



## **Metro Nashville District Energy System Advisory Board**

### **Regularly Scheduled Meeting of**

**November 21, 2024**

### **Minutes of Meeting**

***The meeting was held in person at the Sonny West Conference Center  
and via WebEx teleconference.***

**Facilitator:** Kevin Jacobs, Thermal Engineering Group (TEG)

#### **Board Members Present:**

Olivia Hill, At-Large Metro Council Member  
Brian Taylor, Public Representative  
Heidi Hoeffner *(on behalf of Kevin Crumbo, Metro Finance Director)*  
Kim Shinn, Public Representative  
Gerald Smith, Metro General Services Director  
Ann McGauran, State of Tennessee Representative  
Bill McKnight, Private Customer Representative  
Curtis Thomas *(on behalf of Dr. Troy White, MDHA Executive Director)*

#### **Others Present:**

Damon Varble, Vanderbilt University  
Jon Belcher, TEG  
Randy Pomeroy, Pomeroy Marketing/Communications  
Mike Winters, Constellation Energy Solutions  
Mats Bergquist, Constellation Energy Solutions  
Bill Purcell, Frost Brown Todd LLC  
Freddie Adom, Metro General Services  
Randall Jones, Metro General Services  
Kevin Brown, Metro Finance  
Adrienne Fancher, Metro Water Services  
Charda Johnson, Metro ITS (Webex host)

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Advisory Board Chair Olivia Hill called the meeting to order at 10:05 a.m. Bill McKnight moved to approve the minutes of the previous meeting, and Ann McGauran seconded the motion. The minutes were approved unanimously by verbal acceptance.

Adrienne Fancher, Metro DES Liaison, highlighted the MetroConnect tours hosted at DES. The MetroConnect program invites Metro employees to visit innovative Metro facilities and to network with fellow Metro employees beyond their customary work environments. Approximately 30 people across three tours learned about DES.

Kevin Jacobs reviewed the Customer Sales. Mr. Jacobs stated that there are 0 customers in arrears for more than 30 days. In reviewing the Customer Cost Comparison, Mr. Jacobs reported that the costs for steam sales are down for the quarter due to falling gas prices. Chilled water sales are up.



The graphs of Historic Chilled Water and Steam Sales represent the respective averages of 2021, 2022, and 2023, in comparison with Calendar Year 2024 year-to-date. This year, following summer peaks, sales for both products are tracking closely with 3-year average data.

Regarding Marketing, Mr. Jacobs noted that there are 16 developments in the prospective customer pipeline. Mr. Jacobs explained how DES saves building upfront and operating costs. Ms. McGauran inquired how the DES team learns about new developments. Mr. Jacobs responded that TEG leverages contacts with Architecture and Engineering firms; developments come to DES through the marketing website; the Metro Planning Permit Application checklist drives developers to DES; and Mr. Jacobs monitors local business and construction activity. Ms. McGauran advised a need to look at the process for contacting customers earlier in the development process because some large developers do not use local architects or engineers. Mr. Jacobs acknowledged that some developments were missed, but some projects linger for years through financing and design issues – and some projects simply decline to join. Kim Shinn asked that with many buildings going to air-sourced heat pumps, are any coming to DES for chilled water only? Mr. Jacobs responded that some buildings using electric-resistance heat and hot water decline using DES steam, but DES has been approached to sell condensing water. Condensing water sales may be an option on East Bank.

In reviewing the System Operator's performance, Mr. Jacobs noted that the third amendment to Constellation's contract was executed, and he highlighted the new performance guarantees that began July 1<sup>st</sup>:

- Chilled Water to Electric – changed to 0.92 kWhr/tonhr sales for improved efficiency
- Chilled Water to Water, Steam to Water – equations changed for improved calculation of actual metrics
- Steam to Electric, Steam to Fuel – no changes

The performance guarantee for Steam-Electric has been met for the previous 12 months. The Steam-efficiency metric reflects the installation of a new meter and varies with volume and temperature of condensate return and was met most months. The Steam-Water metric was changed with Amendment 3, but the condensate return meter has not been repaired yet, and this data is manually calculated. The data prior to July was converted to pounds, and it appears that the new standard would have been met for the last 12 months. The Chilled Water-Electric guarantee was met every month for the past 12 months and was changed to 0.92 in Amendment 3. The Chilled Water-Water guarantee equation was changed with Amendment 3 but was not met during the summer months.

Regarding water treatment, there was an excursion in the cooling towers this quarter, but the towers recovered within a week and have operated normally since then. The sidestream filter experienced a springtime spike in turbidity likely due to customer buildings starting air conditioning systems in warm weather and flushing out winter downtime sediment.

Regarding year-to-date gas purchases, Mr. Jacobs noted that gas prices are much lower now than when the Budget was developed. Current purchases are 34% below budget. Projected market prices are approaching the cost of Metro's hedged purchases.

For the FY25-to-date costs, Mr. Jacobs noted that through the first quarter of the fiscal year, most of the costs are approximately 25%. Peak electric use for chilled water is a little ahead of pace at 30%. Mr. Jacobs reviewed the FY25 Budget and noted changes from the previous year. The MFA remained approximately the same, and the overall budget increased. There was a reduction in fuel costs, but the costs of water and electricity had increased. He noted that one of the bonds was retired this fiscal year, and we anticipate additional debt service in FY26.

Mr. Jacobs observed during the quarterly EGF Walkthrough that some of cooling tower maintenance is pending, and there is pipe insulation to be repaired. He noted that the parking lot has been encroached by Turner Construction. The west side sewer replacement restoration is pending. The new fence installation is expected in March (according to Turner's schedule).



Jon Belcher discussed the EDS Walkthrough and his observations, noting significant repairs – including a steam service leak repair at Hyatt Place that required a subsystem shutdown to isolate. Mr. Belcher noted a significant hotspot repair at 1<sup>st</sup> & Molloy. Manhole 3B repairs will proceed during a planned full system outage in the spring. There are planned capital projects for insulation in several manholes as well as additional tunnel insulation repairs. He also commended safety and housekeeping in the system.

Mr. Jacobs noted for FY25 Capital Expenditures, the R&I fund (contributed partially by customers) and one available bond fund that are used for maintenance are lagging indicators pending receipt and approval of invoices.

Mr. Jacobs reviewed the status of Capital Projects, highlighting the status of the Peabody Union development next to the plant; the planned hotel at 7<sup>th</sup> & Commerce is a customer that pursued interest in DES steam and CHW early in its development; and the next new connection will be the Auto Nashville Hotel at 8<sup>th</sup> & Demonbreun. There was a discussion of potential new customers and navigating Metro's and developers' goals for the East Bank neighborhoods – including with respect to Metro's sustainability goals. There was a discussion about the marketing and economic potential for DES and a restructured focus on operations and growth. Mr. Jacobs also provided a brief status update for the chiller optimization study performed by Optimum Energy.

Mr. Belcher reviewed capital projects in the EDS, highlighting tunnel structural projects and State building renovations. Mr. Belcher provided a more detailed review of the 1<sup>st</sup> & Molloy hotspot remedy and provided a larger systemic context for hotspot issues. Mr. Jacobs also provided information for the replacement of the main steam pressure reducing valve (PRV) for the Andrew Jackson Building.

The System Operator, Constellation Energy Solutions (CES), presented an update for the Advisory Board. Mike Winters highlighted the positive safety culture for the CES staff and its contractors. Mr. Winters reviewed the impacts of the revised contract Amendment 3 performance guarantees. Mr. Winters also noted key events during the quarter including a charity golf outing, the MetroConnect tours, and a high score from the FM Global risk management evaluation. Mr. Winters announced the installation of a historical marker for DES that will be scheduled in the Spring.

For Special Topics, Mr. Jacobs highlighted the chiller study and Amendment 3 to Constellation's agreement.

For Other Board Member Items, Ms. Hill invited Board members to offer suggestions about DES. There were no comments to add beyond the earlier discussion regarding the future of the System.

Ms. Hill adjourned the meeting at 11:25 a.m.

The next regular Board Meeting will be held Thursday, February 20, 2025, at 10:00 a.m.

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**These minutes were approved on February 20, 2025.**