



Metro Nashville
DISTRICT ENERGY SYSTEM

DES Advisory Board Meeting
Second Quarter FY20
February 26, 2020



Agenda

1. Call to Order
2. Election of Officers
3. Review & Approval of Previous Meeting Minutes
4. Customer Sales
5. Review of DES Contractor Performance
6. Natural Gas Purchasing Update
7. FY20 Costs to Date
8. FY20 Budget
9. Marketing
10. DES RFP Status Update
11. Capital Projects Review & Status
12. Other Board Member Items
13. Adjourn

1. Call to Order
2. Election of Officers

Advisory Board Members and Terms

Permanent Members:

Metro Director of Finance

Metro Director of General Services

Executive Director of MDHA

Representative of State of TN

Metro Council Representative (Freddie O'Connell, exp. concurrent with office; Aug 2023)

Private with Four Year Terms:

ISC Private Customer (Nick Woollen, exp. Aug 2021)

New Private Customer (Eric Schwartz, exp. Aug 2021)

Public Member (Brian Taylor, exp. June 2023)

Public Member (Yuri Cunza, exp. July 2021)

3. Review & Approval of Previous Meeting Minutes

4. Customer Sales




Summary Table 4: Customer Cost Comparison for the Previous 12 Months

| | | Steam - Rolling 12 Month | | | Chilled Water - Rolling 12 Month | | |
|------------------|-----------------------|--------------------------|------------------------|---------|----------------------------------|------------------------|---------|
| | | Jan 2018 - Dec 2018 | Jan 2019 - Dec 2019 | % Diff. | Jan 2018 - Dec 2018 | Jan 2019 - Dec 2019 | % Diff. |
| Private | Cost | \$ 1,497,197 | \$ 1,441,747 | -3.70% | \$ 3,817,880 | \$ 3,707,481 | -2.89% |
| | Usage (lbs or tonhrs) | 102,114,226 | 100,360,047 | -1.72% | 20,121,301 | 19,982,794 | -0.69% |
| State | Cost | \$ 1,875,324 | \$ 1,741,810 | -7.12% | \$ 3,347,508 | \$ 3,208,378 | -4.16% |
| | Usage (lbs or tonhrs) | 123,945,050 | 110,602,780 | -10.76% | 14,146,753 | 12,712,201 | -10.14% |
| Metro | Cost | \$ 1,903,237 | \$ 1,843,393 | -3.14% | \$ 5,141,555 | \$ 4,972,753 | -3.28% |
| | Usage (lbs or tonhrs) | 155,649,051 | 158,932,509 | 2.11% | 28,732,588 | 29,127,362 | 1.37% |
| Aggregate | Cost | \$ 5,275,758 | \$ 5,026,950 | -4.72% | \$ 12,306,943 | \$ 11,888,612 | -3.40% |
| | Usage (lbs or tonhrs) | 381,708,327 | 369,895,336 | -3.09% | 63,000,642 | 61,822,357 | -1.87% |
| | Unit Cost | \$ 13.82 | \$ 13.59 | -1.7% | \$ 0.195 | \$ 0.192 | -1.56% |

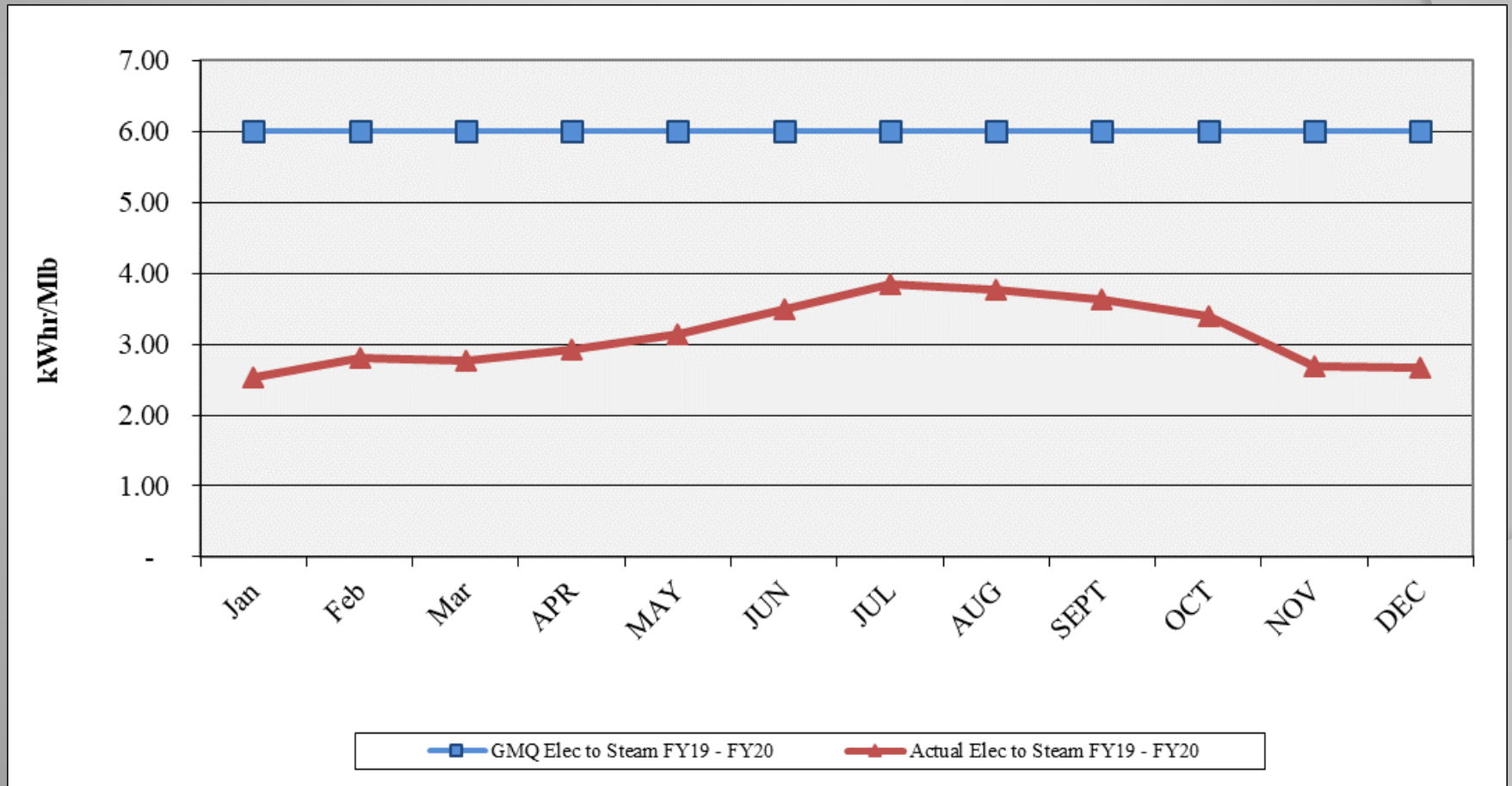
MFA is not included in values shown

5. *Review of DES Contractor Performance*

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

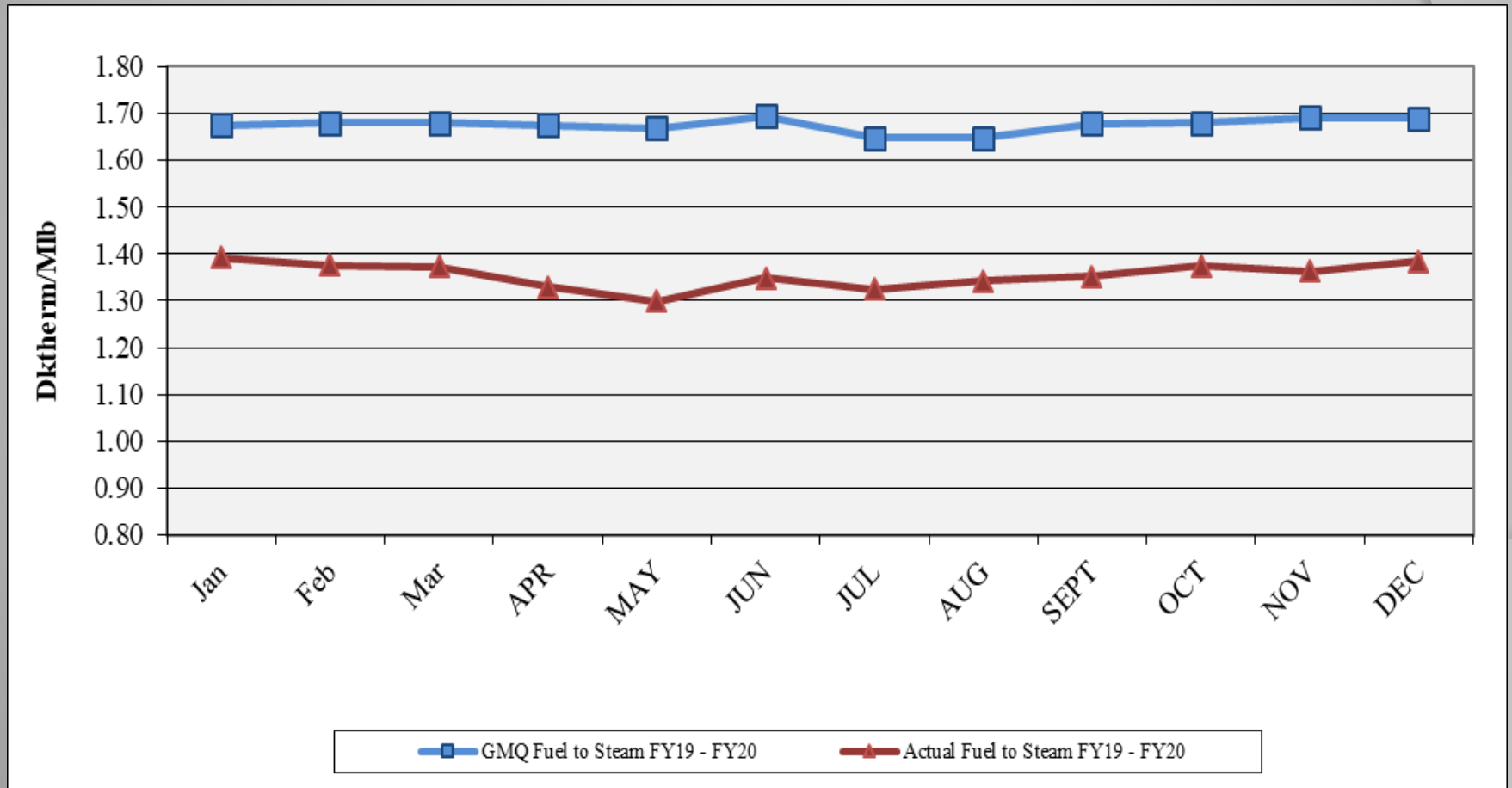
-  Excellent Performance – No Improvement Necessary
-  Satisfactory Performance – Some Improvement Could Be Made
-  Poor Performance – Much Improvement Necessary

Performance Measurement FY20: Steam Electric Conversion ●



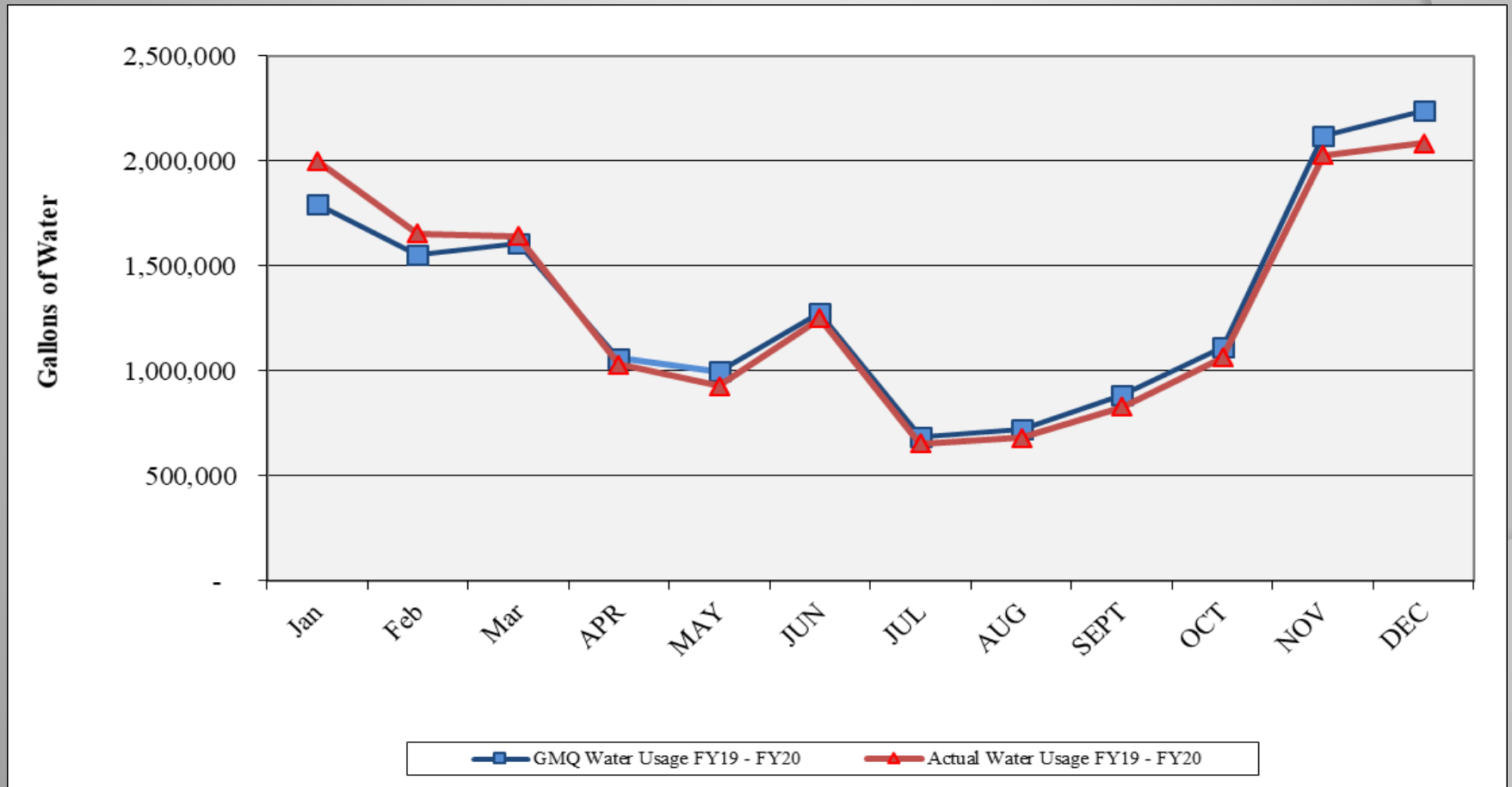
Values of 3.50 to 4.00 in summer months are not unusual.

Performance Measurement FY20: Steam Plant Efficiency

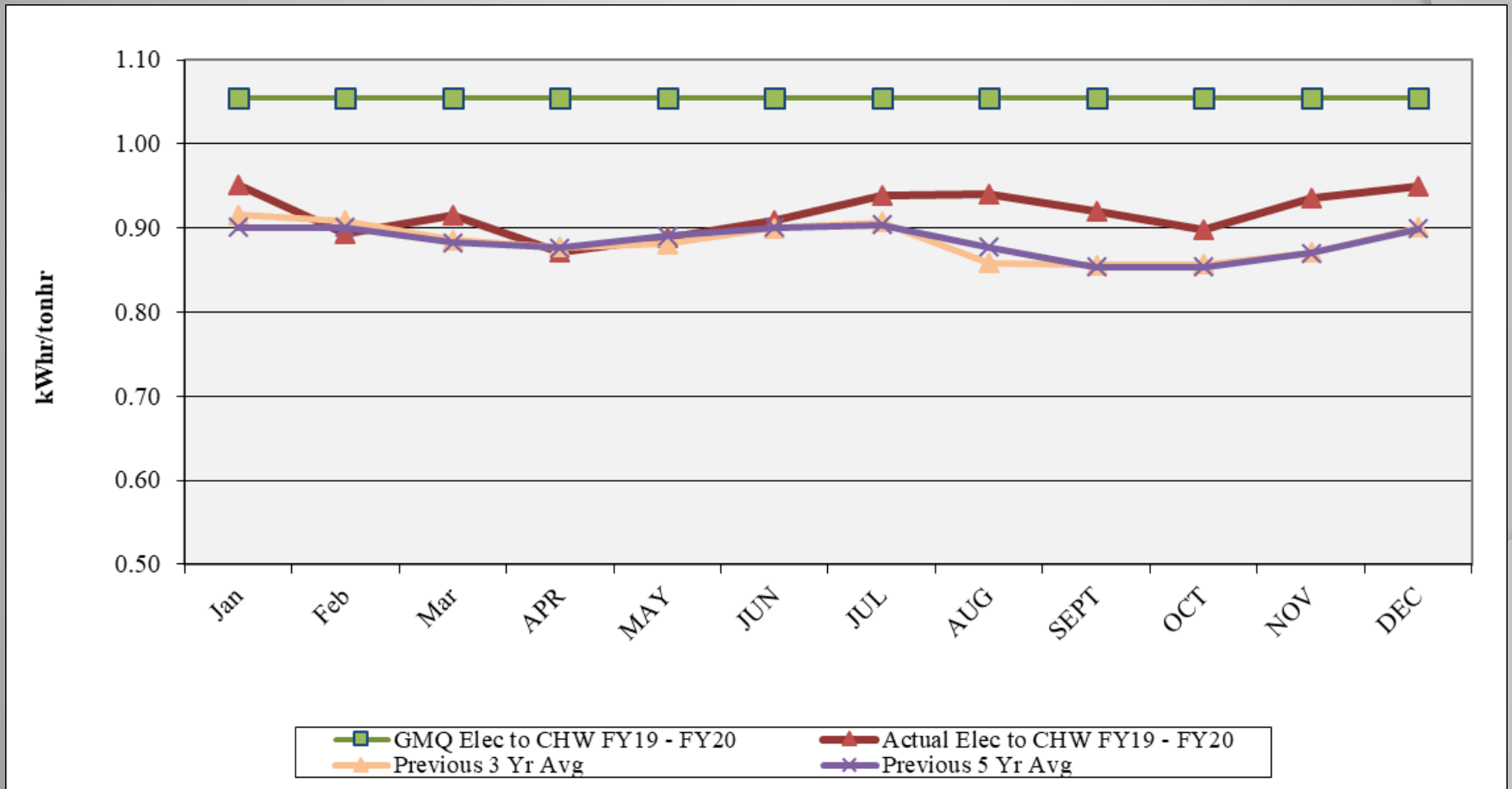




Performance Measurement FY20: Steam Water Conversion ●

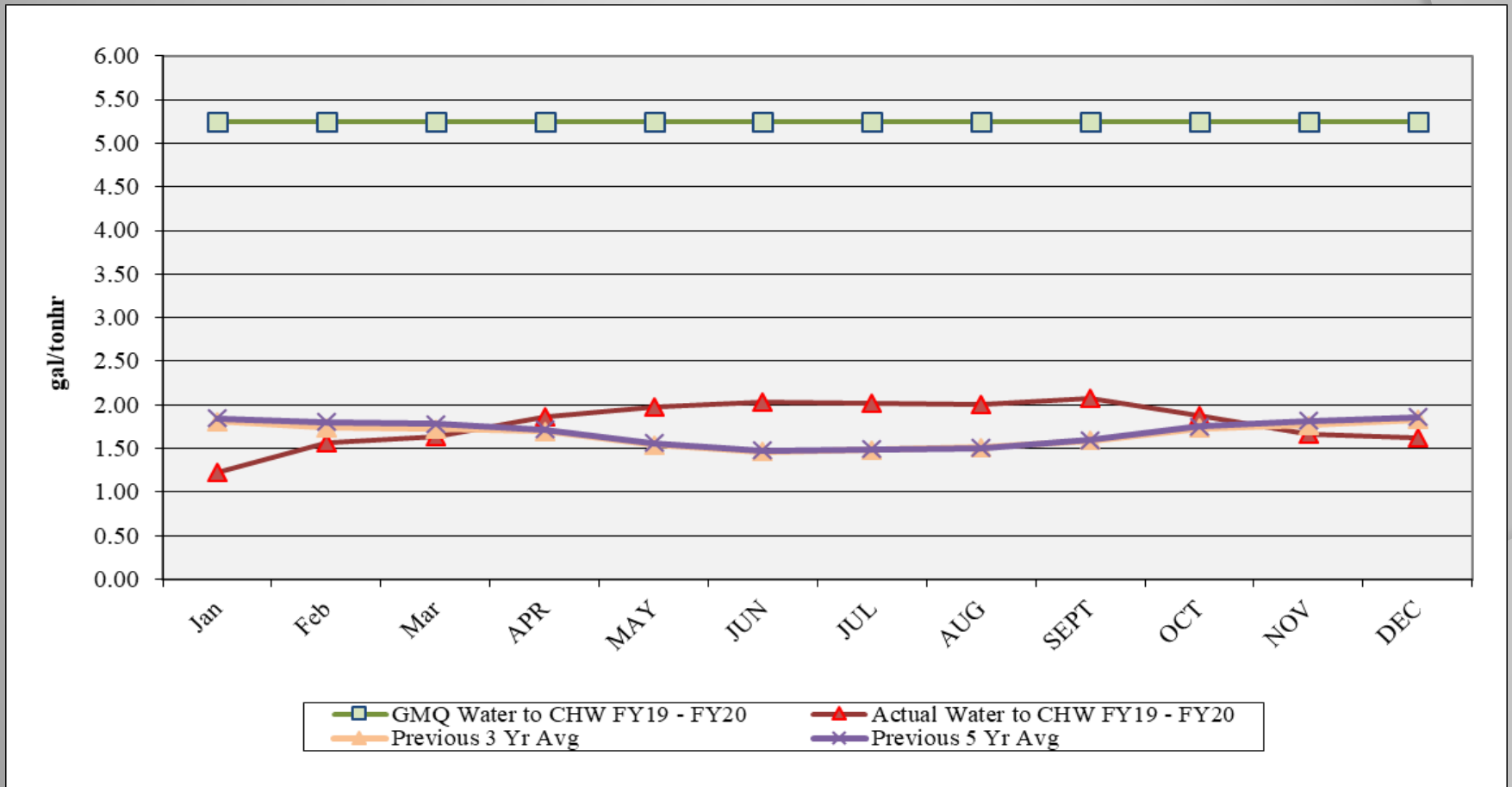


Performance Measurement FY20: CHW Electric Conversion



Performance Measurement FY20: CHW

Water Conversion ●





Water Treatment

Q2FY20 Q1FY20 Q4FY19 Q3FY19

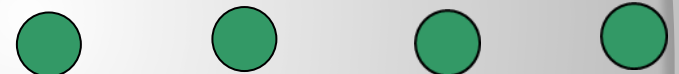
❖ Steam and Condensate

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



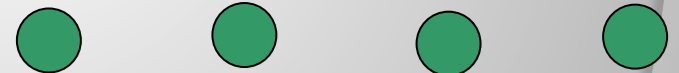
❖ Condensing Water

- ❖ Conductivity
- ❖ Biologicals



❖ Chilled Water

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





EGF Walkthrough

Q2FY20 Q1FY20 Q4FY19 Q3FY19

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



EDS Walkthrough

Q2FY20 Q1FY20 Q4FY19 Q3FY19

| | | | | |
|--|---|---|---|---|
| ✓ Vault/Tunnel Housekeeping | ● | ● | ● | ● |
| ✓ Maintenance Items | | | | |
| ✓ Insulation Repair/Replacement | ● | ● | ● | ● |
| ✓ Water Infiltration | ● | ● | ● | ● |
| ✓ Corrosion of Structural Metal Components | ● | ● | ● | ● |
| ✓ Safety Items | ● | ● | ● | ● |

6. *Natural Gas Purchasing*

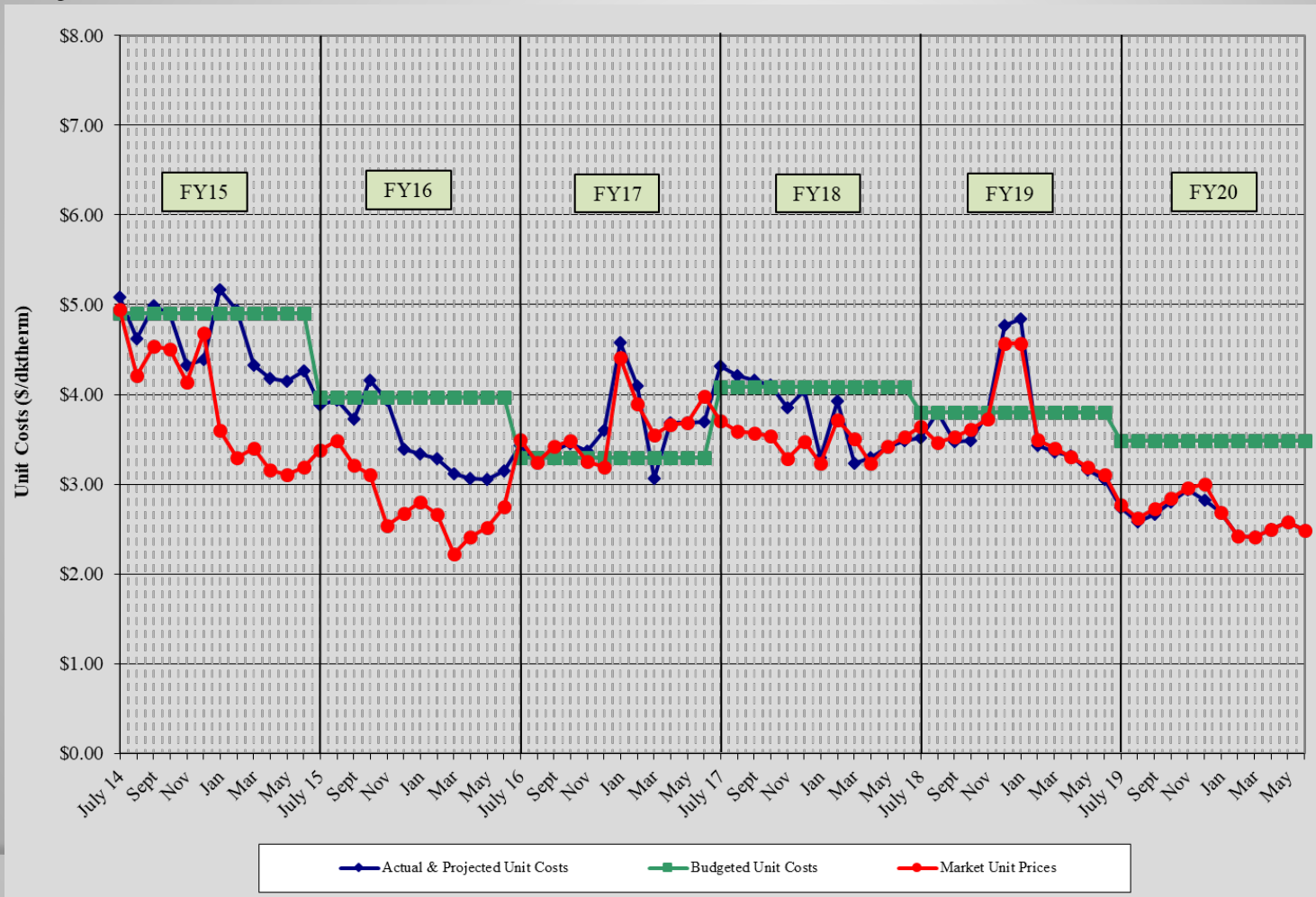
- ❖ Natural Gas Purchasing Review
 - ❖ Table 5: FY20 Gas Spending & Budget Comparison
 - ❖ Figure 5: Actual and Projected Gas Cost Comparison

Table 6: FY20 Gas Spending & Budget Comparison

| | | Actual FY20 To date (Dec 31) | Budget FY20 | Percent Difference |
|--------------------------------------|---|---------------------------------|-------------|-----------------------|
| Steam Sendout (Mlbs) | | 197,427 | 195,526 | 1.0% |
| Fuel Use (Dth) (includes propane) | ● | 269,053 | 284,100 | -5.3% |
| Plant Eff (Dth/Mlb) | ● | 1.363 | 1.453 | -6.2% |
| Total Gas Cost (includes propane) | ● | \$813,640 | \$988,669 | -17.7% |
| Unit Cost of Fuel (\$/Dth) | ● | \$3.024 | \$3.480 | -13.1% |

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

Figure 6. Actual and Projected Gas Cost Comparison History



7. FY20 Costs to Date

| Item | FY20 Budget | FY20 Actual to date | Percent of FY20 Budget |
|-----------------------|----------------------|---------------------|------------------------|
| FOC's | \$ 4,601,600 | \$ 2,315,253 | 50.31% |
| Pass Throughs | | | |
| Non-Energy | \$ 934,300 | \$ 669,167 | 71.62% |
| Water/Sewer | \$ 714,000 | \$ 316,588 | 44.34% |
| Fuel Base | \$ 2,575,700 | \$ 847,896 | 32.92% |
| Fuel Contingency | \$ 507,000 | \$ - | 0.00% |
| Electricity | \$ 5,977,200 | \$ 2,771,790 | 46.37% |
| ORF Deposit | \$ - | \$ - | |
| Debt Service | \$ 5,079,200 | \$ 2,383,398 | 46.92% |
| Total Expenses | \$ 20,389,000 | \$ 9,304,093 | 45.63% |
| Total Revenues | \$ 19,070,500 | \$ 8,753,255 | 45.90% |
| Metro Funding | \$ 1,318,500 | \$ 550,838 | 41.78% |

Actual Costs and Revenues to Date include FY19 True-up Items.

8. 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% |

9. *Marketing*

Remaining Capacity for Sale (approximate)

- 2,429 tons of chilled water
- 24,622 pph of steam

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
- Peabody St Hotel
 - Early stages of communications
 - Potential 2,000 to 3,000 tons
- Added DES to List of Utilities on Metro Website
- New Development North of KVB
 - Early stages of communications
 - Potential ~1,100 tons and ~15,000 pph

Customer Changes of Ownership

- City Center (511 Union) from 511 Union Nashville, LLC to CPVF III NCC LLC
- Parkway Towers (404 James Robertson) from PHR Parkway, LLC to 404 James Robertson Prop, LLC

Customer Changes of Management

- Viridian Condominiums
- Sheraton Grand Nashville Hotel

10. DES RFP Status Update

DES-139

- Constellation's appeal on hold
- Sale to Engie on hold as Metro evaluates options

11. Capital Expenditure Update

| | Spent to End of FY19 | FY20 Spending | Balance to Date (01/16/20) |
|----------------------------------|---------------------------------|--------------------------|---------------------------------------|
| R&I Projects | \$3,675,354 | \$158,297 | \$73,184 |
| 49109-2010 Bond | \$2,596,698 | \$1,227 | \$7,991 |
| 49107-DES Infrastructure Fund | \$8,497,779 | \$2,182 | \$39 |
| 49116-DES Infrastructure Fund | \$822,320 | \$558,337 | \$379,344 |
| Total | \$15,592,151 | \$720,043 | \$460,558 |



Capital Projects Review

Active Capital Projects

- DES 133.1: Broadway Tunnel Damage Recovery: ongoing
- DES 135: Closed during 2nd Qtr FY20
- 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; anticipated completion during 3rd Qtr FY20
- DES 159: MH B2 Repairs – bid in 1st Qtr FY20; construction in-progress; anticipated completion during 3rd Qtr FY20
- 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 to be completed during 3rd Qtr FY20
- 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; bid during 2nd Qtr FY20; work anticipated during 3rd Qtr FY20



Capital Projects Review

Capital Projects in Close-out/Closed

- DES135: Chilled Water Leak Repairs
- DES170: Manhole 18 Anchor Repairs – Phase II

12. Other Board Member Items

13. Adjourn

- *Advisory Board Meeting Schedule*
- FY20 – 3rd Quarter Meeting – May 21, 2020
- FY20 – 4th Quarter Meeting – August 20, 2020
- FY21 – 1st Quarter Meeting – November 19, 2020
- FY21 – 2nd Quarter Meeting – February 18, 2021