



**Metro Nashville**  
**DISTRICT ENERGY SYSTEM**

*Advisory Board Quarterly Meeting*  
*First Quarter FY11*

*Presented to*  
*District Energy Advisory Board*

*November 18, 2010*



## *Agenda*

1. Call to Order
2. Review & Approval of Previous Meeting Minutes
3. Review of DES Contractor Performance
4. Natural Gas Purchasing Status
5. Financial Reports – 1<sup>st</sup> Qtr FY11
6. FY11 Budget Status Report
7. Capital Projects Review & Status Report Update
8. Music City Convention Center Expansion Update
9. Damage Report from May 1-2, 2010 Flood
10. Other Board Member Items
11. Adjourn



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**DISTRICT ENERGY SYSTEM**




*1. Call to Order*

*2. Review and Approval of Previous  
Meeting Minutes*



## *3. Review of DES Contractor Performance*

Contractor (CNDE) is in compliance with their contractual obligations for FY11.

-  Excellent Performance – No Improvement Necessary
-  Satisfactory Performance – Some Improvement Could Be Made
-  Poor Performance – Much Improvement Necessary



*Summary Table 3: Customer Cost Comparison for the Previous 12 Months*

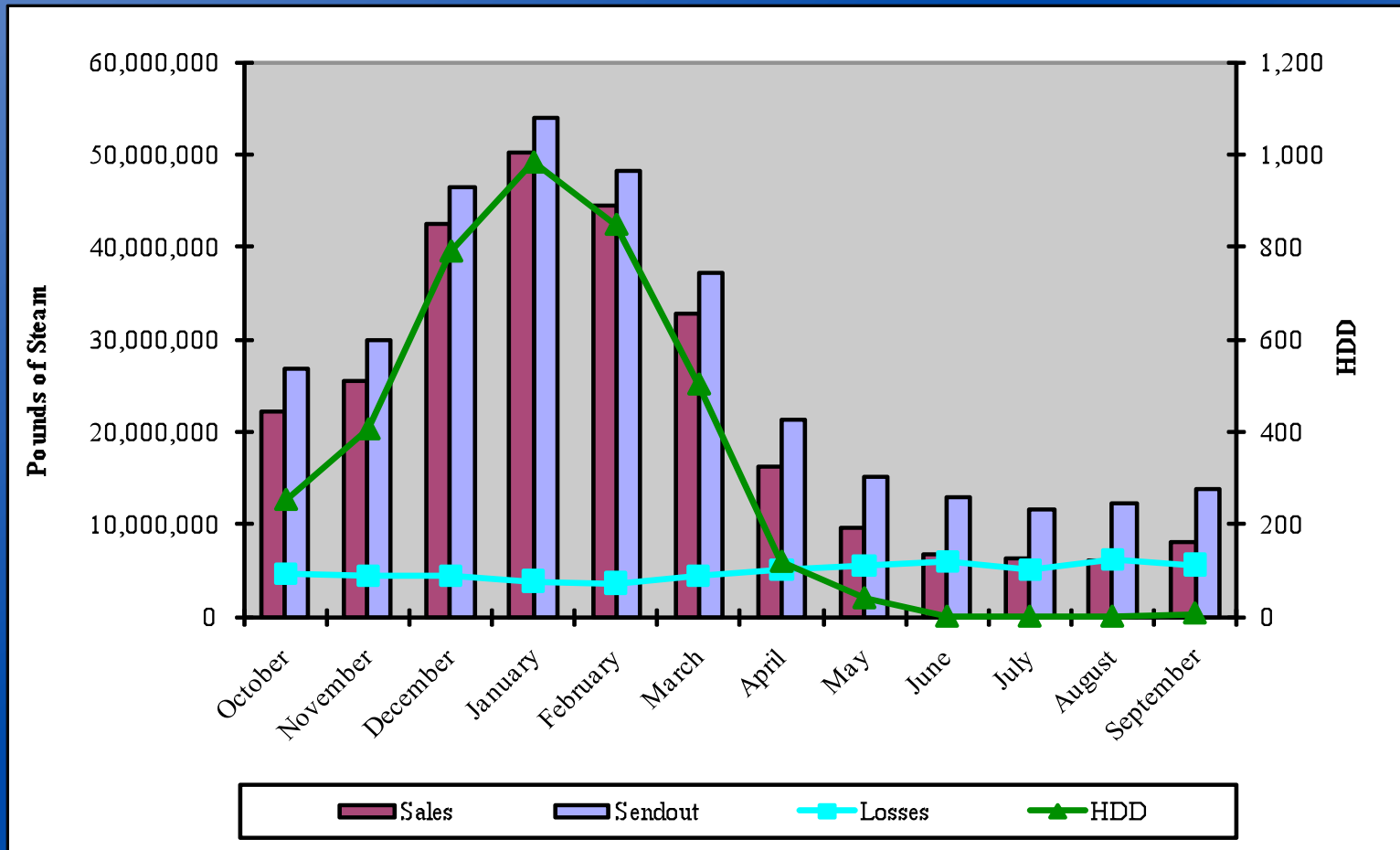
	Steam (\$ millions)			Chilled Water (\$ millions)		
	10/08 – 09/09	10/09-09 /10	% Diff.	10/08 – 09/09	10/09-09 /10	% Diff.
Private	\$2.197	\$1.661	-24.4%	\$3.564	\$3.717	4.3%
State	\$2.805	\$2.287	-18.5%	\$3.213	\$3.364	4.7%
Metro	\$2.636	\$1.937	-26.5%	\$3.053	\$3.103	1.7%
Aggregate	\$7.638	\$5.886	-22.9%	\$9.830	\$10.184	3.6%

\*FY09 MFA = \$3,217,986; FY10 MFA = \$2,661,553 post-True-up; MFA not included in values shown



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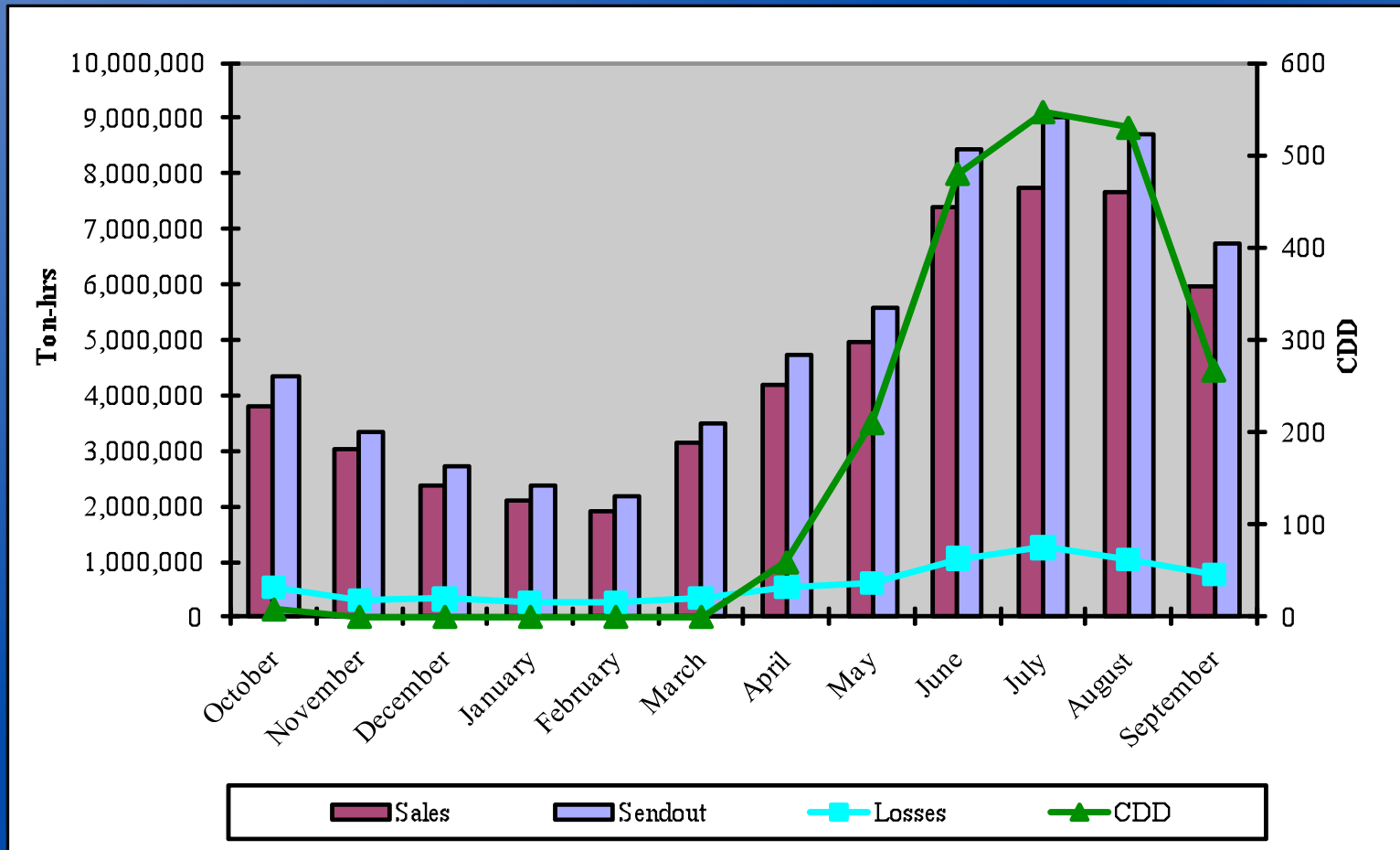
## FY11 Operations: Steam





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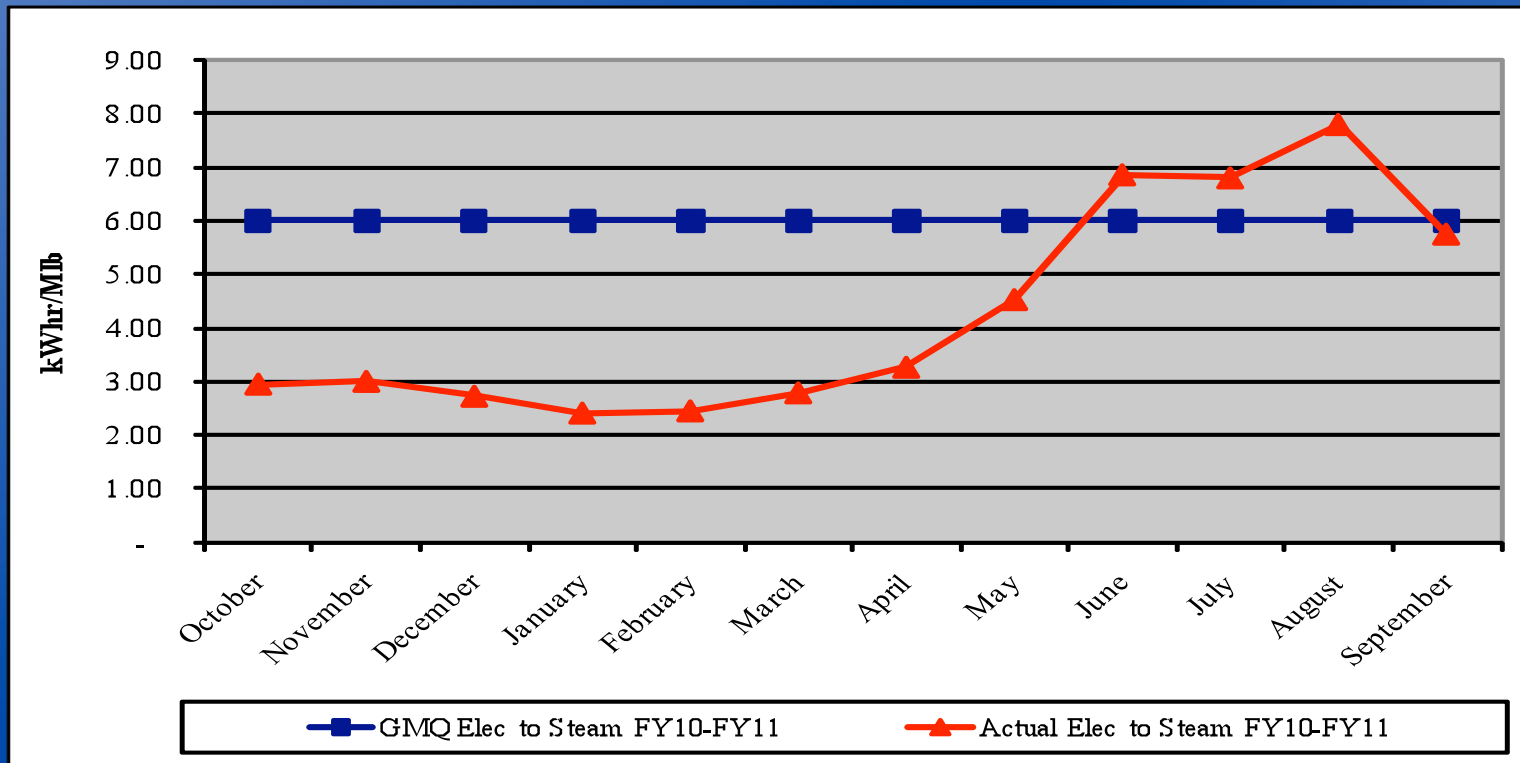
## FY11 Operations: Chilled Water





# Performance Measurement FY11: Steam

## Electric Conversion ●

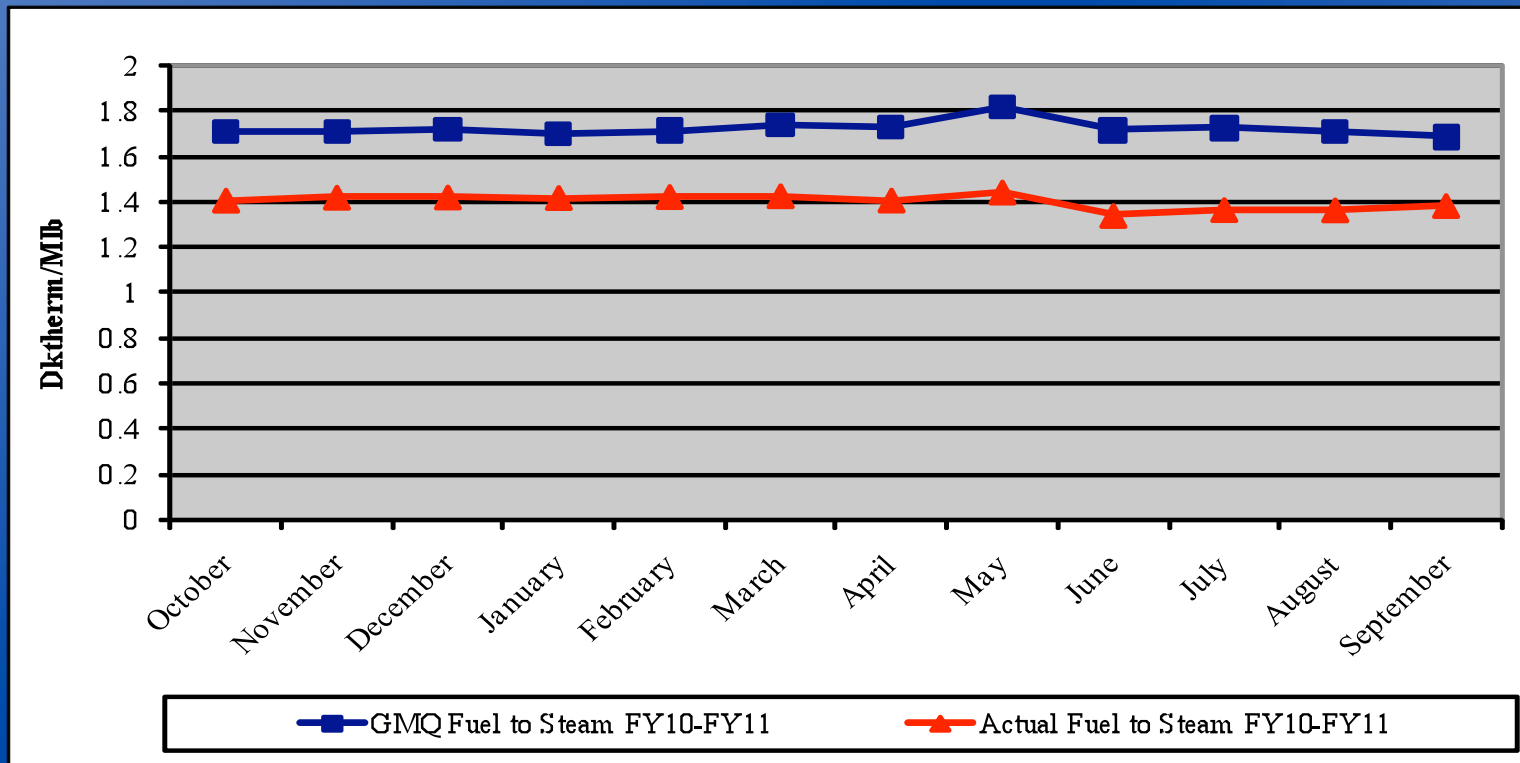






# Performance Measurement FY11: Steam

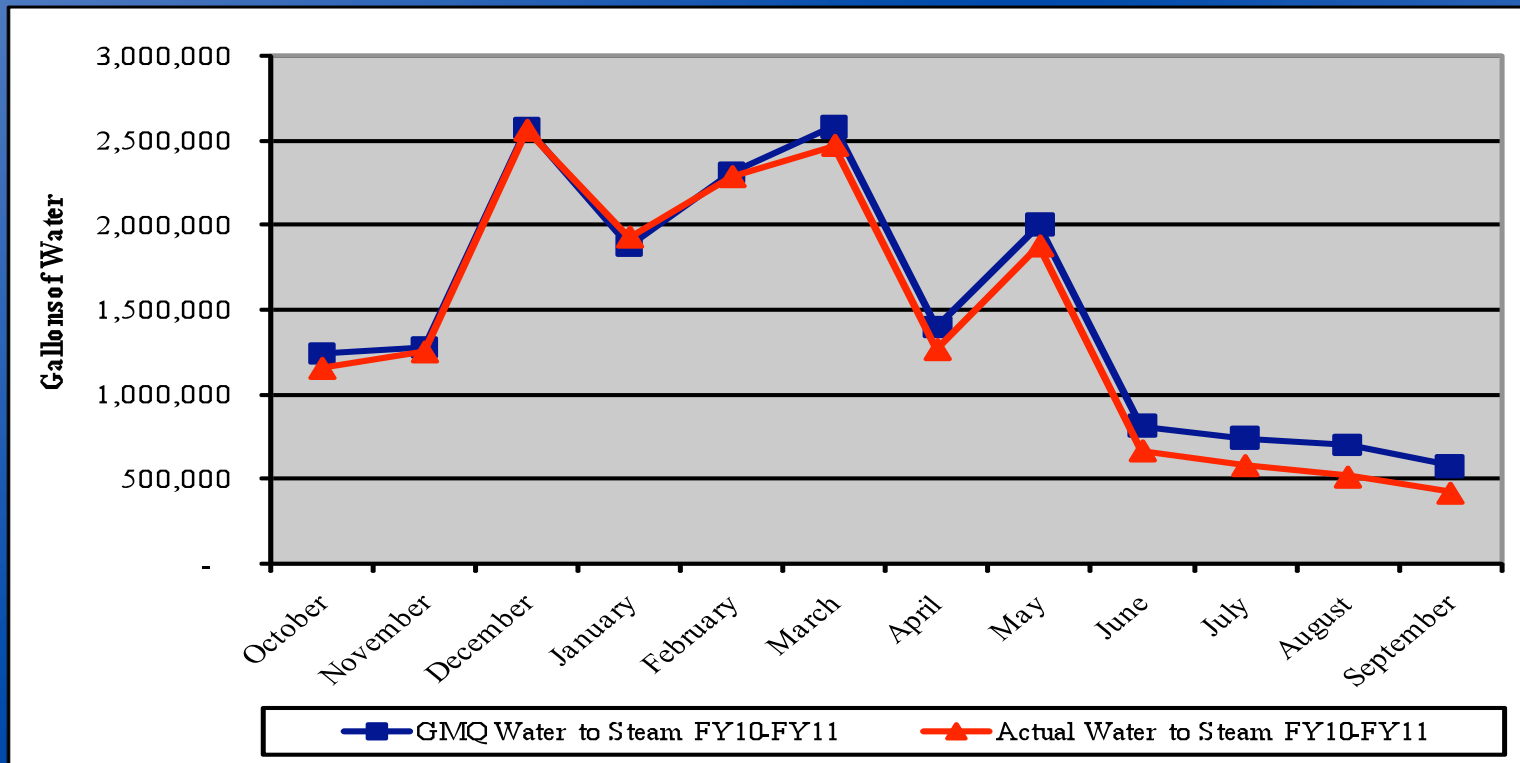
## Plant Efficiency ●





## *Performance Measurement FY11: Steam*

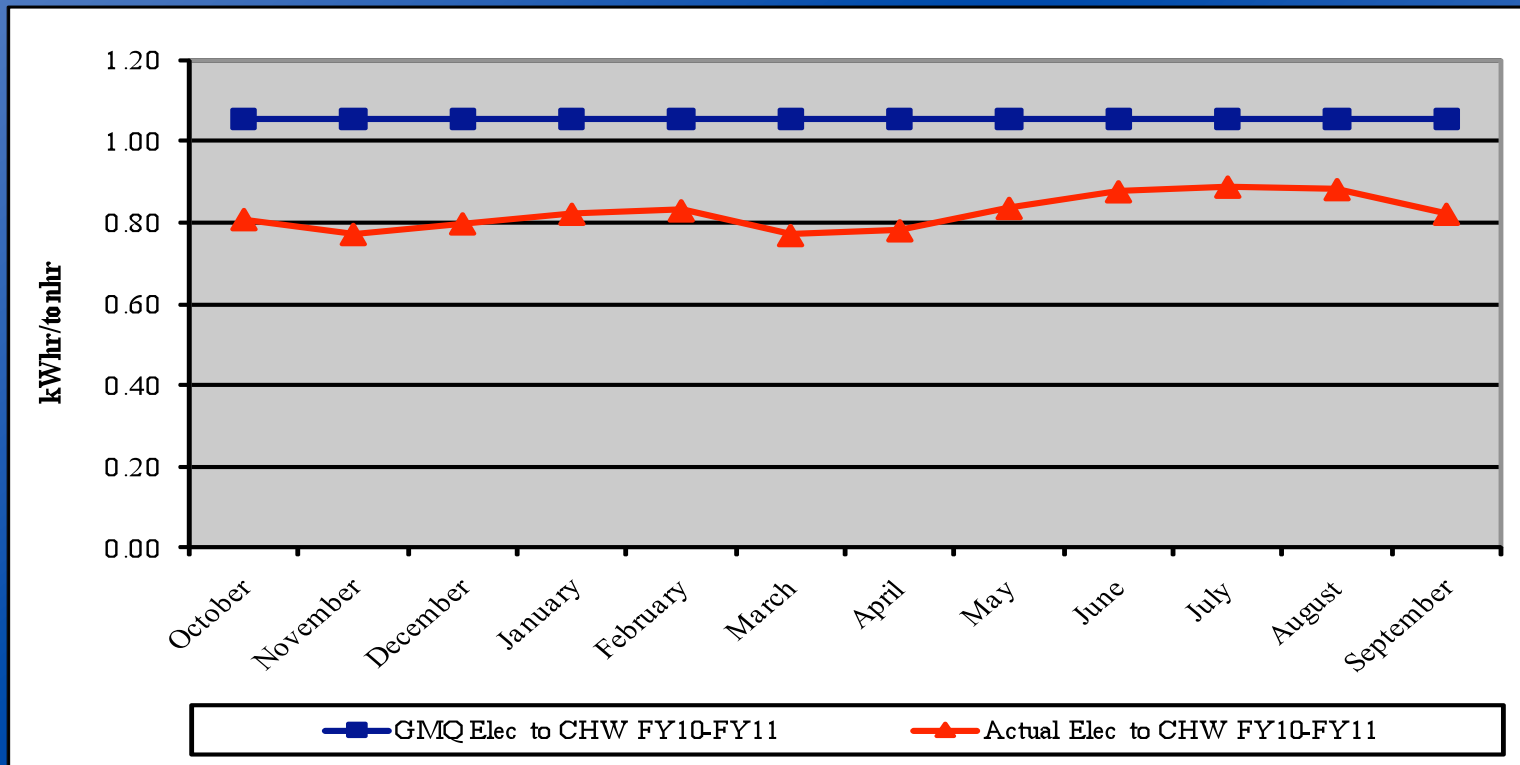
### *Water Conversion*





# Performance Measurement FY11: Chilled Water

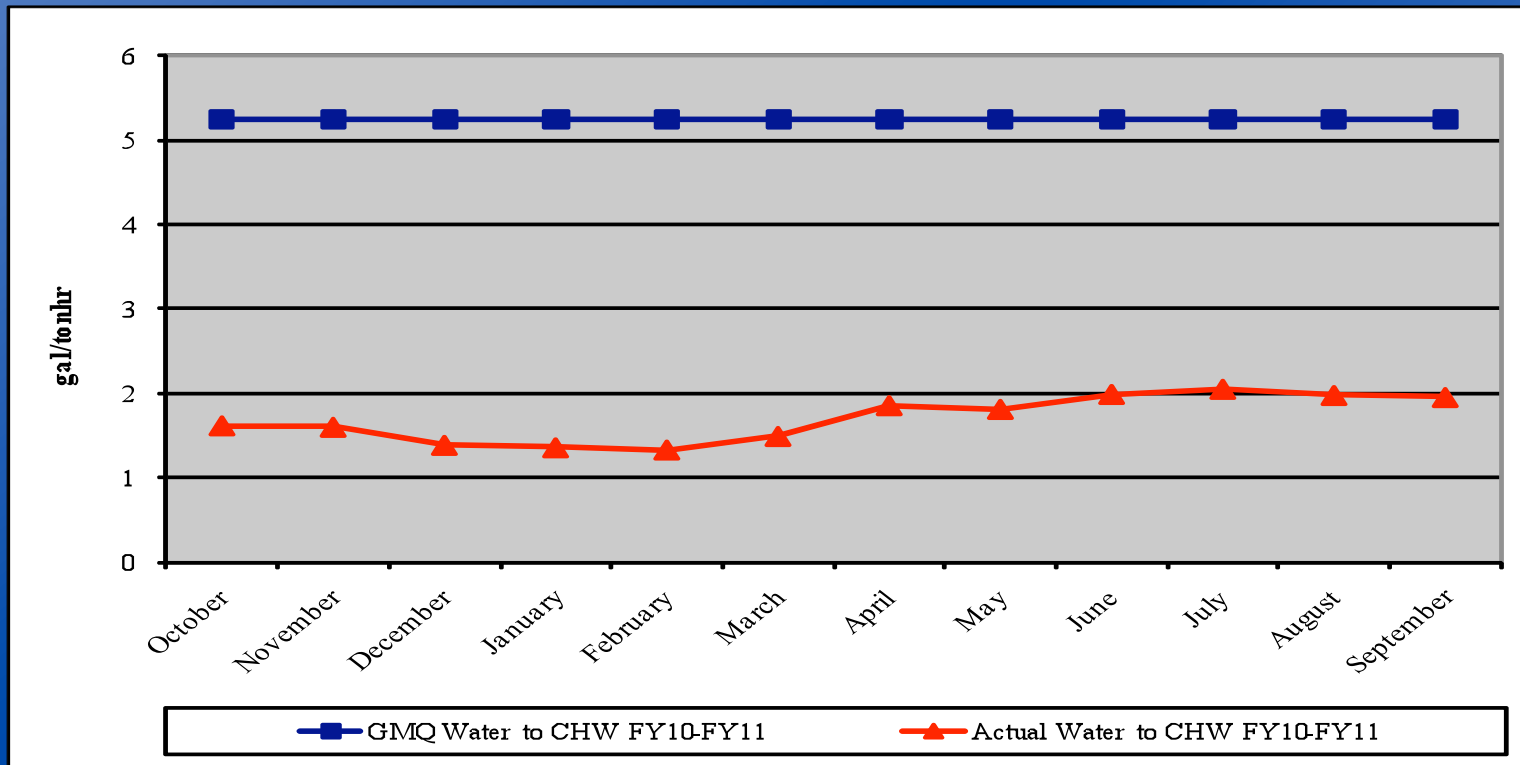
## Electric Conversion ●





# *Performance Measurement FY11: Chilled Water*

## *Water Conversion* ●





## *Water Treatment*

- Steam/Condensate
  - Corrosion ●
  - Iron ●
  - Hardness ●
  - Chlorine/Sulfite ●
- Condensing Water
  - Conductivity ●
  - Biologicals ●
- Chilled Water
  - Hardness ●
  - Corrosion ●
  - Biologicals ●



## *EGF Walkthrough*

### Quarterly Inspection Process

- Equipment Maintenance ●
- Operations ●
- Electrical ●
- Housekeeping ●
- Building Structure ●
- Building Exterior and Grounds ●



## *EDS Walkthrough*

### Quarterly Inspection Process

- Manhole/Tunnel Housekeeping ●
- Maintenance Items
  - Insulation Repair/Replacement ●
  - Water Infiltration ●
  - Corrosion of Structural Metal Components ●
- Safety Items ●



## *4. Natural Gas Purchasing*

### **Natural Gas Purchasing Review**

**Table 4: FY11 Gas Spending & Budget  
Comparison**

**Figure 4: Actual and Projected Gas Cost  
Comparison for FY11**





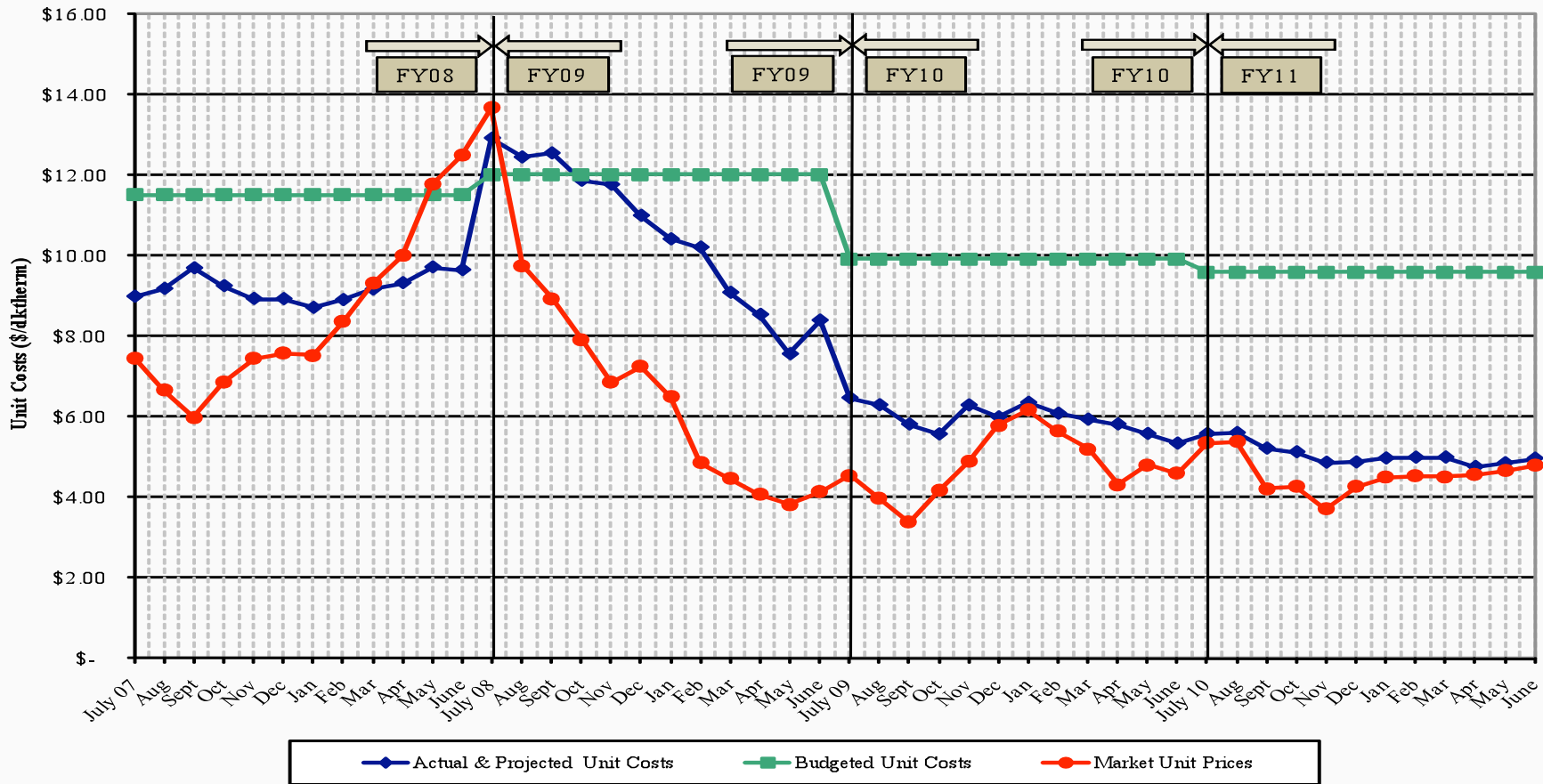
*Table 4: FY11 Gas Spending & Budget Comparison*

		<b>Actual FY11 To date (Sept 30)</b>	<b>Budget FY11</b>
Steam Sendout (Mlbs)		37,522	39,771
Fuel Use (Dth) (includes propane)	●	51,505	56,037
Plant Eff (Dth/Mlb)	●	1.373	1.409
Total Gas Cost (includes propane)	●	\$312,243	\$524,899
Unit Cost of Fuel (\$/Dth)	●	\$6.062	\$9.367



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## Fig 4. Actual and Projected Gas Cost Comparison History





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### 5. Financial Reports: 1<sup>st</sup> Qtr FY11

Item		FY11 Budget	Total Spending to Date	% of Budget
<b>FOC:</b>	Basic	\$ 3,976,200	\$ 988,755.75	24.87%
	9th Chiller	\$ 37,200	\$ 9,264.75	24.91%
	C/O 6A	\$ 73,400	\$ 18,291.51	24.92%
	C/O 6B	\$ 64,300	\$ 16,013.43	24.90%
<b>Pass-thru Charges:</b>	Water	\$ 574,000	\$ 156,947.84	27.34%
	Chemical Treatment	\$ 150,000	\$ 33,954.63	22.64%
	Engineering	\$ 26,200	\$ 3,604.53	13.76%
	Insurance	\$ 27,700	\$ -	0.00%
	EDS Electricity	\$ -	\$ 13,576.00	n.a.
	EDS R&I	\$ 176,500	\$ 3,282.06	1.86%
	EDS Surcharge	\$ 70,600	\$ -	0.00%
<b>Marketing:</b>	CES Sales Activity	\$ -	\$ -	n.a.
	Incentive Payments	\$ -	\$ -	n.a.
	Metro Marketing	\$ 15,000	\$ -	0.00%
	Project Administration	\$ 30,700	\$ 360.00	1.17%
<b>FEA:</b>	Steam	\$ -	\$ 13,190.85	n.a.
	Chilled Water	\$ -	\$ 125,430.95	n.a.
<b>Misc:</b>	Metro Credit	\$ -	\$ (170,523.84)	n.a.
	ARFA	\$ -	\$ 14,360.13	n.a.
	Deferral	\$ -	\$ -	n.a.
	<b>Subtotal - Man Fee =</b>	<b>\$ 5,045,300</b>	<b>\$ 1,219,262.00</b>	<b>24.17%</b>
<b>Reimbursed Management Fee</b>			<b>\$ 405,211.45</b>	
<b>Metro Costs:</b>	Metro Incremental Cost	\$ 469,900	\$ 282,077.15	60.03%
	EDS Water/Sewer	\$ -	\$ 25.10	n.a.
	Natural Gas	\$ 4,445,500	\$ 312,242.55	7.02%
	Propane	\$ -	\$ -	n.a.
	Electricity	\$ 4,949,700	\$ 1,567,251.61	31.66%
	<b>Subtotal - Operations =</b>	<b>\$ 15,086,900</b>	<b>\$ 3,387,745.00</b>	<b>22.45%</b>
<b>Debt Service</b>	2002 Bonds	\$ 4,239,500	\$ 1,090,723.44	25.73%
	2005 Bonds	\$ 628,100	\$ -	0.00%
	2007 Bonds	\$ 227,800	\$ -	0.00%
	2008 Bonds	\$ 220,500	\$ -	0.00%
	2010 Bonds	\$ -	\$ -	n.a.
	Interest Revenue	\$ (100,000)	\$ (17,379.17)	17.38%
<b>Oper. Reserve Funding Deposit</b>		\$ -	\$ -	n.a.
	<b>Subtotal - Capital =</b>	<b>\$ 5,215,900</b>	<b>\$ 1,073,344.27</b>	<b>20.58%</b>
	<b>Total =</b>	<b>\$ 20,302,800</b>	<b>\$ 4,461,089.27</b>	<b>21.97%</b>
	<b>Revenues =</b>	<b>\$ 17,858,700</b>	<b>\$ 4,242,612.37</b>	<b>23.76%</b>
	<b>Metro Funding Amount =</b>	<b>\$ 2,444,100</b>	<b>\$ 218,476.90</b>	<b>8.94%</b>



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### 6. FY11 Budget Status Report

Item	FY10 Budget	FY11 Budget	Percent Change from FY10
FOC: Basic + C/O 6C	\$ 3,976,200	\$ 3,976,200	0.00%
FOC: 9th Chiller	\$ 37,200	\$ 37,200	0.00%
FOC: Change Order 6A	\$ 73,400	\$ 73,400	0.00%
FOC: Change Order 6B	\$ 64,300	\$ 64,300	0.00%
Chemicals	\$ 161,200	\$ 150,000	-6.95%
Engineering	\$ 26,200	\$ 26,200	0.00%
Insurance	\$ 43,700	\$ 27,700	-36.61%
Marketing: CEPS Sales Activity	\$ 9,800	\$ -	-100.00%
Metro Marketing	\$ 35,000	\$ 15,000	-57.14%
Incentive Payments	\$ -	\$ -	n.a.
Project Administration	\$ 24,000	\$ 30,700	27.92%
Metro Incremental Cost	\$ 526,400	\$ 485,900	-7.69%
Water/Sewer	\$ 689,600	\$ 574,000	-16.76%
Natural Gas/Propane	\$ 4,692,900	\$ 4,429,200	-5.62%
Electricity	\$ 5,034,100	\$ 4,949,700	-1.68%
EDS Repair & Improvement	\$ 176,500	\$ 176,500	0.00%
EDS Surcharge	\$ 70,600	\$ 70,600	0.00%
<b>Sub-total Operations</b>	<b>\$ 15,641,100</b>	<b>\$ 15,086,600</b>	<b>-3.55%</b>
2002 Bonds	\$ 4,362,900	\$ 4,239,500	-2.83%
2005 Bonds	\$ 627,600	\$ 628,100	0.08%
2007 Bonds	\$ 227,800	\$ 227,800	0.00%
2008 Bonds	\$ 220,500	\$ 220,500	0.00%
2010 Bonds	\$ -	\$ -	n.a.
Interest Revenue	\$ (123,700)	\$ (92,900)	-24.90%
Oper. Reserve Funding Deposit	\$ -	\$ -	n.a.
<b>Sub-total Debt Service</b>	<b>\$ 5,315,100</b>	<b>\$ 5,223,000</b>	<b>-1.73%</b>
<b>Total Expenses</b>	<b>\$ 20,956,200</b>	<b>\$ 20,309,600</b>	<b>-3.09%</b>
<b>Customer Revenues</b>	<b>\$ 18,488,100</b>	<b>\$ 17,820,100</b>	<b>-3.61%</b>
<b>Project Admin. Revenue</b>	<b>\$ 24,000</b>	<b>\$ 30,700</b>	<b>27.92%</b>
	\$ -	\$ 14,700	n.a.
<b>Total Metro Funding Amount</b>	<b>\$ 2,444,100</b>	<b>\$ 2,444,100</b>	<b>0.00%</b>



## *Capital Expenditure Update*

	<b>Spent to End of FY10</b>	<b>FY11 Spending</b>	<b>Balance to Date (10/20/10)</b>
R&I Projects	\$976,742	\$8,945	\$546,254
2005B Bond	\$8,054,218	\$9,164	\$123,118
2007 Bond	\$2,620,771	\$0	\$237,729
2010 Bond	\$412,384	\$38,242	\$1,957,125
2011 Bond	\$0	\$0	\$8,500,000
<b>Total</b>	<b>\$12,064,115</b>	<b>\$56,351</b>	<b>\$11,364,226</b>



## *7. Capital Projects Review*

### *Active Capital Projects*

- DES 059: CJC Condensate Service Line Repair – construction completed during 1<sup>st</sup> Qtr FY11; closeout to occur in 2<sup>nd</sup> Qtr FY11
- DES 060: MH Insulation - in construction/ongoing
- DES 061: Manhole & Tunnel Steel Corrosion Repair & Prevention – in construction/ongoing
- DES 062: Replacement of Stm and Cond Service to Wildhorse Saloon – closed
- DES 063: Manhole A, B & M Sump Pump Installation – in construction; CEPS donating labor
- DES 066: 1<sup>st</sup> Avenue Manhole & Steam Line Removal from Service - in closeout
- DES 067: Tunnel Rock Rehabilitation.: Broadway, 7<sup>th</sup> & 4<sup>th</sup> Ave. – in construction
- DES 069: Municipal Auditorium Tempering Station – closed
- DES 073: MH-18 Platform Modification – awarded; construction during 2<sup>nd</sup> Qtr FY11





## *7. Capital Projects Review (cont'd.)*

### *Active Capital Projects*

- DES 076: MH-S4A State Manhole Rebuild – on hold; awaiting completion of the State alternate fiber optic duct
- DES 077: Expansion of Service to the Music City Convention Center - in construction
- DES 080: Misc. Manhole & Tunnel Safety Repairs – in design
- DES 081: Flood Related Repairs – construction complete; in closeout



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## *FY 2010-2011 Proposed Projects*

- DES 048: Tunnel Lighting Replacement Phase III – awaiting DES 067
- DES 070: MH 6 to 23 Condensate Line Replacement
- DES 071: Hermitage Hotel Service Modifications
- DES 072: Sheraton Hotel Steam and Condensate Replacement



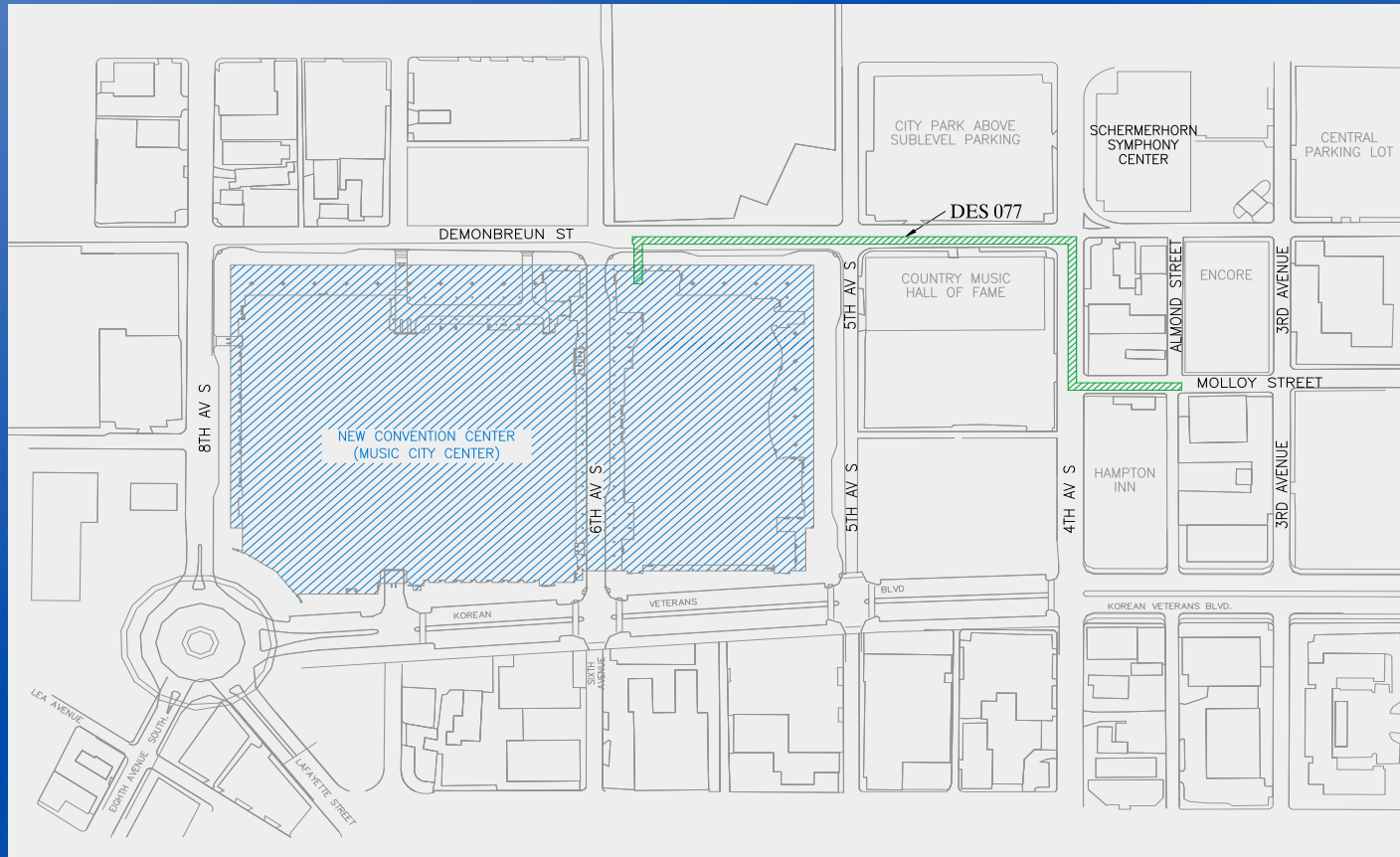


## *8. Music City Convention Center Expansion Update*

- Music City Convention Center
  - 5,820 tons (contract)
  - 53,130 pph (contract)
- Estimated Capital Cost \$6,022,000
- Estimated \$500,000 (~25% ) Reduction in MFA
- Construction Began October 2010
- “Service Ready” Anticipated 04/15/2011



# *Music City Convention Center Location & Routing Plan*





## *9. Damage Report from May 1-2, 2010 Flood*

- Paid to Date (10/29/10) - \$375,000
- Majority of costs may not be affect capital budget

<b>Item</b>	<b>Estimated Total Cost</b>	<b>FEMA Reimbursement</b>	<b>Net Cost to Metro</b>
Electrical & Communications	\$215,000	\$213,477	\$1,523
Mechanical & Temp Boiler	\$373,500	\$83,947	\$289,553
Other	\$25,000	\$20,329	\$4,671
<b>Total</b>	<b>\$613,500</b>	<b>\$317,753</b>	<b>\$295,747</b>



## *10. Other Board Member Items*

## *11. Adjourn*

### *Advisory Board Meeting Schedule*

FY11 – 2<sup>nd</sup> Quarter Meeting – February 17, 2011

FY11 – 3<sup>rd</sup> Quarter Meeting – May 19, 2011

FY11 – 4<sup>th</sup> Quarter Meeting – August 17, 2011

FY12 – 1<sup>st</sup> Quarter Meeting – November 16, 2011