



Metro Nashville
DISTRICT ENERGY SYSTEM

DES Advisory Board Meeting
Third Quarter FY14
May 15, 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. DES Internal Audit
9. Other Board Member Items
10. 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
- ❖ Figure 3C: Degree Day Comparison

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

		Steam - Rolling 12 Month			Chilled Water - Rolling 12 Month		
		Apr 2012 - Mar 2013	Apr 2013 - Mar 2014	% Diff.	Apr 2012 - Mar 2013	Apr 2013 - Mar 2014	% Diff.
Private	Cost	\$ 1,337,722	\$ 1,483,949	10.93%	\$ 3,391,795	\$ 3,280,829	-3.27%
	Usage (lbs or tonhrs)	84,520,591	92,899,687	9.91%	17,516,818	17,085,057	-2.46%
	Unit Cost	\$ 15.83	\$ 15.97	0.9%	\$ 0.194	\$ 0.192	-0.8%
State	Cost	\$ 1,836,030	\$ 2,114,416	15.16%	\$ 3,414,727	\$ 3,280,775	-3.92%
	Usage (lbs or tonhrs)	105,502,775	121,369,414	15.04%	16,630,973	15,422,519	-7.27%
	Unit Cost	\$ 17.40	\$ 17.42	0.1%	\$ 0.205	\$ 0.213	3.6%
Metro	Cost	\$ 2,034,136	\$ 2,797,364	37.52%	\$ 4,199,276	\$ 5,277,441	25.68%
	Usage (lbs or tonhrs)	152,601,345	198,953,156	30.37%	25,442,007	29,794,610	17.11%
	Unit Cost	\$ 13.33	\$ 14.06	5.5%	\$ 0.165	\$ 0.177	7.3%
Aggregate	Cost	\$ 5,207,888	\$ 6,469,935	24.23%	\$ 11,005,798	\$ 11,904,063	8.16%
	Usage (lbs or tonhrs)	342,624,711	416,787,726	21.65%	59,589,798	62,631,564	5.10%
	Unit Cost	\$ 15.20	\$ 15.52	2.1%	\$ 0.185	\$ 0.190	2.91%

MFA not included in values shown

Figure 3A: Historic CHW Consumptions

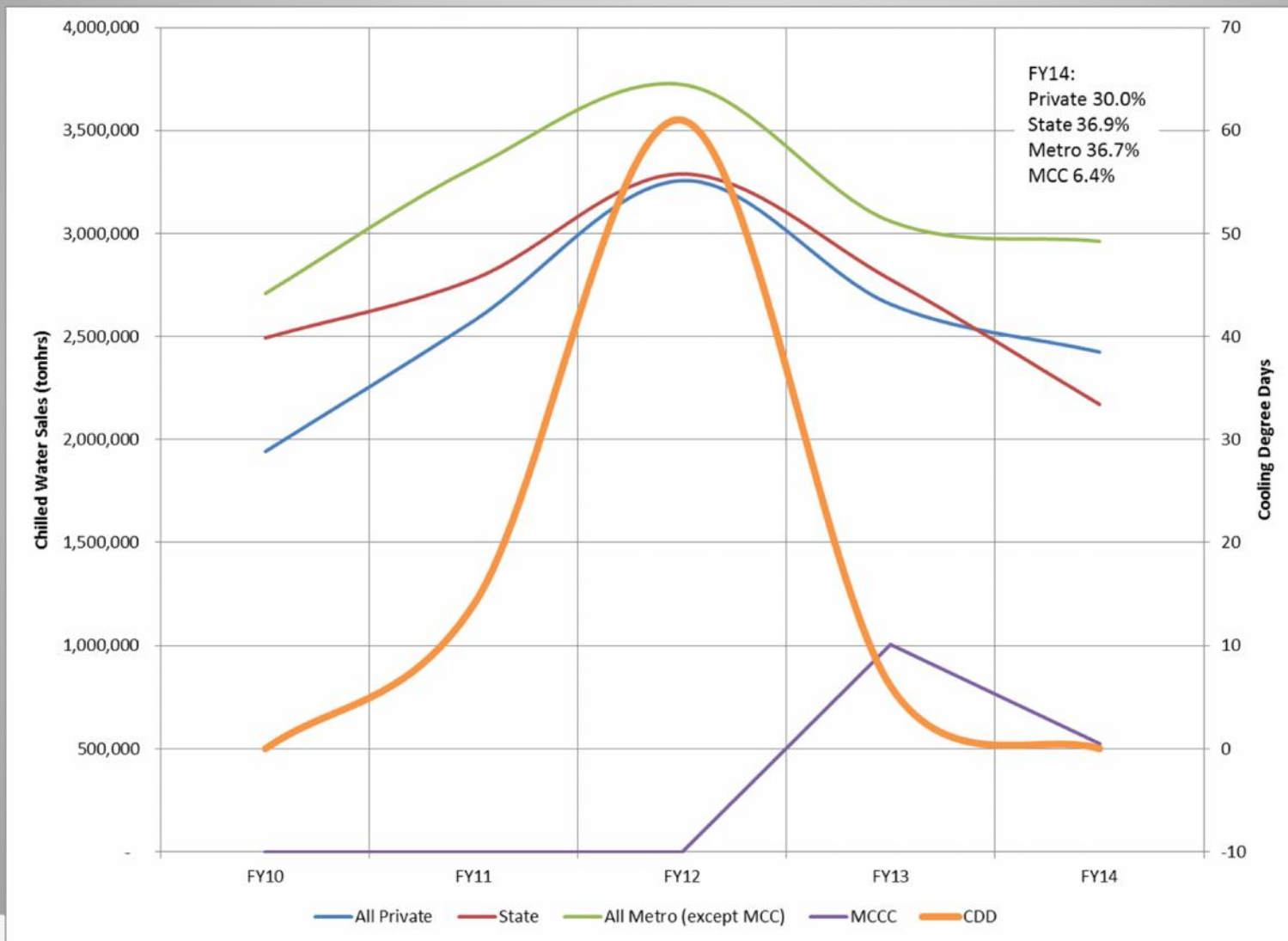


Figure 3B: Historic Steam Consumptions

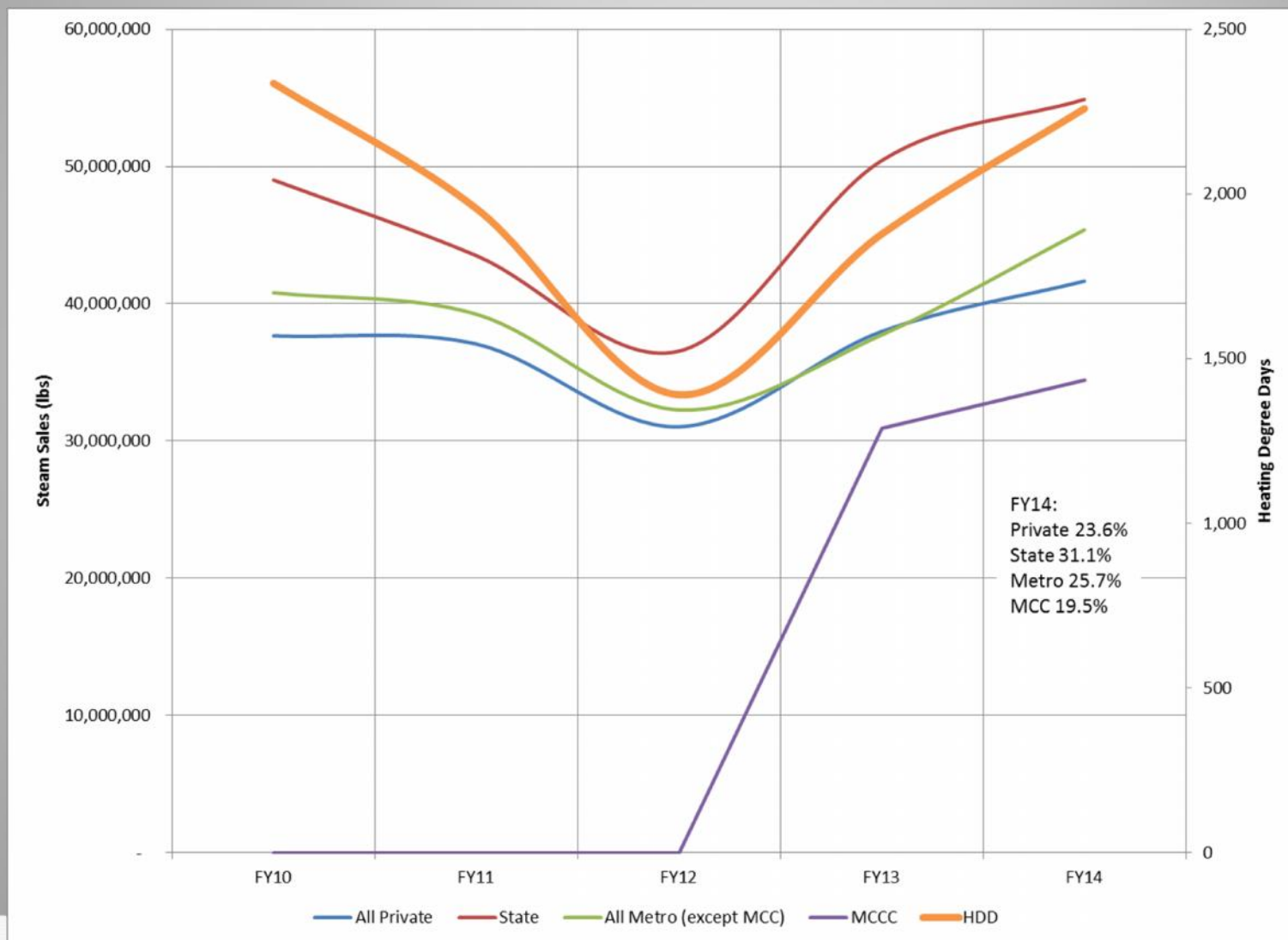
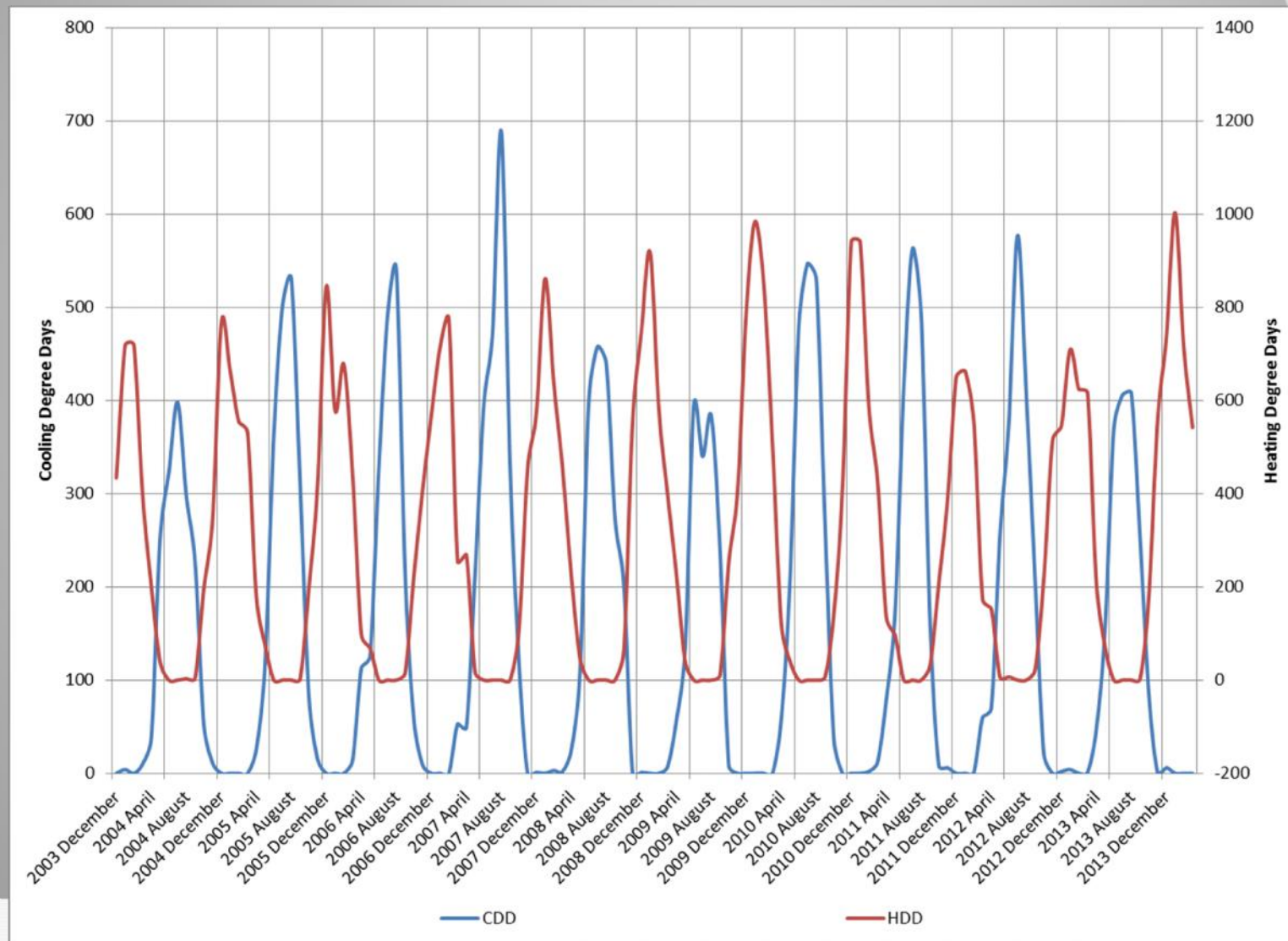





Figure 3C: Degree Day Comparison

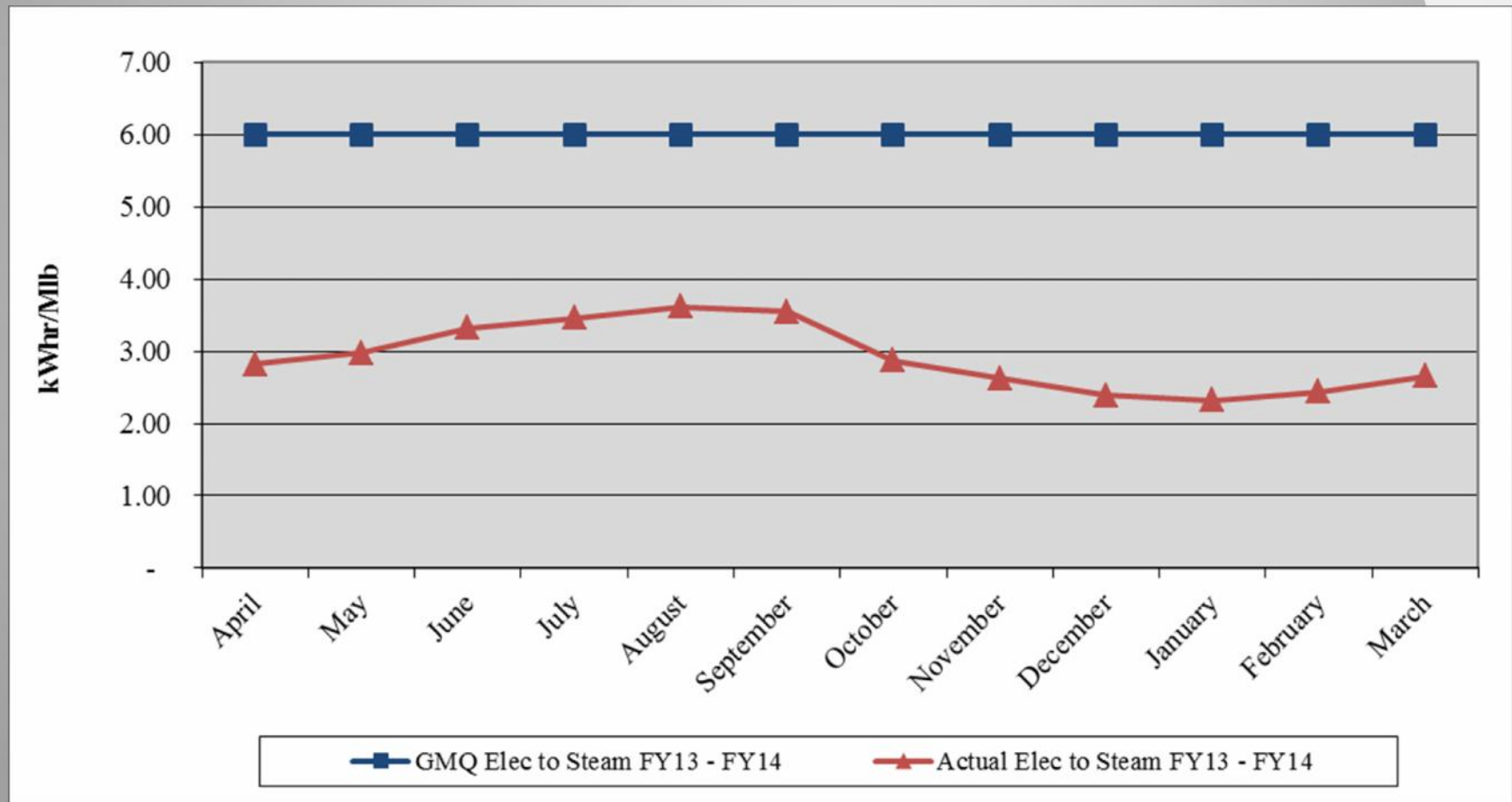


4. *Review of DES Contractor Performance*

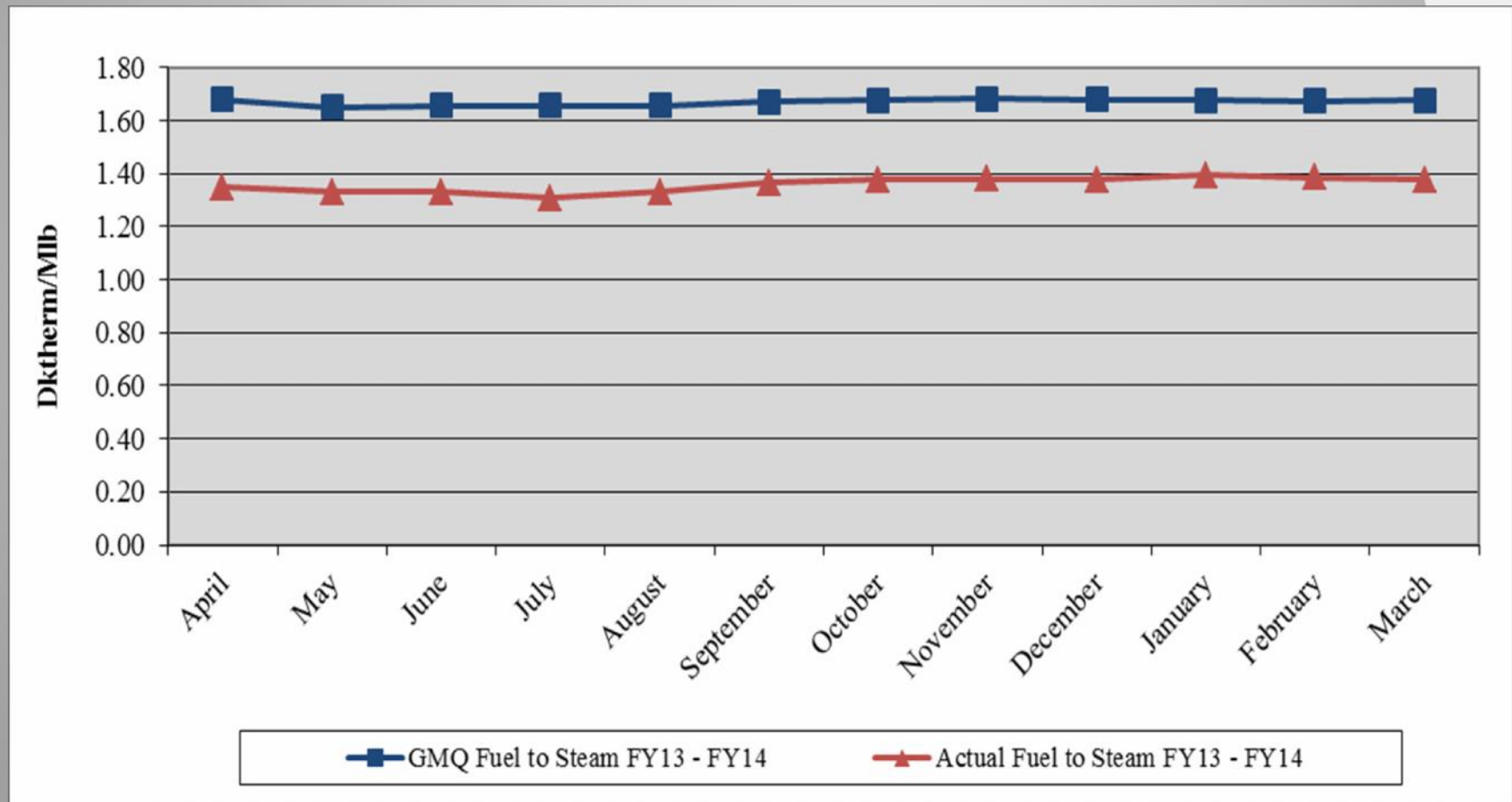
Contractor (CNE) is in compliance with their contractual obligations for FY14.

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

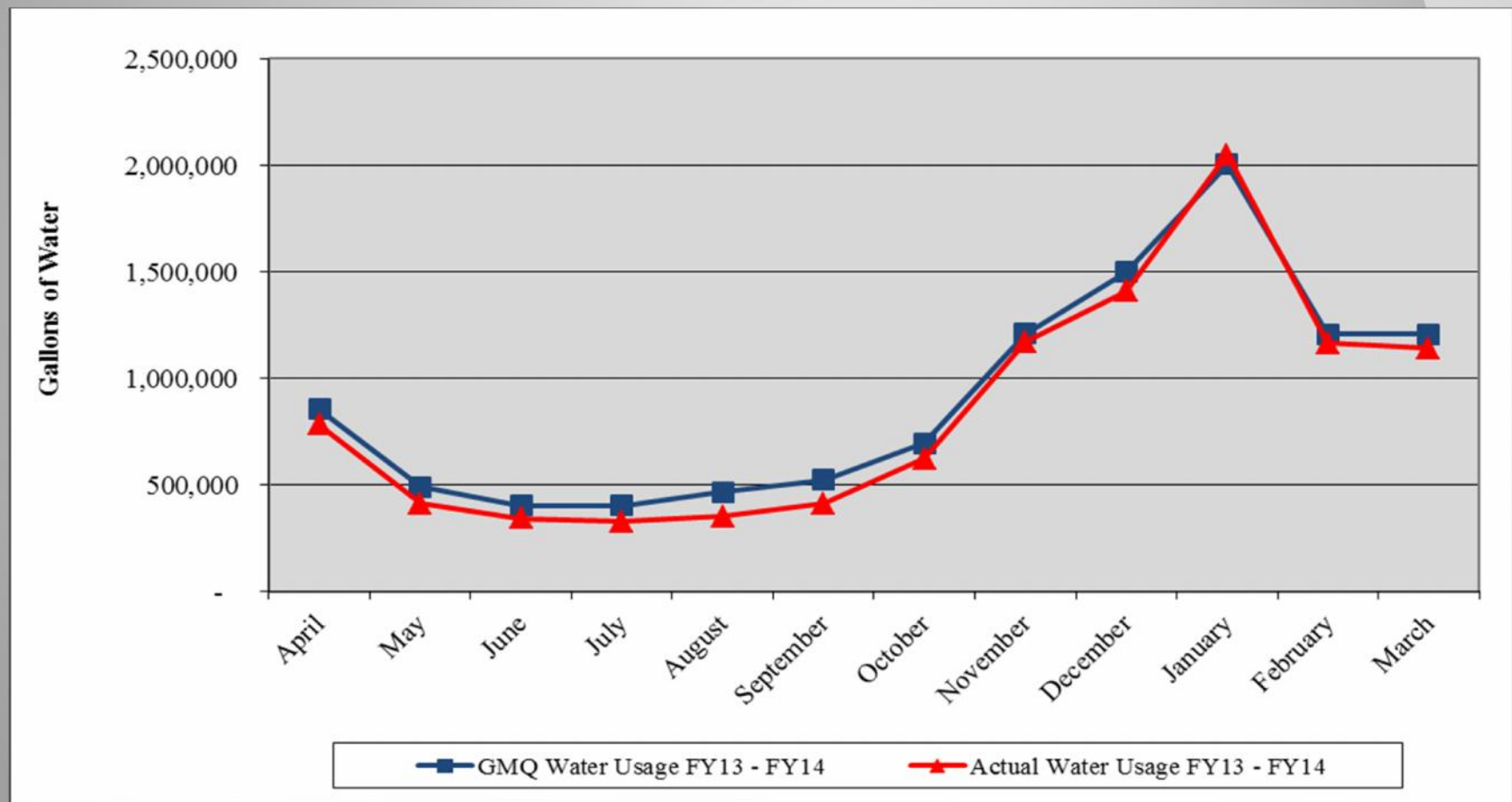
Performance Measurement FY14: Steam Electric Conversion ●



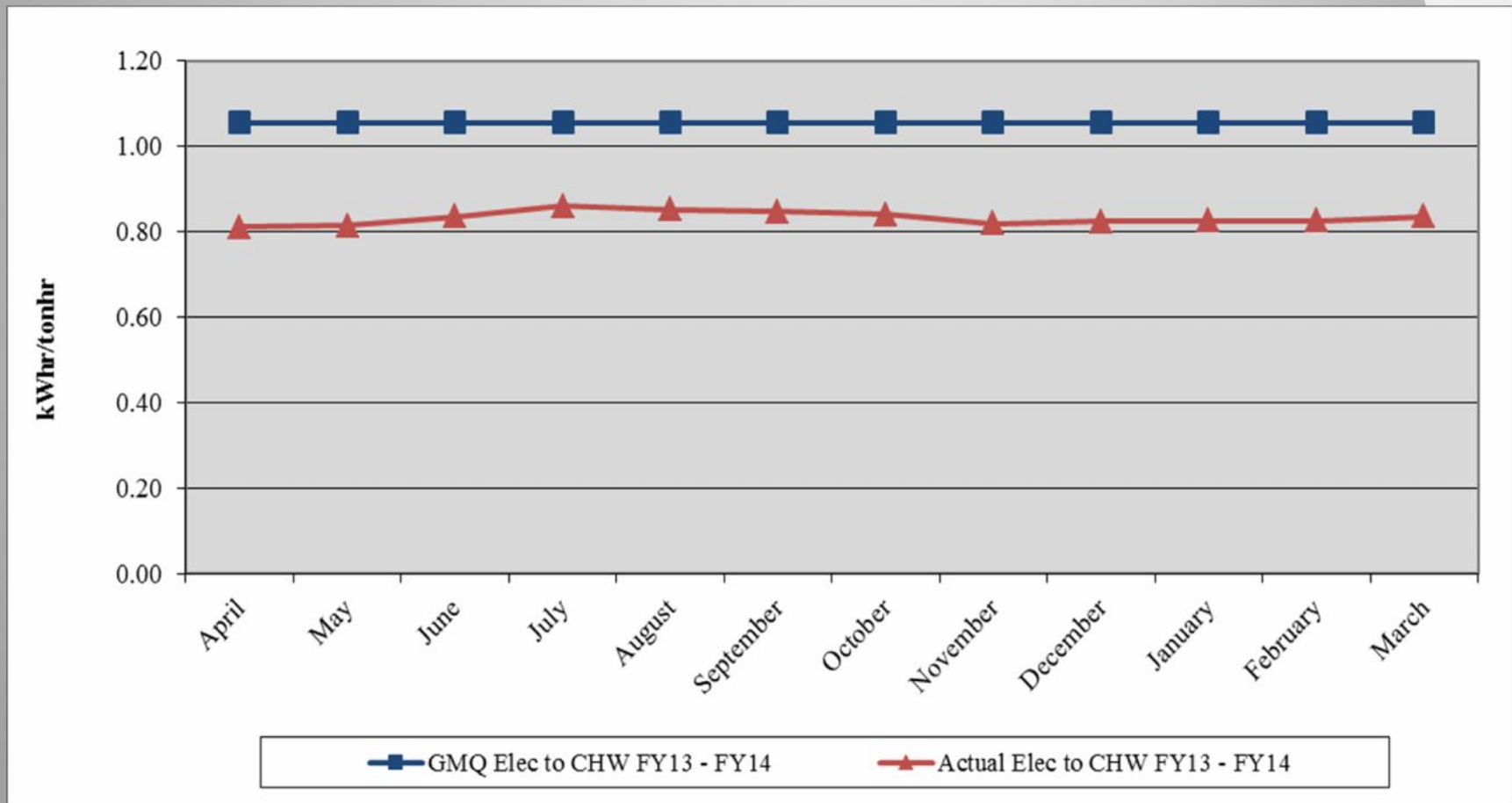
Performance Measurement FY14: Steam Plant Efficiency



Performance Measurement FY14: Steam Water Conversion ●

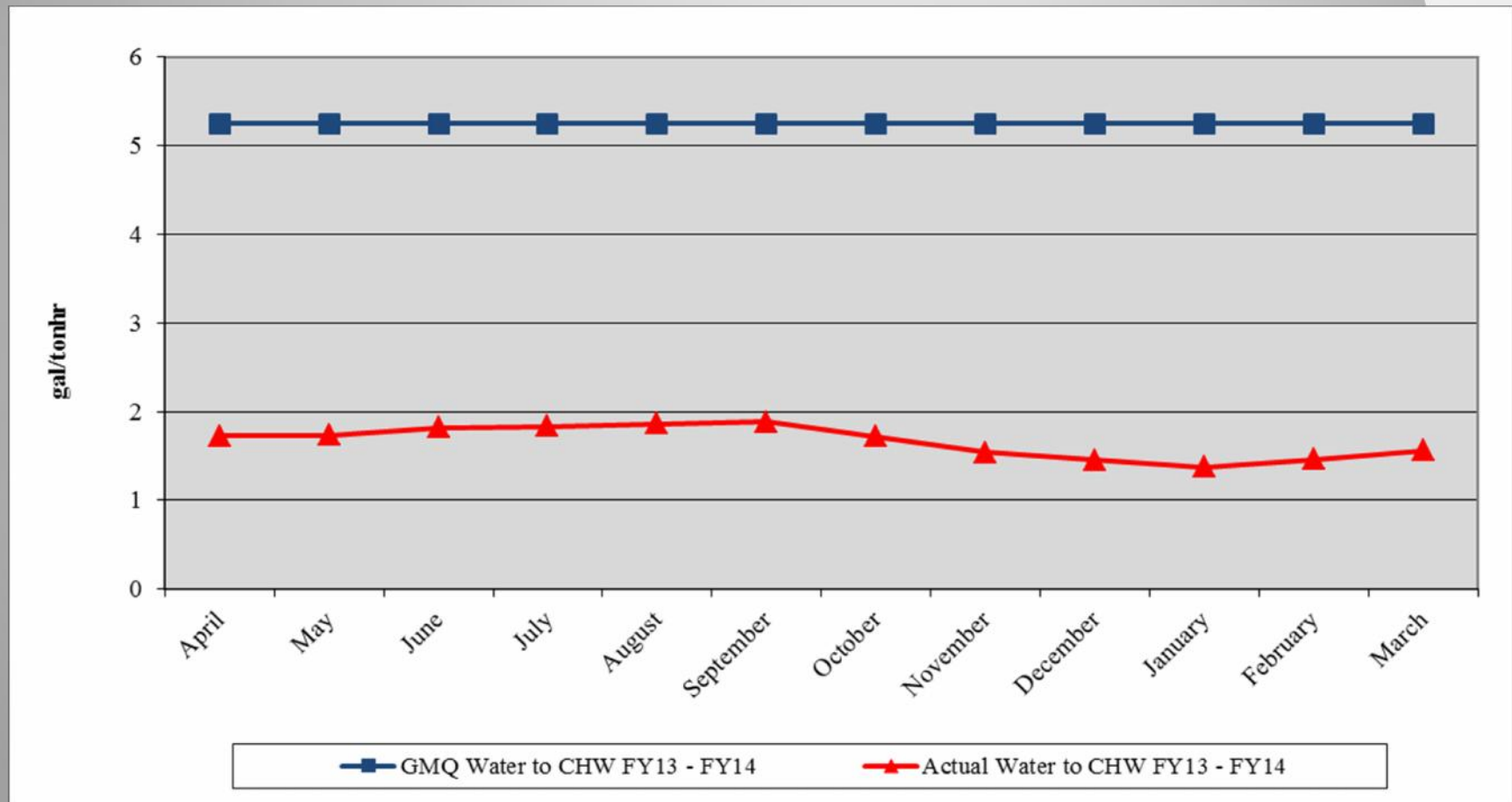


Performance Measurement FY14: CHW Electric Conversion ●



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 ●

(Note: Above based upon EDS 2nd Quarter FY14 review)



5. Natural Gas Purchasing

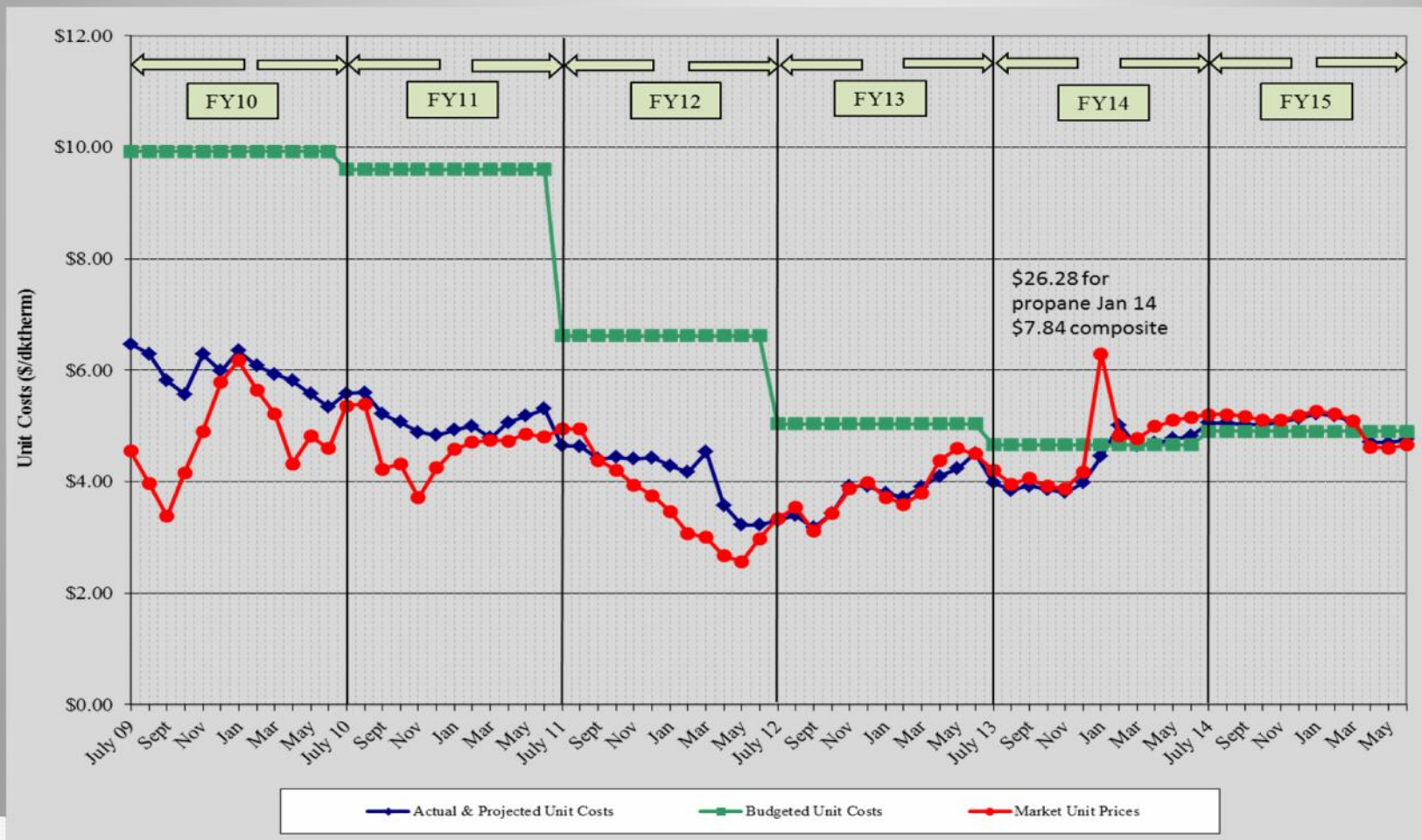
- ❖ Natural Gas Purchasing Review
 - ❖ Table 5: FY14 Gas Spending & Budget Comparison
 - ❖ Figure 5: Actual and Projected Gas Cost Comparison

Table 5: FY14 Gas Spending & Budget Comparison

		Actual FY14 To date (Mar 31)	Budget FY14	Percent Difference
Steam Sendout (Mlbs)		385,059	305,696	-26.0%
Fuel Use (Dth) (includes propane)	●	529,621	428,280	-23.7%
Plant Eff (Dth/Mlb)	●	1.375	1.401	1.9%
Total Gas Cost (includes propane)	●	\$2,805,580	\$1,995,785	-40.6%
Unit Cost of Fuel (\$/Dth)	●	\$5.297	\$4.660	-13.7%

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	\$ 3,344,945	72.98%
Pass Throughs				
Non-Energy	\$ 937,672	\$ 1,091,000	\$ 479,373	43.94%
Water/Sewer	\$ 501,903	\$ 714,300	\$ 366,487	51.31%
Natural Gas Base	\$ 2,491,106	\$ 2,515,126	\$ 2,224,749	88.45%
Natural Gas Contingency	\$ -	\$ 640,974	\$ 640,974	100.00%
Electricity	\$ 5,277,414	\$ 6,585,000	\$ 3,686,190	55.98%
Debt Service	\$ 4,209,145	\$ 5,518,700	\$ 2,847,644	51.60%
Total Expenses	\$ 17,818,340	\$ 21,648,600	\$ 13,590,361	62.78%
Total Revenues	\$ 16,739,403	\$ 19,690,300	\$ 14,000,701	71.10%
Metro Funding Amount	\$ 1,078,937	\$ 1,958,300	\$ 1,468,725	75.00%

7. Capital Expenditure Update

	Spent to End of FY13	FY14 Spending	Balance to Date (04/18/14)
R&I Projects	\$2,181,091	\$104,869	\$148,623
49109-2010 Bond	\$1,888,400	\$2,857	\$518,743
49107-Customer Connection Fund	\$5,825,733	\$688,165	\$1,986,102
Total	\$9,895,224	\$795,891	\$2,653,468

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-103: Sheraton CHW Modifications – Bid & Awarded late 2nd Quarter; exterior construction completed during 3rd Quarter; in close out

Capital Projects Review

Capital Projects in Close-out

- DES 100: MH-10 Sump Pump and Roof Replacement
- DES 103: Sheraton CHW Modifications

8. *DES Internal Audit*

- **Audit Objectives**

- Determine if contract performance requirements were monitored by TEG
- Determine if transactions for energy purchases, capital projects, engineering services, metering, billing, and collections, and DES marketing were in accordance with contract terms
- Audit scope included fiscal years ended June 30, 2012 and June 30, 2013

- **Audit Observations**

- TEG provided the required oversight on behalf of MNDES and contract performance requirements were being monitored
- CNE operated, maintained, and managed the facility as required within contractual terms for daily operations
- State sales tax was paid by CNE and Metro for industrial machinery and other items during the audit period. The TN Department of Revenue allows a qualified manufacturer and/or their contractor to make application for an industrial machinery tax exemption.
- No major findings

- **Audit Recommendations**

- Develop contract monitoring plan and checklist to review Contract Administrator invoices
- Ensure more timely contract change authorizations to cover additional costs outside the Contract Administrator's operations contract
- Submit application for a qualified manufacture/producer and industrial machinery tax-exemption certificate with the Tennessee Department of Revenue
- DES concurs with the audit recommendations and is in the process of developing and implementing recommendations

9. Other Board Member Items

*Customer Meeting / DES 10th Anniversary
May 22, 2014, 11:30 am at Downtown
Partnership*

10. *Adjourn*

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