

Metro Nashville
DISTRICT ENERGY SYSTEM



DES Advisory Board Meeting
First Quarter FY12
November 17, 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. FY12 Costs to Date
7. Capital Projects Review & Status Report Update
8. Thermal Storage & Time of Use Rates
9. MCCC Expansion Update
10. Potential New Customers
11. Other Board Member Items
12. 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

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

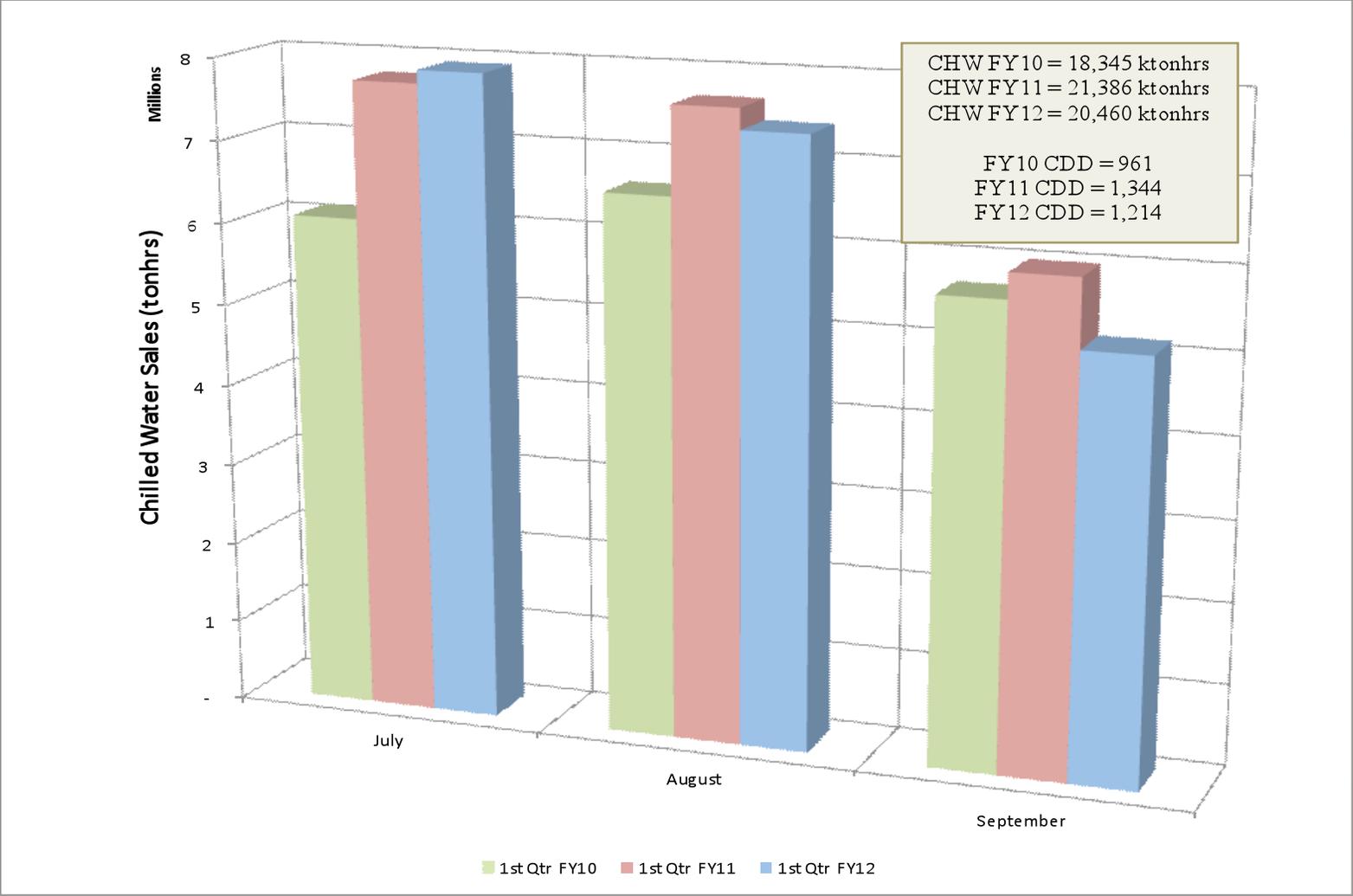
		Steam - Rolling 12 Month			Chilled Water - Rolling 12 Month		
		Oct 2009 - Sept 2010	Oct 2010 - Sept 2011	% Diff.	Oct 2009 - Sept 2010	Oct 2010 - Sept 2011	% Diff.
Private	Cost	\$ 1,638,529	\$ 1,611,911	-1.62%	\$ 3,145,699	\$ 3,318,769	5.50%
	Usage (lbs or tonhrs)	78,382,889	78,781,426	0.51%	16,575,558	17,099,377	3.16%
	Unit Cost	\$ 20.90	\$ 20.46	-2.1%	\$ 0.190	\$ 0.194	2.3%
State	Cost	\$ 2,287,456	\$ 2,074,244	-9.32%	\$ 3,364,105	\$ 3,426,692	1.86%
	Usage (lbs or tonhrs)	104,597,343	92,631,933	-11.44%	17,345,335	16,804,270	-3.12%
	Unit Cost	\$ 21.87	\$ 22.39	2.4%	\$ 0.194	\$ 0.204	5.1%
Metro	Cost	\$ 1,937,180	\$ 1,898,623	-1.99%	\$ 3,102,940	\$ 3,290,498	6.04%
	Usage (lbs or tonhrs)	87,881,675	89,651,041	2.01%	18,023,262	19,003,327	5.44%
	Unit Cost	\$ 22.04	\$ 21.18	-3.9%	\$ 0.172	\$ 0.173	0.6%
Aggregate	Cost	\$ 5,885,528	\$ 5,640,798	-4.16%	\$ 10,183,917	\$ 10,633,431	4.41%
	Usage (lbs or tonhrs)	270,874,991	261,111,548	-3.60%	54,314,339	55,191,768	1.62%
	Unit Cost	\$ 21.73	\$ 21.60	-0.6%	\$ 0.187	\$ 0.193	2.75%

*FY09 MFA = \$3,217,986; FY10 MFA = \$2,661,553; FY11 MFA = \$2,444,100; post-True-up; MFA not included in values shown

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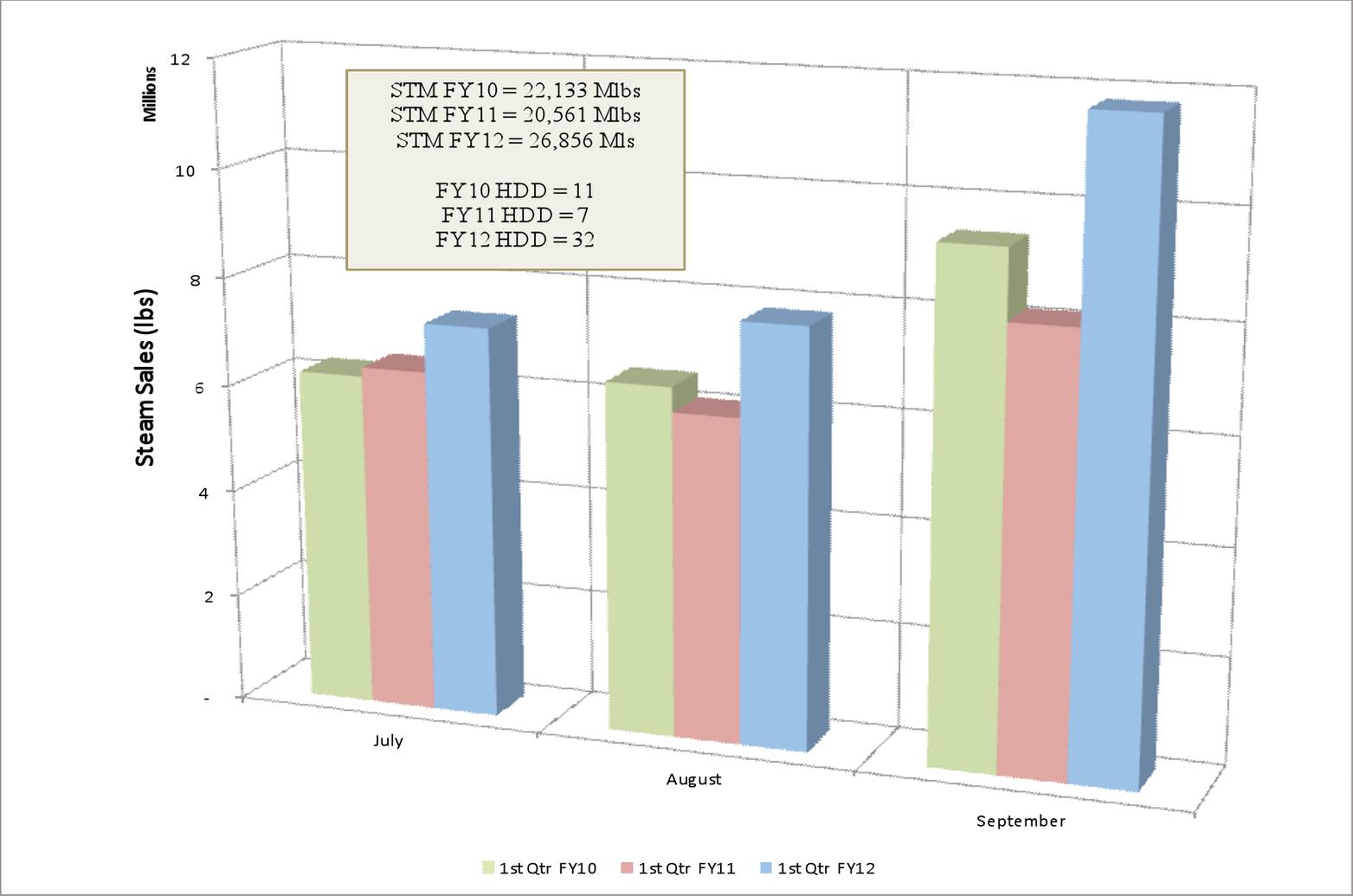
Figure 3A: CHW Sales Comparison



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Figure 3B: Steam Sales Comparison





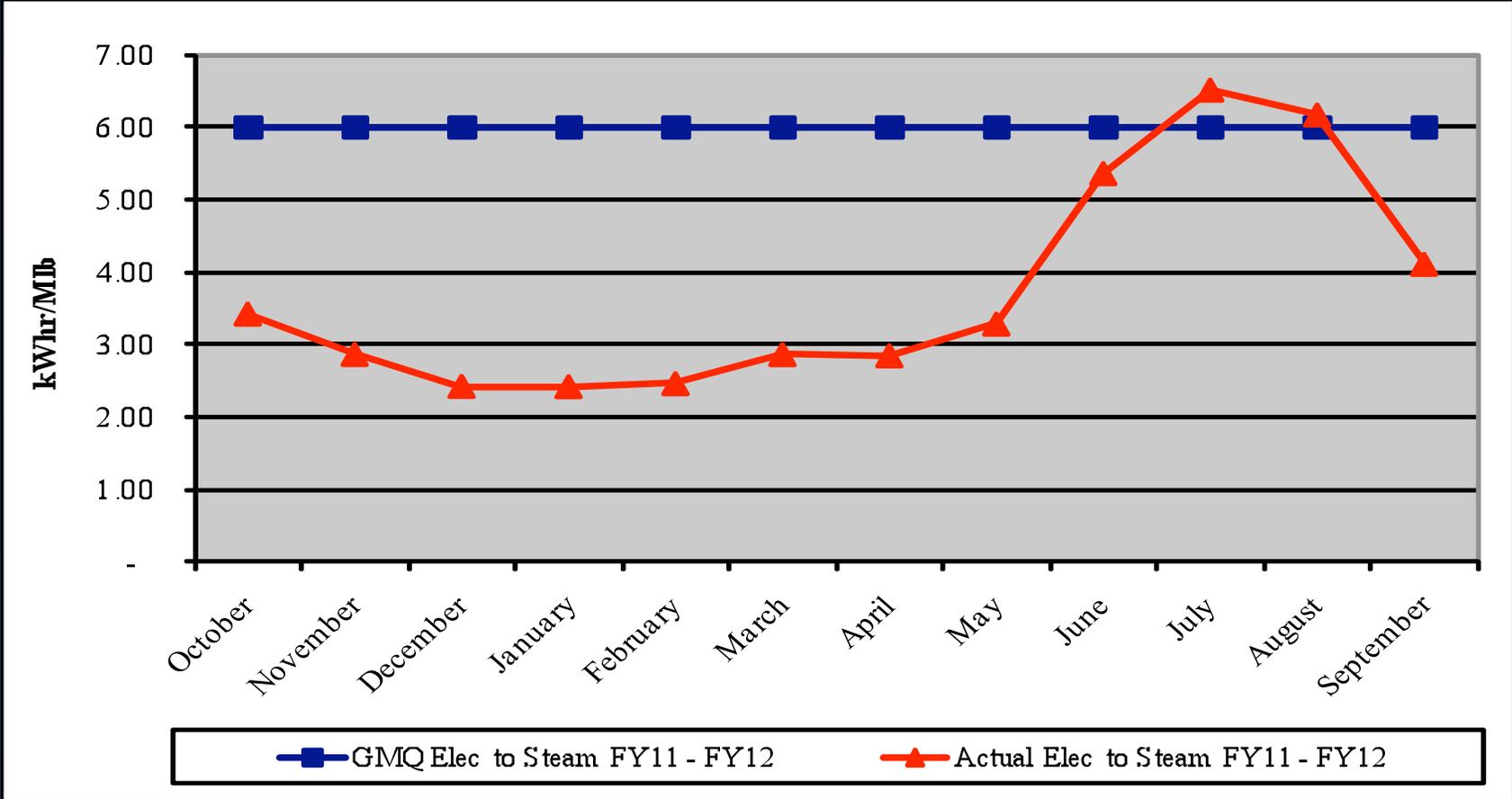
4. Review of DES Contractor Performance

Contractor (CEPS) is in compliance with their contractual obligations for FY12.

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

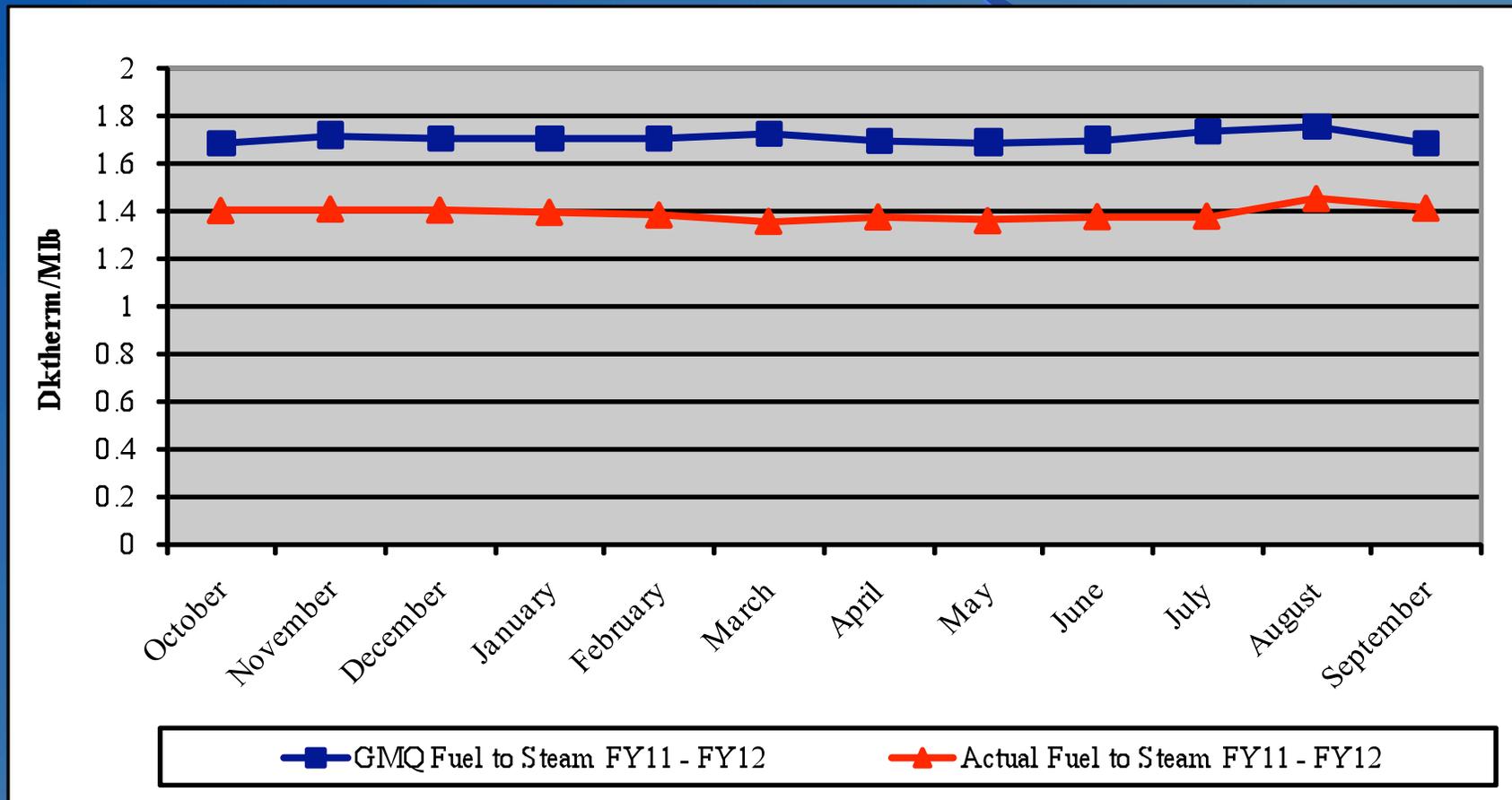


Performance Measurement FY12: Steam
Electric Conversion



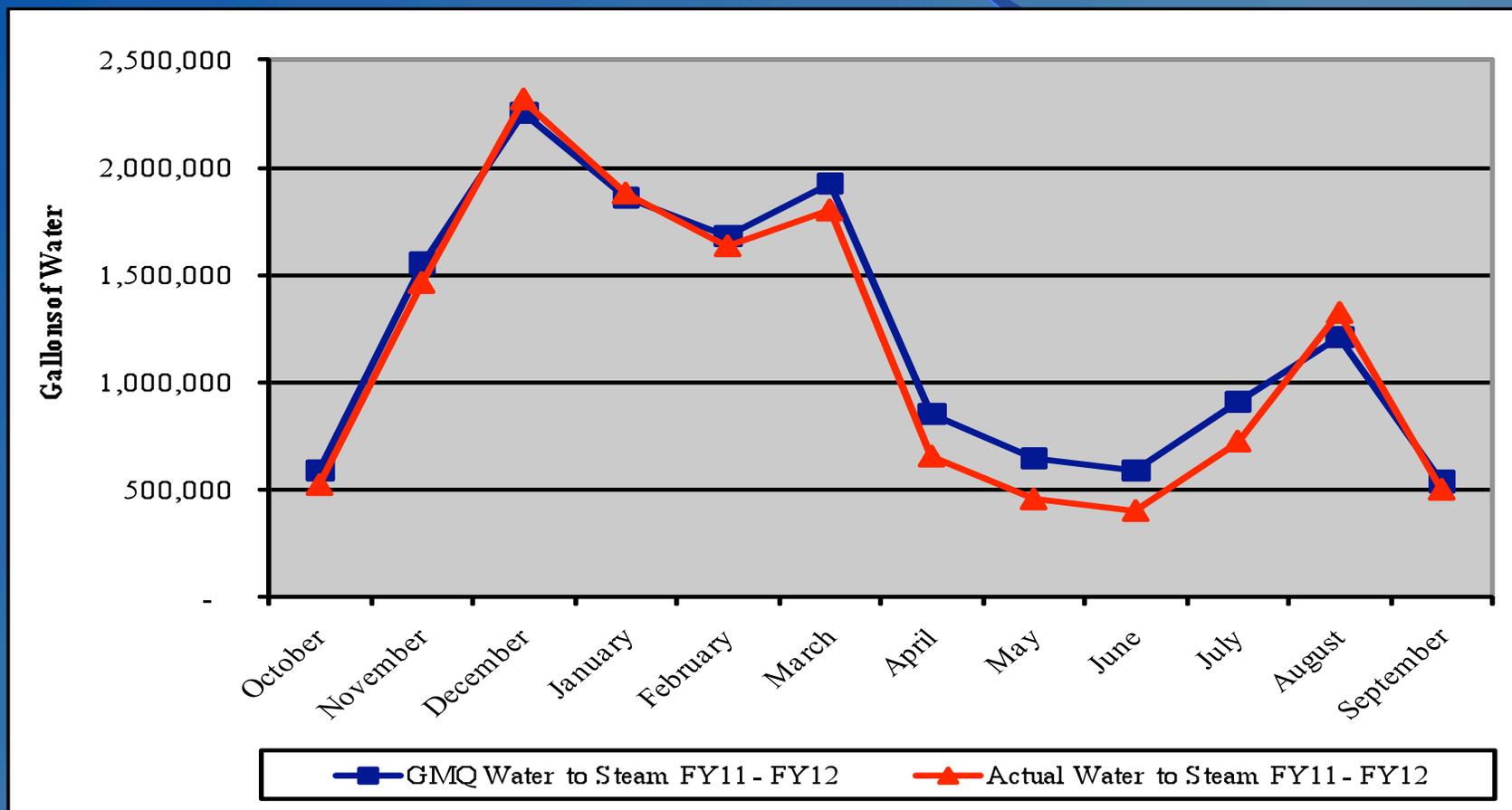


Performance Measurement FY12: Steam Plant Efficiency





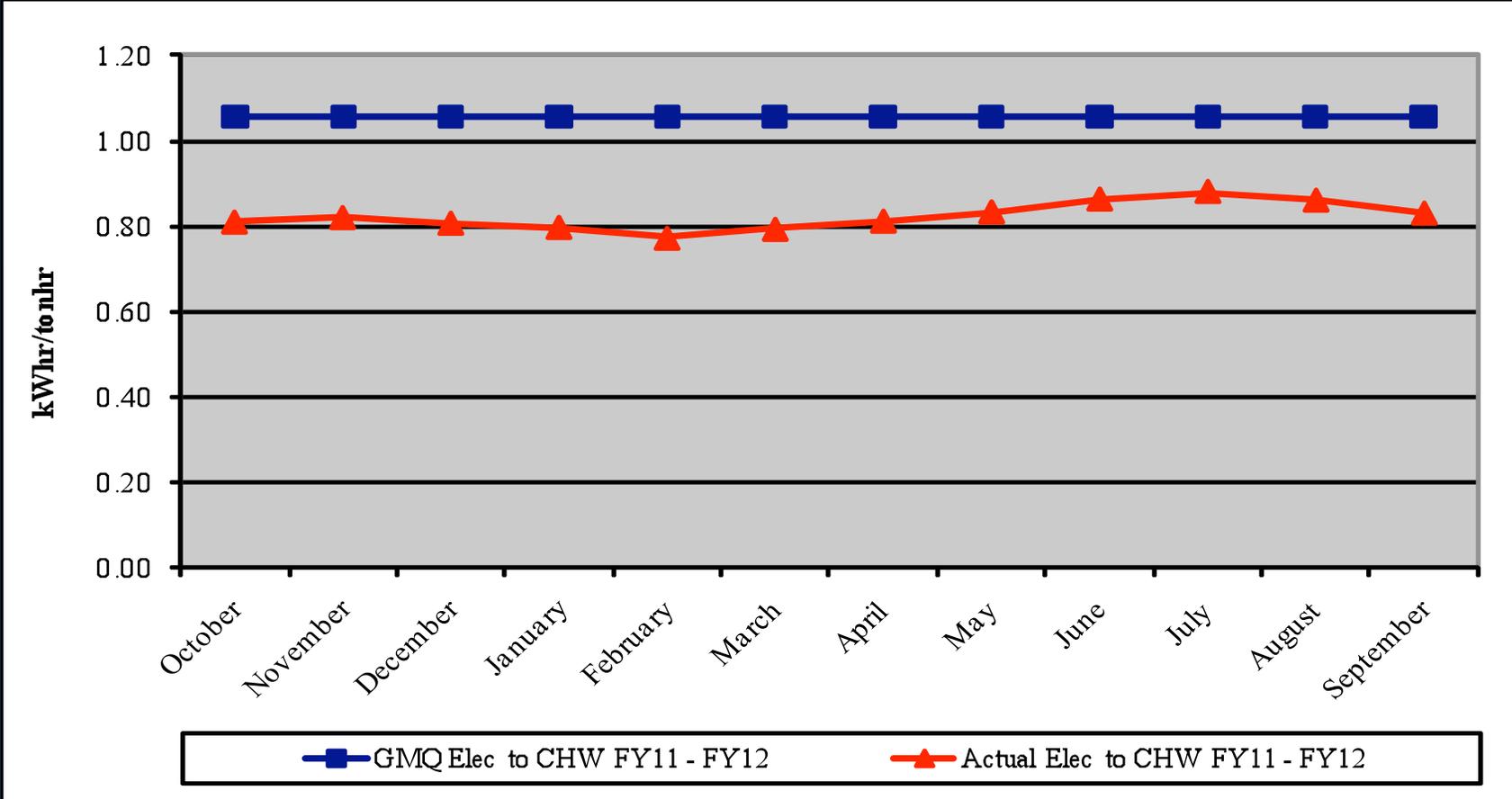
Performance Measurement FY12: Steam Water Conversion



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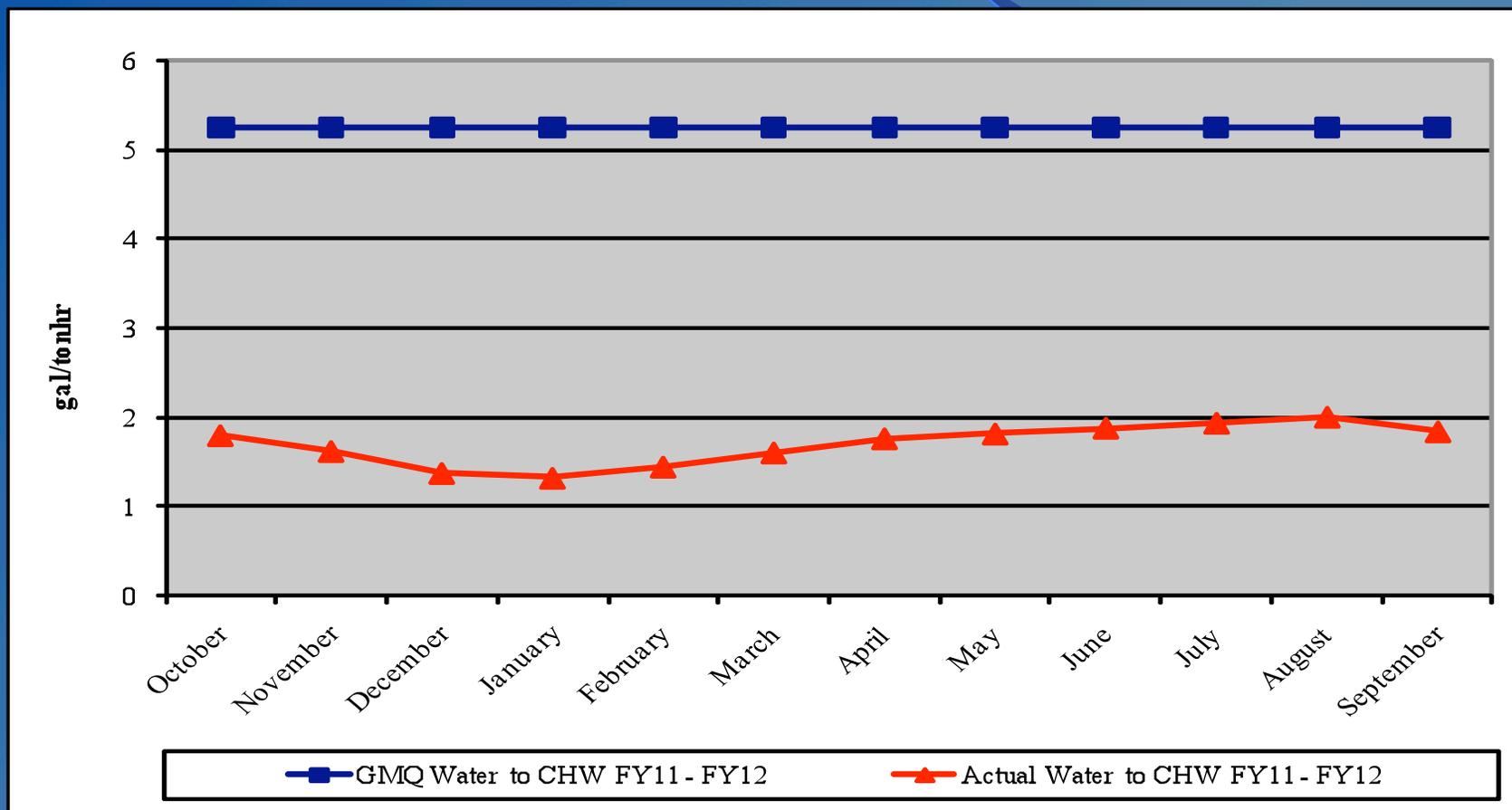


Performance Measurement FY12: CHW Electric Conversion





Performance Measurement FY12: 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 under construction)



5. Natural Gas Purchasing

- Natural Gas Purchasing Review
 - Table 5: FY12 Gas Spending & Budget Comparison
 - Figure 5: Actual and Projected Gas Cost Comparison for FY12



Table 5: FY12 Gas Spending & Budget Comparison

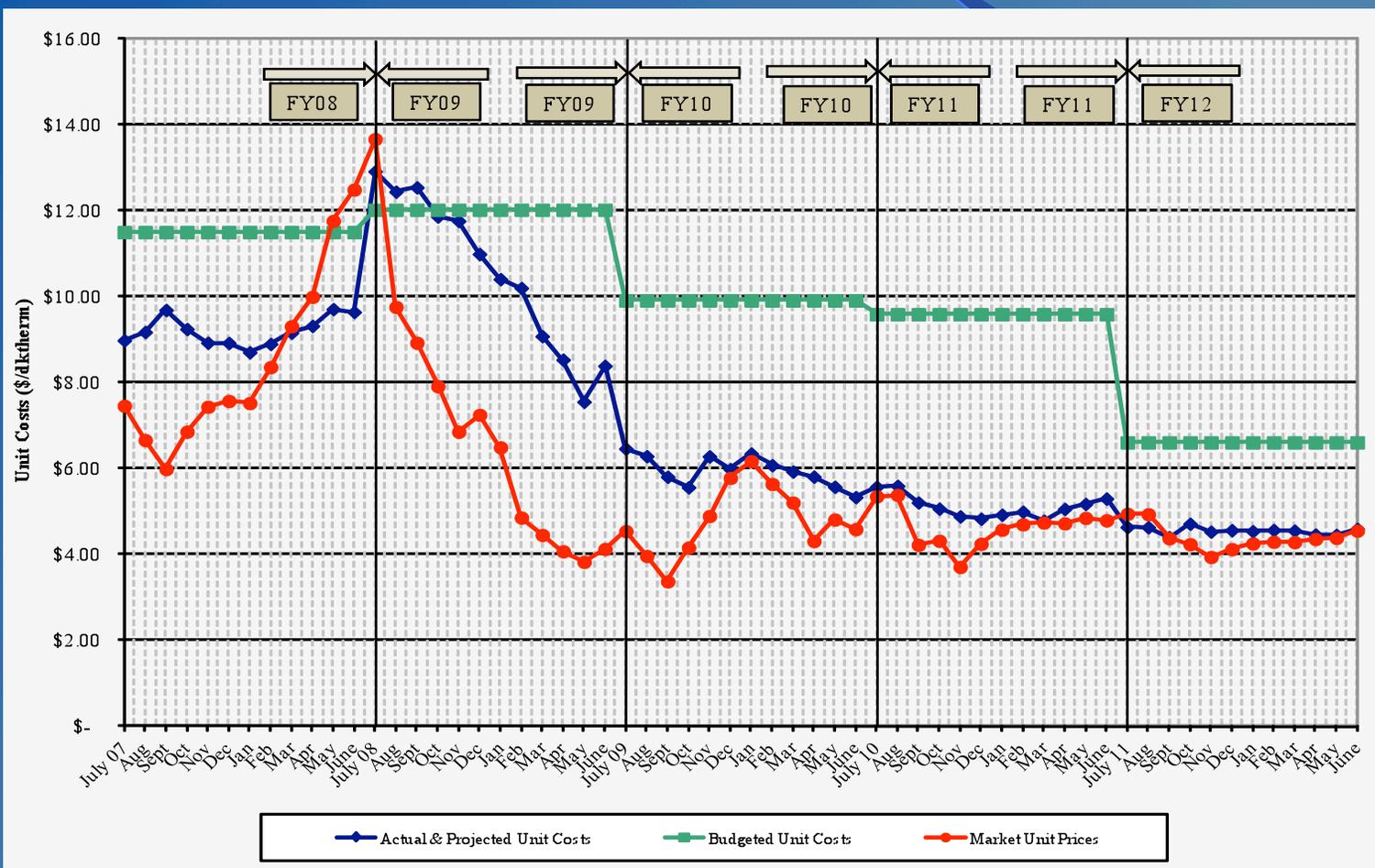
	Actual FY12 To date (Sept 30)	Budget FY12	Percent Difference
Steam Sendout (Mlbs)	43,937	38,073	-15.4%
Fuel Use (Dth) (includes propane)	● 62,017	53,990	-14.9%
Plant Eff (Dth/Mlb)	● 1.411	1.418	0.5%
Total Gas Cost (includes propane)	● \$316,833	\$357,090	11.3%
Unit Cost of Fuel (\$/ Dth)	● \$5.109	\$6.614	22.8%

Excludes consultant fees and FEA

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Figure 5. Actual and Projected Gas Cost Comparison History





6. FY12 Costs to Date

Item	FY11 Actual	FY12 Budget w/MCCC	FY12 Actual	Percent of FY12 Budget
FOC's	\$ 4,129,302	\$ 4,303,100	\$ 1,061,850	24.68%
Pass Throughs				
Non-Energy	\$ 859,795	\$ 1,031,400	\$ 216,270	20.97%
Water/Sewer	\$ 396,869	\$ 597,700	\$ 167,079	27.95%
Natural Gas	\$ 2,496,141	\$ 3,939,300	\$ 321,191	8.15%
Electricity	\$ 4,310,054	\$ 5,192,900	\$ 1,972,256	37.98%
Debt Service	\$ 5,042,150	\$ 5,703,700	\$ 913,174	16.01%
Total Expenses	\$ 17,234,310	\$ 20,768,100	\$ 4,651,820	22.40%
Total Revenues	\$ 15,395,261	\$ 18,405,100	\$ 4,669,068	25.37%
Metro Funding Amount	\$ 1,839,049	\$ 2,363,000	\$ (17,248)	-0.73%



7. Capital Expenditure Update

	Spent to End of FY11	FY12 Spending	Balance to Date (11/09/11)
R&I Projects	\$1,313,613	-\$31,249	\$540,943
2005B Bond	\$8,139,071	\$19,765	\$27,664
2010 Bond	\$1,461,651	\$64,291	\$884,059
MCCC Fund	\$3,856,349	\$389,209	\$4,254,443
Total	\$14,770,684	\$442,015	\$5,707,109



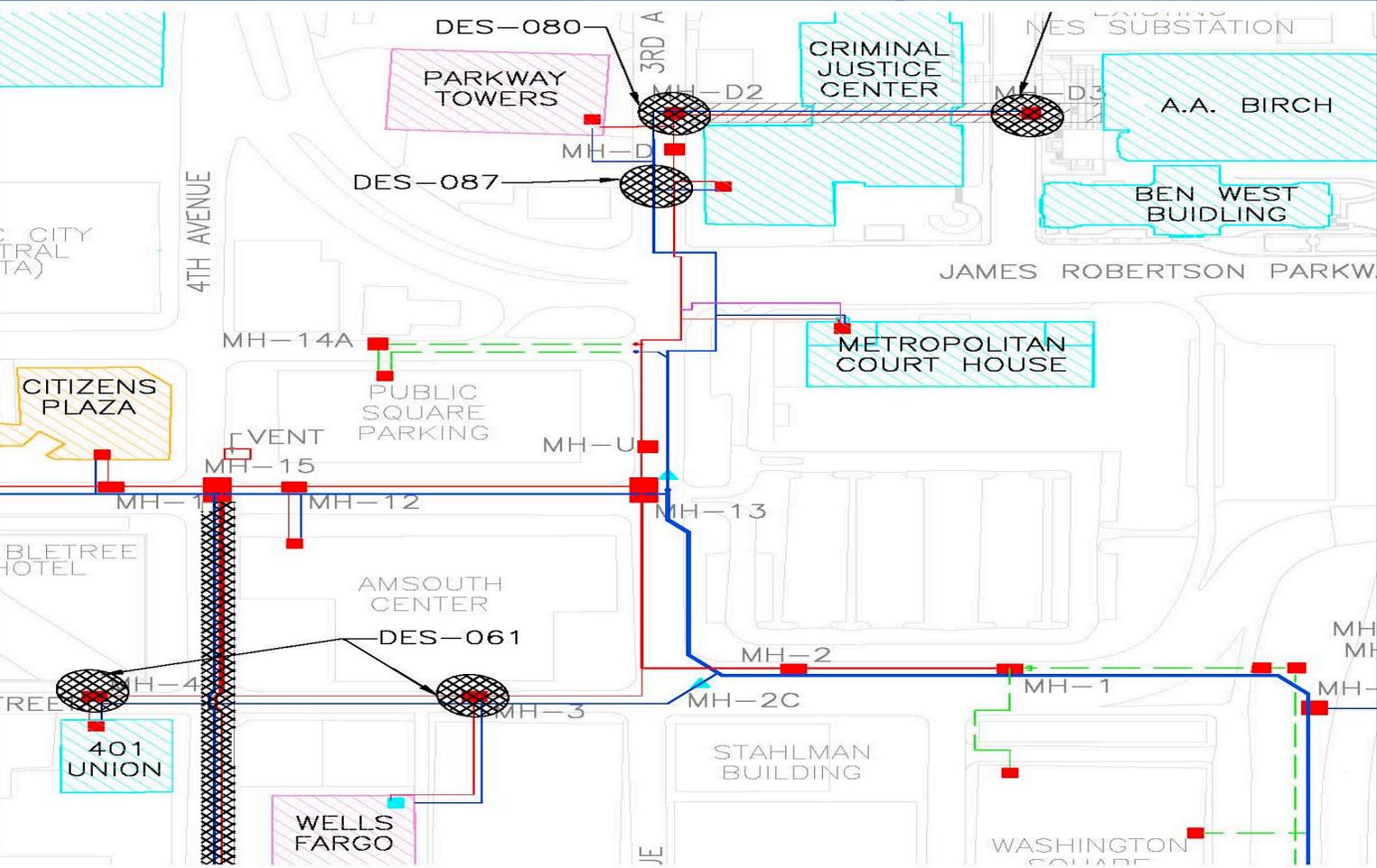
Capital Projects Review

Active Capital Projects

- DES 048: Tunnel Lighting Replacement Phase III – in construction
- DES 061: MH & Tunnel Steel Corrosion Repair & Prevention – in construction/ongoing
- DES 076: MH-S4A State Manhole Rebuild – in construction
- DES 080: Misc. MH & Tunnel Safety Repairs – in construction
- DES 088: Andrew Jackson PRV Control – in construction
- DES 090: MH/Tunnel Insulation - in construction/ongoing
- DES 091: Thermal Storage System – in design/evaluation phase
- DES 092: Sheraton Hotel CHW Pumps – in construction
- DES 093: Manhole 6 Repair and Structural Rehabilitation – in construction
- DES 094: Molloy Street Exploratory Dig – in construction



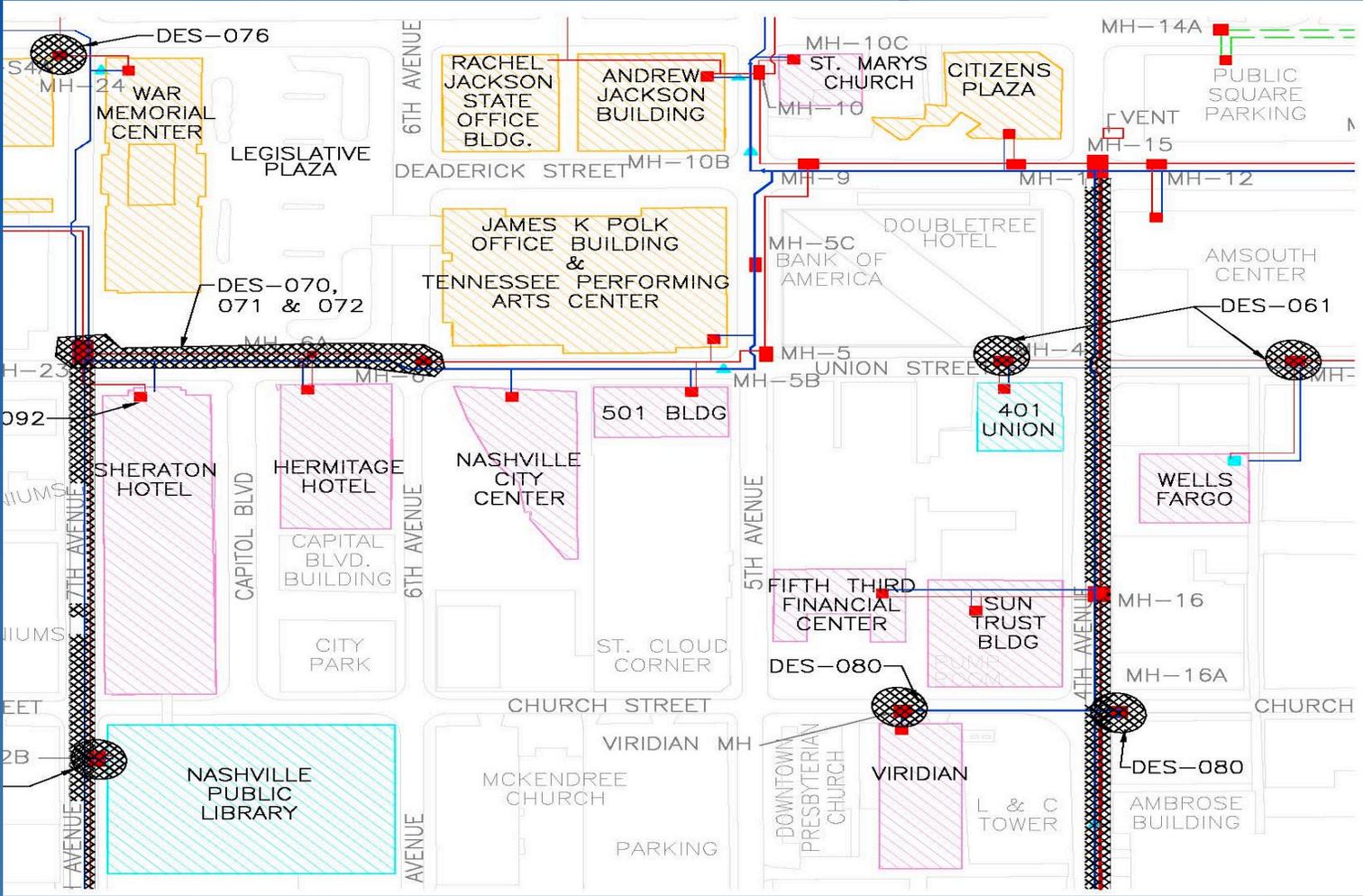
Active Capital Projects



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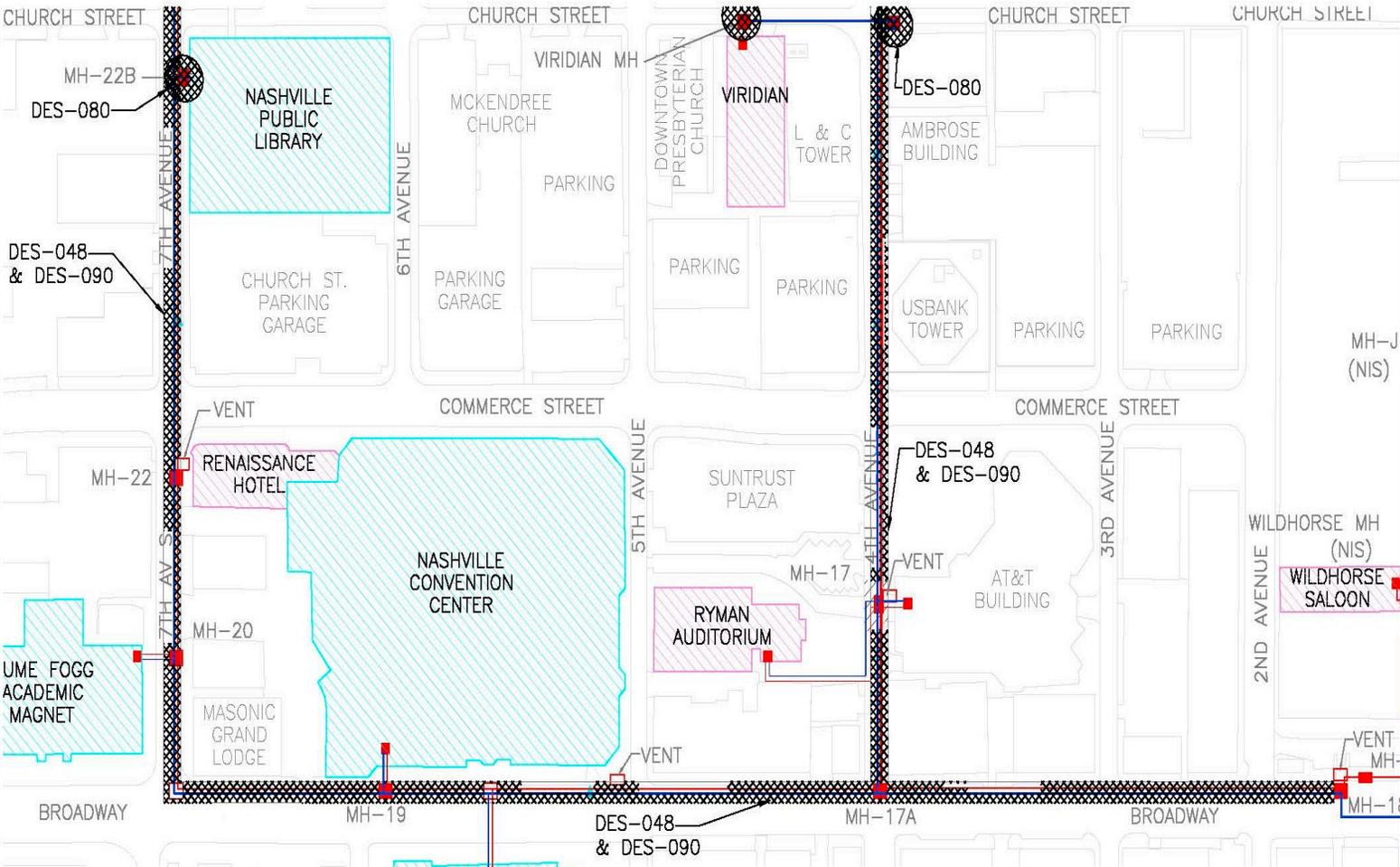
Active Capital Projects



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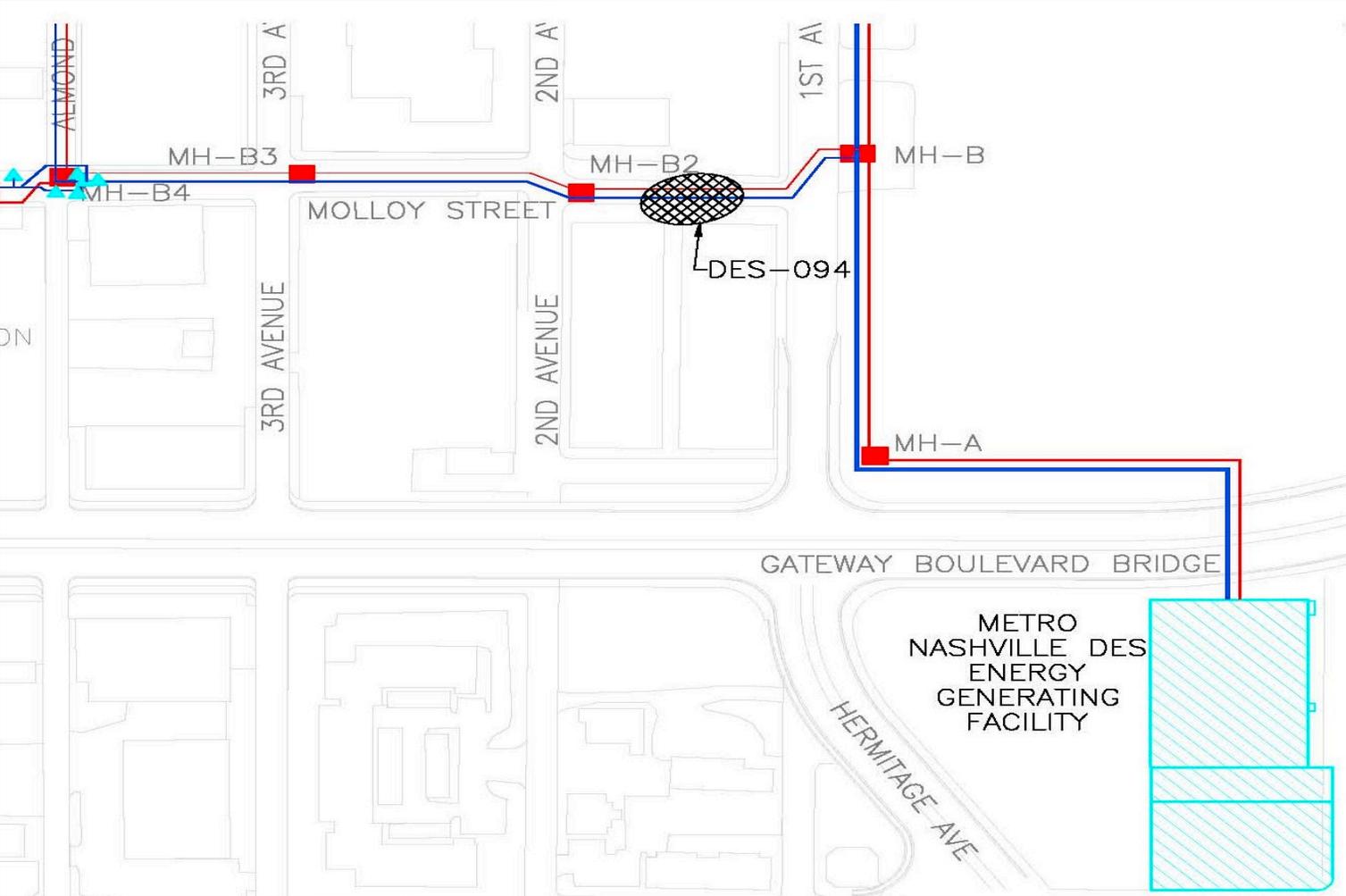
Active Capital Projects



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Active Capital Projects





Capital Projects Review

Capital Projects in Close-out

- DES 077: Expansion of Service to the Music City Convention Center – complete; awaiting service connection
- DES 081: Flood Related Repairs - closed
- DES 082: Andrew Jackson Steam Isolation Valve Replacement – closed
- DES 083: Manhole 13 Leak & Structural Component Repair – in closeout
- DES 086: Manhole 12 Roof Replacement – closed



8. Thermal Storage & Time of Use Rates

- Developing Capital Estimate
- Storage Tank Proposed Location at MDHA Property between Woodland St and James Robertson Bridges
- Anticipate 10 to 12 year Simple Return
- Benefits Include:
 - Reduced Electric Peak Demand Charge
 - Reduced Monthly Energy Cost (slightly)
 - Increased Potential for Customer Expansion North of Broadway



9. Music City Convention Center Expansion Update

- Substantial Completion 10/02/11 with Start-up of Steam and Condensate Lines
- In-building Piping at Metering Station (remains to be completed)
- Cooling Tower Testing – Completed
- EGF CHW Pumps – Under Construction
- CHW Service Required April 2012
- Steam Service Required Nov 2012



10. Potential New Customers

- Nashville Hyatt Place (Molloy & 3rd Ave S)
 - CHW Demand = 300 tons
 - Steam Demand = 9,000 pph
- Medical Mart
- Omni Hotel – *not going to be a DES Customer*



11. Other Board Member Items

12. Adjourn

Advisory Board Meeting Schedule

- FY12 – 2nd Quarter Meeting – February 16, 2012
- FY12 – 3rd Quarter Meeting – May 17, 2012
- FY12 – 4th Quarter Meeting – August 16, 2012
- FY13 – 1st Quarter Meeting – November 15, 2012