



**Metro District Energy System Advisory Board
Regularly Scheduled Meeting of**

November 18, 2021

Minutes of Meeting

The meeting was held via WebEx teleconference.

Facilitators: Dan Coyle, DES Project Contract Administrator and Kevin Jacobs, Thermal Engineering Group (TEG)

Board Members Present:

Freddie O'Connell
Laurel Creech (*on behalf of Nancy Whittemore*)
Heidi Hoeffner (*on behalf of Kevin Crumbo*)
Ann McGauran
Bill McKnight
Yuri Cunza
Brian Taylor

Others Present:

Dan Coyle, TEG
Kevin Jacobs, TEG
Jon Belcher, TEG
Tim Hestle, Constellation
Bill Purcell, Frost Brown Todd LLC
Adrienne Fancher, MWS
Sonia Allman, MWS
Charda Johnson, Metro ITS (Webex host)

Freddie O'Connell, Board Chair, called the meeting to order at 10:07 a.m. Mr. O'Connell proposed accepting the previous meeting minutes. Bill Taylor moved to accept the minutes and Bill McKnight seconded the motion. The minutes were approved unanimously by verbal acceptance. Mr. O'Connell then asked TEG to proceed with its presentation.

Kevin Jacobs reviewed the Customer Sales Cost Comparison table. Mr. Jacobs noted that steam sales were down, and prices were up due to increased gas prices. Chilled water sales have nearly recovered to "normal" levels for Private customers, and gas prices influence chilled water sales too. Although there was a drop-off in sales in 2020, we see a recovery in the first 3 months of FY2022. Steam sales remain below average but similar to 2020 results. Mr. Jacobs asked the Board for feedback regarding the organization/presentation of sales data for future reports.

In response to nCOVID-19, the Advisory Board waived late fees through the early part of the pandemic. Late fees were re-activated in May 2021. Customers were also offered an opportunity to defer some payments due to the financial impacts of the pandemic. The two customers that opted for the deferral plan are now current with payments. There is one customer in arrears due to an invoicing issue – not failure to pay. Constellation continues to maintain its COVID protocols.

Mr. Jacobs noted that Constellation did not meet all of the performance guarantees for 12 consecutive months, as required by contract. The steam electric conversion performance varies with sales, and the



guarantee was exceeded only in July. The steam plant efficiency varies with the condensate temperature and volume. System leaks detected last year were repaired, which increased the return volume and increased efficiency. It appears that a metering issue may have skewed the results, but improvements in October and November indicate expected improvements in December as well. Two boiler fans failed last winter and were repaired, as well as two additional fans were addressed proactively to avoid additional failure. Mr. Jacobs noted that the new guarantees for steam water conversion did not change, and the plant performance is consistent with historic performance.

Mr. O'Connell asked Laurel Creech if General Services (GS) works with Metro Water Services (MWS) and DES to capture metrics for customer use of energy. Ms. Creech responded that GS manages and maintains Metro buildings to maximize energy efficiency, and she deferred the question to MWS for tracking energy use metrics. Mr. O'Connell expressed interest in demonstrating the value of subscribing to DES among downtown buildings and suggested that Nashville Electric Service (NES) might be able to provide applicable data. Mr. Jacobs offered that isolating energy use for HVAC in buildings is difficult if the HVAC systems are not isolated from the overall building energy systems; however, Thermal Engineering uses a model for prospective customers to estimate potential savings through DES. Ms. Creech and Adrienne Fancher agreed to work with Mr. O'Connell in exploring a comparative analysis of the energy "footprint" in DES and "non-DES" downtown buildings.

Resuming the discussion of performance metrics, Mr. Jacobs noted that the steam water conversion guarantee was exceeded in August and September, but the impacts of the meter issue [now resolved] was reflected in the data. The chilled water electric conversion efficiency followed seasonal variation, but there were no excursions for the guarantee. The chilled water-water conversion guarantee excursions do not indicate excess water usage: total water use has declined in recent years. However, while actual performance consistently met the previous, higher guarantee – current performance relative to the new, lower metric is not consistently compliant. CNE hired a consultant to examine operations and investigate the seemingly erratic performance.

Regarding water treatment, there have been no biological issues. Constellation's contractor, Chem Aqua, has completed the installation of new tanks and equipment, and all systems are functioning well.

Mr. Jacobs stated that based on the quarterly EGF Walkthrough, Constellation has improved the EGF equipment maintenance. Buildings and grounds maintenance has improved, but there are outstanding items to address. Some tasks have been deferred to the more opportune "shoulder months" between heating and cooling seasons when loads are low, and equipment is available for offline maintenance.

Mr. Jacobs commended CNE staff for receiving the Exelon Safety Award for the safest, highest-rated facility under operation by Exelon Corporation [the parent company of Constellation]. This honor is awarded by a third-party safety audit. CNE has not had any safety issues or an OSHA violation in over two years.

Jon Belcher discussed the EDS Walkthrough. Mr. Belcher noted that he reviews one-fourth of the system every quarter to see all of it at least once per year, although he sees some areas more often due to ongoing projects. Mr. Belcher noted that there is some tunnel cleanup remaining. Work on the structural components of the tunnel is nearing completion. He added that while all of the corrosion projects may not be completed during the next quarter, he anticipates that the work should be complete by the end of the fiscal year.

Mr. Jacobs reviewed the natural gas spending. Steam sales are down and below budget by volume. It is notable that gas costs are above budget, not including the contingency funds, and winter has not started yet. Gas purchases will be over budget due to higher prices, but one should expect steam sales to be down. Although we have a 20% hedge on natural gas purchases, which has helped DES to weather the price spikes, we will still be over budget.

Mr. Jacobs reviewed the FY2022 Costs to Date. Mr. Jacobs noted that as cooling season winds down, some of the costs should level out, but the winter season has not started yet. After the first quarter, most costs are



at 25% of budget. Given the rise in gas prices beyond budgeted expectations, an increase of approximately 3.5% is expected for FY2022 costs and revenue over budget.

Mr. Jacobs reviewed the Marketing efforts and explained that the last new customer, Hyatt Centric, is fully connected. Conversations continue with the developers of Peabody Union [to be located adjacent to the EGF] regarding the use of chilled water. The Peabody Union development includes a proposed new road, to be named Guthrie Street, that will extend from Peabody Street to KVB along the EGF east property line. In response to new interest in developing properties south of Peabody Street, DES has revived plans for a new service corridor along Peabody. Also note that the Metro Liaison is a member of the East Bank Technical Advisory Committee to raise the prospect of extending DES to serve the new East Bank re-development.

The capital expenditures Fiscal-Year-To-Date are approximately \$393,000. Mr. Belcher reviewed the details of active capital projects and projects that have been completed and closed. There are several manhole and tunnel projects addressing water intrusion, insulation problems, and metal corrosion.

Mr. O'Connell raised a question regarding the source of capital funding. He expressed concern that there appear to be mixed messages about the availability of capital for system expansion. Mr. Jacobs noted that, in recent years, the priorities for projects and equipment [example: Combined Heat and Power] had changed, and that current opportunities for new customers are favorable for expansion. Mr. O'Connell asked about the sources and uses of capital funds. He asked Ms. Creech if the proposed permanent supportive housing unit could be connected to DES. Mr. Jacobs noted that the previous design for the building yielded cooling loads too low for DES to be a reasonable choice. He added that larger buildings are better candidates for DES, and the potential customers on the Peabody Corridor may drive operational changes and/or equipment upgrades in the plant. Mr. O'Connell added that there are many opportunities around the downtown core, and we want Metro's capital planning to include use of DES wherever possible.

With no further questions from other Board members, Mr. O'Connell encouraged Board members to review the schedule of upcoming meetings. The meeting adjourned at 11:11 a.m.

The next regular Board Meeting will be held Thursday, February 17, 2022, at 10:00 a.m.

These minutes were approved on February 17, 2022.