



Board of Light, Gas and Water Commissioners

220 S. Main Street
Memphis, TN 38103
www.mlgw.com

Board Meeting

~ Minutes ~

Friday, February 1, 2019

1:00 PM

Board Room

CALL TO ORDER AND OPENING REMARKS:

Chairwoman McCullough

PLEDGE OF ALLEGIANCE:

Chairwoman McCullough

The Pledge of Allegiance was recited.

SAFETY BRIEFING:

J. T. Young

President Young addressed the audience giving instructions in the event of an emergency during the meeting. He explained that an alarm would sound with instructions given over the loud speaker. He pointed out exits and explained the responsibilities of the Security Officers. He asked for everyone's cooperation should an emergency arise.

ROLL CALL:

Dana Jeanes

Attendee Name	Title	Status	Arrived
Carlee McCullough	Chairwoman	Present	
Mitch Graves	Vice-Chair	Present	
Leon Dickson	Board Member	Present	
Michael Pohlman	Board Member	Present	
Steve Wishnia	Board Member	Present	

The following staff members were present: J. T. Young, President and CEO; Dana Jeanes, SVP, CFO and CAO (Secretary-Treasurer); Cheryl Patterson, VP and General Counsel; Alonzo Weaver, SVP & COO; Nick Newman, VP, Engineering & Operations; Cliff DeBerry, VP Design, Construction & Delivery; Christopher Bieber, VP, Innovation & Business Analytics; Von Goodloe, VP, Shared Services; Lashell Vaughn, VP & CIO; Gale Carson, VP Community and External Affairs; Jim West, VP, Chief Customer Officer; Roland McElrath, Controller; and Lesa Walton, Chief Internal Auditing Officer.

Advisory Board Members:

Dwain Kicklighter – Present
Kevin Young - Present

POWER SUPPLY:

1) INTRODUCTION OF CONSULTANT:

J. T. Young

President Young welcomed Seth Brown, P. E., Vice President of Transmission Services with GDS Associates, Inc. headquartered in Marietta, GA. He gave a brief history of Mr. Brown's experience and explained that GDS has conducted the study of power supply options.

2) PRESENTATION - POWER SUPPLY OPTIONS: Seth Brown

Mr. Brown opened his presentation by sharing a brief history of GDS. He discussed the Project Team, their experience and their role in the evaluation. He clarified that the study objective was to evaluate long-term power supply alternatives including Nuclear Development - Bellefonte Project Power Purchase Agreement. He noted the results are based on a cost of energy-only model. The study also evaluated MLGW as both stand-alone and integrated into MISO (Midcontinent Independent System Operator) and the study year used was 2022. Included in the evaluation was 15% renewable (wind) portfolio. He emphasized that the study did not include value/cost of capacity or costs associated with any new debt service to construct new generation or transmission infrastructure.

Mr. Brown described the various principal assumptions and energy methodology taken into account before reviewing each of the four scenarios and the criteria of each. Mr. Brown reviewed each scenario explaining that two of the scenarios include two whereby MLGW is its own NERC Balancing Authority (BA) and responsible for dispatching generation to meet load in accordance with NERC Reliability Standards and "keeping the lights on". He explained the other two scenarios that included MLGW in MISO's BA as a Regional Transmission Organization (RTO) market participant. He explained that MLGW asked GDS to provide a "sensitivity case" by including renewable wind generation serving approximately 15% of MLGW's load. The PROMOD analysis included power plan fuel costs, plant variable operations and maintenance costs, and transmission service costs.

Mr. Brown discussed the market pricing for the study year of 2022. He brought up areas of caution such as reliability and economic risk associated with placing MLGW's energy needs with a single generator. He pointed out the pros and cons of purchasing energy at spot prices and the fact there would be no protection from scarcity energy pricing. He explained the areas of savings of the scenarios and which ones would provide the most reliable service to MLGW customers.

Mr. Brown pointed out the risks associated with Bellefonte Project viability such as Framatome's technical expertise for a reactor design never constructed in the USA, the existence of equipment vendors no longer in existence requiring reverse engineering of components and lack of knowledge of other critical variables. However, he noted there are positive points of the project and recommends that MLGW continue to evaluate the economics, transmission service, and other factors relevant to the proposed Bellefonte PPA in the course of developing a future power supply plan.

Mr. Brown noted that the TVA calculation presented in the study was utilized from information provided by MLGW and publicly available information to produce an average production cost for TVA of \$18.50/MWh and TVA SEC 10-K filing indicates the full-delivered, all requirements cost to serve MLGW is \$66.00/MWh. He noted that currently TVA provides all of MLGW's capacity, energy and ancillary services needs on a delivered basis. If MLGW terminates the distributor relationship with TVA, the fundamental system operations structure of MLGW must change to accommodate the transmission arrangements.

The study included the way MLGW could manage their energy load requirements as stand-alone BA and how this would be altered in an RTO market environment. Mr.

Brown discussed the details of the cost benefit analysis with MLGW pursuing their own Balancing Authority and MLGW participating in RTO energy markets.

In closing, GDS recommends that MLGW proceed with developing a complete Integrated Resource Plan (IRP) which would enumerate the cost of owning and operating various resource portfolios over a 20-year study period and, by comparison on a net present value basis, identify the most cost-effective resource portfolio to meet MLGW's total capacity and energy requirements.

3) DISCUSSION OF POWER SUPPLY OPTIONS:

The Commissioners were given the opportunity to ask questions. Commissioner Wishnia questioned a need to pull more lines, outsourcing and contracts/agreements with pricing set long term, such as multiple years. Mr. Brown indicated that a purchase of several years can be done or a block and capacity purchase at a discounted rate is a possibility. Mr. Brown stated that MISO runs an auction annually and capacity can be procured at that auction.

Commissioner Pohlman asked about debt service and clarified that none of the scenarios today are a real comparison of what TVA currently provides.

Commissioner Wishnia noted that it seems we need to look closely at distribution. Mr. Brown stated MLGW could build their own connections or investigate the other options to purchase. Commissioner Wishnia also entertained the idea of buying from the Allen Plant.

Chairwoman McCullough asked about infrastructure costs and asked if an additional study would include that information and for a timeline in completing that study. Mr. Brown noted it would be included in the IRP and would take approximately a year. He pointed out that most large utilities would hold public meetings as part of the research.

Commissioner Graves questioned capital cost and the need to explore. Mr. Brown stated that information would also be a part of the IRP.

Mr. Brown stated the next steps would be to obtain data from TVA on the incremental cost of capacity, energy, transmission, and ancillary services required to serve MLGW. In addition conduct a discovery session with MISO and identify transmission transfer limitations with TVA and MISO. In developing an Integrated Resource Plan the need to identify corporate goals for renewables, demand response and energy efficiency is needed. In addition, the need to identify the most cost-effective resource portfolio and develop long-range financial forecasts associated with new resources. Finally, to conduct a request for proposals for new resources is included in the recommendations.

In closing, all of the Commissioners were of the agreement that there is a lot to be investigated and the end result is providing service that is best for the customers.

4) GENERAL STATEMENTS FROM THE PUBLIC (Power Supply Options):

(None)

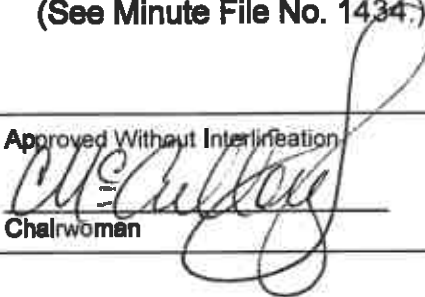
5) CLOSING REMARKS:

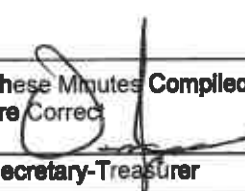
President Young notified everyone that there would be a press conference in the Garden after adjournment. He also wanted to clarify that the rate increase proposals are needed for the infrastructure improvements and are a separate issue from the GDS study and power supply options. He confirmed that the plan to begin pushing through to an IRP to address some of the questions today will be done. He noted that the study would take approximately a year to complete.

ADJOURNMENT:

There being no further business, the meeting was adjourned at 2:12 p.m.

(See Minute File No. 1434.)

Approved Without Interference

Chairwoman

These Minutes Compiled by Undersigned and
are Correct

Secretary-Treasurer