



PPL Corporation 2019 EEI-AGA ESG/Sustainability Report

Qualitative Section

PPL Corporation operates seven fully regulated, high-performing utilities in the United Kingdom, Pennsylvania and Kentucky, each a constructive regulatory jurisdiction.

PPL's long-term strategy is to deliver best-in-sector operational performance, invest in a sustainable energy future, provide superior customer service, maintain a strong financial foundation, and engage and develop our people.

SUSTAINABILITY STRATEGY

PPL provides transparent, voluntary disclosure of sustainability issues through several reporting mechanisms. We are pleased to provide investors and other interested stakeholders with our 2019 EEI-AGA report using a common set of key environmental, social and governance (ESG) metrics across the utility sector.

Additional information and disclosures on our ESG-related efforts can be found on PPL's website at pplsustainability.com.

Our 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. As we transition to a cleaner energy future, our strategy includes:

- **Committing to a low-carbon future.**

- In February 2020, PPL announced it was raising its carbon emissions reduction goal to 80% from 2010 levels by 2050. The company also accelerated its prior 70% reduction goal by 10 years to 2040. By the end of 2019, PPL achieved a 56% reduction from 2010 levels.
- PPL recently announced a partnership with the Electric Power Research Institute (EPRI), Gas Technology Institute (GTI) and other industry leaders on a five-year initiative to accelerate the development of low-carbon energy technology.
- PPL's operating companies expect to reduce CO₂ emissions by more than 6,000 metric tons between 2020-2025 through electrification of fleet vehicles, with an additional reduction of more than 2,500 metric tons expected between 2026-2030.

- **Investing in grid resiliency and climate adaptation.** We are also addressing physical risks through climate adaptation actions such as investing across our transmission and distribution operations to mitigate weather-related impacts on our facilities and to make the grid more reliable and resilient. In 2019, we invested more than \$3 billion in infrastructure improvements to strengthen grid resiliency in the face of a changing climate, incorporate automation, replace and rebuild power lines and substations, and reshape electricity networks to support the growth of renewables and other distributed energy resources.

- **Enabling renewables and helping our customers go green. In 2019, PPL:**

- Became the U.K.'s first network operator to publish an electric vehicle strategy.
- Continued to connect more distributed generation and renewables to our U.K. networks, with more than 6 gigawatts of renewables connected to date.
- Secured regulatory approval in Kentucky for a Green Energy tariff for businesses and continued to enhance our solar offerings for all customers.
- Launched an innovative Distributed Energy Resource Management System in Pennsylvania to enable more distributed energy resources, like solar power and energy storage, to connect reliably to the grid.
- Apart from our regulated utility businesses, we invested in sustainable energy through Safari Energy, LLC. including executed agreements to acquire, develop, own and operate 110 megawatts of solar generation.

- **Helping our customers save energy.** In 2019, PPL's operating utilities in the U.S. provided \$25.5 million in energy efficiency rebates to more than 520,000 participants, collectively saving more than 538 million kilowatt-hours of electricity and reducing peak demand by more than 179 megawatts.

SUSTAINABILITY GOVERNANCE

PPL's management approach to sustainability engages all levels of the company from the board of directors to our employees. PPL's Board of Directors has designated its Governance and Nominating Committee with responsibility for overseeing PPL's practices and positions to further ESG performance and sustainability. The committee receives updates, which include climate-related issues, at regularly scheduled meetings.

GOVERNANCE AND NOMINATING COMMITTEE, BOARD OF DIRECTORS

Oversees the company's practices and positions to further its corporate citizenship, including sustainability, environmental and corporate social responsibility initiatives.

EXPANDED CORPORATE LEADERSHIP COUNCIL

Reviews, provides strategic input and approves the company's sustainability strategy, commitments and priorities. The council includes PPL's chief executive officer, chief financial officer, chief human resources officer, chief legal officer and operating company presidents.

CORPORATE SUSTAINABILITY COMMITTEE

Responsible for reviewing and guiding the development of a sustainability strategy, providing oversight and establishing the priorities and performance metrics. Chaired by the Vice President of Public Affairs and Sustainability, this committee consists of senior leaders throughout the corporation (including operating companies, human resources, compliance, risk, investor relations and audit).

SUSTAINABILITY CORE TEAM

Cross-functional and enterprise-wide team of subject matter experts that conduct analysis of sustainability priority issues and environmental, social and governance trends and is responsible for developing environmental, social and governance disclosures.

SOCIAL RESPONSIBILITY

PPL's ESG commitments related to social responsibility include exceeding customer expectations, fostering an exceptional workplace and strengthening the communities we serve.

Achievements in 2019 include:

- Helping our customers support their own sustainability goals through various initiatives such as Solar Share program in Kentucky; the largest electric vehicle research trial in the U.K.; and making it easier for customers in Pennsylvania to connect their own distributed energy facilities to our network, reducing their electricity costs and increasing the use of renewable energy.
- Supporting diverse businesses – those owned by minorities, women and veterans. In 2019, the company spent \$258 million with diverse businesses. Additionally, 39% of goods and services are procured from locally based suppliers, providing economic development support to communities in our jurisdiction.
- Strengthening communities with charitable funding of more than \$10 million in 2019 and partnering with our communities for economic development, disaster readiness and emergency preparedness.

- Being recognized for outstanding 2019 performance in a number of areas including being ranked one of the best places to work for people with disabilities on the Disability Equality Index and receiving a perfect score of 100 percent on the Human Rights Campaign Foundation's Corporate Equality Index for its Pennsylvania operations.

In 2020, our response to COVID-19 included:

- A swift, efficient and successful transition to work-from-home for a significant portion of our workforce.
- Implementing a number of measures such as social distancing, PPE requirements and changes to work practices to ensure the health and safety of front-line employees such as lineworkers.
- A moratorium on customer disconnections and missed payment penalties.
- Significant donations of PPE to local hospitals and emergency management agencies.
- Grants of \$500,000 to assistance programs to help energy customers facing economic hardships.
- Contributions totaling nearly \$2 million in funding to COVID-19 relief efforts in support to our customers and communities.

ENGAGEMENT ON DIVERSITY, EQUITY AND INCLUSION

This year's racial justice protests also brought to light the inequities faced by Black citizens in our communities. PPL's Black business resource groups in Pennsylvania and Kentucky led discussions with employees about these challenges in our communities and what issues employees may be struggling with personally and in the workplace. Safari Energy also facilitated discussions on diversity and inclusion with their employees.

While diversity and inclusion have always been key considerations in the choices we make when investing in local communities, PPL Foundation announced in June that it would expand the mission and focus to more directly support racial justice and equity initiatives. The announcement was paired with an initial contribution of \$100,000 to local organizations working to make real and lasting changes in these areas. The company has also served as a business leader in a community-wide coalition in Pennsylvania called Color Outside the Lines, which is working to develop a strategic plan for diversity and inclusion and is participating in the Greater Louisville Inc. Diversity, Equity & Inclusion committee.

CYBERSECURITY

PPL takes an enterprise-wide, risk-based approach to cybersecurity to address and mitigate today's security threats, while remaining vigilant on emerging threats.

PPL continually invests in security strategies and practices from industry-accepted security control frameworks including the National Institute of Standards and Technology Cybersecurity Framework and the Network and Information Security directive. Our cybersecurity approach also includes implementation of rigorous, mandatory and enforceable North American Electric Reliability Corporation industry standards in the U.S., as well as close coordination and information sharing among our industry and with government partners

The management of cybersecurity risks is integrated into our Enterprise Risk Management process. The PPL Corporate Security Council, which includes senior leaders throughout the corporation (including PPL's chief financial officer, chief human resources officer, general counsel, vice president-corporate audit, global chief compliance officer, operating company presidents and chief information officers) oversees and governs actions to ensure that PPL is effectively managing cybersecurity risks by conducting regular reviews of the overall enterprise cybersecurity strategy, posture and risks. The council is chaired by the VP & Chief Information Security Officer. In addition, the full Board of Directors receives periodic updates of cyber-related matters.

For more details about how PPL ensures the physical and cyber security of the grid, please see page 37 of the [2019 Corporate Sustainability Report](#).

MANAGEMENT AND OVERSIGHT OF NATURAL GAS OPERATIONS

Louisville Gas & Electric (LG&E) is engaged in the distribution and sale of natural gas, serving more than 300,000 natural gas customers in Kentucky.

LG&E leadership has overall responsibility for the oversight of natural gas operations. The company implemented a Natural Gas Pipeline Safety Compliance Program Steering Committee in 2017 to provide enhanced oversight for compliance with state, local and federal gas operations and pipeline safety regulations. LG&E also has a Pipeline Safety Management Systems program, with the objective of implementing the elements of American Petroleum Institute recommended practices. LG&E maintains integrity management plans, including those for transmission, distribution, and storage.

LG&E continues to make strategic infrastructure investments to enhance pipeline safety and reliability and is reducing methane emissions through its regular leak surveys and asset replacement programs. Among these, LGE is implementing a KY Public Service Commission-approved program to replace approximately 45,000 steel customer service lines and removal of approximately 4,400 steel curbed services. The steel customer service lines are largely 30 to 35 years old or greater and susceptible to corrosion leaks. Through 2019, LG&E has replaced about 5,925 customer services lines and 1,800 steel curbed services with new plastic pipe. The company is also implementing a Kentucky Public Service Commission-approved Transmission Modernization program to replace approximately 15.5 miles of transmission pipeline in Jefferson County. The transmission line is more than 45 years old. This is the first phase of the Transmission Modernization Program, and construction is in progress and anticipated to be largely complete by the end of 2021.

ADDITIONAL RESOURCES

Significant highlights during the 2019 reporting period can be reviewed in the [PPL Corporation Annual Report 2019](#). See [PPL's 2019 Sustainability Report](#), [PPL's 2019 CDP climate survey response](#), [Climate Assessment report](#), [Sustainability Accounting Standards Board \(SASB\) standards mapping report](#), the [Task Force on Climate-related Financial Disclosures \(TCFD\) mapping report](#) and 10-K for more on specific plans, progress and initiatives.

Cautionary statement regarding forward-looking information: Any statements made in this document about future operating results or other future events are forward-looking statements under the Safe Harbor Provisions of the Private Securities Litigation Reform Act of 1995. Although based on current beliefs and expectations, forward-looking statements involve various risks and uncertainties, including those that PPL Corporation describes in its Form 10-K and other filings with the Securities and Exchange Commission. Actual results may differ materially from the forward-looking statements.

Quantitative Section

Parent Company:	PPL Corporation
Operating Company(s):	PPL Electric Utilities (PPL EU), Louisville Gas & Electric and Kentucky Utilities (LKE), and Western Power Distribution (WPD)
Business Type(s):	Fully regulated utilities; Distribution (U.K.); T&D (Pennsylvania) and T&D plus regulated generation (Kentucky)
State(s) of Operation:	Pennsylvania, Kentucky, and Virginia; United Kingdom
State(s) with RPS Programs:	Pennsylvania (mandatory)
Regulatory Environment:	Regulated
Report Date:	August 1, 2020

PORTFOLIO			
Ref. No.		Last Year - 2018	Current Year - 2019
1	Owned Nameplate Generation Capacity at end of year (MW) (Summer Net Capacity)	8,017	7,561
1.1	Coal	5,157	4,715
1.2	Natural Gas	2,756	2,742
1.3	Nuclear	-	-
1.4	Petroleum	-	-
1.5	Total Renewable Energy Resources	104	104
1.5.1	Biomass/Biogas	-	-
1.5.2	Geothermal	-	-
1.5.3	Hydroelectric	96	96
1.5.4	Solar	8	8
1.5.5	Wind	-	-
1.6	Other	-	-

2	Net Generation for the data year (MWh)	34,820,653	32,877,378
2.1	Coal		
2.2	Natural Gas		
2.3	Nuclear		
2.4	Petroleum		
2.5	Total Renewable Energy Resources		
2.5.1	Biomass/Biogas		
2.5.2	Geothermal		
2.5.3	Hydroelectric		
2.5.4	Solar		
2.5.5	Wind		
2.6	Other		

2.i	Owned Net Generation for the data year (MWh)	34,546,832	32,282,872
2.1.i	Coal	27,883,084	25,348,476
2.2.i	Natural Gas	6,301,108	6,558,782
2.3.i	Nuclear	-	-
2.4.i	Petroleum	2,062	1,226
2.5.i	Total Renewable Energy Resources	360,578	374,388

Ref. No.		Last Year - 2018	Current Year - 2019
2.5.1.i	Biomass/Biogas	-	-
2.5.2.i	Geothermal	-	-
2.5.3.i	Hydroelectric	343,548	356,903
2.5.4.i	Solar	17,030	17,485
2.5.5.i	Wind	-	-
2.6.i	Other	-	-

2.ii	Purchased Net Generation for the data year (MWh)	273,821	594,506
2.1.ii	Coal		
2.2.ii	Natural Gas		
2.3.ii	Nuclear		
2.4.ii	Petroleum		
2.5.ii	Total Renewable Energy Resources		
2.5.1.ii	Biomass/Biogas		
2.5.2.ii	Geothermal		
2.5.3.ii	Hydroelectric		
2.5.4.ii	Solar		
2.5.5.ii	Wind		
2.6.ii	Other		

3	Investing in the Future: Capital Expenditures, Energy Efficiency (EE), and Smart Meters		
3.1	Total Annual Capital Expenditures (nominal dollars)	\$1,196,000,000 PPL Electric Utilities \$1,117,000,000 Louisville Gas & Electric and Kentucky Utilities \$954,000,000 Western Power Distribution	\$1,121,000,000 PPL Electric Utilities \$1,094,000,000 Louisville Gas & Electric and Kentucky Utilities \$857,000,000 Western Power Distribution
3.2	Incremental Annual Electricity Savings from EE Measures (MWh)	547,291	538,450
3.3	Incremental Annual Investment in Electric EE Programs (nominal dollars)	\$88,137,446	\$75,824,217
3.4	Percent of Total Electric Customers with Smart Meters (at end of year)	100% PPL Electric Utilities (advanced meters)	100% PPL Electric Utilities (advanced meters)

4	Retail Electric Customer Count (at end of year)	10,649,818	10,693,596
4.1	Commercial	335,818	338,516
4.2	Industrial	6,473	6,206
4.3	Residential	2,379,206	2,396,196

Total customer count includes WPD end-users and LG&E-KU customers in other customer classes.

EMISSIONS			
Ref. No.		Last Year - 2018	Current Year - 2019
5	GHG Emissions: Carbon Dioxide (CO₂) and Carbon Dioxide Equivalent (CO₂e)		
5.1	Owned Generation		
5.1.1	Carbon Dioxide (CO ₂)		
5.1.1.1	Total Owned Generation CO ₂ Emissions (MT) ¹		26,545,123
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh)		0.82
5.1.2	Carbon Dioxide Equivalent (CO ₂ e)		
5.1.2.1	Total Owned Generation CO ₂ e Emissions (MT)	29,481,226	26,744,632
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.85	0.83
5.2	Purchased Power		
5.2.1	Carbon Dioxide (CO ₂)		
5.2.1.1	Total Purchased Generation CO ₂ Emissions (MT)		
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)		
5.2.2	Carbon Dioxide Equivalent (CO ₂ e)		
5.2.2.1	Total Purchased Generation CO ₂ e Emissions (MT)	4,656,452	4,916,945
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.44	0.43
5.3	Owned Generation + Purchased Power		
5.3.1	Carbon Dioxide (CO ₂)		
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT)		
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)		
5.3.2	Carbon Dioxide Equivalent (CO ₂ e)		
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT)	34,137,678	31,661,577
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.75	0.71
5.4	Non-Generation CO₂e Emissions		
5.4.1	Fugitive CO ₂ e emissions of sulfur hexafluoride (MT)	49,513	26,556
5.4.2	Fugitive CO ₂ e emissions from natural gas distribution (MT)	29,040	27,909

6	Nitrogen Oxide (NOx), Sulfur Dioxide (SO₂), Mercury (Hg)		
6.1	Generation basis for calculation		
6.2	Nitrogen Oxide (NOx)		
6.2.1	Total NOx Emissions (MT)	17,329	14,633
6.2.2	Total NOx Emissions Intensity (MT/Net MWh)	0.00050	0.00045
6.3	Sulfur Dioxide (SO₂)		
6.3.1	Total SO ₂ Emissions (MT)	16,698	13,487
6.3.2	Total SO ₂ Emissions Intensity (MT/Net MWh)	0.00048	0.00042
6.4	Mercury (Hg)		
6.4.1	Total Hg Emissions (kg)	71	55
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	2.06E-06	1.70E-06

¹Total Owned Generation CO₂ Emissions includes estimated emissions of 75% ownership of Trimble County units

RESOURCES			
Ref. No.		Last Year - 2018	Current Year - 2019
7	Human Resources		
7.1	Total Number of Employees	12,444	12,280
7.2	Total Number on Board of Directors/Trustees	10	9
7.3	Total Women on Board of Directors/Trustees	2	2
7.4	Total Minorities on Board of Directors/Trustees	4	3
7.5	Employee Safety Metrics		
7.5.1	Recordable Incident Rate	1.18	1.02
7.5.2	Lost-time Case Rate	0.13	0.21
7.5.3	Days Away, Restricted, and Transfer (DART) Rate	0.23	0.34
7.5.4	Work-related Fatalities	0	1

8	Fresh Water Resources		
8.1	Water Withdrawals - Consumptive (Billions of Liters/Net MWh)	0.00000164	0.00000164
8.2	Water Withdrawals - Non-Consumptive (Billions of Liters/Net MWh)	0.00001317	0.00001366

9	Waste Products		
9.1	Amount of Hazardous Waste Manifested for Disposal	790.67	473.37
9.2	Percent of Coal Combustion Products Beneficially Used	33.5%	39.8%

Gas Company ESG/Sustainability Quantitative Section

Parent Company: PPL Corporation
Operating Company(s): Louisville Gas & Electric and Kentucky Utilities (LKE)
Business Type(s): Fully regulated gas distribution utility
State(s) of Operation: Kentucky
Regulatory Environment: Regulated
Report Date: August 1, 2020

NATURAL GAS DISTRIBUTION			
Ref. No.		Last Year - 2018	Current Year - 2019
1	METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS		
1.1	Number of Gas Distribution Customers	325,785	327,940
1.2	Distribution Mains in Service		
1.2.1	Plastic (<i>miles</i>)	2,163	2,181
1.2.2	Cathodically Protected Steel - Bare & Coated (<i>miles</i>)	2,205	2,202
1.2.3	Unprotected Steel - Bare & Coated (<i>miles</i>)	0.5	0.41
1.2.4	Cast Iron / Wrought Iron - without upgrades (<i>miles</i>)	-	-
1.3	Plan/Commitment to Replace / Upgrade Remaining Miles of Distribution Mains (<i># years to complete</i>)		
1.3.1	Unprotected Steel (Bare & Coated) (<i># years to complete</i>)		
1.3.2	Cast Iron / Wrought Iron (<i># years to complete</i>)		

Ref. No.		Last Year - 2018	Current Year - 2019
2	Distribution CO₂e Fugitive Emissions		
2.1	CO ₂ e Fugitive Methane Emissions from Gas Distribution Operations (<i>metric tons</i>)	29,012.25	27,882.00
2.2	Natural Gas Throughput from Gas Distribution Operations in thousands of scf	48,152.74	46,800.43
2.3	Fugitive Methane Emissions Rate (thousand scf of Methane Emissions per thousand scf of Methane Throughput) stated as CO ₂ e using EPA's Global Warming Potential for methane	33.03	32.66

NATURAL GAS TRANSMISSION AND STORAGE

1.2	Transmission Pipelines, Blow Down Volumes, and Fugitive Emissions		
1.2.1	Total Miles of Transmission Pipeline Operated by gas utility (<i>miles</i>)	381.1	380.64
1.2.2	Volume of Transmission Pipeline Blow Down Emissions - outside storage and compression facilities:		
1.2.2.1	scf natural gas		
1.2.2.3	metric tons CO ₂ e		
1.3	Underground Natural Gas Storage Emissions		
1.3.2	Storage Compressor Station Emissions (<i>metric tons CO₂e</i>)		
1.3.3	Storage Facility Wellhead Component Fugitive Emissions (<i>metric tons of CO₂e</i>)		

2	CO₂e EMISSIONS FOR TRANSMISSION AND STORAGE COMPRESSION		
2.1	CO ₂ e Emissions for Transmission Pipelines (<i>metric tons</i>)		
2.2	CO ₂ e Emissions for Storage Facilities (<i>metric tons</i>)		

3	CONVENTIONAL AIR EMISSIONS FROM TRANSMISSION AND STORAGE COMPRESSION		
3.1	Emissions reported for all permitted sources (minor or major)		
3.1.1	NO _x (<i>metric tons per year</i>)	137.26	82.89
3.1.2	VOC (<i>metric tons per year</i>)	9.28	5.66

NATURAL GAS GATHERING AND BOOSTING

1	METHANE EMISSIONS		
1.1	Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions		
1.1.1	Total Miles of Gathering Pipeline Operated by gas utility (<i>miles</i>)		
1.1.2	Volume of Gathering Pipeline Blow Down Emissions (<i>scf</i>)		
1.1.4	Gathering Pipeline Blow-Down Emissions outside storage and compression facilities (<i>metric tons CO₂e</i>)		

2	CO₂e COMBUSTION EMISSIONS FOR GATHERING & BOOSTING COMPRESSION		
2.1	CO ₂ e Emissions for Gathering & Boosting Compression Stations (<i>metric tons</i>)		

3	CONVENTIONAL COMBUSTION EMISSIONS FROM GATHERING & BOOSTING COMPRESSION		
3.1	Emissions reported for all permitted sources (minor or major)		
3.1.1	NO _x (<i>metric tons per year</i>)		
3.1.2	VOC (<i>metric tons per year</i>)		