



Metro Nashville
DISTRICT ENERGY SYSTEM

DES Advisory Board Meeting
Second Quarter FY14
February 20, 2014

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. FY14 Costs to Date
7. Capital Projects Review & Status Report Update
8. Other Board Member Items
9. Adjourn



1. *Call to Order*
2. *Review and Approval of
Previous Meeting Minutes*

3. *Customer Sales*

- ❖ Table 3: Customer Cost Comparison
- ❖ Figure 3A: FY14 CHW Consumptions
- ❖ Figure 3B: FY14 Steam Consumptions

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

		Steam - Rolling 12 Month			Chilled Water - Rolling 12 Month		
		Jan 2012 - Dec 2012	Jan 2013 - Dec 2013	% Diff.	Jan 2012 - Dec 2012	Jan 2013 - Dec 2013	% Diff.
Private	Cost	\$ 1,341,628	\$ 1,360,721	1.42%	\$ 3,424,693	\$ 3,301,911	-3.59%
	Usage (lbs or tonhrs)	77,575,803	91,310,531	17.70%	18,005,960	17,326,547	-3.77%
	Unit Cost	\$ 17.29	\$ 14.90	-13.8%	\$ 0.190	\$ 0.191	0.2%
State	Cost	\$ 1,790,353	\$ 1,917,956	7.13%	\$ 3,440,191	\$ 3,332,261	-3.14%
	Usage (lbs or tonhrs)	91,611,133	116,908,202	27.61%	17,144,596	16,027,536	-6.52%
	Unit Cost	\$ 19.54	\$ 16.41	-16.1%	\$ 0.201	\$ 0.208	3.6%
Metro	Cost	\$ 1,842,924	\$ 2,447,347	32.80%	\$ 4,180,560	\$ 5,109,691	22.23%
	Usage (lbs or tonhrs)	116,202,003	187,820,650	61.63%	25,212,490	30,443,759	20.75%
	Unit Cost	\$ 15.86	\$ 13.03	-17.8%	\$ 0.166	\$ 0.168	1.2%
Aggregate	Cost	\$ 4,974,905	\$ 5,762,111	15.82%	\$ 11,045,444	\$ 11,788,523	6.73%
	Usage (lbs or tonhrs)	285,388,939	397,524,127	39.29%	60,363,046	64,046,091	6.10%
	Unit Cost	\$ 17.43	\$ 14.49	-16.8%	\$ 0.183	\$ 0.184	0.59%

MFA not included in values shown

Figure 3A: Historic CHW Consumptions

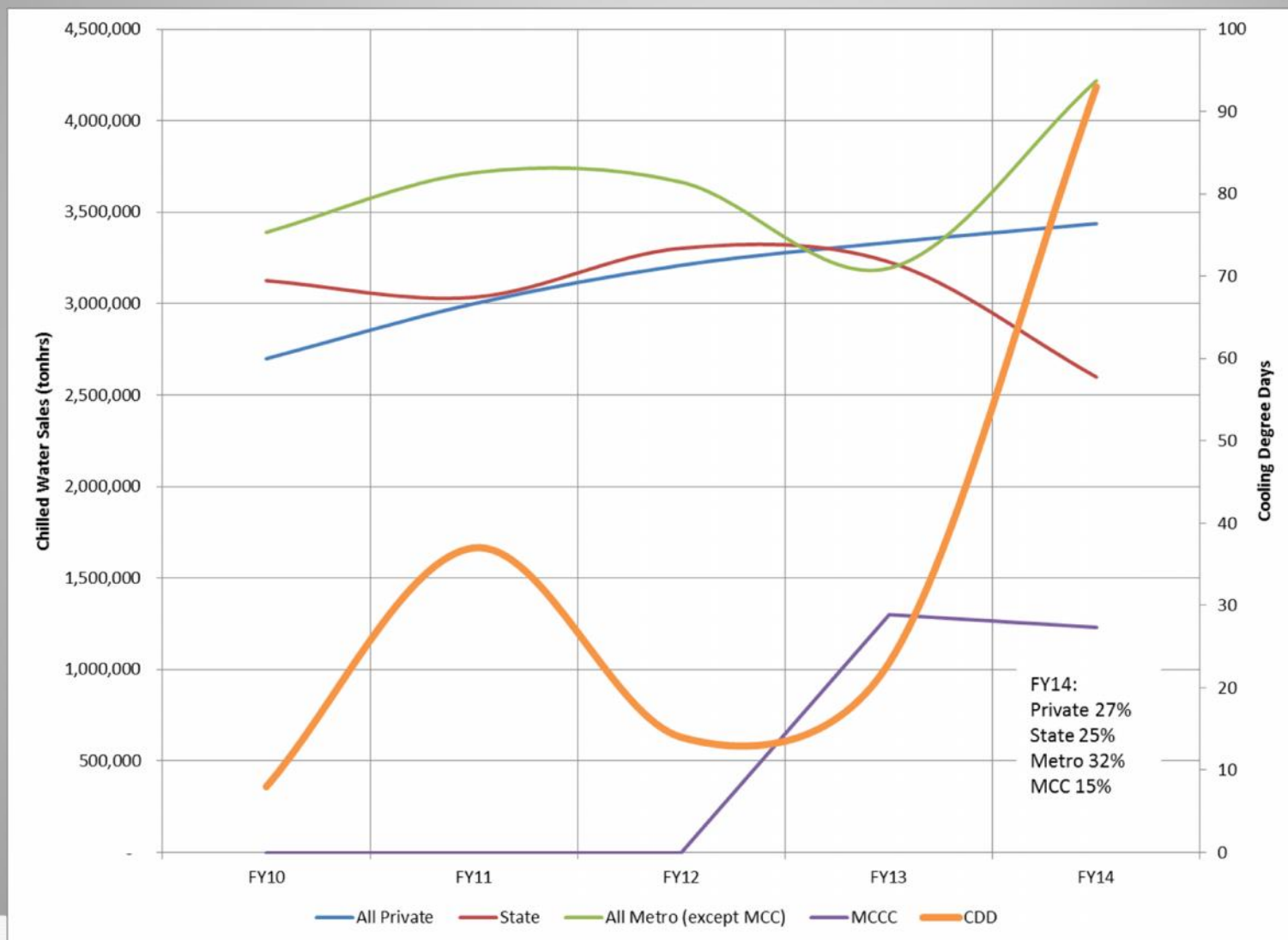
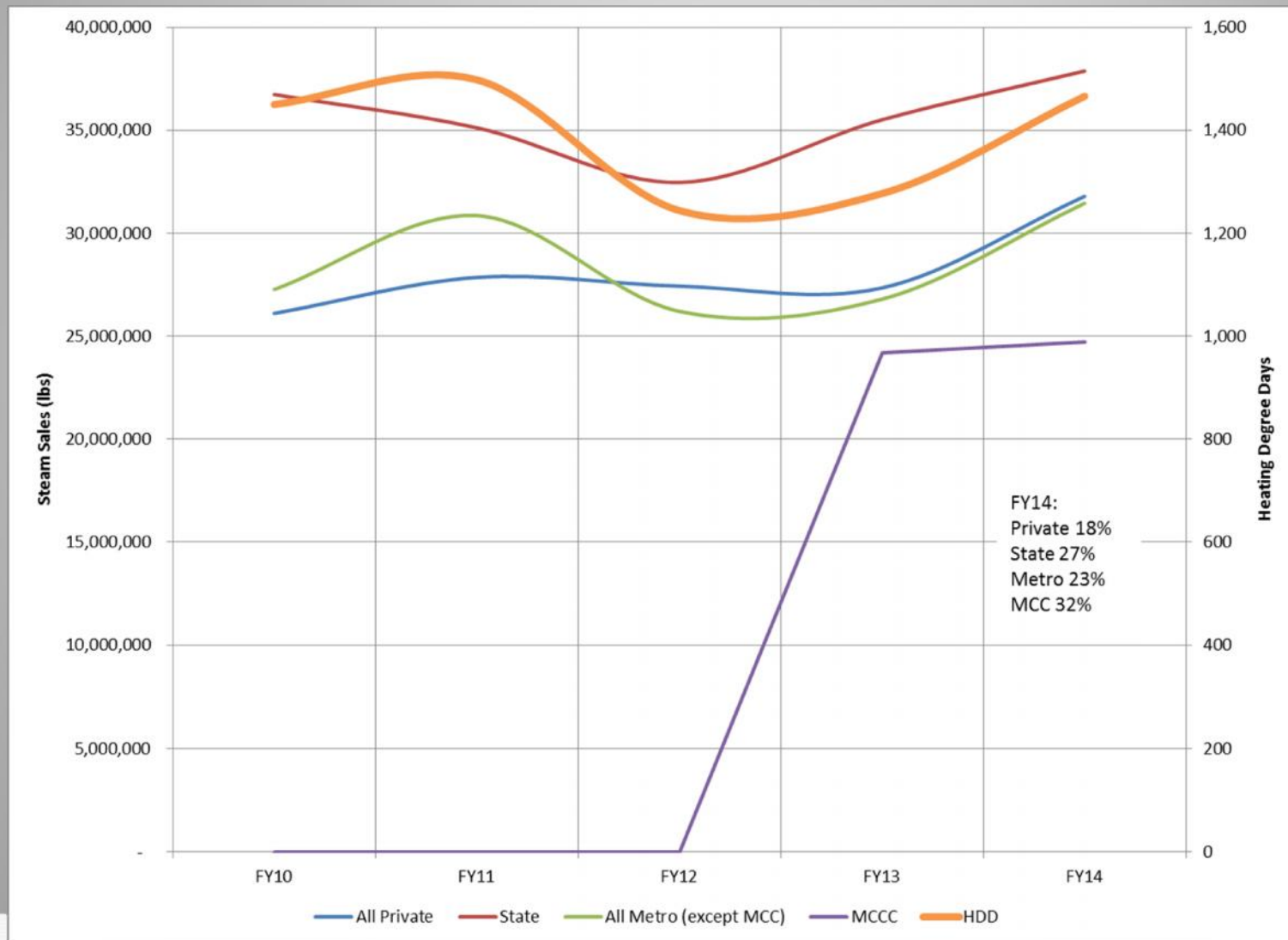





Figure 3B: Historic Steam Consumptions

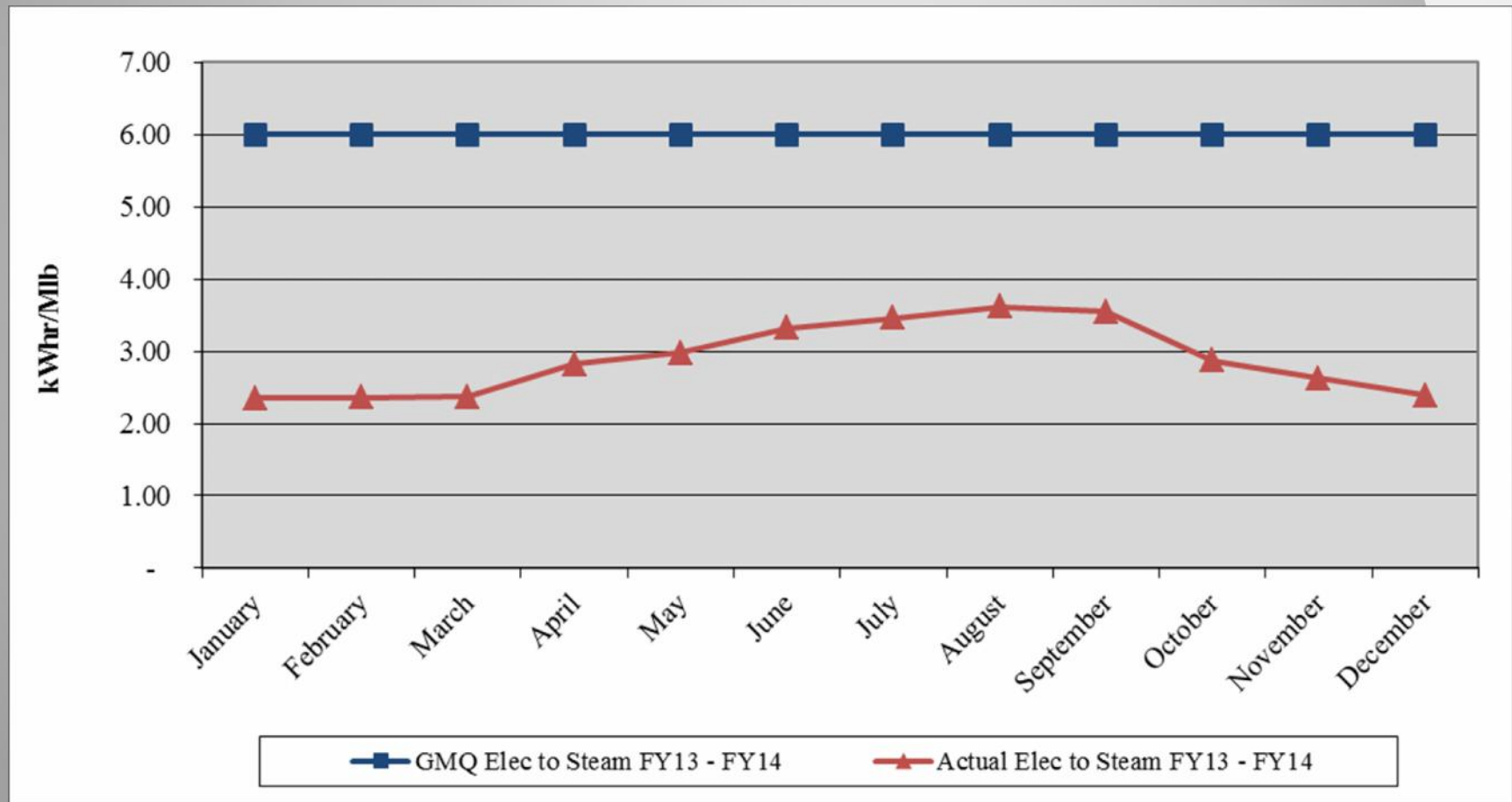


4. *Review of DES Contractor Performance*

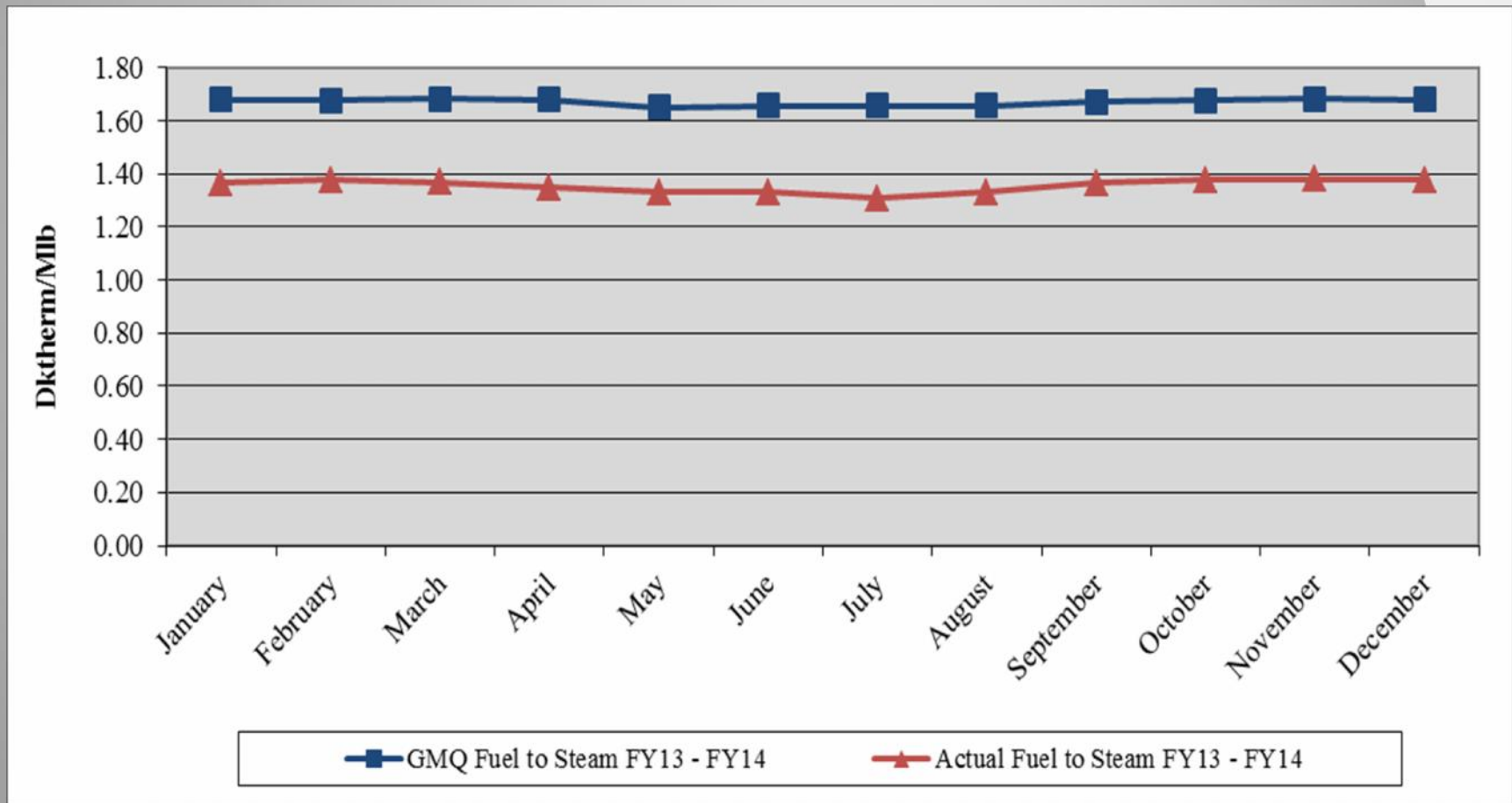
Contractor (CNE) is in compliance with their contractual obligations for FY14.

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

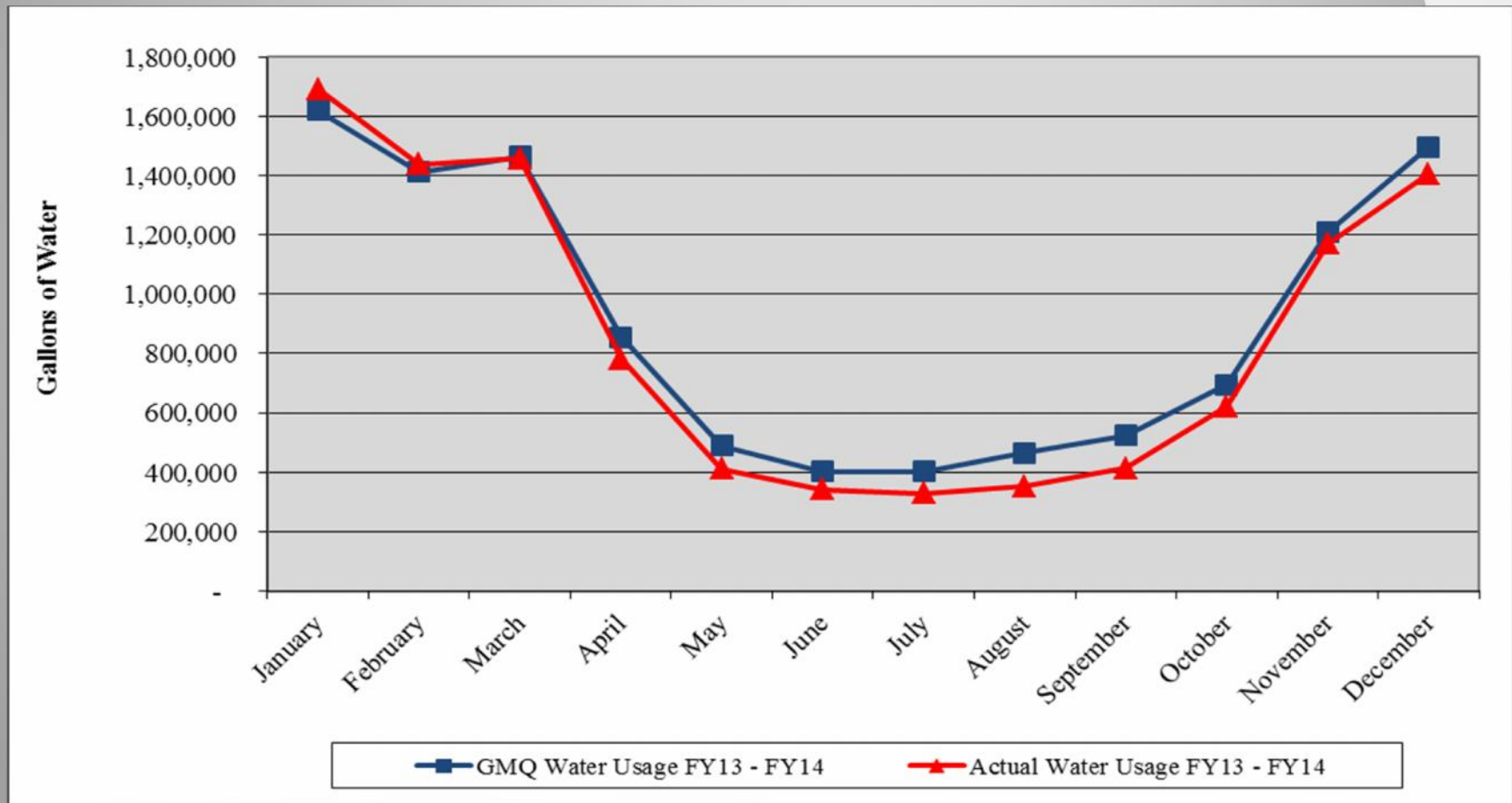
Performance Measurement FY14: Steam Electric Conversion ●



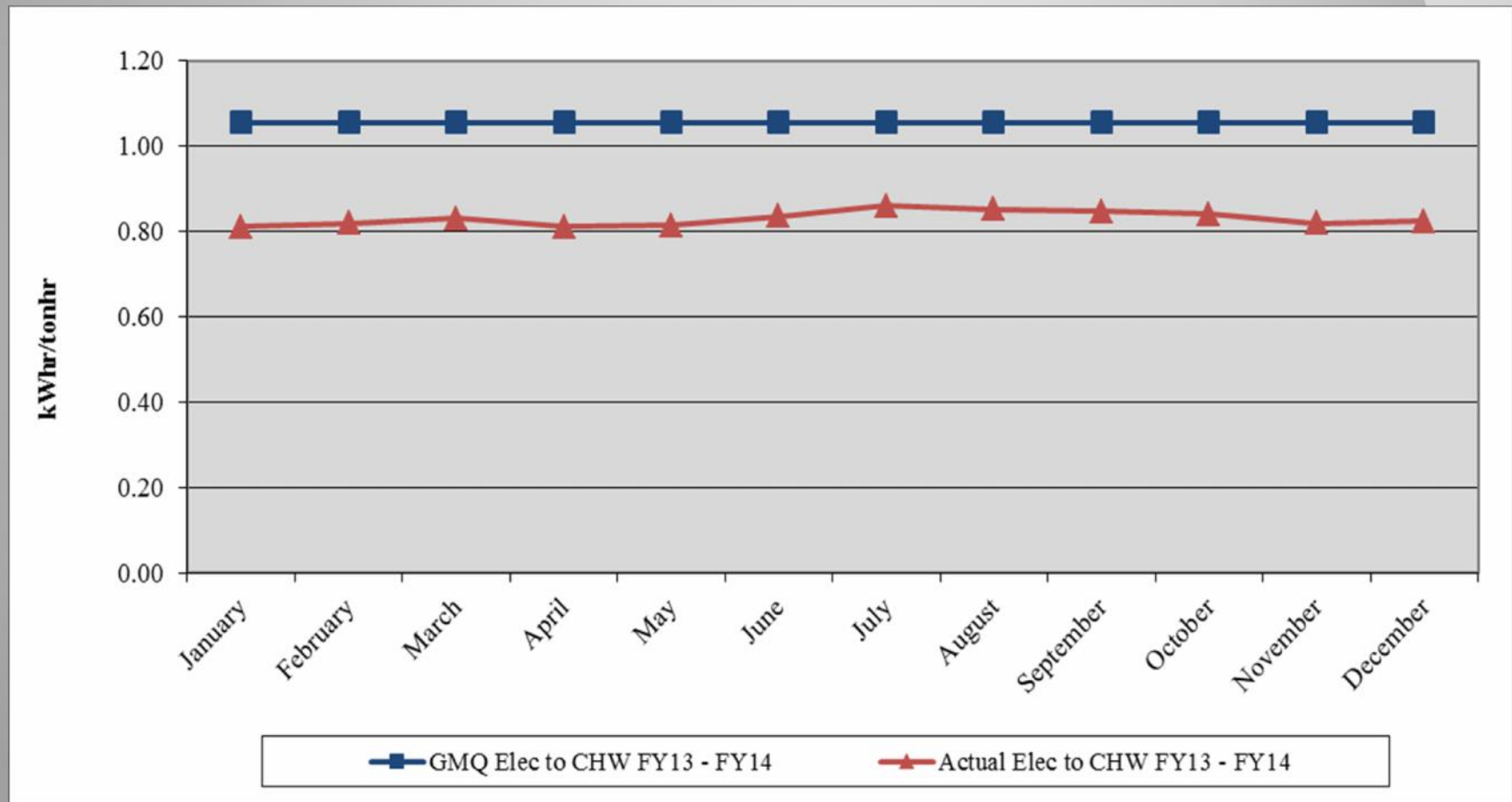
Performance Measurement FY14: Steam Plant Efficiency



Performance Measurement FY14: Steam Water Conversion

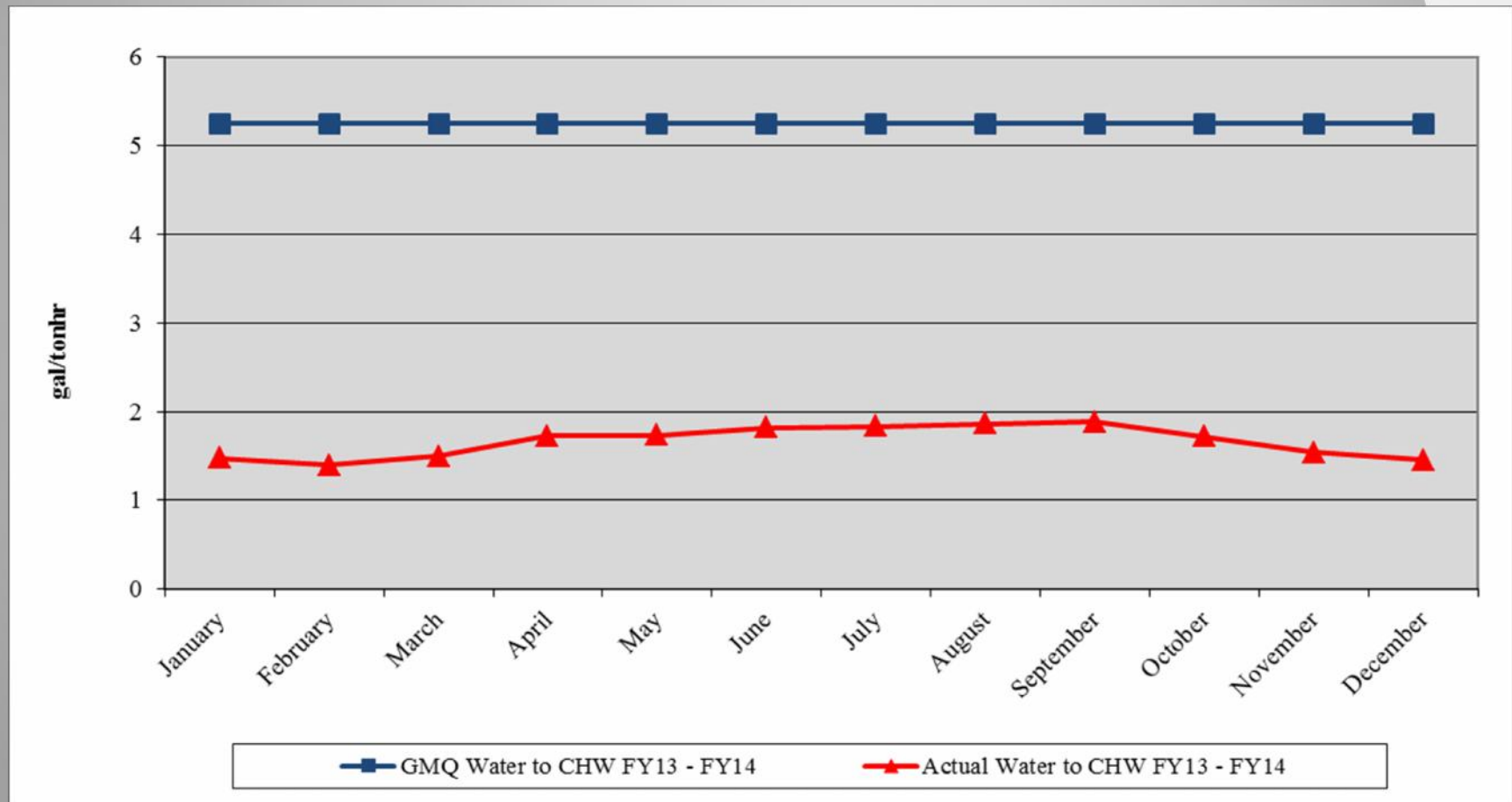


Performance Measurement FY14: CHW Electric Conversion ●



Performance Measurement FY14: 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 ●
 - ✓ Corrosion of Structural Metal Components ●
- ✓ Safety Items ●



5. Natural Gas Purchasing

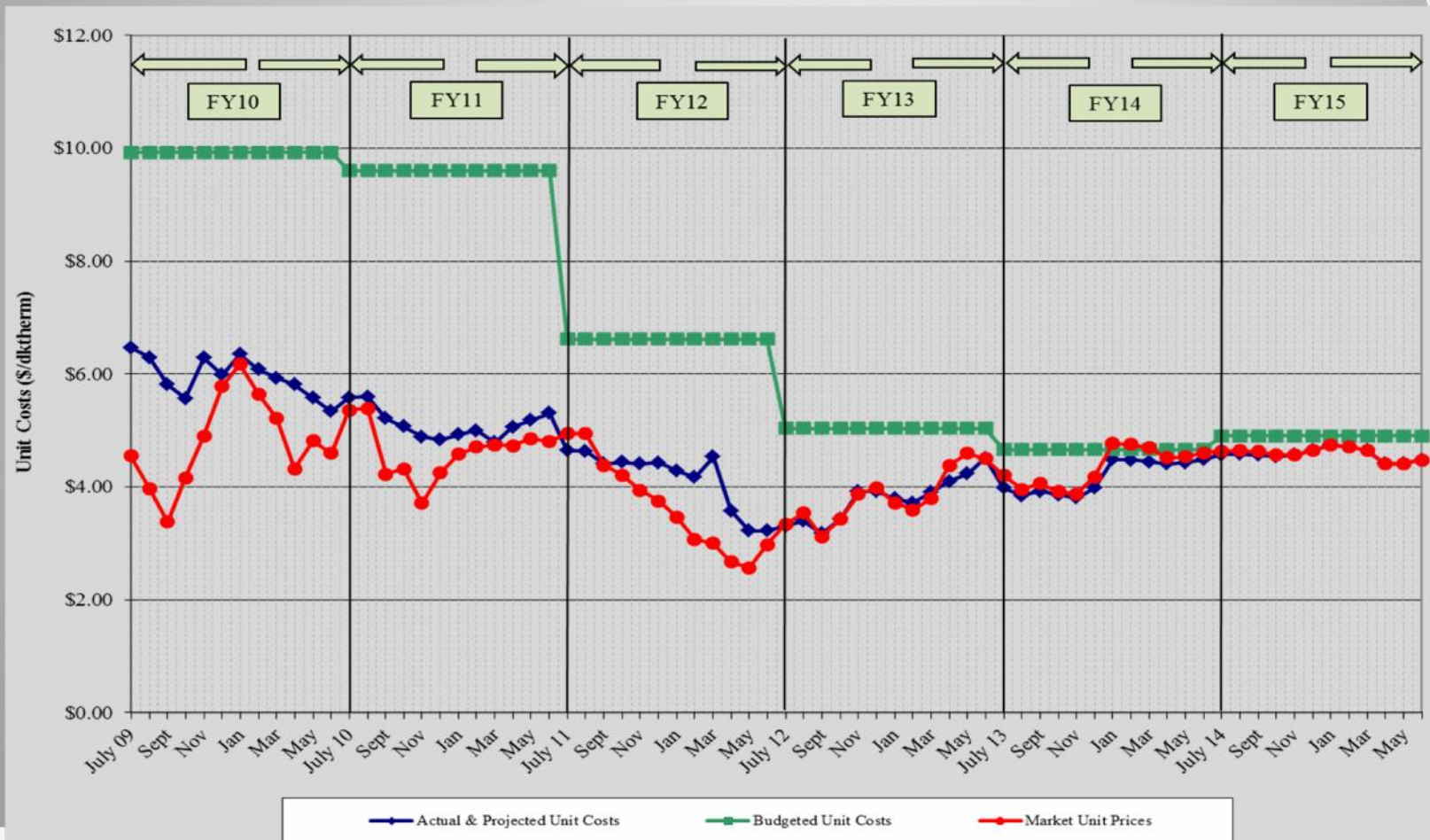
- ❖ Natural Gas Purchasing Review
 - ❖ Table 5: FY14 Gas Spending & Budget Comparison
 - ❖ Figure 5: Actual and Projected Gas Cost Comparison

Table 5: FY14 Gas Spending & Budget Comparison

		Actual FY14 To date (Dec 31)	Budget FY14	Percent Difference
Steam Sendout (Mlbs)		200,161	159,836	-25.2%
Fuel Use (Dth) (includes propane)	●	273,118	223,930	-22.0%
Plant Eff (Dth/Mlb)	●	1.364	1.401	2.6%
Total Gas Cost (includes propane)	●	\$1,183,083	\$1,043,514	-13.4%
Unit Cost of Fuel (\$/Dth)	●	\$4.332	\$4.660	7.0%

Excludes consultant fees and FEA and budget contingency

Figure 5. Actual and Projected Gas Cost Comparison History



6. FY14 Costs to Date

Item	FY13 Actual	FY14 Budget	FY14 Actual to date	Percent of FY14 Budget
FOC's	\$ 4,401,100	\$ 4,583,500	\$ 2,229,963	48.65%
Pass Throughs				
Non-Energy	\$ 937,672	\$ 1,042,100	\$ 383,284	36.78%
Water/Sewer	\$ 501,903	\$ 714,300	\$ 289,648	40.55%
Natural Gas Base	\$ 2,491,106	\$ 2,512,943	\$ 1,043,514	41.53%
Natural Gas Contingency	\$ -	\$ 643,157	\$ 150,882	23.46%
Electricity	\$ 5,277,414	\$ 6,633,900	\$ 2,992,807	45.11%
Debt Service	\$ 4,209,145	\$ 5,518,700	\$ 1,985,403	35.98%
Total Expenses	\$ 17,818,340	\$ 21,648,600	\$ 9,075,500	41.92%
Total Revenues	\$ 16,739,403	\$ 19,690,300	\$ 9,307,119	47.27%
Metro Funding Amount	\$ 1,078,937	\$ 1,958,300	\$ 489,575	25.00%

7. Capital Expenditure Update

	Spent to End of FY13	FY14 Spending	Balance to Date (01/27/14)
R&I Projects	\$2,181,091	\$95,657	\$90,636
49109-2010 Bond	\$1,888,400	\$2,857	\$518,743
49107-Customer Connection Fund	\$5,825,733	\$442,122	\$2,232,145
Total	\$9,895,224	\$540,636	\$2,841,524

Previous Bonds with \$0 Remaining: 2002A, 2005B, 2007 and 2008

Capital Projects Review

Active Capital Projects

- DES 061: MH & Tunnel Steel Corrosion Repair & Prevention – ongoing
- DES 091: TOU and Thermal Storage – developing TOU invoicing changes
- DES-102: Delta T Modifications – complete; in close-out
- DES-103: Sheraton CHW Modifications – Bid & Awarded late 2nd Quarter; exterior construction from 1/24/14 to 2/6/14

Capital Projects Review

Capital Projects in Close-out

- DES 098: Nashville Hyatt Place Connection – in close-out
- DES 100: MH-10 Sump Pump and Roof Replacement – in close-out
- DES 101: MH-1 Abandonment – in close-out

8. Other Board Member Items

Natural Gas Curtailment (CNE Slides)

New Board Members

Customer Meeting – DES 10th Anniversary



New Advisory Board Members

Representing the Private ISC:

Mr. Richard Fletcher

Representing the State:

Mr. Alan Robertson

Representing the MDHA:

Mr. James Harbison -

Spring Customer Meeting

DES 10th Anniversary

9. *Adjourn*

- *Advisory Board Meeting Schedule*
- FY14 – 3rd Quarter Meeting – May 15, 2014
- FY14 – 4th Quarter Meeting – August 21, 2014
- FY15 – 1st Quarter Meeting – November 20, 2014
- FY15 – 2nd Quarter Meeting – February 19, 2015