



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

*Advisory Board Quarterly Meeting*  
*Second Quarter FY10*

*Presented to*  
*District Energy Advisory Board*

*February 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 – 2<sup>nd</sup> Qtr FY10
6. FY09-10 Budget Status Report
7. Capital Projects Review and Status Report
8. Liaison Transition of Duties
9. Adjourn



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*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 FY10.

-  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*

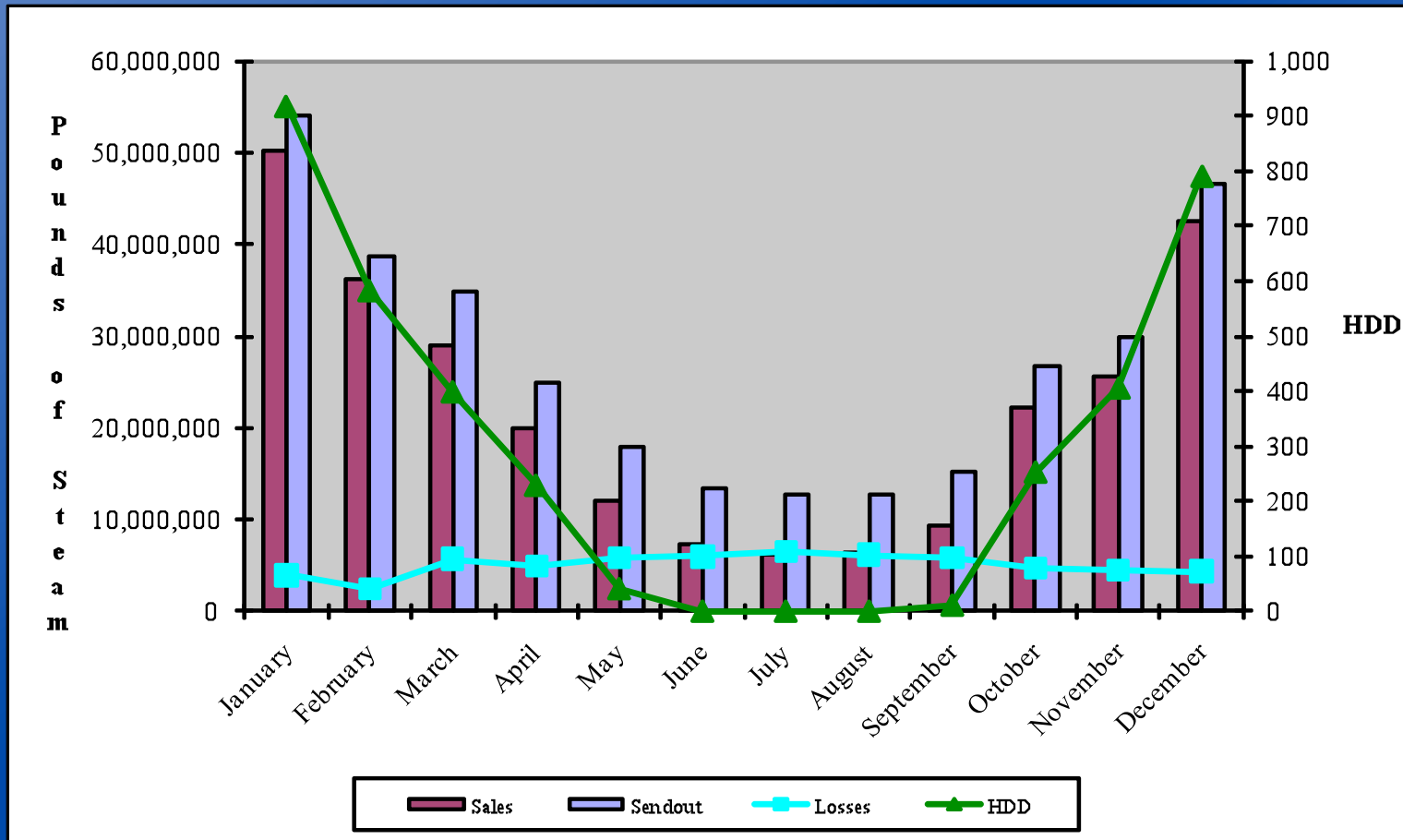
	Steam (\$ millions)			Chilled Water (\$ millions)		
	01/08 – 12/08	01/09-12 /09	% Diff.	01/08 – 12/08	01/09-12 /09	% Diff.
Private	\$2.439	\$1.943	-20.3%	\$3.827	\$3.497	-8.6%
State	\$3.100	\$2.513	-18.9%	\$3.257	\$3.191	-2.0%
Metro	\$2.856	\$2.225	-22.1%	\$3.055	\$2.967	-2.9%
Aggregate	\$8.395	\$6.681	-20.4%	\$10.139	\$9.656	-4.8%

\*FY08 MFA = \$2,193,075; FY09 MFA = \$3,217,986 post-True-up; MFA not included in values shown



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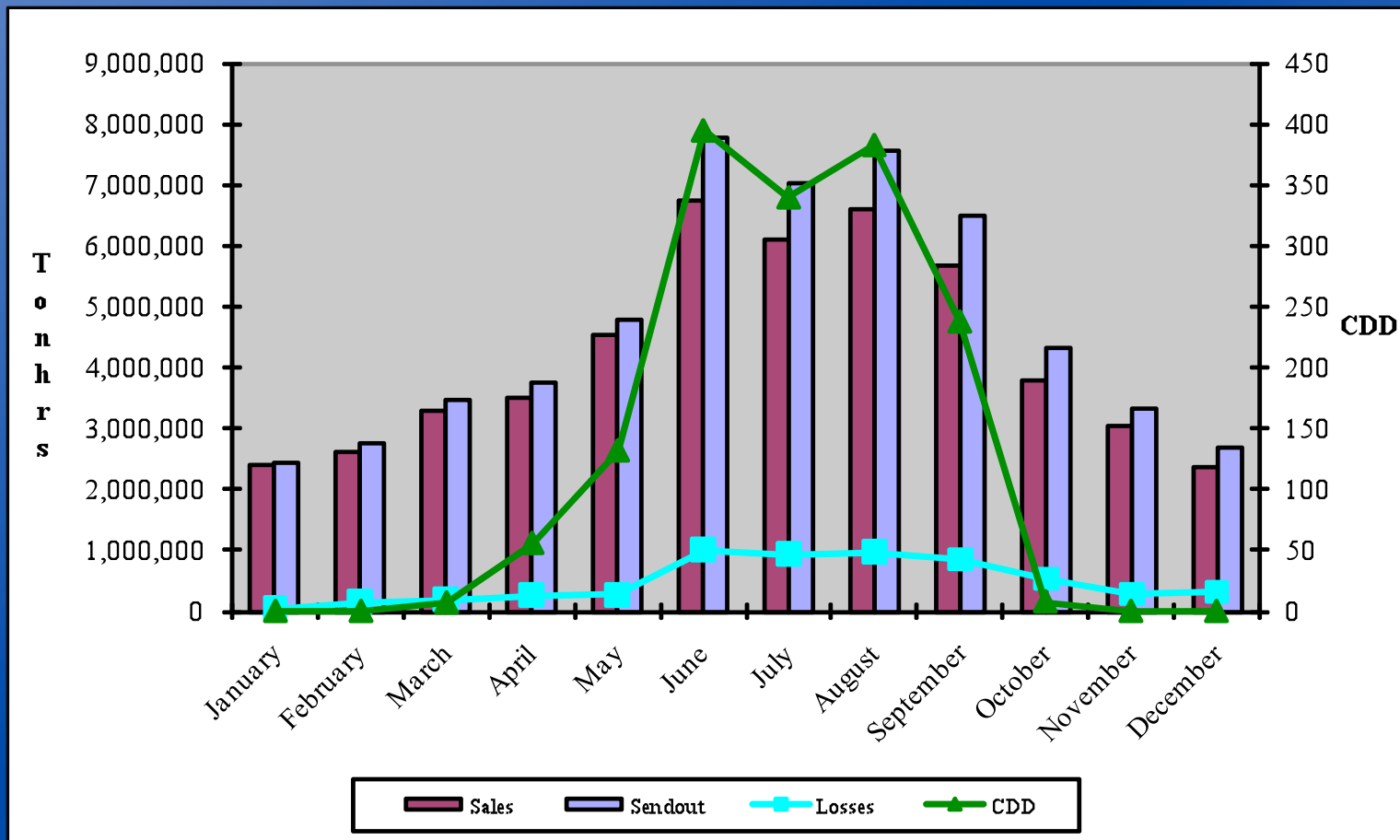
## FY10 Operations: Steam





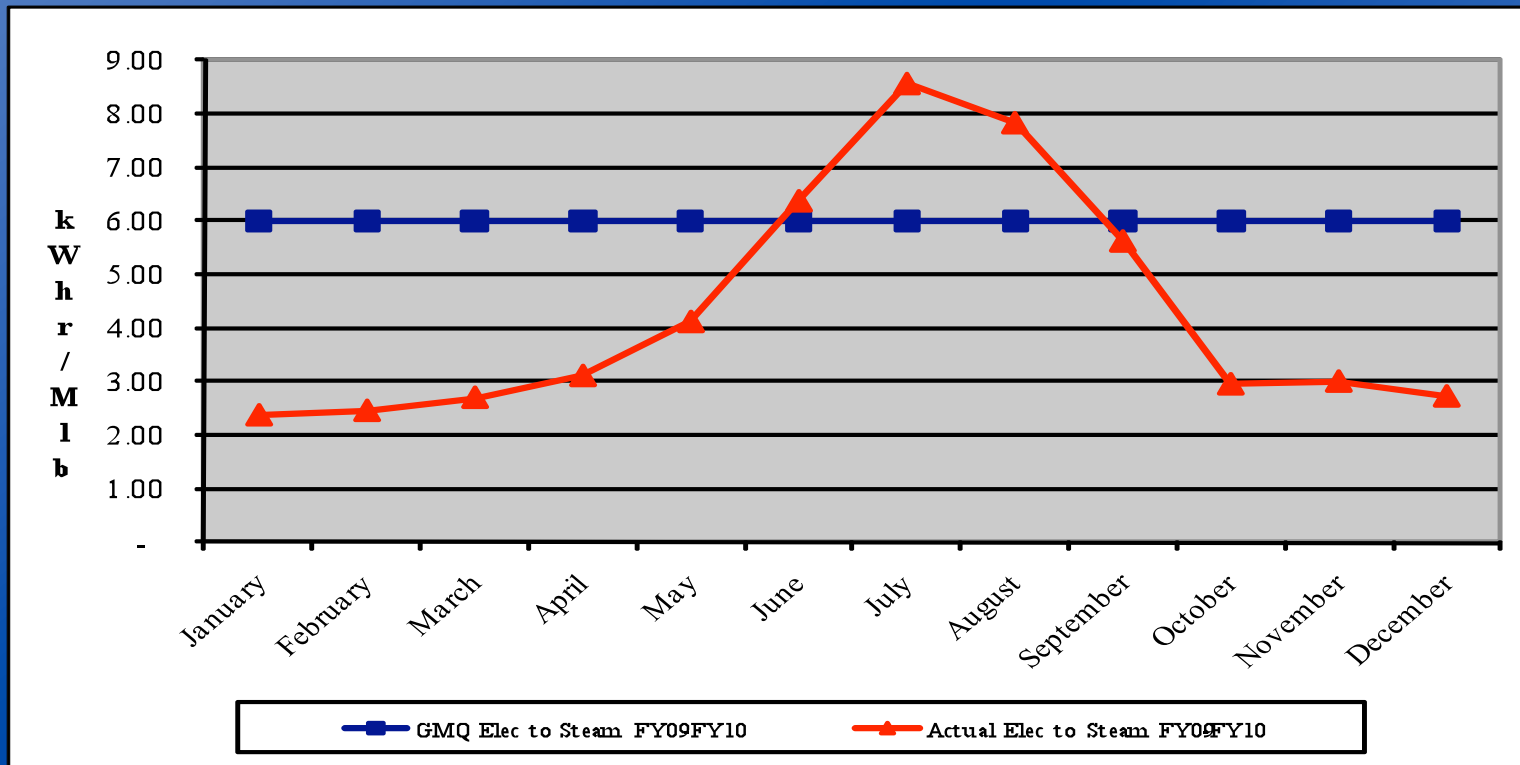
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## FY10 Operations: Chilled Water





# Performance Measurement FY10: Steam Electric Conversion ●

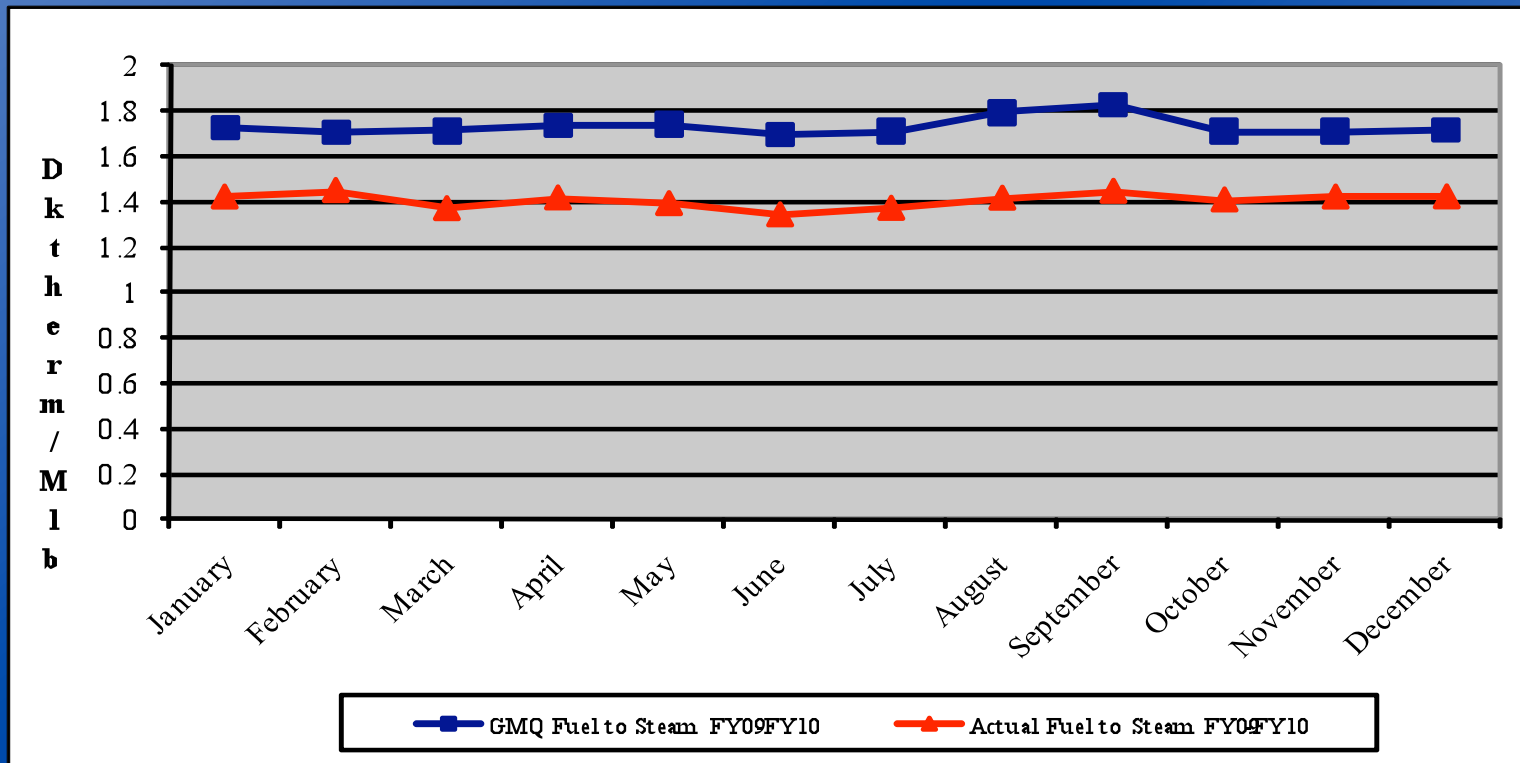






# Performance Measurement FY10: Steam

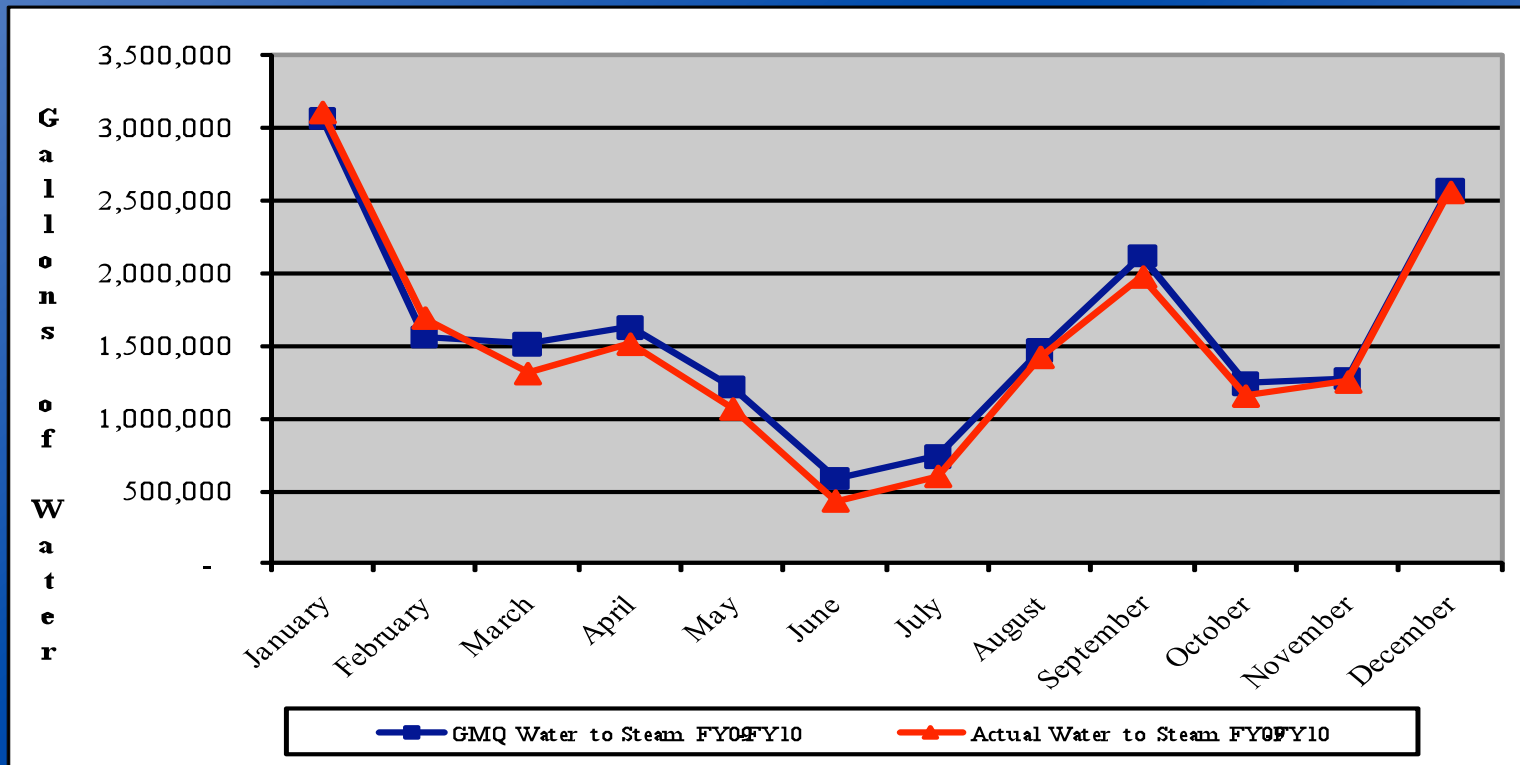
## Plant Efficiency ●





# *Performance Measurement FY10: Steam*

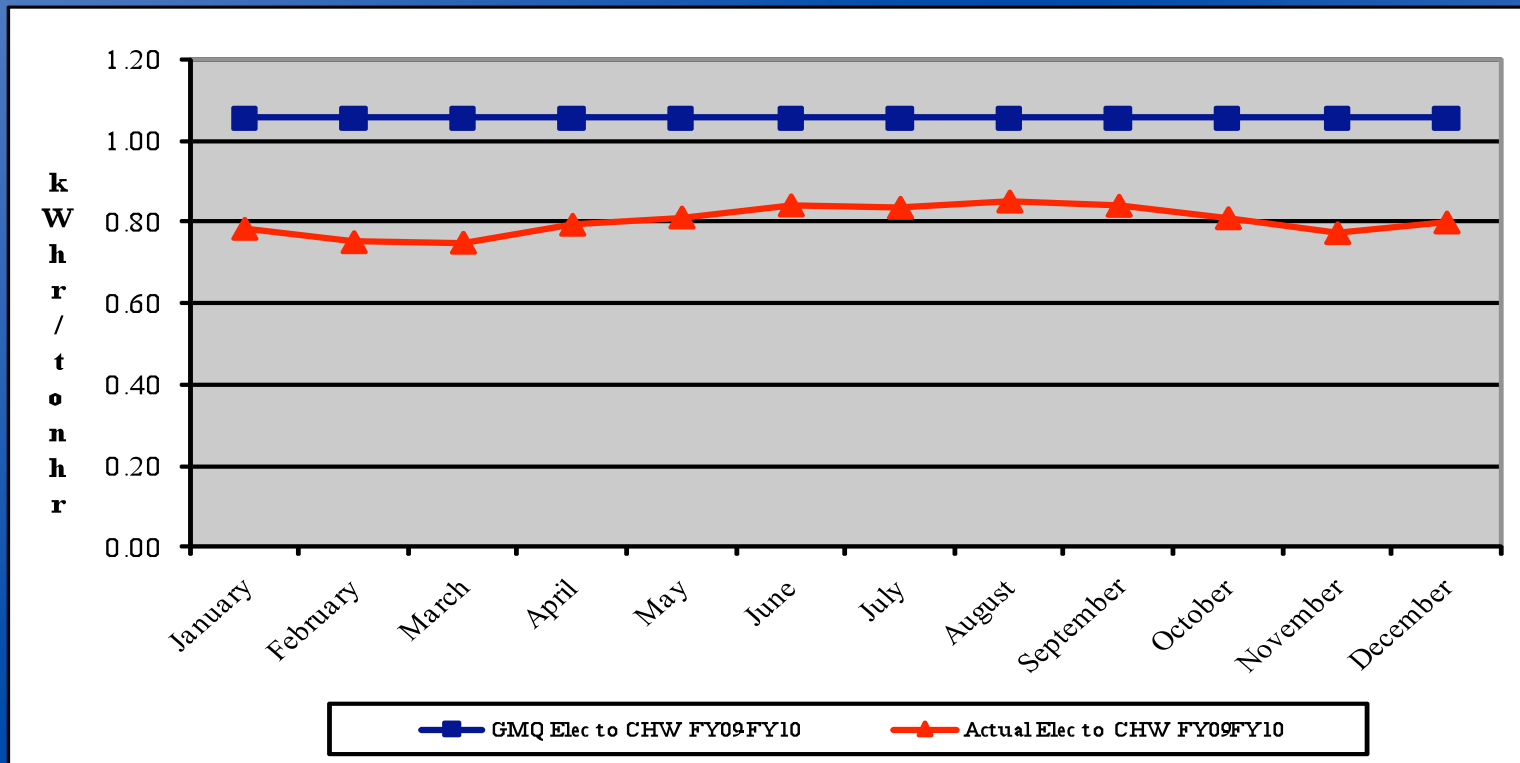
## *Water Conversion*





# Performance Measurement FY10: Chilled Water

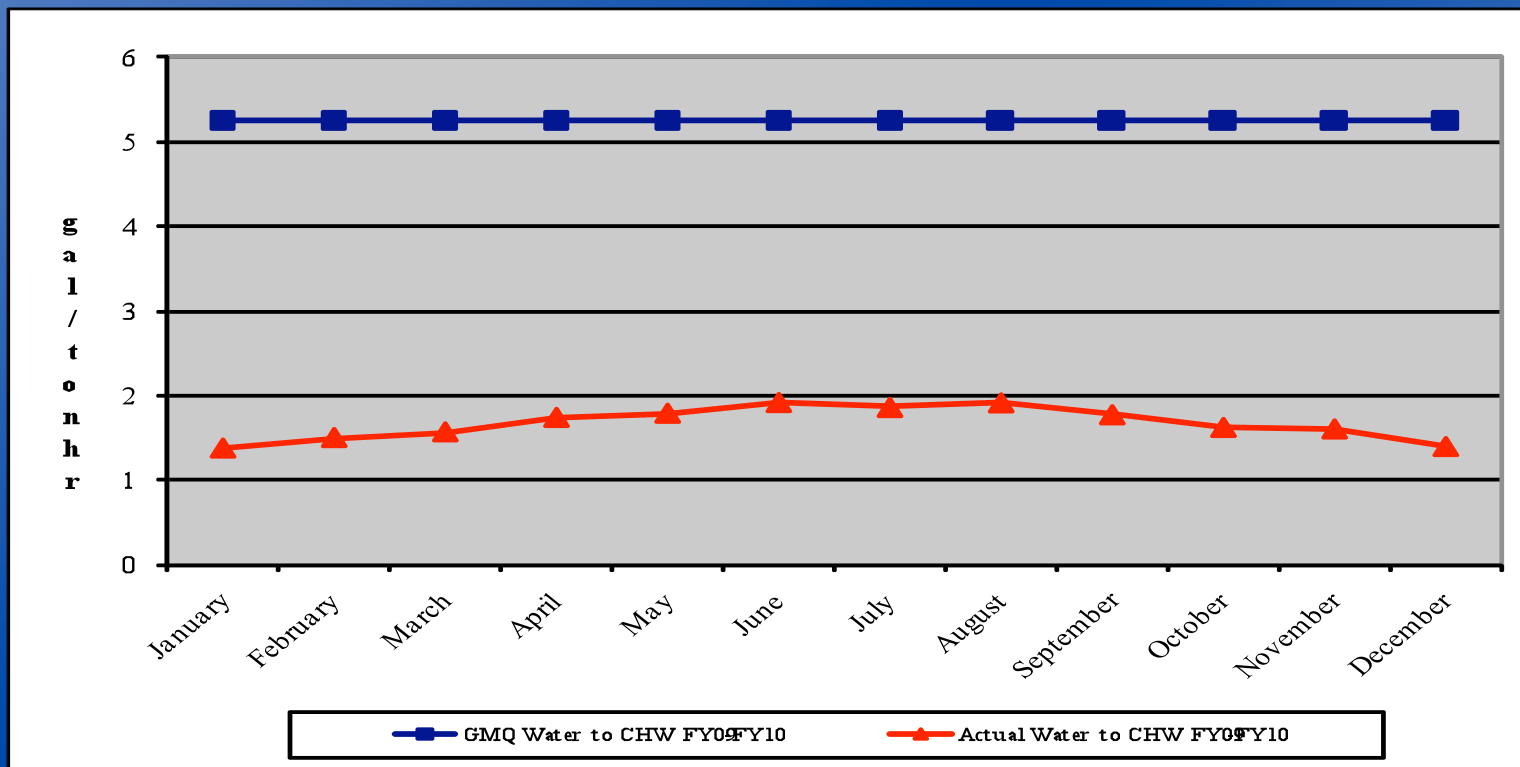
## Electric Conversion ●





# Performance Measurement FY10: 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: FY10 Gas Spending & Budget  
Comparison**

**Figure 4: Actual and Projected Gas Cost  
Comparison for FY10**





*Table 4: FY10 Gas Spending & Budget Comparison*

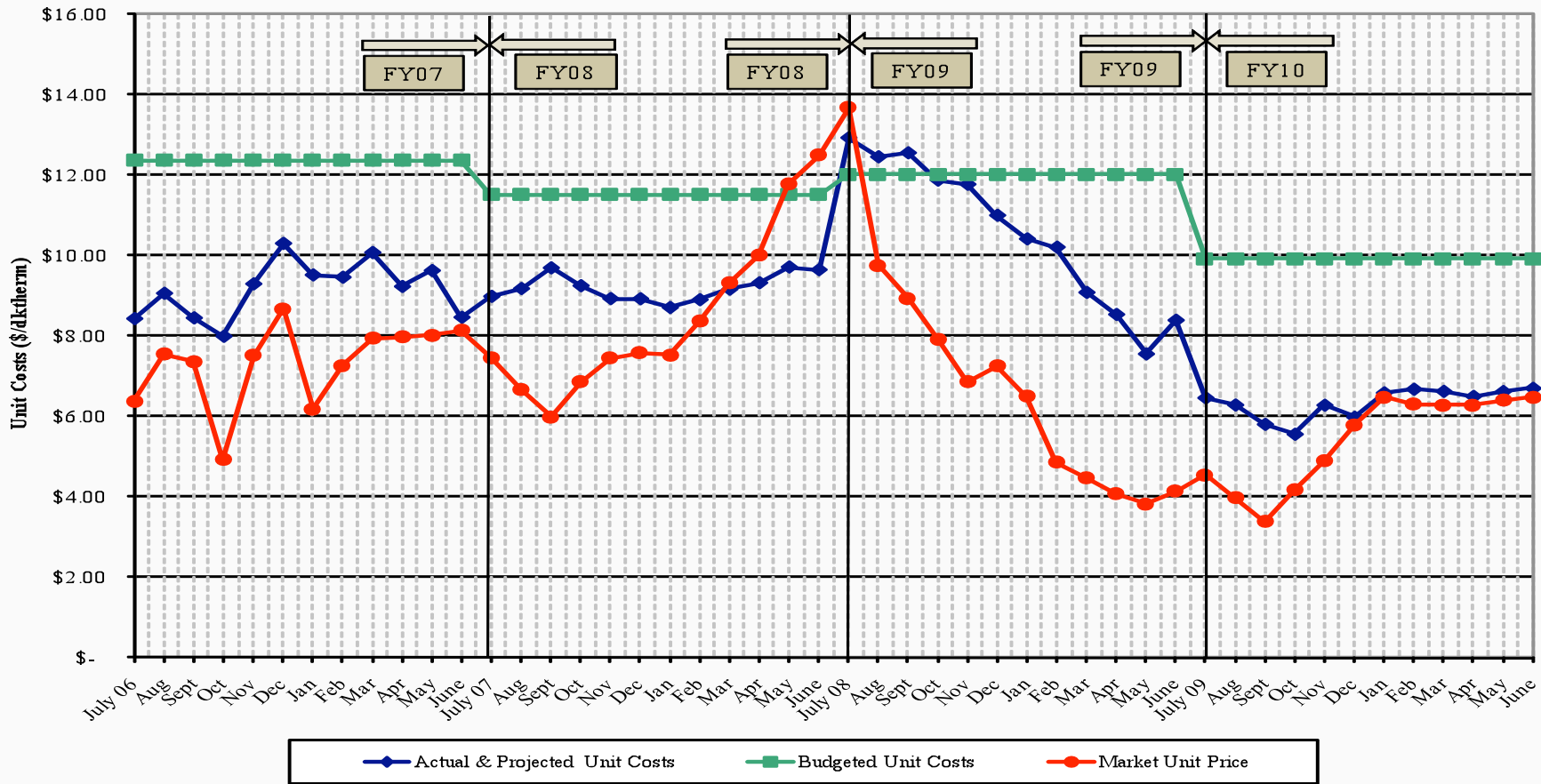
		<b>Actual FY10 To date (Dec 31)</b>	<b>Budget FY10</b>
Steam Sendout (Mlbs)		144,218	145,172
Fuel Use (Dth)	●	205,313	210,500
Plant Eff (Dth/Mlb)	●	1.424	1.450
Total Gas Cost	●	\$1,297,0338	\$2,068,373
Unit Cost of Fuel (\$/Dth)	●	\$6.317	\$9.826



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### Actual and Projected Gas Cost Comparison for FY10





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### 5. Financial Reports: 2<sup>nd</sup> Qtr FY10

Item	FY10 Budget	Total Expenses to Date	Percent of FY10 Budget
FOC: Basic	\$ 3,976,200	\$ 1,926,085	48.44%
FOC: 9th Chiller	\$ 37,200	\$ 18,048	48.51%
FOC: Change Order 6A	\$ 73,400	\$ 35,631	48.54%
FOC: Change Order 6B	\$ 64,300	\$ 31,194	48.51%
Chemicals	\$ 161,200	\$ 74,891	46.46%
Engineering	\$ 26,200	\$ 16,578	63.28%
Insurance	\$ 43,700	\$ 27,723	63.44%
Marketing: CEPS Sales Activity	\$ 9,800	\$ -	0.00%
Metro Marketing	\$ 35,000	\$ 8,564	24.47%
Incentive Payments	\$ -	\$ -	n.a.
Project Administration	\$ 24,000	\$ -	0.00%
Metro Incremental Cost	\$ 526,400	\$ 186,757	35.48%
FEA: Steam	\$ -	\$ 53,980	n.a.
FEA: Chilled Water	\$ -	\$ 194,436	n.a.
ARFA	\$ -	\$ 27,973	n.a.
Metro Credit	\$ -	\$ (221,345)	n.a.
Water/Sewer	\$ 689,600	\$ 194,705	28.23%
Natural Gas/Propane	\$ 4,692,900	\$ 1,297,038	27.64%
Electricity	\$ 5,034,100	\$ 2,083,012	41.38%
EDS Repair & Improvement	\$ 176,500	\$ 63,339	35.89%
EDS Surcharge	\$ 70,600	\$ -	0.00%
<b>Sub-total Operations</b>	<b>\$ 15,641,100</b>	<b>\$ 6,018,610</b>	<b>38.48%</b>
2002 Bonds	\$ 4,362,900	\$ 2,181,405	50.00%
2005 Bonds	\$ 627,600	\$ 168,794	26.90%
FY07 Projects	\$ 227,800	\$ 112,075	49.20%
FY08 Projects	\$ 220,500	\$ 112,075	50.83%
Debt Service Interest Revenue	\$ (123,700)	\$ (7,835)	6.33%
Oper. Reserve Funding Deposit	\$ -	\$ -	n.a.
<b>Sub-total Debt Service</b>	<b>\$ 5,315,100</b>	<b>\$ 2,566,514</b>	<b>48.29%</b>
<b>Total Expenses</b>	<b>\$ 20,956,200</b>	<b>\$ 8,585,124</b>	<b>40.97%</b>
<b>Customer Revenues</b>	<b>\$ 18,512,100</b>	<b>\$ 7,405,726</b>	<b>40.00%</b>
<b>Total Metro Funding Amount</b>	<b>\$ 2,444,100</b>	<b>\$ 1,179,398</b>	<b>48.25%</b>



## *6. FY2009-2010 Budget Status Review*

	Spent to End of FY09	FY10 Spending	Balance to Date (01/25/10)
R&I Projects	\$764,130	\$63,718	\$518,768
2005B Bond	\$7,920,090	\$14,126	\$252,284
2007 Bond	\$2,620,771	\$0	\$237,729
2008 Bond	\$1,846,622	\$1,031,878	\$0
2010 Bond	\$0	\$18,371	\$2,391,629
Total	\$10,530,842	\$1,128,093	\$3,400,410



## *7. Capital Projects Review*

### *Active Capital Projects*

- DES 060: MH Insulation - in construction/ongoing
- DES 062: Replacement of Steam and Condensate Service to 120 2<sup>nd</sup> Ave. North (Wildhorse Saloon) - in construction
- DES 063: Manhole A, B & M Sump Pump Installation - on standby
- DES 066: 1<sup>st</sup> Avenue Manhole & Steam Line Removal from Service -in construction
- DES 073: MH-18 Condensate and Platform Modification - in design
- DES 076: MH-S4A State Manhole Rebuild -in design
- DES 077: Expansion of Service to the Music City Convention Center - in design



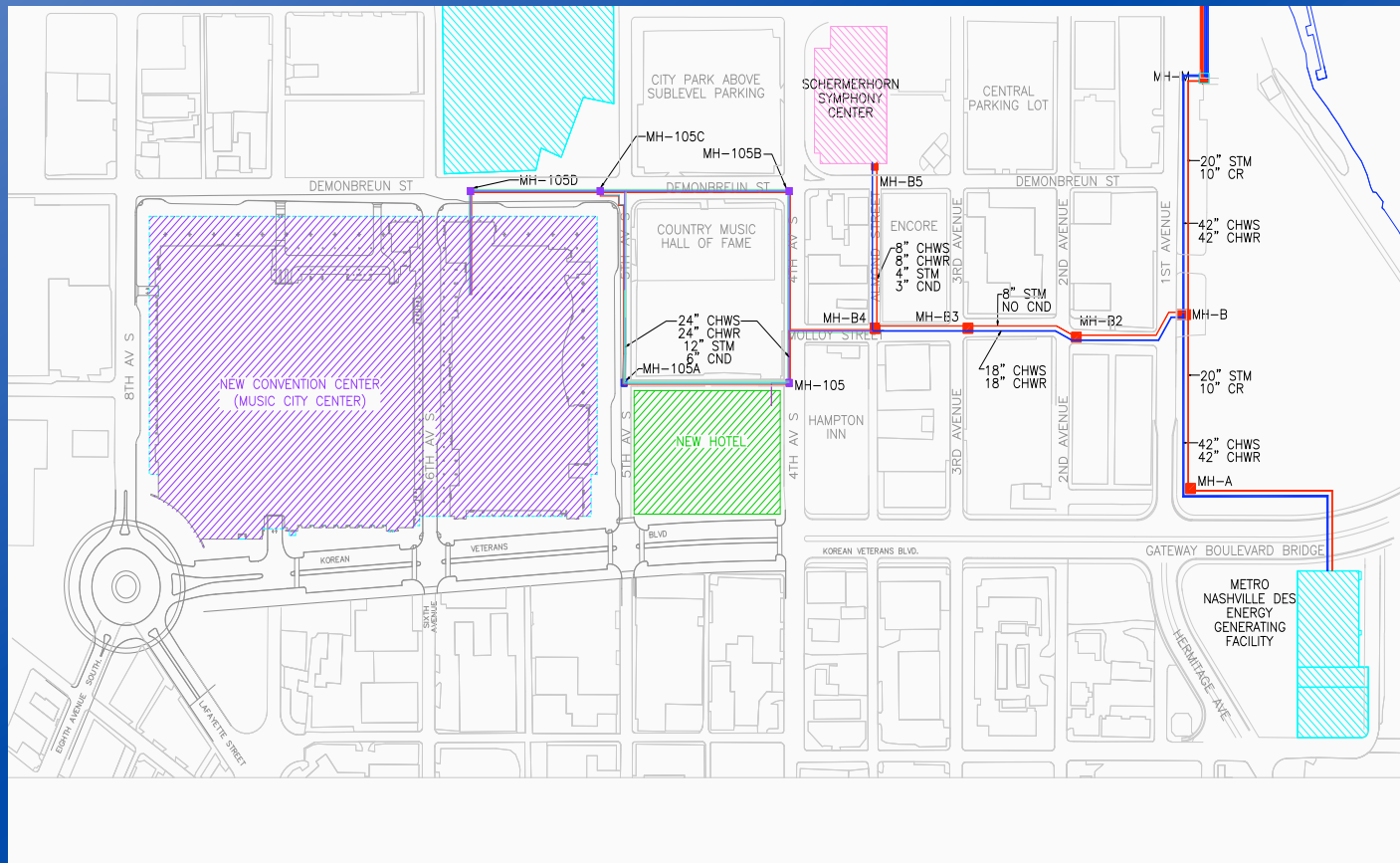
## *FY 2010 Proposed Projects*

- DES 048: Tunnel Lighting Replacement Phase III
- DES 059: CJC Steam & Condensate Line Replacement – in design
- DES 060: MH Insulation – in construction/ongoing
- DES 061: Manhole & Tunnel Steel Corrosion Repair & Prevention
- DES 062: Wildhorse Stm & Cnd Line Replacement – in construction
- DES 063: Sump Pump Installation in MH A, B & M – on standby
- DES 066: 1<sup>st</sup> Avenue Steam Line & Manhole Removal from Service - in construction
- DES 067: Tunnel Rock Repair – in design
- DES 068: St Mary's Condensate Tempering/MH 10 Repair – in design
- DES 069: Municipal Auditorium Condensate Tempering
- DES 070: MH 6 to 23 Condensate Line Replacement – in design
- DES 071: Hermitage Hotel Service Modifications – in design
- DES 072: Sheraton Hotel Steam and Condensate Replacement



# Metro Nashville DISTRICT ENERGY SYSTEM

## *Music City Center & New Hotel DES Location*





## *Proposed Music City Center & New Hotel*

- Music City Center
  - 4,000 tons
  - 35,000 pph
- New Hotel
  - 1,900 tons
  - 23,400 pph
- Est \$1,500,000 (~55% ) Reduction in MFA
- No Impact on Existing Customers
- New Load Approaches EGF Capacity Limit





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*8. Liaison Transition of Duties*

*9. Adjourn*