



Metro Nashville
DISTRICT ENERGY SYSTEM

DES Advisory Board Meeting
First Quarter FY20
November 21, 2019



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 Update
6. FY20 Costs to Date
7. FY20 Budget
8. Marketing
9. DES RFP Status Update
10. Capital Projects Review & Status
11. Other Board Member Items
12. Adjourn

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

3. Customer Sales




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

		Steam - Rolling 12 Month			Chilled Water - Rolling 12 Month		
		Oct 2017 - Sept 2018	Oct 2018 - Sept 2019	% Diff.	Oct 2017 - Sept 2018	Oct 2018 - Sept 2019	% Diff.
Private	Cost	\$ 1,428,765	\$ 1,526,221	6.82%	\$ 3,801,716	\$ 3,741,968	-1.57%
	Usage (lbs or tonhrs)	97,793,958	101,532,569	3.82%	19,995,945	19,813,178	-0.91%
State	Cost	\$ 1,812,248	\$ 1,841,975	1.64%	\$ 3,367,469	\$ 3,221,003	-4.35%
	Usage (lbs or tonhrs)	119,542,528	115,253,370	-3.59%	14,196,589	12,932,819	-8.90%
Metro	Cost	\$ 1,843,706	\$ 1,927,911	4.57%	\$ 5,112,675	\$ 5,004,052	-2.12%
	Usage (lbs or tonhrs)	154,261,565	154,722,051	0.30%	28,435,474	28,775,581	1.20%
Aggregate	Cost	\$ 5,084,718	\$ 5,296,108	4.16%	\$ 12,281,860	\$ 11,967,024	-2.56%
	Usage (lbs or tonhrs)	371,598,051	371,507,990	-0.02%	62,628,008	61,521,578	-1.77%
	Unit Cost	\$ 13.68	\$ 14.26	4.2%	\$ 0.196	\$ 0.195	-0.81%

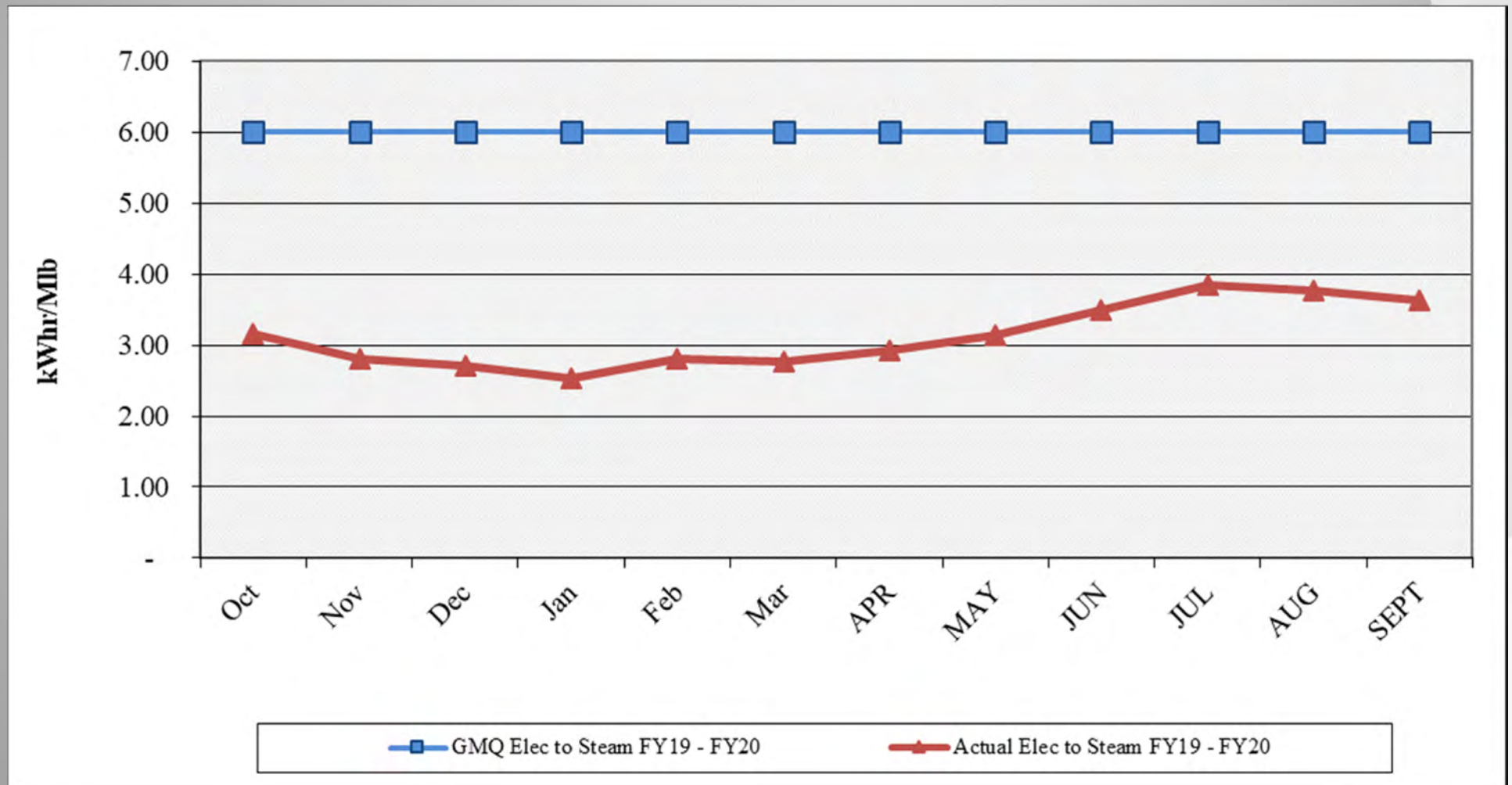
MFA not included in values shown

4. *Review of DES Contractor Performance*

Contractor (CNE) is in compliance with their contractual obligations for FY20 to date.

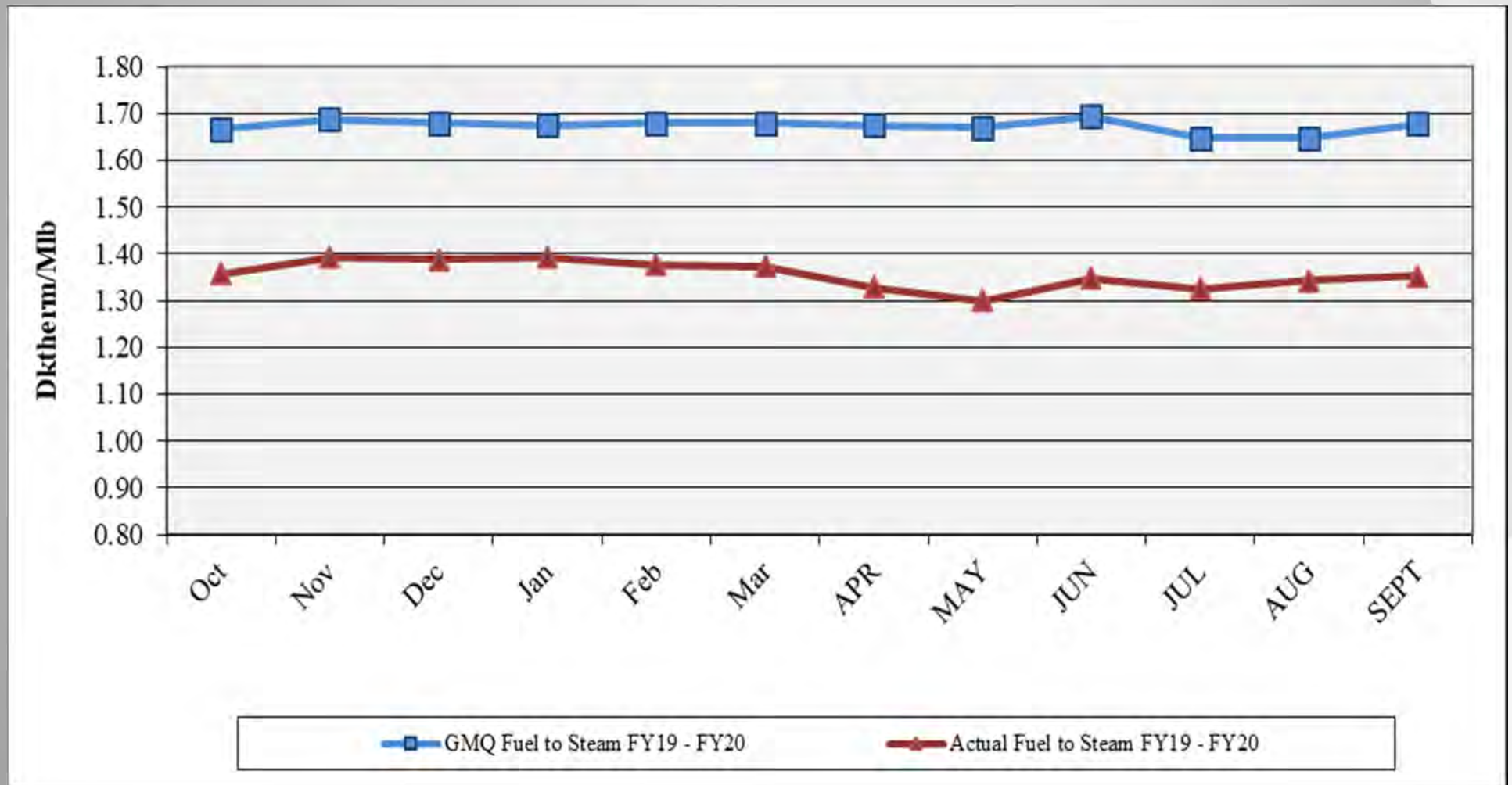
-  Excellent Performance – No Improvement Necessary
-  Satisfactory Performance – Some Improvement Could Be Made
-  Poor Performance – Much Improvement Necessary

Performance Measurement FY20: Steam Electric Conversion ●

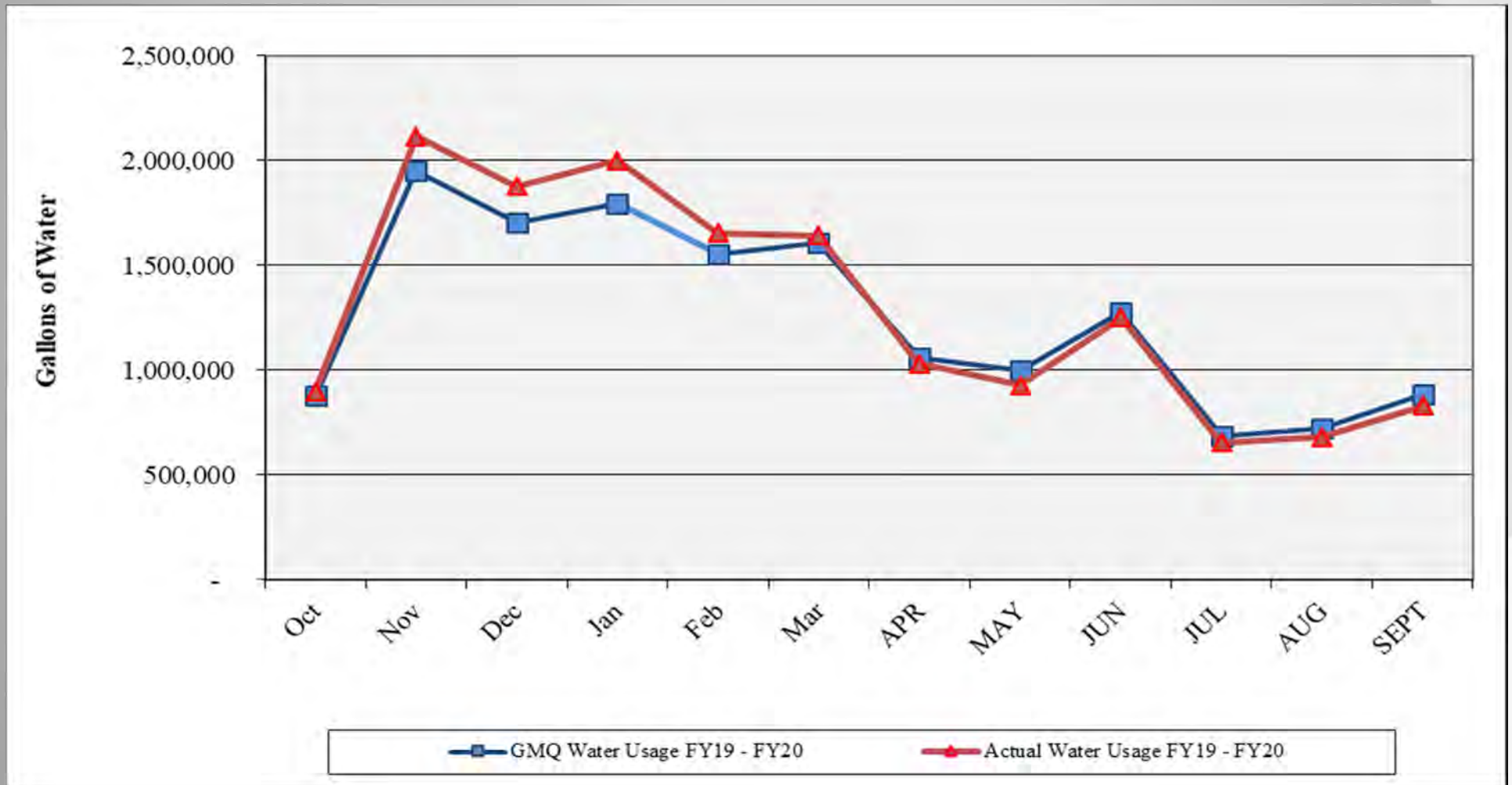


Values of 3.50 to 4.00 in summer months are not unusual.

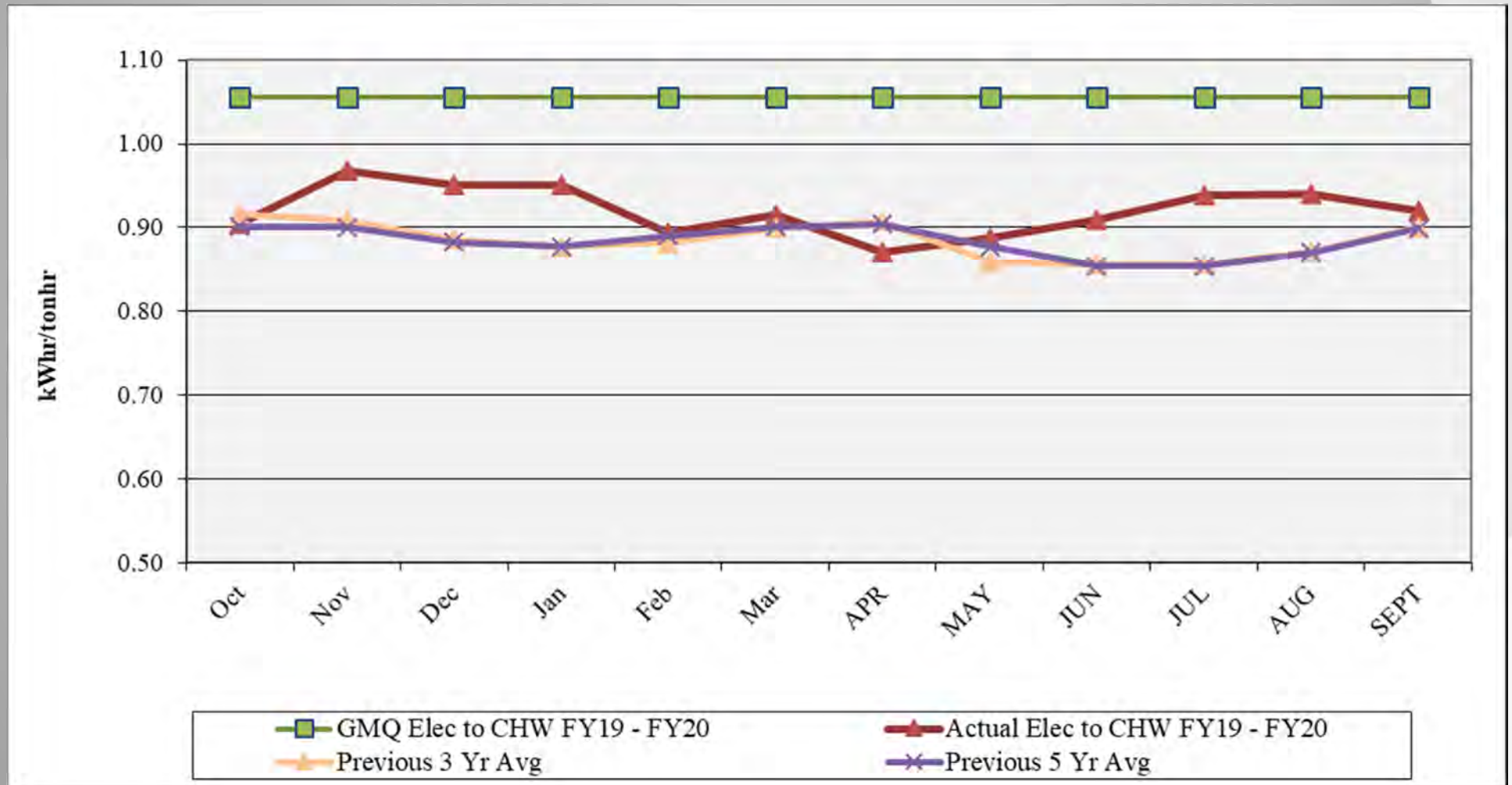
Performance Measurement FY20: Steam Plant Efficiency



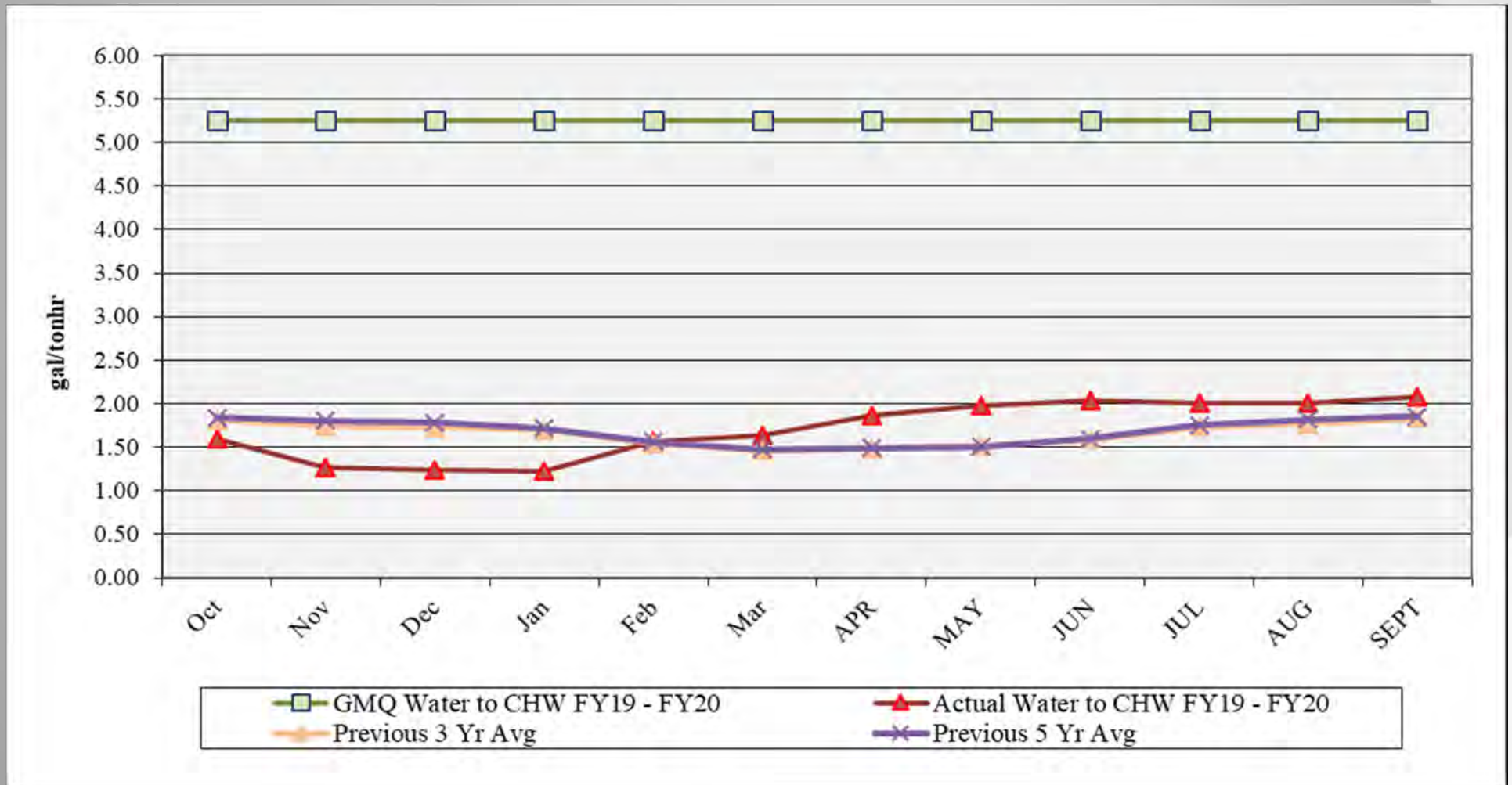
Performance Measurement FY20: Steam Water Conversion ●



Performance Measurement FY20: CHW Electric Conversion



Performance Measurement FY20: CHW Water Conversion ●





Water Treatment

❖ Steam and Condensate

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

❖ Condensing Water

- ❖ Conductivity
- ❖ Biologicals

❖ Chilled Water

- ❖ Hardness
- ❖ Corrosion
- ❖ EGF and Customer Biologicals Good
- ❖ Deposits

Q1

Q4

Q3





EGF Walkthrough

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

	Q1	Q4	Q3
Equipment Maintenance	●	●	●
Operations	●	●	●
Electrical	●	●	●
Housekeeping	●	●	●
Building Structure	●	●	●
Building Exterior and Grounds	●	●	●



EDS Walkthrough

	Q1	Q4	Q3
✓ Vault/Tunnel Housekeeping	●	●	●
✓ Maintenance Items			
✓ Insulation Repair/Replacement	●	●	●
✓ Water Infiltration	●	●	●
✓ Corrosion of Structural Metal Components	●	●	●
✓ Safety Items	●	●	●

5. Natural Gas Purchasing

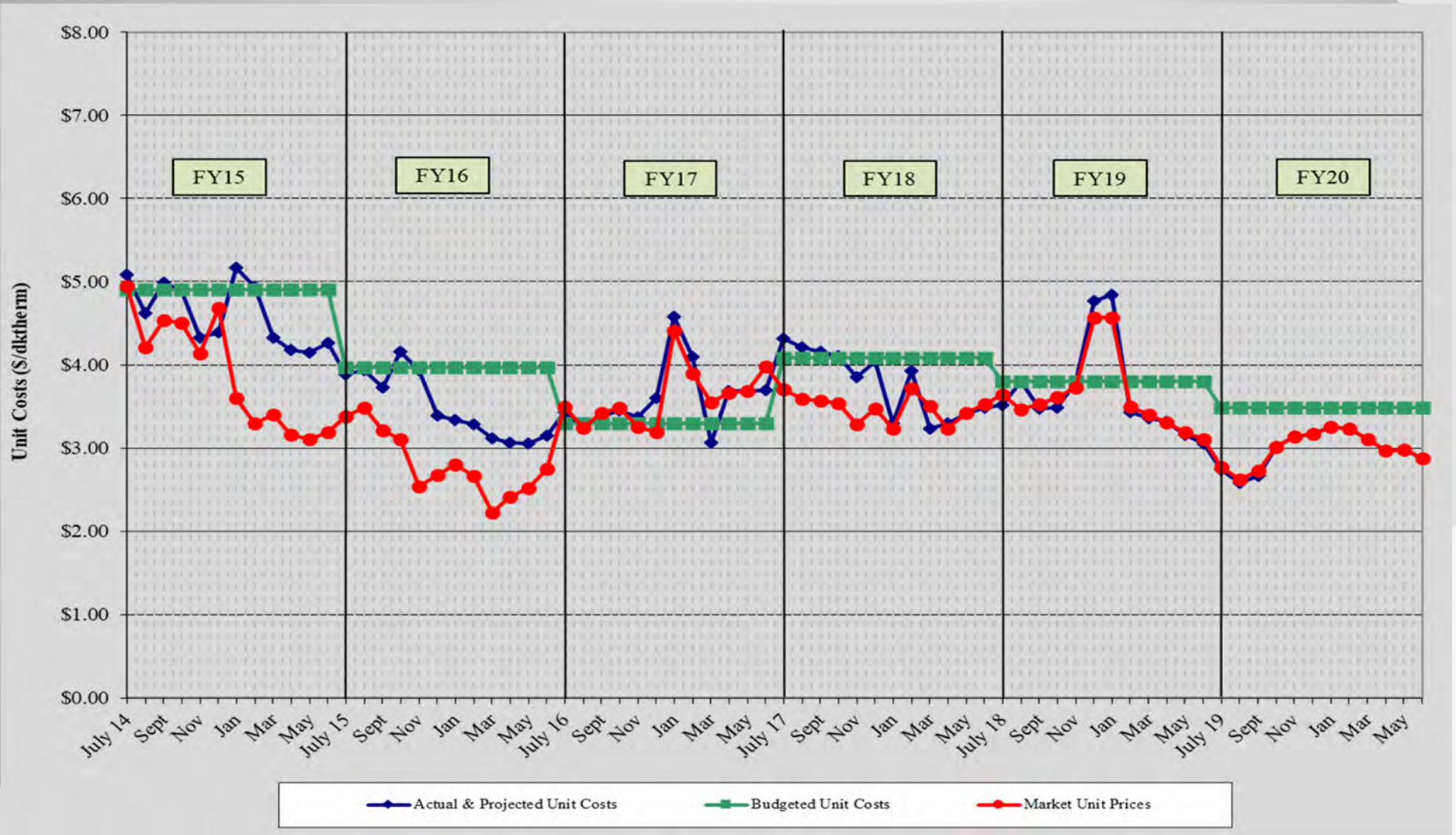
- ❖ Natural Gas Purchasing Review
 - ❖ Table 5: FY20 Gas Spending & Budget Comparison
 - ❖ Figure 5: Actual and Projected Gas Cost Comparison

Table 5: FY20 Gas Spending & Budget Comparison

	Actual FY20 To date (Sept 30)	Budget FY20	Percent Difference
Steam Sendout (Mlbs)	63,453	64,776	-2.0%
Fuel Use (Dth) (includes propane) ●	85,012	94,119	-9.7%
Plant Eff (Dth/Mlb) ●	1.340	1.453	-7.8%
Total Gas Cost (includes propane) ●	\$226,158	\$327,534	-31.0%
Unit Cost of Fuel (\$/Dth) ●	\$2.660	\$3.480	-23.6%

Excludes consultant fees and FEA and budget contingency; Includes transportation and actual propane costs and usages

Figure 5. Actual and Projected Gas Cost Comparison History





6. *FY20 Costs to Date*

Item	FY20 Budget	FY20 Actual to date	Percent of FY20 Budget
FOC's	\$ 4,601,600	\$ 1,157,626	25.16%
Pass Throughs			
Non-Energy	\$ 934,300	\$ 389,830	41.72%
Water/Sewer	\$ 714,000	\$ 189,467	26.54%
Fuel Base	\$ 2,202,900	\$ 243,745	11.06%
Fuel Contingency	\$ 879,800	\$ -	0.00%
Electricity	\$ 5,977,200	\$ 1,843,401	30.84%
ORF Deposit	\$ -	\$ -	
Debt Service	\$ 5,079,200	\$ 1,514,436	29.82%
Total Expenses	\$ 20,389,000	\$ 5,338,506	26.18%
Total Revenues	\$ 19,070,500	\$ 4,823,220	25.29%
Metro Funding	\$ 1,318,500	\$ 515,286	39.08%

Actual Costs to Date do not include True-up Items.



7. FY20 Budget

Item	FY19 Budget	FY20 Budget	Percent Change From FY19 Budget
FOC's	\$ 4,804,000	\$ 4,601,600	-4.21%
Pass Throughs			
Non-Energy	\$ 1,180,500	\$ 934,300	-20.86%
Water/Sewer	\$ 751,900	\$ 714,000	-5.04%
Natural Gas Base	\$ 2,173,300	\$ 2,575,700	18.52%
Natural Gas Contingency	\$ 816,400	\$ 507,000	-37.90%
Electricity	\$ 5,646,100	\$ 5,977,200	5.86%
ORF Deposit	\$ -	\$ -	
Debt Service	\$ 5,420,200	\$ 5,079,200	-6.29%
Total Expenses	\$ 20,792,400	\$ 20,389,000	-1.94%
Total Revenues	\$ 19,152,100	\$ 19,070,500	-0.43%
Metro Funding	\$ 1,640,300	\$ 1,318,500	-19.62%

8. *Marketing*

New and Potential Customers

- Hyatt Centric (3rd Ave and Molloy)
 - CSA has been executed
 - 255-ton contract capacity; no steam
 - Service during construction Spring 2020; April 2021 opening
- Service to Lot K
 - Site directly to the east of EGF
 - Early stages of communication
 - Potential ~1,000 ton and ~15,000 pph

Marketing (con't)

- Service to New KVB Hotels
 - Two hotels with retail space ; discussions favorable
 - Site is between 1st Ave S, 2nd Ave S, KVB and Peabody St
 - Potential ~1,400 tons and ~20,000 pph
- Four Seasons
 - Site is on 1st Ave S between Demonbreun and Shelby Sts
 - Potential ~1,100 tons and ~10,000 pph
- Peabody St Hotel
 - Early stages of communications
 - Potential 2,000 to 3,000 tons

9. *DES RFP Status Update*

DES-139

- Pursuant to Metro's Award to Engie, Engie is continuing with their due diligence efforts
- Constellation appeal update
- Engie has completed the task of obtaining customer consents for the sale
- Engie developing plan to address TN Utilities Commission regulation
- Engie and Metro negotiating purchase contract

10. Capital Expenditure Update

	Spent to End of FY19	FY20 Spending	Balance to Date (09/30/19)
R&I Projects	\$3,675,354	\$77,234	\$58,380
49109-2010 Bond	\$2,596,698	\$1,227	\$7,991
49107-DES Infrastructure Fund	\$8,497,779	\$0	\$2,221
49116-DES Infrastructure Fund	\$822,320	\$245,011	\$692,670
Total	\$15,592,151	\$323,472	\$761,262



Capital Projects Review

Active Capital Projects

- DES 133.1: Broadway Tunnel Damage Recovery: ongoing
- DES 135: CHW Leak at 5th & Union: ongoing; leak repaired at 5th/Union with positive impact at JK Polk; leak in 3rd Ave N beside CJC - excavated w/o finding leak location; hydrant leak in same area
- DES 152: MH A & M Coating Repairs – postponed until FY20; anticipate bidding in 2nd or 3rd Qtr FY20
- DES 153: MH L Repairs – additional repairs may be added to scope; to be bid 2nd or 3rd Qtr FY20
- DES 154: Manhole K Repairs – postponed until FY20; will review priority relative to other projects



Capital Projects Review

Active Capital Projects - continued

- DES 157: MH 9 Repairs – bid in 1st Qtr FY20; construction in-progress
- DES 159: MH B2 Repairs – bid in 1st Qtr FY20; construction in-progress
- DES 160: 5th + Broadway Service Connection – connections for service completed; awaiting install of instruments
- DES 161: MH S6 Insulation – postponed until FY20; anticipate bidding during 2nd or 3rd Qtr FY20



Capital Projects Review

Active Capital Projects - continued

- DES 162: Hyatt Centric Service – wet-taps complete; pipe install in progress
- DES 163: MDHA Parcel K Service – negotiations with new customer in early stages
- DES 168: DES Service to 1st and KVB Hotels – negotiations with new customer in early stages
- DES 169: MH 20 Repairs – pipe supports corroded, require replacement; to be bid 2nd Qtr FY20



Capital Projects Review

Capital Projects in Close-out/Closed

- DES158 Manhole 18A Repairs

11. Other Board Member Items

12. Adjourn

- *Advisory Board Meeting Schedule*
- FY20 – 2nd Quarter Meeting – February 20, 2020
- FY20 – 3rd Quarter Meeting – May 21, 2020
- FY20 – 4th Quarter Meeting – August 20, 2020
- FY21 – 1st Quarter Meeting – November 19, 2020