractor has hired a different excavator. It is anticipated that the excavation across 1st Avenue will occur during the Fourth Quarter FY12.

B. Fourth Quarter FY12 Closed Projects

DES088 and DES092 were closed during the Third Quarter FY12.

C. Capital Projects Budget

The following table summarizes the costs and remaining balance of the DES capital projects based on reported expenditures at the end of the FY12. 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	FY12 Spending to Date	Total Spent to Date	Remaining Balance
2005B Bond Projects						
	DES-061	Tunnel Steel Corrosion	$ 250,000.00	$ 4,718	$ 68,862	$ 181,138
	DES-048	Tunnel Lighting Phase III	$ -	$ 525	$ 525	$ (525)
	DES-063	Sump Pump MH-A, B and M	$ -	$ 3,326	$ 3,326	$ (3,326)
		Total Closed Projects	$ 7,320,301	$ -	$ 7,759,672	$ (439,371)
		Project Development	$ 616,199	$ 22,947	$ 293,328	$ 277,997
		Total 2005B Bond	**$ 8,186,500**	**$ 31,516**	**$ 8,170,587**	**$ 15,913**
2010 Bond Projects						
	DES067	Tunnel Rock Repair	$ 1,176,354	$ 35,512	$ 1,097,604	$ 78,750
	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 Stm & Cond Line	$ 10,000	$ 5,707	$ 6,507	$ 3,493
	DES076	MH S4A Rehabilitation	$ 233,000	$ 16,268	$ 29,762	$ 203,238
	DES088	AJ/State Tunnel Steam PRV Air Control	$ 25,000	$ 2,433	$ 2,433	$ 22,567
	DES091	NES Time of Use Electric Rate	$ 50,000	$ 18,225	$ 48,602	$ 1,398
	DES092	Sheraton CHW Pumps	$ 56,750	$ 62,719	$ 62,886	$ (6,136)
		Total Closed Projects	$ 495,000	$ 33	$ 349,191	$ 145,809
		Metro Project Admin	$ -	$ -	$ -	$ -
		Project Man, Development, etc	$ 323,896	$ -	$ -	$ 323,896
		Total 2010 Bond	**$ 2,410,000**	**$ 140,897**	**$ 1,602,548**	**$ 807,452**
MCCC Construction Fund						
	DES077	Music City Convention Center Design/Const	$ 345,900	$ 54,200	$ 346,394	$ (494)
	DES077	MH-B4 Valve Replacement	$ 8,000	$ -	$ 7,119	$ 881
	DES077	MCCC Metering	$ 121,870	$ -	$ -	$ 121,870
	DES077	EGF Cooling Tower Testing	$ 47,884	$ 12,262	$ 12,262	$ 35,622
	DES077	EGF Chilled Water Pumps	$ 598,672	$ 496,461	$ 496,461	$ 102,211
	DES077	Bell/Clark Construction Fund	$ 4,697,860	$ 481,449	$ 4,038,485	$ 659,375
		Metro Project Admin	$ -	$ -	$ -	$ -
		Project Man, Development, etc	$ 2,679,814	$ -	$ -	$ 2,679,814
		Total MCCC Construction Fund	**$ 8,500,000**	**$ 1,044,372**	**$ 4,900,721**	**$ 3,599,279**

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 $409,420. Table 6 provides a summary of the FY12 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	Net Market Adjustment	Market Value	Balance
Value at end of FY11						**$ -**	**$ 403,653.04**	**$ 403,653.04**
DES Repair And Improvements, for billing period of (7/3/11 - 7/30/11)	8/8/2011	DES-1384	TEG	$ 6,452.15				
ADJUSTMENT FROM 2010 BOND	7/31/2011	N/A	N/A	$ (89,912.00)				
ADJUSTMENT FROM 2010 BOND	7/31/2011	N/A	N/A	$ (35,478.66)				
TEG August Invoice	9/13/2011	N/A	TEG	$ 4,246.12				
CE; DES Proj.DES-086 MH	9/16/2011	N/A	CE	$ 66,589.48				
CE; 401 Union bldg Strm	9/16/2011	N/A	CE	$ 6,924.45				
CE;DES CES Mgmt Fees July	9/16/2011	N/A	CE	$ 2,100.39				
DES R&I 8/28-10/1/11	10/6/2011	N/A	TEG	$ 1,858.63				
CE; Aug - Sept R&I	10/28/11	N/A	CE	$ 4,688.03				
Sub-Total First Quarter				**$ (32,531.41)**	**$ 63,624.99**	**$ -**	**$ 96,156.40**	**$ 96,156.40**
CE; Projc DES-083	11/21/11	N/A	CE	$ 39,731.19				
CE; EMR-11-011	11/21/11	N/A	CE	$ 1,717.31				
DES CES Mgmnt Fees	11/21/11	N/A	CE	$ 3,612.25				
TEG	11/18/11	N/A	TEG	$ 1,525.90				
TEG; DES R&I OCT/NOV	12/02/11	N/A	TEG	$ 15,116.22				
CE; OCT 2011	12/19/11	N/A	CE	$ 1,137.68				
Sub-Total Second Quarter				**$ 62,840.55**	**$ 63,624.99**	**$ -**	**$ 784.44**	**$ 784.44**
TEG; DEC 2011	1/10/2012	N/A	TEG	$ 7,391.19				
TEG; JAN 2012	2/6/2012	N/A	TEG	$ 1,393.62				
MH-3 & 4 STRUCTURAL	1/25/2012	N/A	CE	$ 52,400.00				
CE R&I; Regular EDS Maintenance	3/8/2012	N/A	CE	$ 14,369.89				
CE R&I; DES-094	3/26/2012	N/A	CE	$ 87,122.02				
Refund of Overpayment	3/28/2012	N/A	N/A	$ (7,877.55)				
Sub-Total Third Quarter				**$ 154,799.17**	**$ 63,624.99**	**$ -**	**$ (91,174.18)**	**$ (91,174.18)**
Sub-Total Fourth Quarter				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
FY12 Year to Date				**$185,108.31**	**$190,874.97**	**$ -**	**$409,419.70**	**$ 409,419.70**

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. MH-B2 continues to require frequent pumping due to the infiltration of water.
   b. Several faulty steam traps were replaced.
   c. Chilled water leaks at St Mary's were repaired.
   d. Minor repairs were made during the quarter.
2. State Tunnel Inspections
   a. CNE continues to monitor some steam and condensate leaks within the tunnel.
   b. Other minor repairs were made during the quarter.
3. Other EDS Inspections
   a. The monthly thermographic analyses revealed new hot spots near the James K Polk Building and in the Ryman Auditorium alley.
   b. Other minor items are included in the CNE monthly reports.

C. Emergencies

No emergencies were reported during the quarter.

D. EDS Walk-through

The primary EDS walkthrough was conducted on April 3 and 4, 2012, by Jon Belcher, PE with TEG. The tunnels were visited this quarter which includes the State Tunnel; Manholes D2 and D3; the AA Birch Tunnel; Manhole 23; the 7th Avenue Tunnel; the Broadway Tunnel; and the 4th Avenue Tunnel. In addition, Manhole 9 was visited. The following comments and observations are a result of these visits.

1. State Tunnel
   a. Some light bulbs were not working, but for the first time in recent memory, the working light bulbs far outnumbered the non-working bulbs. The State of Tennessee is responsible for maintaining the lighting. CNE should contact the State and let them know that some bulbs are not working.
   b. Several of the support C Channels have minor to moderate corrosion. This should be brought to the attention of the State for remediation.
   c. At several locations, the concrete tunnel structure has some minor to moderate cracking, spalling, exposed rusty rebar and/or shifting of roof structures. It is reported that State personnel have requested assistance from CNE/TEG concerning inspection and repair procedures for these conditions. TEG will contact our structural engineer to set up a meeting with State personnel to review these problems.
   d. There is a pinhole leak on a high pressure condensate expansion joint at Column W74. This leak should be repaired.
   e. There is some mud and debris at the intersection of the west and north tunnel branches; this debris and mud should be removed from the tunnel.
   f. Water hammer was evident at the intersection of the west and north tunnel branches near and around the condensate receiving tanks. The steam traps in this area should be checked for proper operation and the findings should be reported to TEG.
   g. There is some steam piping insulation which is damaged at Column N62. This insulation should be restored.
   h. There is no insulation on the steam expansion joints at Columns N19 and N20. These expansion joints should have insulation blankets installed and any missing pipe insulation restored.
   i. The steam expansion joints at Columns E1 and E44 have small leaks. These leaks should be monitored and repaired once they are of a magnitude that they can be sealed successfully.

2. Manhole D2
   a. There is some minor accumulation of leaves on top of the piping in this manhole. These leaves should be removed from the manhole to prevent corrosion of the piping.
   b. The link seal on the westernmost chilled water piping penetration in this manhole is leaking. CNE has attempted to tighten and re-adjust this link seal but this effort has not been successful. TEG will pursue a solution to this problem.

3. Manhole D3
   a. There was some minor debris in this manhole which was removed during the review.

4. AA Birch Tunnel
   a. There are several locations throughout the tunnel which groundwater is infiltrating into the tunnel. This infiltration could result in detrimental effects to the tunnel's structural integrity. These tunnel sections have been evaluated by TEG's structural engineer and a solution has been designed. Pricing has been obtained from the contractor which recently completed similar work in the main tunnels. TEG is currently evaluating whether there are sufficient funds available to have this work completed.
   b. The emergency light at station 0+28 is not working; this should be repaired.
   c. Since the last review in April of 2011, there appears to be more mud in the floor of the tunnel and there is a noticeable odor. CNE should retain an environmental testing laboratory to take samples of the mud and water and have it tested for undesirable constituents and invoice the City for these tests and analysis.

5. Manhole 23
   a. The entrance area of this manhole, which has had standing water in the past, is currently dry. However, there is a large amount of dirt in the floor drain. Some of this dirt was removed during this visit. In addition, aluminum jacketing clippings left over from DES090 remain in the vault. This area should be cleaned and all of the dirt in the floor drain removed.
   b. There is a steam leak on a dripleg in this manhole that should be repaired. A partial outage is required to make this repair, which should be scheduled to occur during the summer of 2012.
   c. The steel structural components in the vault have experienced some corrosion. Since the tunnel rock rehabilitation project is now complete, these components should be cleaned, repaired and painted to prevent further corrosion. TEG will develop a scope of work in order for pricing to be obtained for this work.

d. There is some minor insulation damage at the steam leak. This damage should be repaired once the steam leak is fixed. There is some debris in this vault that needs to be removed.

6. 7th Avenue Tunnel
   a. Both sides of a double ended steam slip joint at column 7-62 are leaking. This should be monitored and repaired once the leak is large enough to support a repair.
   b. At column 7-11 (Hume Fog service) the trap discharge line is leaking at an elbow fitting. The isolation valves were checked and appear to hold which will enable a repair to be done without a shutdown. This should be repaired as soon as possible.
   c. There is a large amount of debris at the intersection of the 7th and Broadway Tunnels in the northwestern and northeastern "corner" areas underneath the piping. This debris should be cleaned as soon as possible.
   d. The emergency light at the intersection of the 7th and Broadway Tunnels is not working and should be repaired.
   e. At the intersection of the 7th and Broadway Tunnels, there is a chilled water drain valve which does not have a blind flange installed on the open end. A blind flange should be installed on this valve in case the valve leaks.
   f. There are several locations where the grout underneath the support column base plates is cracked, broken or absent. TEG would like to arrange a time to re-visit the tunnels and more closely inspect these areas and develop a punchlist of the locations for which repairs need to be made.

7. Broadway Tunnel
   a. There is a minor steam leak on the steam expansion joint at Columns B-96. This leak should be monitored and repaired once the leak is large enough to support a repair.
   b. There is debris at column area B-83 that needs to be cleaned and removed.
   c. The platform at the top of the vertical service shaft for the Nashville Convention Center needs to have a "trap door" installed. TEG will prepare a drawing for this modification and add it to the current Miscellaneous Safety Items project, DES 080.
   d. There is some debris that needs to be removed at the platform at the top of the vertical service shaft for the Nashville Convention Center. In addition, there is an extension cord that should be removed.
   e. There is a steam leak on the expansion joint at column B-82 that appears to be large enough to be repaired. This leak should be repaired as soon as possible. (The other slip joint leaks in the

tunnels should be examined by the contractor to see if any of them can be repaired during this same site visit.)

f. There is debris at column area B-71 and at the service tunnel to the Bridgestone Arena that needs to be removed.

g. There is some debris at column area B-66 that needs to be removed, including a ~ 6 foot long section of pipe.

h. The column support at B-66 on the north side of the tunnel has some minor corrosion which should be removed and the structure re-painted to prevent further corrosion.

i. There is a steam trap piping leak at column B-66 which requires a shutdown to be repaired; this repair should be planned and completed during the 2012 summer.

j. Groundwater is leaking from the tunnel ceiling at column B-65. Pans are mounted in the ceiling to divert this groundwater to the sides/floor of the tunnel. However, some of the groundwater is "splashing" onto the structural table that supports the expansion joints at this location and has resulted in extensive corrosion to the table and its supports. Additional pans and/or aluminum flashing should be added at this location to prevent the groundwater from getting onto this table. Once this additional flashing has been installed, this location will be added to the "Structural Steel Repairs & Corrosion Prevention" list.

k. There is a lot of debris at Manhole 18 that needs to be removed. There is also some minor structural steel corrosion in this manhole which needs to be removed and the steel painted to prevent further corrosion.

l. There is a trap station in the Broadway Tunnel which the strainer is installed after the trap; unfortunately the column location was not recorded. This trap station needs to be re-piped such that the strainer is located ahead of the trap.

m. There are several locations where the grout underneath the support column base plates is cracked, broken or absent. TEG would like to arrange a time to re-visit the tunnels and more closely inspect these areas and develop a punchlist of the locations which repairs need to be made.

8. 4th Avenue Tunnel

a. There is debris at column area 4-11 that needs to be removed.

b. The service tunnel to the Sun Trust Building does not have lighting - this apparently was not part of the Phase III Tunnel Lighting project. Lighting should be added to this service tunnel under a change order to the Phase III Tunnel Lighting project. CNE should obtain pricing for this change and submit it to TEG for review.

c. The steam expansion joints at Columns 4-61 and 4-78 are leaking. These leaks should be monitored and repaired once they are of a magnitude that can be sealed successfully.
d. The trap line strainers at columns 4-61 and 4-78 do not have blowdown valves. CNE should install blowdown valves on these strainers as soon as possible. (Blowdown valves should be present on all trap station strainers.)
e. There is some discarded electrical conduit at the far north end of the 4th Avenue Tunnel which needs to be removed.
f. There are several locations where the grout underneath the support column base plates is cracked, broken or absent. TEG would like to arrange a time to re-visit the tunnels and more closely inspect these areas and develop a punchlist of the locations which repairs need to be made.

9. Manhole 9
a. The frame of the primary manway entrance is loose. C-K Masonry should be contacted to remedy this problem.
b. The links seals on the city water piping which passes through this manhole are leaking. These link seals should be adjusted and re-tightened to try and re-establish a seal.
c. A plate on the west side of the condensate piping anchor has separated slightly. This needs to be re-welded. CNE should notify TEG once this re-welding has been completed.
d. The sump pump float was replaced and is now set at a height such that the pump shuts off when there is still 2 - 3 inches of water in the manhole floor. CNE should make adjustments to this float so that there is not any standing water in the floor when the pump stops.

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 26 customers, comprised of 40 different buildings, connected to the EDS. 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

TEG and Metro DES continue to monitor and remain involved with the progress associated with the development of the new Music City Convention Center (MCCC). TEG is actively working on the permanent service contract with the MCCC. The contract for temporary service with Bell Clark was executed during the Third Quarter.

DES has been in contact with two additional entities requesting information on connecting to the system. These potential customers are proposed hotels to be located on Molloy St. TEG has been in communication with these entities to address both technical and economic concerns they have.

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.

- Several customers requested changes in their chilled water setpoint temperature during the quarter. This change is typical during non-cooling load months.
- 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.
- CNE personnel investigated a failure of the CX metering panel at the War memorial in February. Once on-site, they discovered that the failure was caused by a faulty circuit breaker.
- Changes to the chilled water return setpoint temperature were made to the Sheraton Hotel during the quarter to improve their ability to utilize the DES chilled water.
- TEG and CNE investigated reports of water hammer at the Convention Center/Renaissance mechanical room. A faulty chilled water temperature control valve and check valve were discovered. The bypass circuit into which these valves are installed was isolated. Since the isolation of that line, there have been no additional reports of water hammer.
- Water hammer in the condensate line at the Andrew Jackson building was reported to the CSR by building personnel. Once on-site, CNE discovered a faulty steam trap and made the necessary repairs.
- 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 EDS operations, the following recommendations are made.

- Chilled water customer should be notified not to use DES chilled water to re-fill their buildings after draining.
- A specification for customer steam and chilled water connections to the DES has been developed for new customers and for customer that have been isolated from the system for some time. This document requires the customer's signature and

indemnifies DES and its contractors. This document will be presented to the appropriate customers and executed prior to providing DES service.

- Steam traps noted as not functioning should be repaired or replaced as soon as possible.
- Leaks noted in the EDS walk through should be repaired.
- Structural components requiring cleaning and painting noted in the EDS walk through should be addressed.
- Insulation which is absent, or in disrepair, in the manholes should be addressed through either additional capital projects, which include work within these manholes, or through DES090.