



Metro Nashville
DISTRICT ENERGY SYSTEM

DES Advisory Board Meeting
Fourth Quarter FY15
August 20, 2015

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. FY15 Costs to Date
7. FY16 Budget
8. Capital Projects Review & Status
9. Potential Customer: Lifeway
10. Other Board Member Items
11. Adjourn



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

3. *Customer Sales*

- ❖ Table 3A: Customer Cost Comparison




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

		Steam - Rolling 12 Month			Chilled Water - Rolling 12 Month		
		July 2013 - June 2014	July 2014 - June 2015	% Diff.	July 2013 - June 2014	July 2014 - June 2015	% Diff.
Private	Cost	\$ 1,494,950	\$ 1,501,662	0.45%	\$ 3,313,129	\$ 3,470,158	4.74%
	Usage (lbs or tonhrs)	92,588,814	95,284,693	2.91%	17,002,070	17,281,059	1.64%
	Unit Cost	\$ 16.15	\$ 15.76	-2.4%	\$ 0.195	\$ 0.201	3.0%
State	Cost	\$ 2,145,493	\$ 2,085,856	-2.78%	\$ 3,304,434	\$ 3,308,638	0.13%
	Usage (lbs or tonhrs)	122,182,740	119,251,395	-2.40%	15,262,594	13,869,881	-9.13%
	Unit Cost	\$ 17.56	\$ 17.49	-0.4%	\$ 0.217	\$ 0.239	10.2%
Metro	Cost	\$ 2,765,773	\$ 2,479,075	-10.37%	\$ 5,359,536	\$ 5,498,511	2.59%
	Usage (lbs or tonhrs)	190,482,533	161,476,275	-15.23%	28,993,711	27,908,434	-3.74%
	Unit Cost	\$ 14.52	\$ 15.35	5.7%	\$ 0.185	\$ 0.197	6.6%
Aggregate	Cost	\$ 6,511,863	\$ 6,193,909	-4.88%	\$ 11,977,099	\$ 12,385,880	3.41%
	Usage (lbs or tonhrs)	410,073,610	381,755,418	-6.91%	61,258,375	59,626,410	-2.66%
	Unit Cost	\$ 15.88	\$ 16.22	2.2%	\$ 0.196	\$ 0.208	6.24%

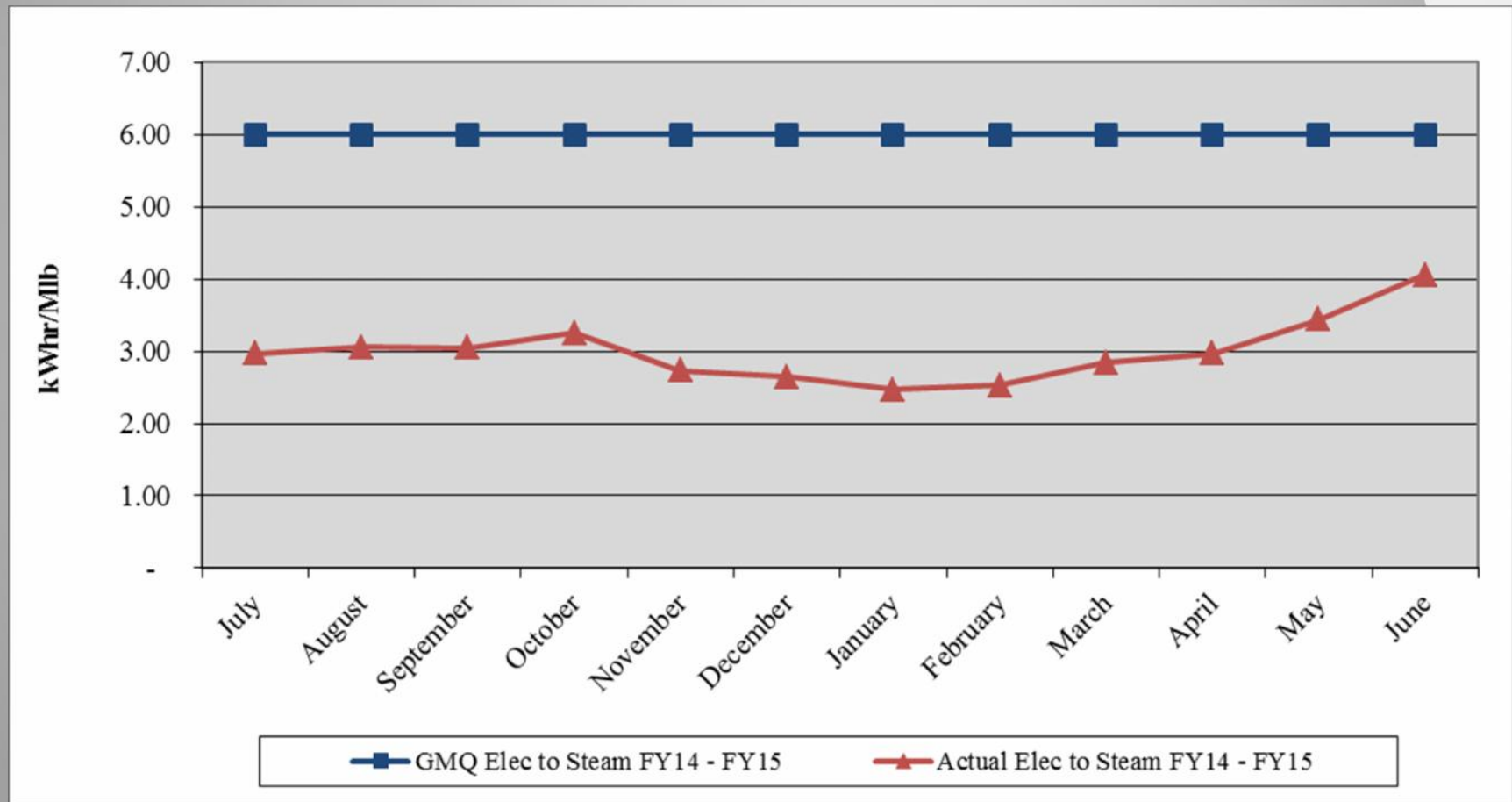
MFA not included in values shown

4. *Review of DES Contractor Performance*

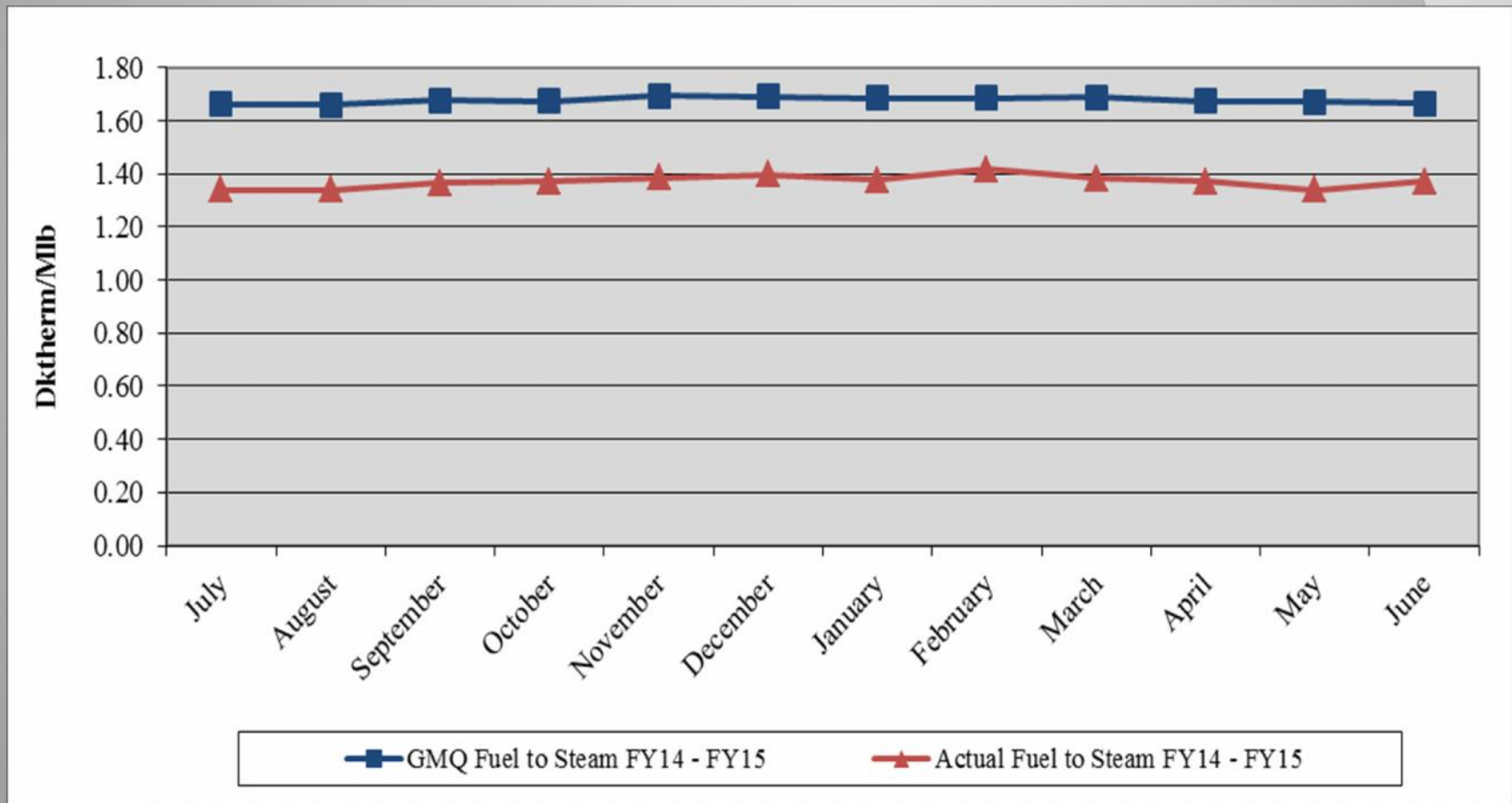
Contractor (CNE) is in compliance with their contractual obligations for FY15.

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

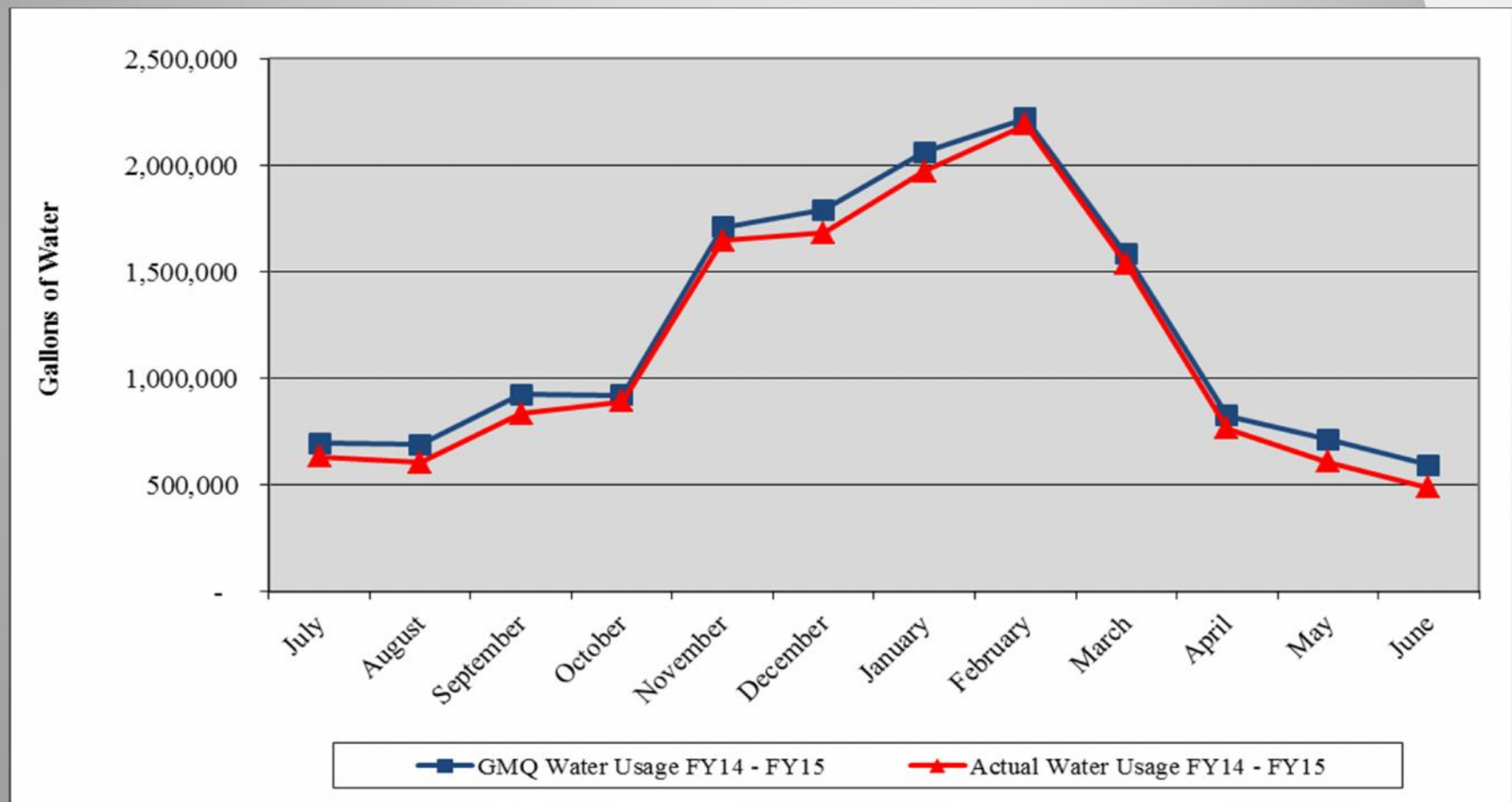
Performance Measurement FY15: Steam Electric Conversion ●



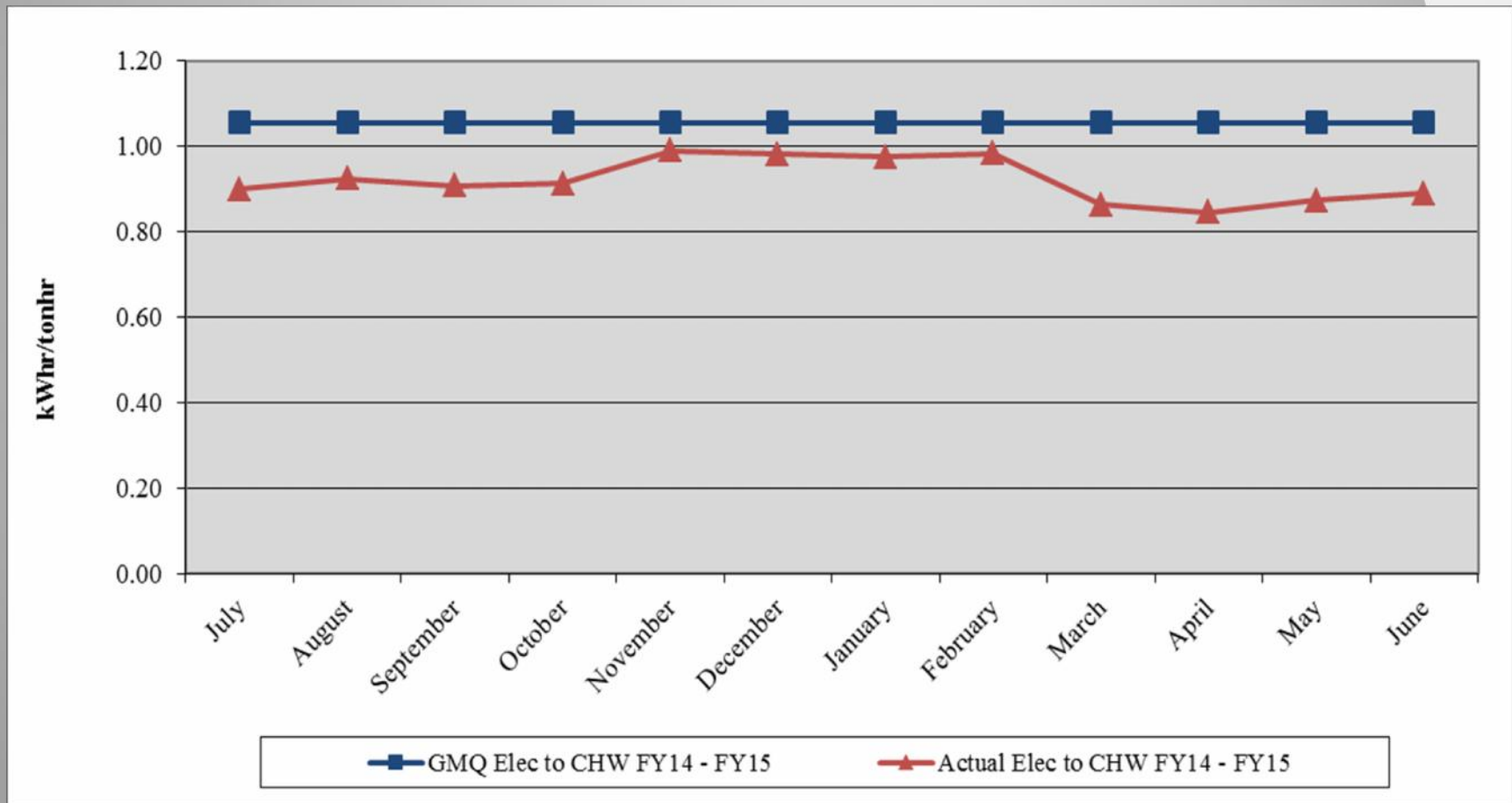
Performance Measurement FY15: Steam Plant Efficiency



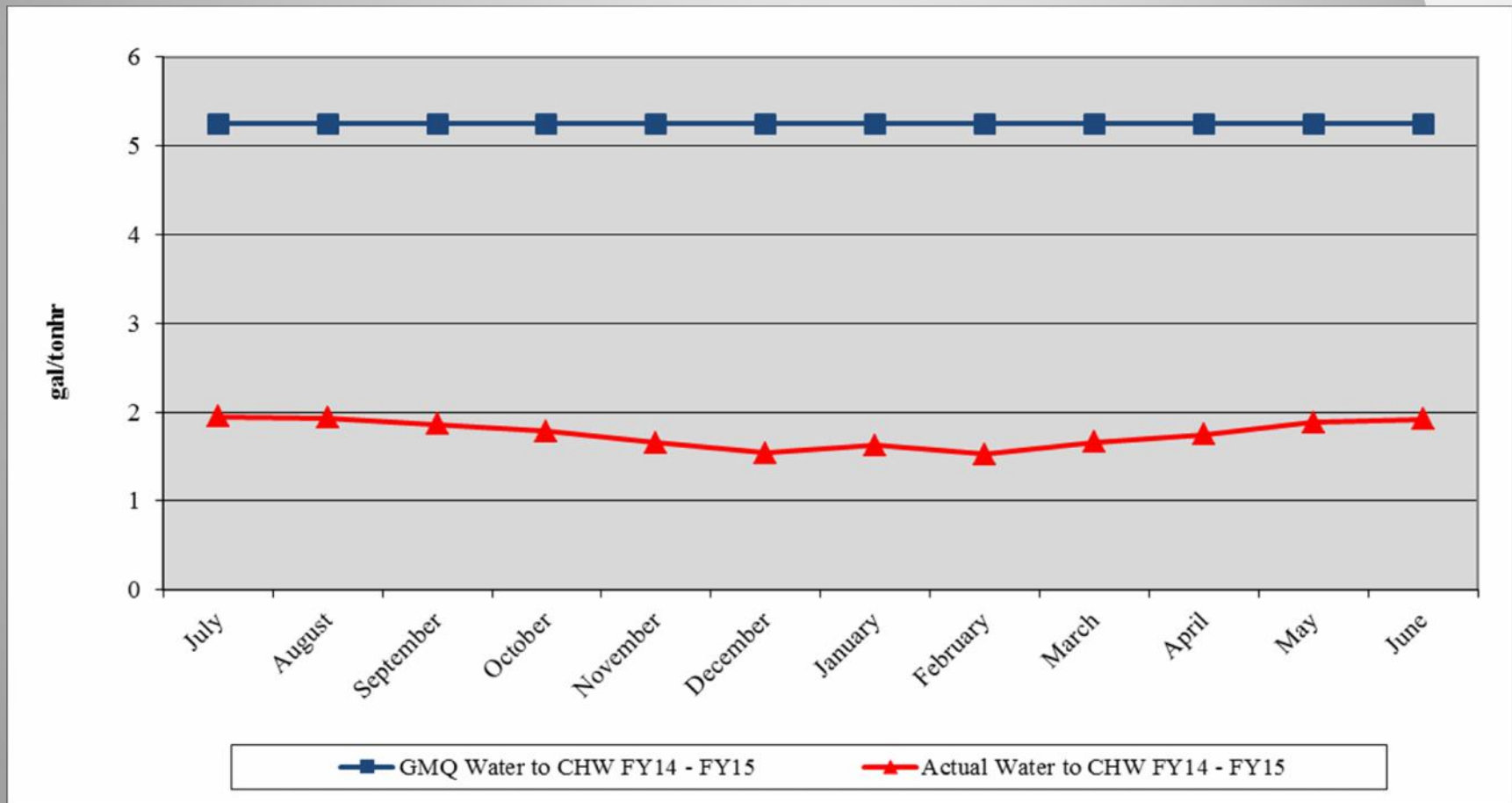
Performance Measurement FY15: Steam Water Conversion ●



Performance Measurement FY15: CHW Electric Conversion



Performance Measurement FY15: CHW Water Conversion ●





Water Treatment

❖ Steam and Condensate ●

- ❖ Corrosion
- ❖ Iron
- ❖ Hardness
- ❖ Chlorine/Sulfite

❖ Condensing Water ●

- ❖ Conductivity
- ❖ Biologicals

❖ Chilled Water ●

- ❖ Hardness
- ❖ Corrosion
- ❖ Biologicals
- ❖ Delta T Issue



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 6: FY15 Gas Spending & Budget Comparison
 - ❖ Figure 6: Actual and Projected Gas Cost Comparison

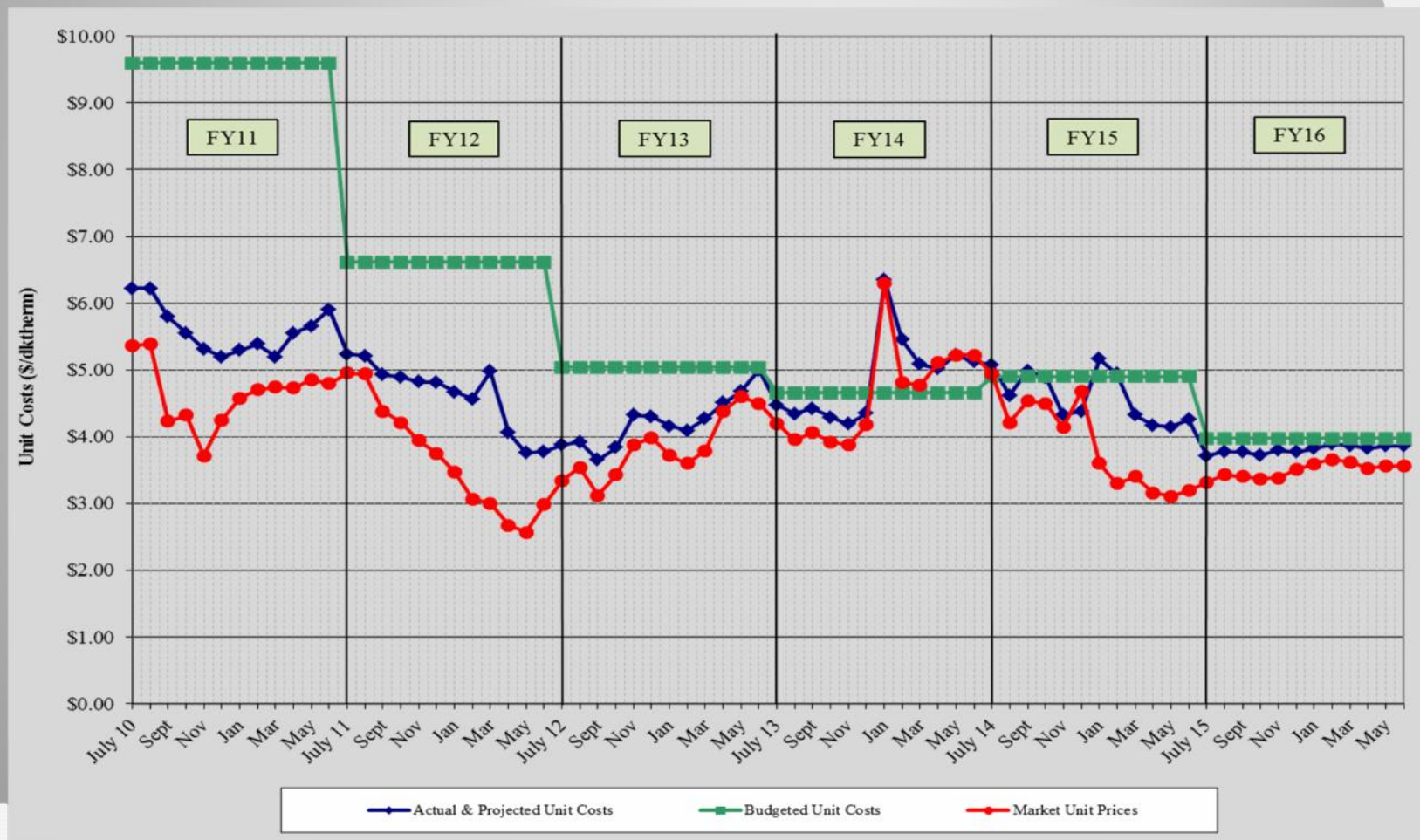
Table 5: FY15 Gas Spending & Budget Comparison

	Actual FY15 To date (June 30)	Budget FY15	Percent Difference
Steam Sendout (Mlbs)	440,426	436,677	0.9%
Fuel Use (Dth) (includes propane)	● 607,463	606,544	0.2%
Plant Eff (Dth/Mlb)	● 1.379	1.389	-0.7%
Total Gas Cost (includes propane)	● \$2,713,647	\$2,972,672	-8.7%
Unit Cost of Fuel (\$/Dth)	● \$4.467	\$4.901	-8.9%

Excludes consultant fees and FEA and budget contingency;

Includes transportation and propane costs

Figure 5. Actual and Projected Gas Cost Comparison History



6. FY15 Costs to Date

Item	FY14 Actual	FY15 Budget	FY15 Actual to date	Percent of FY15 Budget
FOC's	\$ 4,471,300	\$ 4,606,800	\$ 4,532,100	98.38%
Pass Throughs				
Non-Energy	\$ 1,070,900	\$ 1,041,300	\$ 1,226,400	117.78%
Water/Sewer	\$ 485,300	\$ 724,600	\$ 509,000	70.25%
Natural Gas Base	\$ 3,354,300	\$ 3,121,940	\$ 2,912,000	93.28%
Natural Gas Contingency	\$ -	\$ 635,260	\$ -	0.00%
Electricity	\$ 5,226,000	\$ 6,574,600	\$ 5,459,700	83.04%
Interest Revenue and ORF	\$ (28,800)	\$ (175,200)	\$ (36,700)	
Debt Service	\$ 5,734,500	\$ 5,645,900	\$ 5,646,000	100.00%
Total Expenses	\$ 20,313,500	\$ 22,175,200	\$ 20,248,500	91.31%
Total Revenues	\$ 18,397,000	\$ 20,325,700	\$ 18,466,300	90.85%
Metro Funding Amount	\$ 1,916,500	\$ 1,849,500	\$ 1,849,500	100.00%

7. FY16 Budget

Item	FY15 Budget	FY16 Budget	Percent Change
FOC's	\$ 4,606,800	\$ 4,668,200	1.33%
Pass Throughs			
Non-Energy	\$ 1,041,300	\$ 1,064,600	2.24%
Water/Sewer	\$ 724,600	\$ 745,400	2.87%
Natural Gas Base	\$ 3,121,940	\$ 2,954,515	-5.36%
Natural Gas Contingency	\$ 635,260	\$ 678,717	6.84%
Electricity	\$ 6,574,600	\$ 6,545,700	-0.44%
Interest Revenue and ORF	\$ (175,200)	\$ (156,900)	
Debt Service	\$ 5,645,900	\$ 5,571,800	-1.31%
Total Expenses	\$ 22,175,200	\$ 22,072,032	-0.47%
Total Revenues	\$ 20,325,700	\$ 20,272,932	-0.26%
Metro Funding Amount	\$ 1,849,500	\$ 1,799,100	-2.73%

8. *Capital Expenditure Update*

	Spent to End of FY14	FY15 Spending	Balance to Date (06/30/15)
R&I Projects	\$2,293,259	\$286,125	\$46,885
49109-2010 Bond	\$1,911,257	\$398,163	\$316,497
49107-Customer Connection Fund	\$6,568,602	\$143,020	\$1,788,379
Total	\$10,773,118	\$827,308	\$2,151,761

Capital Projects Review

Active Capital Projects

- DES 061: MH & Tunnel Steel Corrosion Repair & Prevention – ongoing
- DES 104: TOU – developing TOU invoicing changes
- DES 107: West Riverfront Park Manhole Repairs
- DES 110: EGF Alternate Fuels Evaluation – Awaiting Final Report from CNE
- DES 111: EGF Combined Heat and Power – Development Phase
- DES 112: Condensate Repair at Cordell Hull Building (State)

Capital Projects Review

Capital Projects in Close-out

- DES 089: AA Birch Tunnel Repairs
- DES 105: Vertical Tunnel Shaft Repairs at Suntrust Building
- DES 106: MCH Chilled Water Bypass
- DES 108: 7th Avenue Tunnel Insulation Repairs
- DES 109: Indigo Hotel Sparge Tube

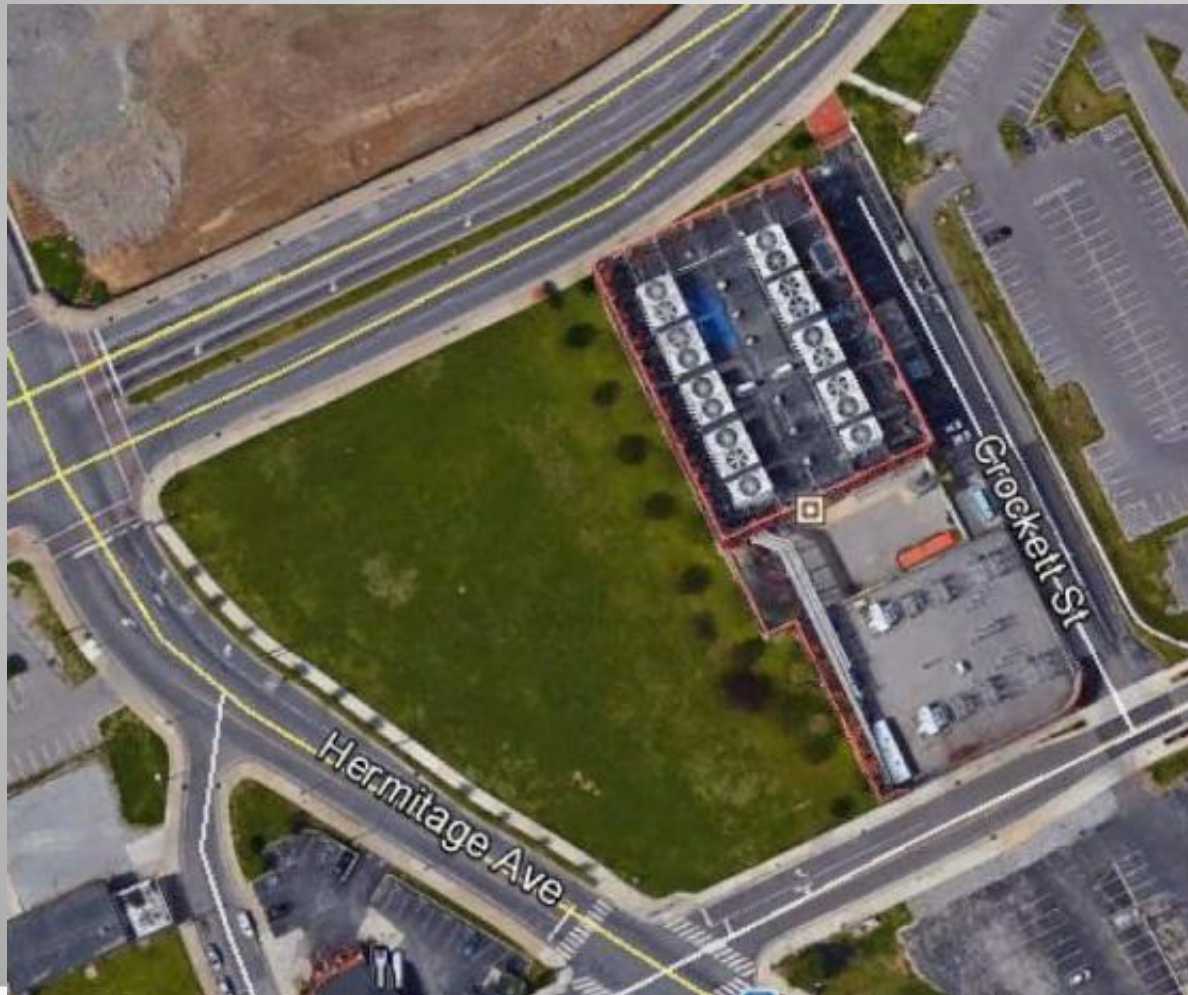
9. *Potential Customer: Lifeway*

- Approx 257,000 sq ft Office Building Next Door
- Anticipated CHW Demand of 492 tons
- Anticipated Steam Demand of 2,500 pph
- Ground Breaking Fall 2015 – Completion in Fall 2017



Metro Nashville
DISTRICT ENERGY SYSTEM

Lifeway Building Location



10. Other Board Member Items

11. Adjourn

- *Advisory Board Meeting Schedule*
- FY16 – 1st Quarter Meeting – November 19, 2015
- FY16 – 2nd Quarter Meeting – February 18, 2016
- FY16 – 3rd Quarter Meeting – May 19, 2016
- FY16 – 4th Quarter Meeting – August 18, 2016