



HIGHLIGHTS OF POWER

SUPPLY ADVISORY TEAM MEETING

THURSDAY, OCTOBER 17, 2019 – 10 a.m. – 2 p.m.
at BENJAMIN HOOKS MAIN LIBRARY, Memphis, TN

PSAT Advisory Team Attendees included:

George Barnes	Martavius Jones	Randy Richardson	J.T. Young
Harold Byrd	Richard Kelley	Jim West	
Sally Heinz	Dwain Kicklighter	Bobby White	
Jenn Hunsperger	Dennis Lynch	Linda Williams-NAC	
Eddie S. Jones Jr.	Mike Pohlman	Linda Williams - RISE	

- **J.T. Young, MLGW President and CEO**
 - Welcome and Safety briefing
- **Nelson Bacalao, Siemens, IRP Consultant**
 - Recap on last PSAT Meeting
- **Nelson Bacalao**
 - Memphis Load Forecast, Energy Efficiency and Electrification
 - Historically, load has generally been decreasing for 10 years during a period of weak economic growth.
- **Olivia Valentine, Siemens, IRP Consultant - Fuel Infrastructure and Forecast**
 - Pipeline Use
 - U.S. Natural Gas Supply Growth is Expected Primarily in the Appalachian and Permian Basins
- **Olivia Valentine / Nelson Bacalao Resource Options Updates**
 - Small Modular Reactors (SMR), River Flow Hydro, Other Options
 - Bellefonte Key Questions: TVA cost to complete estimates were done in 2013, these costs will be substantially higher and it would take 7-10 years to complete.
 - Hydro Generation Technology explored but not feasible given the flow of the Mississippi River cannot be restricted (e.g. construction of a dam).
- **Olivia Valentine / Nelson Bacalao Initial Long-Term Capacity Expansion Results**
 - Results for selected strategies; resource mix and economies
- **Yan Du & Nelson Bacalao Transmission Update on MISO Interconnection**
 - Update on meetings with TVA
- **Breakout sessions**
 - PSAT Members and Siemens Staff

Demand Forecast Topics

1. Our Base Load Forecast (before Energy Efficiency (EE) and Distributed Resources (DR)) shows a flat to very slightly increasing load over the long term. Is this consistent with PSAT expectations? If not how would you see the load to evolve? **Agreed, consistent with PSAT expectations.**

2. Electric Vehicle (EV) forecasts and electrification in general show a very modest levels of adoption. What are the PSAT views on this? Are the base forecast too conservative?
3. EE programs require objectives / mandates and funding. What is the PSAT opinion on effective programs for EE, levels of reduction? **Current outlook is acceptable.**
4. What are the views on levels of rooftop solar? Our forecast again is showing very low impact. Note that this is different than community solar which can be utility scale. **Projections look correct, flat growth unless there are incentives, since rooftop solar is 2-3 times more expensive. Customers may be slow in switching to electrification, modest growth.**

Gas Topics / Supply Topics

1. Gas forecast identify the possibility of developing large combined cycle plants within the MLGW territory possibly towards the east. Provided that issues related to water use are addressed, does the PSAT have views or concerns of developing these plants in this area?
2. Small Modular Reactors (SMR) were investigated as well as hydro kinetic. It seems that SMR could become feasible in the future, but it is unlikely to be selected. Same with hydro. Would the PSAT have concerns if these options are dropped? **Keep abreast, but technology is not here yet.**
3. What are the main concerns about the Bellefonte option in the PSAT opinion? **Not viable for this IRP.**

Long Term Capacity Expansion topics

1. The plan is installing most of the new generation in the first year. Does the PSAT agree that we need to define practical limits? Can the RPS targets be relaxed to achieve a more realistic installation rates? **Consider overall cost, then relax target in order to achieve a more realistic installation rate.**
2. Should there be limits on capital expenditure by MLGW, even if this drives higher long term costs? **Yes, there should be a limit.**
3. Is it a valid strategy to over install to sell into MISO and offset the supply costs? **Should be limits on exports, desire to import than generate to export. Risky to rely on market.**

Long Term Capacity Expansion topics

1. Does a new generation mix largely driven by combined cycle units, PV and wind be within the expectations of the PSAT? Is there something missing that should be added as “hard wired”, storage? **No hard wired storage.**
2. Would it be acceptable to have a total generating fleet where the ratio of total renewable energy to total energy produced is less than the RPS, provided that the ratio of renewable to load is at or above the RPS? **Okay for RPS to meet the load.**
3. How should the CO2 limits be applied? **Yes, there should be limits.** Does this apply to energy that is produced internally but sold into MISO market?
 - Break out session recap and next steps
Several scenarios to be presented in the upcoming meetings by Siemens. Note that the studies start in 2024.

- **Next meeting is Thursday, November 7, 10 a.m. - 2 p.m. at Benjamin Hooks Library**