



Metro Nashville
DISTRICT ENERGY SYSTEM

DES Advisory Board Meeting
Fourth Quarter FY26
August 20, 2026



Presented by:
MNDES Project Administrator
Thermal Engineering Group, Inc

Agenda

1. Call to Order
2. Review & Approval of Previous Meeting Minutes
3. Metro Liaison Update
4. Customer Sales
5. Marketing
6. Review of DES Contractor Performance
7. Natural Gas Purchasing Update
8. FY26 Costs to Date
9. FY27 Budget
10. Review of EGF and EDS
11. Capital Projects Review & Status
12. System Operator Update
13. Special Topics
14. Other Board Member Items
15. Public Comments
16. Adjourn

1. Call to Order
2. Review & Approval of Previous Meeting Minutes
3. Metro Liaison Update

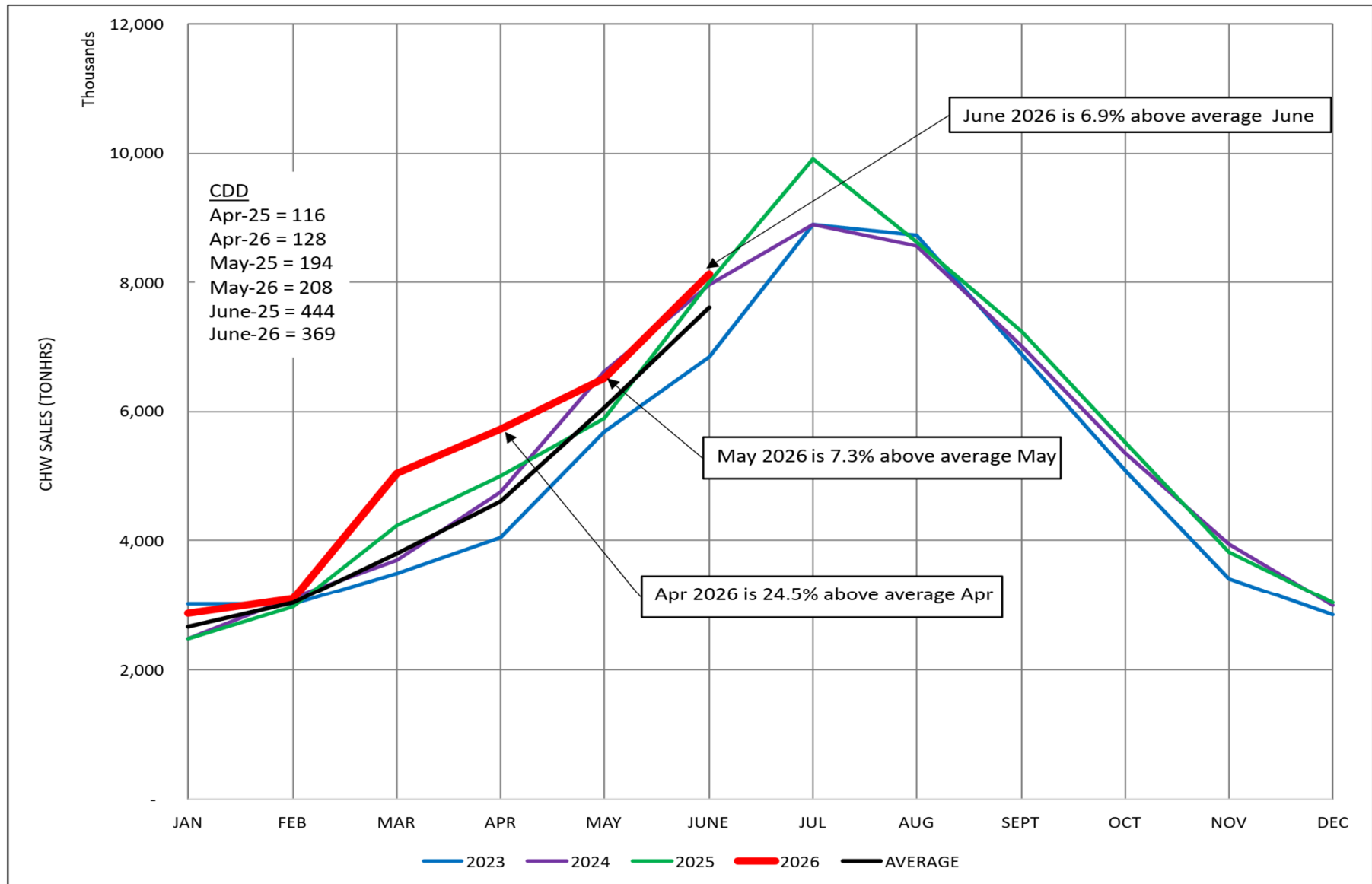
4. *Customer Sales*

- ❖ There are 2 customers in arrears more than 30 days
- ❖ Table 4: Customer Cost Comparison for the Previous 12 Months
- ❖ Figure 4A: Historic Chilled Water Sales
- ❖ Figure 4B: Historic Steam Sales

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

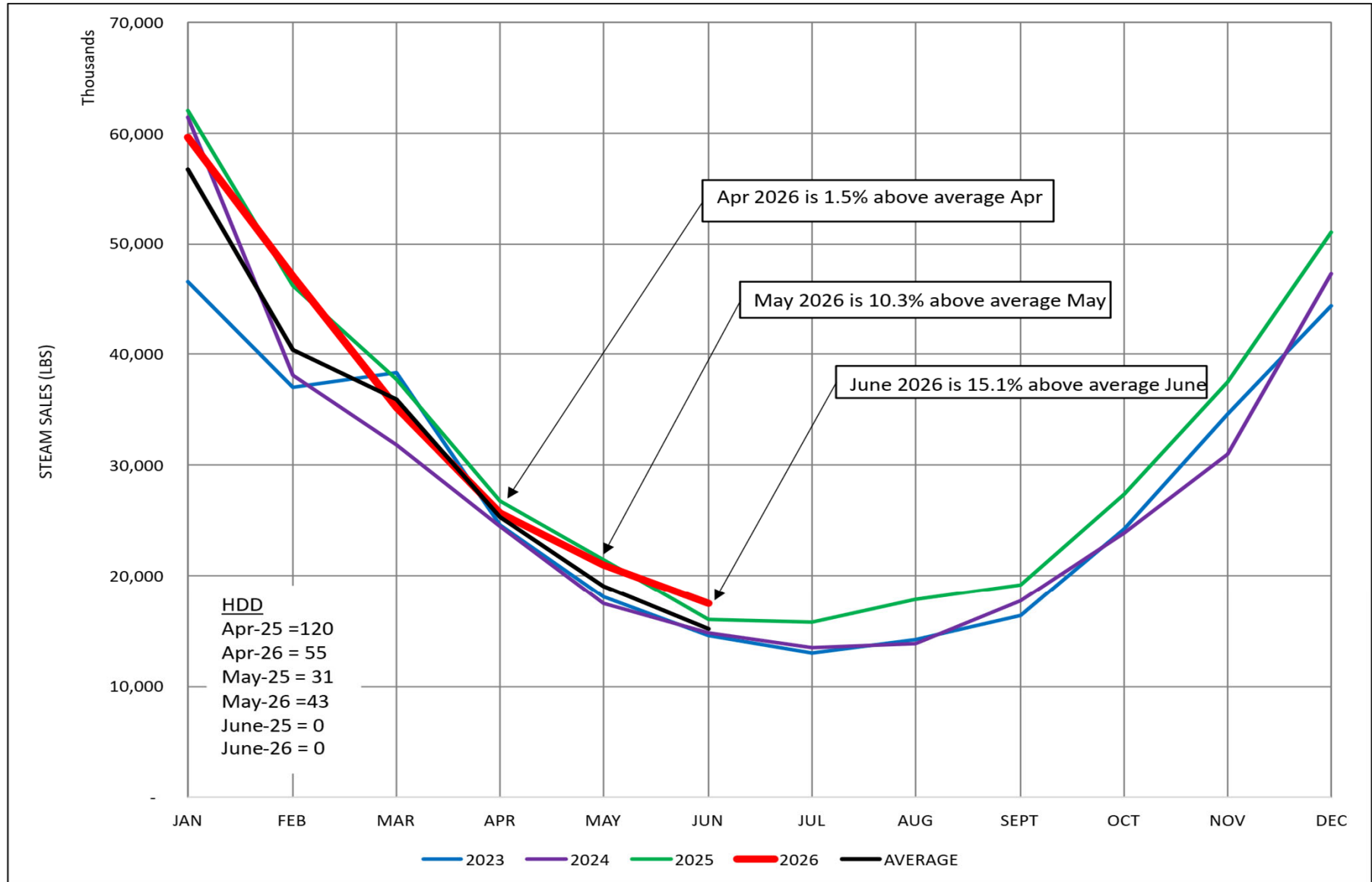
		Steam - Rolling 12 Month			Chilled Water - Rolling 12 Month		
		July 2024- June 2025	July 2025- June 2026	% Diff.	July 2024- June 2025	July 2025- June 2026	% Diff.
Private	Cost	\$ 1,658,827	\$ 1,703,467	2.69%	\$ 4,714,045	\$ 4,709,313	-0.10%
	Usage (lbs or tonhrs)	99,966,224	94,356,472	-5.61%	23,080,934	23,722,477	2.78%
State	Cost	\$ 2,005,461	\$ 2,238,891	11.64%	\$ 3,619,363	\$ 3,677,650	1.61%
	Usage (lbs or tonhrs)	114,104,131	121,172,263	6.19%	13,895,340	15,075,658	8.49%
Metro	Cost	\$ 1,996,036	\$ 2,386,750	19.57%	\$ 5,375,689	\$ 5,709,140	6.20%
	Usage (lbs or tonhrs)	143,095,380	158,897,925	11.04%	28,408,337	30,757,042	8.27%
Aggregate	Cost	\$ 5,660,323	\$ 6,329,107	11.82%	\$13,709,097	\$14,096,102	2.82%
	Usage (lbs or tonhrs)	357,165,735	374,426,660	4.83%	65,384,611	69,555,177	6.38%
	Unit Cost	\$ 15.85	\$ 16.90	6.7%	\$ 0.210	\$ 0.203	-3.34%

Figure 4A. Historic Chilled Water Sales



Averages include the years 2023, 2024, and 2025.

Figure 4B. Historic Steam Sales



Averages include the years 2023, 2024, and 2025.

5. Marketing

- Major Development Areas
 - Peabody Extension/Rolling Mill Hill
 - East Bank
 - North of KVB
- Decoupling Existing Customers
- Existing Customer Building Renovations
 - Three Former Office Buildings Converting to Hotel
 - One Former Office Building Renovations on Hold

Marketing (con't)

- Rolling Mill Hill Development
 - Two Large Developments in Preliminary Design
 - Two Hotel Developments in Preliminary Design
 - New Hot Water and Chilled Water Distribution System Required

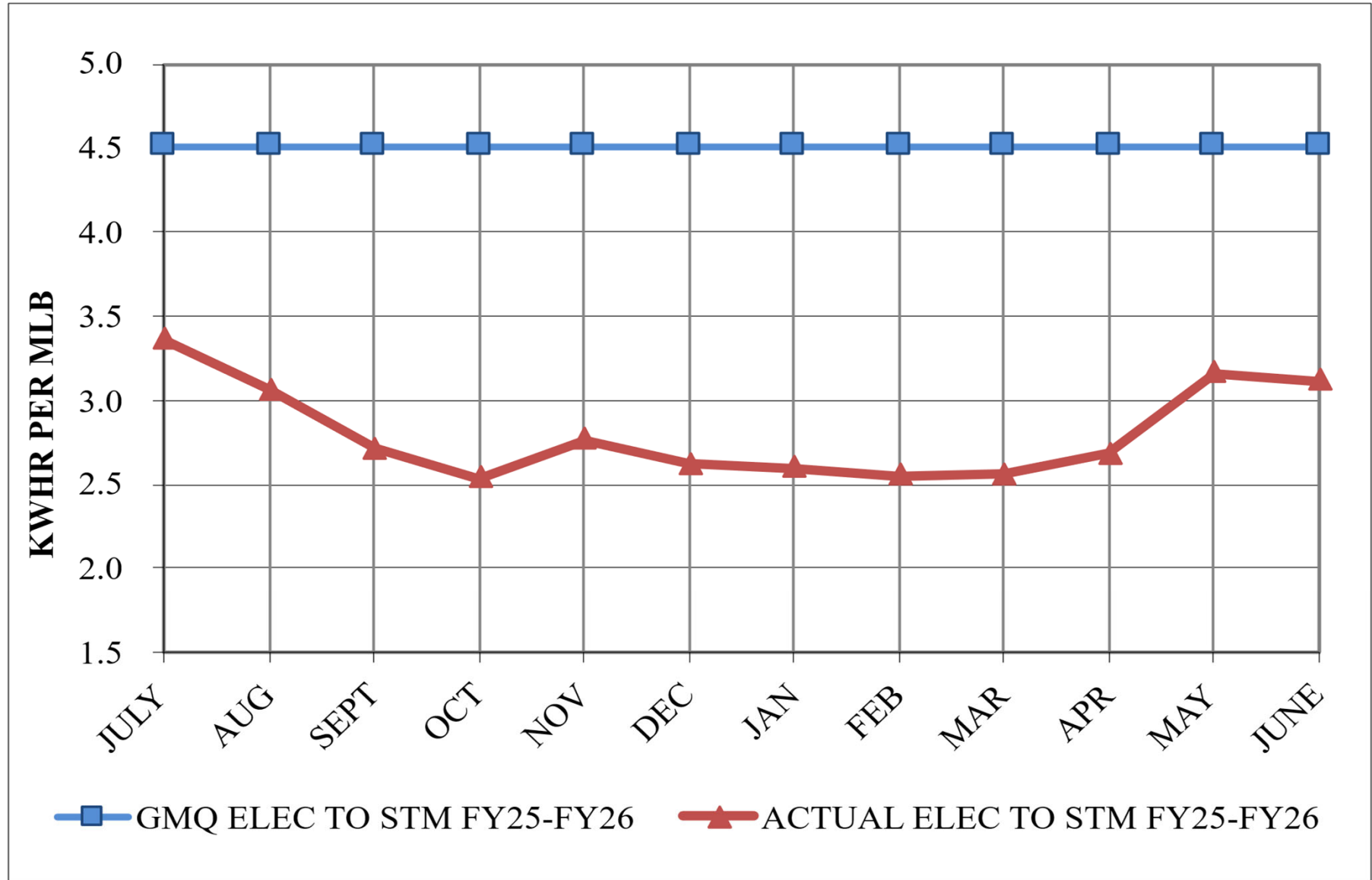
Marketing (con't)

- **Developments North of KVB**
 - 7th and Commerce
 - Development on hold; design includes steam and chilled water
 - Washington Square
 - Anticipate replacing existing chiller with DES
 - Two New Buildings Considering DES in Preliminary Design
 - One Existing Hotel Considering DES in Preliminary Design
 - In need of existing chiller replacement
 - One Existing Office Building Considering DES
 - In need of existing chiller replacement

6. Review of DES Contractor Performance

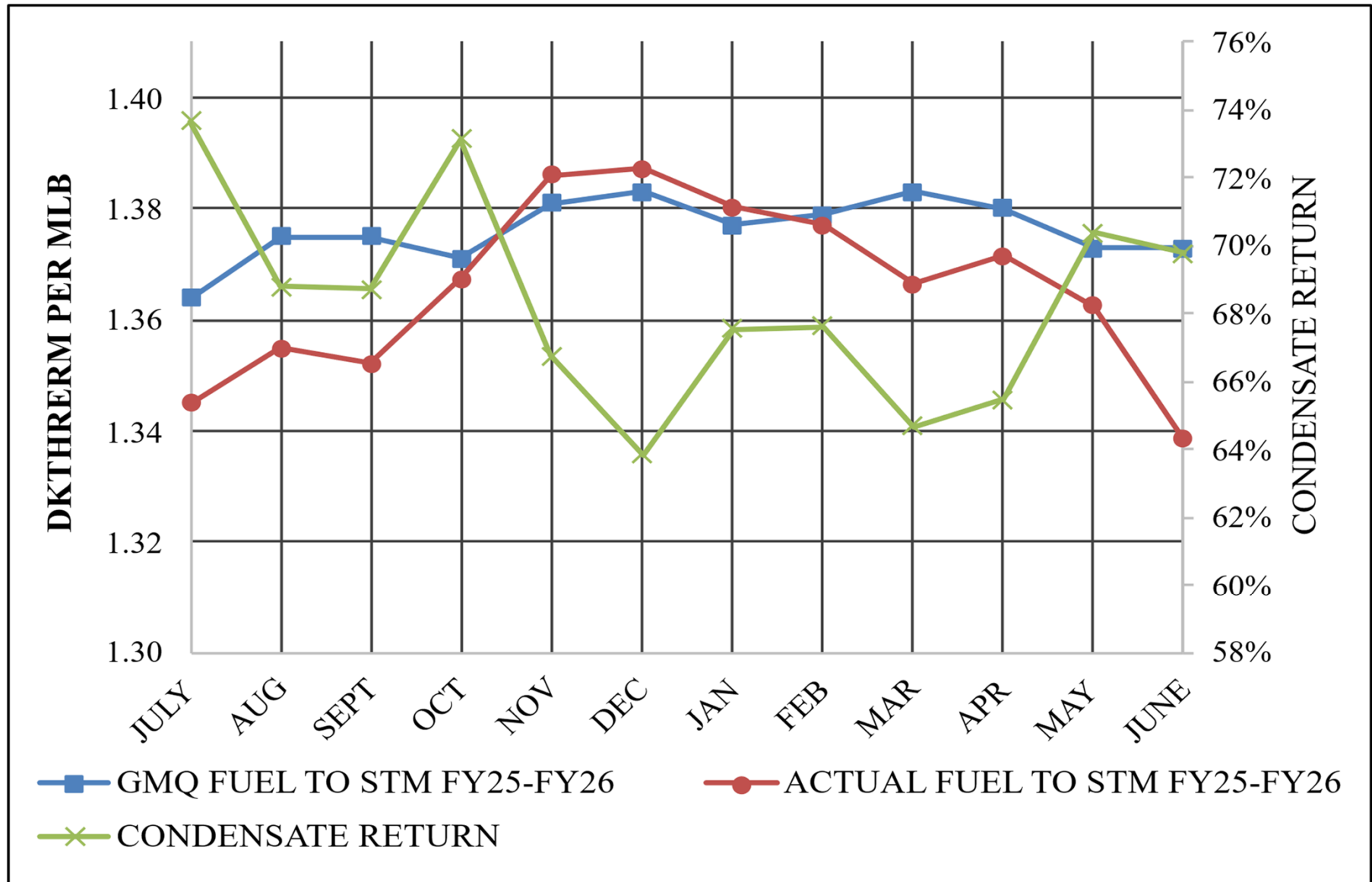
DEAO failed to meet the chilled water-water performance metric each month in the quarter. All other metrics met during the quarter. DEAO continues to address the system energy and water usages.

Performance Measurement FY26: Steam Electric



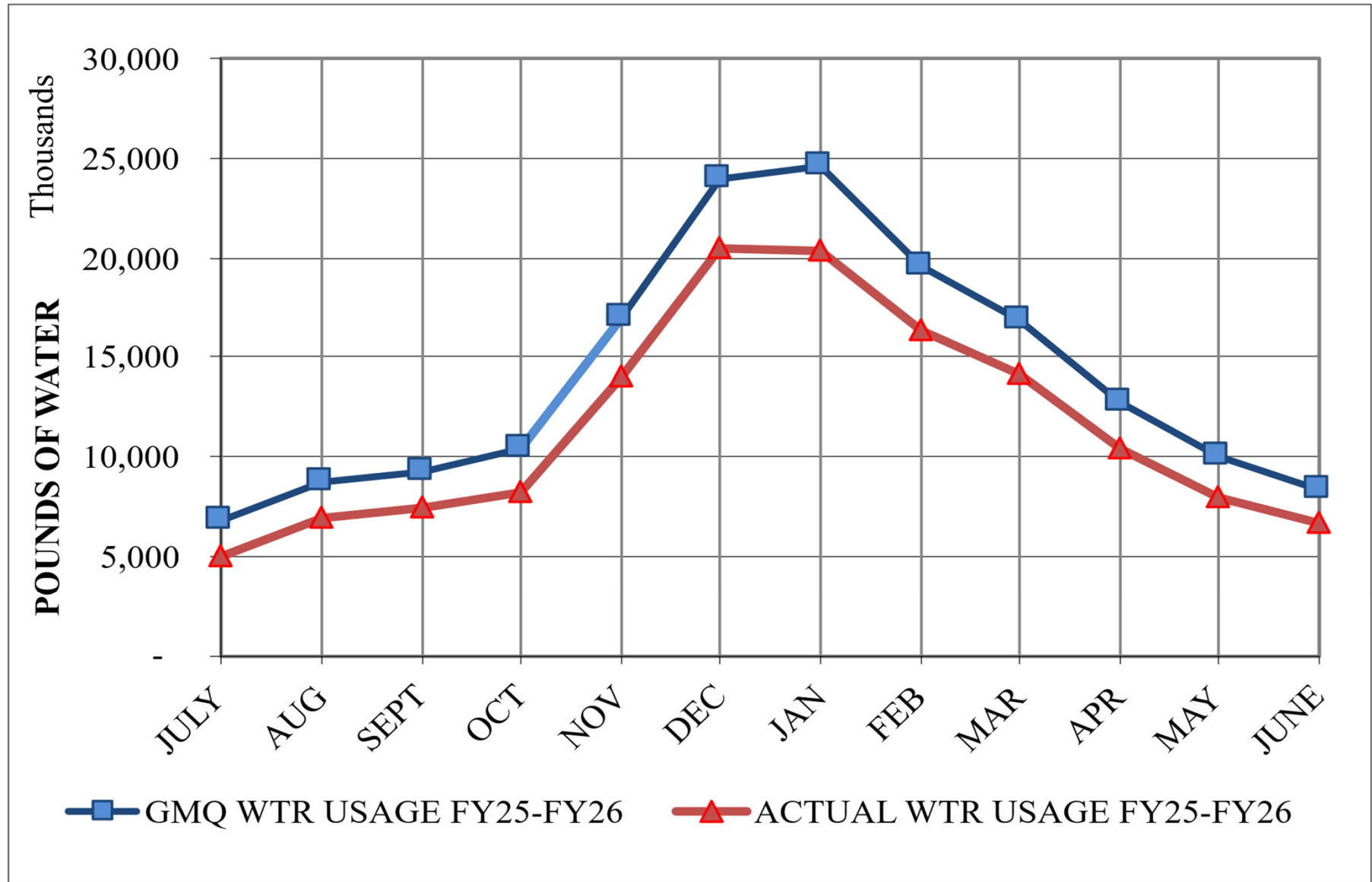
GMQ met each month of the year.

Performance Measurement FY26: Steam Plant Eff



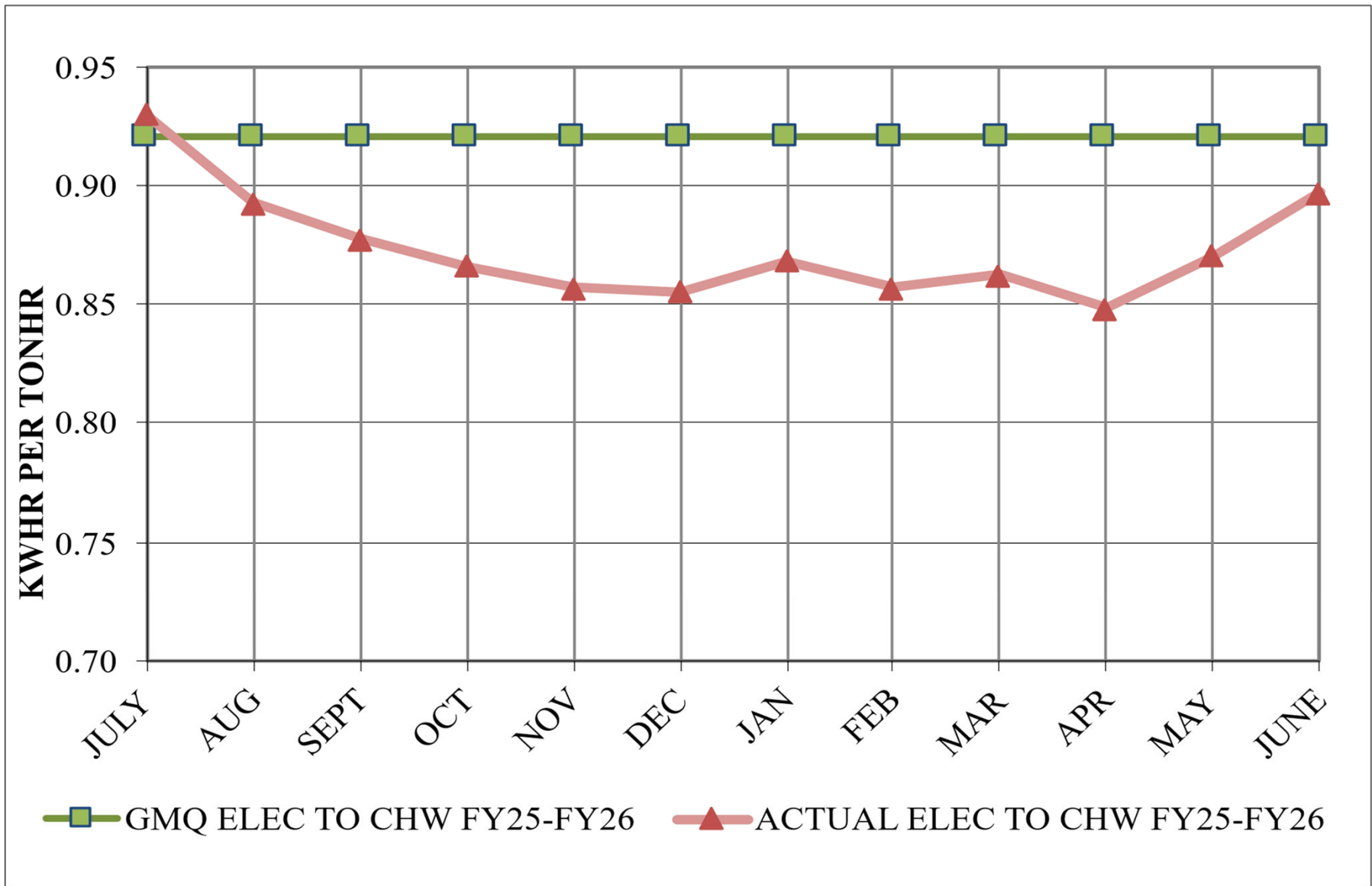
GMQ not met Nov, Dec, and Jan.

Performance Measurement FY26: Steam Water



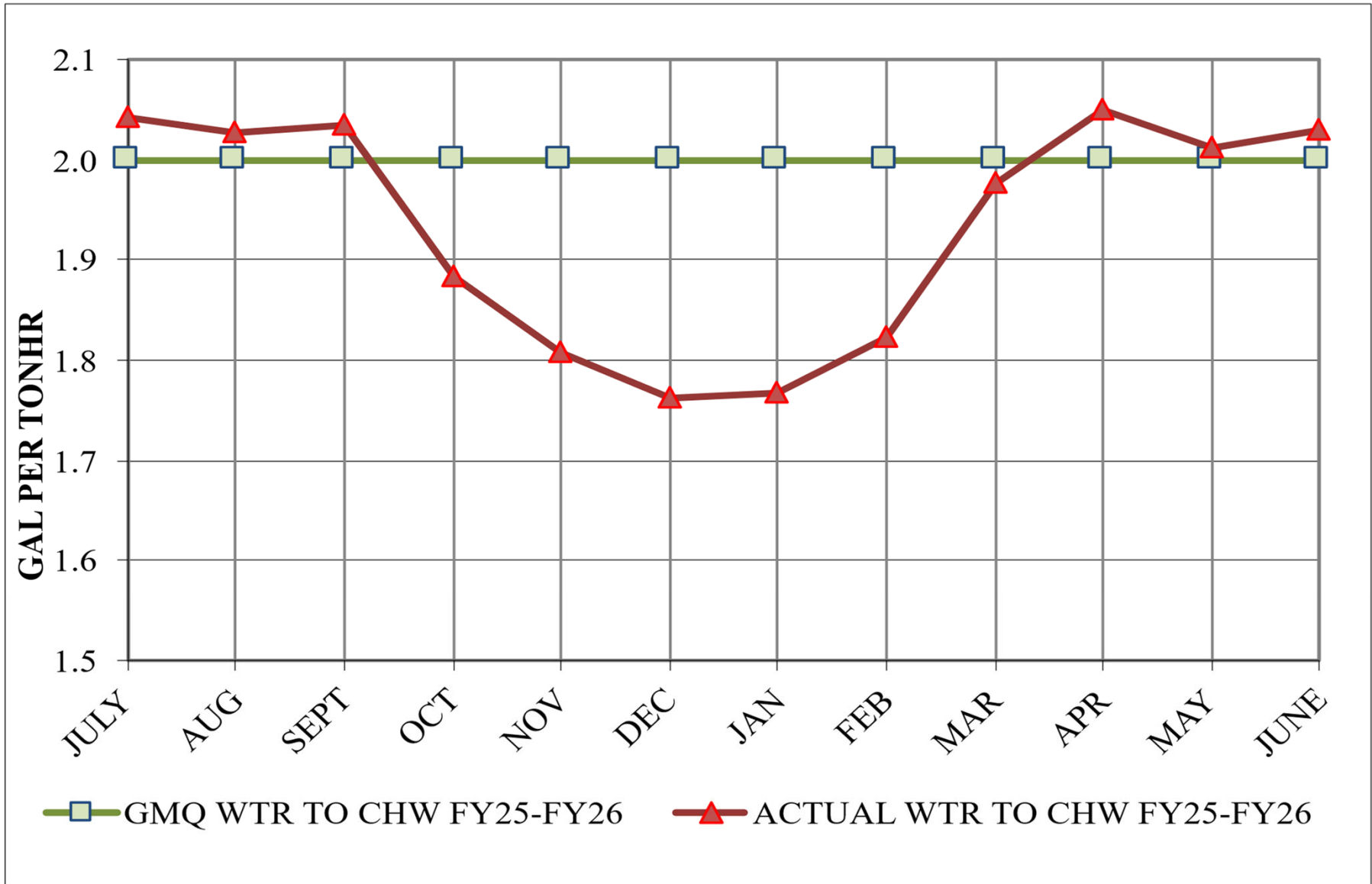
GMQ met in all months.

Performance Measurement FY26: CHW Electric



GMQ not met in July.

Performance Measurement FY26: CHW Water



GMQ not met July, Aug, Sept, Apr, May, and June.

Water Treatment

❖ Steam and Condensate

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

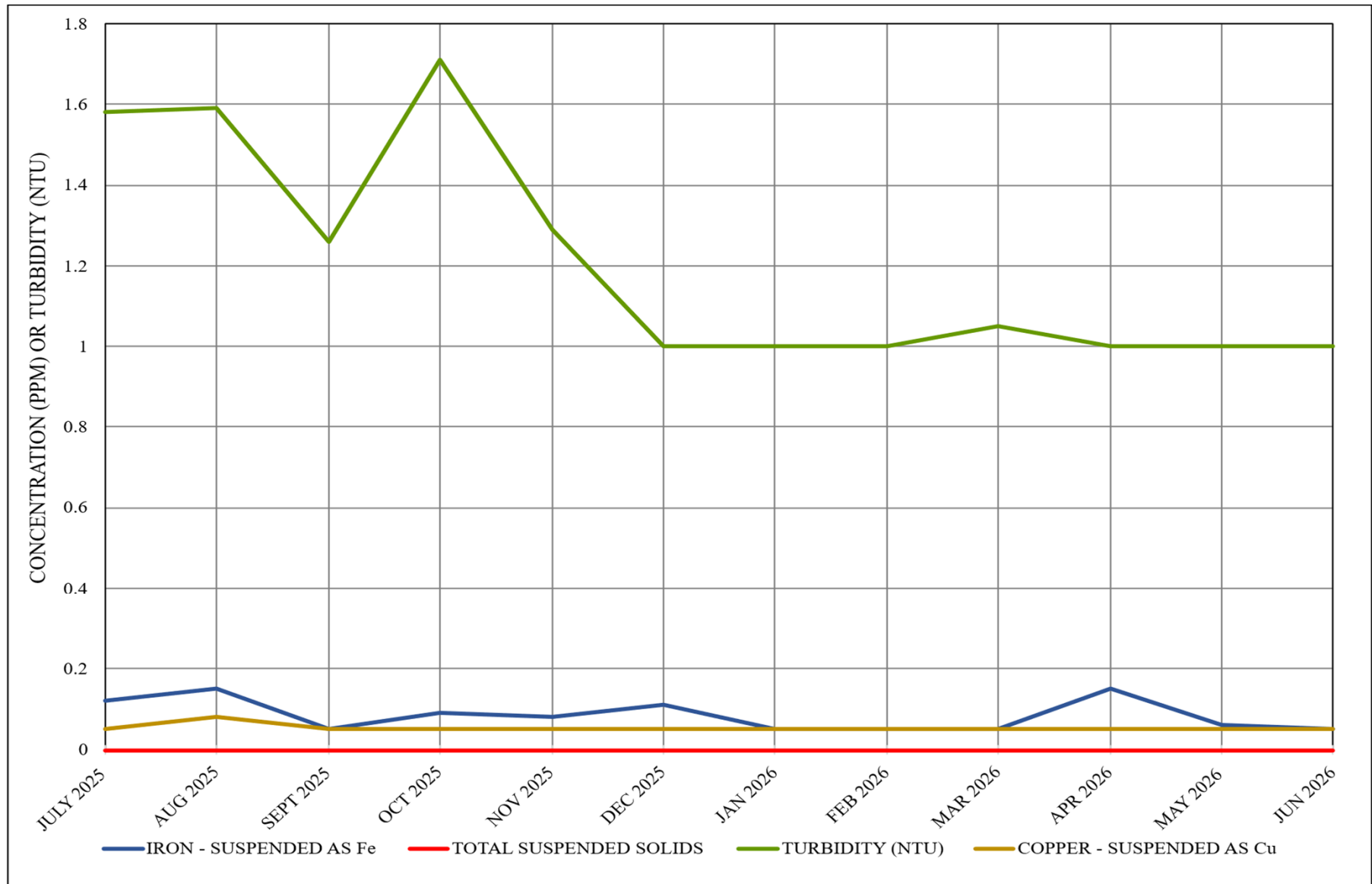
❖ Condensing Water

- ❖ Conductivity
- ❖ Biologicals

❖ Chilled Water

- ❖ Hardness
- ❖ Corrosion
- ❖ EGF and Customer Biologicals Good
- ❖ Side Stream Filter

Side Stream Filter Performance



7. Natural Gas Purchasing

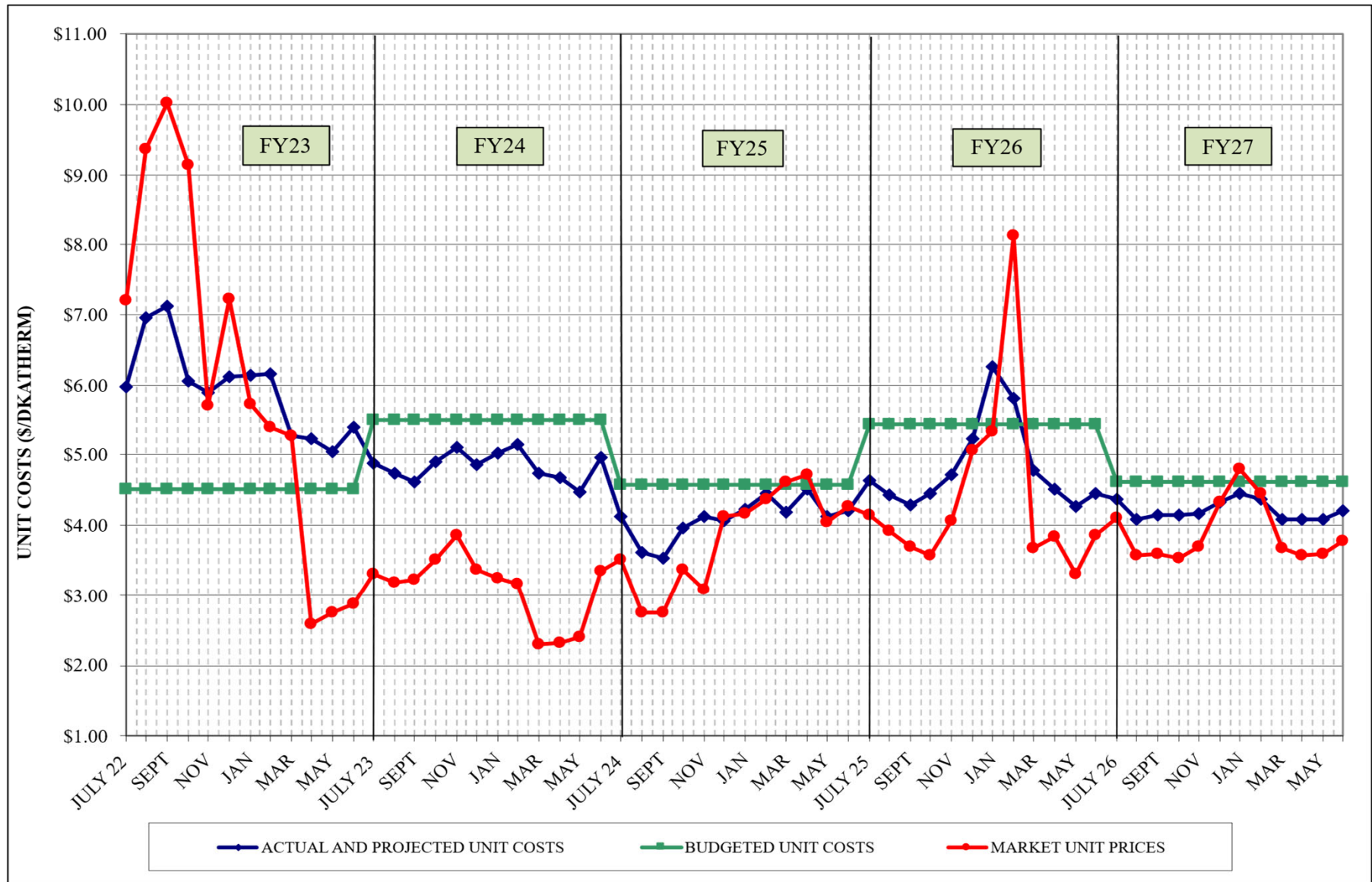
- ❖ Natural Gas Purchasing Review
 - ❖ Table 7: FY26 Gas Spending & Budget Comparison
 - ❖ Figure 7: Actual and Projected Fuel Cost Comparison

Table 7: FY26 Gas Spending & Budget Comparison

	Actual FY26 To June 30	Budget FY26 To June 30	Percent Difference
Steam Sendout (Mlbs)	434,242	426,207	1.9%
Fuel Use (Dth) (includes propane)	595,102	610,755	-2.6%
Plant Eff (Dth/Mlb)	1.370	1.433	-4.24
Total Gas Cost (includes propane)	\$3,045,847	\$3,738,006	-18.5%
Unit Cost of Fuel (\$/Dth)	\$5.118	\$6.120	-16.4%

Excludes consultant fees, FEA, and pre-purchased and stored propane; Includes transportation and actual propane costs and usages. Budget values include price and weather contingencies.

Figure 7. Actual and Projected Fuel Cost Comparison



Currently hedging 65% on natural gas through end of FY27; transportation costs included.

8. *FY26 Costs to Date*

Item	FY25 Budget	FY26 Budget	FY26 Actual to date	Percent of FY26 Budget
FOC's	\$ 4,250,800	\$ 4,378,300	\$ 4,331,600	98.93%
Pass Throughs				
Administrative Costs	\$ 752,500	\$ 753,200	\$ 695,769	92.38%
Chemicals	\$ 379,300	\$ 330,300	\$ 285,160	86.33%
R&I Fund Transfers	\$ 322,200	\$ 763,600	\$ 763,600	100.00%
Water/Sewer	\$ 1,187,300	\$ 1,267,800	\$ 1,180,237	93.09%
Fuel Base	\$ 2,631,171	\$ 2,833,109	\$ 2,833,109	100.00%
Fuel Contingency	\$ 795,729	\$ 1,044,791	\$ 285,049	27.28%
Electricity	\$ 6,801,900	\$ 6,212,900	\$ 6,196,671	99.74%
ORF Deposit	\$ -	\$ -	\$ -	0.00%
Debt Service	\$ 5,385,300	\$ 4,786,400	\$ 4,714,606	98.50%
Total Expenses	\$ 22,506,200	\$ 22,370,400	\$ 21,285,800	95.15%
Total Revenues	\$ 22,121,200	\$ 21,985,400	\$ 20,905,340	95.09%
Metro Funding	\$ 385,000	\$ 385,000	\$ 385,000	100.00%

Actual Costs and Revenues to Date include FY25 True-up Items.

9. *FY27 Budget*

Item	FY26 Budget	FY27 Budget	Percent of FY26 Budget
FOC's	\$ 4,378,300	\$ 4,509,600	3.00%
Pass Throughs			
Administrative Costs	\$ 753,200	\$ 813,000	7.94%
Chemicals	\$ 330,300	\$ 393,400	19.10%
R&I Fund Transfers	\$ 763,600	\$ 327,900	-57.06%
Water/Sewer	\$ 1,267,800	\$ 1,189,600	-6.17%
Fuel Base	\$ 2,833,109	\$ 2,803,926	-1.03%
Fuel Contingency	\$ 1,044,791	\$ 595,974	-42.96%
Electricity	\$ 6,212,900	\$ 6,148,400	-1.04%
ORF Deposit	\$ -	\$ -	n.a.
Debt Service	\$ 4,786,400	\$ 5,588,600	16.76%
Total Expenses	\$ 22,370,400	\$ 22,370,400	0.00%
Total Revenues	\$ 21,985,400	\$ 21,985,400	0.00%
Metro Funding	\$ 385,000	\$ 385,000	0.00%

Budget shown does not include any budget true-up items.

10. Review of EGF and EDS

- Routine maintenance of the EDS is the responsibility of System Operator and is defined within the ARMA. Additional maintenance is directed by the Project Administrator resulting from reviews performed quarterly for tunnels and manholes such that all tunnels and manholes are reviewed annually as presented in TEG's quarterly Walkthrough Reports.
- As identified in one or more EDS and EGF quarterly reports, there are several outstanding maintenance items that have not been addressed in a timely manner. However, DEAO has addressed several EDS and EGF items and is in the process of addressing the remaining outstanding items.

EGF Walkthrough

- Equipment Maintenance
 - Pipe Insulation
 - Cooling Towers
- Operations
- Electrical
 - Metering
- Housekeeping
- Building Structure
- Building Exterior and Grounds

EDS Walkthroughs

- **Piping**
 - Valve condition/operation being evaluated
 - CND replacement in 3rd Ave completed
- **Insulation**
 - Tunnels – completed
- **Water Infiltration**
 - Runoff through manways – various manholes
 - 7th Ave Tunnel infiltration
- **Corrosion**
 - State Tunnel
 - Main Tunnels
- **Housekeeping**
- **Safety**
- **Action Items**
 - Several repeat items but DEAO has addressed several and is working on outstanding items

11. *Capital Expenditure Update*

	Spent to End of FY25	FY26 Spending	Balance to Date (06/30/26)
R&I Projects	\$5,502,812	\$805,366	\$28,892
49116-DES Infrastructure Fund	\$7,900,250	\$996,011	\$2,617,370
Total	\$13,403,062	\$1,801,377	\$2,646,262

Totals spent to date do not include reimbursable expenses for DES231.

Capital Projects Review

Active Capital Projects – General & Marketing

- DES 217: DES Service to Auto Nashville Hotel, LLC (8th and Demonbreun)
 - Routing design at 90%; development delayed with no firm construction start date; 1,300 tons chilled water contract capacity with no steam (budget = \$3.2M; schedule to accommodate customer; 2027)
- DES 243: Service to 414 Union
 - Construction of service connection ongoing; staged capacity up to 950 tons, 18,562 pph (budget = \$810K; service anticipated late Q1FY27)
- DES 244: Service to NFD HQ
 - Owner developing steam and chilled water design with DES for proposed new Nashville Fire Department HQ; preliminary capacities at 390 tons and 2,000 pph; awaiting project development (budget = \$3.3M; schedule to accommodate customer; 2028)

Capital Projects Review

Active Capital Projects – General & Marketing

- DES 222: EDS Valve Identification and Tagging
 - Project established to identify EDS manhole and tunnel valves to assist with maintenance scheduling; manhole and tunnel drawings completed identifying each valve; DEAO's initial tagging is complete; TEG has updated drawings and tag list; add'l tags have been ordered for DEAO to install (budget = \$44,000; schedule is ongoing)
- DES 246: Boring Company Coordination
 - TEG communications and monitoring of Boring Company tunnel work as it may impact DES
- DES 247: FVB Evaluation
 - Evaluation of options for DES by FVB Energy, Inc.

Capital Projects Review

Active Capital Projects – General & Marketing

- DES 249: Nissan Stadium Termination Plan
 - Demolition plan development and coordination with Stadium contractor and other utilities on East Bank
- DES 251: East Bank Development
 - Development for the expansion of DES services on the East Bank

Capital Projects Review

Active Capital Projects – Repairs/Modifications

- DES 213: 4th, 7th & Broadway Tunnel Piping Slide Support Repairs
 - Repair and replacement of pipe slides; work underway; Broadway and 7th Ave has been completed (budget = \$321,500 this phase; schedule completion this phase Q1FY27)
- DES 236: 3rd Ave North Condensate Piping Replacement
 - Project initiated due to condition of piping discovered in DES 235; work completed during Q4FY26 (budget = \$500,000)
- DES 240: Viridian Manhole Platform
 - Platform needed to access valves (budget = \$40,000; bid Q4FY26; completion Q1FY27)

Capital Projects Review

Active Capital Projects – Repairs/Modifications

- DES 241: MH D3 Electrical Component Modifications
 - Due to water infiltration from an irrigation system, watertight elec. components need to be installed; some corroded attachments require replacement (budget = \$50,000; bid Q3FY26; awaiting equipment delivery; potential completion Q1FY27)
- DES 242: Woodland St Bridge CHW Piping Insulation Repair
 - CHW piping casing and insulation repairs are needed; corroded pipe bracing needs to be replaced (on the east side of river) (budget = \$50,000; awaiting pre-bid meeting; potential completion Q2FY27)

Capital Projects Review

Active Capital Projects – Repairs/Modifications

- DES 245: MH 23 Concrete Anchor Pedestal Repair
 - Repair is needed for spalled concrete anchor, ceiling leakage repair and 7th Ave Tunnel shotcrete repairs; awaiting final scheduling of contractor (budget = \$70,000; projected completion Q2FY27)
- DES 248: EDS Valve Maintenance Plan
 - TEG has directed DEAO to identify all valves in EDS that do not function properly or do not seal adequately; TEG is awaiting written plan from DEAO; project will be ongoing (budget not established yet)
- DES 252: Miscellaneous Manhole Repairs
 - Repairs are needed in several manholes including valve replacement, concrete spalling repair, grating replacement, etc.(budget = \$250,000; completion will be ongoing)

Capital Projects Review

Closed Capital Projects

- DES 231: Tennessee Tower Service Piping Relocation – closed
- DES 233: Manhole 12 to Manhole 15 Hot Spot Repair – closed

12. System Operator Update

By System Operator's Service Manager



DE Asset Operations, LLC

13. Special Topics

- Continuing to track and evaluate plant performance and available capacities and impact of potential system growth

14. Other Board Member Items

15. Public Comments

16. Adjourn

- *Advisory Board Meeting Schedule*
- FY27 – 1st Quarter Meeting – November 19, 2026
- FY27 – 2nd Quarter Meeting – February 18, 2027
- FY27 – 3rd Quarter Meeting – May 20, 2027
- FY27 – 4th Quarter Meeting – August 19, 2027