



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

November 15, 2018

Minutes of Meeting

The meeting was held at the Energy Generation Facility at 90 Peabody Street Nashville, TN 37210

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

Board Members Present:

Freddie O'Connell
Brian Taylor
Eric Swartz
Ann McGauran
Laurel Creech (*representing Nancy Whittemore*)
Steve Berry (*representing Talia Lomax-O'dneal*)

Others Present:

Dan Coyle, TEG
Kevin Jacobs, TEG
Bob Lackey, DES Liaison
Jason Way, CNE
Eddie Wisdom, CNE
Randy Pomeroy, PMC
Adrienne Fancher, MWS
Jason Byars, MAS Energy

The meeting was called to order by the Chair and began at 10:01 A.M.

With no additions, comments or edits to the previous meeting's minutes, a motion was made to approve the minutes and seconded. The Board voted and approved the minutes for the August 16, 2018 and September 18, 2018 meetings.

At the request of the Chair, Mr. Jacobs proceeded with the presentation to the Board.

Mr. Jacobs reviewed the Customer Cost Comparison table for the previous twelve month period. On an aggregate basis for the previous twelve (12) months, the steam consumption and chilled water consumption had increased. The chilled water total costs had increased while the steam costs remained about the same. The unit cost for chilled water decreased by 2.13% while the unit costs for steam decreased 13.6%. Natural gas prices have remained consistent for the past year.

Mr. Jacobs reviewed the DES Contractor Performance for FY18, which included the efficiency and performance tables for steam electric consumption, steam gas consumption, steam water consumption, CHW electric consumption, and CHW water consumption. Mr. Jacobs explained the contractor's performance monitoring criteria as identified on the Power Point presentation with the use of the green, yellow and red dots noted on the slides. The green dots indicate excellent performance, the yellow dots



indicate satisfactory performance where some improvement may be necessary and the red dots indicate poor performance. Constellation's performance continues to remain excellent in all areas.

Mr. Jacobs reviewed the Water Treatment. There is some weather related temperature variability on the amount of condensate returned. Although it is part of the agreement with customers that they must return their condensate, some customers are unable to return the condensate. Constellation does investigate and assist customers with repairs to leaks that may be in the customer buildings if a leak is discovered or if the regular water treatment testing indicates a high iron or hardness content. The steam to water and steam to fuel performance guarantees are dependent on the amount of condensate returned, which causes the monthly variation in the performance guarantees shown on the graphs.

There have been leaks found in the chilled water system. The leaks were found at a drain valve near Nissan Stadium and at 4th & Union. Both leaks have been repaired. There is another suspected leak around the area of 5th & Union. The investigation into the locations of any remaining leaks is ongoing. Constellation repairs the leaks quickly once they are discovered.

Mr. Jacobs reviewed the EGF (Energy Generating Facility) walkthrough and all areas are satisfactory. The quarterly physical walkthrough of the plant indicates it is well maintained. Those items that are noted to be addressed are typically addressed by Constellation in a timely manner.

Mr. Coyle reviewed the EDS (Energy Distribution System) walkthroughs that are performed quarterly by Jon Belcher of TEG. The Energy Distribution System's vaults and tunnels are inspected once yearly by reviewing partial sections once per quarter. The areas reviewed in the most recent quarter looked relatively good. There is room for improvement by reducing water infiltration into the vaults and addressing the corrosion of metal components within the vaults. Mr. Coyle discussed options to mitigate water infiltration and the corrosion of metal components in the vaults and tunnels. Several ongoing projects are addressing the corrosion repair in some of the vaults and tunnels.

Mr. Jacobs continued with Natural Gas Purchasing review. The Steam Sendout was higher than what was budgeted. The high sendout amounts caused the natural gas usage to be higher than the pre-contingency budget. No propane was purchased for the fiscal year to date. Mr. Jacobs noted that during the summer months the steam usage may be higher than expected due to the amount of re-heat from customer buildings. The amount of re-heat is heavily dependent on the relative humidity and is difficult to predict. High first quarter steam usage most likely means that there has been an increase in the amount of re-heat. Fuel costs are higher than base value budgeted for fiscal year-to-date, but the values represented in the Natural Gas table do not include the contingency.

Mr. Coyle continued with the Actual and Projected Gas Cost Comparison History. Mr. Jacobs explained that, although there has been some small amount of hedging in FY18, and some hedging is expected to continue in the future, natural gas prices have been decreasing. Current prices are expected to remain below budget for FY19 and decrease even more in FY20. Mr. Jacobs and Mr. Coyle explained the graph in the presentation included propane and transportation costs. The red line on the chart notes market unit prices; the blue line notes actual unit costs in previous months and the expected unit costs in future months. The green line notes the budgeted unit costs without contingencies.

Mr. Jacobs continued with FY19 Costs to Date report. All expenditures appear to be consistent with expectations and within budget. The Fixed Operating Costs (FOC) paid to Constellation were approximately 27.94% of the FY19 budgeted amount. Total expenses were 31.58% of the FY19 total budgeted amounts and total revenues were approximately 26.92% of the budgeted amount.

Mr. Jacobs continued with FY19 Budget report. Debt Service costs will reflect a small decrease, less than 1%. Fixed Operating Costs (FOC) will be approximately 2.30% of the budget, which represents the cost escalator for FY19. Non-energy expenditures are expected to increase 2.37% over FY18. Natural gas base expenditures, including the FEA and gas consultant costs, will decrease by approximately 15.29%, and the



natural gas contingency budget will increase 3.71% over FY18. Total FY19 expenses are expected to decrease by 2.33% over FY18 as compared to a similar decrease in total FY19 revenues of 2.27%. The Metro Funding Amount is estimated to decrease 2.96%.

Mr. Lackey shared with the Board that Constellation and Metro had agreed to a two-year extension to Manage & Operate the District Energy System. Mr. Lackey also shared that Round One of an RFP seeking qualified proposers to become an Operations Partner and/or a Buyer best able to deliver a cost effective and efficient DES in a manner that ensures the best value to Metro was issued November 2, 2018. Upon completion of Round 1 evaluation a short list of bidders will receive an invitation to participate in Round 2 for the sale and/or operation of DES. Several board members requested copies of the RFP.

Mr. Jacobs continued with the Capital Expenditure Update report. The remaining amount of capital funds available as of 09/30/18 totaled \$139,786.

Mr. Jacobs reviewed the Active Capital Projects Review report.

DES 124 - CJC Redevelopment - the building is under construction, but the AA Birch tunnel repairs will be needed. These repairs will be made once the building roof has been constructed on the new Criminal Justice Center building.

DES 124.4 - CJC Reconnection was completed and is waiting on the instrument installation by the contractor. The building's contractor had indicated that they would need service by July 2018, but service is anticipated to be re-energized in December 2018.

DES 133 - 5th and Broadway Development- CSA between OMSE and DES has been executed and the easement agreement has been signed.

DES 133.1 – Repairs to the Broadway tunnel are required now that blasting is complete. These repairs will be addressed under another project number.

DES 133.2 – Equipment has been removed and this project is closed.

DES 135 - A chilled water leak was discovered at 3rd Ave near Charlotte Ave and was repaired. A leak was discovered and repaired near 4th Ave and Union in October/November. There is at least one other leak that is believed to be near 5th Ave and Union, but the exact location has not been found.

DES 139 – RFP issued - DES Implementation Scenarios for DES Program Options

DES 143 – Manholes N1, N2 and S6 insulation and Repair is on hold awaiting Capital approval.

DES 144 – Manhole 6 repair- Piping structural steel cleaning, painting and replacement should be completed in Second Quarter FY19.

DES 147 – 3rd Ave Insulation Repair – DES has been reimbursed; project is closed.

DES 148- Site I Development – Blasting completed; project is closed.

DES 149- Repairs to the hot spot discovered on 1st and Molloy have been completed; project is closed.

DES 150- Federal Courthouse and 7th Ave Tunnel – No blasting will be performed; project is closed.

Without further discussion, and upon a motion, the meeting was adjourned at 11:30 A.M.

The next Board Meeting will be held Thursday, February 21, 2019 at 10:00 A.M.



Metro Nashville
DISTRICT ENERGY SYSTEM

Prepared by: Starla Friedmann

Starla Friedmann, Board Recording Secretary

Date: 21 Feb 2019

Approved: [Signature]

Freddie O'Connell, Chair, DES Advisory Board

Date: 21 Feb 2019

Approved: [Signature]

Bob Lackey, DES Liaison

Date: 21 Feb 2019