



Delivering today for  
a brighter tomorrow

PPL CORPORATION  
**2017 SUSTAINABILITY REPORT**





# Sustainability commitments

The following sustainability commitments provide a framework for PPL to grow and innovate in a responsible, reliable way that benefits customers, shareowners, employees and society as a whole.



## Create extraordinary shareowner value

Create long-term value for shareowners through fiscal discipline, continuous improvement, environmental stewardship and enduring strategic investments



## Drive best-in-sector operational performance

Excel in safety, reliability, customer responsiveness and energy efficiency while maintaining a culture that fosters innovation



## Advance a cleaner energy future

Encourage responsible stewardship in partnership with our customers and stakeholders to have a sustainable environmental impact



## Build tomorrow's energy infrastructure

Invest in tomorrow's energy infrastructure by developing a more reliable, resilient and efficient grid that fosters continued progress and a cleaner energy future



## Exceed customer expectations

Provide safe, reliable and environmentally responsible energy at the lowest reasonable cost



## Foster an exceptional workplace

Cultivate success by energizing an inclusive, respectful and diverse workplace that rewards performance, enables professional development, encourages employee engagement and enables employees to achieve their full potential



## Strengthen communities

Empower the success of future generations by helping to build strong communities today

(Front cover) Ashley Harris, a lineworker for PPL Electric, speaks to high school students about career opportunities for women in technical fields during the company's annual Girls in Trade Fair.

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# Message from our Chairman, President and CEO

At PPL, we take pride in powering everyday life.

We recognize that so much of what we do and enjoy as a society is made possible by electricity. That's as true today as it has ever been.

As such, we have a tremendous responsibility to provide power safely, reliably and affordably. As we make new investments, we also have a great opportunity to shape our energy future for generations to come.

Our long-term strategy to fulfill this responsibility, to make the most of this opportunity, and to grow responsibly, is simple and clear. We will deliver best-in-sector operational performance, invest responsibly in a sustainable energy future, maintain a strong financial foundation, and engage and develop our people.

As we pursue this strategy, informed by feedback from stakeholders, we will stay true to the sustainability commitments outlined in this report (page 8).

## **Delivering Today for a Brighter Tomorrow**

Over the past five years, PPL has invested more than \$16 billion to modernize the grid, advance a cleaner energy future and meet rising customer expectations. From 2018 through 2022, we will invest another \$15 billion.

We're making the grid stronger and more resilient by replacing power lines and substations and building new ones to improve flexibility. We're making the grid smarter by incorporating technology and automation that allow us to prevent outages in some cases, and respond more quickly in others. We're enhancing security, both physical and cyber, to protect against a new generation of threats.

In addition, we're connecting more renewables to the grid – 2 gigawatts of private solar in the U.K. alone in 2017. We're also advancing research and development to enable more distributed

energy resources, including energy storage and electric vehicles, to seamlessly connect to the grid going forward.

## **Supporting a Lower Carbon Future**

Creating a smarter and more flexible grid will help support a lower carbon future. But we realize that enhanced grid capabilities, alone, are not enough. As the world confronts climate change, it's important that companies like PPL identify opportunities to reduce their carbon footprint.

As we look to the future, we're committed to doing just that by replacing our Kentucky coal-fired generation over time with a mix of renewables and natural gas while continuing to meet our obligations to provide reliable service at the lowest reasonable cost to customers. In addition, we will improve energy efficiency across our U.S. and U.K. operations, cut greenhouse gas emissions from our substations and reduce fleet emissions.

In January 2018, we set a goal to cut the company's carbon dioxide emissions 70 percent from 2010 levels by 2050. We believe this goal, informed by a scenario-based climate assessment we conducted in 2017, is not only achievable, but in the best interest of our customers, shareowners and society as a whole.

## **Making a Positive Impact on Our Communities**

Beyond our efforts to prepare for the future and to reliably deliver a service that is essential to the quality of life in the communities we serve, we're committed to remaining a force for good in other ways.

We're investing in the dedicated and talented workforce that fuels our success. We're providing family-sustaining jobs to more than 12,500 PPL employees across the communities we serve. We're increasing spending with minority-owned businesses, reflecting our commitment to supplier diversity. We're creating additional jobs through major investments in infrastructure improvements.



WILLIAM H. SPENCE  
CHAIRMAN, PRESIDENT AND CHIEF EXECUTIVE OFFICER

In addition, we continue to support community programs that strengthen education, expand opportunities for those less fortunate and help those in need in our local communities. In 2017, PPL and its foundations contributed more than \$10 million to support community initiatives.

In closing, the pages that follow provide a detailed look at what's important to us as we focus on creating value for our shareowners, growing in a sustainable way and making a positive impact on society. As we look to the future, we're proud of the progress we've made, and we're committed to continuous improvement.

We welcome your feedback, and we appreciate your interest in PPL.

Sincerely  
William H. Spence

## About our company

Headquartered in Allentown, Pa., PPL Corporation. (NYSE: PPL) is one of the largest companies in the U.S. utility sector. The company serves more than 10 million customers in the United States and United Kingdom and employs more than 12,500 people.

Our mission is to provide gas and electricity safely, reliably and at a reasonable cost to our customers and best-in-sector returns to our shareowners. We believe our competitive earnings, growing dividend, solid management and high-quality assets represent an attractive low-risk opportunity for those looking to invest in the utility sector.

Our vision is to empower economic vitality and quality of life. We are a positive force in the communities where we do business. We support human services, education, arts and culture, and environmental stewardship. In addition, our companies work closely with local and state officials to foster economic development that creates jobs throughout the territories we serve.

PPL Corporation's operating companies are located in three primary jurisdictions: Kentucky, Pennsylvania and the United Kingdom. Each of these jurisdictions has different laws, regulatory agencies and local governing bodies. Details are available in the company's 2017 Form 10-K Report, Part I, Business (filed with the Securities and Exchange Commission).

### OUR VALUES

Safety and Health  
Customer Focus  
Diversity and Engagement  
Performance Excellence  
Integrity and Openness  
Corporate Citizenship



### PPL Electric Utilities Corporation

PPL Electric Utilities Corporation (PPL Electric) provides electricity distribution and transmission services to about 1.4 million customers in eastern and central Pennsylvania and consistently ranks among the best companies in the U.S. for customer service.



### Louisville Gas and Electric Company and Kentucky Utilities Company

Louisville Gas and Electric Company (LG&E) and Kentucky Utilities Company (KU) are regulated utilities that are engaged in the generation, transmission, distribution and sale of electricity in Kentucky, Virginia and Tennessee. They serve nearly 1.3 million customers and have consistently ranked among the best companies for customer service in the United States. In Virginia and Tennessee, KU operates under the name Old Dominion Power Company (ODP). LG&E and KU operate about 8,000 megawatts of power generation. In addition, LG&E is engaged in the distribution and sale of natural gas.



### Western Power Distribution

Western Power Distribution (WPD) is the electricity distribution network operator in the U.K. for the East and West Midlands, South West England and South Wales, serving 7.9 million end-use customers. Operating the U.K.'s largest distribution network by geographical area, WPD covers densely populated residential areas and widely dispersed rural communities. WPD has been recognized consistently as the leading electricity distribution network operator group in the U.K. by the Office of Gas and Electricity Markets (Ofgem).



## At a glance



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J.D. POWER AWARDS FOR  
CUSTOMER SATISFACTION

10M

UTILITY CUSTOMERS  
IN THE U.S. AND THE U.K.



218,000  
MILES OF ELECTRIC LINES



\$7.5B

IN ANNUAL REVENUE

12,500

EMPLOYEES



8,000

MEGAWATTS OF  
REGULATED GENERATION  
CAPACITY IN THE U.S.

142B

KILOWATT-HOURS OF  
ELECTRICITY DELIVERED

# Performance data

Key metrics on our sustainability performance from 2016-2017

ENERGY PORTFOLIO	2016	2017	Page #
<b>ENERGY PORTFOLIO</b>			
<b>GENERATION</b>			
Owned Nameplate Generation Capacity at end of year (MW)	8,011	8,017	<a href="#">75</a>
Net Generation for the data year (MWh)	33,968,857	32,704,879	<a href="#">75</a>
Generation Efficiency (BTU/Net Generation)	10.6	10.1	<a href="#">75</a>
<b>EMISSIONS</b>			
Carbon dioxide (CO <sub>2e</sub> ) emissions (owned generation, purchased power and other operations)(metric tonnes for data year)	29,515,412	29,083,085	<a href="#">76</a>
Generation carbon emissions intensity (metric tonnes/net MWh)	0.85	0.87	<a href="#">76</a>
Sulfur dioxide emissions intensity (metric tonnes/net MWh)	0.00048	0.00041	<a href="#">76</a>
Nitrogen dioxide emissions intensity (metric tonnes/net MWh)	0.00054	0.00048	<a href="#">76</a>
Total mercury emissions (Kg)	70	77	<a href="#">76</a>
<b>WATER</b>			
Water withdrawal (megaliters/year)	534,674	494,946	<a href="#">77</a>
Percent Impact (water withdrawn compared to waterbody size)	0.19%	0.17%	<a href="#">77</a>
Percentage of total volume of water recycled and reused	89.7%	96.07%	<a href="#">77</a>
<b>WASTE</b>			
Percent of coal combustion products beneficially used	34.2%	34.1%	<a href="#">77</a>
<b>INFRASTRUCTURE</b>			
Miles of transmission lines	10,589	10,633	<a href="#">4</a>
Miles of distribution lines	208,143	208,077	<a href="#">4</a>



# Performance data

OPERATIONAL PERFORMANCE		2016	2017	Page #
SAFETY				
Total hours worked		24,700,051	24,157,564	<a href="#">78</a>
Number of lost day cases		24	18	<a href="#">78</a>
Lost time incident rate		0.19	0.15	<a href="#">78</a>
Recordable incident rate		1.30	1.08	<a href="#">78</a>
Work related fatalities		0	1	<a href="#">78</a>
RELIABILTY				
Average number of interruptions per customer (SAIFI)				<a href="#">78</a>
- LG&E and KU		1.04	0.84	
- PPL Electric		0.70	0.60	
- WPD		0.52	0.50	
Average outage duration (in minutes)(SAIDI)				<a href="#">78</a>
- LG&E and KU		100.47	75.41	
- PPL Electric		71.23	69.68	
- WPD		28.86	29.29	
RESOURCES AND COMMUNITY				
Customer count (at end of year)		10,485,850	10,597,979	<a href="#">44</a>
ENERGY EFFICIENCY				
Incremental annual electricity savings from energy efficiency measures (MWh)		433,000	671,055	<a href="#">46</a>
Total rebates (in millions)		\$34.5M	\$35.7M	<a href="#">46</a>
EMPLOYEE AND BOARD DATA				
Total number of employees		12,689	12,512	<a href="#">53</a>
Percentage of women employees		21.1	21.4	<a href="#">53</a>
Percentage of minority employees		6.2	6.4	<a href="#">53</a>
Total hours of training		610,180	570,488	<a href="#">57</a>
Average hours of training per employee		48	46	<a href="#">57</a>
Total number on board of directors*		9	9	<a href="#">15</a>
Total number of women on board of directors*		1	1	<a href="#">15</a>
Total number of minorities on board of directors		4	4	<a href="#">15</a>
SUPPLY CHAIN				
Total spent on diverse businesses		\$151M	\$170M	<a href="#">14</a>
Number of diverse businesses		310	277	<a href="#">14</a>
STRENGTHEN COMMUNITIES				
Total charitable giving in communities served		\$11M	\$10M	<a href="#">60</a>
Total volunteer hours		50,000	69,000	<a href="#">60</a>

\* The total number on board of directors and the total number of women on board of directors is as of Dec. 31, 2017.  
PPL elected Phoebe A. Wood to the Board on Jan. 18, 2018.



## Awards and honors

In 2017, PPL Corporation and its regulated utilities were recognized for outstanding performance in a number of areas. Some highlights include:

LG&E and KU's electric vehicle charging station program was recognized by EPRI with a Technology Transfer Award in 2017.

### PPL Corporation

- Received a perfect score of 100 percent on the Human Rights Campaign Foundation's Corporate Equality Index, a national benchmarking survey and report on corporate policies and practices relating to lesbian, gay, bisexual and transgender workplace equality.
- Recognized by Forbes magazine as one of America's Best Employers for the second year in a row.

### PPL Electric

- Ranked highest by J.D. Power for residential customer satisfaction among large utilities in the East region for the sixth consecutive year.
- Received two Industry Excellence Awards from the Southeastern Electric Exchange for its automated power restoration improvements and its use of data to enhance operations.
- Received the 2017 Training Top 125 Award from Training Magazine for the third year in a row.

### LG&E and KU

- Ranked the highest two utilities by J.D. Power for residential customer satisfaction among midsize electric utilities in the Midwest region.
- Recognized by the Electric Power Research Institute (EPRI) with Technology Transfer Awards for the company's electric vehicle charging station program and 10-megawatt universal solar facility at E.W. Brown Generating Station.
- Named among the "Top 10 Utilities" in the U.S. for economic development by Site Selection, the international economic development magazine. Since 2010, Site Selection has recognized the company's economic development efforts five times.

### WPD

- Celebrated 25 years of outstanding customer service, having held the Government's Charter Mark, now known as the Customer Service Excellence Award, continuously since 1992.
- Received the Louder than Words Charter Mark from Action on Hearing Loss, the nationally recognized accreditation, which recognizes organizations that provide excellent levels of service and accessibility for customers and employees who are deaf or hard of hearing.

# Sustainability commitments and priorities

To identify sustainability priorities, a cross-functional corporate sustainability team conducted benchmarking of PPL's peer companies, analyzed the materiality study conducted by the Sustainability Interest Group of EPRI, reviewed the United Nations Sustainable Development Goals and reviewed company documents, such as risk-management reports, business plans and customer-satisfaction surveys.

## COMMITMENTS

Create extraordinary  
shareowner value

Drive best-in-sector  
operational performance

Advance a cleaner  
energy future

Build tomorrow's  
energy infrastructure

Exceed customer  
expectations

Foster an  
exceptional workplace

Strengthen communities

## PRIORITIES

**Cybersecurity and information protection** – Protect the grid, customer and employee data, and the company's assets

**Economic viability** – Promote long-term financial viability of the company

**Governance and ethics** – Maintain strong corporate governance, compliance and ethical business practices

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**Operational efficiency** – Strive for best-in-sector performance

**Reliability** – Excel in reliability

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**Environmental management** – Exercise responsible environmental stewardship

**Greenhouse gas (GHG)** – Take reasonable measures, within the regulatory frameworks in which we operate, to support reduction of GHG emissions

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**Distributed energy resources** – Encourage and support development of distributed energy resources and renewables

**Grid security** – Protect the physical security of the grid

**Infrastructure investments** – Enhance reliability and resiliency of service through continued investments

**Innovation and technology** – Be an integral part of the development of future energy services

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**Affordability** – Strive to deliver affordable electric and natural gas service for our customers

**Customer satisfaction** – Deliver excellent customer service

**Energy efficiency** – Implement tools and resources to reduce energy consumption

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**Diversity and inclusion** – Foster an inclusive, respectful and diverse workplace

**Employee engagement** – Create a workplace that fosters an engaged, high-quality workforce

**Safety and health** – Encourage employee wellness and public safety

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**Community investments** – Make positive contributions to the communities we serve through procurement practices, philanthropy and volunteerism

**Emergency preparedness** – Maintain business continuity and prepare for events that affect our ability to serve customers

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## About this report

Our current sustainability programs, performance metrics and initiatives are presented throughout this report and are referenced in the Global Reporting Initiative (GRI) Index on page 63. This report presents our sustainability performance following the GRI Framework in accordance with GRI-G4 guidelines at the core level. PPL intends to transition to GRI's updated standards with the next report.

Our views about the company's direct and indirect impacts, risks, challenges and opportunities are presented throughout this report and in other publicly available documents such as the 2017 Form 10-K, Form 10-Qs, *2018 Proxy Statement* and *2017 Annual Report* posted on the [company's website](#).

## Report profile

This report covers activities that occurred in calendar year 2017. The report was published in 2018.

Throughout the report, we reference GRI-G4 guidelines and have included a GRI Index for ease of review on page 63.

PPL Corporation intends to report on its sustainability activities annually. The report is reviewed by the company's leadership team, including the chief executive officer. External audits for this report have not been conducted, but an internal review was completed by the Corporate Audit Department.

Throughout this report, when we refer to PPL, we are discussing all of PPL Corporation and its subsidiaries, including PPL Electric, LG&E and KU, and WPD. For specific issues, information and discussion about each entity may be presented.

Statements contained in this report concerning future events are forward-looking statements as defined by federal securities laws. Although PPL Corporation believes that the expectations and assumptions reflected in these forward-looking statements are reasonable, these statements involve a number of risks and uncertainties, and actual results may differ materially from the results discussed in the statements. Any such forward-looking statements should be considered in light of such uncertainties and assumptions and in conjunction with PPL Corporation's 2017 Form 10-K and other reports on file with the Securities and Exchange Commission.

Conversions of British pounds sterling to U.S. dollars marked throughout this report were based on the foreign exchange rate on Dec. 31, 2017.

Questions and comments about this report can be directed to [Community@pplweb.com](mailto:Community@pplweb.com).



A PPL Electric lineworker gets a thumbs up from a resident of Puerto Rico after his neighborhood's power was restored. Crews from PPL Electric, LG&E and KU were among the many utilities assisting in restoration efforts after Hurricane Maria ravaged the island's power network.



## Key sustainability issues

A cross-functional corporate sustainability team conducted an initial materiality assessment in 2016 to determine the key priorities that may be helpful to stakeholders in evaluating the company's social, governance, economic and environmental performance and overall commitment to sustainability.

PPL has since become a member of EPRI's Sustainability Interest Group; assessed alignment of its sustainability strategy and commitments with the U.N. Sustainable Development Goals for the utility sector; participated in the development of Edison Electric Institute's (EEI) environmental, social, governance and sustainability-related reporting template for investor-owned utilities; issued a climate assessment report; and established a carbon reduction goal.

The corporate sustainability committee, which includes senior leaders throughout the corporation and its business units, is responsible for developing sustainability strategy, providing oversight and establishing the priorities and performance metrics.

The sustainability strategy, commitments and priorities are reviewed by the corporate leadership council and presented to the board of directors.

## Identified material aspects and boundaries

PPL has chosen content that our executives and report teams have deemed material for the purposes of sustainability reporting, based on the following:

- GRI Electric Utilities Sector Supplement
- Regulatory requirements for disclosure and compliance
- EPRI's Metrics to Benchmark Sustainability
- A review of peers who are reporting on sustainability issues
- Stakeholder feedback over the last year
- Reviews with our senior executives
- Reviews with employees who interact with the community and public officials

All material aspects chosen for inclusion in this report are reflected on our GRI Index on page 63.

Material aspects and boundaries vary slightly from subsidiary to subsidiary, in part because of different regulatory frameworks and each subsidiary's level of involvement with energy production and delivery. These are noted throughout the report.

Regarding boundaries, most of the report content is focused on internal boundaries. The company also is reliant on certain regulatory, legislative and community partners to manage some material issues, as discussed in the report.

As we prepared our document, we have considered GRI's principles for defining report content and quality.



Auxiliary Operator Katie Smith on duty at KU's E.W. Brown Generating Station.

# Create extraordinary shareowner value

Create long-term value for shareowners through fiscal discipline, continuous improvement, environmental stewardship and enduring strategic investments

## A strategy for growth

PPL's portfolio offers investors a unique and compelling investment option in the utility industry. Our business provides scale and diversity with seven high-performing, award-winning utilities serving more than 10 million customers in both the U.S. and the U.K.

Across these businesses, we are guided by a common purpose: to deliver for our shareowners and customers, to secure a brighter energy future for generations to come and to make a positive impact in our communities.

Our strategy for growth is clear. We will:

- Deliver best-in-sector operational performance
- Invest responsibly in a sustainable energy future
- Maintain a strong financial foundation
- Engage and develop our people.

As we pursue this strategy, we recognize the importance of strong environmental, social and governance performance, and we regularly review and analyze risks and opportunities as part of our business planning activities.

We will continue to explore opportunities to grow PPL in a sustainable way.

In 2017, we demonstrated strong execution across our U.S. and U.K. businesses. We delivered at the high end of our earnings guidance; executed on our capital plan; provided award-winning customer service; strengthened reliability; and increased our dividend to shareowners for the 15<sup>th</sup> time in 16 years.

Looking ahead, we are well positioned to deliver competitive earnings growth and dividends as we invest in the future. Disciplined infrastructure investment and timely rate recovery will continue to drive growth for our shareowners and deliver benefits for our customers. We invested about \$3.5 billion in infrastructure improvements in 2017. We expect to invest an additional \$15 billion from 2018 through 2022.

As we move forward, we will remain focused on continuous improvement. We will continue to incorporate new technology in ways that improve efficiency and strengthen service to customers, and we will continue to explore opportunities to grow PPL in a sustainable way.



## Financial highlights

For the years ended December 31

FINANCIAL	2017	2016
Operating revenues (millions)	<b>\$7,447</b>	\$7,517
Net income (millions)	<b>\$1,128</b>	\$1,902
Earnings from ongoing operations (millions) (a)	<b>\$1,553</b>	\$1,674
Total assets (millions) (b)	<b>\$41,479</b>	\$38,315
Earnings per share - diluted	<b>\$1.64</b>	\$2.79
Earnings from ongoing operations per share - diluted (a)	<b>\$2.25</b>	\$2.45
Dividends declared per share	<b>\$1.58</b>	\$1.52
Book value per share (b,c)	<b>\$15.52</b>	\$14.56
Market price per share (b)	<b>\$30.95</b>	\$34.05
Market price/book value ratio (b)	<b>199%</b>	234%
Dividend yield	<b>5.1%</b>	4.5%
Dividend payout ratio (d)	<b>96%</b>	55%
Dividend payout ratio - earnings from ongoing operations (d,e)	<b>70%</b>	62%
Price/earnings ratio (d)	<b>18.9</b>	12.2
Price/earnings ratio - earnings from ongoing operations (d,e)	<b>13.8</b>	13.9
Return on common equity	<b>10.9%</b>	19.2%
Return on common equity - earnings from ongoing operations (e)	<b>15.0%</b>	16.9%

### OPERATING - DOMESTIC ELECTRICITY SALES (GWh)

Retail delivered	<b>65,751</b>	67,474
Wholesale supplied	<b>2,084</b>	2,177

### OPERATING - INTERNATIONAL ELECTRICITY SALES (GWh)

United Kingdom	<b>74,317</b>	74,728
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- (a) Management utilizes "Earnings from Ongoing Operations" as a non-GAAP financial measure that should not be considered as an alternative to reported earnings, or net income, an indicator of operating performance determined in accordance with GAAP. PPL believes that Earnings from Ongoing Operations is useful and meaningful to investors because it provides management's view of PPL's earnings performance as another criterion in making investment decisions. In addition, PPL's management uses Earnings from Ongoing Operations in measuring achievement of certain corporate performance goals, including targets for certain executive incentive compensation. Other companies may use different measures to present financial performance.

Earnings from Ongoing Operations is adjusted for the impact of special items. Special items are presented in the financial tables on an after-tax basis with the related income taxes on special items separately disclosed. Income taxes on special items, when applicable, are calculated based on the effective tax rate of the entity where the activity is recorded. See "Reconciliation of Net Income to Earnings from Ongoing Operations" on page 36 (millions of dollars) and page V (per share) of this report.

- (b) End of period.  
 (c) Based on 693,398 and 679,731 shares of common stock outstanding (in thousands) at December 31, 2017 and December 31, 2016.  
 (d) Based on diluted earnings per share.  
 (e) Calculated using earnings from ongoing operations, which is a non-GAAP financial measure that includes adjustments described above in footnote (a).

# Significant operational and regulatory highlights during the reporting period

## March

Members of the International Brotherhood of Electric Workers Local 1600 ratified a new five-year labor agreement with PPL that extends through May 15, 2022, and covers about 1,400 Pennsylvania employees.

## July

WPD released its strategy to transition from a Distribution Network Operator to a Distribution System Operator, a move that is essential to driving future network performance and efficiency. The transition will support increased customer adoption of low-carbon technologies. WPD requested stakeholder input on the strategy. Read more on page 20.

U.K. utility regulator Ofgem published an open letter beginning the framework review for the RIIO-2 price control period, which will begin for U.K. distribution network operators on April 1, 2023. WPD and others stakeholders provided responses that were published in September.

## December

WPD updated its Distribution System Operator strategy (see earlier entry on timeline) to reflect feedback from a wide range of stakeholders.

## June

The Kentucky Public Service Commission authorized a combined \$116 million increase in annual base electricity and gas rates for LG&E and KU to support continued infrastructure investment. The action followed LG&E's and KU's unanimous settlement with parties to the rate review.

LG&E completed a long-term gas main replacement project that involved the replacement of 540 miles of cast iron, wrought iron and bare steel natural gas pipelines, which are more vulnerable to degradation over time, with more durable plastic natural gas pipelines. Read more on page 40.

## August

KU and the United Steelworkers of America ratified a three-year labor agreement that extends through August 2020 and covers 53 employees.

## November

- PPL released its scenario-based Climate Assessment Report ([see page 36](#)).
- KU announced plans to retire two coal-fired units at the E.W. Brown Generating Station in February 2019. The two units total 272 megawatts. In making its decisions, KU analyzed a number of alternatives for meeting anticipated stricter Environmental Protection Agency regulations, including the Coal Combustion Residuals rule, and the increased use of LED lighting and other energy efficiency measures.
- Greg Dudkin, president of PPL Electric, testified before the Pennsylvania House Consumer Affairs Committee in support of House Bill 1782, Alternative Rate Mechanisms. The bill would enable alternative ratemaking approaches such as decoupling, which will allow utilities greater flexibility to continue to invest in making the grid stronger, keeping it reliable for customers, and helping protect the grid from cyber or physical attacks. Customers will still have incentives to use less energy.



Ebony Edwards, Supplier Diversity manager for LG&E and KU, mingles with attendees at the annual diverse business reception in Louisville, Ky.

## Building opportunities for diverse businesses

To create broader supplier networking opportunities for minority-owned, women-owned and veteran-owned businesses, LG&E and KU partners with other Louisville area utilities to host an annual reception and showcase for diverse suppliers.

Known as the “Window of Opportunity,” the reception showcased the many ways that diverse businesses can network with utilities in the Louisville area.

In 2017, more than 300 attendees met with representatives from LG&E and KU, Louisville Water Company and Metropolitan Sewer District, and Louisville Metro Government to discuss ways their businesses might meet the needs of utilities in the Louisville area. One of the major themes was the role that utility infrastructure construction and upgrades play in community economic development. A number of speakers called attention to the contribution utilities make in spurring business growth through their infrastructure projects.

Ebony Edwards, Supplier Diversity manager for LG&E and KU, said the annual reception provides LG&E and KU with an outstanding opportunity to reach out to potential business partners in the community.

“We value our commitment to the Louisville community, and this event helps us both forge new relationships with diverse vendors and strengthen our ties to diverse organizations. It also helps us maintain our leadership in supplier diversity,” said Edwards.

## Supply chain

Relationships with contractors and suppliers are vital to PPL’s successful operations. Contracts are developed and maintained through the company’s Supply Chain organizations, which negotiate and secure contracts to procure a variety of materials, labor and services to execute numerous business activities, including capital projects.

All purchase orders and contracts issued by PPL use a qualified supplier. PPL’s Supply Chain teams maintain lists of qualified suppliers and award business to approved suppliers based on a number of factors, including previous business dealings, competitive prices, quality of materials and services. PPL expects each supplier and contractor to comply with the company’s commitment to safety, the environment, diversity and standards of conduct.

Accordingly, PPL reviews the safety and environmental performance of its business partners and incorporates compliance requirements in purchase orders and contracts. The value PPL places on diversity in its employees, communities and customers carries over to the people from whom the company purchases goods and services. In addition, we require our suppliers and contractors to observe our standards of business, professional and personal ethics when bidding or providing materials or services to PPL.

PPL and its business units actively reach out to find diverse businesses – those owned by minorities, women and veterans. In 2017, the company spent \$170 million with nearly 300 diverse businesses.

### Supplier Diversity

**\$3 billion**

Total corporate spend on goods and services in 2017

**\$1.7 billion**

Total corporate spend on locally based suppliers

**55%**

Of corporate spend on locally based suppliers

**\$170 million**

Total corporate spend on diverse suppliers



From left to right: Raja Rajamannar, Steven G. Elliott, Craig A. Rogerson, William H. Spence, Natica von Althann, Rodney C. Adkins, Keith H. Williamson, John W. Conway, Armando Zagalo de Lima. Phoebe A. Wood who joined the Board on Jan. 18, 2018 is not pictured.

## Governance

Strong leadership and well-managed operations are the cornerstones of a successful business. PPL's corporate governance practices are designed to provide long-term value for our shareowners, customers and the communities in which we operate. The Board of Directors' responsibilities include overseeing the management of PPL, selecting the company's leaders, approving long-range strategic plans and advising senior management.

The Board has designated its Compensation, Governance and Nominating Committee as the body responsible for overseeing PPL's practices and positions to further its corporate citizenship, including sustainability, environmental and corporate social responsibility initiatives.

PPL Corporation's *Guidelines for Corporate Governance* are posted on the corporate website at [pplweb.com/governance](http://pplweb.com/governance).

Additional details about the role of the Board, independence of the directors, role of the independent directors, the presiding or "lead" director, and selection of directors can be found in the *Guidelines for Corporate Governance*.

## Enterprise risk management

PPL maintains a robust enterprise risk management (ERM) process that provides a business portfolio view of material risks that may impact achievement of PPL's business strategy.

As part of the ERM process, representatives from PPL's operating companies and service groups identify, assess, monitor and report on both ongoing and emerging risks. PPL's Risk Management group oversees this process and reports quarterly to the Audit Committee of PPL Corporation's Board of Directors.



## Incentives and remuneration

### Director Compensation

The Board believes that to continue to attract talent to the Board over time, outside directors should be remunerated for their services at a level competitive with that provided by other comparable publicly traded corporations. Directors who are company employees (currently only PPL's chief executive officer) do not receive any separate compensation for service on the Board of Directors or committees of the Board of Directors. Information regarding compensation of PPL's directors can be found in the [2018 Proxy Statement](#), beginning on [page 18](#).

### 2017 Executive Compensation

Information regarding PPL's executive compensation program, our compensation philosophy and objectives as well as a discussion of how executive compensation decisions affecting our named executive officers were made for 2017 is included in the 2018 Proxy Statement, beginning on page 24 in the "Compensation Discussion and Analysis" section. Additional details about specific compensation of the named executive officers are included in the [2018 Proxy Statement](#), beginning on [page 47](#).



## Ethics and integrity

To fulfill our obligation to shareowners and all others who have a stake in PPL's business and the communities we serve, we believe that we (as well as our contractors) must adhere to the highest ethical standards, work safely and responsibly, and comply with both the spirit and the letter of all laws, regulations and rules that govern our business. We recognize that to do otherwise would be costly to our company – not just financially, but also in terms of the strong reputation built by generations of PPL employees.

PPL has established a compliance and ethics program that is founded upon *PPL's Standards of Integrity*. The *Standards of Integrity*, along with our vision and values, define the way that we conduct our business. They apply in all situations, at all times, guiding the decisions we make and the actions we take.

*PPL's Vision and Values*, along with *PPL's Standards of Integrity*, are posted on our website.

### Compliance and Ethics Governance

PPL's compliance and ethics program is overseen by the Audit Committee of the PPL Corporation Board of Directors. Audit Committee members receive quarterly reports from PPL's Global Chief Compliance Officer, who has overall responsibility for PPL's compliance and ethics program. The Audit Committee also receives quarterly reports from the head of the corporate audit

function. Both the Global Chief Compliance Officer and the head of the corporate audit function meet regularly with the Audit Committee.

The Board expects its directors and officers to act ethically at all times and adhere to the policies set forth in the company's *Standards of Integrity*. In addition to every employee of the company, every member of the Board of Directors receives a copy of the PPL *Standards of Integrity*. It is the responsibility of each director to advise the corporate secretary of any actual or potential conflict of interest and any affiliation with public or privately held enterprises, including for-profit and nonprofit entities that may create a potential conflict of interest to the company.

Another integral part of PPL's governance of its compliance and ethics program is the Corporate Compliance Committee (CCC), which is supported by the Compliance Working Group (CWG) and Investigations Working Group. The function of the CCC is to promote an organizational culture that encourages ethical conduct and a commitment to compliance with law and company policies and requirements. The CCC is chaired by the Global Chief Compliance Officer and its membership consists of corporate and operating company executive leadership with the authority and responsibility to assess the overall effectiveness of the company's compliance and ethics program and to drive enhancements to the program as necessary. The CCC meets quarterly.

The CWG supports the CCC in assessing the effectiveness of the corporate compliance and ethics program and driving enhancements to the program as necessary. The CWG is responsible for identifying, evaluating, and assessing existing and emerging risks and potential issues with existing programs. In addition, it is responsible for presenting its findings and proposed action plans to the CCC. The CWG membership consists of (1) compliance and ethics program leads and (2) second-tier leadership with responsibility for supporting the CCC in its oversight of the compliance and ethics program. The CWG is chaired by the Global Chief Compliance Officer and meets once a month.

The compliance and ethics program leads are individuals appointed by an operating company or headquarters. They assist the Global Chief Compliance Officer, the CWG and the CCC in ensuring that PPL has an effective compliance and ethics program, and provide input to Enterprise Risk Management to ensure that compliance and ethics risks are included in overall strategic risk assessments. The compliance and ethics program leads play a key role in helping to identify and prioritize compliance risks, tailor the compliance and ethics program to the identified risks, and provide appropriate training and communications with respect to the compliance and ethics program. Each compliance and ethics program lead obtains and maintains appropriate certifications or qualifications to perform these functions and has a direct or dotted line reporting relationship to the Global Chief Compliance Officer.

## Employees

Every employee and director is expected to read, understand and comply with [PPL's Standards of Integrity](#). In addition, employees are expected to report any compliance or ethics concerns to their immediate supervisor or via another appropriate reporting mechanism, including anonymous reporting mechanisms provided by PPL and its operating subsidiaries. PPL takes any instance of noncompliance seriously. Failure to obey laws and regulations or violations of company policies may result in employee discipline to the extent permissible under applicable law, up to and including termination.

Every employee receives annual training on the [Standards of Integrity](#). As part of the training, every employee is required to certify that he or she understands the expectation to report misconduct and understands that PPL will not tolerate any form of retaliation for any report made in good faith. All training is tracked and recorded and reported to executive leadership and the Audit Committee. Targeted communications on certain topics are also issued as needed.

## Reporting and Handling of Violations

PPL expects employees to ask questions or raise concerns about the application or interpretation of the [Standards of Integrity](#). The company does not discriminate against or tolerate any form of retaliation toward employees who ask questions or raise concerns in good faith.

PPL provides a mechanism for confidential and, if desired, anonymous reports of employee concerns, including accounting issues. PPL's EthicsHelpline toll-free phone number and internet site are available 24 hours a day, seven days a week. PPL's EthicsHelpline is also accessible on the internet. Anonymous contacts also can be made in writing to PPL's Corporate Audit department.

Corporate guidelines are in place for promptly responding to allegations of misconduct and include notifying the Global Chief Compliance Officer of the allegations. The Global Chief Compliance Officer reviews data for issues and trends. The data and trends are reported to the Audit Committee on a quarterly basis. Critical concerns of a more immediate nature can be raised to the Audit Committee or the full Board of Directors at any time.



## Public policy engagement

Laws and policies enacted at the national and local levels can have a significant impact on PPL and our customers, employees and shareowners. PPL actively encourages public policy that furthers our ability to provide reliable and affordable electricity to our customers and to function efficiently, safely and economically. Our active participation in the public policy arena is appropriate to ensure that public officials are informed about key issues that affect the interests of our customers, employees, shareowners and the communities we serve.

### Lobbying Compliance

PPL takes very seriously the need to conduct all aspects of our business in compliance with all applicable laws and regulations and consistent with the company's values.

PPL reports all corporate lobbying-related activities and expenditures to appropriate state and federal agencies. Information on PPL's current lobbying activities can be found in lobbying reports filed with the U.S. House, U.S. Senate, Kentucky Legislative Ethics Commission and Pennsylvania Department of State and will also be made available upon request.

PPL's Public Affairs Department is in regular communication with executive leadership and provides semi-annual reports to the Board on key issues and advocacy positions.

### Trade Associations

PPL belongs to various business and trade associations that engage generally in education and advocacy on a number of industry and business-related issues. PPL reports dues or payments to trade associations not deductible under Section 162(e)(1) of the Internal Revenue Code in its lobbying filings, as required by state and federal laws. In 2017, the amounts reported totaled \$215,159.

Listed at right are the trade associations that received 2017 annual dues from PPL in excess of \$50,000, including that portion of dues identified by each trade association as attributable to lobbying.

### Political Action Committees (PACs)

PPL Corporation and its affiliates are prohibited from making contributions to candidates and political parties, including in-kind contributions, under federal law and under the laws of Pennsylvania and Kentucky, the states in which PPL currently has significant utility operations. PPL has established federal and state PACs through which employees may participate in the political process. People for Good Government (PGG) and the LG&E-KU Political Awareness and Civil Education Committee (PACE) are PACs that encourage active interest and participation in the political process by employees, retirees and shareowners. These nonpartisan, voluntary PACs are organized and operate separately from PPL Corporation, as required by law. They are guided by steering committees and allocations committees made up of employees from across the company. Decisions regarding PAC contributions are made without regard to the private political preference of any executive or individual employee.

PGG and PACE report all PAC contributions in campaign finance reports filed with the **Federal Election Commission, Pennsylvania Bureau of Commissions, Elections and Legislation** and **Kentucky Registry of Election Finance** and will also be made available upon request.

### Independent Expenditures and Tax-Exempt Organizations

PPL Corporation does not make independent political expenditures in connection with campaigns or to influence ballot measures, and it is our current policy not to make such expenditures. PPL Corporation makes donations to various tax-exempt organizations. Charitable donations to 501(c)(3) organizations are not covered under this policy. The company

occasionally makes contributions to other tax-exempt organizations, such as 501(c)(4) and 527 organizations, but such contributions are generally related to memberships and event sponsorships and not intended to influence a political campaign.

Should PPL decide to make independent expenditures in the future, or make contributions to a tax-exempt organization for the purpose of influencing a campaign, the expenditures must be approved by the most senior officer responsible for government or regulatory affairs in PPL Electric Utilities Corporation, LG&E and KU Energy LLC or PPL Services Corporation.

#### 2017 Contributions to Tax-Exempt Organizations

National Conference of State Societies	\$10,000
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### Board Oversight

The PPL Corporation Board of Directors, or a duly authorized oversight committee, receives on an annual basis a report of corporate political contributions, including the following:

- The non-deductible portion of dues and other payments made to trade associations that are in excess of \$50,000;
- Independent expenditures in connection with campaigns or to influence ballot measures; and
- Contributions to tax-exempt organizations covered under this policy, such as 501(c)(4) and 527 organizations.

PPL voluntarily discloses this political information and, as such, has ranked in the first quartile in the CPA-Zicklin Index of Corporate Political Disclosure and Accountability.

Association	Total Dues for 2017 Membership	Non-Deductible Portion of Dues Allocated to Lobbying
Edison Electric Institute	\$1,283,499	\$178,743
American Gas Association	\$204,426	\$13,083
Energy Association of Pennsylvania	\$164,167	\$9,850
Greater Louisville, Inc.	\$131,250	\$3,938
Kentucky Chamber of Commerce	\$55,490	\$8,324



## Key legislative and regulatory issues

PPL engages with public officials on issues of importance to the company. In 2017, these were our top U.S. legislative and regulatory issues:

- **Physical and cybersecurity** – Policymakers continually are assessing and examining the reliability and security of the bulk power system from both a physical security and cybersecurity perspective. The electric sector is the only critical infrastructure sector with mandatory and enforceable federal cybersecurity and reliability standards through the North American Electric Reliability Corporation's (NERC) standards setting process. Grid owners and operators are involved in developing these standards, which must be approved by NERC and then the Federal Energy Regulatory Commission.
- **Permitting and regulatory reform** – PPL supports federal legislation that creates a more efficient and predictable permitting process for large infrastructure projects and a more transparent and accountable regulatory system that promotes economic development while maintaining necessary safety, environmental and public health protections.
- **Federal tax reform** – PPL and our industry partners worked closely with policymakers during the development of tax reform legislation to help ensure that utilities can continue to make the significant capital investments necessary to provide reliable and safe energy at a reasonable cost to our customers while delivering strong returns to shareowners.
- **Rate reform** – Long-term rate reform is needed to better reflect the full costs and benefits of new energy technologies, as well as utility investments. The implementation of comprehensive long-term rate reform measures such as decoupling and performance-based rates would allow electricity distribution companies to continue to earn enough revenue to provide safe and reliable service despite load reductions due to distributed energy resources penetration and energy efficiency measures.
- **Integration of distributed energy resources** – The Department of Energy (DOE) awarded PPL Electric a \$3.9 million grant in 2017 to establish the Keystone Solar Future Project (KSFP) to pilot the integration of high levels of solar penetration on our distribution grid ([see page 27](#)). PPL will continue to advocate for funding levels that allow federal agencies to fund additional research and development grants and effectively administer current projects like KSFP.
- **Low-income home energy assistance program** – PPL supports the Low-Income Home Energy Assistance Program and works with federal policymakers to secure adequate funding for this important program, which provides assistance for our most vulnerable customers.
- **Pole attachments** – In 2017, the Federal Communications Commission proposed a rule that would dramatically reduce rates and limit the ability of pole owners like PPL to evaluate attachments for safety and reliability. PPL is working through the regulatory and legislative process to seek modifications to the rule and respond to other proposals that have safety and reliability implications and shift the cost of telecommunication services to electricity customers.
- **Unmanned aircraft systems** – Since becoming one of the first utilities in the country to incorporate unmanned aircraft systems (UAS) into company operations in April 2015, PPL has closely monitored federal actions governing the use of this technology. As legislation to reauthorize the Federal Aviation Administration is considered in early 2018, PPL will pursue legislative and regulatory measures that allow for the expanded safe and responsible use of UAS.
- **Net metering** – PPL supports the development of private distributed energy resources with a compensation structure that is fair to all customers.



WPD's Mark Lewis, West Midlands South project engineer, Martin Southall, primary system design engineer, and Marc Rees, primary system design engineer, at the Garreg Lwyd wind farm.

## WPD takes active step toward new role

The way we generate, distribute and consume electricity is changing due to advances in technology affecting the entire energy system. Generation is becoming cleaner and more distributed. Networks are becoming smarter and more active. And customers are seeking more renewable energy sources and cleaner transportation options with private solar and electric vehicles on the rise.

Always ready to adapt, WPD has risen to these challenges by implementing innovative solutions to unlock additional network capacity.

But, in order to meet the future energy demands of all customers, WPD recognizes that it is time to make a change.

In July 2017, WPD released its plan to transition from a Distribution Network Operator (DNO) to a Distribution System Operator (DSO). Through 2023, the company will invest nearly \$164 million to implement a transition strategy that will drive performance and efficiency on the power grid.

"The company's transition to a DSO model will support the customer adoption of electric cars, low carbon heating and distributed generation investment," said WPD Operations Director Phil Swift. "This is a natural extension of our current role as a DNO, and we are uniquely positioned to lead the management of an efficient and cost-effective electricity system at a local level."

WPD is one of 14 DNOs in the U.K. whose job it is to move electricity, in one direction, from the high voltage transmission grid to industrial, commercial and residential users. The DNOs also support times of maximum demand and generation on the distribution grid. In addition, they are responsible for managing interconnections to the power grid,

such as requests to add private solar and wind generation to the network. These requests have grown exponentially in recent years.

While a DNO typically provides passive network support, a DSO actively manages the flow of energy across the distribution system. In a world with increased distributed energy resources and private generation, a DSO balances the two-way flow of power across the local and regional network. To achieve balance, the DSO studies past and current flows of energy across the system, forecasts future energy volumes and then actively reconfigures the system as needed.

During the six-year transition, the company will focus on building a smarter, more secure grid that has the flexibility to accommodate distributed energy resources. It will also identify and adopt ways to increase network capacity through non-network solutions, such as energy storage and microgrids, and enhance coordination with the Transmission System Operator.

# Drive best-in-sector operational performance

Excel in safety, reliability, customer responsiveness and energy efficiency while maintaining a culture that cultivates innovation

“We believe we can be the best large electric utility in the United States.”

PPL ELECTRIC PRESIDENT GREG DUDKIN



Employees like Marilyn Nunez, customer service representative, helped PPL Electric achieve first quartile performance in customer satisfaction in 2017.

## Measuring progress: PPL Electric's first-quartile campaign

At PPL Electric, the premise is simple.

First-quartile performance in safety, reliability, customer satisfaction and cost management is necessary for long-term sustainable success.

“Achieving and maintaining first-quartile performance matters for a number of reasons,” said PPL Electric President Greg Dudkin. “We will control our own destiny and become a safer, more efficient and more responsive organization that is focused on our customers. Investors will view our company as a place where

people deliver on their promises, and we'll attract and retain talent to enable continued long-term success.”

Being a first-quartile utility is a mindset that lives at the heart of the workplace. From tailboards at job sites to engineering solutions to creative ideas on operating more efficiently, it's a reflection of the culture of excellence and continuous improvement.

PPL Electric communicates its drive for first-quartile performance in several ways, including through a regularly updated set of posters that show where the company stands compared to its peers on the key metrics.

It is firmly in first quartile on reliability, measured as outages per customer, and is poised to enter the top 10 percent as continued grid investments bring more benefits for customers.

A repeated J.D. Power award winner for residential customer satisfaction among large utilities in the eastern U.S., PPL Electric currently ranks at the top of the second quartile nationally. On safety, the utility was in the third quartile nationally in 2016 when compared to its peers. However, a record safety year in 2017 propelled the company into the second quartile. The company is in the second quartile on costs per customer and is continuously working to reduce operating costs.

The continued fostering of a constructive culture is at the center of the advance toward first-quartile performance in all key areas.

“We believe we can be the best large electric utility in the United States,” said Dudkin. “By communicating expectations and engaging with employees, by never being satisfied with the status quo, and by measuring ourselves against our peers, we position ourselves for success.”



24,157,564

TOTAL HOURS WORKED  
WITH **18** LOST DAY CASES



0.15%

LOST TIME INCIDENT RATE  
WITH **1.08** RECORDABLE INCIDENT RATE



1

WORK RELATED  
FATALITY

[For complete details, see Appendix page 78.](#)

## Safety

One of PPL's primary goals is to maintain a work environment that promotes the health and safety of our employees and the communities where we work and live. No job is too important or so urgent that precautions, laws or regulations concerning health and safety can be bypassed. Our goal is simple: zero accidents or incidents adversely affecting employees, contractors or the public. Employees own the concept of health and safety at a grassroots level, and that commitment to health and safety enables employees to hold each other accountable while sharing good practices. We strive for continuous improvement, engaging with others in our industry and elsewhere to learn and to incorporate best practices that can enhance our existing programs.

### Injuries and Accidents

Safety is a high priority at PPL – something we consider an obligation to our employees, contractors and the public. That attitude has created a strong accident-prevention culture through all our business lines. Employees are always focused on reducing risks to eliminate workplace accidents. Even with extensive training, however, accidents can occur. The chart above outlines our safety performance. The company reviews every incident and takes the necessary corrective measures to prevent as many incidents as possible.



WPD's safety superhero Pylonman teaches young children about electrical safety at the Herefordshire Family Festival.

As our drive toward improved safety continued in 2017, we undertook some new initiatives and expanded upon other programs already in place. The result has been one of the safest years ever at PPL. Among the work done during the year:

#### **In the U.K., WPD:**

- Hosted more than 400 contractors, staff, safety representatives and guests from the Energy Networks Association for the 4<sup>th</sup> annual contractor-focused safety conference Working Well Together.
- Provided electrical safety demonstrations on using equipment near power lines, pole rescue techniques and safe working techniques at the Arboricultural Association's annual Arb Show, attended by more than 5,000 visitors.
- Launched a public safety campaign – Think Safe, Stay Safe – to educate landowners about the risks of working near electrical equipment.

#### **In Pennsylvania, PPL Electric:**

- Introduced 1,100-plus field workers to a unique type of training featuring safety-related theatrical performances by a group of actors who acted out safety-related scenarios.
- Built upon our bargaining unit safety advocate program by sending two more groups of eight workers in the field to observe work done by their peers.
- Instituted an injury prevention campaign focused on our workers' most commonly injured body parts.
- Expanded opportunities for employee safety committees to share their experiences and best practices with each other.
- Delivered electrical safety messages to more than 15,000 school children with the in-school theatrical program and more than 10,000 people through the Live Line Electrical Safety Exhibit.

#### **In Kentucky, LG&E and KU:**

- Achieved a 0.97 injury rate, the lowest recordable injury rate in the companies' history. This figure was considerably lower than the 1.22 EEL top quartile level for the group of comparable utilities and closer to the top-performer rate of 0.91.
- Held their 16<sup>th</sup> Annual Safety Summit – Safety: Why I Care – with nearly 1,200 employees and contractors in attendance. Informative speakers and workshops encouraged attendees to consider the personal reasons that motivate them to work safely.
- Installed 88 Automated External Defibrillators (AED) at various company facilities to ensure employees have easy access to a potentially life-saving device. The company also trained at least 20 percent of its staff at each site on how to use the AEDs.
- Teamed with the American Red Cross in recent years to offer CPR/AED and first-aid classes. Since 2014, more than 100 employees have been trained through on-site classes offered by the Health and Wellness Department. In addition, hundreds more employees are trained in CPR and first aid through their regular jobs or involvement with Emergency Response Teams and Public Safety Response Teams.

## DRIVE BEST-IN-SECTOR OPERATIONAL PERFORMANCE

Our ultimate goal is to ensure that we all remain safe and healthy at home and on the job and return home to our families safely at the end of each day. Components of our program include:

#### Hazard assessment and mitigation

Aggressively identify, assess and mitigate hazards of all types before they cause injuries

#### Incident investigation and reporting

A process is followed where all incidents and near-misses/close calls are reported and investigated. Root cause analysis is completed for significant employee and contractor incidents/events

#### Employee involvement

Capitalize on the company's most valuable resource, employees, by actively creating and facilitating opportunities to become involved in loss-prevention efforts

#### Job briefings

Require that employees participate in a job briefing prior to the start of any work related to natural gas or electricity operations

#### Compliance

Hold all business areas and employees responsible for complying with local, state and federal regulatory requirements

#### Vehicle incident prevention

Provide employees have the resources, skills and knowledge necessary to drive safely and defensively in order to reduce the number of vehicle incidents

#### Business partner relationships

Foster better communication and closer working relationships between employees and business partners to strengthen the company's safety culture

#### Near-miss/close-call reporting

Report all incidents that could have resulted in injury, so hazards can be addressed to prevent similar incidents in the future

#### Empowerment

Seize the freedom, responsibility and accountability for controlling and correcting unsafe work without repercussions

#### Communication

Foster reciprocal communication that will support safe work habits and a hazard-free environment

#### Leadership

Demonstrate the courage and knowledge to correct unsafe actions, protect the safety and well-being of co-workers and promote safety as the most important thing we do

#### Health and wellness

Actively pursue opportunities to meaningfully incorporate health and wellness as a component of safety

#### Sharing best practices

PPL engages with outside groups to learn best practices. Discussions cover areas such as accident prevention, emergency response, fire safety and operational health and safety

Our commitment to safety also extends to our contractors. Stringent safety and health requirements are contractual obligations.



Safety is top of mind for every project. Here, WPD technicians Andy Ellis (left) and Kevin Hare wait for a piece of equipment to be lowered for a substation upgrade project.

## Reliability

One of the most critical factors for customer satisfaction is reliability. This includes not only ongoing reliability but also how quickly the utility can respond to unforeseen interruptions. Reliability encompasses a number of operational aspects, including ongoing maintenance and oversight for our system's equipment and power lines that can be affected by everything from weather to wildlife.

Today, PPL's utilities are using technology and data like never before to deliver a more reliable system for customers. Some of these efforts include:

**PPL Electric's** power grid had its most reliable year ever in 2017 with customers continuing to experience fewer outages. Compared to 2007, PPL customers experienced a total of 550,000 fewer interruptions in 2017.

Since 2010, smart grid devices have been installed at more than 4,600 locations throughout PPL's service territory. The utility has also invested in lightning protection, leading to a 76 percent reduction in lightning-related outages on transmission lines from 2012 to 2017.

PPL Electric's future grid investments include:

- More automation on the local distribution grid to reroute power around trouble spots and turn the lights on faster for many customers.
- More automation on the higher-voltage transmission grid to further improve reliability for customers.
- Improvements at substations and in underground networks that serve cities.
- Continued proactive replacement of aging equipment.
- Replacement of 15,000 wooden distribution poles and 160 circuit breakers over the next five years.
- Rebuilding over 1,400 miles of older transmission lines over the next five years.

### 2017 Average Number of Interruptions (per customer)



System Average Interruption Frequency Index (SAIFI) is the average number of interruptions per customer, excluding major events, per Institute of Electrical and Electronics Engineers definition 1366.

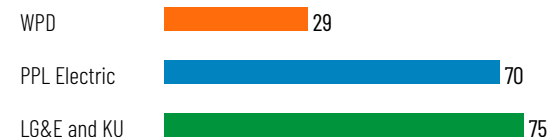
[For complete details, see Appendix page 78.](#)

**LG&E and KU** had their best reliability performance in more than a decade. In an industry reliability benchmarking survey, the utilities performed in the top quartile for Distribution System Average Interruption Duration Index, or SAIDI and for Transmission and Distribution combined Customer Average Interruption Duration Index, or CAIDI. Since 2010, LG&E and KU have reduced the number of outages and their duration by 35 percent and 34 percent, respectively. Planned system improvements and technology advancements over the next five years are projected to reduce the frequency of outages by 26 percent and duration of outages by 17 percent, compared to historical system performance over the last seven years.

LG&E and KU are planning a number of improvements throughout the electric and natural gas systems that will help improve safety, reliability and service. The utilities received approval from the Kentucky Public Service Commission to invest in intelligent control equipment that will enhance reliability. Likewise, a five-year transmission upgrade program that includes replacing aging equipment such as wooden poles, cross arms, insulators, lines and substations is underway.

From a natural gas standpoint, LG&E plans to expand its replacement of aging natural gas steel service lines from the street to customers' homes with new plastic pipe. The project is similar to the utility's recently completed 20-year investment in downtown Louisville in which the natural gas distribution lines were upgraded from aging wrought iron and steel to plastic. LG&E also intends to replace its aging natural gas transmission lines, add capacity to

### 2017 Average Outage Duration (in minutes)



System Average Interruption Duration Index (SAIDI) is the average outage duration (in minutes), excluding major events, per Institute of Electrical and Electronics Engineers definition 1366.

enhance reliability and promote economic growth in the region.

For **WPD**, investments in high voltage automation has significantly reduced the number of customers affected by unplanned outages. The investment includes installation of additional remotely controlled switches and protection equipment and the application of computerized switching algorithms.

Nearly nine out of 10 WPD customers who experience high voltage faults have their power supply restored in under an hour.

WPD has a clear focus on restoring power quickly. The utility's Target 60 initiative sets a goal to restore power within 60 minutes of an outage occurring. The average number of customers interrupted by unplanned incidents has dropped across its entire service area.





Nicki Johnson, stakeholder engagement officer, says external customer satisfaction standards such as Customer Service Excellence drive WPD to continuously improve its customer service.

## 25 years of outstanding service

WPD celebrated 25 years of outstanding customer service, achieving its 2017 Customer Service Excellence (CSE) standard with a record number of top ratings.

The standard measures five criteria encompassing nearly five dozen elements. Assessments are conducted through annual audits.

Over 100 separate pieces of evidence are reviewed, including performance reports, social media and website content, strategies, policies, training plans and stakeholder engagement reports. This is coupled with interviews with senior managers and Contact Centre teams to assess the quality of WPD's delivery.

There are four possible outcomes, ranging from non-compliance to compliance plus – indicating best practice across sectors. In the 2017 assessment, WPD gained an extra two compliance plus outcomes, taking its total to 38 compliance plus designations out of a possible 57. The result placed the company among the U.K.'s top five performers and number one out of the 237 organizations certified by M-Assessment Services. WPD continues to have zero non-compliance or partial compliance ratings.

"We particularly like the CSE standard because it allows our strategies and processes to obtain critical external evaluation," said Nicki Johnson, WPD's stakeholder engagement officer. "Even when you achieve a compliance plus rating, the assessor will still recommend areas where further improvement could be achieved. This allows us to drive our standards even higher and continuously improve our customer service."

The CSE standard originated in 1992 as the Charter Mark, which public sector organizations had to compete for every three years. It became the CSE standard in 2011.



# Advance a cleaner energy future

Encourage responsible stewardship in partnership with our customers  
and stakeholders to have a sustainable environmental impact

## Innovative project positions PPL Electric as a provider in the grid of the future

The Keystone Solar Future Project is an example of the innovative thinking PPL Electric is using as new on-site generation technologies transform the utility environment.

The project will set up a “distributed system platform” that leverages the company’s existing smart grid technology to plan for, monitor and control distributed energy resources such as solar panels. In 2017, PPL Electric received a \$3.3 million U.S. Department of Energy grant to pay a portion of the project cost.

The company’s Keystone Solar Future Project aims to smoothly integrate increasing amounts of customer-owned generation into the existing delivery network in a way that maintains a high level of service and reliability for all customers.

“Our customers’ interest in solar and other distributed energy installations increases each year,” said Stephanie Raymond, vice president-Distribution Operations. “We will innovate and adjust to these new developments, while continuing to provide safe, reliable, affordable service.”

The project will demonstrate that solar and other customer-owned generation – properly placed and integrated into the electric grid – can benefit the customers who install it and can have significant benefits for society.

Launched in 2017, the pilot program will seek to connect hundreds of new private solar installations by 2020 and to demonstrate the ability to control this generation to improve reliability and reduce electricity costs for all customers.

“Our smart grid technology has already enabled large strides forward in terms of reliability improvements,” Raymond said. “Now, we’ll take innovation to a new level to help manage the way distributed energy installations interact with the grid. Over the longer term, our goal is to manage all emerging technology, such as battery storage and smart thermostats, in a way that produces a sustainable and reliable two-way distribution grid.”

The project is expected to create jobs as local solar companies install additional systems and to lower costs for all customers, not just those installing private generation.

The total cost of the project is estimated at \$9 million. PPL Electric will provide the balance of the funding in partnership with General Electric, EPRI, Landis+Gyr, Drexel University and BRIDGE Energy Group.

## Addressing our environmental impact

PPL works to reduce its carbon footprint by making the generation and delivery of power cleaner and more efficient. Reducing our environmental impact is achievable through a balanced energy mix, combining clean and renewable energy sources with traditional ones. We recognize that concerns regarding greenhouse gas emissions, as well as declining costs for clean energy options, could continue to accelerate a shift to cleaner energy both in the U.S. and in the U.K. As a result, many of the actions we take – and will continue to take – are helping to advance a smarter, cleaner energy infrastructure.

### Expanding Renewable Energy

WPD participates in the U.K. Network Innovation Allowance and Competitions, which has launched projects that test innovative methods to enable the widespread adoption by customers of low-carbon technologies, such as solar panels, heat pumps and electric vehicles. There are 19 projects currently underway, including:

- WPD partnered with the Carbon Trust to develop an application and website to allow customers to view the composition and carbon intensity of their electricity supply. With growing customer awareness, the project could lead to increased engagement with demand side management programs leading customers to adjust their energy usage.
- Electric Nation, an innovative two-year trial to investigate the impact that home charging of electric vehicles (EVs) has on distribution networks, continues on track to achieve its target of recruiting up to 700 electric vehicle users to participate in a trial to ensure the U.K. can charge electric vehicles at peak times as the numbers of EVs rise.
- WPD is providing technical support to the Smart Energy Isles, a European Union project that intends to create a smart energy system that will provide a model to support the transition to low carbon sustainable communities.

Energy management systems will be installed in 100 solar-powered homes and in 190 of the island's businesses. Additionally, 10 smart homes will be piloting a variety of smart energy technologies, including energy storage and air source heat pumps.

LG&E and KU are investigating low-carbon, distributed generation options on several fronts:

- LG&E and KU began installation of 20 public EV charging stations across Kentucky. Eight stations were installed in 2017, with other locations being determined to best serve EV drivers in the region. The stations are located in public access areas, such as street parking, parking lots and outdoor areas to improve accessibility to regional charging stations and support EV drivers who are concerned about their transportation environmental footprint.
- KU announced plans to retire two coal units at the E.W. Brown Generating Station totaling 272 MW in the first quarter of 2019. The closure of the units will bring the total coal-fired generation retired by LG&E and KU to more than 1,000 MW in just under five years. There are no employee separations as a result of this closure due to new projects and normal attrition. E.W. Brown will continue to operate a 409-megawatt, coal-fired unit at the site. The generating station also continues to be home to Kentucky's largest universal solar facility at 10 megawatts; a 33-megawatt hydroelectric facility; and seven natural gas-fired combustion turbines capable of producing up to 906 megawatts of energy, typically used at peak demand times.
- LG&E and KU began accepting enrollments into their new Solar Share program, which gives residential, business and industrial customers across the utilities' service territories the opportunity to share in local solar energy and receive

credits on their monthly bills. LG&E and KU will build, own and operate the regional Solar Share Facility. Once constructed, the facility will generate energy that then helps power the community. Customers participating in Solar Share will receive a credit on their monthly bill for the amount of solar energy produced based on their subscription. Construction of the new solar share facility will commence once full subscription of the first array is reached.

- LG&E and KU created a new Energy Storage Research and Demonstration Site in collaboration with EPRI. The site is allowing utilities to develop, test and evaluate the potential benefits and investigate operating needs and associated costs of large-scale battery technologies. The site includes three testing bays and has a total hosting capacity of up to three megawatts of energy storage.
- In Pennsylvania, PPL Electric is making investments to expand customer access to renewable and distributed resources:
- PPL Electric has secured a \$3.3 million grant from the U.S. Department of Energy to support the company's Keystone Solar Future Project. The three-year pilot project will leverage PPL Electric's existing smart grid infrastructure to develop a Distributed Energy Management System capable of reliably and safely integrating more solar power on the grid. For more details, go to [page 27](#).
  - PPL Electric participates in a statewide alternative-energy portfolio standard. From June 2016 to May 2017, alternative power sources comprised 14.2 percent of the power PPL Electric bought for customers, including 6 percent from solar, wind and hydropower energy sources. The projected renewable energy obligation for June 2017 through May 2018 is 14.7 percent.

## Conserving and Protecting Water

PPL carefully manages the water it uses and monitors the impact of waste water discharged into waterways. The company supports programs that protect waterways and the ecosystems that depend on them in the service areas where the utilities operate. LG&E and KU pay consumptive use fees to cover the costs of reservoir projects and storage space, designed to benefit all users and maintain adequate river levels during low-flow periods. In the U.S., PPL's utilities collaborate with a variety of stakeholders and state agencies to ensure that watersheds and reservoirs meet the needs of both the utilities and other stakeholders, including the public.

For example, KU's Dix Dam hydroelectric plant and the adjacent Herrington Lake is a public recreation area and serves to provide water for the city of Danville, Ky. The facility staff works with the Kentucky Department of Fish and Wildlife and Trout Unlimited to improve fish habitat in the area and the Dix River, which is connected to the lake. The staff also works with the Herrington Lake Conservation League, which holds local volunteer events for shoreline cleanups and other public activities. LG&E and KU plants adjacent to the Ohio River (Ghent, Trimble County, Ohio Falls, Cane Run and Mill Creek) are in segments classified as warm water aquatic habitat, community recreation areas and the source of domestic water for numerous communities. Voluntary company initiatives include riverbank cleanup and parking for fishermen and hikers.

LG&E and KU have greatly reduced the volume of cooling water withdrawn from the watershed by utilizing closed-cycle cooling instead of once-through cooling at its generating plants. Each facility also has a Groundwater Protection Plan, a Stormwater Best Management Practices Plan, and a Spill Prevention Control and Countermeasure plan that facilitates the safe storage of chemicals and oils on site. Proper secondary containment and weekly inspections keep these chemicals out of the watershed and groundwater.

Consumptive water use at LG&E and KU facilities has decreased significantly over the past five years. The utility used 75 percent less water for each megawatt-hour generated in 2017 than in 2013, which can be attributed to the closure of older coal-fired units and the transition to natural gas generation. Further reductions are expected to continue as power plant efficiency improves and the company transitions to dry-ash handling at its Kentucky coal-fired power plants.



# 75%

DECREASE IN AMOUNT  
OF WATER USED

# 96%

AMOUNT OF WATER  
RECYCLED AND REUSED

# .17%

IMPACT

(WATER WITHDRAWN  
COMPARED TO WATERBODY SIZE)

[For complete details on water management, see Appendix page 77.](#)

## Reducing Air Emissions

In January 2018, PPL announced a goal to cut the company's carbon dioxide emissions 70 percent from 2010 levels by 2050. This goal is based on the ongoing transition of our power generation to lower-emissions sources, such as natural gas and solar. We are also taking actions to reduce emissions from our company operations. We are adding lower-emission vehicles to our own fleet, including electric and natural-gas vehicles. These actions, in addition to facility upgrades and new construction projects, are expected to reduce not just our carbon dioxide emissions but also other air emissions. The goal also recognizes the strategic spin off of our competitive generation business in 2015.

LG&E and KU generation currently includes a mix of coal, natural gas and renewable capacity. In 2016, coal accounted for 64 percent of LG&E's and KU's generating capacity, which represented less than 2 percent of coal-fired generation capacity in the U.S.

Like the nation's generation fleet, LG&E's and KU's fleet has changed in recent years. In 2015, LG&E and KU completed the retirement of 800 megawatts of coal capacity and completed construction of a new natural gas, combined-cycle unit. In 2016, LG&E and KU also completed a 10-megawatt universal solar power facility, Kentucky's largest. In addition, LG&E and KU completed a multi-year, \$2.8 billion project to add environmental controls to four of the companies' coal-fired power plants to

further reduce emissions and improve operations. As a result of these emissions controls, 2017 emissions of sulfur dioxide, nitrogen oxide and particulate matter were 83.79 percent, 45.16 percent and 58.99 percent lower, respectively, than they were in 2010.

Finally, in November 2017, LG&E and KU announced plans to retire two coal units totaling 272 MW in the first quarter of 2019 (E.W. Brown Units 1 and 2).

With a network spread over an area of 55,000 km, WPD needs to operate a significant fleet of vehicles so its staff can serve the territory effectively. To make an effort to reduce both total fuel use and liters of fuel used per vehicle, WPD is ensuring that every time a replacement vehicle is added to its fleet, it has lower CO<sub>2</sub> emissions than the previous vehicle.

As part of an initiative to cut down fuel emissions, vehicle maintenance and reduce work site noise, PPL Electric is outfitting all of its bucket trucks with electric-powered bucket lifts.

Read more about efforts to make our vehicles more efficient on [page 38](#).

### Generation Efficiency

We continue to improve on our generation efficiency measured in British thermal units (BTUs) consumed per net megawatt hour generated. See more details on [page 76](#).

**34.1%**  
PERCENTAGE COAL ASH  
BENEFICIALLY REUSED  
*(in million metric tonnes)*

### Waste Materials and Environmental Safety

PPL has high standards for managing waste from our operations. In keeping with the company's commitment to advance a cleaner energy future and encourage responsible stewardship, we seek innovative solutions and opportunities to reduce, reuse and recycle these materials.

Coal ash is one of the residuals of coal power production. Ash production has decreased 32 percent from 2013 to 2017 due to the closure of coal-fired units and the increased use of natural gas generation.

LG&E and KU made progress on a nearly \$1 billion project to cap and close ash ponds and other coal-combustion residual ponds at their active and retired coal-fired plants and transition to dry handling of coal-combustion residuals.

## Emissions

0.87

Carbon intensity  
(metric tonnes/net MWh)

0.00041

Sulfur dioxide emissions intensity  
(metric tonnes/net MWh)

0.00048

Nitrogen dioxide emissions intensity  
(metric tonnes/net MWh)

77

Total mercury  
emissions (Kg)

[For complete details on emissions, see Appendix page 76.](#)



Reducing idling is a team effort for LG&E and KU, with every employee who drives a fleet vehicle doing their part.

## Drivers take action to reduce pollution

While air pollution from individual vehicles is relatively small, when you add up all the vehicles on the roadway, they are the single largest contributor to the formation of ground-level ozone.

Ozone season takes place May through September each year when sunny, warm days can trap and heat nitrogen oxide and volatile organic compounds found in the air and form ozone.

As part of LG&E and KU's ongoing environmental stewardship efforts, the companies' Transportation Department encourages employees driving company vehicles to reduce idling time while on the roadways. Transportation uses a special monitoring system to track idling of the company's vehicle fleet. With GPS tracking, the company monitors total idling time per month, based on the vehicle type and business area within the company. The information is tracked over time using an online dashboard.

The monitoring system defines and tracks idling when the vehicle is running and when the speed registers 0 miles per hour. The system then documents when a vehicle idles continuously for more than 3 minutes.

Through various forums such as tailgates and department meetings, group managers are able to educate employees on idling times and provide advice on best practices to reduce excess idling.

The initiative focuses on day-to-day driving practices, with the understanding that some company vehicles, such as bucket trucks and heavy-duty vehicles, often perform job functions that require continuous operations.





PPL Electric employees participate in the company's first Construction Methods Environmental Forum.

## Commitment to environmental responsibility and the community

PPL has a longstanding commitment to carry out all of our business activities in ways that preserve and promote a clean, safe and healthy environment. We have invested in environmental upgrades at power plants, carbon-free generation projects and programs to encourage energy efficiency. Our management approach to environmental responsibility encompasses:

### Performance

PPL uses health, safety and environmental management systems to set goals, monitor and assess performance and continually improve. PPL works with contractors and suppliers to focus on results that contribute to our business success and holds them accountable to our high environmental standards and compliance with all laws and requirements.

### Communication

We help our customers identify areas where they can conserve energy, reduce their carbon footprint and learn how to support community-driven environmental initiatives.

We take a lot of steps to ensure the environment is protected while work is being done on the electrical system. PPL's utilities also work with community organizations to protect and preserve nature in the areas around our operations.

Beyond the day-to-day conservation efforts, initiatives in 2017 included:

### PPL Electric Construction Methods Environmental Forum

Nearly 100 PPL Electric employees and contractors attended the first-ever PPL Electric Construction Methods Environmental Forum. The company's Environmental Compliance staff gave demonstrations of everything from hazardous spill response and wood pole reuse to the use of aerial drone technology in the environmental and construction realms.

The demonstrations included a display of techniques used for environmental matting, which is used to build protective roadways and construction pads through sensitive wetlands, animal habitats and agricultural areas.

The forum also covered safe digging techniques and methods to dry out wet soils.

The daylong event was held to educate employees on new technologies and work methods that are lessening our impact on the environment and reducing project risks at little to no additional cost.

### Plant for the Planet


In Kentucky, LG&E and KU provided Plant for the Planet Grants to 62 organizations. The utilities' Plant for the Planet program is modeled after the United Nations Environment Program's (UNEP) Plant for the Planet: Billion Tree Campaign. The purpose of UNEP's

tree-planting effort is to bring individuals, communities and businesses together to collectively plant over one billion trees worldwide each year. Similarly, LG&E's and KU's program is designed to encourage nonprofit organizations and local government agencies with a record of successful tree planting to continue their efforts. The company has dedicated up to \$75,000 each year toward this initiative.

LG&E and KU offer one-year grants of \$500 to \$5,000 for urban, suburban or rural projects, in forests and parks and along parkways or roadways that meet program objectives. Applicants must demonstrate that mature trees resulting from their efforts will not interfere with utility lines. Since the program was launched, LG&E and KU have contributed to the planting of more than 38,000 trees.

### Keen to be Green

In the U.K., WPD provides support to communities across the network area with the aim of encouraging energy conservation, promoting recycling initiatives and enhancing the landscape for wildlife. Keen to be Green is the umbrella brand of community environmental activities and enables a range of groups, charities and schools to benefit from cash awarded by WPD. As part of this program, WPD plants 5,000 native trees annually across its network area. It also responds to ad hoc requests from a range of organizations and works with nationally recognized charities including the Wildlife Trusts and the Conservation Volunteers.



Patrick Renshaw, project manager-Environmental, digs in during a planting event as part of PPL Electric's Community Roots program.

## Trees for a greener, cleaner planet

PPL Electric is greening up its service territory through a new program called Community Roots that will provide 20,000 trees in 2018 to select groups in its service territory.

The goal of the program is to give trees to county and municipal parks, environmentally focused groups and schools. In schools, Community Roots will be available to fourth-graders, provided the school they attend in PPL's service area successfully applies for trees.

Demand for the program was strong. Within about six weeks, all 20,000 trees allocated for spring and fall planting in 2018 were claimed. The seedlings offered through Community Roots are Pennsylvania native species and are purchased from local nurseries.

Community Roots trees will be planted in 2018 throughout the Pennsylvania counties served by PPL. Nearly 100 organizations are participating, including more than 25 schools.

The environmental benefits of the trees from Community Roots will lead to greener, cleaner communities. Trees help remove carbon dioxide from the air and provide numerous other benefits. As part of the program, tree recipients are reminded to always plant trees away from overhead or underground utilities and to call 811 before any digging so underground utilities can be marked.

"When it comes to trees, we know not everyone likes that we must cut and trim in the rights of way to help ensure reliable service," said Michael Hasel, manager, Environmental Compliance. "Community Roots represents a way to promote trees, and their benefits, without affecting reliability."

# Biodiversity initiatives

All facets of the daily operations of electric power companies – from water discharges and atmospheric emissions to transmission line rights-of-way – can potentially affect ecosystems. PPL works throughout all phases of its projects to avoid and minimize impacts to the environment, especially in sensitive resource areas. We routinely relocate structure locations and access roads to avoid impacting sensitive areas like wetlands, waterways and critical habitat for rare, threatened or endangered flora and fauna. Here are a few examples of local projects that protect biodiversity:

## Bat Habitat

LG&E and KU support research intended to help boost the population of the endangered Indiana bat. The company installed 10 utility poles several years ago that are used as artificial roosting structures at Fort Knox. The project is a coordinated partnership that includes Copperhead Environmental Consulting, the U.S. Fish and Wildlife Service and Fort Knox. Over time, the utility poles were fitted with artificial bark to supplement and eventually replace the existing roost trees. At one time, more than 150 bats were counted emerging from just one of the installed poles. In Pennsylvania, PPL Electric has conducted several studies and installed habitat protection for the eastern small-footed bat. When WPD engineers discovered a significant colony of bats within and around one of its substations, the engineers consulted with local ecologists from Natural Resources Wales. WPD adopted an innovative method for installing acoustic barriers to prevent noise disturbance to the bat roost. The installation of the barrier within the substation was successful and allowed the work to continue without disrupting the bats.



## Birds

Through cross-department collaboration, the company uses a comprehensive approach to protect birds and their habitat. Our utilities use bird-safe methods for newly constructed or rebuilt lines and other electrical equipment in areas with high bird risk; track and document all bird mortalities and at-risk nest sites so that remedial actions can be identified and executed; and provide employee training on bird protection issues and procedures. LG&E, KU and PPL Electric have adopted comprehensive Avian Protection Plans to protect birds from coming in contact with electrical equipment and power lines.

Those efforts have resulted in the improvement of transmission-line designs to deter nesting and perching and to enhance tracking of all avian-related outages and impacts. We also have collaborated with EEI's Avian Power Line Committee and the Raptor Research Foundation to share best practices and develop improvements that can be used industry-wide. PPL Electric has been installing osprey nesting platforms throughout its service territory for more than 20 years. In 2017, PPL Electric worked with the Pennsylvania Game Commission to install additional nesting platforms throughout the service area.

In addition, peregrine falcons are making a big comeback in Kentucky, thanks in part to the dedication of employees at many of LG&E's and KU's facilities for the last 20 years. The Kentucky Department of Fish and Wildlife Resources has placed nest boxes at many locations throughout Kentucky, including LG&E's and KU's Trimble County, Cane Run, Mill Creek, Ghent and E.W. Brown generation stations.

Employees ensure the nest boxes at the power plants provide a safe setting for the falcons to prosper. More than 100 falcons have hatched from these nest boxes. In 2017, Trimble County Station received the Kentucky Cooperator of the Year Award for its contributions to the program.

## Protected Species

We support the protection of habitats through a variety of methods from siting and design through construction and ongoing operations and maintenance of the electrical system.

As part of WPD's Protected Species and Habitats Policy, the company publishes a series of information sheets to aid in the identification and protection of endangered native species, raise awareness and assist our operational staff and our contractors in recognizing and managing species and habitats. In 2017, protected species management at WPD involved a range of activities, including a project to protect dormouse habitat during vegetation clearance work. WPD works closely with local ecologists to follow best practices and enhance habitats.

PPL Electric uses the Pennsylvania Natural Diversity Inventory system to aid in identifying and protecting species of concern. Once identified, species are protected through a variety of methods, including:

- Adjustments to scheduled work to avoid seasonal impacts
- Adjustments to construction methods to avoid impacts in areas of concern such as working from helicopters to avoid driving into sensitive areas
- Developing alternative routes to avoid impacts
- Design changes to avoid impacts (e.g., relocate a transmission structure and span the area of concern)
- Retain biologists/plant specialists to flag any species of concerns for avoidance during construction
- Habitat offsets if avoidances cannot be addressed

PPL works to mitigate all risks, but if a conflict cannot be avoided, mitigation plans are developed in coordination with the appropriate agency.

## Native Plants

Utility rights-of-way provide ecological conditions that allow native species to thrive.

Employees survey hundreds of miles of electric transmission rights-of-way within our service territories and identify populations of native flowers and grasses. In the U.S., both PPL Electric, LG&E and KU use maintenance practices that help facilitate growth and will reintroduce native grasses and wildflowers when planting is appropriate. The utilities are members of the EEI Pollinator Working Group, which hopes to play a major role in managing pollinator habitat and protection initiatives. In the U.K., WPD implemented an invasive species management plan to ensure the appropriate measures were in place to minimize the spread of any invasive species present on work sites to avoid disrupting local biodiversity.

## Vegetation Management

Millions of people served by PPL's utilities depend on having reliable power for their homes and businesses. Effective vegetation management along high-voltage transmission lines is a critical part of maintaining that reliability. Our vegetation management program is designed to promote the safe, reliable operation of the electric grid while making sure we are sensitive to the concerns of property owners and our obligations to electricity customers. We work with conservation, land management and environmental groups to advance common goals of electric reliability and environmental stewardship.

Trees and other tall vegetation need to be kept away from power lines. If they get too close, power outages can result. Tree-related outages can potentially affect thousands of customers for extended periods of time. Keeping overhead power lines clear of limbs and brush also enables our crews to detect and repair issues that impact service during storms. Tree interference also creates the potential for a significant safety risk to our employees and the public.

PPL's utilities conduct tree trimming throughout their service areas on a consistent and planned cycle using Integrated Vegetation Management to execute their program and maintain reliable service.

PPL Electric was recognized in 2017 by the Arbor Day Foundation with a Tree Line USA award, which recognizes electric utilities across the United States that demonstrate practices that enhance urban and community forests. In 2017, the utility also received an Industry Excellence award from the Southeastern Electric Exchange for implementing paperless vegetation management software.

PPL Electric began a unique partnership with the Lehigh Valley Zoo in 2017 to provide cut tree branches to feed one of the zoo's newest additions, a Masai giraffe named Murphy. The cut branches, which normally would have gone through a chipper, were sourced locally from trees that were removed as part of ongoing electric reliability improvements in the area.



## PPL's approach to climate change

PPL regularly assesses risks and opportunities associated with climate change. We have considered the recommendations of the Task Force on Climate-Related Disclosures, and include in our reporting a discussion of: our governance of climate-related risks and opportunities; impacts on our business strategy and financial planning; how we identify, assess and manage climate-related risks; and our climate-related metrics and targets. Any material financial information is disclosed in our [Form 10-K](#) and other financial filings.

### Governance

Oversight of climate-related risks and opportunities is included in the responsibilities of PPL's board of directors, executive leadership and PPL's Enterprise Risk Management Committee. See Governance discussion on [page 15](#). The Board has designated its Compensation, Governance and Nominating Committee as the body responsible for overseeing PPL's practices and positions to further its corporate citizenship, including sustainability, environmental and corporate social responsibility initiatives.

We regularly assess risks and opportunities associated with climate change as part of our overall strategic business planning and enterprise risk management. In addition to our enterprise risk management process, PPL's operating companies regularly review and analyze risks and opportunities as part of ongoing business planning activities.

### Strategy

Our approach centers on understanding and managing climate risks, exploring opportunities associated with the drive for a cleaner energy future and taking steps to reduce the company's carbon footprint. As a result of PPL's strategic restructuring and investments in recent years, PPL's CO<sub>2</sub> emissions dropped about 50 percent from 2010 to 2016.

Our strategy going forward includes using innovative approaches to integrate more distributed energy resources, investing in lower-emitting generation in Kentucky consistent with Kentucky's lowest reasonable cost requirements and investing in a more dynamic, resilient grid.

Through our Integrated Resources Planning in Kentucky, we routinely consider future load, fuel prices, environmental costs (including CO<sub>2</sub> price), and other factors in determining the best approach to meeting our customers' needs. A thorough analysis of climate related risks and opportunities is included in PPL's [climate assessment report](#) and discussed below.

### Risk Management

#### Climate Assessment Report

In August 2017, PPL Corporation committed to shareowners that it would publish an assessment of the potential impacts on PPL resulting from future requirements and technological advances aimed at limiting global warming to 2° Celsius over pre-industrial levels. The report, published in November 2017, presents the results of PPL's scenario-based climate assessment. In addition, it describes PPL's approach to climate change and steps the company is taking to manage climate-related risks and to capitalize on new opportunities.

#### *Our Analysis*

PPL's portfolio is heavily focused on electricity delivery with more than 80 percent of 2017 earnings driven by our delivery operations. Our Kentucky utilities own and operate generation facilities. For this assessment, the company analyzed the potential impacts of three possible long-term policy scenarios on its Kentucky generation assets. We considered potential variations in commodity prices, technology adoption rates and other factors across these scenarios

#### *Potential Impact*

Under each policy scenario considered, including a scenario consistent with limiting the global temperature increase to 2° Celsius, carbon dioxide emissions from PPL's Kentucky generation assets are expected to decline 45-90 percent from 2005 levels by

2050. Moreover, we anticipate that the financial risk of continuing to operate the existing coal units will be minimal so long as they are operated consistent with approved regulatory frameworks and are economically justifiable to Kentucky regulators. We have made, and continue to make, major investments across our transmission and distribution operations to mitigate weather-related climate risks and make the grid more reliable and resilient. We are also leveraging smart grid technologies to actively manage our system and integrate distributed energy resources. In addition, we are actively engaging with regulators on these issues.

### *Risks Associated with Climate Change*

PPL will continue to assess risks and opportunities associated with climate change. In addition, we will continue to engage on related public policy matters to ensure we can respond effectively to future changes in policy and regulation as we look to preserve and grow shareowner value. An in-depth risk assessment is available in PPL's Climate Assessment report published in November 2017. PPL will respond in 2018 to an annual climate survey by CDP, formerly known as the Carbon Disclosure Project. CDP provides another outlet for companies to disclose environmental data important to investors and other stakeholders.

### *Metrics and Targets*

PPL developed a CO<sub>2</sub> reduction goal in 2017 (announced in January 2018). PPL's goal is to reduce CO<sub>2</sub> emissions by 70 percent by 2050 from a 2010 baseline (or 45 percent counting only PPL's current business mix). PPL's CO<sub>2</sub> reduction goal encompasses our energy consumption at company-owned facilities. The company expects to achieve the reductions through a variety of actions. These include replacing Kentucky coal-fired generation over time with a mix of renewables and natural gas while meeting obligations to provide safe and reliable service at a reasonable cost to customers. And they include taking actions across PPL's U.S. and U.K. operations, such as improving energy efficiency, reducing greenhouse gas emissions from substations and reducing vehicle fleet emissions. See discussion titled "Reducing Air Emissions" on [page 30](#) and in the Appendix on [page 76](#).

## Helping our customers go green

Our companies offer a variety of services to help customers save energy, calculate their indirect greenhouse gas and carbon emissions and adopt renewable energy. Our customer programs utilize advisory and educational resources, rebates and incentives and technology, such as meters and online tools.

Examples of program offerings include:

- Conservation/home energy performance monitoring
- Low-income weatherization
- High-efficiency lighting
- HVAC test and tune up
- New construction advisory services
- Load management options with financial incentives to reduce demand during peak hours
- Appliance removal with incentives for replacement with energy efficient appliances
- Smart energy profiles and dashboards for monitoring usage and performance
- Student energy efficiency education

For more details on energy efficiency programs and savings, see [page 46](#).

### Research and Development

Research and development into providing reliable and sustainable electricity is an important part of today's energy landscape.

PPL's operating utilities participate in many research and development activities throughout the year, including company research, industry-wide studies and partnerships with educational institutions and research organizations.

In 2017, activities included:

- LG&E and KU partnered with EPRI to develop an energy storage demonstration facility co-located with the E.W. Brown Solar Plant. Research conducted includes studies designed to understand integration benefits and challenges for battery energy storage.
- LG&E and KU have conducted several studies to understand emissions and cost benefits for converting customer end use technologies to electric from other fuel sources (e.g., natural gas, propane, diesel, gasoline).
- LG&E and KU partnered with the University of Kentucky to develop technologies that can capture carbon dioxide from coal generation.
- PPL Electric partnered with EPRI on research related to energy storage, distribution systems, integration of distributed energy resources and crisis communications.



Contractors remove a PPL Electric customer's old refrigerator, which will be sent to a recycling facility for reclamation. The customer will receive a rebate for recycling the appliance and helping the utility remove inefficient electric load from the grid.

- PPL Electric began the Keystone Solar Future Project in partnership with Drexel University to model the effects of distributed energy on the grid. Read more about that project on [page 27](#).
- As part of its Innovation Strategy, WPD conducts R&D activities across five broad areas: network performance and efficiency; low carbon networks; smart grid and meters; and environment and customer service. Progress is tracked and published on an annual basis through WPD's Future Networks Program.



## Electric vehicles

EVs present opportunities as they become more widely used. PPL is working to make the system enhancements necessary to meet electricity demand over the long term to support the adoption of electricity-fueled transportation.

### Battery-powered bucket trucks

As part of an initiative to cut down fuel emissions and vehicle maintenance and reduce work site noise, PPL Electric is outfitting all of its bucket trucks with electric-powered bucket lifts.

The noise reduction provides a significant safety improvement for PPL work crews that now find it easier to communicate at job sites. PPL anticipates that the new technology will help the company extend the service life of each vehicle by an additional two years.

By the end of 2017, the company equipped nearly 50 trucks with electric bucket lifts. The company's goal is to equip all 277 bucket trucks with the technology by the end of 2026.

Historically, the company has used bucket lifts that use the vehicle's engine to power the motor to operate the boom, bucket and lift. The new technology uses battery power to operate this equipment. It also powers heating and cooling in truck cabs, reducing the need for engine idling, which in turn reduces fuel consumption, emissions, maintenance costs and job site noise. Fuel consumption is offset by as much as 1 gallon of diesel fuel per hour of eliminated idling.

Up to four hours of engine idling is replaced by the new electric lift daily. This equates to an annual reduction in diesel fuel consumption of approximately 1,040 gallons of diesel fuel per vehicle.

With that fuel use reduction, PPL has reduced its vehicle emissions. It is expected that carbon emissions will be reduced by 11 tons annually for each vehicle using the technology.

The battery-powered bucket lifts are just one of a number of environmental initiatives PPL has undertaken. The company also has 15 plug-in Chevy Volt vehicles in its business fleet and 22 EV charging stations in its service territory for use by employees.

### Electric Nation

The growth of EVs in the U.K. presents a new challenge for the country's electricity transmission and distribution network operators. WPD is taking a proactive approach with Electric Nation, a project that aims to build an understanding of the potential impact the increasing popularity of EVs will have on electricity networks.

The two-year research project is on track to achieve its target of recruiting 700 homeowners to participate in the largest trial of its kind. Each participant receives a free smart charger installed at their property.

At the end of 2015, there were about 50,000 EVs on the roads in the U.K. Forecasts suggest that by 2020 there will be over 1 million EVs. The Electric Nation project will help develop the necessary smart charging solutions to facilitate EV integration on local electricity networks.

### Electric Vehicle Charging

LG&E's and KU's EV Charging Station program was recognized for applying EPRI methodologies, standards and staff expertise as the utilities gained their regulator's approval of the program and designed and deployed EV charging infrastructures. Launched in 2016, the program committed to installing new EV charging infrastructure both in public access areas and for business customers interested in hosting charging stations. The program was designed to help further improve accessibility to regional charging stations and support EV drivers who are concerned about their transportation environmental footprint.

LG&E and KU committed to installing 20 public EV charging stations across Kentucky, 10 in LG&E's service territory and 10 in KU's service territory. As of the end of 2017, eight stations were installed, with additional locations being determined to best serve EV drivers in the region.

EV drivers who use the charging stations pay an hourly fee. While exact fees and taxes vary depending on the location of each station, the average rate is about \$3 per hour.

The stations are equipped with safety features, which include charging plugs that lock in the stand when not in use. They also have digital display screens and quick-pay options for a user-friendly customer experience.

Through the utilities' program, commercial customers also can host EV charging stations at their locations for public or private use.



Geetha Srinivasan, business operations analyst for PPL Electric, leads the project to rejuvenate underground cables.

## Innovation helps to cut waste

PPL Electric has found an innovative way to cut down on waste, while also making significant improvements for customers.

PPL Electric owns and maintains more than 7,000 miles of primary underground distribution cable. Over time, underground cables sustain damage from the environment, particularly water damage that causes corrosion in the cable, leading to faults and outages for customers.

The utility uses a process that extends the life of underground cables by injecting fluid into the cable insulation to better preserve its insulation properties. It can extend the life of cables by up to 40 years.

By choosing that technology over replacing the cable, PPL Electric has significantly cut down on waste. It also saves valuable resources, such as the copper and aluminum that are used to make cable and the diesel fuel that powers vehicles to transport it.

Every mile of cable that is injected – rather than disposed of – reduced global warming potential by the equivalent of 300 metric tons of carbon dioxide, according to Novinium, which recognized PPL Electric as one of the top 10 utilities making use of cable rejuvenation. That is done by avoiding the impact of having to replace copper, plastic and aluminum and avoiding use of fuel to transport those components.

Since starting to use the cable curing process, PPL Electric has cured nearly 300 miles of cable, including 61 miles in 2017.

That work represents a significant reliability improvement and helps keep costs down, two components that are crucial to customer satisfaction.

Over the life of the program, PPL Electric expects to save \$32 million by using the curing process, rather than the traditional full cable replacement option.

# Build tomorrow's energy infrastructure

Invest in tomorrow's energy infrastructure by developing a more reliable, resilient and efficient grid that fosters continued progress and a cleaner energy future

## Natural gas line upgrades ahead of the curve

LG&E completed a long-term gas main replacement project in the heart of downtown Louisville in June 2017.

The final stretch of work wrapped up an initiative that began back in 1996 when LG&E established a program to replace 540 miles of aging cast iron, wrought iron and bare steel natural gas pipelines, which are more vulnerable to degradation over time, with more durable plastic natural gas pipelines.

"Many utilities across the country only began making these types of upgrades within the last five years," said John P. Malloy, vice president-LG&E Gas Distribution. "So having the foresight to put this upgrade in place when we did has enabled us to enhance the safety of our system for our customers well in advance of our peers and allowed us to put additional infrastructure upgrade plans in place for the future."

While replacing the pipelines was not required when the program started, the company recognized the time-intensive work as a worthwhile effort toward improving the future safety and reliability of the utility's system and received approval of the program from the Kentucky Public Service Commission.

It was an initiative that came 15 years before stringent federal distribution pipeline integrity regulations took effect in 2011, putting the company well ahead of the curve.

Completion of the program builds on LG&E's ongoing safety measures within its natural gas system including its regular leak surveys and gas riser inspection and replacement program.

Moving forward, LG&E plans to expand infrastructure upgrades within its natural gas system. This will include replacing aging steel service lines with new plastic pipe, replacing aging natural gas transmission lines, carrying out reinforcement projects to enhance reliability and adding capacity to promote economic growth in its region.



A crew installing a segment of the last portion of LG&E's long-term gas main replacement project. In total, the company has replaced more than 500 miles of pipeline over nearly 21 years.

## Infrastructure investments for a smarter grid

In 2017, PPL completed \$3.5 billion of infrastructure investments to build a smarter, more dynamic and more secure energy grid and advance a cleaner energy future, including investing more than \$1 billion in each of the regions in which we operate.

In Pennsylvania, PPL Electric invested more than \$127.5 million installing about 600,000 new meters that enable better management of power usage, more accurate outage reporting and new functionality that improves customer service.

Additional investments in smart grid technology include pole-top sensors that detect outages, technology that quickly analyzes the location of faults and remote-operable switches to quickly reroute or restore power. PPL Electric also invested more than \$383 million to build four new substations and rebuild 110 miles of transmission lines to strengthen grid resiliency.

LG&E and KU are investing in new technologies throughout their distribution system. The utilities received approval from the Kentucky Public Service Commission for a \$112 million distribution automation project to improve reliability. Over the next six years, the utilities will install the devices throughout the system and integrate advanced technologies that will improve reliability for customers by allowing for immediate detection when a fault occurs and the ability to reroute and restore power to as many customers as possible, as quickly and safely as possible.

In the U.K., WPD was engaged in nearly two dozen projects to explore low-carbon technologies and help networks enable increased adoption of renewables, electric vehicles, heat pumps, energy storage and demand-side management. Investments in these projects totaled \$18.9 million in 2017.

WPD is deploying new fault location equipment that will enable teams to locate transient cable faults before they become permanent. The equipment can detect and analyze issues, restoring supplies and reporting the event to the relevant team to investigate and take action when appropriate. This proactive approach helps manage customer interruptions and reduces minutes out of power.

### A Safer, More Secure Network

A robust power grid results in a resilient system that limits the impact of natural and physical events. The investments we are making help secure the flow of power to our customers and defend the bulk electricity system – and our customers' data and privacy – from attack. Our industry takes grid security and reliability responsibilities seriously, and the ability to share sensitive information with the federal government about power grid facilities and operations, including information about threats and vulnerabilities associated with such infrastructure, is a crucial part of our strategy to protect the grid and make it more resilient.

As the threats to our business and energy infrastructure evolve, we are changing how we respond to those threats. We have made – and continue to make – significant investments in tools, technology and people to strengthen our defensive capabilities and enhance grid reliability and resiliency. We continually assess the risk landscape and improve our understanding of potential threats, motivations and techniques. Using this knowledge, we layer on physical and cyber protections to further reduce risk, increase resiliency and maintain the integrity of our systems. We take a defense-in-depth approach to protecting grid assets. This includes: rigorous, mandatory, enforceable and regularly audited reliability standards; close coordination and information sharing among our industry and with government partners at all levels; and efforts to prepare, respond and recover should power grid operations be affected in any way.

In the U.S., PPL complies with all mandatory cybersecurity standards, developed through the Federal Energy Regulatory Commission and the North American Electric Reliability Corporation. PPL regularly assesses our processes and procedures against voluntary standards and cybersecurity frameworks such as the National Institute of Standards and Technology's Cybersecurity Framework and the Department of Energy's Cybersecurity Capability Maturity Model, commonly known as C2M2.

Protecting our critical infrastructure isn't a singular effort – it is a shared responsibility. Our industry is committed to working across the public and private sector to protect the energy grid. PPL takes an active role in collaborative efforts. PPL provides strategic guidance and input to the Electricity Subsector Coordinating Council (ESCC). The ESCC serves as the principal liaison between the electric sector and the federal government for coordinating efforts to prepare for and respond to national-level disasters or threats to critical infrastructure. PPL participates in mutual-assistance cybersecurity measures including the Electricity Information Sharing and Analysis Center and Cybersecurity Risk Information Sharing Program, two information-sharing efforts to bolster situational awareness and reduce risk.

Crisis management plans provide resiliency and timely restoration and testing those plans is essential. PPL conducts exercises and drills to help us test our incident protocols and critical functions and identify areas for improvement. As a company, PPL continues to test its own critical functions, response and playbooks through regular drill activities.

In addition, PPL's continuing investments in new power lines and substations help strengthen the power grid and make it more resistant to security events.

## This is a test ...

PPL Electric, LG&E and KU regularly participate in events like the biennial GridEx to improve our readiness to respond to threats or attacks that might affect the bulk power system.

In November 2017, about 200 PPL Electric, LG&E and KU employees joined thousands of utility workers across North America as part of GridEx IV, an exercise designed to test the industry's response to simulated cyber and physical threats and attacks against the grid.

Grid operators responded to GridEx IV as they would a true disaster situation, running through their crisis plans, coordinating responses and reassuring customers as they rushed to "restore power."

More than 6,500 people from 450 industry and government organizations in the U.S., Canada and Mexico took part in GridEx IV. The drill is conducted by NERC, the regulatory authority responsible for the bulk power system in North America.



Vince Cuce, manager-Emergency Preparedness for PPL Electric, leads employees in drills and simulations regularly throughout the year to prepare the utility's response to threats and attacks against the power grid.

# Exceed customer expectations

Provide safe, reliable and environmentally responsible energy at the lowest reasonable cost



Debbie Leist (center), director of Customer Service and Marketing for LG&E and KU, with Billy Barnett (left) and Chad Francisco (right), service technicians, whose effort is just one example of how employees strive to "Go BEYOND" in their interactions with customers.

## Going above and beyond for customer service

Most people couldn't imagine starting their day without a cup of coffee. So, when customers Don and Robin Smith from Somerset, Kentucky, saw KU trucks outside their house, Don was worried the crews would shut off power before he could brew his morning cup of Joe.

What the Smiths may not have realized is that the crew – like their co-workers at LG&E and KU – keeps the customer experience top of mind.

A day earlier, Billy Barnett and Chad Francisco, service technicians, met the Smiths after the couple reported the lights inside their home were constantly flickering.

After completing an inspection, both men noticed the transformer connected to the house needed an upgrade.

"We could have easily changed the wires, and that may have fixed the problem in the short term," said Barnett. "But we wanted to do the job right, and that meant replacing the transformer, too."

The following day, line technicians arrived at the Smiths' house bright and early, and connected with them before starting work. The crew made sure the couple had time to make their morning coffee and get ready for the day before shutting off power to their home to replace the old transformer and wires with new ones.

The effort is just one example of how LG&E and KU employees strive to "Go BEYOND" in their interactions with customers.

Initially launched in 2009, the "Go BEYOND" Customer Experience initiative was designed to create an awareness among employees that everyone, regardless of whether they work in a customer-facing role, impacts the customer experience.

"Keeping the customer experience top of mind in everything we do is a key part of our company culture. We want employees to feel empowered to make decisions that positively impact customers' interactions with our company," said Debbie Leist, director of Customer Service and Marketing and lead of the utilities' Customer Experience advisory committee – comprised of directors throughout the company, brought together in 2015 to help broaden the effort.

As part of the initiative, an internal, mobile friendly webpage provides employees with tools and practical ways to enhance every customer interaction.



A PPL Electric customer verifies his information for an energy efficiency rebate.

## Our customers

The PPL family of companies provides essential energy services to more than 10 million customers in the U.S. and U.K. Through its regulated utility subsidiaries, PPL delivers electricity to customers in the U.K., Pennsylvania, Kentucky, Virginia and Tennessee; delivers natural gas to customers in Kentucky; and generates electricity from power plants in Kentucky. We strive to provide the highest quality, safe and reliable service to our customers at a reasonable cost, improving quality of life in the areas we serve.

Below is information about our customers, by business unit:

**LG&E and KU** are engaged in the regulated generation, transmission, distribution and sale of electricity in Kentucky and, in KU's case, Virginia and Tennessee. LG&E engages in the distribution and sale of natural gas to more than 326,000 customers in Kentucky. LG&E and KU provide electric service to nearly 1 million customers throughout central, southeastern and western Kentucky, as well as parts of southwestern Virginia.

The companies also provide electricity to fewer than 10 customers in Tennessee. Overall, LG&E's and KU's service territories span approximately 4,800 non-contiguous square miles. In Virginia, KU operates under the name Old Dominion Power Company.

**PPL Electric** delivers electricity to approximately 1.4 million customers in a 10,000-square mile territory in 29 counties of eastern and central Pennsylvania. PPL Electric customers can choose to purchase their electricity from various suppliers, including from PPL Electric as a Provider of Last Resort under the state's Electric Competition Act.

**WPD** in the U.K. provides regulated electricity distribution services to licensed third party energy suppliers (its customers) who use WPD's networks to transfer electricity to their customers, the end-users. WPD bills the energy supplier for this service and the supplier is responsible for billing end-users. WPD distributes electricity to about 7.9 million end-users in a 21,600-square-mile region covering the East Midlands, South West and West Midlands regions of England and South Wales.

### CUSTOMERS

	LG&E and KU Electric	LG&E (Gas)	PPL Electric	WPD	TOTAL
Residential	816,539	299,354	1,249,299		
Large Commercial	128,810	25,287	179,393		
Large Industrial	3,230	420	3,674		
Public Authorities	13,217	1,194			
Street Lights	2,149				
Municipals	10				
Gas Transport		81			
End Users				7,875,322	
<b>TOTAL</b>	<b>963,955</b>	<b>326,336</b>	<b>1,432,366</b>	<b>7,875,322</b>	<b>10,597,979</b>

## Customer satisfaction

PPL's utilities provide an outstanding service experience for our customers, consistently ranking among the best for customer satisfaction in the regions we serve.

Customer feedback is important to us as we look to continuously improve. For that reason, PPL relies on independent market research firms to conduct periodic customer satisfaction surveys.

In addition, we subscribe to syndicated studies, such as J.D. Power, as another way to gain insight about our customers from an objective source. We use the results of this feedback to evaluate our service and identify customer interests and concerns, and determine critical needs and offer our customers an opportunity to communicate their interests and concerns.

Customer feedback is obtained through telephone and online surveys, advisory boards, focus groups, online panels, mail surveys and customer service lines. A summary of results and insights is prepared and distributed monthly by the customer service departments of each operating subsidiary. Executives review customer satisfaction results on a quarterly basis.

### 2017 Customer Satisfaction Results

WPD was again rated as No. 1 in its industry for customer satisfaction in the U.K., with its four Distribution Network Operator (DNO) license areas securing the top four places out of the 14 measured by Ofgem. As part of the Ofgem Broad Measure of Customer Satisfaction incentive, a selection of customers from all DNOs is surveyed monthly. The surveys monitor satisfaction with a DNO's handling of outages (both planned and unplanned), connections (quotations and completed work) and general inquiries. About 15,000 WPD customers are surveyed annually.

In addition, WPD celebrated a milestone in 2017, holding the Customer Service Excellence Standard – formerly the Charter Mark – for 25 years. WPD is the only energy company in the U.K. to have achieved this feat.



WPD Contact Centre Adviser Kate Kenny at work.

WPD maintains this high level of service by developing improvements based on customer feedback received in the company's extensive stakeholder engagement program. Senior managers review individual comments to identify specific business changes that will help the company maintain its industry-leading performance.

In 2017, PPL Electric ranked highest among large electric utilities in the eastern U.S. for residential customer satisfaction for the sixth year in a row, according to a J.D. Power study.

The J.D. Power award means PPL Electric has landed the top spot among large electric utilities for 14 of the 19 years that J.D. Power has been conducting its residential electric customer survey. PPL

Electric's score, 739 out of 1,000, was 34 points higher than the previous year.

LG&E and KU earned the top two rankings for residential customer satisfaction among utilities in the Midwest midsize region in 2017.

In the midsize utility segment in the Midwest region, KU ranked highest for the second consecutive year, with a score of 761. LG&E ranked second with a score of 743.

The achievement is a testament to the ongoing work of employees to develop advanced technology and offerings to meet customers' needs.

### Affordable Energy

Electricity still provides a great value for our customers. The average price of electricity in the U.S. today is less than it was in 1992, when adjusted for inflation.

In the U.S., our utilities maintain residential rates below the regional averages based on EEI's Average Rates Report for Winter 2017.

PPL Electric customers' costs are below the average of the mid-Atlantic region (18 companies in New Jersey, New York and Pennsylvania). A customer using 1,000 kwh of electricity will pay about \$132 per month – about \$15 less than the average customer in the mid-Atlantic region.

LG&E's and KU's residential rates are below the average for electric utilities in the East South Central (includes Alabama, Kentucky, Mississippi and Tennessee) region. A customer using 1,000 kwh of electricity will pay between \$99 and \$105 per month, which is below the regional average of \$106.

We intend to keep rates affordable by reducing operating costs, boosting efficiency and making smart investments in our infrastructure.


### Energy Efficiency

PPL's subsidiaries give customers more options to manage their energy use than ever before. In 2017, more than 1 million participants took advantage of our utilities' energy efficiency programs for residential and commercial customers, receiving more than \$35.7 million in energy efficiency rebates.

In all, our energy efficiency programs helped customers save more than 671 million kilowatt-hours of electricity and reduced peak demand by more than 259 megawatts across our business.

At the same time, we took steps to give customers a greater number of options in other areas, from billing alternatives to power outage updates. According to survey data, these alternatives improve customers' opinions of their utility. Here are some of the tools we used in 2017 to better serve our customers:

- WPD launched the Flexible Power initiative, a pilot program to understand how demand side response can benefit the network and earn revenue for businesses. Flexible Power asks half-hourly metered customers to reduce their electrical consumption or increase their onsite generation in response to an automated signal.
- PPL Electric offers customers free online energy assessments. Customers provide basic information to get personalized tips on how to save energy. Participants also receive a free energy efficiency kit containing a variety of energy-saving products.
- LG&E's and KU's Commercial Rebate program is designed to help eligible commercial customers offset the cost of upgrading or installing high-efficiency equipment. The program offers the incentives for customers installing qualifying high-efficiency lighting, A/C units, chillers, motors, pumps, variable frequency drives and other equipment. The program also offers incentives for energy audits, new construction and major renovations, including Leadership in Energy and Environmental Design.



**\$35.7M**  
IN REBATES

**671M**  
KILOWATTS-HOURS SAVED

**259**  
MEGAWATTS REDUCED  
DURING PEAK DEMAND

## Boosting energy efficiency, reducing costs

PPL Electric is in the midst of a multi-million-dollar project to convert all 25,000 leased area lights on its system to more energy-efficient LED technology.

Area lights are single lights used primarily to illuminate parking lots and other smaller areas. They do not provide light for roadways like streetlights do.

PPL Electric replaced 20,000 area lights in 2017 and will convert the balance by the middle of 2018.

“With the technical advances in LED lighting, it’s now feasible to upgrade these lights and remove the high-pressure sodium and mercury-vapor lights that are out there,” said Steve Gelatko, director, Distribution Asset Planning. “LED area lights are twice as efficient as high-pressure sodium and four times more efficient than mercury vapor.”

The energy and cost savings for customers are significant. It’s estimated that by the end of 2017, area light conversions saved customers 12.5 million kilowatt-hours. That’s enough electricity for more than 1,100 average U.S. homes for a year.

The LED area light conversions are expected to save customers nearly \$1 million a year.

There are also operations and maintenance savings for PPL. Because LED lamps are projected to last about 25 years, the level of area light lamp replacements will decrease significantly.

In addition to converting area lights to LED technology, PPL Electric has been working with communities to convert streetlights to LEDs. About 20,000 of the approximately 100,000 streetlights leased from PPL Electric have been converted to LED.



Brian Wynn, project manager for PPL Electric, stands under one of the 20,000 area lights his team worked to convert to energy efficient LED technology in 2017.

### Customer Education

PPL's utilities share important energy efficiency information with both commercial and residential customers on a regular basis. This information is distributed through online and television advertising, by mail, through digital means and in person. It includes energy savings tips, home-energy analytics and information about available energy efficiency rebates.

Under Pennsylvania's Act 129 to help cost-effectively reduce electricity consumption and peak demand, PPL Electric offers 11 energy efficiency programs for its customers. These programs helped customers save more

than 505 million kWh of electricity in 2017 and more than 2.85 billion kWh since the program's inception in 2009, or enough to power more than 319,500 homes for a year.

LG&E and KU customers who have embraced the utilities' energy efficiency programs have been able to offset roughly the same amount of energy that equates to a new power plant.

The utilities set a goal in 2008 of saving approximately 500 megawatts of capacity by 2018 and reached that goal a year early in 2017.

Since 2008, through participation in LG&E's and KU's energy efficiency programs, customers have:



16,000

ON-SITE HOME ENERGY  
ANALYSES RECEIVED

31,000

ONLINE HOME ENERGY  
ANALYSES PERFORMED



19,677

BENEFITED FROM  
WEATHERIZATION SERVICES

55,000

RECYCLED REFRIGERATORS  
AND FREEZERS



230,000

DEVICES INSTALLED THAT  
HELPED MANAGE THE  
COMMUNITY'S ENERGY  
NEEDS THROUGH DEMAND  
CONSERVATION



\$13M

REBATES FOR BUSINESS  
FACILITY UPGRADES

\$15M

REBATES FOR HIGH-EFFICIENCY  
APPLIANCES AND PRODUCTS

## Stakeholder engagement

A stakeholder is anyone with an interest in our business, or who is affected by what we do. PPL and its subsidiaries reach out to stakeholders on both a formal and informal basis. Our Investor Relations department answers questions from investors directly and at investor events; our Customer Service teams respond to customer inquiries; and our Public Affairs team consults with state and national regulators and public officials on a regular basis and regularly engages subject matter experts. We track customer service issues, including response time and reliability as a part of our regular operations. We conduct regular market research to establish customer satisfaction.

We are active with community groups that help us understand the connection between their needs and our role as an energy provider and employer. The company regularly schedules public open houses on major infrastructure projects. In addition, we monitor and respond to stakeholder feedback at public hearings, forums or town halls hosted by regulators and public officials who are considering our operations.

Consumers and communities are represented in the U.S. by the following groups:

**Consumer advisory panels** consist of business and community leaders from within the utilities' service areas who meet quarterly to discuss topics of interest for utility customers and the industry. The panels typically participate in tours, discussions and presentations held at company sites throughout Kentucky. The panels review, discuss and offer feedback on key issues. Topics often include the environment and customer service initiatives as well as infrastructure and facility upgrades. Local elected officials are often invited to attend the meetings.

**Customer commitment advisory forums** promote dialogue between the utilities and their low-income advocate stakeholders. The aim is to provide guidance regarding policies and practices related to service to customers in need.



WPD holds annual stakeholder engagement events, which help to shape the company's business plan.

**LG&E and KU's demand side management/energy efficiency advisory groups** provide forums for customer groups to discuss existing programs and potential development efforts.

**PPL Electric Act 129 stakeholder groups** provide a forum for a cross-section of the energy provider's customers, including low-income customers, to provide input and advice on energy efficiency programs and services.

In the U.K., WPD's extensive stakeholder engagement program is conducted annually and designed to be inclusive, tailored and focused on action. In 2016/17, the company engaged with more than 14,000 stakeholders at 130 events ranging from workshops to meetings.

Some of WPD's key activities include:

- **WPD customer panel**, a permanent group of more than 30 expert members who meet quarterly.

- **Annual stakeholder workshops**, which include representatives from key segments to enable balanced consideration of different interests. This includes local authorities, domestic customers, consumer bodies, businesses, developers, utilities and DNOs.
- **Market research and workshops** on topics such as community energy, fuel poverty and vulnerability, future energy scenarios, distributed generation, small business concerns and network losses.
- **Engaging members of Parliament and key policy makers** through periodic parliamentary receptions.
- WPD has a comprehensive **social obligations strategy and program** with the objective of supporting its most vulnerable customers in relation to power outages and also to tackle wider issues such as fuel poverty. In the U.K., fuel poverty is defined as low-income households that cannot be kept warm at reasonable cost.

## Special services for our customers



Age Cymru's Angharad Phillips with customer Phyllis Preece and WPD's Kyle Sims demonstrate thermometer cards used as education tools to assist vulnerable customers.

A number of special services are available to meet the broad range of residential and commercial customer needs. Here are some examples:

### Language Assistance

PPL Electric wants to ensure that customers can receive assistance in the language they prefer. The company's call centers use a translation service that allows customers to communicate with associates about their account in over 75 languages. Additionally, the company makes many of its customer brochures and communications available in both English and Spanish.

LG&E and KU provide live call translation that allows customer representatives to include a translator in communications with customers who would prefer to conduct business in their native language instead of English. The service provides access to over 140 different languages. In 2017, customer calls were translated in 29 languages with approximately 800 customers utilizing this translation service per month.

WPD's improved website includes the 'speak or translate me' functionality which includes translation in 102 languages, reading text aloud and using larger font. Letters and publications can be provided in a range of languages, including Braille, on request. Additionally, customers can request a Language Line interpreter to join their conversation if they need a translator.

### Financial Assistance

**Operation HELP** provides financial aid to PPL Electric residential customers to help pay energy bills for low-income families with financial hardships. The program is funded jointly through tax-deductible contributions from PPL Corporation, employees, retirees and customers. More than 96,700 families have been helped since 1983, with 2,745 families receiving grants in 2017. Operation HELP also supports **CARES**, the Customer Assistance and Referral Evaluation Service program. CARES is a special referral service for customers with temporary hardships such as illness, injury, loss of job or high medical bills.

**Winterhelp** (LG&E), **WinterCare** (KU) and **WinterShare** (ODP) are third-party heating assistance programs that provide heating assistance for the utilities' qualifying customers. The assistance offered by the programs is contributed by customers through tax-deductible donations. In addition, the companies match the customer contributions to the programs. Both LG&E and KU have relationships with local charities, community action groups and government assistance offices to help customers. In 2017, LG&E and KU provided a \$500,000 grant to the Association of Community Ministries to assist customers who needed help paying their energy bills.

**Home Energy Assistance Program** (HEA) is funded by a residential meter charge (\$.25 per meter); LG&E and KU contributed \$550,000 in addition to customer charges.

**OnTrack** is a special payment plan for PPL Electric's low-income customers that offers reduced monthly payments, protection from shutoffs, debt forgiveness and referrals to other assistance

programs. It is funded through residential customer rates in Pennsylvania.

**Power Up** and **Affordable Warmth** are WPD's fuel poverty referral programs. The utility works with partners to refer customers in need of support to help pay their energy bills. In 2016/17, Power Up helped 7,205 customers save \$1.8 million and 3,528 customers benefitted from Affordable Warmth, saving \$1.3 million.

### Energy Savings

**WRAP** – PPL Electric's Winter Relief Assistance Program helps customers with limited incomes reduce their home energy use and lower their electric bills. WRAP provides energy education and energy saving measures for customers, when applicable. All measures and services are free.

**WeCare** (Weatherization, Conservation Advice and Recycling Energy) is designed to create savings through weatherization and energy education to help LG&E and KU income-eligible customers in need. WeCare participants receive a walk-through analysis from the utilities' business partner assessing their home's energy efficiency and identifying ways they can reduce their energy use. Through the other programs offered as part of the utilities' full portfolio of offerings, financial incentives are available to eligible customers who take action to make their homes more energy efficient as a result of the onsite analysis.

### Vulnerable Customers

WPD offers a Priority Services Register for customers who rely on electricity for medical equipment or are elderly, or disabled, have specific communication needs or who would be distressed or feel vulnerable in the event of a power outage. The register provides customers who join with a direct number to call in the event of a power outage, a password to be used for any needed home visits, special help through the British Red Cross and proactive messages about planned electricity supply interruptions.

## Increasing access for all customers

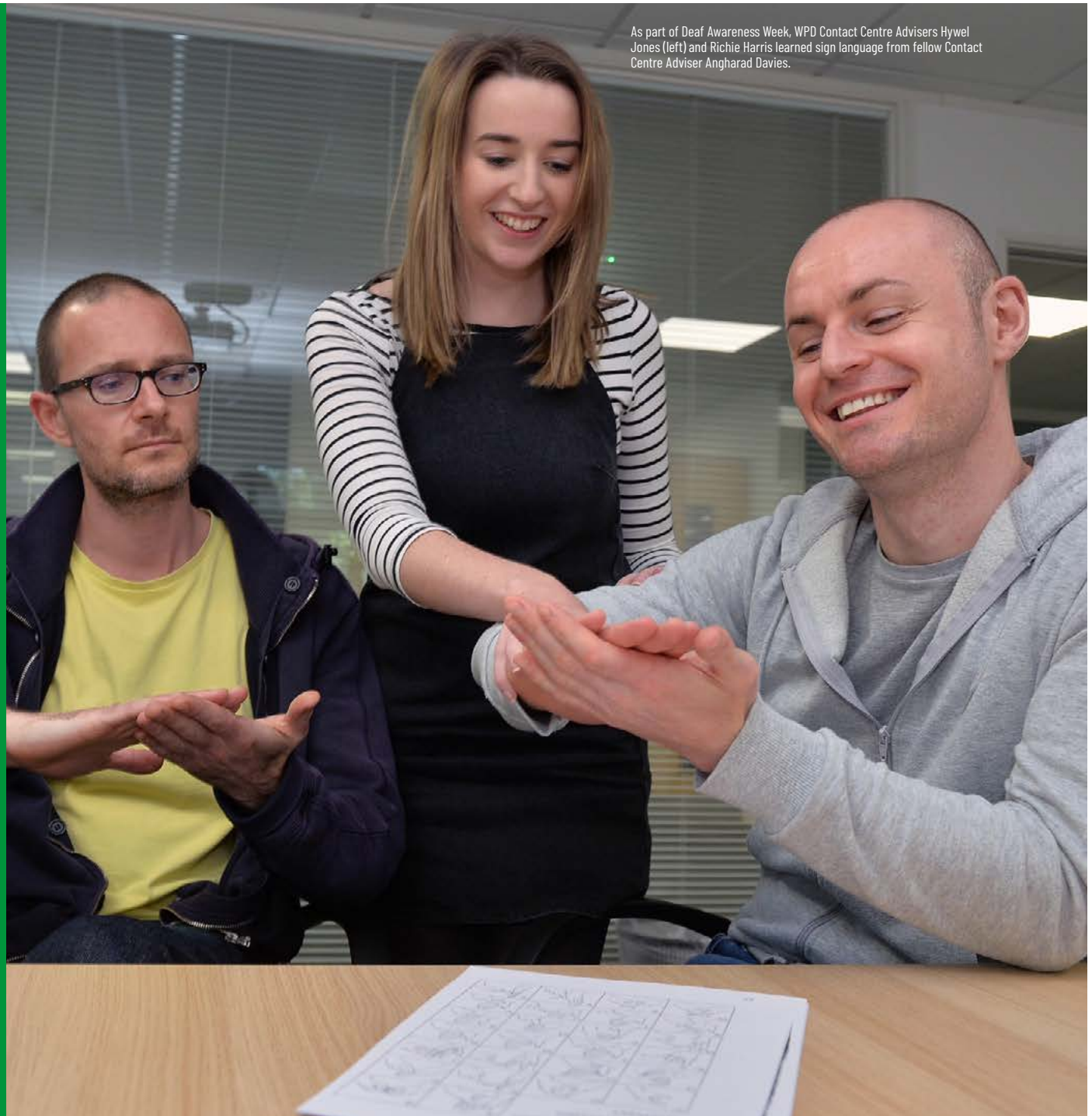
WPD has become one of the first distribution companies in the U.K. to sign up for a suite of applications that improve website and accessibility for customers with sight or hearing impairments.

ReciteMe and SensusAccess, also known as Robobrace, help customers with sight impairments or dyslexia use WPD's website. InterpreterNow and the Next Generation Text (NGT) Service and its application gives customers with hearing difficulties the option to make calls from a variety of devices. The application avoids the need to switch between text and voice so the flow of conversation is improved.

In another boost to the service, 32 customer service employees completed deaf awareness training to further improve their communication skills. The training, led by charity Action on Hearing Loss, was tailored to WPD with the aim of helping staff better understand some of the frustrations that people with hearing loss can feel when communicating with others.

Both the app launch and training come just weeks after Action on Hearing Loss awarded WPD its Louder than Words Charter Mark for the seventh successive year. The nationally recognized accreditation requires its holders to satisfy 10 quality standards. Of the 1.4 million customers who have signed up to WPD's Priority Service Register, 95,000 are deaf or suffer from hearing loss.

As part of Deaf Awareness Week, WPD Contact Centre Advisers Hywel Jones (left) and Richie Harris learned sign language from fellow Contact Centre Adviser Angharad Davies.



# Foster an exceptional workplace

Cultivate success by energizing an inclusive, respectful and diverse workplace that rewards performance, enables professional development, encourages employee engagement and enables employees to achieve their full potential

The company has built a culture that nurtures an atmosphere of employee engagement and accountability.



Discussions by crews about doing jobs safely and productively helps drive collaboration, innovation and improved performance.

## Constructive culture driving innovation, collaboration

The common thread to PPL Electric's continued success has been an increasingly constructive workplace culture.

In recent years, the company has built a culture that nurtures an atmosphere of employee engagement and accountability, with employees providing and accepting feedback as they focus on achieving exceptional results.

A more constructive culture produces more satisfied employees who deliver on their commitment and are more invested in the success of the company.

That investment takes many forms. It could be front-line field workers contributing ideas on how a job can be done better. It's electricians coming up with solutions to a substation problem. It's an analyst digging into big data to make equipment maintenance more efficient.

One example already in practice is bargaining-unit safety advocates. The advocates visit job sites across the service territory over a six-month period with the assignment of providing input, suggestions and feedback designed to improve worker safety.

In short, employees are engaged to improve the business. They see they are part of something bigger and know their work contributes to a successful company and more satisfied customers.

The company continues to break new ground and achieve improved performance in reliability, safety, customer satisfaction and cost management.

"There are countless examples of employees at all levels who are stepping up and becoming involved in solutions," said PPL Electric President Greg Dudkin. "Internal surveys show we're becoming much more constructive, but we know we can't be complacent. Everyone has an impact on the overall success of the company. They see the big picture."



Laboratory Supervisor Tamara Powell analyzes water samples in the lab at KU's E.W. Brown Generating Station.

## Our people

PPL is supported by more than 12,500 talented employees, focused on providing gas and electricity safely and reliably at a reasonable cost to our customers. In turn, PPL is committed to providing employees with a diverse and engaging workplace, rich with opportunities that foster innovation and personal success. We're always looking for candidates whose core beliefs align with our company values, such as a strong safety culture and a team orientation. Candidates can expect a work environment built around our commitment to safety and our company's fundamental values of customer focus, performance excellence, integrity and openness, corporate citizenship and diversity and engagement.

### Inclusion and Diversity

An environment where all employees feel included and valued creates greater commitment and motivation, making PPL a stronger company. For PPL to continue its growth and build on its successes, we must be inclusive. The PPL family of companies is

committed to nurturing a strong pipeline of talented employees from a diverse mix of educational and social backgrounds. We support the principles of non-discrimination and equal opportunity. We foster an atmosphere that brings together talented individuals with a deep history in the energy industry and new ideas for improving the services we provide.

To support that commitment, all employees receive training on inclusion and diversity. Every new hire is required within the first six weeks of employment to complete compliance and diversity training.

In 2017, PPL Chairman Bill Spence signed onto the CEO Action for Diversity & Inclusion, the largest CEO-driven business commitment to advance diversity and inclusion in the workplace.

By signing on to this commitment, PPL joined more than 150 companies in the pledge to take action to cultivate a workplace where diverse perspectives and experiences are welcomed and respected, where employees feel encouraged to discuss diversity and inclusion.

PPL leaders meet regularly to identify and promote diversity initiatives and policies that help to achieve a diverse workforce and work environment. Additionally, PPL utilizes Business Resource Groups (BRG) to foster an environment of inclusion and provide an opportunity for employees with common experiences and perspectives to network and develop professionally.

Throughout the year, BRG members organize employee "lunch and learns" to educate fellow employees and build awareness on numerous topics, including diversity and inclusion topics. Members are also actively involved in various cultural and community programs that enable them to extend their reach outside their workplaces. BRG members have taught leadership skills to Girl Scouts, handed out first-aid kits to homeless veterans, run tech-focused summer camps for middle school girls and sponsored job-shadowing opportunities for Latino high school students.



12,512

EMPLOYEES

21.4%

WOMEN EMPLOYEES

6.4%

MINORITY EMPLOYEES

## Workforce Planning

Although PPL has a relatively low turnover rate of 6.8 percent, the company has a strong focus on planning for its future workforce.

Workforce planning enables PPL to:

- Forecast ebbs and flows in workforce requirements
- Determine the size and type of workforce required for future business success
- Identify and address talent gaps and plan for future talent needs
- Develop plans, sourcing strategies and tactics

Workforce planning results are integrated into the business planning process.

A large portion of the PPL workforce is moving toward retirement. Nearly 45 percent of the PPL workforce falls within the Baby Boomer generation, a demographic group that represents people born between 1946 and 1964. This challenges the company to continually develop current employees while also building a strong pipeline of skilled workers for the future. PPL continues to make efforts with the goal of attracting and retaining up-and-coming leaders with diverse skill sets. The company has also continued efforts to ensure workplaces are inclusive to employees of all ages by incorporating generational diversity into the company's new hire orientation programs.

In an effort to attract top talent, PPL supports a robust internship program that engages students in career-specific work experience, informational interviews, fun activities, exposure to PPL executives and community service. In 2017, PPL's Pennsylvania operations hosted 24 interns who represented



2017's class of PPL interns.

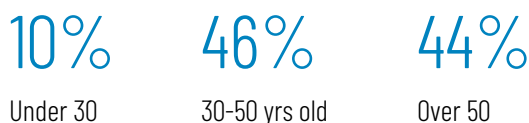
13 different universities and had an average GPA of 3.59. PPL's intern program also serves as an excellent source of diversity. Last year's interns were 62 percent diverse (women and minorities).

LG&E and KU have a robust co-op and internship program for students pursuing both two- and four-year degrees. In 2017, there were 181 students in the co-op/intern program (25 percent women, 11 percent minority). Additionally, in 2017 there were 43

former co-op/intern students hired into full time positions (28 percent women, 5 percent minority). Relationships have been established at several regional schools to help provide educational opportunities as well as fill the talent pipeline for the organization. Students are not only provided real world work experiences, but also are provided with opportunities to learn about different areas of the business and network with other employees at all levels of the organization.

PPL's companies participate in many outreach activities to attract a diverse group of talent. Career fairs, multicultural leadership conferences, university leadership summits, mock interviews, resume reviews, panel discussions, career boot-camps, networking events, affinity group sponsorships and dinners are part of ongoing efforts to maintain PPL's position as an employer of choice.

## Generational Diversity



## Craft Trade Apprentice and Trainee Programs

PPL's companies are taking a proactive approach to expanding the talent pool for positions that will be available in the next several years due to retirements. In addition to college co-op programs, our companies actively recruit and train trade craft workers.

For example, PPL Electric offers 12 apprenticeship programs for various lineworker positions and actively recruits from trade and technical schools throughout the company's 29-county service territory in northeast and central Pennsylvania. The average apprentice program takes 4.5 years to complete.

In 2017, PPL Electric hired 10 apprentices and partnered with a local community college to establish a line work program that teaches students electrical-, cable- and communications-related line work. The program has helped to fill a local void for workforce training and has been added to the state's High Priority Occupation Training program list, allowing Pennsylvania residents who are eligible for Workforce Investment Act or Trade Adjustment Act funding to pay little or nothing for the course.

In the U.K., more than 80 apprentices were hired in 2017. The core training takes a minimum of two years and includes positions for overhead lineworkers, who work on the network that is supported by wooden poles or steel towers, jointers who work on the underground cable network and fitters who work on switches and transformers in substations.

In addition to craft apprentices, WPD also offers a structured training program for planning and design trainees. In 2017, WPD added 12 trainees for a total of 65 in the two-year program to develop skills in design and development of projects, including new supplies and asset replacement.

LG&E and KU also have an active craft worker internship program. The craft worker intern program was launched in March 2015 in response to a growing demand for employees with technical knowledge and degrees in the LKE workforce. The program focuses on recruiting the top student talent directly from the community and technical colleges in and around the service area. Students are able to gain hands-on knowledge about the various



2017's class of WPD apprentices.

career paths that LG&E and KU offer while they obtain the degrees that are required for many craft worker positions. The program has expanded to include interns in 14 different areas of the company.

Strategic partnerships have been created at a number of schools throughout Kentucky including Elizabethtown Community and Technical College, Bluegrass Community and Technical College, Jefferson Community and Technical College, Hazard Community and Technical College, and Ivy Tech. Recruitment efforts build awareness of the various career paths and opportunities within LG&E and KU.

Since its inception, the program has expanded to include positions in 14 different areas of the company, attracted students from 11 different campuses, resulting in 20 full-time hires.

In 2017 alone, through the focused efforts of the Recruitment Coordinator, 37 Craft Worker Interns (5 percent women, 10 percent veteran) were employed by the program and 14 were hired into the full-time workforce.

### Military Veterans

As PPL develops its workforce planning strategy, the company recognizes that military veterans can offer desired qualities of

leadership, dedication, confidence and discipline. PPL has earned a trusted reputation among the military community as a preferred employer. In the U.S., the company has received the coveted Patriot Award recognizing its long-time support of military reservists. PPL has been recognized as a Military Friendly Employer by G.I. Jobs magazine.

PPL has business resource groups for veterans across the company, which focus on the needs of veterans and their families. Members participate in veteran outreach projects, mentoring of veterans, professional development and recruitment activities.

In addition to allowing time off for active duty and for periodic military training, the company also supports employees who are members of a military reserve organization in the following ways:

- Paying the difference between the regular pay they would have received, if they had worked, and their government pay for a period of six months.
- Providing additional time off to take care of personal affairs, if necessary, before reporting for duty.
- Implementing retroactively any step and merit increases that were deferred during the leave of absence.

## FOSTER AN EXCEPTIONAL WORKPLACE

LG&E and KU Civil Engineer Grant Phelps, Lead Engineer Haley Turner and Outage Coordinator Francisco Maldonado review plans at Trimble County Generating Station.



### Benefits

In addition to challenging careers and competitive salaries, PPL offers an excellent benefits program that enriches the company culture of inclusion and diversity.

PPL offers competitive vacation time, a comprehensive and voluntary retirement program, and internal and external development opportunities, including tuition reimbursement offerings for undergraduate and certain graduate degrees.

Our commitment and partnership with our employees has successfully powered PPL decade after decade and fosters an environment that encourages employees to directly contribute to the overall success of PPL. As we look toward the future, PPL is looking for team members who embrace and foster new ideas and perspectives to build upon our strong, value-based culture.

For information on benefits packages at PPL's companies visit [www.pplweb.com/careers/life-at-ppl/](http://www.pplweb.com/careers/life-at-ppl/)

### Health and Wellness

PPL values the well-being of employees and offers several programs and activities to support its employees' pursuit of happier, healthier lives.

LG&E and KU go the extra mile to help their employees, and it shows. The companies' wellness offerings, which include flu shots, health fairs and screenings, matching grants for wellness programs, and on-site exercise and healthy-eating programs, earned a number of accolades in 2017. LG&E and KU were recognized as one of the 100 healthiest workplaces in the country by Springbuk in 2017. The winning organizations were honored for their commitment to employee health and exceptional corporate wellness programming. Of the more than 5,000 employers who applied for the award, LG&E and KU ranked 26<sup>th</sup>.

LG&E and KU also routinely train employees in first aid, cardio-pulmonary resuscitation (CPR) and automated external defibrillator (AED) use. In 2017, Tina Revak, meter associate II, and Tim Bowles, prover, Gas Meter Shop were recognized by the Southern Gas Association with the Humanitarian Life-Saving

Award for saving the life of their co-worker with their coordinated efforts.

Pennsylvania employees have been benefitting from the health and fitness expertise of athletic trainers from Occupational Athletics, which provides a wide-range of services to PPL employees. The athletic trainers have helped reduce soft tissue injuries among workers and provide guidance on exercise, weight loss, eating healthier and using proper ergonomics on the job. Daily stretching among large groups of employees has been common inside PPL buildings across the Pennsylvania territory. Assessments of employees' health have shown positive trends. Those assessments have shown that the body fat index of employees has gone down by 8.4 percent and that body mass index declined by 1.1 percent in 2017.

WPD hosted a week-long health program for employees in 2017. Presentations on a wide range of topics, including mental and cardiovascular health were given. Employees were encouraged to take advantage of the company's discounted gym memberships and support systems like the Employee Assistance Program.



LG&E and KU Manager of Capital Projects Joan Lipp and Project Coordinator James Withrow work on a bridge construction project at Trimble County Generating Station.

## Training

PPL's operating companies are committed to creating a workplace atmosphere that rewards performance and encourages professional development. In 2017, PPL employees participated in more than 570,000 hours of training, an average of 46 hours annually per employee. Beyond occupational training, the company offers personal skills, professional and leadership training courses. Programs cover a broad range of topics including but not limited to, business topics, effective communications, conflict resolution, personal awareness, effective leadership and situational leadership.

LG&E and KU provide valuable skill-development opportunities for all employees aspiring to grow in the company. New in 2017, the company emphasized succession development to support the growth and development of all employees, along with helping leaders understand the importance of conversations that help the employee feel engaged and valued. Twelve competency-based development programs and five nomination-based programs are offered through the company's Talent Management group. In 2017, more than 1,600 employees participated in these programs. The company also offers a formal mentoring program that enables high-potential employees to gain insight and guidance from senior leadership and a mentoring program that pairs engineers who are just starting their careers with more experienced engineers and managers.

PPL Electric provides classroom and computer-based training programs to improve employee skills in performing their jobs and to enable them to prepare for advancement opportunities. In 2017, PPL Electric offered more than 600 learning courses for its employees.



# 570,488

TOTAL TRAINING HOURS

# 46

AVERAGE HOURS PER EMPLOYEE

To prepare employees for leadership roles, new supervisors are provided with up to four weeks of training on topics such as diverse thinking, coaching, leadership and accountability. PPL Electric also offers craft worker and lineworker development programs to help its employees enhance and further their skill sets.

To provide managers across the company with the skills they need to manage and motivate their teams, WPD organized a three-day leadership course for managers that covered topics such as communication methods, individual leadership style and conflict management. In 2017, more than 240 employees participated in the program.



Hollis Bridgewater (right), team leader – Gas Distribution for LG&E, recently received the prestigious U.S. Department of Defense's Employer Support of the Guard and Reserve Patriot Award for exemplifying this commitment through his support of Craig Evans, a gas trouble technician who serves in the Indiana National Guard.

## Strong commitment to military personnel

"Going above and beyond." That's what Americans see U.S. National Guard and Reserve members doing every day in support of the nation. It's also what Guard and Reserve members see LG&E and KU doing in support of their service and to help transition veterans into the company's workforce.

Hollis Bridgewater, team leader- LG&E Gas Distribution, recently received the prestigious U.S. Department of Defense's Employer Support of the Guard and Reserve (ESGR) Patriot Award for exemplifying this commitment through his support of Craig Evans, a gas trouble technician who serves in the Indiana National Guard. Bridgewater was the sixth LG&E and KU employee to receive the award.

The Patriot Award is presented by the Department of Defense to a manager or supervisor who is committed to assisting an individual in the military. The Patriot Award reflects the efforts made to support citizen warriors through a wide range of measures including flexible schedules, time off prior to and after deployment, caring for families, and granting leaves of absence if needed.

In accepting the award, Bridgewater, a military veteran, reminded attendees at the award ceremony that many American military service personnel and veterans still need support from their employers.

"This award is very nice," he said. "But I know how hard it is to be in the Guard when you don't have the level of support we provide today. That's why I do everything I can to support Craig and encourage everyone else to do so, too."

In addition to Bridgewater's honor, LG&E and KU employees have received a total of five other Patriot Awards between 2015 and 2017. The company is also one of only two organizations in its area to receive ESGR's Pro Patria Award, the United States Defense Department's highest state-level award for providing support to employees serving in the Kentucky National Guard and Reserve.

# Strengthen communities

Empower the success of future generations by helping to build strong communities today



Crews from PPL Electric, LG&E and KU worked together to help restore power after Hurricane Maria in the hard hit region of Caguas, Puerto Rico.

## Helping communities – near and far

Crews from PPL's operating utilities are often called to help restore power in other regions, and under their mutual assistance agreements, can call in help from other utilities when it is needed.

In 2017, the call for help came often after numerous devastating storms hit Texas, Florida, Puerto Rico and Ireland.

More than 850 PPL Electric employees and contractors traveled to Florida to help restore electricity to nearly 8 million customers who lost power when Hurricane Irma and its 100-mph winds made its way through the Sunshine State.

LG&E and KU sent more than 400 employees and contractors and 37 company trucks to aid Duke Energy Florida, Florida Power & Light and Tampa Electric. Weeks earlier, LG&E and KU provided assistance to Texas following Hurricane Harvey.

In the U.K., WPD crews provided aid to Ireland in the wake of ex-Hurricane Ophelia.

The storm hit the southern coast of Ireland in October with winds in excess of 80 miles per hour. The storm caused severe damage to electricity network infrastructure and resulted in more than 360,000 properties losing power. In total, 37 WPD linemen and engineers travelled to Ireland to help restore power supplies and repair electricity infrastructure.

The assistance didn't end with the hurricane season. In January 2018, PPL Electric, LG&E and KU sent crews, line trucks and equipment for a long-term relief effort in Puerto Rico to help restore power knocked out by Hurricane Maria. Despite challenging work conditions, the crews rebuilt lines and restored power to customers in the Caguas area as part of a massive mutual assistance effort.

## Dedicated community partners

Delivering power safely, reliably and affordably to our customers is our primary role, but we know there are other ways to empower a community. Supporting innovative education programs, helping to revitalize neighborhoods and fostering the development of the future workforce strengthens communities.

PPL goes beyond its core business by focusing its energy on being a good neighbor through a long-standing commitment to corporate citizenship. Our philanthropic contributions and the dedicated volunteerism of our employees allow us to improve the communities in which we live, work and serve.

### Volunteering

We proudly partner with many nonprofit organizations in the communities where we live and work. We continually seek new ways to invest our time and resources in our communities. It's how we do business, and it's our way of keeping our promise to support a brighter future.

Whether they hail from the U.K., Kentucky or Pennsylvania, PPL employees are known for their dedication to the community. Employees serve on the boards of hundreds of organizations throughout our service areas. They also take an active role – helping to clean up children's centers, to help students with science fair projects, to lead scout troops and to coach youth sports teams.

PPL encourages employees to volunteer their time in their local communities. Our employees are an extension of our commitment to our neighbors, schools and the environment. In 2017, employees volunteered more than 69,000 hours.

These efforts are recognized by the company through various initiatives. In the U.S., PPL Electric, LG&E and KU have similar programs in Dollars for Doers, where employees can earn company contributions for organizations where they volunteer. In the U.K., WPD supports employees' efforts through the Pound for Pound initiative. Collectively, PPL's companies contributed nearly \$94,000 to nonprofits in 2017 in recognition of employee volunteer efforts.

### Philanthropy

We partner with nonprofit organizations working to improve the quality of life in the communities we serve with emphasis on the areas of education, community and economic development, and environmental stewardship. PPL's contributions to charitable organizations totaled more than \$10 million in 2017.

In Pennsylvania, the PPL Foundation has contributed more than \$6 million to a wide variety of nonprofit organizations in north and central Pennsylvania since its inception in 2015.

Funded solely by PPL Corporation, the PPL Foundation awards grants to qualified nonprofit organizations (501(c)(3)) working to improve the community through initiatives focused on education, community revitalization and workforce development.

In 2017, the PPL Foundation provided grants to more than 100 nonprofit organizations throughout the 29 counties in Pennsylvania served by PPL Electric.

Additionally, PPL's employees make meaningful contributions – both in time and monetary contributions.

We are active supporters of United Way in Kentucky and Pennsylvania. In 2017, giving to United Way in Pennsylvania was more than \$2 million, including a corporate match of employee donations. Coupled with financial support from the LG&E and KU Foundation, the employee giving campaign in Kentucky – Power of One – raised more than \$2 million in contributions.

Collectively, the company's employee-giving campaigns help support more than 300 nonprofit organizations in the communities we serve.

### Powering Local Economies

Mapping out long-term energy plans that contribute to economic well-being is part of the way PPL's companies work to provide a bright future for the communities we serve. We understand enhancement and construction of utility infrastructure, at a reasonable cost, is vital to attracting and retaining businesses that create jobs for our communities.

PPL's infrastructure investments, which benefit the public and local economy, are described on [page 41](#).

PPL's subsidiaries and its executives are actively involved in business organizations, such as the Chamber of Commerce and economic development organizations.

We provide incentives to support economic development efforts. For example, LG&E and KU's Economic Development Rider – an incentive rate for existing industry expansions, new project locations and redevelopment initiatives within the service area – continues to be recognized as an exemplary business attraction tool.

The company's economic development and major accounts team works with state, county and local officials, regional partners, site consultants, real estate developers and industry associations on potential business relocations and expansions.



## Disaster Readiness

We work closely with public safety and emergency preparedness organizations to coordinate responses to all hazardous events.

To help restore electric service to communities after catastrophic emergencies or significant natural events, 28 U.S. utilities — including PPL Electric, LG&E and KU — committed to participate in the Regional Equipment Sharing for Transmission Outage Restoration (RESTORE) program, which establishes a proactive approach to providing critical equipment for utilities that need additional resources during disaster recovery.

The national importance of a strategic transformer reserve has been highlighted by the Department of Energy's Strategic Transformer Reserve Report to Congress earlier this year. Newly formed at the time of that DOE Report, the RESTORE program is now a fully functional collaborative effort that takes advantage of regional cooperation and is consistent with DOE's recommendation supporting voluntary industry-based options to address the reserve.

RESTORE was founded in 2016 by LG&E and KU, PPL Electric, Tennessee Valley Authority (TVA) and Southern Company to identify and share spare transformers and other transmission equipment, which will then be available for purchase by other participants in the event of a major disaster within their service area.

RESTORE is designed to enhance the resilience and reliability of the power grid and provide additional sources for utilities seeking critical equipment during disaster recovery and does not replace existing programs or agreements already in place. The RESTORE agreement is now in place among all participating utilities, except a few that must first obtain state approval to execute the agreement.

## Emergency Preparedness and Management

PPL Corporation's Board of Directors has authorized the Corporate Leadership Council to establish an Emergency Management Plan. This plan is based on an annual hazard vulnerability and risk analysis and is a summary of the prevention, mitigation, preparedness, response, continuity of essential functions, and recovery activities that serve as the comprehensive integrated approach to establishing and maintaining an effective response to

and recovery from internal or external disasters. This plan provides guidance for the corporation's role in supporting the National Infrastructure Protection Plan and National Response Framework.

The plan outlines the corporation's processes for dealing with an all-hazards approach to an actual or perceived disaster. The all-hazards nature allows PPL Corporation to remain compliant with NERC and the electric sector with regard to natural disasters, terrorism, sabotage, cyber-attacks, and other criminal activity posing a risk to the organization.

All domestic business lines and support service groups are required to develop and maintain a written business continuity plan that documents, maintains, and tests procedures for preparedness/initial response, business continuity and recovery from emergencies.

PPL Corporate Security will conduct and/or review a hazard vulnerability analysis on an annual basis to evaluate natural, man-made, technological, and hazardous materials risks and vulnerabilities.

PPL business lines maintain policies and procedures for responding to a variety of emergencies as required by regulatory agencies. An Executive Crisis Team is maintained at the corporate level and, when activated: reviews the appropriateness of the response and recovery effort and ensures adherence to the plan during an event; and, ensures that the appropriate corporate resources are being deployed to a response and recovery effort, including those necessary to safeguard protection of the public and the environment.

Some examples of emergency planning in 2017 include:

In Kentucky and Virginia, LG&E and KU partnered with state and local emergency management organizations as well as Homeland Security on disaster preparedness for large-scale power interruptions that impact residents in the commonwealths. LG&E and KU were active in working with FEMA and Homeland Security on emergency preparedness related to the Louisville Levee Regional Resiliency Assessment Program and the New Madrid Seismic Zone response and recovery plan workgroup. LG&E and KU also worked with the Kentucky Emergency Management

organization in developing emergency processes and procedures associated with the 2017 solar eclipse that could be viewed in totality in KU's western Kentucky service territory.


PPL Electric developed, exercised, and strengthened response plans for black sky events, which may challenge our ability to operate for an extended period of time. Throughout the year, PPL Electric conducted numerous drill exercises to ensure preparedness for many types of events including participation in GridEx IV ([see page 42](#)).

Emergency Planning with WPD focuses on three main topics: Major Supply restoration; Disaster Recovery for Control and Contact Centre; and Recovery from Total System Shutdown.

The vast majority of major supply interruption events are weather related, and mainly caused by wind storms, although occasionally snow and heavy rain are also contributory causes. Planning for these events starts with good weather forecasting, and across the WPD business, daily weather forecasts looking ten days ahead are provided to managers.

To support disaster recovery, WPD maintains a network of Control and Contact centers that allow redeployment of personnel in the event of a failure. These Disaster Recovery Centers provide services throughout the WPD territory and are exercised regularly throughout the year to maintain confidence in the facility.

Working in conjunction with the U.K. Government, National Grid, and Power Station Operations, WPD maintains a process to restore supplies in the event of a total shutdown of the U.K. electricity network or major parts of the U.K. These plans are regularly tested through drills and simulations.



PPL's headquarters, seen in the distance, has been a consistent presence in Allentown, Pa., since the company's founding in 1920. PPL has directly supported recent efforts to revitalize the downtown by sponsoring the new arena and strengthening the power network in the center city area.

## Revitalization program receives recognition

The revitalization of downtown Allentown, PPL Corporation's headquarters city, has earned recognition in a prestigious international award program.

Allentown's redevelopment project, including construction of the PPL Center multi-use arena, is one of 13 "extraordinary developments" selected as winners for the Urban Land Institute's 2017 Global Awards for Excellence.

Allentown's downtown project is in good company: Other finalists include high-visibility projects in Chicago, Houston, New York, Singapore, Toronto and Vancouver.

In addition to the new arena, the ongoing revitalization project includes new and remodeled office, retail and residential space.

PPL Corporation directly supported the rebirth of downtown Allentown by purchasing the naming rights to PPL Center. PPL Electric has also supported redevelopment by investing in its network in center-city Allentown, making the grid stronger, more flexible and more ready to serve increased downtown demand.

PPL also offers financial incentives to employees who choose to buy a home or rent an apartment in certain downtown neighborhoods.

Wendy Rowden, chairman of the awards jury, said the chosen projects demonstrate "a thoughtful, innovative approach to urban development that is adding to the sustainability and livability of the communities in which they are located.

"The attention paid to project detail, flexible design, and neighborhood context were among the factors making these entries stand out. They represent the type of development that will withstand the tests of time and change."

# GRI index

## SPECIFIC STANDARD DISCLOSURES

PPL Corporation is committed to reporting on our sustainability performance annually, using the Global Reporting Initiative (GRI-G4) Sustainability Reporting Framework with the Electric Utilities Sector Supplement. This index details where specific GRI indicators appear in this report or in other publicly available filings or posting to PPL's website.

G4 Indicator	GRI Standards	Description	Response
<b>STRATEGY AND ANALYSIS</b>			
G4-1	102-14	Statement from the most senior decision-maker of the organization	For a message from our chairman, president and CEO, see <a href="#">page 2</a> .
G4-2	102-15	Description of key impacts, risks and opportunities	For a message from our chairman, president and CEO, see <a href="#">page 2</a> .
<b>ORGANIZATIONAL PROFILE</b>			
G4-3	102-1	Name of the organization	PPL Corporation
G4-4	102-2	Primary brands, products, and/or services	Headquartered in Allentown, Pa., PPL Corporation is one of the largest companies in the U.S. utility sector. PPL's high-performing, award-winning utilities — Western Power Distribution (East Midlands) plc, Western Power Distribution (South Wales) plc, Western Power Distribution (South West) plc and Western Power Distribution (West Midlands) plc (together, WPD), Louisville Gas and Electric Company (LG&E), Kentucky Utilities Company (KU) and PPL Electric Utilities Corporation (PPL Electric) — provide an outstanding service experience for our 10.5 million customers, consistently ranking among the best in the United States and United Kingdom.
G4-5	102-3	Location of organization's headquarters	Allentown, Pa.
G4-6	102-4	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report	PPL operates utilities in the United States and the United Kingdom.
G4-7	102-5	Nature of ownership and legal form	PPL Corporation is a publicly traded utility holding company.
G4-8	102-6	Markets served (including geographic breakdown, sectors served and types of customers/beneficiaries)	For information on the markets we serve, see <a href="#">page 3</a> .
G4-9	102-7	Scale of the reporting organization	See At a Glance on <a href="#">page 4</a> . More detailed information can be found in PPL's 2017 <a href="#">Form 10-K</a> .
G4-10	102-8	Total workforce by employment type, employment contract and region, broken down by gender	PPL has 12,512 employees. For more details on employees, see <a href="#">page 53</a> .
G4-11	102-41	Percentage of employees covered by collective bargaining agreements	As of the end of 2017, 49% of our employees were covered by collective bargaining agreements.
G4-12	102-9	Describe the organization's supply chain	See Supply Chain on <a href="#">page 14</a> .
G4-13	102-10	Significant changes during the reporting period regarding size, structure or ownership	There were no significant changes during the reporting period.
G4-14	102-11	Explanation of whether and how the precautionary approach or principle is addressed by the organization	See Governance on <a href="#">page 15</a> .
G4-15	102-12	List externally developed economic, environmental and social charters, principles or other initiatives to which the organization subscribes or which it endorses	In 2017, PPL Chairman Bill Spence signed onto the CEO Action for Diversity & Inclusion, the largest CEO-driven business commitment to advance diversity and inclusion in the workplace.
G4-16	102-13	Memberships in associations (such as industry associations) and/or national/international/advocacy organizations	PPL's operating utilities are members of various industry associations including the Electricity Power Research Institute and the Edison Electric Institute.



G4 Indicator	GRI Standards	Description	Response
<b>IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES</b>			
G4-17	102-45	List all entities included in the organization's consolidated financial statements or equivalent documents.	PPL Corporation's utility subsidiary operating companies are <a href="#">WPD</a> , <a href="#">LG&amp;E</a> , <a href="#">KU</a> and <a href="#">PPL Electric</a> . For a listing of significant subsidiaries, see Exhibit 21 of PPL's 2018 <a href="#">Form 10-K</a> .
G4-18	102-46	Process for defining report content	For information about how material aspects were determined, see <a href="#">page 10</a> .
G4-19	102-47	List all the material aspects identified in the process for defining report content	For information about how material aspects were determined, see <a href="#">page 10</a> .
G4-20	103-1	For each material aspect, report the aspect boundary within the organization	For information about how material aspects were determined, see <a href="#">page 10</a> .
G4-21	103-1	For each material aspect, report the aspect boundary outside the organization	For information about how material aspects were determined, see <a href="#">page 10</a> .
G4-22	102-48	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements	PPL had no significant restatements to report in 2017.
G4-23	102-49	Report significant changes from previous reporting periods in scope and aspect boundaries	There were no significant changes from the previous reporting period.
<b>STAKEHOLDER ENGAGEMENT</b>			
G4-24	102-40	List of stakeholder groups engaged by the organization	PPL engages with a variety of stakeholder groups, including customers, community groups, shareholders, potential investors, employees, retirees, labor unions, contractors and others in our supply chain as well as various professionals in academia, industry and government. For more information on stakeholder engagement, see <a href="#">page 49</a> .
G4-25	102-42	Basis for identification and selection of stakeholders with whom to engage	For more information on stakeholder engagement, see <a href="#">page 49</a> .
G4-26	102-43	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group	PPL is committed to keeping our stakeholders informed through various formal and informal groups, forums and events. For more information on stakeholder engagement, see <a href="#">page 49</a> .
G4-27	102-44	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting	For more information on stakeholder engagement, see <a href="#">page 49</a> .
<b>REPORT PROFILE</b>			
G4-28	102-50	Reporting period (e.g., fiscal/calendar year) for information provided	This report focuses on calendar year 2017.
G4-29	102-51	Date of most recent previous report (if any)	PPL's last <a href="#">Corporate Sustainability Report</a> was published in May 2017. It focused on calendar year 2016.
G4-30	102-52	Reporting cycle (annual, biennial, etc.)	PPL prepares this report annually.
G4-31	102-53	Contact point for questions regarding the report or its contents	Questions and comments about this report can be directed to <a href="mailto:community@pplweb.com">community@pplweb.com</a> .
G4-32	102-55	Table identifying the location of the standard disclosures in the report	Disclosures are included in the GRI Index of this report, beginning on <a href="#">page 63</a> .
G4-33	102-56	Policy and current practice with regard to seeking external assurance for this report	External assurances for this report have not been conducted.

G4 Indicator	GRI Standards	Description	Response
<b>GOVERNANCE</b>			
G4-34	102-18	Report the governance structure of the organization, including committees of the highest governance body	PPL Corporation's corporate governance structure is posted online on the corporate website at <a href="http://www.pplweb.com/governance">www.pplweb.com/governance</a> . For more information on corporate governance, see <a href="#">page 15</a> of this report, and pages 12-16 of PPL's <a href="#">2018 Proxy Statement</a> .
G4-35	102-19	Report the process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees	The Board has designated its Compensation, Governance and Nominating Committee (CGNC) as the body responsible for overseeing PPL's practices and positions to further its corporate citizenship, including sustainability, environmental and corporate social responsibility initiatives.
G4-36	102-20	Report whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body	The Board has designated its CGNC as the body responsible for overseeing PPL's practices and positions to further its corporate citizenship, including sustainability, environmental and corporate social responsibility initiatives. PPL's Public Affairs and Sustainability Vice President is the executive level position responsible for economic, environmental and social topics, reporting to senior leadership and presenting to the CGNC and the full board.
G4-37	102-21	Report processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics. If consultation is delegated, describe to whom and any feedback processes to the highest governance body	Anyone wishing to make their concerns known to PPL's Board or independent directors may contact the PPL lead director, currently John W. Conway, or the Board or the independent directors as a group, by writing to such person or persons in care of the Corporate Secretary's Office at: PPL Corporation, 2 N. Ninth St., GENTW4, Allentown, PA 18101. Senior management and certain directors meet regularly with investors to discuss matters of interest to shareowners, such as financial performance, strategic direction, corporate governance, executive compensation, environmental and social topics.
G4-38	102-22	Composition of highest governing body	Information regarding our Board of Directors is available on pages 4-9 of PPL's <a href="#">2018 Proxy Statement</a> .
G4-39	102-23	Is chair of highest body also an executive officer?	Yes. See Board Leadership Structure on pages 10-11 of PPL's <a href="#">2018 Proxy Statement</a> .
G4-40	102-24	Report the nomination and selection processes for highest governance body members	See Director Nomination Process on pages 14-15 of PPL's <a href="#">2018 Proxy Statement</a> .
G4-41	102-25	Report processes for the highest governance body to ensure conflicts of interest are avoided	The Board of Directors determines the independence of each director before the director joins the board and on an annual basis thereafter. Disclosure of other board memberships and PPL's policy on related-person transactions, together with any disclosures, are included each year in the annual proxy statement.
G4-42	102-26	Report the highest governance body's and senior executives' roles in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies and goals related to economic, environmental and social impacts	The Board has designated its CGNC as the body responsible for overseeing PPL's practices and positions to further its corporate citizenship, including sustainability, environmental and corporate social responsibility initiatives.
G4-43	102-27	Report the measures taken to enhance the board's collective knowledge of economic, environmental and social topics	See Governance on <a href="#">page 15</a> .
G4-44	102-28	Report the process for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics. Report whether such evaluation is independent or not and its frequency. Report whether such evaluation is a self-assessment. Report actions taken in response to evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics, including, at a minimum, changes in membership and organizational practices	See Board and Committee Evaluations on page 11 of PPL's <a href="#">2018 Proxy Statement</a> .
G4-45	102-29	Report the highest governance body's role in the identification and management of economic, environmental and social impacts, risks and opportunities	See Governance on <a href="#">page 15</a> and The Board's Role in Risk Oversight on page 17 of PPL's <a href="#">2018 Proxy Statement</a> .
G4-46	102-30	Report the highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics	See Governance on <a href="#">page 15</a> and The Board's Role in Risk Oversight on page 17 of PPL's <a href="#">2018 Proxy Statement</a> .
G4-47	102-31	Report the frequency of the highest governance body's review of economic, environmental and social impacts, risks and opportunities	See Governance on <a href="#">page 15</a> .
G4-48	102-32	Report the highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material aspects are covered	Senior executive leaders review and approve sustainability reports as appropriate.



## GRI INDEX

G4 Indicator	GRI Standards	Description	Response
<b>ETHICS AND INTEGRITY</b>			
G4-49	102-33	Process for communicating critical concerns to the highest governance body	See Ethics and Integrity on <a href="#">page 16</a> .
G4-51	102-34	Remuneration policies for the highest governance body and senior executives	PPL's approach to compensation of its directors and executives can be found in PPL's <a href="#">2018 Proxy Statement</a> (pages 18-19 for directors and pages 24-46 for executive officers).
G4-52	102-36	Process for determining remuneration including use of consulting	PPL's process for determining compensation of its directors and executives, including the use of consultants, can be found in PPL's <a href="#">2018 Proxy Statement</a> (pages 13-14 and 27-42).
G4-53	102-37	Report how stakeholder views are sought for determining remuneration	See <a href="#">page 27</a> of PPL's <a href="#">2018 Proxy Statement</a> .
G4-56	102-16	Describe the organization's values, principles, standards and norms of behavior, such as codes of conduct and codes of ethics	See Ethics and Integrity on <a href="#">page 16</a> .
G4-57	102-17	Report the internal and external mechanisms for seeking advice on ethical and lawful behavior and matters related to organizational integrity, such as help lines or advice lines	See Ethics and Integrity on <a href="#">page 16</a> .
G4-58	102-17 (Combined with G4-57)	Report the internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistle-blowing mechanisms or hotlines	See Ethics and Integrity on <a href="#">page 16</a> .
<b>ECONOMIC</b>			
<b>PERFORMANCE</b>			
G4-EC1	201-1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments	For 2017 Financial Highlights, see <a href="#">page 12</a> . Additional financial information can be found in PPL's 2017 <a href="#">Form 10-K</a> .
G4-EC2	201-2	Financial implications and other risks and opportunities for the organization's activities due to climate change	Please refer to PPL's 2017 <a href="#">Form 10-K</a> .
G4-EC3	201-3	Coverage of the organization's defined benefit plan obligations	Please refer to PPL's 2017 <a href="#">Form 10-K</a> .
G4-EC4	201-4	Significant financial assistance received from government	None.
<b>MARKET PRESENCE</b>			
G4-EC5	202-1	Range of ratios of standard entry-level wage by gender compared to local minimum wage at significant locations of operation	PPL Corporation hires all employees, including interns, at a rate significantly above minimum wage.
G4-EC6	202-2	Proportion of senior management hired from the local community at significant locations of operations	Hiring and promotion is based on merit, not whether a candidate is from a particular locality.
<b>INDIRECT ECONOMIC IMPACTS</b>			
G4-EC7	203-1	Development and impact of infrastructure investments and services supported	See more about infrastructure investments on <a href="#">page 41</a> .
G4-EC8	203-2	Significant indirect economic impacts, including the extent of impacts	See Strengthening Communities on <a href="#">page 59</a> .
G4-EC9	204-1	Proportion of spending on local suppliers at significant locations of operations	See Supply Chain on <a href="#">page 14</a> .

G4 Indicator	GRI Standards	Description	Response
<b>ENVIRONMENTAL</b>			
<b>ENERGY</b>			
G4-EN2	302-2	Report the percentage of recycled input materials used to manufacture the organization's primary products and services	Nearly all fuel used is virgin material because sufficient volumes of recycled fuels are not available. We continuously investigate opportunities to incorporate recycled fuels in our operations.
G4-EN3	302-1	Energy consumption within the organization	For information on energy consumption, see <a href="#">page 75</a> .
G4-EN4	302-2	Energy consumption outside the organization	For information on energy consumption, see <a href="#">page 75</a> .
G4-EN5	302-3	Energy intensity	For information on energy intensity, see <a href="#">page 76</a> .
G4-EN6	302-4	Reduction of energy consumption	For information on PPL's efforts to reduce energy consumption within our operations, see <a href="#">page 28</a> .
G4-EN7	302-5	Reductions in energy requirements of products and services	For information on programs that help customers save energy, see <a href="#">pages 37 and 46</a> .
G4-EN8	303-1	Total water withdrawal by source	Consumptive water use at our facilities has decreased. In 2017, we used 75% less water for each megawatt-hour generated than we did in 2013.
G4-EN9	303-2	Water sources significantly affected by withdrawal of water	For information on PPL's approach to water management, see <a href="#">page 29</a> .
G4-EN10	303-3	Percentage and total volume of water recycled and reused	For information on PPL's approach to water management, see <a href="#">page 29</a> .
G4-EN11	304-1	Operational sites owned, leased, managed in or adjacent to protected areas and areas of high biodiversity value outside protected areas	For information on PPL's approach to biodiversity, see <a href="#">page 34</a> .
G4-EN12	304-2	Description of significant impacts of activities, products and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	For information on PPL's approach to biodiversity, see <a href="#">page 34</a> .
G4-EN13	304-3	Habitats protected or restored	For information on PPL's approach to biodiversity, see <a href="#">page 34</a> .
G4-EN14	304-4	Total number of IUCN Red List species and national conservation lists species with habitats in areas affected by operations, by level and extinction risk	For information on PPL's approach to biodiversity, see <a href="#">page 34</a> .
<b>EMISSIONS</b>			
G4-EN15	305-1	Direct greenhouse gas (GHG) emissions (Scope 1)	For information on PPL's approach to emissions, see <a href="#">pages 30 and 76</a> .
G4-EN16	305-2	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	For information on PPL's approach to emissions, see <a href="#">pages 30 and 76</a> .
G4-EN17	305-3	Indirect greenhouse gas (GHG) emissions (Scope 3)	For information on PPL's approach to emissions, see <a href="#">pages 30 and 76</a> .
G4-EN18	305-4	Greenhouse gas (GHG) emissions intensity	For information on PPL's approach to emissions, see <a href="#">pages 30 and 76</a> .
G4-EN19	305-5	Reduction of greenhouse (GHG) emissions	For information on PPL's approach to emissions, see <a href="#">pages 30 and 76</a> .
G4-EN20	305-6	Emissions of ozone-depleting substances (ODS)	This is not material to PPL.



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G4 Indicator	GRI Standards	Description	Response
<b>EFFLUENTS AND WASTE</b>			
G4-EN21	305-7	NO <sub>x</sub> , SO <sub>x</sub> , and other significant air emissions	For information on PPL's approach to emissions, see <a href="#">pages 30 and 76</a> .
G4-EN22	306-1	Total water discharge by quality and destination	For information on PPL's approach to water management, see <a href="#">pages 29 and 77</a> .
G4-EN23	306-2	Total weight of waste by type and disposal method	For information on PPL's approach to waste management, see <a href="#">pages 30 and 77</a> .
G4-EN24	306-3	Total number and volume of significant spills	PPL had 15 reportable spills with a total volume of 6,459.55 liters (non-PCB transformer oil). All spills were cleaned in full compliance with established spill policies.
G4-EN25	306-4	Weight of transported, imported, exported or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III and VIII, and percentage of transported waste shipped internationally	This is not material to PPL, as the company's operations do not transport any hazardous waste across international borders.
G4-EN26	306-5	Identity, size, protected status and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	Discharges to lakes and rivers are by regulatory permits. With our operating practices, they are designed to protect aquatic species and the environment.
<b>PRODUCTS AND SERVICES</b>			
G4-EN27	N/A	Extent of impact mitigation of environmental impacts of products and services	For information on PPL's environmental stewardship efforts, see <a href="#">pages 27-39</a> .
<b>COMPLIANCE</b>			
G4-EN29	307-1	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	No significant fines (defined as more than \$100,000).
G4-EN30	N/A	Significant environmental impacts of transporting products and services and other goods and materials for the organization's operations and transportation of the workforce	For information on PPL's efforts to minimize the impact of the operation's transportation fleet, see <a href="#">pages 31 and 38</a> .
G4-EN31	N/A	Total environmental protection expenditures and investments by type	For information on recent and planned expenditures, refer to PPL's 2017 <a href="#">Form 10-K</a> .
<b>SUPPLIER ENVIRONMENTAL ASSESSMENT</b>			
G4-EN32	308-1	Percentage of new suppliers that were screened using environmental criteria	100%
G4-EN33	308-2	Significant actual and potential negative environmental impacts in the supply chain and actions taken	PPL contractually requires supplier adherence to environmental terms and conditions.
<b>SOCIAL - LABOR PRACTICES AND DECENT WORK</b>			
<b>EMPLOYMENT</b>			
G4-LA1	401-1	Total number and rates of new employee hires and employee turnover by age group, gender and region. See G4-10 for data on this indicator	For information on PPL's workforce data, see <a href="#">page 53</a> .
G4-LA2	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	For information on benefits provided to employees, see <a href="#">page 56</a> .
G4-LA3	401-3	Return to work and retention rates after parental leave, by gender	A total of 310 employees used parental leave. A total of 308 employees returned to work, resulting in a 99% retention rate.

G4 Indicator	GRI Standards	Description	Response
<b>LABOR/MANAGEMENT RELATIONS</b>			
G4-LA4	402-1	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	Notice periods vary by collective bargaining agreement. We comply with applicable laws, regulations and collective bargaining agreements.
<b>OCCUPATIONAL HEALTH AND SAFETY</b>			
G4-LA5	403-1	Percentage of total workforce represented informal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	PPL has voluntary employee safety committees across the company in virtually every business unit that plan and execute safety improvement activities. These committees, with representatives from first line and management, communicate safety messages to employees and hold regular safety meetings.
G4-LA6	403-2	Type of injury and rates of injury, occupational diseases, lost days and absenteeism, and total number of work-related fatalities, by region and gender	For information on PPL's safety program, see <a href="#">page 22</a> .
G4-LA7	403-3	Workers with high incidence or high risk of diseases related to their occupation	No high risks or incidents identified.
G4-LA8	403-4	Health and safety topics covered in formal agreements with trade unions	All collective bargaining agreements contain language that references the need for a strong health and safety program and a joint health and safety advisory committee.
<b>TRAINING AND EDUCATION</b>			
G4-LA9	404-1	Average hours of training per year per employee by gender and by employee category	For information on professional development, see <a href="#">page 57</a> .
G4-LA10	404-2	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	For information on professional development, see <a href="#">page 57</a> .
G4-LA11	404-3	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	PPL's expectations are that all eligible employees receive an evaluation of their skills and performance on an annual basis. The company's business units have formal performance appraisal processes that cover 100% of eligible active, full-time and part-time employees.
<b>DIVERSITY AND EQUAL OPPORTUNITY</b>			
G4-LA12	405-1	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership and other indicators of diversity	For information on diversity at PPL, see <a href="#">page 53</a> . See also page 2 and pages 5-9 of PPL's 2018 Proxy Statement for the diversity of its Board of directors.
<b>EQUAL REMUNERATION FOR WOMEN AND MEN</b>			
G4-LA13	405-2	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operations	PPL complies with all state, federal and local laws and regulations prohibiting discrimination.
<b>LABOR PRACTICES GRIEVANCE MECHANISMS</b>			
G4-LA15	414-2	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	PPL's <i>Standards of Conduct and Integrity for Suppliers</i> requires that all suppliers adhere to all applicable labor and human-rights laws.
G4-LA16	103-2	Number of grievances about labor practices filed, addressed and resolved through formal grievance mechanisms	This is not publicly disclosed information. The company follows procedures set forth in collective bargaining agreements.



## GRI INDEX

G4 Indicator	GRI Standards	Description	Response
<b>SOCIAL - HUMAN RIGHTS</b>			
<b>NONDISCRIMINATION</b>			
G4-HR1	412-3	Total number and percentage of significant investment agreements and contracts that include human-rights clauses or that underwent human-rights screening	PPL and its subsidiary companies in the U.S. and U.K. operate in compliance with applicable laws and regulations.
G4-HR2	412-2	Total hours of employee training on human-rights policies or procedures, concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	All employees are trained on PPL's <i>Standards of Integrity</i> , which includes topics on respect in the workplace, nondiscrimination and compliance with laws.
G4-HR3	406-1	Total number of incidents of discrimination and corrective actions taken	This is not publicly disclosed information. Company policies prohibit discrimination and set forth a robust procedure for reporting, investigating and responding to allegations of discrimination.
<b>FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING</b>			
G4-HR4	407-1	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	None. We comply with applicable laws, rules and regulations wherever we operate. Freedom of association is also addressed in our <i>Standards of Conduct and Integrity for Suppliers</i> .
<b>CHILD LABOR</b>			
G4-HR5	408-1	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	None. We comply with applicable laws, rules and regulations wherever we operate.
<b>FORCED OR COMPULSORY LABOR</b>			
G4-HR6	409-1	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures taken to contribute to the elimination of all forms of forced or compulsory labor	None. We comply with applicable laws, rules and regulations wherever we operate.
<b>SECURITY PRACTICES</b>			
G4-HR7	410-1	Percentage of security personnel trained in organization's human-rights policies or procedures that are relevant to operations	All domestic Corporate Security personnel complete corporate standards of integrity training on an annual basis. Additionally, all domestic Corporate Security personnel complete a training program on indicators and response to workplace violence events at least bi-annually. All contract security personnel working domestically complete training programs on ethics and conduct and cultural diversity administered by their employer.
<b>SUPPLIER HUMAN-RIGHTS ASSESSMENT</b>			
G4-HR10	414-1	Percentage of new suppliers that were screened using human-rights criteria	PPL's <i>Standards of Conduct and Integrity for Suppliers</i> requires that all suppliers adhere to all applicable labor and human rights laws.
G4-HR11	414-2	Significant actual and potential negative human rights impacts in the supply chain and actions taken	PPL's <i>Standards of Conduct and Integrity for Suppliers</i> requires that all suppliers adhere to all applicable labor and human rights laws.
<b>SOCIAL SOCIETY</b>			
<b>LOCAL COMMUNITIES</b>			
G4-S01	413-1	Percentage of operations with implemented local community engagement, impact assessments and development programs	100% of PPL's operations have programs for local community engagement. For more information on community engagement, see <a href="#">page 60</a> .

G4 Indicator	GRI Standards	Description	Response
<b>ANTI-CORRUPTION</b>			
G4-S03	205-1	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	All business units are subject to corruption risks analysis.
G4-S04	205-2	Communication and training on anti-corruption policies and procedures	All employees receive regular anti-corruption training as well as training on a variety of important policies and procedures. PPL's <a href="#">Standards of Integrity</a> , which highlights certain key policies and procedures, can be accessed online at any time.
G4-S05	205-3	Confirmed incidents of corruption and actions taken	None.
<b>PUBLIC POLICY</b>			
G4-S06	415-1	Total value of political contributions by country and recipient/beneficiary	For information on PPL's public policy approach, see <a href="#">page 18</a> .
<b>ANTI-COMPETITIVE BEHAVIOR</b>			
G4-S07	206-1	Total number of legal actions for anti-competitive behavior, anti-trust and monopoly practices and their outcomes.	None.
<b>COMPLIANCE</b>			
G4-S08	419-1	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	No significant fines (defined as greater than \$100,000).
<b>SOCIAL PRODUCT RESPONSIBILITY</b>			
<b>CUSTOMER HEALTH AND SAFETY</b>			
G4-PR1	416-1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	Electricity and natural gas can be dangerous if handled incorrectly. Safety programs are part of our ongoing operations. We have extensive training and safety education programs for customers, contractors and employees.
G4-PR2	416-2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcome	PPL does not publicly disclose this information.
<b>PRODUCT AND SERVICE LABELING</b>			
G4-PR3	417-1	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	Electric and natural gas service cannot be labeled. We provide regular and detailed safety information to customers via bill inserts, public service announcements, presentations, social media and the company's websites.
G4-PR5	102-43 and 102-44	Results of surveys measuring customer satisfaction	For information on customer satisfaction, see <a href="#">page 45</a> .
<b>MARKETING COMMUNICATIONS</b>			
G4-PR7	417-3	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and sponsorship, by type of outcomes	None.
<b>CUSTOMER PRIVACY</b>			
G4-PR8	418-1	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	None.
G4-PR9	419-1	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	Please refer to the PPL's 2017 <a href="#">Form 10-K</a> .








## GRI INDEX

G4 Indicator	GRI Standards	Description	Response
<b>SECTOR DISCLOSURES - ELECTRIC UTILITIES</b>			
EU1		Installed capacity, broken down by primary energy source and regulatory regime	LG&E and KU's installed capacity is 8,017 MW.
EU2		Net energy output broken down by primary energy source and regulatory regime	See About Our Company on <a href="#">page 3</a> .
EU3		Number of residential, industrial, institutional and commercial accounts	For details on PPL's customers, see <a href="#">page 44</a> .
EU4		Length of above and underground transmission and distribution	See Infrastructure on <a href="#">page 40</a> .
EU5		Allocation of CO2 emissions allowances, or equivalent, broken down by carbon trading framework	None.
G4-DMA Avail- ability & Reliability		Management approach to ensure short- and long-term electricity availability and reliability	PPL addresses availability and reliability in our integrated resource plans that are submitted to regulatory agencies. More information is available in PPL's 2017 <a href="#">Form 10-K</a> .
EU10		Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime	Forecast demand for LG&E and KU is 6,807 MW, and LG&E and KU generation capacity is currently 8,274 MW, providing a 21.6% reserve margin.
G4-DMA Demand Side Man- agement		Demand-side management programs including residential, commercial, institutional and industrial programs	Where applicable, PPL addresses planned capacity and projected demand in integrated resource plans that are submitted to regulatory agencies. For information about demand-side management programs for customers, see <a href="#">pages 37, 46 and 48</a> .
G4-DMA Research & Devel- opment		Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development	Research and development activities addressing short- and long-term electricity availability and reliability include investigations of advanced fossil generation, flexible plant operations, distributed energy resource integration, grid scale energy storage and advanced grid technologies to support the integrated grid. The research spans from paper studies to pilot demonstrations. The information supports the integrated resource-planning and business-planning processes across the organization. For more information on research and development initiatives, see <a href="#">page 37</a> .
EU11		Average generation efficiency of thermal plants by energy source and regulatory regime	In 2017, the average generation efficiency for LG&E and KU was 10.1 (MMBTU/Net MWh)
EU12		Transmission and distribution losses as a percentage of total energy	This data is not centrally tracked.
EU13		Biodiversity of offset habitats compared to the biodiversity of the affected areas	For information on habitat-protection efforts, see <a href="#">page 34</a> .
G4-DMA Skilled Workforce		Programs and processes to ensure the availability of a skilled workforce	For information on how PPL is ensuring the availability of a skilled workforce, see <a href="#">page 54</a> .
EU15		Percentage of employees eligible to retire in next 5 and 10 years, broken down by job category and region	PPL has developed strategic workforce plans to identify key functions and proactively implement plans to assure a ready and qualified workforce. For information on generational diversity and turnover rates, see <a href="#">page 54</a> .
EU17		Days worked by contractor and subcontractor employees involved in construction, operation and maintenance activities	PPL does not publicly disclose this information.
EU18		Percentage of contractor and subcontractor employees who have undergone relevant health and safety training	PPL provides required health and safety-related training for 100% of the contractors performing physical work on our electric systems.

G4 Indicator	GRI Standards	Description	Response
G4-DMA Water		At the watershed or hydrological basin level, include collaborative approaches to managing watersheds and reservoirs for multiple uses (e.g., irrigation, drinking water, ecosystem conservation, etc.). Also report long-term planning for securing water resources, for meeting the needs of both the utility and other stakeholders (e.g. local communities). This includes describing the criteria for managing maximum/minimum flow of surface water and volume of ground water and how these are determined and maintained.	For information on PPL's approach to water conservation, see <a href="#">page 29</a> .
G4-DMA Vegetation Management		Report approaches for pest and vegetation management along transmission and distribution corridors (e.g., use of Integrated Pest Management and Integrated Vegetation Management)	For information on our approach to vegetation management, see <a href="#">page 35</a> .
G4-DMA Local Communities		Stakeholder participation in decision making processes related to energy planning and infrastructure development	For information on stakeholder engagement, see <a href="#">page 49</a> .
EU22		Number of people physically or economically displaced and compensation, broken down by type of product	We avoid displacement of anyone to the extent feasible by careful planning during the siting process of major projects. If displacement is unavoidable, we make fair compensation for any property transactions.
G4-DMA Emergency Planning		Contingency planning measures, disaster/emergency management plan and training programs, and recovery/restoration plans	For information on PPL's disaster and emergency management planning, see <a href="#">page 61</a> .
G4-DMA Customer Support Programs		Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services.	For information on customer programs, see <a href="#">pages 43-51</a> .
EU26		Percentage of population unserved in licensed distribution or service areas	PPL's utilities have an obligation to serve all that want electrical service in their service territory.
EU27		Number of residential disconnections for non-payment, broken down by duration of disconnection and by regulatory regime	In 2017, PPL's U.S.-based utilities had 160,794 residential disconnections.
EU28		Power outage frequency	For information on reliability, see <a href="#">page 25</a> .
EU29		Average power outage duration	For information on reliability, see <a href="#">page 25</a> .
EU30		Average plant availability factor by energy source and by regulatory regime	LG&E's and KU's plant availability factor is 84.81%. The unplanned outage rate for LG&E and KU plants in 2017 was 7.59%, down from 8.39% in 2016.
G4-DMA Customer Access		Practices to address language, cultural, low literacy and disability related to barriers to accessing and safely using electricity and customer support services	For information on customer programs, see <a href="#">pages 43-51</a> .

## PPL's contribution to the U.N. Sustainable Development Goals

As a multinational business, PPL understands we have a role to play in contributing to the United Nations Sustainable Development Goals (UNSDGs). As we developed our own sustainability commitments, we considered how they would support the UNSDGs in their objective to achieve a better world for all. PPL also participated in the United States Council for International Business' (USCIB) Business for 2030 – Forging a Path for Business in the UN 2030 Development Agenda initiative, which aims to promote opportunity for the private sector to drive progress toward sustainable development and act as a partner to help provide the financing and technical capabilities needed to achieve the UNSDGs.

Sustainable Development Goal	PPL's Sustainability Strategy	What PPL is doing
	<p>We are working to advance a cleaner energy future. PPL has a longstanding commitment to carry out all of our business activities in ways that preserve and promote a clean, safe and healthy environment. We have invested in environmental upgrades at PPL power plants, carbon-free generation projects and programs to encourage energy efficiency.</p>	<ul style="list-style-type: none"> <li>- Taking steps to manage climate-related risks, <a href="#">page 36</a>.</li> <li>- Working to expand renewable energy integration into the grid, <a href="#">page 27</a>.</li> <li>- Investing in technology, upgrades and projects that reduce our energy consumption and emissions, <a href="#">page 30</a>.</li> </ul>
	<p>As part of our efforts to advance a cleaner energy future, PPL carefully manages the water it uses and monitors the impact of waste water discharged into waterways. The company supports programs that protect waterways and the ecosystems that depend on them in the service areas where the utilities operate.</p>	<ul style="list-style-type: none"> <li>- Reducing the use of water consumed and used at power plants, <a href="#">page 29</a>.</li> <li>- Deploying innovative ways to cut waste, <a href="#">page 39</a>.</li> </ul>
	<p>Investing in tomorrow's energy infrastructure by developing a more reliable, resilient and efficient grid that fosters continued progress and a cleaner energy future.</p>	<ul style="list-style-type: none"> <li>- WPD is implementing a transition to Distribution System Operator that will drive performance and efficiency on the grid, <a href="#">page 20</a>.</li> <li>- PPL Electric's smart grid program is leading to record-breaking reliability improvements for customers, <a href="#">page 41</a>.</li> <li>- LG&amp;E and KU were ahead of the curve, upgrading more than 500 miles of natural gas pipelines, <a href="#">page 40</a>.</li> </ul>
	<p>Encouraging responsible stewardship in partnership with our customers and stakeholders to have a sustainable environmental impact. We also are focused on providing affordable, reliable, safe and environmentally responsible energy to our customers.</p>	<ul style="list-style-type: none"> <li>- Helping our customers go green, saving money and energy, through energy efficiency education and programs, <a href="#">pages 37 and 46</a>.</li> <li>- Conducting research and development to prepare the grid for electric vehicles, <a href="#">page 37</a>.</li> <li>- Providing special services to meet the needs of all our customers, <a href="#">page 50</a>.</li> </ul>
	<p>We are focused on cultivating success for our employees by fostering an inclusive, respectful and diverse workplace that rewards performance, promotes professional development and enables employees to achieve their full potential. We also work closely with local and state officials to foster economic development that creates jobs throughout the territories we serve.</p>	<ul style="list-style-type: none"> <li>- Developing a constructive culture that nurtures employee engagement and accountability, <a href="#">page 52</a>.</li> <li>- Nurturing the future workforce through apprenticeships and training programs, <a href="#">pages 54-55</a>.</li> <li>- Fostering a diverse and inclusive workforce, <a href="#">page 53</a>.</li> <li>- Supporting the economic development of the communities we serve, <a href="#">page 62</a>.</li> </ul>

# Appendix

## Installed Capacity

Year	Total Owned Nameplate Generation Capacity at end of year (MW) <sup>1</sup>	Total Net Summer Rating at end of year (MW)	Coal Owned Nameplate Generation Capacity at end of year (MW) <sup>2</sup>	Natural Gas Owned Nameplate Generation Capacity at end of year (MW) <sup>3</sup>	Renewable Owned Nameplate Generation Capacity at end of year (MW) <sup>4</sup>
2013	9,174	8,079	6,583	2,477	113.4
2014	9,174	8,087	6,583	2,477	113.4
2015	9,148	7,997	5,750	3,284	113.4
2016	9,157	8,011	5,750	3,284	123
2017	9,183	8,017	5,754	3,285	144

<sup>1</sup>LGEKU Installed

<sup>2</sup>LGEKU Installed

<sup>3</sup>LGEKU Installed

<sup>4</sup>LGEKU Installed

## Energy Consumption and Output

YEAR	Generation (MWh gross)	Generation (MWh net) <sup>2</sup>	Total BTU Consumed at Plant	Generation Efficiency: (BTU/Net Generation)	Percentage Change in Generation Efficiency	Small Plant Stationary (Subpart C) Combustion Sources (Liters)	Plant Mobile Fuel Combustion Sources (Liters)	Organization Building Electricity Use (kWh)	Organization Building Gas Use (kWh)	Organization Fleet Vehicle Energy Use (Liters)
2013 <sup>1</sup>	37,706,347	34,329,844	389,289,544	11.3		5,934,934 *	1,882,854 *	101,880,013 *	100,920,048 *	18,712,396 *
2014	38,236,325	34,852,836	394,375,570	11.3	-0.21%	5,934,934 *	1,882,854 *	112,529,670 *	101,445,325 *	19,067,244 *
2015	36,937,034	33,880,343	371,360,145	11.0	-3.13%	5,934,934 *	1,882,854 *	113,735,235 *	101,156,024 *	18,392,459 *
2016	36,857,210	33,968,857	360,888,362	10.6	-3.07%	5,934,934 *	1,882,854 *	108,898,199 *	101,078,573 *	17,816,820 *
2017	35,759,848	32,704,879	330,071,507	10.1	-5.00%	5,934,934	1,882,854	116,693,279	101,227,880	17,919,631

<sup>1</sup>2013 data does not include WPD Surf Telecom.

<sup>2</sup>Net Generation data excludes OVEC.

\* Estimated data for Kentucky Operations.



## APPENDIX

## Carbon Emissions and Intensity

Year	Scope 1 (Gross MWh) (Includes CO <sub>2</sub> , N <sub>2</sub> O and CH <sub>4</sub> ): Metric Tonnes of CO <sub>2</sub> e	Scope 1 (Fleet Vehicles): Metric Tonnes of CO <sub>2</sub> e	Scope 1 (Small Plant Station- ary Fuel Combustion Sources not included in Stack Emissions): Metric Tonnes of CO <sub>2</sub> e	Scope 1 (Plant Mobile Equipment) Metric Tonnes of CO <sub>2</sub> e	Scope 1 (Gas Operations): Metric Tonnes of CO <sub>2</sub> e	Scope 1 (Electric Substation and Distribution SF6): Metric Tonnes of CO <sub>2</sub> e	Scope 2 (Purchased Power Net of Wholesale): (MWh)	Scope 2 (Purchased Power Net of Wholesale): Metric Tonnes of CO <sub>2</sub> e	Scope 2 (Electric- ity Use in Buildings): Metric Tonnes of CO <sub>2</sub> e	Scope 2 (Gas Use in Build- ings): Metric Tonnes of CO <sub>2</sub> e	Scope 3 (Electricity Purchased for End Use Customers): (MWh)	Scope 3 (Electricity Purchased for End Use Customers): Metric Tonnes of CO <sub>2</sub> e	Scope 3 (Gas Purchased for End Use Customers): MMCUFT	Scope 3 (Gas Purchased for End Use Customers): Metric Tonnes of CO <sub>2</sub> e	Total Goal Related Emissions: Metric Tonnes of CO <sub>2</sub> e	USD Million Sales (in millions)	Carbon Intensity Calculation <sup>1</sup> (CO <sub>2</sub> e/ Revenue)	Generation (MWh Net) <sup>3</sup>	Generation Carbon Intensity by MWh Calculation <sup>5</sup> (CO <sub>2</sub> e/Net Generation)
Goal <sup>2</sup>	✓	✓	✓	✓		✓		✓	✓	✓									
2010	60,736,086***	48,343*	2,515	4,893*		114,727**	1,906,442	1,597,157	89,732*	18,250*	15,980,340	7,263,132	44,546	2,389,400	62,577,296				
2013	33,068,054	48,773*	3,417	4,893*	30,437	46,069	456,118	387,968	71,687*	18,317.6*	9,100,894	4,590,490	46,516	2,355,666	33,614,771	\$7,263	0.00463	34,329,844	0.96
2014	33,212,770	50,469*	3,209	4,893*	30,419	131,230	520,845	451,533	71,016*	18,378.1*	8,949,034	4,497,655	49,079	2,533,521	33,909,091	\$7,852	0.00432	34,852,836	0.95
2015	30,199,495	49,727*	5,610	4,893*	35,622	86,940	482,359	395,828	70,472*	18,325.6*	9,082,309	4,177,384	44,835	2,304,800	30,796,883	\$7,669	0.00402	33,880,343	0.89
2016	28,737,028	46,633*	32,645	4,893*	35,376	85,195	619,191	558,092	67,022*	18,311.1*	9,272,725	4,172,432	43,287	2,225,952	29,515,412	\$7,517	0.00393	33,968,857	0.85
2017	28,407,677	47,630	8,984	4,893	28,132	90,107	530,829	470,110	69,781	18,310.5	9,134,536	4,110,251	40,656	2,034,406	29,083,085	\$7,447	0.00391	32,704,089	0.87

<sup>1</sup> Total CO<sub>2</sub>e excluding Scope 3 purchased power/gas and gas operations.

<sup>2</sup> Our CO<sub>2</sub> Goal includes columns identified with a checkmark.

<sup>3</sup> Net Generation data excludes OVEC.

<sup>4</sup> Note: There is not a material difference in the conversion formulas utilized in our U.K. Operations (DECC Conversion Factor) vs. our Kentucky Operations (EIA's Conversion Factor).

<sup>5</sup> Total CO<sub>2</sub>e associated with gross generation divided by net generation.

\* Estimated data for Kentucky Operations.

\*\* Estimated data for Pennsylvania Operations.

\*\*\* 2010 Scope 1 Plant Emissions is the only data point that includes PPL Energy Supply, LLC.

## Emissions

Year	Generation (MWh net) <sup>1</sup>	Total NOx Emissions (Metric Tonnes)	Total NOx Emissions Intensity (Metric Tonnes / Net MWh)	Total SO <sub>2</sub> Emissions (Metric Tonnes)	Total SO <sub>2</sub> Emissions Intensity (Metric Tonnes / Net MWh)	Hazardous Air Pollutants (Total HG Emissions) (Kg)	Hazardous Air Pollutants Intensity (Total HG Emissions (Kg) / Net MWh)	Particulate Matter (Metric Tonnes)
2013	34,329,844	30,874	0.00090	66,897	0.00195	*	*	3,874
2014	34,852,836	31,644	0.00091	70,697	0.00203	*	*	4,209
2015	33,880,343	22,365	0.00066	40,075	0.00118	230	6.79E-06	4,168
2016	33,968,857	18,380	0.00054	16,398	0.00048	70	2.06E-06	2,634
2017	32,704,879	15,710	0.00048	13,499	0.00041	77	2.35E-06	1,900

<sup>1</sup> Net Generation data excludes OVEC

\* Reporting began in 2015

## 2017 Water Sources Affected by Withdrawal of Water

Plant	2017 Withdrawal [megaliters/year]	% Impact (Water Withdrawn compared to Waterbody Size)	2017 Discharge [megaliters/year]	Water body	Waterbody Size [Lake-megaliters] or [River-megaliters/day]	Consumption [Megaliters/year] (Withdrawal - Discharge)	Total Volume of Water Recycled and Reused as a Percentage of Total Water Withdrawal
KU-Brown	21,796	0.018%	21,949	Herrington Lake (created by Dix River Dam)	324,405 *	-153 ***	100.70%
KU-Ghent	104,296	0.26%	115,304	Ohio River	110,829 **	-11,008 ***	110.55%
LG&E-Cane Run	4,883	0.011%	1,336	Ohio River	119,882 **	3,547	27.36%
LG&E-Mill Creek	325,205	0.74%	321,131	Ohio River	119,882 **	4,074	98.75%
LG&E-Trimble County	38,766	0.1%	15,778	Ohio River	110,829 **	22,988	40.70%

\* Volume of lake during 1007 low flow conditions.

\*\* Flow during 1007 low flow conditions.

\*\*\* Discharge exceeds withdrawal due to rainfall.

## Ash-Use Trends

Year	Ash-Use Trends: Production <sup>1</sup> (Million Metric Tonnes)	Ash-Use Trends: Reuse <sup>1</sup>	Generation (MWh net) <sup>2</sup>	Ash-Use Trends (Million Metric Tonnes / Net MWh)
2013	1,489	22.0%	34,329,844	0.043
2014	1,377	22.5%	34,852,836	0.040
2015	1,231	25.7%	33,880,343	0.036
2016	1,133	34.2%	33,968,857	0.033
2017	1,010	34.1%	32,704,879	0.031

<sup>1</sup> Includes Kentucky operations only.

<sup>2</sup> Net Generation data excludes OVEC.

## Waste

Year	Hazardous Waste <sup>3,4</sup> (Total Tonnes)	Non-Hazardous Waste <sup>5</sup> (Total Tonnes)
2013	252.7	9,861.13
2014	347.68	11,329.87
2015	460.2	16,099.39
2016	743.97	136,124.63
2017	829.03	45,347.15

<sup>3</sup> All Operations.

<sup>4</sup> Poles are designated as hazardous waste in U.K.

<sup>5</sup> Includes Pennsylvania and U.K. operations only.

Note: Kentucky does not track Non-Hazardous Waste other than ash.



## APPENDIX

**2017 SAFETY**

	2015	2016	2017
Total Hours Worked	25,172,506	24,700,051	24,157,564
Number of Lost Day Cases	27	24	18
Lost Time Incident Rate	0.25	0.19	0.15
Recordable Incident Rate	1.23	1.30	1.08
Work Related Fatalities	1	0	1

**2017 RELIABILITY****Average Number of Interruptions (per customer)**

System Average Interruption Frequency Index *(SAIFI)	2015	2016	2017
LG&E and KU	0.998	1.04	0.84
PPL Electric	0.67	0.70	0.60
WPD	0.57	0.52	0.50

\*SAIFI is the average number of interruptions per customer, excluding major events, per Institute of Electrical and Electronics Engineers definition 1366.

**Average Outage Duration (in minutes)**

System Average Interruption Duration Index (SAIDI)*	2015	2016	2017
LG&E and KU	87	100	75
PPL Electric	75	71	70
WPD	28	29	29

\*SAIDI is the average outage duration (in minutes), excluding major events, per IEEE definition 1366.

