

Metro Nashville
DISTRICT ENERGY SYSTEM



DES Advisory Board Meeting
Fourth Quarter FY11
August 18, 2011



Agenda

1. Call to Order
2. Review & Approval of Previous Meeting Minutes
3. Customer Sales
4. Review of DES Contractor Performance
5. Natural Gas Purchasing Status
6. FY11 Costs to Date
7. FY12 Budget Status Report
8. Capital Projects Review & Status Report Update
9. MCCC Expansion Update
10. Other Board Member Items
11. Adjourn



1. Call to Order

*2. Review and Approval of
Previous Meeting Minutes*



3. *Customer Sales*

- Table 3: Customer Cost Comparison
- Figure 3A: CHW Sales Comparison
- Figure 3B: Steam Sales Comparison



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

		Steam - Rolling 12 Month			Chilled Water - Rolling 12 Month		
		July 2009 - June 2010	July 2010 - June 2011	% Diff.	July 2009 - June 2010	July 2010 - June 2011	% Diff.
Private	Cost	\$ 1,677,190	\$ 1,652,024	-1.50%	\$ 3,511,319	\$ 3,765,380	7.24%
	Usage (lbs or tonhrs)	79,286,373	76,325,625	-3.73%	17,275,353	19,869,892	15.02%
	Unit Cost	\$ 21.15	\$ 21.64	2.3%	\$ 0.203	\$ 0.190	-6.8%
State	Cost	\$ 2,271,242	\$ 2,078,963	-8.47%	\$ 3,256,686	\$ 3,314,694	1.78%
	Usage (lbs or tonhrs)	104,151,697	91,081,361	-12.55%	16,751,676	17,266,764	3.07%
	Unit Cost	\$ 21.81	\$ 22.83	4.7%	\$ 0.194	\$ 0.192	-1.3%
Metro	Cost	\$ 1,958,584	\$ 1,887,371	-3.64%	\$ 2,985,716	\$ 3,123,068	4.60%
	Usage (lbs or tonhrs)	89,009,560	87,409,393	-1.80%	17,245,590	18,981,595	10.07%
	Unit Cost	\$ 22.00	\$ 21.59	-1.9%	\$ 0.173	\$ 0.165	-5.0%
Aggregate	Cost	\$ 5,907,016	\$ 5,618,358	-4.89%	\$ 9,753,721	\$ 10,203,142	4.61%
	Usage (lbs or tonhrs)	272,447,630	254,816,379	-6.47%	51,272,619	56,118,251	9.45%
	Unit Cost	\$ 21.68	\$ 22.05	1.7%	\$ 0.190	\$ 0.182	-4.42%

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



Figure 3A: CHW Sales Comparison

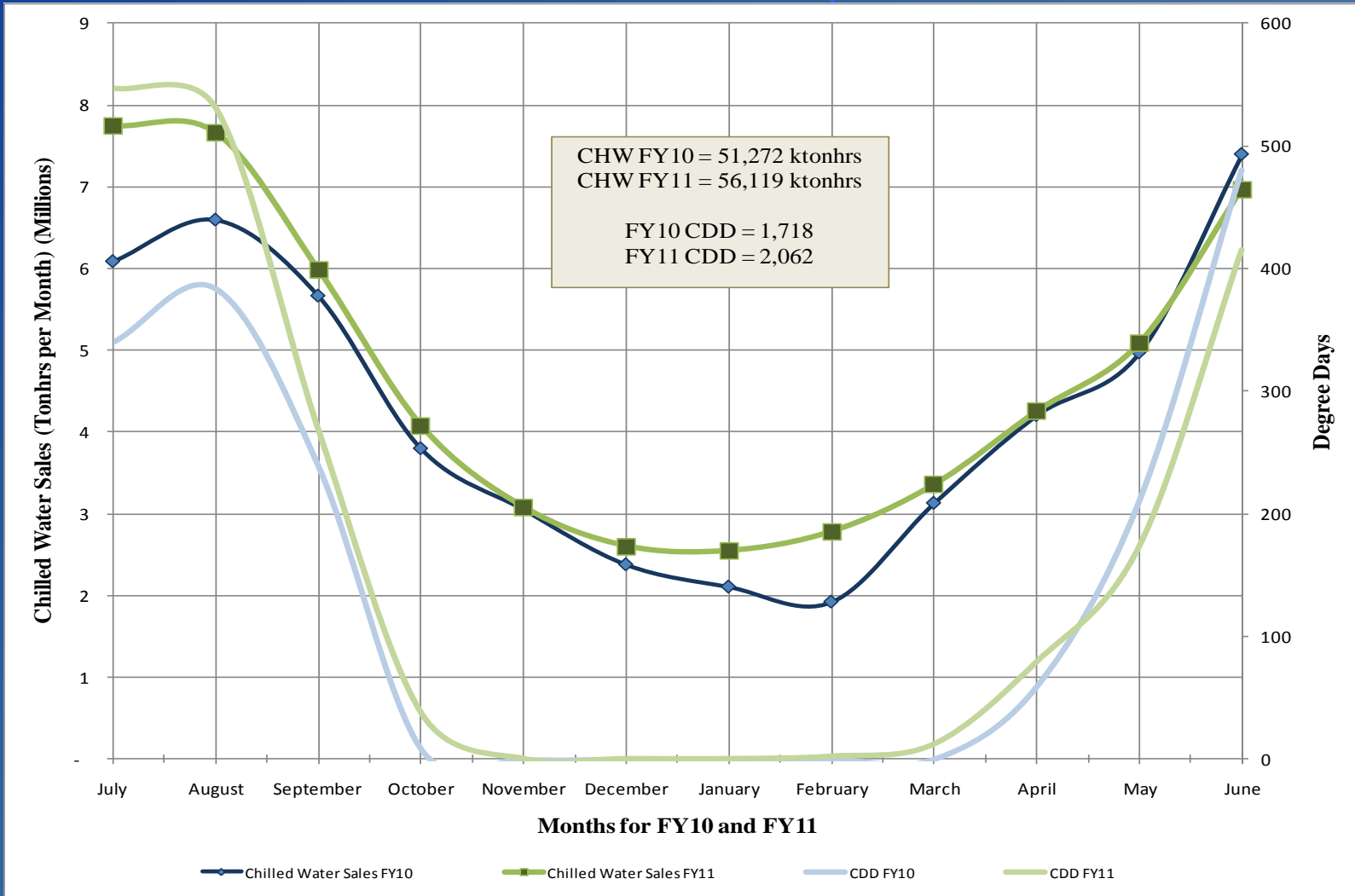
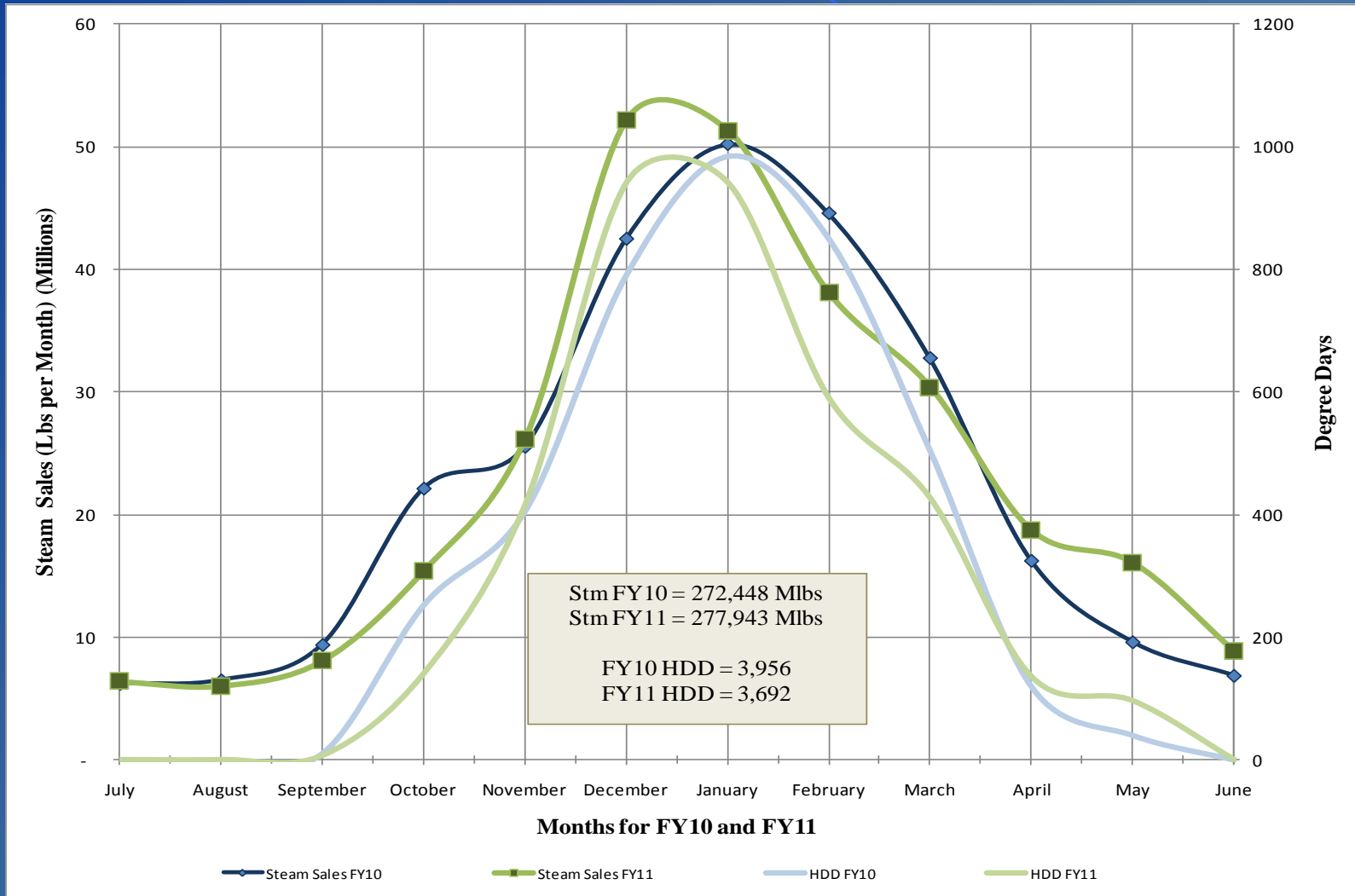







Figure 3B: Steam Sales Comparison





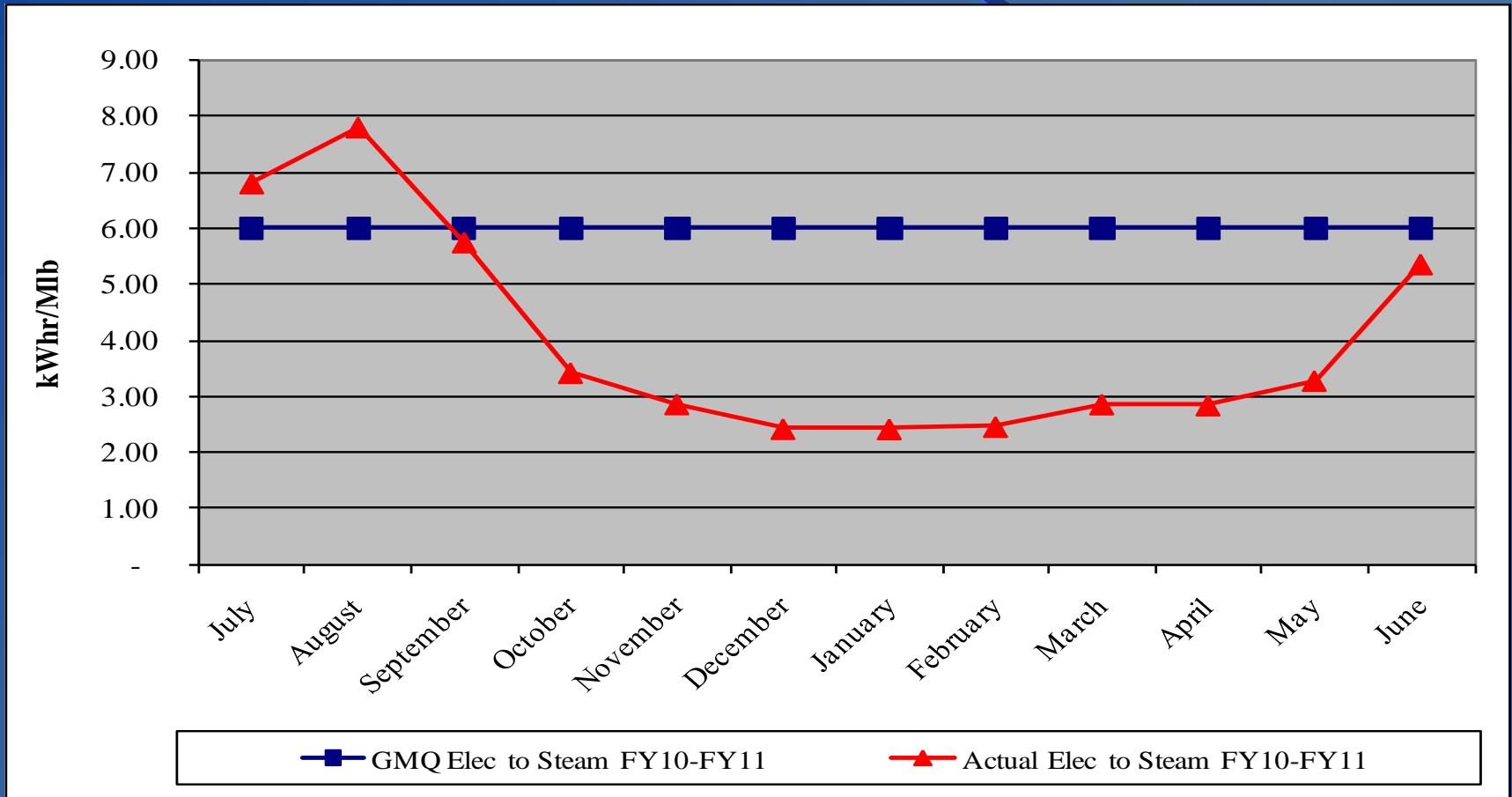
4. *Review of DES Contractor Performance*

Contractor (CEPS) 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

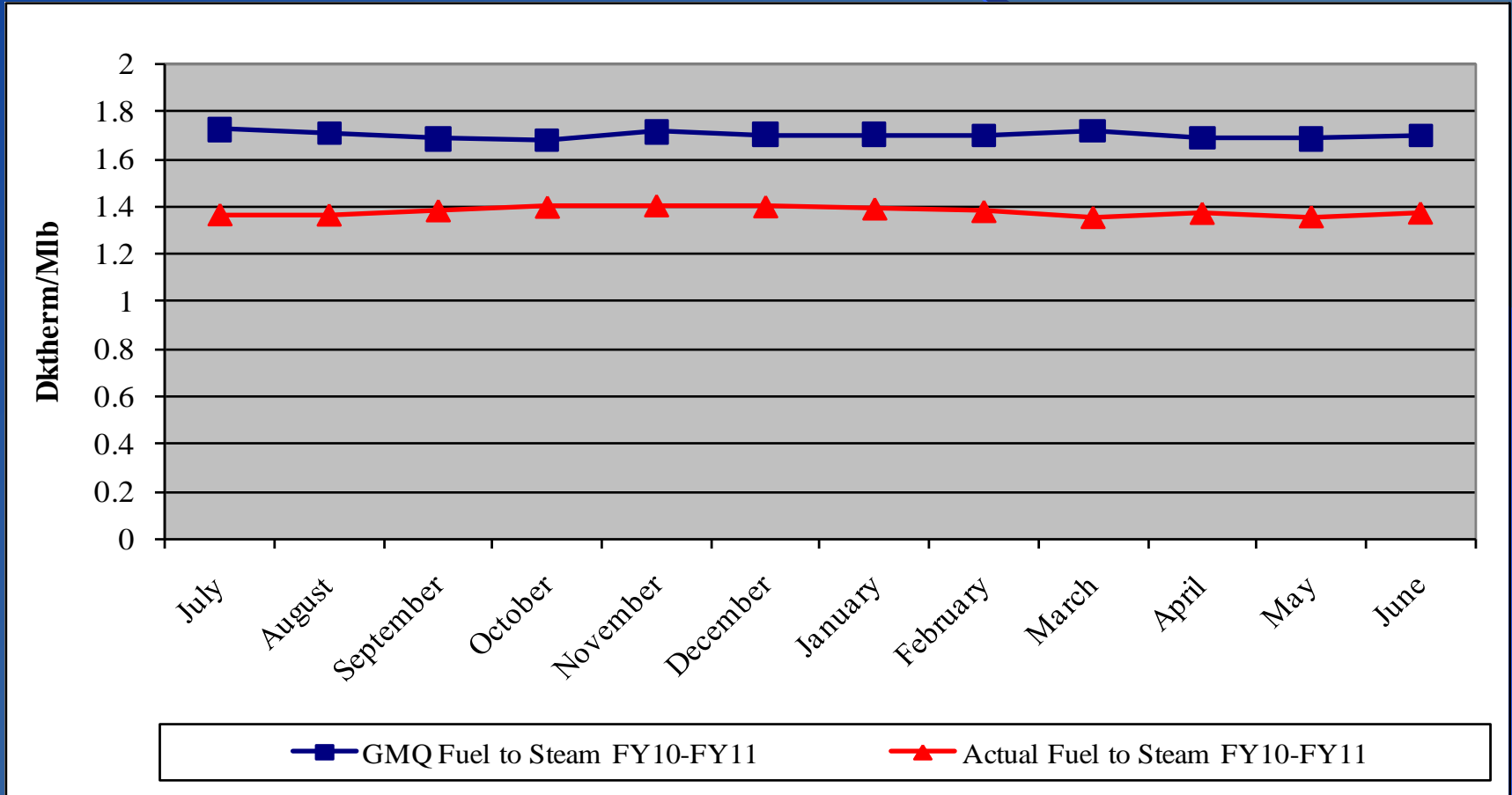


Performance Measurement FY11: Steam Electric Conversion



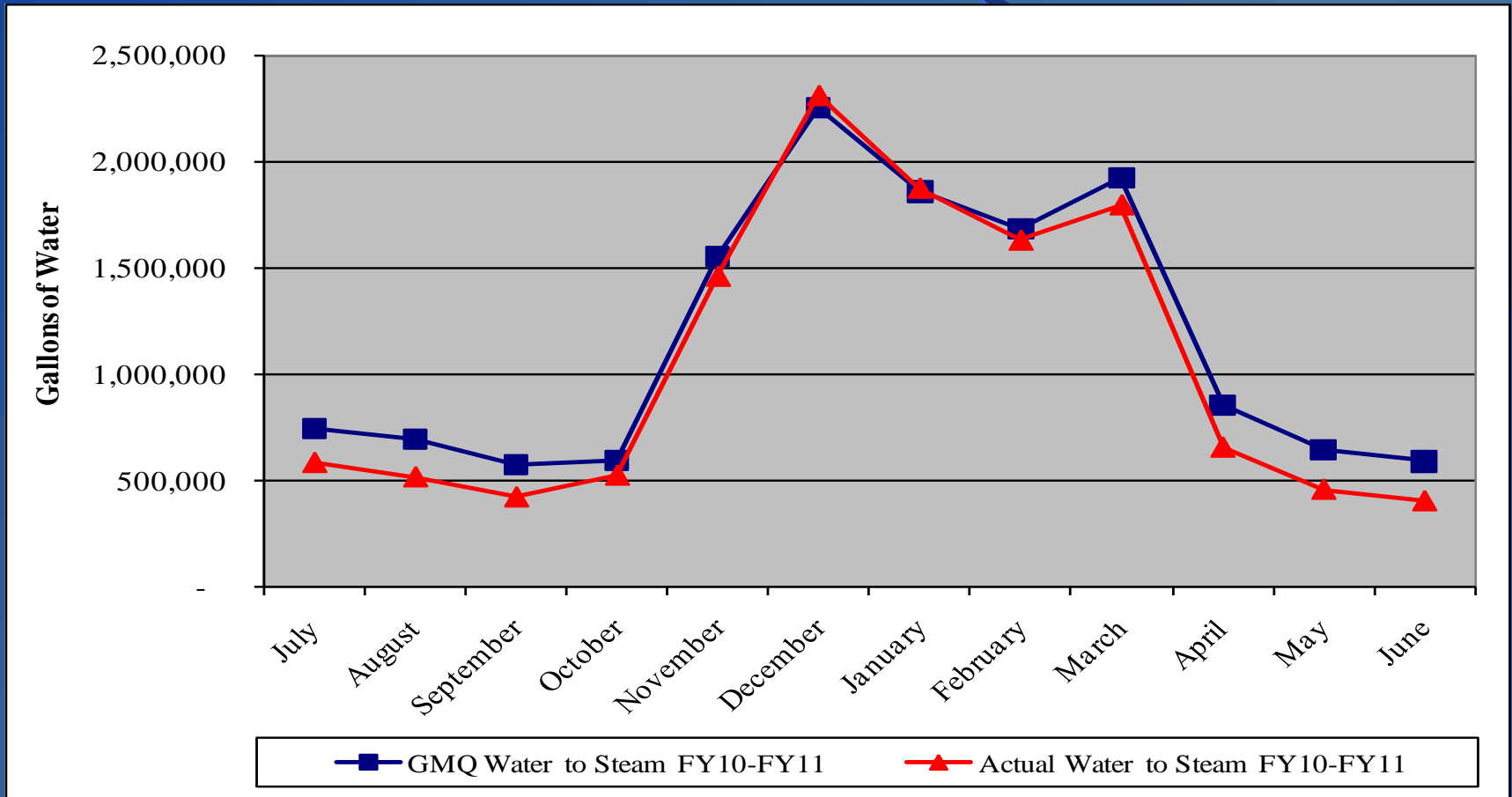


Performance Measurement FY11: Steam Plant Efficiency



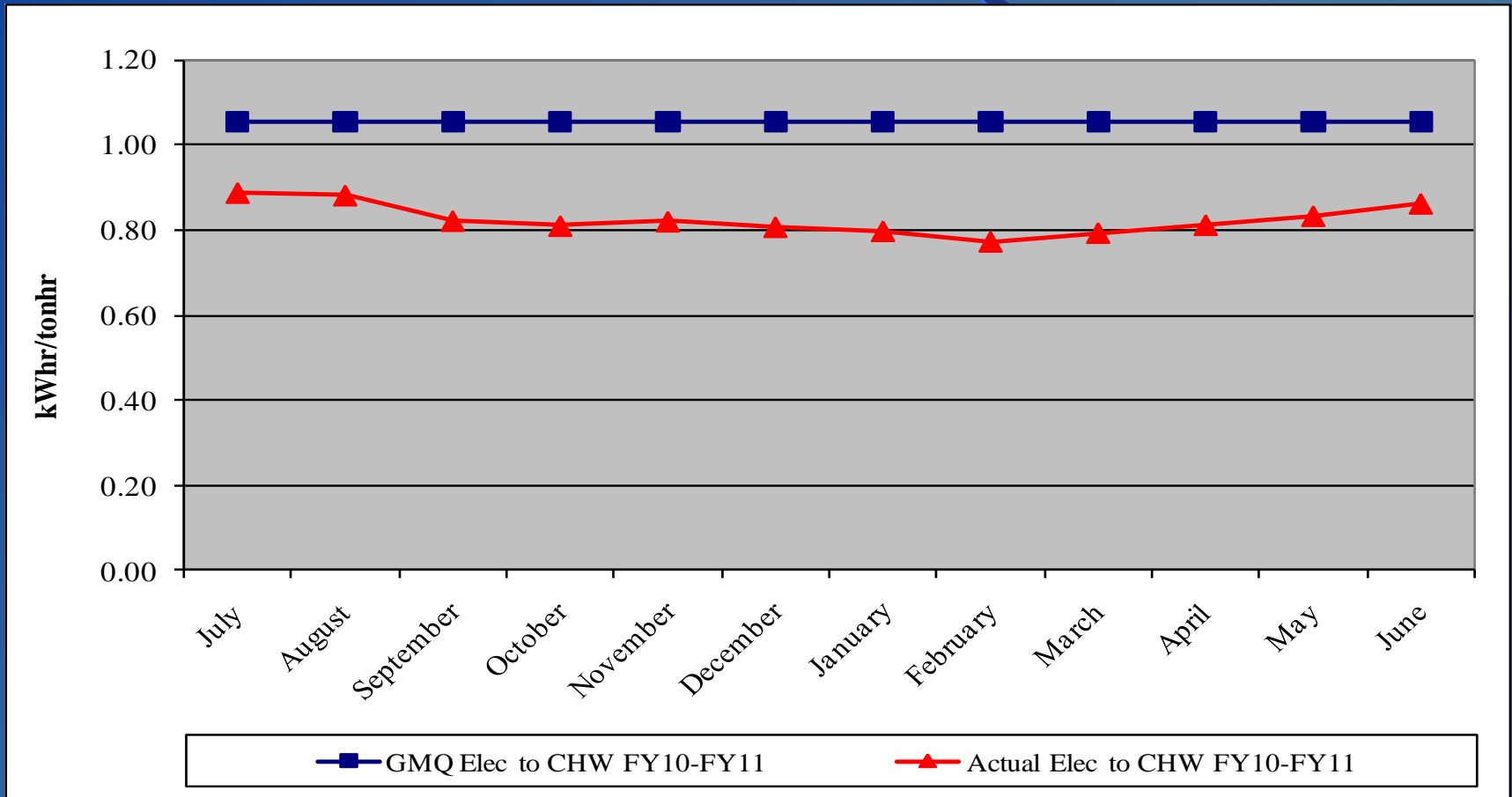


Performance Measurement FY11: Steam Water Conversion





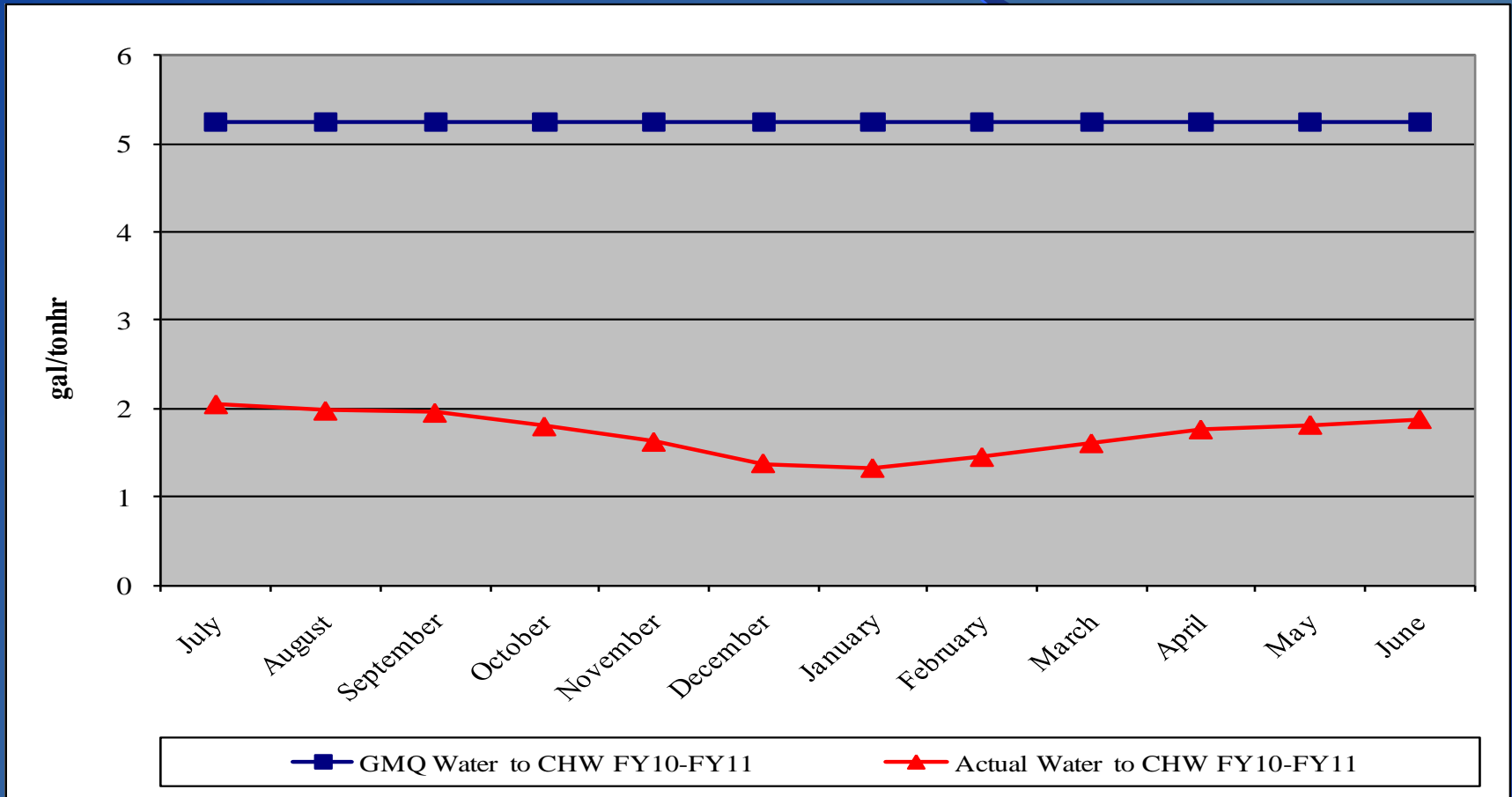
Performance Measurement FY11: CHW Electric Conversion





Performance Measurement FY11: CHW

Water Conversion





Water Treatment

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



EGF Walkthrough

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



EDS Walkthrough

- Vault/Tunnel Housekeeping ●
- Maintenance Items
 - Insulation Repair/Replacement ●
 - Water Infiltration (City Water Leak) ●
 - Corrosion of Structural Metal Components ●
- Safety Items ● (DES 080 bidding 1st Qtr FY12)



5. *Natural Gas Purchasing*

- Natural Gas Purchasing Review
 - Table 5: FY11 Gas Spending & Budget Comparison
 - Figure 5: Actual and Projected Gas Cost Comparison for FY11



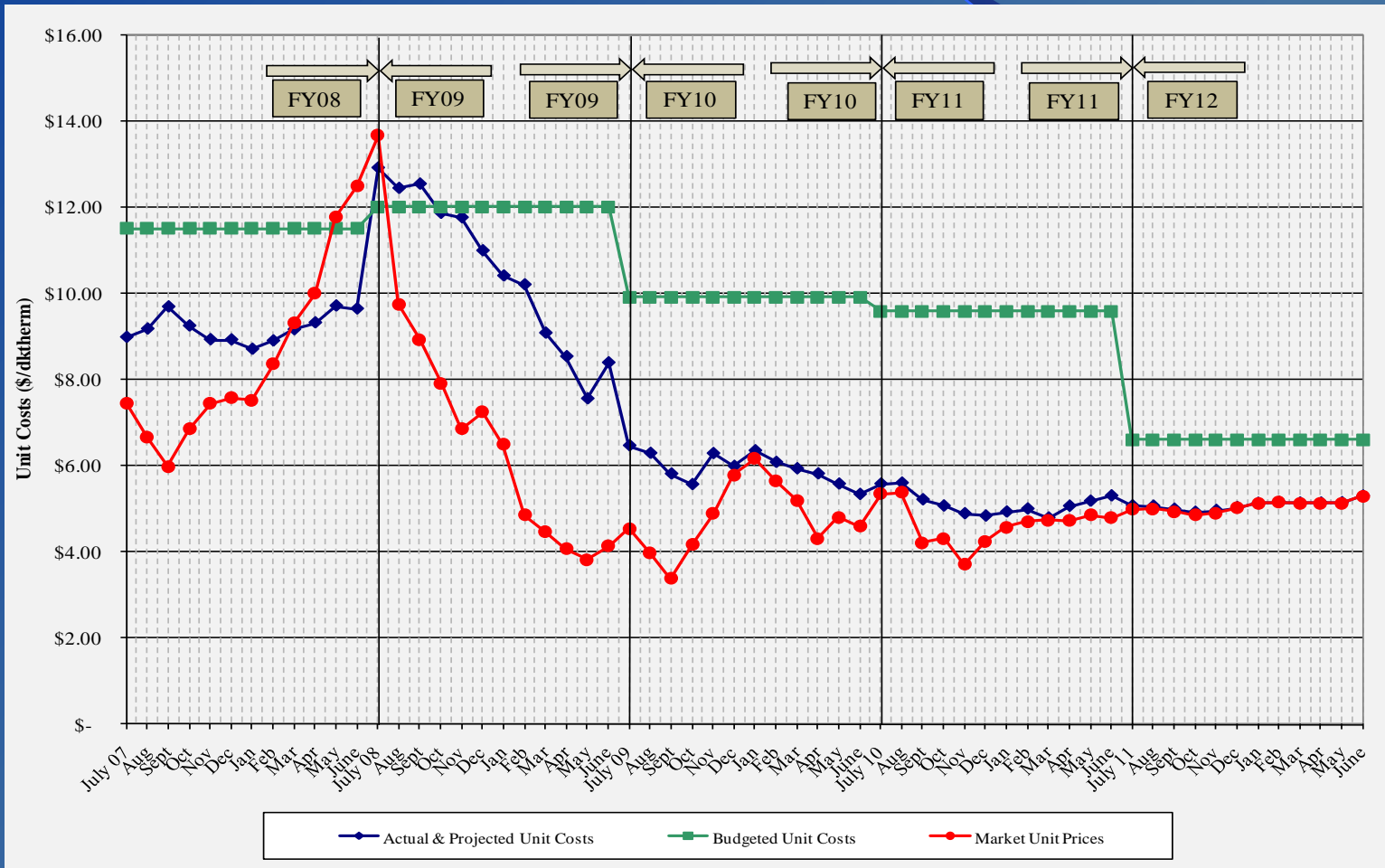
Table 5: FY11 Gas Spending & Budget Comparison

	Actual FY11 To date (July 31)	Budget FY11	Percent Difference
Steam Sendout (Mlbs)	334,106	328,679	1.7%
Fuel Use (Dth) (includes propane)	● 460,277	463,237	-0.6%
Plant Eff (Dth/Mlb)	● 1.378	1.409	-2.2%
Total Gas Cost (includes propane)	● \$2,496,141	\$4,224,026	-40.9%
Unit Cost of Fuel (\$/Dth)	● \$5.423	\$9.118	-40.5%

Excludes consultant fees and FEA



Figure 5. Actual and Projected Gas Cost Comparison History





6. FY11 Costs to Date

Item	FY11 Budget	FY11 Actual to 07/31/11	Percent of Budget
FOC's	\$ 4,151,100	\$ 3,955,888	95.30%
Pass Throughs			
Non-Energy	\$ 966,600	\$ 1,277,127	132.13%
Water/Sewer	\$ 574,000	\$ 396,869	69.14%
Natural Gas/Propane	\$ 4,445,500	\$ 2,496,141	56.15%
Electricity	\$ 4,949,700	\$ 4,310,054	87.08%
Debt Service	\$ 5,215,900	\$ 5,069,742	97.20%
Total Expenses	\$ 20,302,800	\$ 17,505,822	86.22%
Total Revenues	\$ 17,858,700	\$ 15,395,261	86.21%
Metro Funding Amount	\$ 2,444,100	\$ 2,110,560	86.35%



7. FY12 Budget Status Report

Item	FY10 Actual	FY11 Budget	FY12 Budget w/MCCC	Percent Change FY12 to FY11 Budget
FOC's	\$ 4,151,100	\$ 4,151,100	\$ 4,303,100	3.53%
Pass Throughs				
Non-Energy	\$ 798,699	\$ 966,600	\$ 1,031,400	6.28%
Water/Sewer	\$ 414,307	\$ 574,000	\$ 597,700	3.97%
Natural Gas	\$ 3,152,310	\$ 4,445,500	\$ 3,939,300	-12.85%
Electricity	\$ 4,041,188	\$ 4,949,700	\$ 5,192,900	4.68%
Debt Service	\$ 5,326,665	\$ 5,215,900	\$ 5,703,700	8.55%
Total Expenses	\$ 17,884,269	\$ 20,302,800	\$ 20,768,100	2.24%
Total Revenues	\$ 15,222,716	\$ 17,858,700	\$ 18,405,100	2.97%
Metro Funding Amount	\$ 2,661,552	\$ 2,444,100	\$ 2,363,000	-3.43%



FY12 Budget Status Report (B)

Item	FY11 Budget	FY12 Budget w/MCCC	FY12 Budget wo/MCCC	Percent Change FY12 to FY11 Budget
FOC's	\$ 4,151,100	\$ 4,303,100	\$ 4,275,600	2.91%
Pass Throughs				
Non-Energy	\$ 966,600	\$ 1,031,400	\$ 1,006,800	3.99%
Water/Sewer	\$ 574,000	\$ 597,700	\$ 530,000	-8.30%
Natural Gas	\$ 4,445,500	\$ 3,939,300	\$ 3,336,500	-33.24%
Electricity	\$ 4,949,700	\$ 5,192,900	\$ 4,546,800	-8.86%
Debt Service	\$ 5,215,900	\$ 5,703,700	\$ 5,021,600	-3.87%
Total Expenses	\$ 20,302,800	\$ 20,768,100	\$ 18,717,300	-8.47%
Total Revenues	\$ 17,858,700	\$ 18,405,100	\$ 16,513,000	-8.15%
Metro Funding Amount	\$ 2,444,100	\$ 2,363,000	\$ 2,204,300	-10.88%



New NES Time of Use (TOU) Rates

	Summer			Winter			Transition		
	June 2010	June 2011		December 2010	December 2011		May 2011	May 2012	
		Peak	Off Peak		Peak	Off Peak		Peak	Off Peak
Energy (\$/kWhr)	\$ 0.0434	\$ 0.0913	\$ 0.0579	\$ 0.0577	\$ 0.0621	\$ 0.0570	\$ 0.0400	\$ 0.0585	\$ 0.0577
Demand (\$/kW)	\$ 15.57	\$ 16.17	\$ 4.09	\$ 17.48	\$ 9.28	\$ 4.09	\$ 15.57	\$ 4.09	\$ 4.09
Aggregate (\$/kWhr)	\$ 0.0792	\$ 0.2546	\$ 0.0612	\$ 0.1010	\$ 0.2868	\$ 0.0570	\$ 0.0841	\$ 0.1012	\$ 0.0577
Aggregate (\$/kWhr)	\$ 0.0792	\$ 0.1045		\$ 0.1010	\$ 0.0955		\$ 0.0841	\$ 0.0686	



8. Capital Expenditure Update

	Spent to End of FY10	FY11 Spending	Balance to Date (07/29/11)
R&I Projects	\$976,742	\$335,588	\$404,936
2005B Bond	\$8,054,218	\$80,009	\$30,750
2010 Bond	\$412,384	\$888,379	\$1,109,237
MCCC Fund	\$102,062	\$3,739,167	\$4,658,771
Total	\$9,545,406	\$5,043,143	\$6,203,694



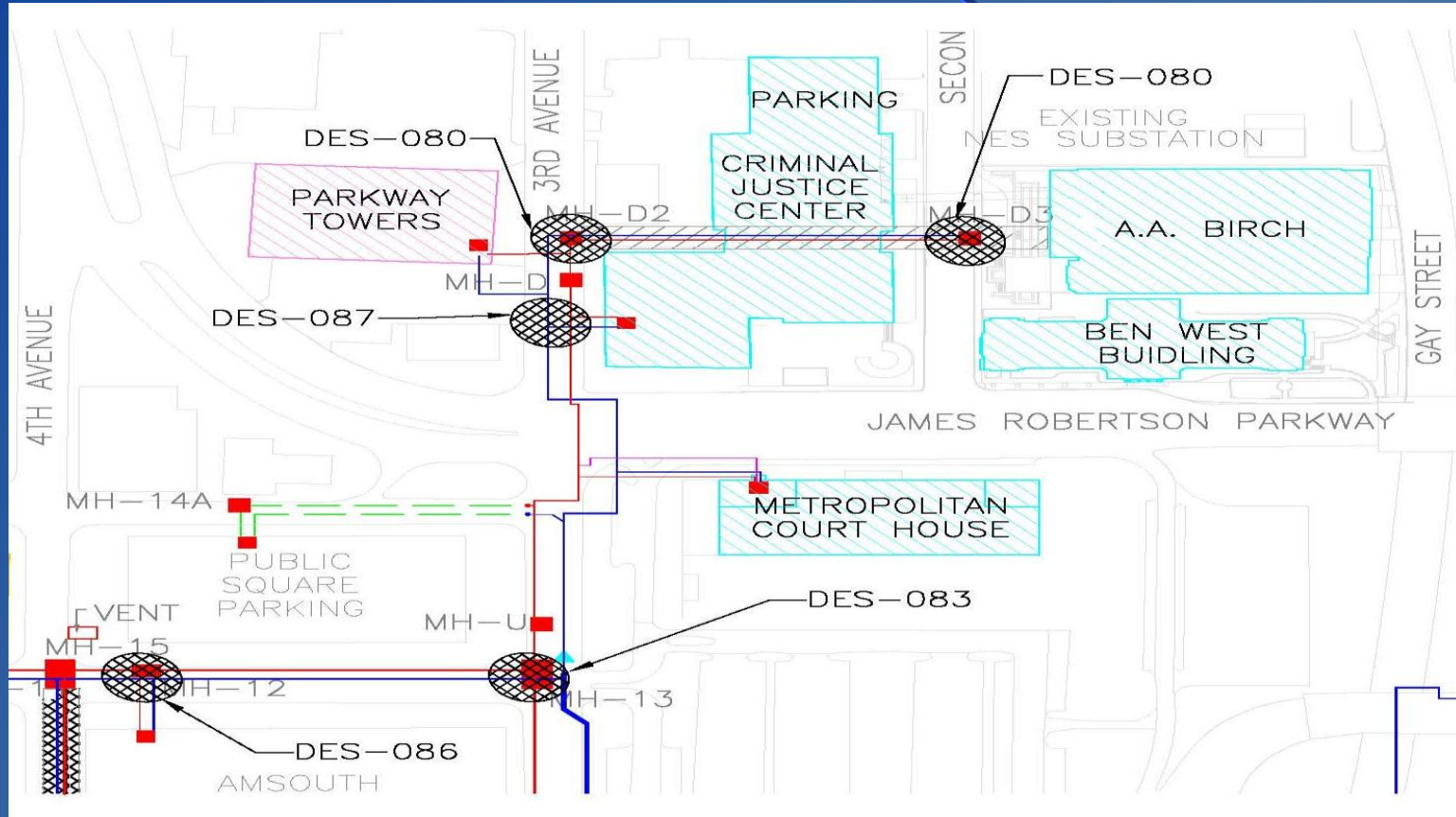
Capital Projects Review

Active Capital Projects

- DES 060: MH Insulation - in construction/ongoing
- DES 061: MH & Tunnel Steel Corrosion Repair & Prevention – in construction/ongoing
- DES 076: MH-S4A State Manhole Rebuild – in bid phase
- DES 080: Misc. MH & Tunnel Safety Repairs – in design; to be bid 1st Qtr FY12
- DES 081: Flood Related Repairs – in construction (tunnel electrical)
- DES 083: MH-13 Leak Repair – in construction (punchlist items)
- DES 087: Exploratory Excavation at MH D; CHW Leak – in bid phase
- DES 088: Andrew Jackson PRV Control – in bid phase
- DES 092: Sheraton Hotel CHW Pumps – in bid phase

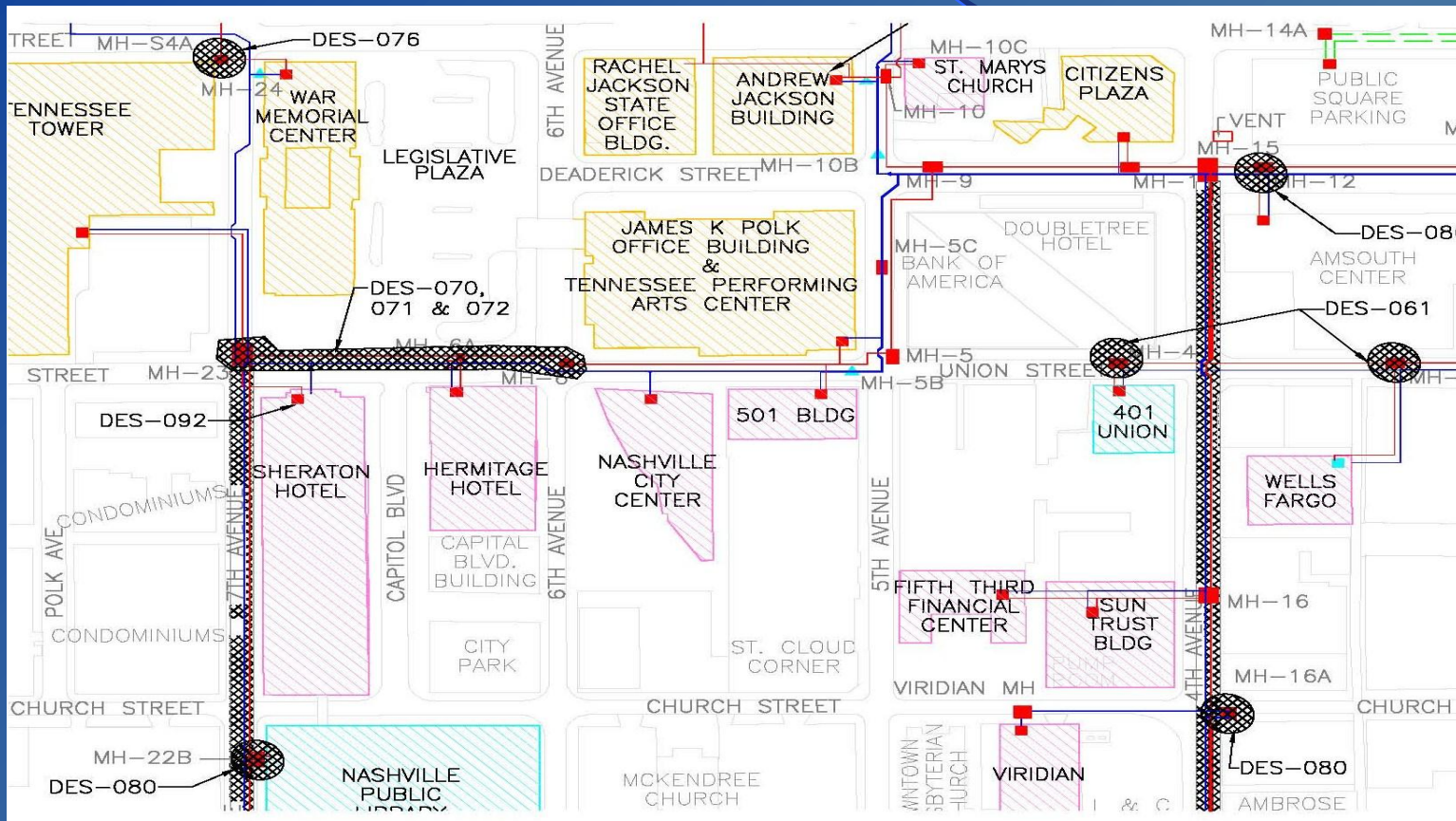


Active Capital Projects



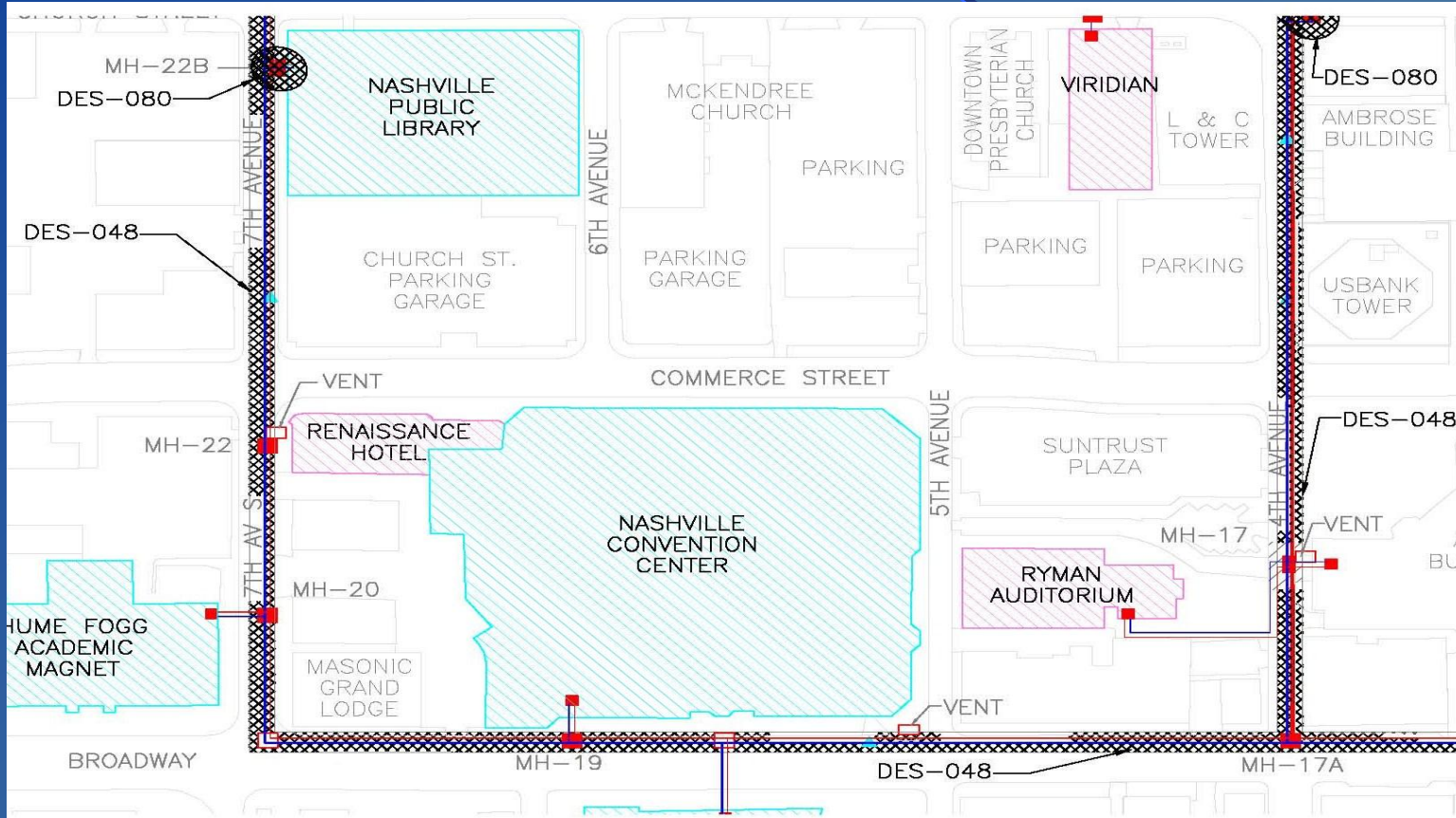


Active Capital Projects



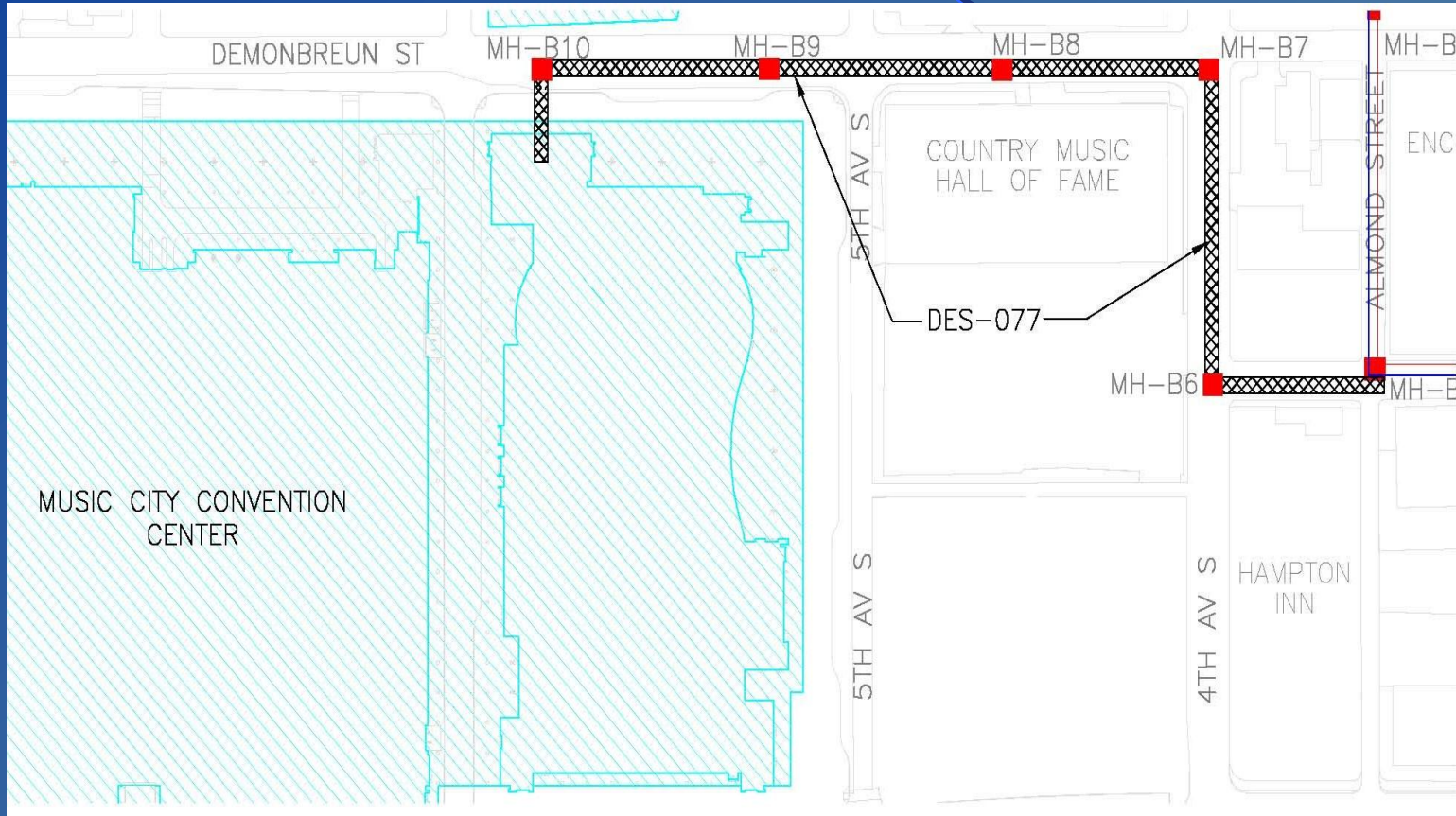


Active Capital Projects





Active Capital Projects





Capital Projects Review

Capital Projects in Close-out

- DES 059: CJC Condensate Service Line Repair – closed
- DES 063: Manhole A, B & M Sump Pump Installation – closed
- DES 066: 1st Avenue Manhole & Steam Line Removal from Service – closed
- DES 067: Tunnel Rock Rehabilitation.: Broadway, 7th & 4th Ave. – in closeout
- DES 073: MH-18 Platform Modification – closed
- DES 077: Expansion of Service to the Music City Convention Center; anticipate completion during 1st Qtr FY12
- DES 082: Andrew Jackson Steam Isolation Valve Replacement – closed
- DES 086: Manhole 12 Roof Replacement – in closeout



Capital Projects Review

FY12 Future Projects

- DES 048: Tunnel Lighting Replacement Phase III
- DES 070: MH 6 to 23 Condensate Line Replacement
- DES 071: Hermitage Hotel Service Modifications
- DES 072: Sheraton Hotel Steam and Condensate Replacement
- DES 088: State Tunnel Air Compressor and PRV Control
- DES 092: Sheraton Hotel Chilled Water Pump Modification



9. *Music City Convention Center Expansion Update*

- Major Construction Completed
- Tie-in & Symphony Shut-down Successful
- In-building Piping at Metering Station
- Cooling Tower Testing
- EGF CHW Pumps
- Informed Steam Not Required FY12
- CHW Service Required April 2012



Temporary Chillers at the Symphony





CHW Valves at MH-B4





Finishing Work on Molloy





Repaved Molloy St at MH-B4





10. Other Board Member Items

11. Adjourn

Advisory Board Meeting Schedule

- FY12 – 1st Quarter Meeting – November 16, 2011
- FY12 – 2nd Quarter Meeting – February 16, 2012
- FY12 – 3rd Quarter Meeting – May 17, 2012
- FY12 – 4th Quarter Meeting – August 16, 2012