dimensions

Employee Magazine

Embracing technology to improve operations

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dimensions

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Providing insight, perspective and analysis of PPL news, strategies and people to engage employees and retirees, encourage dialogue and generate ideas that contribute to the corporation's success.

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Printed on recycled paper and recyclable.

PPL continues to embrace technology to improve operations

This edition of Dimensions explores the many ways PPL's utility companies are embracing technology and using it to improve reliability, productivity and customer service.

With an increase in distributed generation and the use of renewable energy, PPL's utility companies are adding innovative programs and technologies, making it easier for customers to integrate these solutions.

PPL's utility companies are using drones to accomplish tasks more safely and quickly and are assessing cutting-edge technology like virtual reality that could provide more efficient ways to operate.

With a constant focus on protecting its systems and building the next generation utility, PPL continues to power a brighter energy future.

KEVIN AMERMAN

Virtual and augmented reality point to real-world advances for PPL Electric Utilities

When Devraj Banerjee dons virtual reality headgear in a room at PPL's headquarters in downtown Allentown, it covers his eyes, but his view of the job at hand is expanded like never before.

Looking at a substation design, he can do things like simulate a construction sequence, something he would not be able to do in an on-site field visit. He can look around that virtual environment and accurately assess if new equipment will fit and if there is enough space to operate it safely.

Banerjee, a support engineer for PPL Electric Utilities, believes digital technology is one of the most important ways to meet the challenges of the future. Technology like virtual reality and augmented reality will someday be commonplace in the electric utility industry. It's already being used in other industries, such as vehicle design, manufacturing and healthcare.

Virtual reality (VR) is an artificial, computer-generated world that features sounds and images controlled by the person experiencing it. Augmented reality (AR) uses technology to overlay computer-generated images on something being viewed through a device like specialized glasses or a smart phone.

Right now, PPL Electric Utilities is in the early stages of piloting VR and AR, but the promise is evident. Danny Jarrah, manager, Substation Engineering and Engineering Services, said using both technologies has tremendous potential in determining constructability and maintainability, and in producing safe, quality designs.

"We see a variety of beneficial uses," Jarrah said. "Among other things, it can be used for training, as well as operations and maintenance. We may even use it at transmission project open houses to give the public a virtual view of what a new substation or power line might look like."

> "Imagine being able to look through your AR lens and be guided step by step as you service a piece of equipment. The utility of the future is going to be a decidedly digital utility. It's an exciting, challenging time."
>
> Patricia Scaramuzzo, manager,
> Technical Training and Development for PPL Electric Utilities

Nothing will ever totally replace onsite, boots-on-the-ground work on the grid, but technology like VR and AR have the ability to make work safer and more efficient.

The Technical Development & Improvement Group plans to incorporate the technology into employee learning solutions and Work Methods materials. There is an AR/VR Station located on the first floor of the PPL Conference Center at Walbert to offer a glimpse into how the technologies can transform the way people learn and safely perform job tasks.

Patricia Scaramuzzo, manager, Technical Training and Development for PPL Electric Utilities, said using AR and VR is about taking important next steps in using technology to help employees work smarter, safer and more efficiently.

"Imagine being able to look through your AR lens and be guided step by step as you service a piece of equipment," she said. "The utility of the future is going to be a decidedly digital utility. It's an exciting, challenging time."

Just as importantly, there are benefits to being able to work on equipment without the real-world consequences of a mistake.

Jarrah said PPL Electric Utilities will continue to build in-house expertise in using the technologies. Using AR or VR technology won't happen in a vacuum, however. Other things, like three-dimensional modeling and GPS technology also will play complimentary roles.

"Someday, in a storm restoration situation, I can envision someone wearing AR glasses to be able to access geographical location data in the field, pull up recorded drawings and standards, and develop a list of the necessary materials to make repairs," Jarrah said. "This will speed repairs and reduce outage durations."

The utility of the future may be closer than we think.

JOE NIXON

Working smarter and safer with drones

PPL's utility companies are saving time, cutting expenses and working more safely with drones

Drones flown recreationally can sometimes cause problems for utility companies.

If an unmanned aerial vehicle (UAV) — the official name for a drone — contacts power lines or equipment, it could cause damage and safety issues.

But when used properly by utility companies, drones have proven to be a major asset.

Western Power Distribution, PPL Electric Utilities, Louisville Gas and Electric and Kentucky Utilities have all been using drones to complete tasks more safely and efficiently.

WPD received approval from the U.K.'s Civil Aviation Authority (CAA) in May 2017 to use the devices. Since then, the company has used drones for detailed inspections of power lines and equipment. Drones can fly close to lines, conductors, towers, substations and buildings, reducing the need for staff to work at great heights and enabling teams to allocate their resources more effectively.

WPD recently used a drone to accurately measure the height of a 132-kilovolt conductor that stretches above water to make sure it was high enough to allow a large boat to sail under it.

The company has one primary drone and one for training. The drones are controlled and operated by WPD's Helicopter Unit.

The drones provide high-definition video and still images along with a heat sensing capability, all of which can identify defective equipment before potential failures. This allows repairs to be scheduled and carried out proactively, contributing to a reduction in the frequency and duration of power outages.

WPD Observers Mark Robertson and Chris Lock underwent extensive training and assessment to gain licences from the CAA that authorize them to carry out commercial operations.

"We had to pass a two-day ground school assessment, create an operations manual and complete an air navigation assessment with final exam to be recommended to the CAA," Robertson said. "Having acquired the knowledge and skills needed to operate the UAV effectively and safely, it's rather concerning that people with little or no experience can just buy a piece of equipment like this and possibly create a serious incident while 'playing' with the device."

CAA guidelines stipulate a UAV may fly to a pre-programmed maximum height of 400 feet with a controller, or pilot, accompanied by an observer on the ground. It's similar to the way WPD's helicopter crews operate.

Mark Robertson (left) and Chris Lock demonstrate the UAVs' capabilities.

A drone's-eye view.

PPL Electric Utilities, Louisville Gas and Electric and Kentucky Utilities began operating drones in 2015, gaining approval from the Federal Aviation Administration.

The companies have used the drones to inspect power lines and assess damage to company assets. Drones have allowed the companies to enhance work efficiency, expedite projects and reduce costs.

This past March, drones played a crucial role in two PPL Electric Utilities restoration projects. In the first, crews used a drone to pull line through a 1,200-foot section of a ravine to restore power following a crippling nor'easter. In another challenging situation days later, PPL Electric Utilities crews used a drone to restore a line above a creek after a tree took out the previous line.

LG&E and KU have used drones to conduct infrared inspections of substations, survey construction and environmental projects and secure high-definition photos and videos.

The companies' Power Generation unit also uses a drone to inspect the burners inside of power plant boilers, which stand nearly 17 stories tall. Burners fire pulverized coal that heats water in tubes to about 1,500 degrees to create steam for the generation process. Drones quickly and easily maneuver up and down inside the boilers to check for issues. Before a drone did the work, a burner inspection took around 50 hours and included building scaffolding for workers who had to control multiple safety hazards. With a drone, a burner inspection takes about 90 seconds with little risk to the operator and at a substantially lower cost.

▸ KEVIN AMERMAN AND CLAUDIA HENDRICKS

Employees at Louisville Gas and Electric and Kentucky Utilities' storage centers use barcode scanners to better track meter assets as part of a new Meter Asset Management solution.

New system allows LG&E and KU to better track and gain data from meter equipment

Nearly 1,000 Louisville Gas and Electric and Kentucky Utilities employees have started using a new Meter Asset Management (MAM) solution to track meters and receive, issue, test and view data from the roughly 20 million devices that make up the companies' meter asset inventory.

The new MAM solution provides employees in the meter shops, storage centers and operations centers with the tools and processes to track meter assets — legacy electric meters, advanced electric meters, auxiliary equipment (current transformers and potential transformers), gas diaphragm meters, gas rotary meters, gas regulators, and ERT modules — from birth to retirement.

Employees at the companies' storage centers and meter shops track pallets, boxes and individual assets using barcode scanners which automate the data entry process, reducing meter processing time and data entry and cutting down on mistakes that had resulted from manual entry.

▸ CHERYL WILLIAMS

LG&E and KU's Solar Share program achieves shining success

Louisville Gas and Electric and Kentucky Utilities' Solar Share program reached an important milestone in July with full subscription for the 2,000 shares in the facility's first array.

fee structure of the program, making it more attractive to customers.

Construction on the first fully subscribed section is anticipated to begin in early 2019.

The first array in LG&E and KU's Solar Share program reached full subscription in July. Construction is expected to begin in early 2019.

This crowning achievement was followed in August by the Kentucky Public Service Commission's approval of the companies' request to change the

Affordability of Solar Share

The commission approved Solar Share in November 2016. The program is ideal for residential, business and industrial customers who want to support local solar but are unable to install it on their own property or would prefer to avoid the upfront costs and long-term maintenance required for a private system. It's especially appealing for renters, those with properties predominantly in the shade and those who have deed restrictions against solar panels.

Solar Share site

The site, in north central Kentucky, is large enough to accommodate a four-megawatt solar field. The Solar Share facility will be built in eight 500-kilowatt sections, and each section represents 2,000 shares. The construction process will begin for each 500-kilowatt section after it is 100 percent subscribed.

Customers can subscribe on a first-come basis to shares of solar in 250 watts. Customers can choose one or more shares, based on their preference.

Solar Share production

Each share of solar is currently estimated to produce 18 to 38 kilowatt-hours of energy per month, depending on factors like weather conditions and time of year. A typical residential household uses approximately 1,000 kilowatt-hours of electricity each month.

▸ KATIE DELAUNE AND LAUREN COLBERG

Harnessing the sun's power using data analytics

LG&E and KU's online dashboards share instant solar generation data

In 2016, LG&E and KU began operating their E.W. Brown solar facility — the largest of its kind in Kentucky.

Since then, employees have been using the facility's near real-time generation data to improve operational efficiencies and encourage solar research and development. It's information that also helps foster a better understanding with the public about solar power's capabilities in the Bluegrass State.

When the facility came online, Aron Patrick, manager, Technology Research and Analysis, began using the data from the site to help optimize its performance.

Through modeling and collecting millions of live solar irradiance and generation data points, Patrick developed a live, real-time internal monitoring system that provides regular performance updates, automatically notifies staff of any issues and identifies areas in need of repair.

"Passing clouds can cause a sudden drop in electricity generation, which is perfectly normal at any given moment," added Patrick. "The dashboard can differentiate between these normal variations in solar generation and actual mechanical problems by using the live solar irradiance data to estimate the amount of solar generation that should be produced at each moment."

Following the successful launch of an internal dashboard, Energy Supply and Analysis teamed up last summer with Communications and IT to unveil a new online solar dashboard on the LG&E and KU website.

Viewers can watch online in near real-time while the facility generates power. The facility works in tandem with LG&E and KU's other generating plants to produce power.

"Our goal was to design an educational, visually appealing view of our solar generation data that creates a great customer experience," said Kevin Edmister, senior web specialist. "It automatically updates every minute and dynamically changes data points, time ranges, labels and current statistics on the fly."

Offering comprehensive, live and historical data that highlights the minute-to-minute variation in solar power, LG&E and KU have created a unique opportunity to educate customers, the general public and technical audiences about intermittent renewable energy resources in Kentucky and how they contribute to day-to-day energy needs.

▸ LIZ PRATT

Protecting the Grid

Employees play a major role in company's vigilant defense of cyber threats

Employees not directly involved with transmission or distribution operations might think they are less likely to be targeted by hackers seeking to shut down the grid.

They're wrong, according to PPL Vice President and Chief Information Security Officer Mark Brooks.

"They're even bigger targets," Brooks said.

Brooks says hackers targeting critical infrastructure companies like PPL often start "soft," meaning they initially target employees or departments not directly tied to distribution or transmission functions. They often attempt to gain access to critical systems by first targeting other departments such as human resources, finance, legal or other corporate functions.

"Just because you don't work in the control room, doesn't mean you're not susceptible," Brooks said. "It's often just the opposite."

PPL, like other critical infrastructure companies, is under constant attack.

"We block thousands of attempts daily to penetrate our network through websites, phishing emails, and our perimeter defenses," said Brooks.

Brooks oversees the company's cybersecurity strategy that is executed in PPL's operating units in Pennsylvania, Kentucky and the U.K. His team helps establish industry-best practices through common standards and requirements for all of the companies to follow. Expanding the adoption of encryption, multi-factor authentication (requiring additional pieces of information beyond just a password and ID), and enhanced security monitoring are just some of the areas of focus. PPL is also investing in what Brooks calls "active defense" or "cyber hunting" to proactively detect where the company might have cyber issues or compromises in its environments.

While Brooks' team plays an essential role in overseeing and helping to manage cybersecurity risks, he said the cybersecurity teams in the operating units are where the critical day-to-day protections are being implemented.

"Our security and IT teams in Pennsylvania, Kentucky and the U.K. are working hard to ensure that their operations are secure and protected against cyber threats," he said. "Managing and mitigating cybersecurity risks is a priority for our company. The digitization of the electric grid makes cybersecurity essential to its reliability and resiliency."

While Brooks said the company has a well-defined strategy to defend against cyber attacks and invests millions in cybersecurity, all employees play a critical role in protecting the company. He said over 90 percent of cyber attacks start from a successful phishing campaign.

"These often come in the form of phishing emails — targeted messages designed to trick you into letting down your guard long enough to do something you shouldn't, like clicking on a link or opening a malicious attachment," he said.

"It's crucial for all employees to stay vigilant," Brooks said. "All employees across PPL — no matter what department they work in — need to do their best to be cyber safe."

KEVIN AMERMAN

What can employees do to prevent cyber attacks? PPL Vice President and Chief Information Security Officer Mark Brooks offers these tips:

Stop and think before responding, clicking on links or opening attachments.

Keep your electronic devices up to date with the latest software and security updates.

Retain access to only those systems that are essential for your job. Having access just for convenience is a real security risk.

Use multi-factor authentication, whenever possible, when accessing systems.

Use good passwords with unique and complex combinations, including numbers.

Operate with a mindset that you and the access you have to PPL systems are prime targets for hackers.

PPL Electric Utilities online tool speeds up distributed energy requests

Hundreds of PPL Electric Utilities customers have been benefiting from an innovative new online tool now being used for requests to add solar panels and other distributed generation projects to the grid.

Just weeks after the new Renewable Energy Connection site went live on pplelectric.com, customers were seeing dramatic improvements in how quickly and efficiently their applications were approved.

The online portal, designed to provide fast, reliable and efficient service, is believed to be the first of its kind in the industry. It allows customers to request connections to PPL Electric Utilities' delivery network and get those requests processed within hours or days. Previously, the process took 30 days or more.

The online tool features automated engineering checks that help reduce and, in some cases, eliminate the need for engineering reviews. The system has been accepting about 100 requests monthly.

The new portal has led to significant benefits.

"In addition to improving service to our customers, this tool has reduced the amount of time needed for engineering reviews, which saves the company and ratepayers money," said Kimberly Gauntner, supervisor-Asset Planning. "We've also reduced the number of back-and-forth communications between customer service staff and customers, and we're using less paper.

"Perhaps most importantly, all new approved connections are being added to our mapping system, which will help the company better manage future use and demand."

The new portal is part of a larger three-year, approximately $10 million program undertaken to design, build and pilot new tools to integrate distributed energy resources into the grid.

In addition to accepting application information, the system is actually making real-time decisions based on built-in logic developed by PPL Electric Utilities engineers.

The online portal is linked to the company's customer service system, as well as its electric facilities database, which ties into other PPL Electric Utilities systems, including its Distribution Management System and Outage Management System.

Through some complex site automation work and data analytics, the online application tool has the capability of quickly indicating — within 24 hours for residential customers — whether the company's distribution system can accommodate the distributed energy resources request.

The tool is critical in maintaining the integrity of the grid. Distribution systems were not originally designed for bi-directional power flow, so a large number of distributed energy resources can adversely affect the grid. The new portal allows PPL Electric Utilities to better manage those additions and reduce the risk of adverse effects.

PATRICK LESTER

Looking to the future: PPL Electric Utilities prepares for a different world

We all wonder what tomorrow will bring, and that also applies to electric utilities.

When it comes to predicting the future of the electric utility industry, there's no pat answer, no crystal ball. But talk to PPL Electric Utilities President Greg Dudkin and he'll tell you about the signs that point the way.

> You can wait to see what the future holds, or you can prepare, innovate and be ready to take advantage of what you know is coming. We're going to be ready.
>
> Greg Dudkin, president-PPL Electric Utilities

What Dudkin and others at PPL Electric Utilities see on the horizon is a power grid unlike the one of recent decades, where utilities built new lines and substations just to keep up with suburban sprawl and increasing power demand.

"It used to be that power demand went hand in hand with economic growth, but that's no longer the case," Dudkin said. "Electricity demand is now flat or declining and no longer mimics gross national product. Change is inevitable."

PPL Electric Utilities is ahead of its Pennsylvania peers in investing in its power grid. Billions of dollars of investments in recent years have made the grid smarter, stronger, safer and much more resilient.

The result? Electric service reliability for PPL Electric Utilities customers is among the best in the country. Recent statistics from the Institute of Electrical and Electronics Engineers for 2017 performance show the company was in the top 10 percent of utilities when it came to average outage frequency on its grid.

The challenge will be to improve on that reliability while accommodating change.

So where's the change going to be in the utility landscape? First is the increasing amount of renewable energy. More and more distributed generation — think solar and wind power — is coming onto the grid. That influx of electricity coming onto the grid represents a shift that's expected to continue to grow.

Second is digital. There already is a burgeoning market related to innovation in sensors, controls, automation equipment, and other advanced digital technologies and Internet-enabled applications to detect and respond faster to changing conditions on the grid.

PPL Electric Utilities is already preparing for how to effectively deal with that new reality. A federal solar grant will be used to pilot a project to study how to more smoothly integrate distributed energy resources into the distribution grid.

Apart from the growing influence of things like solar power, PPL Electric Utilities also believes the future will require investments in non-wires alternatives, things like battery storage and energy management. It will rely more than ever on big data and in using that data to drive important decisions.

"As we look to the future, we'll need to be much more diversified in how we manage the grid and in how we deliver financial value for PPL Corporation and its shareowners," Dudkin said.

Changes are already afoot in how PPL Electric Utilities helps customers manage their energy use. Outside of conventional energy-efficiency programming, the company also is making more timely usage information available to customers so they can make more informed choices.

The utility is well past the halfway point of a $471 million project to install the next generation of advanced meters, digital units that send usage data back via very low-frequency radio signals. As part of the meter project, a pilot project is underway to have 500 customers use a small in-home device that links with meters and provides real-time electricity consumption data.

> We challenge the status quo and we never rest in working to provide what's best for our customers. The smarter, stronger and more adaptable we make our grid, the more we're going to be able to successfully compete in tomorrow's energy world.
>
> Greg Dudkin, president-PPL Electric Utilities

Be it a new generation of advanced meters, finding new business opportunities in things like energy management, or some other opportunity, one thing is certain: the electric utility landscape that existed for our parents and grandparents will likely be unrecognizable to our grandchildren.

▸ JOE NIXON

PPL's shifting investor mix

As PPL's business has transformed, so have its shareowners. Events such as energy deregulation, the acquisition of operations in Kentucky and the U.K., and the spinoff of PPL's competitive generation business have helped to drive an evolution of PPL's business and investor mix.

About a decade ago, PPL's shareowners were more evenly weighted between institutional and retail, or individual investors. Today, the investor mix is composed of about 75 percent institutional investors and 25 percent retail investors.

There are different types of institutional investors, and each has different investment objectives, such as income or growth. Regulated utility companies, like PPL, appeal to institutional investors because they typically offer a more stable, low-risk investment option relative to other companies.

Like all companies, PPL's mix of institutional investors includes active investors that manage their investment portfolio based on fundamentals-based research and passive investors that use broad market indexes, such as the S&P 500 to guide investment decisions. More than 30 percent of PPL shareowners are passive investors while a large portion of PPL's institutional investors are driven by a combination of growth and value. These funds seek to invest in companies that they believe are undervalued in the market and/or have high-potential for growth.

Events in the U.K., such as Brexit, U.K. utility regulator Ofgem's next price control review and talk of renationalization, have added a layer of uncertainty that has weighed on PPL's stock price and created small shifts in the company's investor mix.

PPL Top 10 Investors

PPL's top 10 investors own more than 35% of PPL's outstanding shares.

SHARES AS OF SEPTEMBER 30, 2018

Institution	*Total Shares*
The Vanguard Group, Inc.	53,332,187
BlackRock Fund Advisors	45,016,691
Fidelity Management & Research Company	44,993,818
State Street Global Advisors	33,156,263
Zimmer Partners, L.P.	22,533,818
Caisse de dépôt et placement du Québec	18,183,901
Invesco Advisers, Inc.	17,594,260
Federated Investment Management Company	14,828,753
BNY Mellon Asset Management	10,267,259
Geode Capital Management, LLC	9,236,450
Total	**269,143,400**

"Despite the uncertainty brought on by the U.K., PPL's top investors have stuck with us," said Joe Bergstein, vice president of Investor Relations and Corporate Development and Planning. "Even though we are trading in the lower end of our peer group, our shareowners continue to see PPL as a good investment because of how well we execute our business strategy."

PPL's excellent operational performance and the ability to hit its earnings forecast helps to offset the uncertainty many investors feel about the U.K. regulatory and political environment.

"Something that we continually hear from investors is that operationally, we are extremely strong. We do what we say we are going to do, and we execute well on the things that are in our control, and that is recognized by investors. They understand that the uncertainty in the U.K. is not something we can control and that the issues there will come to a conclusion," Bergstein explained.

In the meantime, PPL stands out as a top performer in reliability, customer satisfaction and capital deployment.

"Investors take notice when we receive JD Power awards or when we receive praise from our regulators. When key legislation is passed, like the alternative ratemaking bill in Pennsylvania, it is a nod to the constructive relationships PPL has built with regulators and policymakers. Our reputation and excellent track record of strong performance is something that remains clear to investors," said Bergstein.

Bergstein adds that each employee's contribution is reflected in PPL's bottom line.

"Every employee contributes to the bottom line, no matter what their position or job function is. We all need to perform to the best of our ability and that value will continue to flow up through the company," said Bergstein.

▸ DANA BURNS

Worth their weight in gold

These three workers have reached their golden anniversaries: five decades with their PPL company

Following in father's footsteps led KU employee to long and fruitful career

Following in his father's footsteps, John Morrison joined the Kentucky Utilities family on Dec. 2, 1968. One of six family members who worked at the company — eventually reaching a total of 247 years of service among them — Morrison just celebrated his 50th service anniversary.

"It's in my DNA," he said. "When I was a kid, there were no call centers. All calls came directly to my dad. I remember riding with him at night while he finished up jobs. We didn't mind. KU was feeding us, so we were happy to do whatever we could to help."

For Morrison — who worked as a groundman/truck driver and meter reader before landing his current role as a customer order technician — career highlights include breaking ground on Lexington's Stone Road facility; spending a week in Louisville for Hurricane Ike restoration in 2008; and meeting celebrities like Colonel Harlan Sanders and former University of Kentucky Head Coach Adolph Rupp while on the job.

Today, Morrison covers territory that includes eastern Kentucky to Virginia and even Tennessee.

"Every day is different, a challenge," he said. "I get 30 to 40 orders in the morning, then travel the area to change meters, do disconnects or complete re-reads if a customer questions their bill. When a re-read is requested, I'll look at their meter and have them turn off various appliances. We can see together what the issue may be, and then I'll suggest they contact an electrician, for example, to make repairs. At the end of the day, customers just want to be heard."

As he considers lessons learned in 50 years on the job, Morrison has a few words of advice to newer employees about customer focus and the ever-changing conditions of utility work.

The photo on the left from 1973 shows John Morrison in his early years at the company. Morrison celebrated his 50th anniversary on Dec. 2.

"Have patience and work hard. When I started, I didn't know how long I'd be here. But we have to be here for our customers always — whether we're working in snow that's 12 inches deep or in 100-degree heat."

▸ LAUREN SHEMWELL

Fifth generation LG&E employee has 52 years under his belt

Three days after Larry "Smokey" Dodson's high school graduation in June 1966, he reported for his first day of work at Louisville Gas and Electric Company.

"It was the company my grandfather worked for," said Dodson, a fifth-generation LG&E employee. "And I knew that LG&E would still be in business 50 years from then."

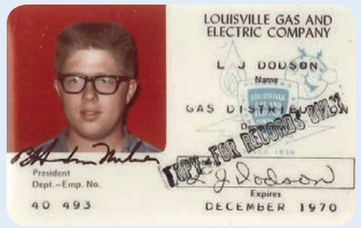
Dodson's grandfather, James "Pa" Workman, was a crew foreman in the gas department and Dodson joined his crew.

"I was very lucky — and privileged — to work for the same crew as my Pa," said Dodson. "The advantage of that was that I knew a lot of people on that crew, and they sort of took me under their wings and looked out for me. Back then and still today, LG&E is 'family' and not just work people."

Over the next two decades, Dodson advanced through various gas operations jobs, gaining a wealth of operational knowledge. In 1987, he transitioned into gas safety training, which appealed to his "teacher's heart" and set the stage for the second half of his career. Initially, he established a gas training program at LG&E, customizing the curriculum and a training center for the utility. Since then, Dodson has collaborated with industry experts nationwide and won numerous industry awards. In a typical day, he might conduct internal training classes, work with fire departments, make safety presentations to outside groups, investigate gas-related incidents, conduct safety audits or develop new training programs.

"I enjoy the fact that my job is different every day and I like working with people in all areas of the gas business," said Dodson. "I'm proud to help ensure that our employees stay safe on the job and that they go home every night with no injuries, and to know that we're protecting and taking care of the public, too."

▸ CINDY STAIRS



Top: Larry Dodson, shown on his first employee ID badge, joined the company in 1966 as a laborer in Gas Distribution. Bottom: Today, Dodson serves as a Gas Safety/Technical Training consultant. He has 52 years of service with LG&E and KU.

PPL employee continues to demonstrate dedication after 50 years with company

Ben Gress will retire in January, but he'll have plenty to do. He and his wife take care of about 80 animals, including this llama, on their 15-acre animal sanctuary.

It was the middle of the night and Ben Gress and his wife had to rush an ailing miniature horse from their animal sanctuary to an animal hospital over two hours away.

On the long trip down, Gress planned on taking the day off from work, not knowing how long he'd be gone or how the horse would make out.

After four hours of traveling and lots of worrying, the 68-year-old and his wife finally returned home just before Gress' work shift normally starts. Relieved that the horse would be OK, Gress placed his focus back on his job at PPL and decided not to take off after all.

It's that type of dedication that propelled Gress to his golden anniversary with PPL in June.

Gress first stepped into the PPL Tower Building in 1968 as a high school intern. Then just a 17-year-old Dieruff High School student, Gress parlayed the internship into full-time employment.

"It doesn't seem like 50 years looking back," Gress said. "It seems to have gone fast."

Gress handled various roles over the years from accounting to payroll to overseeing retirement benefits. He advanced though Payroll, Plant Accounting, and Accounts Payable where he landed an accounting role that he stayed in for 19 years. In 2002, he moved to his current role as a senior clerk in PPL Electric Utilities, working with capital expenditure requisitions and various billings.

But the one Gress currently has will be his last. He recently decided to retire in January.

Gress has plenty to keep him busy upon retirement — the miniature horse he rushed to the hospital is one of about 80 animals Gress and his wife, Kathryn, care for on their 15-acre animal sanctuary at their Lowhill Township home. The Gress Mountain Ranch, a 501(c)(3) public charity, is a therapeutic ranch for both people and animals.

"With the animals, it's basically 24-hour care, so it's not like I'll have nothing to do," he said.

Gress said he'll look back with fond memories on his five decades with the company.

"It's been a good company to work for," he said. "It's allowed me to live a good life."

▸ KEVIN AMERMAN

PPL Electric Utilities has given electrical safety demonstrations to more than 20,000 people with its Live Line Electrical Safety Exhibit.

Louie the Lightning Bug, LG&E and KU's electric safety mascot, attracts "kids" of all ages at community events, including the Kentucky State Fair, which hosts nearly 1 million people.

PPL Electric Utilities has delivered in-school theatrical performances about electrical safety to more than 60,000 children since 2015.

Delivering powerful messages in a fun package

PPL's utility companies teach safety methods through mascots, plays, virtual reality and other methods

Educating children at an early age about electrical and natural gas safety creates life-long impressions and positive behaviors.

That's why PPL's utility companies invest significantly in numerous initiatives to teach kids and teens about potential hazards related to electricity and natural gas.

The use of mascots, plays, demonstrations, publications and even virtual reality are just some of the ways our companies teach important safety messages in a fun way.

PPL Electric Utilities

PPL Electric Utilities produces a theater-based program with the help of actors from the National Theatre for Children to deliver messages about electrical safety to youngsters.

Since 2015, the company has delivered "Safety Detectives in Hot Pursuit" to more than 60,000 students at nearly 200 schools. PPL Electric Utilities has committed to taking the program to 100,000 children over a five-year period. Most recently, performances were given to 30 schools from mid-October to early November.

"We're focused on getting our safety message to children early in their lives and continuing to reinforce it as they grow," said Mark Santayana, manager-Public Safety. "The idea is to show and tell them something they'll remember for the rest of their lives. And our hope is that they share it with their parents, siblings and friends."

Some high school-age students across the company's service territory have been getting up-close lessons in what can happen when contact is made with overhead and underground power lines thanks to demonstrations of the PPL Live Line Electrical Safety Exhibit.

The exhibit is a scaled-down 7,200-volt electrical distribution system that was developed and built by PPL workers and features live electrical wires, utility poles and transformers. Using ladders, gloves, shovels and other tools in a controlled environment, trained PPL Electric Utilities staff wearing protective equipment show the spark, flames, smoke and crackle that occur when those items come in contact with live electrical lines.

While exhibit demonstrations are done primarily for the general public and first responders, The company's Public Safety team is taking the popular exhibit to some high schools and technical schools.

In 2018, demonstrations have been performed for about 11,500 people through September. That included a seven-day run at the Bloomsburg Fair in Columbia County. An estimated 8,000 people saw electrical safety presentations in 2017.

PPL Electric Utilities expanded its safety education efforts in the fall by publishing a children's book that outlines what children should do and what they should avoid near power lines and other electrical components. The book explains what electricity is, what it does and how PPL's crews work safely around it. The illustrated 28-page book will be made available to fourth-grade students across the service territory.

LG&E and KU

Louisville Gas and Electric and Kentucky Utilities use their electric safety mascot, Louie the Lightning Bug, to reach thousands of children and adults with key messages at community and special events across the service territories. Most notable is the Kentucky State Fair, which draws nearly 1 million attendees.

LG&E and KU also use their 120-volt mini-city tabletop to feature a live demonstration about electric distribution system operations and the risks associated with playing near power lines. And Energy Day in the classroom educates students about a variety of energy- and safety-related topics.

LG&E and KU also recently launched a new K-6 curriculum-based natural gas and electric safety education program for schools throughout the companies' service territories. The program meets Kentucky Academic Standards and offers a variety of age-appropriate safety information through various media. They include student booklets; lesson-plan guides for educators; a website that features videos, games and checklists for students, teachers and families; and a parent-engagement survey.

WPD

Western Power Distribution is also taking the electrical safety message to the stage by backing a touring production of an interactive play for primary school children.

Performed by community and schools engagement group Bollo, the play includes lots of jokes to go along with the serious messages. During the shows, the audience gets to choose whether the characters get themselves into unsafe situations or not. They're helped out by WPD's safety superhero Pylonman.

The company has also produced a video to warn of the dangers of entering substations. Children watch it via virtual reality headsets. A second video is now in production.

PAT LESTER, CLAUDIA HENDRICKS AND LOUISE BIRKETT

Western Power Distribution's safety superhero Pylonman preaches electrical safety.

This Safari project at The Mall at Short Hills in New Jersey features a rooftop solar system capable of producing 3.5 megawatts of power.

Short Hills, high impact

The Mall at Short Hills is one of the top fashion and luxury shopping destinations in New Jersey. While shoppers spend thousands inside its walls, the mall quietly generates thousands of kilowatts of solar power from its roof.

The Mall at Short Hills recently partnered with Safari Energy to design and build a parking deck and rooftop solar system capable of providing nearly 3.5 megawatts of power.

Safari Energy's project development process provides clients with a turnkey approach to commercial solar systems. The entire process is managed by a project lead, who works hand in hand with clients to oversee the various stages of development, including contracting, procurement, construction and asset management. The project starts with a detailed energy and financial analysis, as well as an engineering feasibility study. Safari Energy's project development team secures proper permits and available incentives and it coordinates with the local utility provider to organize interconnection approvals and receive permission to operate.

"The Mall at Short Hills is one of more than 300 projects where we've successfully applied our portfolio approach," said Matt Rudey, chief executive officer of Safari Energy. "This approach delivers consistent value, impeccable quality and a high degree of efficiency to optimize financial returns for the owners," said Rudey.

Safari Energy has contracted with the owners of The Mall at Short Hills for two additional sites and has begun evaluation work on several other sites, using the turnkey approach that has driven success on previous projects.

"Commercial solar projects like these fit well not only with our customers' financial goals, but also with their sustainability goals to increase use of renewable energy sources, limit energy consumption and reduce greenhouse gas emissions," said Rudey.

▸ DARIUS RAZGAITIS

View video: safarienergy.com/shorthills

A bright future for renewable energy

Q&A with Vijay Singh, vice president-Renewable Energy Solutions

Vice President of Renewable Energy Solutions Vijay Singh has spent about 20 years at Fortune 200 companies developing and implementing clean and renewable power generation solutions using natural gas, solar, wind and energy storage.

Q: What brought you to the utility industry, and how did you get involved in renewable energy?

A: I spent the first part of my career as a mechanical engineer developing products in the auto industry in Michigan. But I wanted to broaden my knowledge beyond engineering to all aspects of how a business runs. After completing my MBA at Wharton School in 1997, I knew I wanted to pivot to something exciting and more challenging. At the time, the energy industry was in the midst of wholesale deregulation and it was an exciting place for me to be. I decided to work for the competitive generation affiliate of Southern Company in Atlanta, where I focused on analyzing the recently deregulated power markets, developing market entry strategies, and supporting the commercial deployment of natural gas-fired combined cycle power plants, which was a new form of power generation at the time.

My next move was to FPL Energy, which later became NextEra Energy Resources, an affiliate of NextEra Energy Inc. For more than 14 years, I moved across different groups within the company where I performed strategic functions such as financial valuation and market analysis, and managed P&L for about 5,000 megawatts of assets in various markets across the country. About five years ago, I had the opportunity to launch NextEra's energy storage group when this market was in its infancy. Since then, the industry has picked up considerably.

Q: How have you seen the renewable energy industry evolve and where do you see it going?

A: Renewables are competing economically now. In the early days, tax credits and state renewable portfolio standards, which mandate utilities to buy a certain portion of their energy from renewables, helped spur the adoption of renewables. Over time, with scale, the technology and efficiency have improved and cost has declined dramatically, allowing wind turbines, solar panels and now storage to basically compete without tax credits. Currently, wind and solar alone comprise about 15 percent or 150,000 megawatts of installed capacity in the U.S. — it was almost zero fifteen years ago.

It has taken time, but we are at a point where we will see a lot more renewables utilized in this country. Talking about solar alone, in 2010, capacity in this country was roughly 1,000 megawatts. At the end of this year, solar capacity is projected to be about 65,000 megawatts. In the next five years it is projected to double to almost 130,000 megawatts.

Q: How has energy storage impacted the growth of solar and wind power?

A: Solar and wind have typically been considered intermittent power sources, meaning that if the sun doesn't shine or the wind doesn't blow, you don't generate power. Now with energy storage, solar and wind power are more predictable.

The cost of batteries is coming down significantly while the efficiency is increasing. We are seeing an increasing convergence of renewable and energy storage technologies. Now, batteries can be paired with solar and wind resources to create a dispatchable carbon-free product. It makes a lot of sense to utilities now.

Q: How do you see renewable energy fitting into PPL's business strategy?

A: Renewable energy has the potential to be a growth platform for PPL. As regulations change and the resource mix shifts away from fossil, we will see more growth in renewables and distributed energy resources.

The continued growth in renewables, cost declines, storage, and customer demand for these resources could facilitate renewable energy becoming a meaningful part of the business that adds customer and shareowner value. Safari gives us an anchor from which we can build on.

▸ DANA BURNS

> The most important thing that I have learned at LEAF is that creating safe spaces for people to be themselves and to really value them for who they are is really important and a big part of what we do here."
>
> Dailah, third-year LEAF leader

Farming project cultivates young leaders

For many kids, summer vacation is a chance to kick back, relax and take a break. For the youths who spend their summer working at the LEAF Project — a program funded by the PPL Foundation — this is their time to get up early, work hard and bloom into the leaders of tomorrow.

Launched in January 2013, the LEAF Project, which stands for leadership, education and farming, is a farm-based youth employment program in south central Pennsylvania. Youths ages 14 to 22 work alongside farmers, chefs and their peers to develop knowledge about the food system while broadening their self-awareness and building leadership and communication skills.

"LEAF's ultimate goal is to cultivate young leaders from diverse backgrounds through meaningful work in the food system," said Heidi Witmer, founder and executive director of LEAF. "At the core of it, we equip youths to build the world they want to see by putting them in positions of real challenge, real responsibility and real complex situations. We give them the support and resources to see things in a different light and see how they would change that."

LEAF develops leadership skills and workforce readiness through a program that builds progressively over four years. All participants start in an eight-week summer internship program and then can apply for fall, winter, spring and future summer seasons. Teens and young adults who choose to continue in the program move into leadership roles, taking on venture management, marketing and business responsibilities.

According to Witmer, about half of all first-year participants move on to subsequent years or even the full program at LEAF. The program has employed more than 100 diverse teens and young adults during the six years it has been operating.

No matter how many years youths have been at LEAF, they are all immersed in every aspect of the food system, from cultivating and harvesting crops to cooking and to educating and feeding the community. Half of their time is spent doing hands-on work in the food system and the other half is spent participating in workshops about farming, food security, nutrition and diversity.

"In the food systems workshops, youths learn about how we farm at LEAF and the farming system in general," said Shane Kaplan, assistant director at LEAF. "Then we have workshops that are about nutrition and hunger and homelessness, so they get a sense of who they are in the world and how they can make the biggest impact."

That impact is far-reaching. The food raised from LEAF feeds a lot of people in the community. About 60 percent of all produce is sold to eight local chefs, 10 restaurants and 41 households as part of a Community Supported Agriculture program. LEAF also partners with numerous hunger relief organizations and two preschools to feed more than 3,000 people in need each year.

Grants from the PPL Foundation have helped to develop and expand the program. Funds from the PPL Foundation have been used to extend the LEAF seasonal positions to year-round leadership positions where participants are responsible for functions such as bookkeeping, field management and produce share management.

"We can see the profound impact of that investment. The young people have been able to develop into much more sophisticated and meaningful adult-like responsibilities in the organization because of the PPL grants," said Witmer.

DANA BURNS

Watch LEAF in action on the PPL Currents blog: pplweb.com/blog/leaf

> I spent the summer learning how to work on a farm, grow vegetables, visit other partner farms and learning practical skills like cooking and money management. I was rewarded with all that knowledge as well as the opportunity to work on my leadership skills. LEAF helped me see that there's no right or wrong way to lead people and build a community."
>
> Jake, second season assistant crew leader

Retiree finds passion in work with disabled artists

When Ian Wainwright was asked to put together a business plan to launch a fledgling disability arts organization as an independent charity, it was meant to be a couple of weeks' work.

That was in 1999 when he was a senior manager within MEB Network Services (now Western Power Distribution West Midlands). Nineteen years later, and having retired in 2002, he's still a director and trustee of DASH — Disability Arts in Shropshire, a disability-led visual arts organization.

"I responded to a request by the then-Public Relations Director Mike Dernie, who was passionate about an organization called Arts and Business, which works to develop partnerships and exchange of skills between the cultural and private sectors," Wainwright said. "Arts and Business linked MEB with DASH, which was an offshoot of the Shropshire Disability Consortium, and the rest, as they say, is history."

In 2001, Wainwright's work with DASH saw him win the U.K.'s Jaguar Award for Business Advisor of the Year — the prize included the loan of a rather nice XK Jaguar for a weekend.

As well as commissioning new work by disabled visual artists, DASH runs workshops and mentoring programs for artists. It also provides support and accessibility services for disabled audiences.

Projects DASH has been involved with during 2018 include a visual arts project for young people and Processions — a mass participation artwork to mark the centenary of the Representation of the People Act, which gave British women the right to vote.

When it came to retirement, Wainwright never had any plans to put his feet up.

"I really don't miss all of the travelling I had been doing for the previous 25 years," he said. "But I still wanted to be challenged."

He's currently DASH's treasurer.

And with most small charities, the directors and trustees also all undertake roles to support the day-to-day operations of the organization. In Wainwright's case, that includes human resources-related matters and fundraising.

"The thirst for the services and support that we provide to disabled artists and audiences has increased dramatically over the years," Wainwright said. "I passionately believe DASH is making a difference to society's perception of disability art and advocating the social model of disability and inclusion in general."

With plans to expand its Cultivate mentoring project for disabled artists, increase the number of artists it works with and provide further training and workshops, one thing is certain — Wainwright won't be putting his feet up for a few years yet.

Above: A disabled artist creates work as part of the DASH program. Below: Ian Wainwright

PPL Retiree Club Contacts

LE-GEN: Jim Carr, president, 484-375-5121, jhcarr@ptd.net
Lancaster: Merle Farmer, president, 717-786-0125, mfarmer13@comcast.net
Harrisburg: Corrin Aughenbaugh, president, 717-697-3146;
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Montoursville/Susquehanna: Richard DiGiacomo, 570-275-3831, rdigi@ptd.net
Scranton/Northeast: Anthony DePaola, president, 570-347-6324, tonypsu@comcast.net
Lexington: Kim Gentry, 859-367-1362, kim.gentry@lge-ku.com
Louisville: Charlotte Self, 502-627-4790, charlotte.self@lge-ku.com

Powering economic development in Kentucky

LG&E and KU play pivotal role in bringing business to Kentucky

Louisville Gas and Electric and Kentucky Utilities are well recognized in Kentucky as leaders for encouraging economic vitality and quality of life. The utilities continue to have nationally competitive electric rates and have made strategic investments in infrastructure and technology to ensure the communities served have safe, reliable energy and are poised for economic growth.

Over the past two years, the companies' economic development efforts contributed to 268 announcements of new or expanding businesses within their service territories, which includes more than 12,562 jobs and investments of more than $4.8 billion. Some of these efforts include:

- Commencement of a commercial-scale battery and energy storage research project.
- Expansion of LG&E's natural gas transmission system.
- Investment in intelligent control equipment on the electric distribution system.
- Enhancements to its transmission system.
- Support of and assistance to multiple nonprofit organizations.
- Promotion of workforce development and STEM careers initiatives.

It's because of these efforts that Site Selection, the international economic development magazine, once again named LG&E and KU a "Top 10 Utility" for the companies' efforts to grow business and attract jobs to Kentucky.

LG&E and KU's Economic Development team, from left to right: Daryl Smith, Economic Development project manager; Debbie Gray, Economic Development project manager; Paul Weis, manager, Business Services; Lisa Payne, lead Economic Development project manager; and Brad Sowden, Economic Development project manager.

John Bevington

As further commitment to its ongoing focus on fostering growth and expansion across the state, LG&E and KU recently created and filled a new role, hiring John Bevington as the company's director of Business and Economic Development. Bevington previously worked at the Kentucky Cabinet for Economic Development for nine years, most recently as commissioner for the Department for Business Development, a key role in promoting business development statewide.

Bringing new energy to western Kentucky

In 2018, a major site-selection announcement was made in the region, which LG&E and KU's Economic Development team helped bring to fruition.

Global Win Wickliffe, a Chinese-owned paper products manufacturer, announced it will open its first U.S. facility in western Kentucky at the former Verso Corporation mill in Ballard County. Global Win Wickliffe committed to invest $150 million and is expected to create 500 new jobs.

LG&E and KU's involvement included significant investments in transmission lines, pole replacements and upgrades to the substation that serves the facility.

"The 161-kilovolt line that feeds the Wickliffe station is the backbone of electrical service to Global Win Wickliffe," said Paul Weis, manager, Business Services. "LG&E and KU's investments in this system are not only vital for electric reliability at the facility, but offer Global Win Wickliffe improved flexibility for future maintenance and upgrades to the substation that services the plant."

JENNIFER M. WHELAN

Company loses influential leader

With great sadness, the company announced on Nov. 7 that Robert Symons, Western Power Distribution's chief executive, died from an illness that he had been diagnosed with earlier in the year. He was 65.

Symons spent more than four decades in the energy industry and had led WPD since 2000. He was instrumental in achieving improvements in network performance, reductions in cost and industry-leading customer satisfaction that enabled WPD to be regarded as the U.K.'s leading electricity distribution business. He was a tireless champion for the utility industry in the U.K., a leader determined to deliver for WPD's customers, and a friend and mentor to those who knew him best.

Here's what those who worked with Symons had to say about him:

PPL Chairman Bill Spence:
"Robert was a force of nature driven to deliver for our customers and never satisfied with the status quo, always challenging the business to reach higher for those it served."

Mike Gee, former WPD networks manager:
"Robert was a director in all senses of the word, of the greatest ability and also a very great friend. He made decisions quickly and effectively and most importantly of all, he trusted people to deliver. As a friend he was kind, supportive and understanding for all of the years that I was privileged to know him. He will be missed by everyone and things will never be quite the same again."

Maurice Fletcher, former WPD director of Regulatory Relations and External Affairs:
"Whatever the job, Robert always set and achieved high goals, created great teamwork and led from the front. But most of all, he was a sincere colleague and friend with a great sense of fun. He will be sorely missed."

Simon Roberts, chief executive, Centre for Sustainable Energy:
"I know Robert was a huge influence on the positive and down-to-earth culture at WPD — so he leaves an amazing legacy of which his family and everyone at WPD should be rightly proud."

EMPLOYEES

Thomas H. Gallagher of East Stroudsburg, Pa. died Sept. 17, 2018. Gallagher was an electrician leader-FS-Substation for PPL Electric Utilities.

John P. Horvath of Zion Grove, Pa. died Aug. 27, 2018. Horvath was a material handler-RM for PPL Electric Utilities.

Trent Probus of Louisville, Ky. died July 11, 2018. Probus was an inventory attendant and material handling operator for LG&E's Mill Creek Station.

Timothy E. Samuels of Dunmore, Pa. died Aug. 7, 2018. Samuels was an electrical test technician for PPL Electric Utilities.

RETIREES

John D. Albright of Montgomery Village, Md. died Aug. 12, 2018. Albright retired in 1986 as an area foreman for the former PP&L.

Jessie Barnett of Frankfort, Ky. died Sept. 30, 2018. Barnett retired from KU in 1999.

Howard J. Beinhower of Dover, Pa. died Aug. 19, 2018. Beinhower retired in 1982 as a shift supervisor-Power Production for the former PP&L.

Sarah Beirne of Louisville, Ky. died July 11, 2018. She retired in 1996 from LG&E.

Robert A. Brouse of Moyock, N.C. died Sept. 1, 2018. Brouse retired in 1996 as a consultant for the former PP&L.

Norman E. Ceriani of Freeland, Pa. died Sept. 25, 2018. Ceriani retired in 1994 as a materials manager for the former PP&L.

Robert Clark of LaGrange, Ky. died July 3, 2018. He retired in 2002 from LG&E and KU as a laboratory technician.

Freddie Czubowicz of Lake Ariel, Pa. died July 20, 2018. Czubowicz retired in 1989 as a senior groundman for the former PP&L.

Mary Debellas of New Ringgold, Pa. died Sept. 14, 2018. Debellas retired in 1989 as a steno/clerk-general for the former PP&L.

The PPL family has sadly said goodbye to some of our colleagues. We pay tribute to them here.

Dow Dunlap of Bedford, Ky. died June 25, 2018. Dunlap retired in 2000 from KU as a chief mechanic.

Leon Dunn of Louisville, Ky. died Sept. 15, 2018. He retired from LG&E in 1989.

Tearance Ellis of Shelbyville, Ky. died Aug. 28, 2018. Ellis retired in 2001 from LG&E as an instrument electrician A.

Ronny Eshelman of Elliottsburg, Pa. died June 18, 2018. Eshelman retired in 2008 as a tractor-trailer operator for PPL Services Corp.

Peggy Fields of Dayton, Ohio died Aug. 20, 2018. She retired in 1997 from KU.

Francis P. Gavin of Wilkes-Barre, Pa. died June 29, 2018. Gavin retired in 1986 as a lineman 1/C for the former PP&L.

Michael J. Grab of Hummelstown, Pa. died Sept. 12, 2018. Grab retired in 1999 as a journeyman electric-FS-Generation for the former PP&L.

Tommy Hamilton of Owensboro, Ky. died Aug. 20, 2018. He retired from Western Kentucky Energy in 2007 as a resource leader.

David Harbison of Louisville, Ky. died July 19, 2018. He retired in 1992 from LG&E.

William Hetherington Jr. of Selinsgrove, Pa. died Sept. 27, 2018. Hetherington retired in 1999 as a utility man-yard for the former PP&L.

John Holt of Shepherdsville, Ky. died Sept. 24, 2018. He retired from LG&E in 1995.

Garth A. Horlacher of Plainfield, N.J. died Aug. 3, 2018. Horlacher retired in 1994 as a senior tool repairer for the former PP&L.

J. E. Humphreys III of Ephrata, Pa. died June 15, 2018. Humphreys retired in 1994 as a plant control operator for the former PP&L.

William Johnson Sr. of Lexington, Ky. died July 21, 2018. He retired from KU in 1998.

Dennis R. Isopi of Mountaintop, Pa. died Sept. 25, 2018. Isopi retired in 1998 as a unit coordinator-SSES for the former PP&L.

Alfred S. Kielbasa of Avoca, Pa. died Aug. 8, 2018. Kielbasa retired in 1999 as a master mechanic-Electrical for the former PP&L.

Fred Kornet Jr. of Jackson, Miss. died June 22, 2018. Kornet retired in 1982 as a vice president-Corporate Planning for the former PP&L.

David Mattingly of Mt. Washington, Ky. died Aug. 19, 2018. He retired in 2016 from LG&E as a gas trouble technician.

Michael McDonald of Central City, Ky. died Aug. 5, 2018. He retired in 2015 as a unit operator assistant at KU's Green River Station.

Arthur Montgomery of Harrodsburg, Ky. died July 2, 2018. He retired from KU in 1998.

William Mosley Jr. of Louisville, Ky. died Aug. 9, 2018. He retired in 2001 from LG&E's Cane Run Station as a yard operator.

Zelma Mosley of Louisville, Ky. died Aug. 29, 2018. Mosley retired from LG&E in 1989.

Stephen Norris of Lebanon, Ky. died Sept. 29, 2018. He retired in 2001 from LG&E as a mechanic A–equipment shop.

Harley Parr of New Albany, Ind. died July 27, 2018. Parr retired from LG&E in 1989.

William Polston of Louisville, Ky. died Aug. 30, 2018. He retired in 1996 from LG&E.

James B. Orzechowski of Springfield, Mo. died April 26, 2018. Orzechowski retired in 2004 as a service technician for PPL Electric Utilities.

Alfred F. Price of Folsom, Pa. died Aug. 13, 2018. Price retired in 1983 as a business consultant for the former PP&L.

Stephen Reich of Williamsport, Pa. died Sept. 3, 2018. Reich retired in 2011 as a system operator for PPL Electric Utilities.

Glenn R. Robinson of Redline, Pa. died Sept. 3, 2018. Robinson retired in 1992 as a lineman 1/C for the former PP&L.

Harold Sanders of Louisville, Ky. died Aug. 8, 2018. He retired in 2001 as a gas trouble technician A for LG&E.

John W. Schugardt of Allentown, Pa. died July 3, 2018. Schugardt retired in 1994 as a troubleman for the former PP&L.

Robert Snider of Louisville, Ky. died July 3, 2018. He retired in 2000 as a mechanic repair technician A for LG&E's Mill Creek Station.

Roger Still of Norton, Va. died Sept. 29, 2018. He retired from KU in 2000 as a substation supervisor A.

P. A. Strohecker, Jr. of Milton, Pa. died Aug. 23, 2018. Strohecker retired in 2001 as an equipment operator-FS for PPL Electric Utilities.

John Thompson of Elizabethtown, Ky. died July 12, 2018. He retired in 1992 from LG&E.

Charles L. Thourot of Willow Street, Pa. died Sept. 5, 2018. Thourot retired in 2004 as a journeyman lineman-FS for PPL Electric Utilities.

Harold H. Tust of Allentown, Pa. died Sept. 28, 2018. Tust retired in 1991 as a distribution technician for the former PP&L.

Susan Villiard of Abingdon, Va. died July 16, 2018. She retired from KU in 2010 as a senior customer representative in the Norton office.

Jerry Vincent of Greenville, Ky. died Sept. 1, 2018. He retired in 1998 from KU.

Gerald Volpert of New Albany, Ind. died Aug. 12, 2018. He retired in 2001 from LG&E as a dispatcher A for Distribution Operations.

Judith A. Walter of Fogelsville, Pa. died Sept. 19, 2018. Walter retired in 1999 as a bookkeeper for the former PP&L.

Norman Wills of Paris, Ky. died Aug. 25, 2018. He retired from KU in 2001 as a meter reader.

Around the company

WPD partners with gas supply company on hybrid heating project

A unique collaboration between electricity and gas network operators Western Power Distribution and Wales & West Utilities has highlighted the viability of hybrid heating as a way of saving customers money and helping the U.K. reach its carbon reduction targets.

Heating systems that combined gas boilers with air source heating pumps and featured smart switching between the gas and electric networks were installed in 75 homes in Bridgend. The project found that smart hybrid systems can deliver a transition to low carbon heat, offering a significant financial saving compared to a full electrification scenario.

PPL Electric Utilities, GE Power collaborate on distributed energy technology

PPL Electric Utilities and GE Power Digital are embarking on a joint initiative to develop and test software to manage and control electricity from renewable and stored energy sources.

The initiative will enable both companies to learn more about the impact of distributed energy resources on grid management and will accelerate the advancement of technology to support it.

LG&E and KU continue "Plant for the Planet" program

Louisville Gas and Electric and Kentucky Utilities are once again accepting grants for their "Plant for the Planet" program. More than 40,000 trees have been planted since the program began in 2009.

The program awards matching grants in amounts of $500 to $5,000 to nonprofit and government entities with a history of successful tree plantings in the LG&E and KU service territories.

▶ KEVIN AMERMAN