



2019 JEPE Engineering Seminar

Engineering the
Way Forward





Engineering the Way Forward

Program Schedule

Location: Memphis Botanic Gardens

Date: December 5, 2019

Time: 7:30 a.m. – 4:15 p.m.

7:30 a.m. – Breakfast

Hardin Hall – Morning Session

- 8:00 a.m. to 8:20 a.m. Kyle Hyneman & Nick Newman – Welcome and JEPE Update
- 8:20 a.m. to 9:20 a.m. J.T. Young, MLGW President and CEO
- 9:30 a.m. to 10:30 a.m. Ben Amaba – Engineer’s Role in Artificial Intelligence and Technology
- 10:30 a.m. to 10:45 a.m. Break
- 10:45 a.m. to 11:45 a.m. Josh Whitehead – Memphis 3.0 Plan

12:00 p.m. to 1:00 p.m. – Lunch

Hardin Hall – Afternoon Breakout A (External or City of Memphis related)

- 1:00 p.m. to 1:50 p.m. Joe Johnson – Distribution Generation Impact on Electric Systems
- 2:00 p.m. to 2:50 p.m. Travis Aslinger – Federal Pipeline Safety Regulations

Goldsmith Room – Afternoon Breakout B (MLGW Projects)

- 1:00 p.m. to 1:50 p.m. David Hopkins – MLGW LNG Facility
- 2:00 p.m. to 2:50 p.m. Dan Shultz – Water Plant Upgrades

Hardin Hall

- 3:00 p.m. to 3:50 p.m. Brandon Turk – The Way Forward with Drones
- 4:00 p.m. to 4:15 p.m. Kyle Hyneman – Closing Remarks and Questions



J.T. Young

President and CEO J.T. Young joined MLGW in 2018 and is the 11th President to lead the utility. Young's diverse utility experience includes engineering, customer service, marketing, sales, risk management, information technology, finance and supply chain management. Immediately prior to assuming his responsibilities at MLGW, he served as Gulf Power Company's Customer Service and Marketing General Manager.

Young holds a B.S. in Electrical Engineering from the University of Florida, an MBA from the University of West Florida and he is a graduate of Harvard Business School's General Management Program.

Before moving to Memphis, Young was active in the Pensacola community and served on many local boards including Baptist Healthcare in Pensacola and as board chairman of two Florida-based Baptist Healthcare affiliates, Lakeview Center, Inc. and Global Connections to Employment. He also served on the boards of the Fellowship of Christian Athletes, Covenant Hospice, United Way of Escambia County, Waterfront Rescue Mission and SunTrust Bank, NW Florida. He also chaired the Chief Judge's Children's Council Fatherhood Advocacy Committee.

Young and his wife, Deidre, have two sons, Jarl II ('Thomas') and Joseph.





Nick Newman

Nick Newman, Vice President of Engineering and Operations, is responsible for managing and coordinating all engineering and operational divisions for Memphis Light, Gas and Water.

Newman joined MLGW in 1988 as a Service Engineer in the Customer Engineering Department. He served in several positions in the Customer Engineering area as well as several rotations to other operational areas at MLGW. He was promoted to Assistant Manager of the South Service Center in 2000 and Manager of the same area in 2005. Nick was promoted to Vice President of Construction in 2007 and was reassigned to Vice President of Engineering and Operations in 2018. Additionally, he served as the Project Manager for the Energy Conservation Project at NSA Mid-South.

Newman is a native Memphian and graduate of Frayser High School. He earned his B.S. in Electrical Engineering and an MBA from the University of Memphis. He holds a Grade 2 Water Distribution License from the State of Tennessee. Newman is active in the American Water Works Association (AWWA), Tennessee Association of Utility Districts (TAUD) and several other associations. He is on the board of TAUD where he serves as Vice President and is the Chairperson for the legislative team. He also serves on the Tennessee Water/Wastewater Financing Board.



JEPE's Mission

MLGW's Junior Engineer to Professional Engineer (JEPE) Program is a two-year program for all Level I engineers. We help new engineers get acclimated at MLGW through our mentoring, rotation and orientation programs. The development of junior engineers is considered a key component in MLGW's overall succession planning. The orientations and rotations are intended to expose the engineers to the many facets of MLGW, and to allow engineers to network and establish a rapport with their coworkers in other departments. The JEPE also supports existing engineers in obtaining their professional license through the PE review course and material support reimbursement policy.

2019 JEPE Committee Members

Chair – Kyle Hyneman

Past Chair – Hyung Lee

Vice Chair – Kory Robinson

Secretary – Irvin Gabaldon

Program Coordinator – Ben Hamilton

Mentor Coordinator – Gregory Haerr

Finance Coordinator – William Yates

Records Coordinator – Adam Blair

Communications Coordinator – Phillip Loewenberg

Logistics Coordinators – Jennifer Lo and Tyler Whitehead

Social Coordinator – Kelsey Seiter



2019 JEPE Members

Kyle M. Atkins

Robert Aymett

Darrell Banks

Kendrick Crawford

Christopher T. Cullum

Douglass Dobbins

Ike Griffith

Curt Holt

Heather M. Horton

Kaitlin Howle

Darrie Jenkins

Jennifer Lo

Madelyn Lukens

James Luttrell

Giovanti Palacio

Jimmie Sanders

Kelsey Seiter

Erin Stirgus

Sean Stocking

Natasha Taylor

Oussama Terrab

Tyler Whitehead

Matthew Winters

Tamer Younis

2019 JEPE Recap

2019 has been an exciting year for JEPE! Here are just a few of the happenings.

JEPE and Beverly Perkins teamed up again this October to organize the A-Blazing Solar Car Race! We had a great turnout, with 38 teams from 24 different schools. In September, we hosted a seminar at the training center to prepare students for the event. We gave presentations on topics like aerodynamics, friction, and solar energy. On race day, the forecast was not looking good, but we refused to let rain dampen the mood. With the help of Central Shops, we set the track up inside, and Beverly Perkins found spots for the registration and judging. Once the races started, teams hurried to get their cars running.

Kyle Hyneman announced each race, and Tyler Whitehead and Erin Stirgus updated the brackets. After several heats, a victor was crowned for both the middle school and high school tournaments. The winner of the high school tournament used CD's for wheels!

Another event that JEPE helped organize was the 2019 Robotics Exhibit! With the help of TVA, we set up booths, chairs, signs, and chaperoned the event. We had several high school and middle school teams come in and show off their work. Some students made robots that could lift and move blocks from the middle of an arena to designated zones. Representatives from First Lego League, Robo Challenge Xtreme (RCX), and others were there. RCX talked to adults about how they could

start their own teams. At one booth, a group of elementary school students were showing off their knowledge of circuits and sensors with Cubelets, small electric blocks that can be attached to each other. Another booth allowed kids to control an underwater drone! They could control it remotely by looking at a monitor with a live feed from the drone's camera. It was impressive!

This year, JEPE introduced onsite orientations, events where JE's would travel to different work centers and hear from several engineering and operations departments. They got to hear from a variety of MLGW workers, including both engineers and foremen, from 11 different areas. If you would

like to add your area to the list, send an email to Ben Hamilton.

This is the first year that JEPE began tracking attendance with the Oracle Learning Management (OLM) system. It was a major success! By working with the training center, we gave JE's and their managers

the ability to track their progress through the JEPE program. Ervin Romero and the training center were very helpful with this endeavor. Big thanks to them!

Let's not forget about the three socials that Kelsey Seiter put together! JEPE hosted socials for MLGW engineers at Railgarten, Loflin Yard, and Flying Saucer. Please come to our next social on Dec. 6 at 6 p.m. at Local in Overton Square. It's been a great year, and we look forward to 2020!





Dr. Ben Amaba, PE, CPIM®, LEED® AP BD+C
Chief Technology Officer
Industrial Sector IBM Data Sciences
and Artificial Intelligence Team Elite

Dr. Ben Amaba holds a PhD. degree in Industrial & Systems Engineering, a M.B.A./M.S. degree in Engineering and Operations, and a B.S. degree in Electrical Engineering. Dr. Amaba is a registered and licensed Professional Engineer in several states with International Registry; certified in Production, Operations, and Inventory Management by APICS®; LEED® Accredited Professional (Leadership in Energy & Environmental Design); and certified in Corporate Strategy by Massachusetts Institute of Technology in Cambridge, Massachusetts. He is responsible for industrial manufacturing, infrastructure, engineering, and supply chain solutions.

Dr. Amaba holds positions as Industry Council Advisor to Project Production Institute, Board of Director of Whoop Wireless Corporation, UCX Corporation, and RANCS Group LLC, Executive Board Member of Applied Human Factors and Ergonomics (AHFE) and Editorial Board Member to IEEE (Institute of Electrical and Electronics Engineers) IT Professionals, Founding member to the Institute of Advanced Systems Engineering, Founding member to the Center of Advanced Supply Chain Management, Editorial Board of The Open Cybernetics and Systemics Journal, and Executive Advisory Board Member to the University of Miami, University of Houston, and University of Central Florida.





Brandon Turk

**Managing Member
Midsouth Aerials**

Brandon Turk is the Managing Member of Midsouth Aerials, a Memphis-based technology firm working in drones, 3D renderings, and education. While operating Midsouth Aerials, Brandon was recruited by Apple co-founder Steve Wozniak to be the Director of Transformational Technology in his education company, WozEd. Brandon is helping prepare our next generation of youth to work in the technology industry, including drones for commercial applications such as Powerline Inspection, Thermography, and Engineering. Having a background in law enforcement, Department of Defense, and other various experiences places Brandon at the forefront of current and future drone technology.



Travis Aslinger

**Deputy Director
Gas Pipeline Safety Division
Tennessee Public Utility Commission**



Travis Aslinger has been with the Gas Pipeline Safety Division of the Tennessee Public Utility Commission for five years. Presently, he performs duties as Deputy Director under Director Bryce Keener. Aslinger graduated from Tennessee Tech in Chemical Engineering. He previously worked in Water Treatment for TDEC in the Cross-Connection Prevention Program and as Superintendent for Harpeth Valley UD Drinking Water System, and has more than 20 years of experience in water treatment. Aslinger resides in Joelton, Tennessee where he builds boats and canoes in his spare time.



David Hopkins

David Hopkins
Supervisor MLGW LNG Plant

David Hopkins has worked for the MLGW LNG Plant 15 years. Initially he worked as a LNG Maintenance Mechanic, moved to LNG Operator, was later promoted to LNG Crew Leader, and then to Supervisor LNG Plant. Hopkins is responsible for LNG truck loading, maintaining LNG tank levels for MLGW peak shaving and LNG truck sales, and day to day operation and maintenance requirements for the LNG Plant. David holds an Associate's Degree in Mechanical Engineering.





Joseph R. Johnson
System Analytics Team Lead
Planning and Analytics Department
Fisher & Arnold

Joseph is an experienced power systems engineer with demonstrated work history in the electric utility industry. He is skilled in traditional utility planning and analytics system studies, such as Construction Work Plans, Long Range Plans, Arc-Flash Hazard Assessments, Power Supply Studies, and Distribution Generation Interconnection Studies.

He is currently positioned as the System Analytics Team Lead at Fisher & Arnold, leading a team of professionals to aggregate data during system model creation, load allocation, load forecasting, system analysis, and long-term planning for utilities. In the past, he has participated in the development of the IEEE 1547 & 1584 standards through the Standards Association.

Joseph holds a Bachelor of Science in Electrical Engineering from Mississippi State University, and is currently earning his Master of Science in Electrical Engineering from the University of Arkansas.



Daniel Schultz
Water Engineering Department
Memphis Light, Gas and Water Division

Daniel Schultz graduated from the University of Memphis with a BS in Electrical and Computer Engineering. For five years he has worked at Memphis Light, Gas and Water Division's Water Engineering Department, where the electrical modernization of the pumping stations has been a primary focus.



Josh Whitehead

**Planning Director
Memphis and Shelby County
Office of Planning and Development**

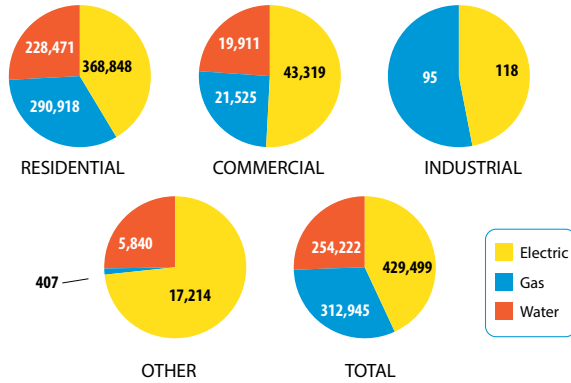
Josh Whitehead is a sixth-generation Memphian who was appointed to the position of Planning Director of Memphis and Shelby County in 2010. In that role, Whitehead administers the Office of Planning and Development and serves as the secretary to the Land Use Control Board and Board of Adjustment.

He holds a master's in community planning from the University of Cincinnati and a Juris Doctor degree from the University of Memphis where he currently serves as adjunct professor. Whitehead has been published in law review journals on issues related to housing and blight, but is most active on a blog that features his take on Memphis' design, history and architecture, cremedememph.com.



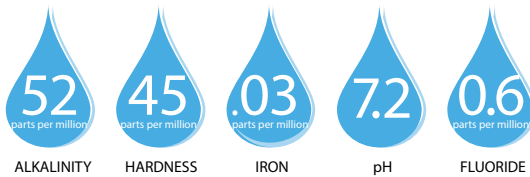
Memphis Light, Gas and Water Division FAST FACTS 2018

Utility Use

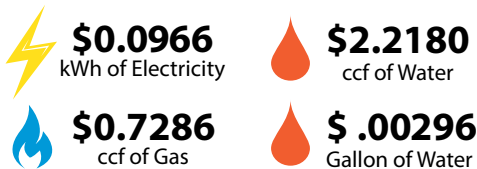


Commercial and industrial water customers are combined under commercial usage figures. Figures indicate average number of customers for 2018.

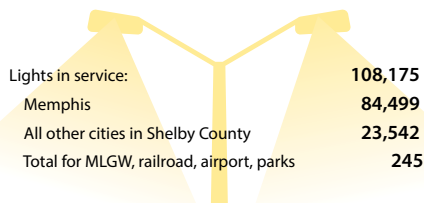
Water Analysis (average 2018)



Average Residential Cost Per



Electric street lights

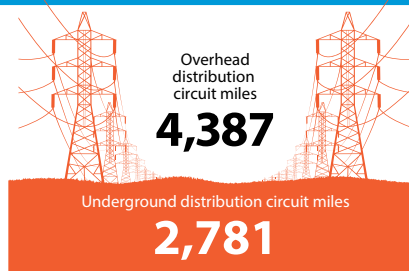


Leased outdoor lights in service
42,717

Fire hydrants in service
30,374



Electric Division



Overhead transmission structure miles
450

Overhead transmission circuit miles
626



Underground transmission circuit miles
17.58

Gas Division

Miles of gas

Mains
4,518



Transmission mains
200.35

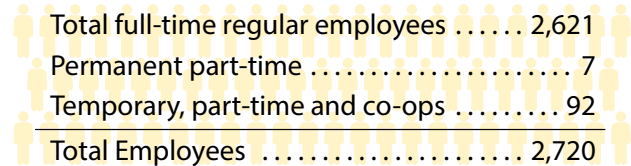
Water Division



Miles of water mains
3,948



PERSONNEL



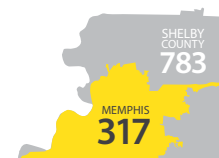
Memphis/Shelby County

Population:



Source: memphischamber.com

Area (in square miles)



Source: shelbycountytg.gov

Data as of December 31, 2018



MLGW

JEPE

Junior Engineer to
Professional Engineer

<http://www.mlgw.org/JEPE/Home.html>