Welcome to your CDP Climate Change Questionnaire 2022

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Submitted on Sept. 23, 2022. Headquartered in Allentown, Pennsylvania, PPL Corporation (NYSE: PPL) and our family of companies provide essential energy services to more than 3.5 million customers. We provide an outstanding service experience for our customers, consistently ranking among the best utilities in the U.S. for customer satisfaction and reliability.

PPL is one of the largest regulated utility companies in the United States, and we understand the electricity and natural gas we provide is vital to our customers and communities. PPL Corporation is the parent company of four regulated utility companies. Through our regulated utility subsidiaries, we deliver electricity to customers in Kentucky, Pennsylvania, Rhode Island and Virginia. We also deliver natural gas in Kentucky and Rhode Island and generate power in Kentucky. In addition, PPL is the parent company to Safari Energy, LLC a leading provider of solar power solutions for commercial customers in the U.S.

As the energy grid evolves, so do we. Our companies are addressing new challenges head-on and finding ways to accommodate new technologies, distributed generation and renewable power sources on our grid. We are also taking steps to reduce our environmental impact and advance a cleaner, more balanced energy mix.

We are a positive force in the cities and towns where we do business, and the spirit of volunteerism and philanthropy runs deep at PPL. Our more than 6,700 employees generously volunteer their time and energy to help others. Together with PPL Foundation, our affiliated nonprofit organization, we partner with hundreds of nonprofit organizations and provide financial support to help develop a strong, skilled workforce; revitalize our communities; enhance education; and promote diversity, equity and inclusion.

PPL is committed to providing essential energy in extraordinary ways, and we deliver.

PPL’s strategy is focused on creating value for all stakeholders and centers on five strategic objectives to enable long-term growth and success:

- Achieve industry-leading performance in safety, reliability, customer satisfaction and operational efficiency.
- Advance a clean energy transition while maintaining affordability and reliability.
- Maintain a strong financial foundation and create long-term value for our shareowners.
- Foster a diverse and exceptional workplace.
- Build strong communities in the areas we serve.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1, 2021	December 31, 2021	Yes	3 years

C0.3

(C0.3) Select the countries/areas in which you operate.

United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Equity share

C-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

Electricity generation
Transmission
Distribution

Other divisions

Gas storage, transmission and distribution
Smart grids / demand response
Battery storage

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a Ticker symbol	PPL

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board-level committee	Systemic risk oversight is a function of the full Board, including strategic, operational, legal and regulatory. As detailed below, climate-related risks have been delegated to the Committees; In addition, the full Board receives management sustainability updates as significant issues arise.
Board-level committee	The Board's Governance, Nominating and Sustainability Committee (GNSC) oversees the company's sustainability-related policies and practices; reviews key corporate sustainability disclosures and receives regular sustainability and environmental, social and governance (ESG) reports, including discussion of key climate and clean energy trends, risks and opportunities.
Board-level committee	The Board's Audit Committee receives quarterly reports on enterprise risk management. The Audit Committee regularly reviews risk management activities, including issues related to the transition of the utility sector, such as sustainability and climate-related issues, as well as activities related to the company's financial statements and disclosures, and certain legal and compliance matters.
Board-level committee	The Board's Finance Committee annually reviews and approves a multi-year business plan and capital expenditure plan. The Finance Committee also approves major capital financing, acquisitions and divestitures. Climate-related issues are addressed in the business and capital plans.
Board-level committee	The Board's Compensation Committee reviews and approves annually the compensation structure, including ESG goals and objectives, for the company's executive officers.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding risk management policies Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The Board's GNSC oversees the Company's practices and positions to further its corporate citizenship, including sustainability, environmental and corporate social responsibility initiatives. The GNSC has regularly scheduled meetings during which sustainability strategy is discussed and climate-related issues are regularly incorporated into those discussions. The full Board receives reports from the GNSC after each GNSC meeting. Management also provides the full Board with periodic updates on climate and other ESG matters, including in conjunction with the publication of the Corporate Sustainability Report. The Board periodically reviews climate and ESG-related issues as part of strategy discussions, including carbon emissions-related goals.
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding risk management policies	The Board's Audit Committee receives quarterly reports on enterprise risk management. The Audit Committee regularly reviews risk management activities related to the company's financial statements and disclosures, certain legal and compliance matters, transition of the utility sector, and other key areas including but not limited to sustainability and climate-related issues. The full Board is also updated as important matters arise and receives reports from the Audit Committee after each Audit Committee meeting.
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies	The Board's Finance Committee annually reviews and approves the business plan, typically three years, and capital expenditure plan, typically five years. The Finance Committee also approves major capital expenditures, acquisitions and divestitures, risk management policies and potential borrowing at PPL and operating companies. Climate-related issues are addressed in the business and capital plans.

	Reviewing and guiding annual budgets Reviewing and guiding business plans Overseeing major capital expenditures, acquisitions and divestitures	The full Board is also updated as important matters arise and receives reports from the Finance Committee after each Finance Committee meeting.
Scheduled – some meetings	Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The Board's Compensation Committee annually reviews and approves the compensation structure, including ESG goals and objectives, for the Company's executive officers. The full Board is also updated as important matters arise and receives reports from the Compensation Committee after each Compensation Committee meeting.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	Experience related to oversight of climate risk and clean energy strategy.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Chief Operating Officer (COO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

Chief Financial Officer (CFO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other C-Suite Officer, please specify General Counsel	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify Operating Company Leadership	Both assessing and managing climate-related risks and opportunities	As important matters arise
Other, please specify Sr. Director - Risk	Assessing climate-related risks and opportunities	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

The Corporate Leadership Council (CEO, COO, CFO, GC, CHRO, collectively “CLC”) provides management and oversight of the company’s overall risk management practices and business strategy, including the company’s clean energy transition plans, targets and metrics. Guided by PPL’s Investor Relations, CLC and other company leaders inform our investors of the company’s business strategy, clean energy transition plans and progress toward climate goals.

Progress toward the company’s 2050 net-zero emissions goal is included in executive compensation. The Board’s Compensation Committee approved an incentive mix for CLC and other top executives that includes goals tied to priority ESG areas and climate-related performance, including goals linked to coal plant retirements, fleet electrification and building energy use.

PPL maintains a robust enterprise risk management (ERM) process that provides a business portfolio view of material risks that may impact achievement of the company’s business strategy. As part of the ERM process, operating company leadership and service groups identify, assess, monitor and report on ongoing and emerging risks, including climate-related and boarder ESG risks. This Risk Management department reports to the executive vice president and chief financial officer and oversees the ERM process. Additional management committees, including a corporate sustainability committee chaired by the Vice President – Public Affairs and Chief Sustainability Officer, ensure that PPL is effectively managing, monitoring and disclosing key ESG risk areas. CLC and operating company presidents review all corporate sustainability disclosures and receive updates and reports from ERM and sustainability management throughout the year and as important matters arise.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	In 2022, the Compensation Committee evaluated PPL's LTI mix and considered how to further link executive compensation to its future strategy, which resulted in adding earnings growth (EG) and environmental, social and governance (ESG) metrics to the LTI mix at 20% each. Priority ESG metrics are tied to climate-related performance. There are several specific goals identified in our Corporate Sustainability Report with a 2030 target, including goals linked to coal plant retirements, fleet electrification, building energy use and installation of solar arrays. Emissions associated with these activities are included in PPL's CO_2e reduction goal (net-zero by 2050). See also: https://www.pplweb.com/sustainability/climate-action/ In 2021, we added ESG to the annual discretionary component of compensation for top executives, with 10% specifically focused on environment, safety and DEI. In addition, all employees in LG&E and KU are entitled to a monetary reward for taking mass transit.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Other, please specify Designated employees	Monetary reward	Other (please specify) Management of programs and initiatives	Incentive compensation for certain employees includes management of certain programs and initiatives highlighted in this CDP response, including customer facing programs for energy efficiency and solar generation, integration and development of distributed energy resources, and alternative energy portfolio compliance.
Other, please specify	Monetary reward	Behavior change related indicator	Reimbursement for employees who take mass transit to work.

All LG&E and KU employees			
Corporate executive team	Monetary reward	Other (please specify) Management of programs and initiatives	Progress toward the company's 2050 net-zero emissions goal is included in executive compensation. The Board's Compensation Committee approved an incentive mix for CLC and other top executives that includes goals tied to priority ESG areas and climate-related performance, including goals linked to coal plant retirements, fleet electrification and building energy use.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	2	
Medium-term	3	5	
Long-term	6	28	Integrated Resource Plan (IRP) and T&D planning horizon is typically a 15-year timeframe; climate assessment and CO_2e goal are 28 years from the date of this response (to 2050).

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

We define substantive impact as risks or opportunities driven by factors such as shareowner and consumer preferences, market and regulatory changes that alone or in combination can drive a substantial change in the Company's business model, including its services, and portfolio of assets.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term

Description of process

The company maintains a robust enterprise risk management process that provides a business portfolio view of material risks that may impact achievement of the company's business strategy. As part of the Enterprise Risk Management (ERM) process, representatives from the company's operating companies and service groups identify, assess, monitor and report on ongoing and emerging risks, including climate-related and broader ESG risks. The ERM process is overseen by the Chief Financial Officer, with PPL Corporation's Board of Directors receiving quarterly updates. PPL's full board reviews overall strategy and risks, with the Audit Committee receiving ERM reports and the Board GNSC receiving regular ESG reports with a discussion of key risks and opportunities.

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Long-term

Description of process

Across our enterprise, PPL's operating companies conduct robust transmission and distribution planning each year to maintain compliance with rigorous federal, state and industry standards, enable us to deliver energy safely and reliably, and position PPL to

support the clean energy transition.

PPL's planning strengthens grid resilience to reduce damage and speed recovery from severe weather impacts that could result from climate change. It also incorporates smart grid technology to reliably and efficiently integrate increased Distributed Energy Resources (DERs), including renewable generation and energy storage.

Value chain stage(s) covered

Direct operations

Risk management process

A specific climate-related risk management process

Frequency of assessment

Every three years or more

Time horizon(s) covered

Long-term

Description of process

We have assessed climate risk using a long-term view (2050 endpoint). We have conducted a comprehensive climate assessment, including a scenario analysis consistent with keeping global warming to no more than 1.5°C, and we followed the recommendation of the Task Force on Climate-Related Financial Disclosures.

As a result of our actions over the past decade, PPL has reduced its risk associated with climate change. The company's portfolio is now heavily weighted toward electricity transmission and distribution. We believe there will be significant future investment opportunities in our electricity delivery infrastructure and cleaner energy resources.

As PPL looks to the future, we will continue to take steps to identify, understand and manage risks and opportunities associated with climate change and the transition to a cleaner energy future. This includes evaluating different options to inform business strategy, using modeling and input from our internal experts and third parties, as needed, and reviewing assessments with senior management and our Board on an ongoing basis.

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Every three years or more

Time horizon(s) covered

Long-term

Description of process

LG&E and KU prepare an Integrated Resource Plan (IRP) every three years and submit the plan to the Kentucky Public Service Commission (KPSC). The planning horizon is 15 years. The primary focus of resource planning is risk management. Key categories of risk stem from uncertainties related to the way customers use electricity, the performance of generation units, the price of fuel and other commodities, and the future impact of new state and federal regulations.

Through the IRP process, LG&E and KU model the most reliable and affordable way to meet current and future demand, including considering demand-side management, energy efficiency, renewable resources, environmental policies and carbon pricing.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	As investor-owned utilities are heavily regulated, PPL's ERM process, as well as compliance risk management processes, consider the risks and impacts of a wide variety of state and federal regulations, many of which are climate-related and can have material impact (both as risks as well as opportunities) to the company.
Emerging regulation	Relevant, always included	PPL operates in a dynamic regulatory environment in all of its geographic locations and carefully monitors evolving and emerging legislation and regulations at the state and federal levels, including renewable and clean energy standards, carbon cap-and-trade, energy efficiency requirements, EPA regulation of greenhouse gases and SEC disclosure requirements.
Technology	Relevant, always included	PPL's ERM process includes analysis of emerging technologies that present risks and opportunities. These include energy storage, electric vehicles, renewable energy, smart energy grids, small nuclear reactors and carbon capture and sequestration.
Legal	Relevant, always included	Legal challenges, particularly to new regulations and company-specific regulatory approvals, can result in significant changes in risk and must always be considered in the company's risk assessments.
Market	Relevant, always included	The demand for power and natural gas are influenced by economic conditions, consumer preferences and weather and factored into company forecasts, programs and initiatives.
Reputation	Relevant, always included	PPL's customers, investors and other stakeholders are increasingly interested in PPL's carbon footprint, and PPL's risk assessments factor stakeholder input into long-term investment decisions.

Acute physical	Relevant, always included	Increasingly frequent severe weather is presenting physical risks to PPL's system, presenting risks to reliability that must be considered as we prioritize infrastructure-related investments. We are also monitoring supply chain risk and taking steps to mitigate potential disruptions, including diversifying suppliers.
Chronic physical	Relevant, always included	Long-term, ambient temperature changes can affect PPL's facilities and operations, as well as demand for electricity. PPL considers long-term temperature trends in its operational and business planning. We are also monitoring supply chain risk and taking steps to mitigate potential disruptions, including diversifying suppliers.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Regulations and policies from renewable mandates, permitting and siting, and utility ratemaking can impact operations. Specifically considering regulations that impose a cost of carbon either through a cap-and-trade program, clean energy standard or a tax, such policies would result in additional operational costs to our power delivery and power generation operations with the greatest potential impact in our Kentucky power generation operations.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

450,000,000

Potential financial impact figure – maximum (currency)

750,000,000

Explanation of financial impact figure

Proxy for financial impact calculated using PPL's 2021 domestic Scope 1 emissions and the carbon price used for analysis in LG&E and KU's Integrated Resource Plan of $15 and $25 per short ton (rounded). These carbon prices are based on the RGGI and CA markets, the two largest CO_2 markets in the U.S.

A carbon price is not currently contemplated in Kentucky. The financial impact to the company would be anticipated to be low as all prudent costs, including those to comply with regulations, are included in utility rates.

Cost of response to risk

650,000

Description of response and explanation of cost calculation

Proxy for cost of response is total 2021 federal lobbying expenditures. One of the ways that PPL manages the risk of emerging regulation and legislation is through direct engagement with public officials and in partnership with our industry associations to educate and inform about policy implications and solutions.

Comment

Financial impact and cost figure are estimates and are provided here as examples of potential implications of climate-related policy and regulation.

The time horizon for this risk is based on Kentucky's regulatory environment as the greatest potential for financial impact would be in Kentucky.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Market

Changing customer behavior

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

This risk includes shifts in demand due to changing consumer preferences, policy changes and evolving technologies that facilitate new entrants into the market.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

2,500,000

Potential financial impact figure – maximum (currency)

7,300,000

Explanation of financial impact figure

Proxy for financial impact is total revenue impact to our Kentucky operations based upon current and future forecasts of reduced sales from distributed energy resources.

Financial impact is based upon current regulation and tax benefits.

Cost of response to risk

Description of response and explanation of cost calculation

There are a multitude of ways that PPL is mitigating this risk, including enabling the deployment of renewables and distributed energy resources through direct investments, actively pursuing clean energy options for our customers and enabling greater electrification. We have not assessed the aggregate cost of these and other mitigation efforts, many of which also represent opportunities for the company as noted in C2.4a.

Comment

Financial impact is an estimate and is provided here as an example of a potential negative market impact. LG&E and KU's sales are used as a proxy since that is the PPL

company that provides energy supply, Over the long term, grid alternatives could negatively impact customer load and sales revenue for all operating companies.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Cyclone, hurricane, typhoon

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Increasingly frequent and severe storms producing high winds and precipitation, and extreme heat and cold can disrupt PPL's operations, increase costs and hurt the reliability of PPL's service in a variety of ways. For example, increased flooding and severe storms could damage equipment or disrupt fuel supply, fallen trees and debris can lead to outages, bring down power lines and block access for restoration efforts.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

7,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Proxy for financial impact is PPL Electric’s unrecoverable storm expense of Superstorm Sandy, the most expensive single storm event experienced across the enterprise in the last decade. Total storm expense (O&M) was $51.4 million dollars before insurance coverage.

Cost of response to risk

2,000,000,000

Description of response and explanation of cost calculation

Mitigation of physical risk entails a variety of measures across our generation, transmission and distribution systems. Specific to severe storms with the potential for high winds and flooding damage, all of PPL's operating companies monitor their reliability performance and conduct planning analyses of their systems, looking at trends in weather, vegetation management and other impacts to system reliability. Based on these analyses, PPL made multi-billion-dollar investments in infrastructure improvements, the bulk of which is for investments to modernize and strengthen its grid to be more resilient to storm impacts and other stresses on the system. Proxy for cost of response represents 2021 capital investments from Pennsylvania and Kentucky utilities.

Comment

Financial impact and cost figure are estimates and are provided here as examples of potential implications of physical risks.

Magnitude of financial impact is assessed as low due to ability of company to recover costs of storms. PPL will be further assessing this risk with the acquisition of Rhode Island Energy.

PPL recently joined EPRI's Climate READi initiative to address energy system climate resilience and adaptation to increasing extreme weather events.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of climate adaptation, resilience and insurance risk solutions

Primary potential financial impact

Increased value of fixed assets

Company-specific description

Additional enhancements to the grid are necessary to make it stronger, more resilient and flexible to withstand increasingly frequent severe storm events, as well as to enable the connection of distributed renewable and low-carbon generation sources. Such projects support long-term earnings growth and have typically offered favorable returns on investment.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

188,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The magnitude of financial impact is a proxy reflecting the return expected on investments needed to enhance and modernize the grid, including transmission and distribution enhancements. The 2021 average authorized ROE for electric utilities of 9.38% was used as a proxy.

Cost to realize opportunity

2,000,000,000

Strategy to realize opportunity and explanation of cost calculation

All of PPL’s operating companies monitor their reliability performance and conduct planning analyses of their systems, looking at trends in weather, vegetation management and other impacts to system reliability. Proxy for cost to realize represents 2021 capital investments from Pennsylvania and Kentucky utilities.

Comment

Opportunity to earn a return on investments in modernizing and strengthening the grid in all of PPL's operating areas. Investments are recovered through customer rates. It is also expected that new customer offerings, products and services can create additional value.

The financial impact of PPL's generation fleet transition will be dependent upon future planning and is not included in the financial impact or cost to realize figures.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Ability to diversify business activities

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Decarbonization of the economy will lead to increased electrification, directly impacting electricity sales and supportive investments. Additionally, increased demand for renewable energy and declining cost of renewables provide new investment opportunities in the unregulated and regulated renewable and distributed energy space, including solar generation and energy storage solutions driven by customer demand, favorable policies, and retirement of existing coal plants.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Not currently assessed but expected to be potentially significant.

Opportunities exist across the enterprise to support electrification and customer solutions

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Cost to realize not specifically calculated. Entails a key pillar of our clean energy strategy to enable customer decarbonization.

Comment

PPL leverages our utilities leading performance to expand and modernize the grid and integrate utility scale renewables and distributed energy resources.

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

Yes, we have a transition plan which aligns with a 1.5°C world

Publicly available transition plan

Yes

Mechanism by which feedback is collected from shareholders on your transition plan

We have a different feedback mechanism in place

Description of feedback mechanism

PPL's clean energy transition strategy, including our net-zero by 2050 carbon emissions goal and interim targets, is discussed with our shareowners in one-on-one meetings, quarterly earnings calls, company reports and most recently during an investor day presentation.

We understand that we play a key role in supporting economywide decarbonization in addition to reducing our direct carbon emissions. We believe that PPL's clean energy transition strategy is consistent with long-term objectives to keep global warming to well below 2-degrees Celsius and efforts to limit pre-industrial temperature increases to 1.5-degrees Celsius. We believe our clean energy transition strategy also recognizes the energy needs of our customers, including access to reliable and affordable electricity and gas. PPL's view of our clean energy transition plan alignment is informed by our

assessment of our generation-related greenhouse gas emissions trajectory on an absolute basis as compared to an international 1.5-degree pathway. While there are limitations to comparing an individual company's carbon emissions against a global pathway, PPL's 2021 Climate Assessment Report includes scenario planning comparing a range of expected absolute emissions to an IPCC 1.5-degree pathway. Our modelling of our generation fleet showed a range of emissions reductions with historic and projected absolute emissions reductions compared to the IPCC's P3 pathway's assumed reductions (see page 21 of PPL's Climate Assessment Report).

Frequency of feedback collection

More frequently than annually

Attach any relevant documents which detail your transition plan (optional)

https://www.pplweb.com/wp-content/uploads/2022/01/PPL_Corp-2021-Climate-Assessment_2022-01-04.pdf

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios Customized publicly available transition scenario	Company-wide	1.5ºC	Our 2021 climate assessment report takes a company-wide view of transition scenarios including a scenario consistent with limiting global temperature to 1.5°C. As emissions from generation resources that we own represent the largest component of PPL's carbon emissions footprint and corporate-wide CO_2e reduction goal, much of the 2021 analysis was focused on three distinct future generation-related transition scenarios that consider PPL's owned generation emissions and future resource mix: • A Current Policies Scenario establishing PPL's future carbon emissions trajectory and potential range of reductions assuming no new regulatory requirements. • A 1.5°C Scenario benchmarking the range of

			reductions against an Intergovernmental Panel on Climate Change (IPCC) global climate mitigation pathway. • A Fast Transition Future Policy Scenario benchmarking the range of reductions and forecasted resource mix against the expected contribution pathway for the power sector under the U.S. Nationally Determined Contributions (NDC) to the Paris Agreement. These scenarios are designed to describe possible future states and potential implications for PPL within those future states. While grounded in plausible assumptions, PPL's scenarios and forecasts are not specific predictors of the future and do not constitute future business plans. The results of our climate scenario analysis and assessment are shown in the section of 2021 Climate Assessment titled, "Results and Implications for Our Business."
Transition scenarios Customized publicly available transition scenario	Company-wide	1.5ºC	Across our enterprise, PPL's operating companies conduct T&D planning each year to maintain compliance with federal, state and industry standards; enable us to deliver energy safely and reliably; and position PPL to support the clean energy transition. PPL's planning focuses on strengthening grid resilience to reduce damage and speed recovery from severe weather impacts that could result from climate change. It also incorporates smart grid technology to reliably and efficiently integrate increased DERs, including renewable generation and energy storage. PPL Electric and LG&E and KU use a five-year asset planning model to prioritize T&D capital allocation, as well as operation and maintenance activities. PPL Electric also projects a 10-year plan that is submitted to the PJM Interconnection, the regional transmission operator, for inclusion in PJM's annual Regional Transmission Expansion Plan (RTEP) process. RTEP identifies system additions and improvements needed to keep power flowing reliably throughout the PJM region. LG&E and KU develop a 10-year Transmission

			Expansion Plan, coordinating closely with their independent operator, TranServ International Incorporated; their Stakeholder Planning Committee; and their reliability coordinator, the TVA, to ensure the companies' ability to meet existing and future requirements. In addition, they actively participate in the Southeast Regional Transmission Planning process. Planning approach focused on requirements for Kentucky IRP - identification of future scenarios to reliably meet load at the lowest cost. While not directly assessed against a transition pathway as part of the IRP process, the scenario planning was an input to PPL's Climate Assessment Report scenario analysis. T&D planning considers a wide variety of factors, including load forecasts, facility ratings, expected generation, data received from customers regarding their load growth, inputs from severe weather events, and insights gained from analyzing the increasing amount of data we can collect to monitor changing conditions on the energy grid and assess the adequacy of our systems and equipment. We use LIDAR technology to map trees along transmission rights-of-way and predictive data science to map vegetation risk and better target our efforts to improve reliability without increasing costs. In addition, we can monitor waveforms recorded by relays to proactively identify when electrical equipment is at a higher risk of failure.
Transition scenarios Customized publicly available transition scenario	Business division	Unknown	In Kentucky, LG&E and KU routinely evaluate the best ways to serve customers under a wide range of scenarios. The IRP process begins with 30-year forecasts of customers' energy needs. LG&E and KU use information from a variety of sources to develop reasonable long-term forecasts that reflect not only the quantity of electricity required, but also the hour-by-hour demand. The companies' load forecast models consider such factors as weather conditions, daily usage patterns, future economic activity, population, and potential adoption rates of demand-side management programs, electric vehicles, private solar generation, energy efficiency measures and more.

			Seasonal and daily variability of customers' energy needs drive the development of a generation portfolio that can reliably meet customers' needs in every hour of the year and under a broad range of weather conditions. For example, over the course of the year, approximately 50% of customers' energy needs occur at night when solar power is not generating electricity, with up to 65% occurring at night during the winter months. Considering all the above factors, LG&E and KU submit an IRP to the Kentucky Public Service Commission (KPSC) once every three years, as required. However, the companies annually review and update their plan to reflect the latest information and forecasts and must affirm the adequacy of their resources annually in filings with the KPSC. As a result of LG&E and KU's attention to planning and maintenance, the companies have demonstrated sustained excellence in generation reliability in recent years, reflecting top-quartile performance in its equivalent forced outage rates that are well below industry averages as tracked by ReliabilityFirst Corporation. Seasonal and daily variability of customers' energy needs drive the development of a generation portfolio that can reliably meet customers' needs in every hour of the year and under a broad range of weather conditions

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

PPL uses scenario analysis for system planning as discussed in detail in section 3.2a. Additionally, PPL used transition climate scenario analysis to benchmark our progress to reduce the company's generation-related carbon emissions against 1.5°Celsius emission pathways and Paris Agreement-aligned commitments.

Results of the climate-related scenario analysis with respect to the focal questions

A full description of that analysis and findings can be found on pages 16-22 of PPL's Climate Assessment Report (https://www.pplweb.com/wp-content/uploads/2022/01/PPL_Corp-2021-Climate-Assessment_2022-01-04.pdf).

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	The reliability of PPL's electric service is at risk of being impacted by increasingly frequent severe storm events as well as the increase in distributed energy resources and private renewable energy. This poses a risk of adversely affecting PPL's reputation and future rate recovery but also presents the opportunity to invest in modernizing the grid with more storm-resistant materials, increased redundancies, automated systems and more data-driven management of the grid. PPL is also making enhancements necessary to meet electricity demand over the longer-term to support the adoption of electricity-fueled transportation. In addition to grid enhancements, PPL is offering new types of products and services in response to increasing public desire for renewable energy. LG&E and KU's community solar program - Solar Share - is more than 50% subscribed. The subscription-based Solar Share program is a cost-effective option available to residential, business and industrial customers who want to support solar energy. Upon completion, the Solar Share facility will have a total capacity of 4 megawatts. PPL Electric's user-friendly Renewable Energy Connection website makes it easier for customers to apply to connect solar panels and other generation systems to the grid. Since deploying the portal in 2018, the company has received 5,000 applications for connection, processing 90% of those within 24 hours.
Supply chain and/or value chain	Yes	Through PPL's Supplier Code of Conduct, suppliers have an obligation to carry out all of their activities on our behalf in ways that preserve and promote a clean, safe and healthy

		environment, which includes understanding and abiding by our environmental policies and the environmental laws and regulations applicable to the locations in which we operate. PPL Electric requires electricity suppliers to provide sufficient renewable energy credits to allow PPL Electric to meet Pennsylvania's Alternative Energy Portfolio Standards requirements. Additionally, PPL Electric is purchasing remanufactured furniture from its furniture manufacturer and supplier and intends to purchase remanufactured office panels going forward. LG&E and KU expects to retire 1,000 megawatts of coal-fired capacity in Kentucky by 2028. The companies issued an RFP for replacement generation, including requests for solar energy and battery storage. In 2020, LG&E and KU executed a 100 MW purchase power agreement ("PPA") with a developer for a new solar facility expected to be operational in early 2023. In late 2021, LG&E and KU executed a PPA for an additional 125 MW of solar generation expected to be operational in 2025. These PPAs support our customers' interest in renewable generation and will enable us to meet our obligations to serve our Kentucky customers' energy needs in the most reliable, least-cost fashion. The state of Rhode Island has adopted aggressive clean energy goals including reaching net-zero carbon emissions by 2050 and achieving 100% renewable energy by 2033. Additionally, In July 2022, Rhode Island passed an amendment to the Affordable Clean Energy Security Act (ACES) that requires RIE to issue a request for proposals (RFP) for at least 600 MW but no greater than 1,000 MW of newly developed offshore wind capacity no later than October 15, 2022.
Investment in R&D	Yes	PPL is a long-time member of the Electric Power Research Institute (EPRI), which conducts research and development on a variety of electric sector topics, including climate change, carbon capture and electrification. PPL is a participant in research projects to advance low-carbon technologies. This includes the Low-Carbon Resources Initiative (LCRI) to accelerate the development and demonstration of low-carbon energy technology. PPL's CEO chairs EPRI's board working group for the LCRI. PPL has committed to invest up to $50 million across

		Energy Impact Partner's (EIP) investment platform aimed at accelerating the shift to a low-carbon future and driving commercial-scale solutions needed to deliver deep, economy-wide decarbonization. Collaboration with EIP is expected to provide PPL greater visibility into emerging technologies that can be leveraged to advance the clean energy transition. PPL Electric is participating in the Keystone Solar Future Project which leverages several different grid technologies to develop a distributed system platform that bridges the gap between existing and future technologies by monitoring, controlling, and optimizing high penetration of solar generation. Additionally, PPL Electric is working to carry out a 500-customer pilot on at least 10 distribution circuits. LG&E and KU have created an Energy Storage Research and Demonstration Site to continue developing large-scale battery storage technologies. In 2021, LG&E, KU and the University of Kentucky Center for Applied Energy Research (CAER) also launched an innovative partnership to study the capture of carbon dioxide emissions at natural gas combined-cycle power plants. LG&E and KU previously partnered with CAER on the development of a pilot-scale carbon capture unit at the E.W. Brown coal-fired generation station.
Operations	Yes	Operational impacts are primarily related to enhancing and managing the grid in all of PPL's service areas to meet the growing demand for renewable energy, and to address physical risks from increasingly frequent severe storms. Generation planning in KY balances reliability and affordability in transition to clean energy.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures	PPL has adopted a clean energy transition strategy that positions the company to be a clean energy leader in the regions that we serve. Our transition strategy is centered around four key areas that we believe will enable us to advance new opportunities for the company and help deliver a net-zero economy by 2050:

	Capital allocation Acquisitions and divestments Access to capital Assets Liabilities	• Decarbonize our generation. • Decarbonize our non-generation operations. • Drive Digital Innovation and R&D to Enable New Technologies • Position the Grid as an Enabler for Clean Energy Resources and Drive Energy Efficiency and Demand Side Management. Our commitment to achieve net-zero carbon emissions by 2050 is backed by the actions that we are and will continue to take to support a low-carbon energy system that is affordable and reliable for our customers and provides the time needed for technology to advance. Our rigorous capital expenditure program is designed to deliver long-term value for our stakeholders and align with our corporate strategy, including our clean energy strategy described elsewhere in this report. We have invested more than $30 billion over the past decade across our energy grid to strengthen grid resilience in the face of future storms, reduce power plant emissions and prepare networks to better integrate more distributed energy resources, including renewables and energy storage. As a result of PPL's strategic repositioning as described below, we continue to evaluate additional capital investment opportunities in additional regulated T&D capital investments through 2025 to maintain and improve grid resiliency and reliability, and support grid modernization. Advancing a cleaner energy future and reducing the largest source of PPL's direct emissions involves investing in renewable and non-emitting generation. PPL's only fossil-fueled power plants are located in Kentucky, where LG&E and KU have plans to economically retire aging power plants and replace them with lower-carbon and non-emitting generation. Based on the current retirement schedule, we expect our coal capacity to be reduced from just over 4,700 megawatts in 2020 to approximately 550 megawatts in 2050 based on expected retirement dates; and, the company has committed to not burn unabated coal by 2050. Acquisitions and divestments In March 2021, PPL announced it entered into a share purchase agreement to sell PPL's U.K. utility business, Western Power Distribution (WPD), to National Grid. The sale was completed in June 2021. On the same day, PPL also announced its planned acquisition of Rhode Island's primary electric and gas utility, The Narragansett Electric Company, from National Grid. The acquisition was completed in May 2022 with the utility rebranded as Rhode Island Energy (RIE). The state of Rhode Island has adopted aggressive clean energy goals including reaching net-zero carbon emissions by 2050 and achieving 100% renewable energy by 2033. Additionally, In July 2022, Rhode Island

		passed an amendment to the Affordable Clean Energy Security Act (ACES) that requires RIE to issue a request for proposals (RFP) for at least 600 MW but no greater than 1,000 MW of newly developed offshore wind capacity no later than October 15, 2022. In Kentucky, the companies expect to retire 2,000 megawatts of coal-fired power plants by 2034, with at least 1,000 megawatts by 2028. In 2020, LG&E and KU executed a 100 MW purchase power agreement (PPA) with a developer for a new solar facility expected to be operational in early 2023. In late 2021, LG&E and KU executed a PPA for an additional 125 MW of solar generation expected to be operational in 2025. These PPAs support our customers' interest in renewable generation and will enable us to meet our obligations to serve our Kentucky customers' energy needs in the most reliable, least-cost fashion.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 3

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Base year

2010

Base year Scope 1 emissions covered by target (metric tons CO2e)

60,906,564

Base year Scope 2 emissions covered by target (metric tons CO2e)

73,575

Base year Scope 3 emissions covered by target (metric tons CO2e)

1,597,157

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

62,577,296

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

97.3

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

0.1

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

2.6

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

99.9

Target year

2035

Targeted reduction from base year (%)

70

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

18,773,188.8

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

26,413,903

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

32,199

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

219,132

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

26,665,234

% of target achieved relative to base year [auto-calculated]

81.9833214179

Target status in reporting year

Revised

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

PPL's original 2050 goal was publicly announced in January 2018 and revised in 2020. In August 2021, PPL set a new goal to achieve net-zero carbon emissions by 2050 and established new interim targets – 70% reduction by 2035 and 80% reduction by 2040 from a 2010 baseline

Regarding calculation of Scope 2 emissions, LG&E and KU's emissions are calculated using a hybrid of location- based and market-based factors. LG&E and KU have access to location-based factors for power procured from specific contracted units. LG&E and KU also purchase a small amount of power in the wholesale market. Emissions associated with all electric and gas use in buildings across all operations (LG&E, KU, and PPL Electric) are calculated based on market-based factors.

LG&E and KU Purchased Power for End-Use customers has been reclassified from Scope 2 to Scope 3 emissions and will remain part of PPL's 2050 goal.

Plan for achieving target, and progress made to the end of the reporting year

To help achieve these reductions and support our net-zero-by 2050 goal, PPL has a four-part clean energy strategy aimed at decarbonizing our owned generation and operations, bringing smart grid technology and renewable energy solutions to our customers, and investing in research and development necessary to support the deployment of affordable and reliable clean energy technologies.

Our commitment to achieve net-zero carbon emissions by 2050 is backed by the actions that we are and will continue to take to support a low-carbon energy system that is affordable and reliable and provides the time needed for technology to advance. As the majority of our carbon emissions come from our Kentucky generation operations, the

expected retirement of aging coal-fired generation and replacement with clean and non-emitting resources will have the greatest impact to PPL's goal-related emissions.

List the emissions reduction initiatives which contributed most to achieving this target

Target reference number
Abs 2

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2
Scope 3

Scope 2 accounting method
Market-based

Scope 3 category(ies)
Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Base year
2010

Base year Scope 1 emissions covered by target (metric tons CO2e)
60,906,564

Base year Scope 2 emissions covered by target (metric tons CO2e)
73,575

Base year Scope 3 emissions covered by target (metric tons CO2e)
1,597,157

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
62,577,296

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
97.3

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

0.1

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

2.6

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

99.9

Target year

2040

Targeted reduction from base year (%)

80

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

12,515,459.2

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

26,413,903

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

32,199

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

219,132

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

26,665,234

% of target achieved relative to base year [auto-calculated]

71.7354062406

Target status in reporting year

Revised

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

PPL's original 2050 goal was publicly announced in January 2018 and revised in 2020. In August 2021, PPL set a new goal to achieve net-zero carbon emissions by 2050 and established new interim targets – 70% reduction by 2035 and 80% reduction by 2040 from a 2010 baseline.

Regarding calculation of Scope 2 emissions, LG&E and KU's emissions are calculated using a hybrid of location based and market-based factors. LG&E and KU have access to location-based factors for power procured from specific contracted units. LG&E and KU also purchase a small amount of power in the wholesale market. Emissions associated with all electric and gas use in buildings across all operations (LG&E, KU, and PPL Electric) are calculated based on market-based factors.

LG&E and KU Purchased Power for End-Use customers has been reclassified from Scope 2 to Scope 3 emissions and will remain part of PPL's 2050 goal.

Plan for achieving target, and progress made to the end of the reporting year

To help achieve these reductions and support our net-zero-by 2050 goal, PPL has a four-part clean energy strategy aimed at decarbonizing our owned generation and operations, bringing smart grid technology and renewable energy solutions to our customers, and investing in research and development necessary to support the deployment of affordable and reliable clean energy technologies.

Our commitment to achieve net-zero carbon emissions by 2050 is backed by the actions that we are and will continue to take to support a low-carbon energy system that is affordable and reliable and provides the time needed for technology to advance. As the majority of our carbon emissions come from our Kentucky generation operations, the expected retirement of aging coal-fired generation and replacement with clean and non-emitting resources will have the greatest impact to PPL's goal-related emissions.

List the emissions reduction initiatives which contributed most to achieving this target

Target reference number

Abs 3

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 1
Scope 2
Scope 3

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Base year
2010

Base year Scope 1 emissions covered by target (metric tons CO2e)
60,906,564

Base year Scope 2 emissions covered by target (metric tons CO2e)
73,575

Base year Scope 3 emissions covered by target (metric tons CO2e)
1,597,157

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
62,677,269

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
97.3

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
0.1

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
2.6

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
99.9

Target year
2050

Targeted reduction from base year (%)
100

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
0

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
26,413,903

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
32,199

Scope 3 emissions in reporting year covered by target (metric tons CO2e)
219,132

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

26,665,234

% of target achieved relative to base year [auto-calculated]

57.4562924878

Target status in reporting year

Revised

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

PPL's original 2050 goal was publicly announced in January 2018 and revised in 2020. In August 2021, PPL set a new goal to achieve net-zero emissions by 2050 and established new interim targets – 70% reduction by 2035 and 80% reduction by 2040.

Regarding calculation of Scope 2 emissions, LG&E and KU's emissions are calculated using a hybrid of location based and market-based factors. LG&E and KU have access to location-based factors for power procured from specific contracted units. LG&E and KU also purchase a small amount of power in the wholesale market. Emissions associated with all electric and gas use in buildings across all operations (LG&E, KU, and PPL Electric) are calculated based on market-based factors.

LG&E and KU Purchased Power for End-Use customers has been reclassified from Scope 2 to Scope 3 emissions and will remain part of PPL's 2050 goal.

Plan for achieving target, and progress made to the end of the reporting year

To help achieve these reductions and support our net-zero-by 2050 goal, PPL has a four-part clean energy strategy aimed at decarbonizing our owned generation and operations, bringing smart grid technology and renewable energy solutions to our customers, and investing in research and development necessary to support the deployment of affordable and reliable clean energy technologies.

Our commitment to achieve net-zero carbon emissions by 2050 is backed by the actions that we are and will continue to take to support a low-carbon energy system that is affordable and reliable and provides the time needed for technology to advance. As the majority of our carbon emissions come from our Kentucky generation operations, the expected retirement of aging coal-fired generation and replacement with clean and non-emitting resources will have the greatest impact to PPL's goal-related emissions.

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production
Net-zero target(s)
Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2007

Target coverage
Business division

Target type: energy carrier
Electricity

Target type: activity
Consumption

Target type: energy source
Renewable energy source(s) only

Base year
2007

Consumption or production of selected energy carrier in base year (MWh)

% share of low-carbon or renewable energy in base year
5.7

Target year
2021

% share of low-carbon or renewable energy in target year
18

% share of low-carbon or renewable energy in reporting year
18

% of target achieved relative to base year [auto-calculated]

100

Target status in reporting year

Achieved

Is this target part of an emissions target?

No

Is this target part of an overarching initiative?

Other, please specify

Pennsylvania Act 129

Please explain target coverage and identify any exclusions

PPL Electric's PA Alternative Energy Portfolio Standard (AEPS) for CY2021 is 18%, which we achieved. The final target under the PA AEPS Act was achieved in CY2020 – the 2021 target matched the 2020 target.

The 2021 target was fully achieved through competitive solicitation for PA-eligible RECs and approved by the PA Public Utility Commission.

Plan for achieving target, and progress made to the end of the reporting year

List the actions which contributed most to achieving this target

A combination of wholesale electric bundled service (which included PA AECs) and separate, competitive solicitation for PA AECs.

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2016

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Energy consumption or efficiency

MWh

Target denominator (intensity targets only)

Base year
2021

Figure or percentage in base year

Target year
2026

Figure or percentage in target year
1,250,157

Figure or percentage in reporting year
187,891

% of target achieved relative to base year [auto-calculated]

Target status in reporting year
Revised

Is this target part of an emissions target?
No

Is this target part of an overarching initiative?
Other, please specify
Part of PPL's enterprise carbon reduction goal

Please explain target coverage and identify any exclusions
PPL Electric has achieved Act 129 Phase 3 targets. The PPL Electric Phase IV plan is currently in effect (effective 2021), having been approved by the Pennsylvania Public Utility Commissions (PUC).

Plan for achieving target, and progress made to the end of the reporting year
PPL Electric plans to achieve its targets using a portfolio of comprehensive programs, targeting customers in the residential, low-income, and non-residential sectors, on a 5-year budget of $307 MM.

List the actions which contributed most to achieving this target

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Target reference number
Oth 2

Year target was set
2020

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon vehicles

Other, please specify

Carbon reduction by utilizing electric vehicles (MT of CO_2e)

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

11,084

Target year

2030

Figure or percentage in target year

1,600

Figure or percentage in reporting year

10,523

% of target achieved relative to base year [auto-calculated]

5.9152256432

Target status in reporting year

Revised

Is this target part of an emissions target?

Yes, part of PPL's goal to achieve net-zero emissions by 2050

Is this target part of an overarching initiative?

Other, please specify

Part of PPL’s enterprise carbon reduction goal

Please explain target coverage and identify any exclusions

Developed in 2021 and publicly announced in April 2022, PPL Electric set a goal to electrify 50% of medium/heavy duty vehicles by 2030; 100% of light-duty vehicles and indoor forklifts by 2030; and converting 80% of heavy-duty vehicles with electric lift technology (ePTO) by 2025.

Plan for achieving target, and progress made to the end of the reporting year

PPL's plans include converting light-duty vehicles from carbon-based fuels using a combination of fully electric vehicles or plug-in hybrids. For heavy-duty vehicles, electric lift technology uses battery power to operate the boom, bucket and lifts used by lineworkers, reducing the need for engine idling. This reduces fuel consumption and maintenance costs and minimizes job site noise. Fuel consumption is reduced by as much as a gallon of diesel fuel per hour of eliminated idling.

List the actions which contributed most to achieving this target

Target reference number

Oth 3

Year target was set

2021

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon vehicles

Other, please specify

Carbon reduction by utilizing electric vehicles (MT of CO_2e)

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

14,654

Target year

2030

Figure or percentage in target year

2,800

Figure or percentage in reporting year

14,459

% of target achieved relative to base year [auto-calculated]

1.6450143412

Target status in reporting year

Revised

Is this target part of an emissions target?

Yes, part of PPL's goal to achieve net-zero emissions by 2050

Is this target part of an overarching initiative?

Other, please specify

Part of PPL's enterprise carbon reduction goal

Please explain target coverage and identify any exclusions

Developed in 2021 and publicly announced in April 2022, LG&E and KU set a goal to electrify 50% of medium/heavy duty vehicles by 2030; 100% of light-duty vehicles and indoor forklifts by 2030; and converting 80% of heavy-duty vehicles with electric lift technology (ePTO) by 2030.

Plan for achieving target, and progress made to the end of the reporting year

PPL's plans include converting light-duty vehicles from carbon-based fuels using a combination of fully electric vehicles or plug-in hybrids. For heavy-duty vehicles, electric lift technology uses battery power to operate the boom, bucket and lifts used by lineworkers, reducing the need for engine idling. This reduces fuel consumption and maintenance costs and minimizes job site noise. Fuel consumption is reduced by as much as a gallon of diesel fuel per hour of eliminated idling.

List the actions which contributed most to achieving this target

Target reference number

Oth 4

Year target was set

2021

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon buildings

Other, please specify

Reduction of carbon emissions (MT of CO_2e)

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year
24,192

Target year
2030

Figure or percentage in target year
15,000

Figure or percentage in reporting year
18,626

% of target achieved relative to base year [auto-calculated]
60.5526544822

Target status in reporting year
New

Is this target part of an emissions target?
Yes, part of PPL's goal to achieve net-zero emissions by 2050

Is this target part of an overarching initiative?
Other, please specify
Part of PPL’s enterprise carbon reduction goal

Please explain target coverage and identify any exclusions
PPL will undertake facilities planning to reduce emissions associated with our electric and gas use, including increasing renewables consumption for our owned buildings. We have already begun to identify opportunities to serve our energy needs through clean energy options. In 2021 and publicly announced in April 2022, PPL Electric set a goal to decrease electricity use in buildings 28% by 2030 from a 2019 baseline.

Plan for achieving target, and progress made to the end of the reporting year
In Pennsylvania, we completed our first solar project at a PPL Electric facility, a 40-kilowatt solar array, to help meet our energy needs. We expect to install systems at additional service centers in the future.

List the actions which contributed most to achieving this target

Target reference number
Oth 5

Year target was set
2021

Target coverage
Business division

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon buildings

Other, please specify

Reduction of carbon emissions

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

36,903

Target year

2030

Figure or percentage in target year

26,000

Figure or percentage in reporting year

41,758

% of target achieved relative to base year [auto-calculated]

-44.5290287077

Target status in reporting year

New

Is this target part of an emissions target?

Yes, part of PPL's goal to achieve net-zero emissions by 2050

Is this target part of an overarching initiative?

Please explain target coverage and identify any exclusions

PPL will undertake facilities planning to reduce emissions associated with our electric and gas use, including increasing renewables consumption for our owned buildings. We have already begun to identify opportunities to serve our energy needs through clean energy options. In 2021 and publicly announced in April 2022, LG&E and KU set a goal to decrease electricity use in buildings 28% by 2030 from a 2019 baseline.

Plan for achieving target, and progress made to the end of the reporting year

In Kentucky, a fully regulated state, reductions in building electricity use will help to reduce scope 1 emissions from our owned generation.

List the actions which contributed most to achieving this target

Target reference number

Oth 6

Year target was set

2021

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon buildings

Other, please specify

Reduction of carbon emissions (MT of CO_2e)

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

16,082

Target year

2030

Figure or percentage in target year

12,600

Figure or percentage in reporting year

13,573

% of target achieved relative to base year [auto-calculated]

72.0562894888

Target status in reporting year

New

Is this target part of an emissions target?

Yes, part of PPL's goal to achieve net-zero emissions by 2050

Is this target part of an overarching initiative?

Other, please specify

Part of PPL’s enterprise carbon reduction goal

Please explain target coverage and identify any exclusions

To help contribute to our enterprise-wide net-zero carbon emissions commitment in 2021 and publicly announced in April 2022, LG&E and KU set a goal to decrease gas use in buildings 28% by 2030 from a 2019 baseline.

Plan for achieving target, and progress made to the end of the reporting year

List the actions which contributed most to achieving this target

---

Target reference number

Oth 7

Year target was set

2021

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Energy consumption or efficiency

Other, please specify

Quantity of solar array installations

Target denominator (intensity targets only)

Base year

2021

Figure or percentage in base year

Target year

Figure or percentage in target year

Figure or percentage in reporting year

% of target achieved relative to base year [auto-calculated]

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, part of PPL's goal to achieve net-zero emissions by 2050

Is this target part of an overarching initiative?

Other, please specify

Part of PPL’s enterprise carbon reduction goal

Please explain target coverage and identify any exclusions

In addition to decarbonizing our generation portfolio, each of PPL’s companies will install one solar array annual to offset energy use.

Plan for achieving target, and progress made to the end of the reporting year

List the actions which contributed most to achieving this target

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Abs1
Abs2
Abs3

Target year for achieving net zero

2050

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Please explain target coverage and identify any exclusions

PPL has set a goal to achieve net-zero carbon emissions by 2050. In addition, we are targeting a 70% reduction from 2010 levels by 2035 and an 80% reduction by 2040. This goal covers at least 95% of our Scopes 1 and 2 emissions and also includes Scope 3 emissions associated with our purchased electricity for LG&E and KU customers. Scope 1 emissions from gas operation are not included in the target.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Yes

Planned milestones and/or near-term investments for neutralization at target year

We view our path to net-zero emissions on a continuum, with a primary focus on eliminating our gross emissions, leveraging technology to remove emissions where they cannot be eliminated due to cost or reliability constraints, and finally, considering carbon offsets for any remaining emissions as the least preferred option.

We expect to retire 2,000 MW of coal-fired generation by 2034 and are preparing for energy and capacity needs created by 2028 retirements. We have also committed to not burn unabated coal by 2050. In addition to decarbonizing our generation portfolio, PPL's carbon emissions goal and clean energy transition strategy include decarbonizing other areas of our business by reducing company energy use, increasing electrification of fleet vehicles and reducing emissions associated with transmission and distribution equipment. We have set 2030 targets for fleet electrification and reductions in building energy use. We have made improvements to our gas distribution system in Kentucky resulting in reduced leaks and greenhouse gas emissions; we are exploring other options to reduce the methane intensity of the system, as well as alternative heating options for customers. In Rhode Island, we are undertaking a comprehensive, 12-month study of the gas system with a focus on supporting the state's decarbonization goals.

Planned actions to mitigate emissions beyond your value chain (optional)

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	2	
To be implemented*	0	
Implementation commenced*	4	1,900
Implemented*	13	500,000
Not to be implemented	0	

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in buildings

Other, please specify

Customer energy efficiency programs reducing consumption and peak demands

Estimated annual CO2e savings (metric tonnes CO2e)

67,000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3: Other (downstream)

Voluntary/Mandatory

Mandatory

Annual monetary savings (unit currency – as specified in C0.4)

15,200,000

Investment required (unit currency – as specified in C0.4)

40,000,000

Payback period

No payback

Estimated lifetime of the initiative

11-15 years

Comment

PPL Electric: Pennsylvania Act 129 legislation, which became effective in November 2008, requires EDC's to cost-effectively reduce electricity consumption and peak demand on their systems. The reported calendar year 2020 period marks the final full year of the current plan. Total energy savings for CY201 was 187,891 MWhs.

The next phase of Act 129 begins June 1, 2021, with PPL Electric having already submitted and received PA PUC approval for its next phase plan.

Note: Payback period is applicable only to customers and varies based on each project.

Initiative category & Initiative type

Low-carbon energy consumption

Low-carbon electricity mix

Estimated annual CO2e savings (metric tonnes CO2e)

310,000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Voluntary/Mandatory

Mandatory

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

PPL Electric: Alternative Energy Portfolio Standards Act requires Pennsylvania's Electric Distribution Companies (EDC's) to purchase a set amount of power from alternative sources like solar, wind and biofuels. By 2021, companies will need to purchase eight percent of their overall power from "tier 1" renewable energy sources.

Initiative category & Initiative type

Fugitive emissions reductions

Other, please specify

Reduction of SF_6 emissions

Estimated annual CO2e savings (metric tonnes CO2e)

31,000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

21,100,000

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

PPL Electric utilizes a compounded annualized growth rate (CAGR) approach to represent reductions in CO_2e emissions related to SF_6 since 2010. Currently, PPL Electric CO_2 emissions are reducing at an annualized rate of 18% since 2010. PPL Electric has improved its leak rate performance faster than industry peers while increasing the total SF_6 gas on the system by 209%. The resulting practices reflect an overall decrease in SF_6 losses by 90% and a 94% reduction in overall system leak rate. Based on the latest EPA benchmark data from 2020, PPL Electric places in the top decile in leak rate performance.

Payback period not yet calculated.

Initiative category & Initiative type

Company policy or behavioral change

Other, please specify

Carbon sequestration

Estimated annual CO2e savings (metric tonnes CO2e)

125

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3: Other (downstream)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

73,000

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

PPL Electric: Beginning in 2017, PPL Electric developed a new program within its service territory that focused on community environmental awareness and engagement through tree donations and school outreach. Investment required reflects costs since program inception.

The carbon sequestration benefits resulted were calculated using a 1998 publication by the U.S. Department of Energy for the “Calculation process for determining CO_2e

sequestration from planting various trees." Through 2021, PPL Electric has realized 233 metric tonnes of CO_2e sequestrated through this tree program. The program is funded in the current budget and by 2024 it is estimated a total CO_2e sequestration of approximately 861 metric tonnes will have been realized. Note actual annual sequestration is dependent on success rate of plants.

Initiative category & Initiative type

Company policy or behavioral change
Supplier engagement

Estimated annual CO2e savings (metric tonnes CO2e)

54

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3 category 1: Purchased goods & services

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

PPL Electric: The use of remanufactured furniture for PPL Electric is ongoing and it is our intent to buy all furniture panels going forward as remanufactured. Our furniture manufacturer has significantly reduced the amount of waste and CO_2e in their production product. Using them as our furniture supplier demonstrates our commitment to a cleaner environment.

Initiative category & Initiative type

Low-carbon energy consumption
Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

17

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period
11-15 years

Estimated lifetime of the initiative
Ongoing

Comment
PPL Electric: The first major solar project was completed at our Quarryville Service Center. This system produced 43.2 MWh in 2021. The CO_2e equivalency since 2018 installation is 50.9 metric tonnes CO_2e. PPL Electric is working to develop and install a second system at another service center.

Initiative category & Initiative type
Energy efficiency in buildings
Maintenance program

Estimated annual CO2e savings (metric tonnes CO2e)
14,000

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period
4-10 years

Estimated lifetime of the initiative
Ongoing

Comment
PPL Electric: For 2021, all of PPL Electric's buildings emitted a total of 18,626 metric tons of CO_2e emissions based on power usage. When compared to PPL Electric's 2014 equivalent emissions of 33,099 metric tons of CO_2e, this represents an annual reduction

of 14,473 metric tonnes of CO_2e emission in 2021. This was achieved through building upgrades and modernization efforts which reduces power usage that directly benefits the environment.

Initiative category & Initiative type

Fugitive emissions reductions

Other, please specify

Reduction of SF_6 Emissions

Estimated annual CO2e savings (metric tonnes CO2e)

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

33,000,000

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

PPL Electric: In an effort to increase efficiency in system performance and maintenance as well as meet evolving environmental standards, for all voltage classes with the available technology, PPL Electric is at the implementation stage of installing vacuum circuit Breakers to replace existing Gas Circuit breakers. Vacuum circuit breakers are an environmentally friendly alternative to SF_6 for insulating medium and high-voltage electrical equipment. Vacuum technology uses dry air as insulation material and has been demonstrated as highly reliable through 10,000 open/close mechanical operations tests. In addition to resolving the environmental and safety concerns associated with the use of chemical insulation, vacuum technology has an extended maintenance cycle and reduced arcing time, which allows for substantially more switching operations prior to required maintenance.

Initiative category & Initiative type

Low-carbon energy generation

Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

No payback

Estimated lifetime of the initiative

3-5 years

Comment

PPL Electric: Pennsylvania PUC approval was granted in December 2020 to the Distribution Energy Resources (DER) petition agreed upon between PPL Electric and external stakeholders. The petition requires smart inverters for all new DER interconnections on PPL Electric system as part of a 3-year pilot program for PPL Electric to demonstrate through monitoring and management improved reliability and lower costs for customers. Program began January 1, 2021.

Current year to date (12/31/2021) PPL Electric has 724 DER installations in the program.

Initiative category & Initiative type

Low-carbon energy generation
Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

1,900

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

LG&E and KU: LG&E and KU's Solar Share program gives residential, business, and industrial customers the opportunity to share in local solar energy and receive credits on their monthly bills. Five of the eight 500-kilowatt sections of LG&E and KU's Solar Share Program are fully subscribed, and the company is currently accepting applications for a sixth section.

Investment and payback calculated on a project-specific basis.

Initiative category & Initiative type

Energy efficiency in buildings

Other, please specify

Demand Side Management Programs

Estimated annual CO2e savings (metric tonnes CO2e)

76,000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

14,000,000

Payback period

No payback

Estimated lifetime of the initiative

6-10 years

Comment

LG&E and KU: In 2021 LG&E and KU invested $14M in Demand Side Management Programs, which includes:

• Low-Income Weatherization Program

• Advanced Metering Program Residential and Commercial Demand Response Programs,

• Nonresidential Rebates Program

LG&E and KU generates and delivers electricity, as such these initiatives directly reduced Scope 1 emissions.

Payback period is applicable only to customers and varies based on each project.

Initiative category & Initiative type

Fugitive emissions reductions
Other, please specify
Reduction of SF_6 Emissions

Estimated annual CO2e savings (metric tonnes CO2e)

5,200

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

LG&E and KU: Reductions are the 11-year average reduction in 2021 emissions compared to 2010 emissions. LG&E and KU are replacing equipment to reduce SF_6 emissions (O&M expense).

Initiative category & Initiative type

Fugitive emissions reductions
Oil/natural gas methane leak capture/prevention

Estimated annual CO2e savings (metric tonnes CO2e)

0.35

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

101,000,000

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

LG&E and KU: LG&E and KU are using advanced in-line inspection tools to identify gas leaks more quickly and effectively.

Note: Calculated by calculating annual difference for Subpart W LDC Service Line emissions (i.e. 2020 10.0 metric tons – 2021 9.8 metric tons = 0.2mt CO_2e).

Initiative category & Initiative type

Company policy or behavioral change

Other, please specify

Carbon sequestration

Estimated annual CO2e savings (metric tonnes CO2e)

400

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3: Other (downstream)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

LG&E and KU: LG&E and KU's Plant for the Planet matching grant program, which began in 2009, has contributed to more than 60,000 plantings. These projects have occurred in a range of urban and rural areas that offer public access, including parks and nature preserves.

The carbon sequestration benefits resulted were calculated using a 1998 publication by the U.S. Department of Energy for the "Calculation process for determining CO_2e sequestration from planting various trees." Since the program starting in 2009, LG&E and KU has sequestered 2,800 metric tonnes of CO_2e. Actual annual sequestration is dependent on success rate of plants.

Initiative category & Initiative type

Low-carbon energy generation
Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

Scope(s) or Scope 3 category(ies) where emissions savings occur

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

LG&E and KU: LG&E and KU offers a Green Tariff to support the growth of renewable and economic development in Kentucky. New or existing businesses can choose from several options to meet their renewable energy goals, including purchasing renewable energy certificates through the Green Energy Program, building a solar array or purchasing solar, hydro or wind power through the utility's renewable energy power agreement.

Initiative category & Initiative type

Low-carbon energy consumption
Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

LG&E and KU: LG&E and KU implemented a Renewable Power Agreement for customers interested in purchasing renewable power. LG&E and KU received approval from the Kentucky Public Service Commission for three separate renewable power agreements. These agreements include:
(1) Renewable Power Agreement with Toyota Motor Manufacturing in Georgetown for LG&E and KU Energy to supply solar energy to site (50% Rhudes Creek Solar facility, or 50 MW).
(2) Renewable Power Agreement with Dow Silicones Corporation in Carrollton for LG&E and KU Energy to supply solar energy to site (25% Rhudes Creek Solar facility, or 25 MW).
(3) Renewable Power Agreement with Rhudes Creek Solar to build a new 100-megawatt solar photovoltaic facility in Hardin County (LG&E and KU will utilize 25% to serve customers, or 25 MW). Rhudes Creek Solar is expected to be completed and commercially available in 2022.

Initiative category & Initiative type

Low-carbon energy generation
Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

230

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

LG&E and KU: The Business Solar Program offers LG&E and KU customers the ability to support solar/renewable energy sources without upfront cost and maintenance. LG&E and KU will build, own, and operate a roof mount or ground mount solar array on the customer's property based on their needs. The customers pay a monthly equipment fee and receive monthly bill credits based on the production of the array. Each Business Solar install requires contract approval by the KPSC.

Initiative category & Initiative type

Fugitive emissions reductions

Other, please specify

Fugitive emissions from lawncare

Estimated annual CO2e savings (metric tonnes CO2e)

2

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

LG&E and KUL: LG&E and KU has a livestock vegetation management project for the solar generation sites to develop a sustainable model for using up to 125 Shetland and

Katahdin sheep to manage up to 25 acres, while substantially increasing the beneficial use of the land at solar generation sites. The ongoing use of sheep for vegetation management is expected to reduce costs by ~30% compared to mowing and reduce mowing related emissions.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Regulatory requirements related to energy efficiency, reliability standards coupled with customer DER integration are driving smart grid investments.
Dedicated budget for energy efficiency	Under Pennsylvania's Act 129, PPL Electric has a $312.5 million budget over 5 years for a program to incentivize its customers to install more energy-efficient lighting, HVAC equipment, motors, etc.
Financial optimization calculations	Financial calculations have driven investments in grid modernization, resulting in operational efficiencies and reduced greenhouse gas emissions. Financial calculations have also driven decisions regarding the most beneficial arrangements for renewable energy ownership vs. leases or PPAs.
Partnering with governments on technology development	PPL's utilities in PA and KY have partnered with the U.S. Department of Energy and other public sector institutions on several ongoing demonstration projects.
Dedicated budget for energy efficiency	LG&E and KU has a dedicated budget for research and development for clean energy technology research and development. PPL Corporation has made multi-year commitments to clean energy research and development partnerships.
Dedicated budget for other emissions reduction activities	LG&E and KU are performing trials with vacuum breakers as an alternative to utilization of SF_6 breakers. PPL Electric is in the implementation stage of replacing SF_6 breakers with vacuum breakers on 69kV transformers.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify

Avoided emissions based on reduced consumption of electricity

Type of product(s) or service(s)

Power

Other, please specify

Energy efficiency

Description of product(s) or service(s)

Customer Energy Efficiency and Demand Side Management Services: Across the enterprise, these services include energy audits, winterization, appliance rebates, demand response and education to modify energy consumption behaviors. These services reduce revenue due to reduced use of our product (electricity).

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Low-Carbon Investment (LCI) Registry Taxonomy

Type of product(s) or service(s)

Power

Other, please specify

Energy efficiency regulation

Description of product(s) or service(s)

Alternative Energy Portfolio: For PPL Electric, the Alternative Energy Portfolio Standards Act requires Pennsylvania Electric Distribution Companies to purchase a set amount of power from alternative sources like solar, wind and biofuels. By 2021 this was required to be 18% from renewable and low-carbon sources. These services have no impact on revenue.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Low-Carbon Investment (LCI) Registry Taxonomy

Type of product(s) or service(s)

Power

Solar PV

Description of product(s) or service(s)

Low-carbon energy

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

275 MWh/year * .83 mt CO_2e/MWh

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

228

Explain your calculation of avoided emissions, including any assumptions

LG&E and KU's Business Solar Program offers customers the ability to support solar/renewable energy sources without upfront cost and maintenance. LG&E and KU will build, own, and operate a roof mount or ground mount solar array on the customer's property based on their needs. The customers pay a monthly equipment fee and receives monthly bill credits based on the production of the array. Each Business Solar install requires contract approval by the KY Public Service Commission (KPSC).

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Low-Carbon Investment (LCI) Registry Taxonomy

Type of product(s) or service(s)

Power

Solar PV

Description of product(s) or service(s)

Low-carbon energy

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

2,251 MWh/year * .83 mt CO_2e/MWh]

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

1,800

Explain your calculation of avoided emissions, including any assumptions

LG&E and KU are providing customers the opportunity to purchase low-carbon energy through participating in LG&E and KU's Community Solar Program.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify

Avoided emissions based on reduced used of SF_6 breakers

Type of product(s) or service(s)

Power

Other, please specify

Vacuum breaker alternatives

Description of product(s) or service(s)

Alternative SF_6 Breakers: PPL Electric and LG&E and KU are performing trials with vacuum breakers as an alternative to utilization of SF_6 breakers. PPL

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

---

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

Low-Carbon Investment (LCI) Registry Taxonomy

Type of product(s) or service(s)

Power
Solar PV

Description of product(s) or service(s)

Alternative Energy Portfolio: PPL Renewables and Safari develop, own and operate solar and storage projects that provide renewable energy to C&I, MUSH and Utility customers for periods ranging from 15 years to over 40 years. Percent of revenue is specific of the PPL Renewables and Safari business segment.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

100

C-EU4.6

(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.

LG&E employs comprehensive natural gas safety and leak detection measures that include 24/7 monitoring by a central Gas Control Room; conducting leak surveys; operating a Pipeline Integrity Management Program that identifies and minimizes potential pipeline risks; and educating community partners and the general public about natural gas safety. LG&E's Lost

and Unaccounted for Gas as reported on our Gas Annual Reported filed with the Pipeline and Hazardous Materials Safety Administration was 1.28% for the year ending June 30, 2021, an amount well within the industry average. The metric includes gas lost through leaks, theft and losses due to operations and maintenance functions when necessary. In addition to these ongoing efforts, the company's plan for natural for natural gas infrastructure updates include:

- Proactively replacing aging steel customer service lines, with new plastic pipe.
  - LG&E implemented a program to replace approximately 45,000 steel customer service lines and removal of approximately 4,400 inactive steel services. The steel customer service lines are largely 30 to 35 years old or greater and susceptible to corrosion leaks. LG&E has replaced, or verified about 8,300 customer services lines and removed 3,300 inactive steel services.
- Replacing aging natural gas transmission lines
  - LG&E implemented a Transmission Modernization program to replace approximately 15.5 miles of transmission pipeline in Jefferson County. The transmission line is 45 – 60 years old. Through 2020, approximately 8 miles had been installed with over 3 miles placed into service. The project was largely complete by the end of 2021.
- Upgrades to city gate stations and gas regulation facilities with new valves, piping, and modern regulation and measurement equipment.

A gas main replacement program completed an initiative the utility began implementing in its system beginning in 1996 as it established a program committing to replacing 540 miles of cast iron, wrought iron and bare steel natural gas pipelines, which are more vulnerable to degradation over time. These lines were replaced primarily with more durable plastic natural gas pipelines. The facility portion of this project was completed in 2017 with some restoration completed in 2018. Additionally, vintage plastic mains and associated services were replaced in 2016 and 2017 with modern plastic natural gas pipelines.

Gas Distribution Operations complies with all Pipeline and Hazardous Materials Safety Administration (PHMSA) and state regulatory requirements to prevent gas release.

Rhode Island Energy is undertaking a comprehensive assessment of the company's gas distribution system to be completed in 2023.

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

Yes, an acquisition

Yes, a divestment

Name of organization(s) acquired, divested from, or merged with

Acquired - Narragansett Electric Company

Divested - Western Power Distribution (WPD)

Details of structural change(s), including completion dates

The sale of PPL's U.K. utility business, Western Power Distribution (WPD), to National Grid was completed on June 14, 2021. Emissions from WPD are not included in emissions for the 2021 reporting year. Previous years data have not been adjusted to reflect the sale of WPD.

On the same day, PPL also announced its planned acquisition of Rhode Island's primary electric and gas utility, The Narragansett Electric Company, from National Grid. The acquisition was completed in May 2022 with the utility rebranded as Rhode Island Energy.

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?
Row 1	No

C5.1c

(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	No, because the impact does not meet our significance threshold	The 2010 baseline data remains unchanged after the sale of WPD, which had a minor contribution to overall emissions. Further adjustments are expected in 2022 resulting from the addition of Rhode Island operations.

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO2e)

60,906,564

Comment

Scope 1 (Gross): 60,736,086 + Scope 1 (Fleet Vehicles): 48,343 + Scope 1 (Small Plant Stationary): 2,515 + Scope 1 (Plant Mobile Equipment): 4,893 + Scope 1 (SF_6): 114,727

Scope 2 (location-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 2 (market-based)

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO2e)

73,575

Comment

Estimated market-based CO_2e emissions. Scope 2 (Electricity Use in Buildings): 55,325 + Scope 2 (Gas Use in Buildings): 18,250

Scope 3 category 1: Purchased goods and services

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO2e)

1,597,157

Comment

LG&E and KU Purchased Power for End Use Customers is now reported as Scope 3; emissions will remain part of PPL's 2050 goal.

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

US EPA Mandatory Greenhouse Gas Reporting Rule

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

26,436,983

Start date

January 1, 2021

End date

December 31, 2021

Comment

Scope 1 (Gross): 26,369,339 + Scope 1 (Fleet Vehicles): 24,982 + Scope 1 (Small Plant Stationary): 4,411 + Scope 1 (Plant Mobile Equipment): 5,696 + Scope 1 (Gas Operations): 22,204 + Scope 1 (SF_6): 10,436

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)

25,061,103

Start date

January 1, 2020

End date

December 31, 2020

Comment

Scope 1 (Gross): 24,971,324 + Scope 1 (Fleet Vehicles): 25,510 + Scope 1 (Small Plant Stationary): 2,297 + Scope 1 (Plant Mobile Equipment): 5,157 + Scope 1 (Gas Operations): 22,204 + Scope 1 (SF_6): 34,611

2020 Scope 1 carbon emissions reported here do not reflect an additional 29,019 metric tonnes attributed to WPD, which was sold on June 14, 2021. Previous years data have not been adjusted to reflect the sale of our U.K. business.

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)

26,913,754

Start date

January 1, 2019

End date

December 31, 2019

Comment

Scope 1 (Gross): 26,740,576 + Scope 1 (Fleet Vehicles): 46,646 + Scope 1 (Small Plant Stationary): 4,056 + Scope 1 (Plant Mobile Equipment): 5,898 + Scope 1 (Gas Operations): 27,909 + Scope 1 (SF_6): 88,669

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)

29,609,494

Start date

January 1, 2018

End date

December 31, 2018

Comment

Scope 1 (Gross): 29,480,129 + Scope 1 (Fleet Vehicles): 43,256 + Scope 1 (Small Plant Stationary): 1,097 + Scope 1 (Plant Mobile Equipment): 6,459 + Scope 1 (Gas Operations): 29,040 + Scope 1 (SF_6): 49,513

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are not reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Emissions associated with all electric and gas use in buildings across all operations (PPL Electric, LG&E, and KU) are calculated based on market-based factors. LG&E and KU Purchased Power for End Use Customers is now reported as Scope 3; emissions will remain part of PPL's 2050 goal.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, market-based (if applicable)

32,199

Start date

January 1, 2021

End date

December 31, 2021

Comment

LG&E-KU's market-based emissions captured in Scope 1 Gross MWh.

LG&E and KU Purchased Power for End Use Customers, previously reported as Scope 2, location-based is now reported as Scope 3; emissions will remain part of PPL's 2050 goal. Previous years data has been updated to reflect the change.

Past year 1

Scope 2, market-based (if applicable)

35,849

Start date

January 1, 2020

End date

December 31, 2020

Comment

LG&E and KU's market-based emissions from electricity use in buildings are captured in Scope 1 Gross MWh. 2020 Scope 2 market-based carbon emissions reported here do not reflect an additional 6,157 metric tonnes attributed to WPD, which was sold on June 14, 2021. Previous years data have not been adjusted to reflect the sale of our U.K. business.

Past year 2

Scope 2, market-based (if applicable)
48,560

Start date
January 1, 2019

End date
December 31, 2019

Comment

Past year 3

Scope 2, market-based (if applicable)
51,755

Start date
January 1, 2018

End date
December 31, 2018

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, not yet calculated

Please explain

Capital goods

Evaluation status
Relevant, not yet calculated

Please explain

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

4,275,989

Emissions calculation methodology

Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Please explain

CO_2e for total purchased electricity for end use electric customers in PA and KY. Purchased electricity in KY is included in Scope 1. CO_2e for total purchased gas for end use customers in KY will be identified as Use of sold products.

Upstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Please explain

Waste generated in operations

Evaluation status

Relevant, not yet calculated

Please explain

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

623

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Please explain

CO_2e emitted from business travel for employees in PA and KY

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

9,113

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Please explain

CO_2e emitted by employees commuting in PA and KY

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Insignificant as PPL does not generally lease assets from others.

Downstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Please explain

The electricity and natural gas that we deliver to end users is not further transported or distributed.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

The electricity and natural gas that we deliver to end users is not further processed.

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

2,059,996

Emissions calculation methodology

Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Please explain

Value is calculated with LG&E and KU internal data for the quantity of natural gas sold.

End of life treatment of sold products

Evaluation status

Relevant, not yet calculated

Please explain

LG&E and KU maximizes the amount of coal combustion residuals that are beneficially reused offsite. Examples of end-of-life treatments are wallboard, cement, concrete, etc.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

PPL does not lease its assets to others.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

We have no upstream or downstream franchises.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

There are no upstream or downstream investments resulting in any additional CO_2e emissions.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

We have no other (upstream) CO_2e emissions.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

We have no other (downstream) CO_2e emissions.

C6.5a

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

Start date

January 1, 2021

End date

December 31, 2021

Scope 3: Purchased goods and services (metric tons CO2e)

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

4,275,989

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

Scope 3: Business travel (metric tons CO2e)

623

Scope 3: Employee commuting (metric tons CO2e)

9,113

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

2,059,996

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Emissions reported cover PPL Electric and LG&E and KU operations. LG&E and KU Purchased Power for End Use Customers, previously reported as Scope 2 is now reported as Scope 3; emissions will remain part of PPL's 2050 goal. Previous years data has been updated to reflect the change

Past year 2

Start date

January 1, 2020

End date

December 31, 2020

Scope 3: Purchased goods and services (metric tons CO2e)

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

4,673,449

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

Scope 3: Business travel (metric tons CO2e)
613

Scope 3: Employee commuting (metric tons CO2e)
11,158

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)
2,002,542

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Past year 3

Start date
January 1, 2019

End date
December 31, 2019

Scope 3: Purchased goods and services (metric tons CO2e)

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

4,916,945

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

Scope 3: Business travel (metric tons CO2e)

1,824

Scope 3: Employee commuting (metric tons CO2e)

15,654

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

2,230,727

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1		Relevant to vegetation management and siting of facilities. Not yet calculated.

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.00461

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

26,469,182

Metric denominator

unit total revenue

Metric denominator: Unit total

5,783,000,000

Scope 2 figure used

Location-based

% change from previous year

36.82

Direction of change

Increased

Reason for change

Decrease in revenue from divestment of WPD and increased emissions from LG&E and KU generation, resulting in a higher intensity.

Intensity figure
0.84

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
26,369,339

Metric denominator
megawatt hour generated (MWh)

Metric denominator: Unit total
31,336,074

Scope 2 figure used
Location-based

% change from previous year
1.45

Direction of change
Increased

Reason for change
Increase in 2021 reflects a rebound back toward normal levels pre-pandemic.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO_2	26,299,613	IPCC Fourth Assessment Report (AR4 - 100 year)
CH_4	76,729	IPCC Fourth Assessment Report (AR4 - 100 year)
N_2O	132,429	IPCC Fourth Assessment Report (AR4 - 100 year)

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	26.6	883.7	0.44	27,979	Scope 1 Gas Operations and Scope 1 SF_6 from Distribution Operations
Combustion (Electric utilities)	26,295,206	2,861	0	26,366,731	Scope 1 Gross MWh and Small Plant Stationary
Combustion (Gas utilities)					
Combustion (Other)					
Emissions not elsewhere classified				30,678	Plant Mobile Equipment and Fleet Vehicles

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	26,436,983

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
PPL Electric	15,108
LG&E and KU	26,421,875

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Electric utility activities	26,393,905	Gross Scope 1: Emissions associated with gross MWh's (includes CO2, N2O and CH4), emissions from small plant stationary fuel combustion sources not included in stack emissions, and emissions from plant mobile equipment and LG&E and KU fleet vehicles.

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	24,175	Decreased	0.1	SF_6 reduction initiatives
Other emissions reduction activities				
Divestment	35,176	Decreased	0.14	In June 2021, PPL sold its U.K. utility business, Western Power Distribution (WPD), to National Grid plc. This report does not include 2021 data from WPD.
Acquisitions				

Mergers				
Change in output	1,398,015	Increased	5.58	Increase in 2021 reflects a rebound back toward normal levels pre-pandemic.
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No

Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	204,196	204,196
Consumption of purchased or acquired electricity		14,972	68,205	83,177
Consumption of self-generated non-fuel renewable energy		2,837		2,837
Total energy consumption		17,809	272,401	290,210

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

Comment

Other biomass

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

Comment

Coal

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

Comment

Oil

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

Comment

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

74,936

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

Comment

Calculated for gas use in buildings.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

LHV

Total fuel MWh consumed by the organization

129,240

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

Comment

Fleet consumption of diesel and petrol by PPL Electric and LG&E and KU

Total fuel

Heating value

Total fuel MWh consumed by the organization

204,176

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

Comment

C-EU8.2d

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)

4,715

Gross electricity generation (GWh)

27,556

Net electricity generation (GWh)

25,015

Absolute scope 1 emissions (metric tons CO2e)

24,082,048

Scope 1 emissions intensity (metric tons CO2e per GWh)

962.7

Comment

Total CO_2e associated with gross generation divided by net generation. Net generation data excludes purchased power.

Net summer rating used for generation capacity consistent with SEC reporting (10-K).

Lignite

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Oil

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Gas

Nameplate capacity (MW)

2,716

Gross electricity generation (GWh)

5,921

Net electricity generation (GWh)

5,777

Absolute scope 1 emissions (metric tons CO2e)

2,408,077

Scope 1 emissions intensity (metric tons CO2e per GWh)

416.84

Comment

Net summer rating used for generation capacity consistent with SEC reporting (10-K).

Sustainable biomass

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Other biomass

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Waste (non-biomass)

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Nuclear

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Geothermal

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Hydropower

Nameplate capacity (MW)

96

Gross electricity generation (GWh)

355

Net electricity generation (GWh)

352

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Net summer rating used for generation capacity consistent with SEC reporting (10-K).

Wind

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Solar

Nameplate capacity (MW)

10

Gross electricity generation (GWh)

19

Net electricity generation (GWh)

19

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

In addition to installed capacity reported here, in 2021, Safari Energy, LLC acquired solar generation with a nameplate capacity of 20.510 MW (AC), which produced 514 MWh. Total installed nameplate capacity for Safari Energy, LLC (inclusive of 2021 acquired capacity) was 131.428 MW (AC), which produced 176,372 MWh.

Marine

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Other renewable

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Other non-renewable

Nameplate capacity (MW)

Gross electricity generation (GWh)

2

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Petroleum – Scope 1 CO_2e is captured in the coal number above.

Total

Nameplate capacity (MW)
7,537

Gross electricity generation (GWh)
33,853

Net electricity generation (GWh)
31,163

Absolute scope 1 emissions (metric tons CO2e)
26,490,125

Scope 1 emissions intensity (metric tons CO2e per GWh)
846.26

Comment
The total of Scope 1 emissions intensity should not be the sum of values, but the Total Absolute Scope 1 / Total Net Electricity generation = 846.26 metric tonnes CO_2e per GWh

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area
United States of America

Consumption of electricity (MWh)
86,014

Consumption of heat, steam, and cooling (MWh)

Total non-fuel energy consumption (MWh) [Auto-calculated]

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?
Yes

C-EU8.4a

(C-EU8.4a) Disclose the following information about your transmission and distribution business.

Country/Region
United States of America

Voltage level
Transmission (high voltage)

Annual load (GWh)
67,322

Annual energy losses (% of annual load)
5

Scope where emissions from energy losses are accounted for
Scope 2 (market-based)

Emissions from energy losses (metric tons CO2e)

Length of network (km)
17,379

Number of connections
129

Area covered (km2)
50,246

Comment
Defined as voltage exceeding 69 kV.

This includes L&GE and KU's location-based transmission as well as market-based transmission and distribution for PPL Electric and L&GE and KU.

Average line loss is 5% across the system is from emissions associated with owned net generation and purchased power. Line loss emissions are not reported separately.

Country/Region
United States of America

Voltage level
Distribution (low voltage)

Annual load (GWh)
67,322

Annual energy losses (% of annual load)
5

Scope where emissions from energy losses are accounted for

Scope 2 (market-based)

Emissions from energy losses (metric tons CO2e)

Length of network (km)

110,350

Number of connections

2,464,233

Area covered (km2)

50,246

Comment

Defined as voltage not exceeding 69 kV.

This includes L&GE and KU's location-based transmission as well as market-based transmission and distribution for PPL Electric and L&GE and KU.

Average line loss is 5% across the system is from emissions associated with owned net generation and purchased power. Line loss emissions are not reported separately.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-EU9.5a

(C-EU9.5a) Break down, by source, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.

Coal – hard

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

720,000,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

80.79

Explain your CAPEX calculations, including any assumptions

Percentage is for LG&E and KU alone and covers LG&E and KU 2022 - 2026 CAPEX.

Lignite

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Oil

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Gas

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

720,000,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

17.71

Explain your CAPEX calculations, including any assumptions

Percentage is for LG&E and KU alone and covers LG&E and KU 2022 - 2026 CAPEX.

Sustainable biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Other biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Waste (non-biomass)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Nuclear

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Geothermal

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Hydropower

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

9,900,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

1.11

Explain your CAPEX calculations, including any assumptions

Percentage is for LG&E and KU alone and covers LG&E and KU 2022 - 2026 CAPEX.

Wind

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Solar

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

3,500,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0.39

Explain your CAPEX calculations, including any assumptions

Percentage is for LG&E and KU alone and covers LG&E and KU 2022 - 2026 CAPEX: Design, Engineering, Construction of solar facilities for the Companies' subscription-based Solar Share program (Solar facilities expected to be built based on customer demand, for utilities' residential and business customers interested in receiving solar energy credits generated from the facility).

Marine

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Fossil-fuel plants fitted with CCS

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Other renewable (e.g. renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

11,700,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

100

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Percentage is for Safari Energy alone. Safari Energy is planning to design, engineer, install, own, and operate solar facilities at customer facilities across the United States.

Other non-renewable (e.g. non-renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Distributed generation	PPL Electric: Working with multiple research partners on the Keystone Solar Future Project to integrate and manage distributed energy resources (DER) like solar systems onto the electrical system. The project created a fully automated renewable interconnection portal for customers to apply for DERs, provides state of the art inverter(s) to use and establishes communication to DERs through its innovative Distributed Energy Resource Management System (DERMS).	31,000,000	4.6	2026
Smart grid	PPL Electric: The work associated with the development and installation of Smart Grid work will provide both reliability/operations benefits and CO_2e reductions by eliminating a significant number of truck miles/traffic each day. This is done through system automation (i.e., remote switching and sectionalizing) and by using remote sensing (e.g., battery and transformer monitoring) to eliminate routine field inspections that were previously performed by	52,800,000	7.7	2026

	field workers driving to each location. This remote sensing will also allow for better predictive maintenance through analytics that will also further extend the useful life of these assets and avoid indirect CO_2e emissions from purchase of new assets.			
Other, please specify Gas Circuit Breaker Replacement	PPL Electric: The Gas Circuit Breaker (GCB) replacement strategy helps to improve the reliability of the Transmission system and reduces the use of greenhouse gases in PPL equipment as well as the inadvertent loss of greenhouse gases into the atmosphere. For all voltage classes with the available technology, PPL Electric is at the implementation stage of installing Vacuum Circuit Breakers to replace existing Gas Circuit Breakers, which use SF_6 gas as the insulating medium. This shift in strategy will reduce the total pounds of SF_6 gas on the PPL system, and in effect reduce the relative incidence of SF_6 leaks from that equipment. The strategy also uses Circuit Breaker Monitoring technology coupled with data analytics to predict which GCBs are at the highest risk for SF_6 leaks to allow proactive maintenance or replacement of those assets.	84,000,000	12.2	2026
Other, please specify Facilities Efficiency Programs	PPL Electric: Facilities Efficiency Programs are designed to optimize energy efficiency and resource utilization at the various buildings maintained for PPL Electric. This includes the installation of solar panels at certain service centers, the use of remanufactured furniture to divert usable material from landfills and preserve natural resources, and installation of energy efficient components for Facilities projects, such as HVAC equipment, insulation,	12,600,000	1.8	2026

	windows, and converting all lighting to LED.			
Other, please specify Fleet Electrification	PPL Electric: PPL Electric is spending 10% of its Transportation Capital Vehicle budget each year on electrification. The fleet currently includes hybrid and electric cars and SUVs, with electric pickup trucks under consideration. Additionally, PPL Electric utilizes bucket trucks with electric lifts, which allow the truck's engine to be turned off during use, significantly reducing fuel consumption. PPL Electric has partnered with vendors to identify additional opportunities to include more electric technology into the fleet.	37,300,000	5.4	2026
Other, please specify Dynamic Line Rating Sensors	PPL Electric: PPL Electric is Partnering with PJM Interconnection to pilot dynamic line rating sensors, which allows transmission owners like PPL Electric to maximize our infrastructure by delivering more electricity on existing transmission lines without having to build out additional capacity.	2,000,000	0.3	2026
Smart grid	LG&E and KU: Meters and related system elements that communicate energy usage information to a utility and its customers in ways that allow customers to manage their energy usage and provide the utility with more dynamic information to use in managing the electric system; and Grid-management technologies such as communication networks and intelligent controls that enable utilities to operate more reliably and efficiently the electric system while providing more visibility and security for system operators.	470,000,000	67.8	2026
Other, please specify	LG&E and KU: Includes electric charging stations 10% of light duty fleet by 2030 (which was the goal in	950,000	0.1	2026

Fleet Electrification	the 2022BP) and EPTO (electric power take-off) equipped bucket trucks.			

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	PPL's operating utilities participate in a variety of research and development activities throughout the year, including company research, industry-wide studies and partnerships with educational institutions and research organizations. Our 2021 R&D activities included: • Leveraging $330,000 in company cost share for $5.7 million in Department of Energy (DOE), and in 2022 we are applying for another $125+ million in DOE funding for R&D projects. • Joining Energy Impact Partners' global investment platform, which brings together leading companies and entrepreneurs worldwide to foster innovation toward a sustainable energy future. PPL has committed to invest up to $50 million across EIP's investment platform aimed at accelerating the shift to a low-carbon future and driving commercial-scale solutions needed to deliver deep, economy-wide decarbonization. • Serving as an anchor sponsor of the Low Carbon Resources Initiative (LCRI), a five-year initiative led by the Electric Power Research Institute (EPRI) and Gas Technology Institute to help accelerate research and development of low-carbon and zero-carbon technologies. PPL's CEO is helping to lead this effort as chair of the Low-Carbon Resources Initiative Board Working Group. The LCRI is a collaborative focused on identifying, developing and demonstrating affordable pathways to economy-wide decarbonization. This initiative is pursuing fundamental advances in a variety of low-carbon technologies, such as advanced nuclear, carbon capture, utilization and sequestration, hydrogen, ammonia, synthetic fuels and biofuels. • Launching an innovative partnership with the University of Kentucky's Center for Applied Research to study capture of carbon dioxide emissions at natural gas combined cycle power plants. • Partnering with EPRI on LG&E and KU's energy storage demonstration site, the first and largest utility-scale energy storage system in Kentucky. Now in its sixth year of operation, the battery is co-located with LG&E and KU's 10-megawatt E.W. Brown solar facility allowing the company to explore how

		batteries can improve the inherent intermittency of solar power. Battery operations have been automated to charge during sunlight or periods of low demand and discharge overnight or during periods of high demand.

C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Other, please specify Difficult to Electrify End-Use decarbonization and zero emission electricity generation	Basic academic/theoretical research	≤20%	600,000	PPL Company Wide EPRI Low Carbon Resource Initiative: PPL is an anchor member of EPRI Low Carbon Resources Initiative that promotes advancements in low-carbon electric generation technologies and low-carbon energy carrier (multi-year financial commitment included). The initiative will provide a centralized, collaborative platform to identify and accelerate development of promising technologies from around the world, to demonstrate and assess the performance of selected key technologies and processes and identify possible improvements, and to inform key stakeholders and the public about technology pathways and options.
Energy storage	Pilot demonstration	≤20%		LG&E and KU Battery Storage Demonstration: The companies invested $2,500,000 in 2016 for this battery storage system. No

				capital investment was made during the reporting year. LG&E and KU operates Kentucky's first and largest utility scale battery—a 1 MW, 2 MWh lithium-ion battery located at the E.W. Brown Generating Station. The battery energy storage system includes over 300 modules distributed across two shipping containers, a 1 MVA bidirectional inverter for charge/discharge operations, and a 3-phase transformer for grid connectivity. The 10 MW solar photovoltaic (PV) plant co-located with the battery allows LG&E and KU to explore how the systems can operate together. Beyond solar plant support, the battery system can also provide voltage support, reactive power support, and frequency regulation. This facility also includes a programmable 1 MVA load bank for simulating various grid conditions and to analyze how the battery system will respond to a variety of operational scenarios. The battery is a critical tool for understanding how intermittent renewable generation best fits into the company's generation portfolio and how batteries

				can improve site performance and reliability.
Carbon capture and storage/utilization	Pilot demonstration	≤20%	130,000	In 2006, LG&E and KU founded the carbon capture program at the University of Kentucky (UK) and continue to partner with the US Department of Energy (DOE) and Electric Power Research Institute (EPRI) on this important research. In 2014, we deployed the capture technology that the team developed in a pilot-scale carbon capture unit at the E.W. Brown Generating Station, which is one of a few power plants in the United States today with an active carbon capture system. This joint research at our site has lowered capture costs by forty percent and led to numerous patents and academic publications. In 2021, LG&E and KU continue to partner with UK studying carbon capture with natural gas using the existing carbon capture system at E.W. Brown leveraging $3.7m in federal funding in 2021. The next stage of this research would be to demonstrate carbon capture at LG&E and KU's Cane Run Station, a natural gas combined cycle plant. We are also working with our partners at UK, DOE, and EPRI's Low Carbon Resource Initiative (LCRI)

				on hydrogen production and direct air capture technology capable of 90% carbon capture while producing 99.9% purity hydrogen gas.
Energy storage	Applied research and development	≤20%	100,000	LG&E and KU Energy operates Kentucky's first and largest utility-scale energy storage system — a 1-megawatt, 2-megawatt-hour lithium-ion battery. The battery is co-located with E.W. Brown Solar, allowing the company to explore how batteries can improve the inherent intermittency of solar power. The battery is operated 24/7, 365 days a year and is continuously collecting data — typically charging during the day when solar power is available and discharging at night. Academic publications, and research on battery degradation, recycling and automation.
Renewable energy	Basic academic/theoretical research	≤20%	350,000	Researchers from the University of Kentucky Power and Energy institute of Kentucky (PEIK) and the Technology Research and Analysis (TRA) department have analyzed the impact of large solar PV penetration on the companies' generation portfolio. Using historical solar irradiance profiles from multiple sites distributed across the state of Kentucky, the study was able to estimate the maximum amount of

				intermittent renewable energy sources the service area can sustain with the existing infrastructure. Solar PV generation exceeding 1,000 MW requires significant changes to the portfolio that includes fast-ramping natural gas units and additional transmission infrastructure.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	No third-party verification or assurance
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No third-party verification or assurance

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, but we anticipate being regulated in the next three years

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Clean energy policies are continuously debated at the federal level. Given legislative and regulatory uncertainty, we cannot predict the success of any one proposal or the resulting

compliance schedule. Kentucky, the state in which the company's generation is located, is not currently considering carbon regulation. However, the state has in place an environmental cost recovery mechanism for prudently incurred costs to comply with environmental requirements.

PPL recognizes that future policies could also impose a compliance obligation on regulated transmission and distribution utilities in restructured markets. We would expect that obligations generally could be met by these utilities purchasing additional clean energy subject to state regulatory approvals. Additionally, Pennsylvania finalized its regulations to implement Regional Greenhouse Gas Initiative (RGGI) in April 2022; however, litigation is pending in the Pennsylvania Commonwealth Court, so the implementation date of the rule is uncertain. PPL Electric is not expected to be directly responsible for RGGI obligations as the utility does not own generation and, details concerning RGGI implementation and any use of proceeds are uncertain. PPL completed the acquisition of Rhode Island Energy, Rhode Island's primary electric and gas utility, in May 2022. While Rhode Island Energy falls under RGGI jurisdiction, it is not directly responsible for RGGI obligations as the utility does not own generation. Rhode Island Energy currently receives allocations of RGGI funding from the state to be utilized for various incentives within the company's Energy Efficiency programs. RIE is committed to helping the state achieve its renewable energy and decarbonization goals and will undertake specific initiatives and plans in support of these goals.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Other, please specify

Used in LG&E and KU's integrated resource planning (IRP) process

GHG Scope

Scope 1

Application

Applicable to LG&E and KU operating companies.

Actual price(s) used (Currency /metric ton)

15

Variance of price(s) used

LG&E and KU's IRP 2021 follow-up data request to the KY Public Service Commission (KPSC) reflects a carbon price of $15 to $25 per short ton.

Type of internal carbon price

Shadow price

Impact & implication

LG&E and KU evaluate long-term resource planning through the company's IRP. Carbon price is an input to this resource planning.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers/clients

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Other, please specify

Suppliers must meet 18% renewables

% of suppliers by number

12.5

% total procurement spend (direct and indirect)

35

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

Energy suppliers under contract with PPL Electric are required to provide a specific percentage of renewable and alternative energy and/or Alternative Energy Credits (AECs) in compliance with the Alternative Energy Portfolio Standards (AEPS) obligation. Additionally, PPL Electric contracts with AEC-only suppliers to meet the remainder of its AEPS obligations.

Impact of engagement, including measures of success

Success is measured by confirming that the total number of credits transferred through the PJM electronic transfer system is commensurate with PPL AEPS Standards obligation.

Comment

From June 2020 to May 2021, alternative power sources comprised at least 18% of the power PPL Electric bought for customers who had not chosen a competitive supplier. The projected renewable energy obligation for June 2021 through May 2022 remains at 18%.

PPL Electric required all energy suppliers to meet these AEPS requirements.

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing
Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

PPL's operating utilities in Pennsylvania and Kentucky provide programs open to all customers to help them reduce their own energy consumption and to increase awareness among all stakeholders regarding PPL's sustainability efforts, carbon goals and energy efficiency programs. Engagement across all levels of customer class – from residential to industrial – ensures all customers have the information they need regarding energy efficiency, PPL's carbon goals and how we can help customers achieve their own sustainability goals. The scope of the engagement is broad and includes a variety of rebate programs, energy efficiency workshops, video and social media profiles highlighting customers' energy savings and in-school curricula that teach students the importance of energy, natural resources and environmental issues. In addition to direct customer engagement programs, the companies also conduct community outreach programs such as tree planting programs, sponsorships of environmental programs with community partners and collaboration with industry and academic partners.

Impact of engagement, including measures of success

The programs are all facilitated by individual operating companies and success is measured in various ways for each program including but not limited to tracking of rebates for appliance installations and tracking participation in auditing and behavioral programs.

For customers engaged in formal energy saving programs such as demand response programs, concrete energy savings are a clear measure of success. In 2021, Energy efficiency programs across PPL's utilities helped customers save more than 279,000 megawatt-hours of electricity and reduced peak demand by more than 43.5 megawatts across our business.

In addition to helping customers reduce their own energy consumption, engagement helps increase awareness among all stakeholders regarding PPL's sustainability efforts, carbon goals and energy efficiency programs.

Type of engagement & Details of engagement

Collaboration & innovation

Other, please specify

LG&E and KU collaborates on renewable energy projects, some of which are combined with energy storage. Installations of EV infrastructure supports clean mobility options. The company also provides a number of renewable energy options for customers.

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

LG&E and KU offer a Green Tariff to support the growth of renewable energy and economic development in Kentucky. New or existing businesses can choose from several options to meet their renewable energy goals, including purchasing renewable energy certificates through the Green Energy Program, building a solar array or purchasing solar, hydro or wind power through the utility's renewable power agreement.

The utility implemented a Renewable Power Agreement for customers interested in purchasing renewable power.

LG&E and KU's Solar Share program gives residential, business and industrial customers the opportunity to share in local solar energy and receive credits on their monthly bills. Four of the eight 500-kilowatt sections of LG&E and KU's Solar Share Program are fully subscribed, the fifth array is nearly complete and the company is currently accepting applications for a sixth section. Among the customers taking

advantage of the renewable energy installation are the Ford Motor Company, which was the first major founding partner in the program.

Impact of engagement, including measures of success

The Renewable Choice Calculator helps LG&E and KU customers explore their sustainability options. Based upon a few details — including customer type and average monthly bill — the calculator uses the utilities' Solar Share Program and Green Energy Program to provide a solution that enables most customers to support renewables at a level that is equal to 100% of their power consumption for either less than $1 per day or about 5% more on their monthly energy bill. LG&E and KU announced plans to provide renewable energy to major institutional and industrial customers from a 125-megawatt solar facility to be constructed in western Kentucky.

LG&E and KU's Solar Share facility is more than 50% subscribed. The subscription-based Solar Share program is a cost-effective option available to residential, business and industrial customers who want to support solar energy for as little as 20 cents per day. Upon completion, the Solar Share facility will have a total capacity of 4 megawatts.

Type of engagement & Details of engagement

Education/information sharing
Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

This program is meant to inform all customers of PPL Electric of the company's advanced DERMS designed to manage solar, wind and other renewable power coming onto the grid. The system will help the company ensure good power quality and reliability and keep the grid running smoothly. Moving forward, it will also help PPL Electric better integrate more distributed energy resources like private solar, while preserving network reliability and power quality.

Additionally, the program informs customers that the utility has made it easier for customers to apply to connect solar panels and other generation systems to the grid through a user-friendly Renewable Energy Connection website.

Impact of engagement, including measures of success

The Distributed Energy Resource Management System (DERMS) helps PPL Electric better integrate more distributed energy resources like private solar, while preserving network reliability and power quality. To date, PPL Electric has connected more than 257.2 megawatts of renewable energy to the grid through the program.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, and we do not plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers
Yes, we engage indirectly through trade associations
Yes, we engage indirectly by funding other organizations whose activities may influence policy, law, or regulation that may significantly impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

https://www.pplweb.com/wp-content/uploads/2022/08/PPL_Climate-Policy-Principles.pdf

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

At PPL, we are committed to our mission to provide safe, affordable, reliable, and sustainable energy to our customers as we pursue our ambitious goal to achieve net-zero carbon emissions by 2050. As we transition to a clean energy future, we measure all proposed climate policies against three core principles: Customer Focus, Sustainability, and Effectiveness. Specifically, we ask whether the policy will:

Customer Focus
1. Promote Reliability and Resilience. Policies we support will preserve and enhance the reliability and resiliency of energy networks at every step of the clean energy transition. Our focus is on ensuring 24/7 service to our customers.

2. Keep Energy Affordable. Policies we support will keep energy affordable for our customers, for whom our services are indispensable for everyday quality of life and economic growth. Sound climate policy must consider the costs to customers and ensure energy affordability and economic competitiveness – short, mid, and long-term.

Sustainability

3. Advance PPL's Carbon Reduction Goals. Policies we support will have the practical effect of advancing PPL's ability to reach its carbon reduction goals. To reach these ambitious climate goals, policies must enable PPL to sustainably manage its energy resource portfolio for the greatest carbon reduction along the whole course of the net-zero trajectory - short, mid, and long-term.

4. Help Others Meet Their Climate Goals. Policies we support will enable our customers and others to contribute to economy-wide carbon reduction. The electric and natural gas sectors alone cannot deliver a net-zero carbon future, and policies that leverage our industry's unique ability to facilitate decarbonization reliably and affordably are key to achieving deep, economy-wide impacts.

Effectiveness
5. Enable Compliance Feasibility. Policies we support will have a realistic pathway for implementing the proposed rules and requirements. Compliance must be feasible and reasonable. Good policy considers the relevant technological, economic, legal and regulatory dynamics and addresses barriers to effective implementation.

6. Maintain Operational Excellence. Policies we support will promote operational efficiency and avoid unnecessary complexity and risk. Operational excellence creates value. Sound policy will recognize and enable us to take advantage of our operational expertise, skilled labor force, and advanced technology deployments as we deliver the utilities of the future.

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate

Adaptation and/or resilience to climate change
Other, please specify
Decarbonization

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Infrastructure Investment and Jobs Act—Resilience and Electrification Provisions

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United States of America

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

IIJA provides significant federal funding for a variety of resilience and climate-related programs. PPL worked directly with lawmakers and through our trade associations to both define the types of projects that would be eligible for this funding and to push for enactment of the legislation.

At the state level, PPL is working directly with state officials as they develop programs to use IIJA funding to support decarbonization efforts beyond the electric sector.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Adaptation and/or resilience to climate change
Renewable energy generation

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Renewable energy tax credits within Build Back Better/Inflation Reduction Act reconciliation legislation

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United States of America

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

PPL supports either technology-specific or technology-neutral tax credits for renewable energy resources. These tax credits make the transition to renewable energy resources more affordable for our customers. PPL has engaged policymakers directly on this issue, and also worked through our trade associations to ensure this remains a top legislative priority.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Low-carbon, non-renewable energy generation
Renewable energy generation

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Tax credits for non-renewable, low-carbon generation such as carbon capture and sequestration, advanced nuclear generation; research, development, and demonstration funding for next generation low- and zero-carbon generation resources.

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United States of America

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

PPL supports federal support, via direct funding and tax credits, for the next generation of low- and zero-carbon generation technology. These new technologies would help to ensure affordability and reliability through generation diversity as PPL delivers on its future GHG emissions targets.

PPL has engaged policymakers directly on this issue, and also worked through our trade associations to ensure this remains a top legislative priority.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Mandatory climate-related reporting
Renewable energy generation

Specify the policy, law, or regulation on which your organization is engaging with policy makers

The Securities and Exchange Commission's efforts to promulgate rules to require certain climate-related disclosures

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United States of America

Your organization's position on the policy, law, or regulation

Undecided

Description of engagement with policy makers

PPL is committed to good governance, transparency, and providing information that is valuable to investors through our publicly available disclosures.

PPL has worked closely with EEI and AGA as they have developed and refined a utility-specific ESG reporting template. PPL executives met with SEC commissioners and staff to share insights from investors on the value of the industry template and in order to help the commission develop rules that will be of value to investors.

PPL supports transparent disclosure that is useful for our investors. We believe it is imperative the SEC implement rules that allow for flexibility by registrants and that the information disclosed be limited to what would truly be valuable to investor decision making. Given the expansiveness of the proposal, we provided numerous comments on the mechanics of the disclosures and await the final rule proposed by the SEC.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Renewable energy generation

Specify the policy, law, or regulation on which your organization is engaging with policy makers

KY Senate Bill 266 "An act relating to solar farms on agricultural lands"

Policy, law, or regulation geographic coverage

Sub-national

Country/region the policy, law, or regulation applies to

Other, please specify

Kentucky, USA

Your organization's position on the policy, law, or regulation

Oppose

Description of engagement with policy makers

LG&E and KU engaged with policymakers in the KY General Assembly

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

LG&E and KU looks to deploy more renewable and lower-carbon generation resources as the company economically retires its coal fleet. The company is concerned that prohibiting the siting of solar resources on certain lands, and allowing a patchwork of siting authorities, would hinder efforts to deploy cleaner resources.

LG&E and KU worked with sponsor of HB392, as he developed compromise solar siting legislation that was significantly less restrictive than SB266. HB392 addressed many of LG&E concerns, and represented a compromise among landowners, the solar industry and utilities.

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Edison Electric Institute (EII)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

With respect to climate, EEI's policy priorities include:
• Increasing funding, from research through deployment, for a range of clean energy technologies;
• Revamping energy tax credits to advance newer technologies in a technology-neutral manner;
• Enabling the siting, permitting, and construction of new technologies and grid infrastructure; and
• Utilizing electric sector emission reductions to reduce emissions in other sectors.

EEI believes that to be effective and efficient, any climate change legislation must be consistent with current technology, be economy-wide in scope and allow for full flexibility in market-based mechanisms, while maintaining reliability and customer affordability.

The full EEI Board sets the association's federal and state policy through a consensus process, and no position is taken if consensus is not reached. PPL's President and CEO is on the EEI Board and is actively engaged in the development and refinement of EEI's position on climate change. CEO Policy Committees and Task Forces, comprised of company CEOs, Presidents and COOs, oversee EEI public policy development and implementation. These policy committees are informed by Executive Advisory Committees (EACs), which provide direction and expertise to their respective CEO Policy Committees. PPL is represented on all key EACs, whose members generally are member company officers.

PPL's VP-Public Affairs and Chief Sustainability Officer co-chairs EEI's sustainability workgroup. PPL's VP-Federal Government Relations is on the Federal Affairs Executive Advisory Committee.

See EEI's Public Policy website for additional information.

https://www.eei.org/issuesandpolicy/Pages/CleanEnergy.aspx

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

American Gas Association (AGA)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

AGA is committed to reducing greenhouse gas emissions through smart innovation, new and modernized infrastructure, and advanced technologies that maintain reliable, resilient and affordable energy service choices for customers, AGA has adopted eight principles for policy action, key among them is that all sectors of the economy should contribute to reductions; the potential benefits of natural gas and natural gas infrastructure to effectively reduce emissions and improve energy efficiency should be recognized; the option of natural gas for consumers, should be preserved; and the government should increase its investments into the RD&D of advanced gas and mitigation technologies (including carbon capture utilization and sequestration). The full list of AGA policy principles, and ten commitments made by AGA and its member companies can be found at:

https://www.aga.org/globalassets/aga_climate-change-document_final.pdf

The AGA Board annually sets the association's advocacy priorities and adjusts them as needed throughout the year. LG&E and KU's Chief Operations Officer is a member of the AGA Board and provides regular input on policy positions. Recommendations for these advocacy priorities come from AGA Board Committees and Task Forces as well as committees of AGA members (e.g., Operations, Legislative Affairs, State Affairs, Legal, etc.), outlined in AGA's Committee Scope book.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

American Clean Power

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

American Clean Power works to champion policies that will transform the U.S. power grid to a low-cost, reliable, and renewable power system through policies that:

• Expand demand for renewable energy technologies at a national, regional, and state level.
• Remove barriers of entry through regulatory, permitting, and siting reforms.
• Establish long-term market certainty to ensure increased investment and manufacturing of renewable energy technologies.
• Invest in a national electric grid that is reliable, secure, clean, and designed for a renewable future.
• Develop a robust, stable, and diverse renewable energy workforce.

PPL is a member of American Clean Power. Currently, their policies are consistent with PPL's.

https://cleanpower.org/policy/

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Kentucky Chamber

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are attempting to influence them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

The chamber's advocacy positions are generally focused on issues of general business climate and competitiveness.

LG&E and KU are represented on all relevant Public Policy Councils, and LG&E and KU's President is a member of the KY Chamber's Board of Directors. Before taking a position on a state policy, regulation or proposed legislation, the KY Chamber works through its staff to develop a position with assistance from its six Public Policy Councils and Small Business Committee. These Councils/Committees make policy and position recommendations to the KY Chamber's Board, which the Board can then review, modify, adopt or ratify. The policies usually provide a clear direction on positions; however, a Board vote is sometimes needed if there is not clear direction or if there is a split or a lack of consensus. Generally, if KY Chamber members cannot reach consensus on an issue, the Chamber does not take a position.

We are a member of this organization primarily as it seeks to promote policy conducive to a strong business environment. This organization represents diverse business interests and is not solely focused on energy sector or climate-related issues. To the extent it may adopt climate policies that are not consistent with PPL's policies, PPL seeks to influence its position to be more aligned with PPL's. We evaluate such policies on a case-by-case basis.

https://www.kychamber.com/sites/default/files/pdfs/2021%20Kentucky%20Chamber%20Legislative%20Agenda.pdf

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

Other, please specify

Kentucky Coal Association (KCA)

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are attempting to influence them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

The mission of the Kentucky Coal Association is to provide effective leadership for the coal industry and to enhance the ability of the Kentucky coal industry to compete in domestic and international coal markets.

LG&E and KU are members of the KCA, though no employees are on its Board or Executive Committee. When KCA's policy positions related to clean energy transition do not align with LG&E and KU's, LG&E and KU notifies KCA and freely advocates against the position at issue.

We are a member of this organization primarily as it seeks to promote policy conducive to a strong business environment with a focus on a segment of the energy sector and its customers. To the extent it may adopt climate policies that are not consistent with PPL's policies, PPL seeks to influence its position to be more aligned with PPL's. We evaluate such policies on a case-by-case basis.

http://www.kentuckycoal.org/our-mission/

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

Other, please specify

Pennsylvania Chamber

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are attempting to influence them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

The purpose of the PA Chamber is to create an environment in which businesses want to operate in a state that allows them to thrive and grow. As such, the chamber's advocacy positions are generally focused on issues of competitiveness. With respect to environment and climate issues generally, the chamber believes that economic development and environmental protection are not mutually exclusive objectives and

advocates for thoughtful, science-based development and flexible implementation of environmental law.

The Pennsylvania Chamber's Policy Roundtable makes recommendations on changes to the Chamber's policies, which the Board can review, modify, adopt or ratify. The polices are reviewed every three years. The Board may vote on a regulatory or legislative issue if there is a lack of clear policy direction or if a consensus position cannot be reached. PPL is represented on committees relevant to its business interests. PPL's VP-Public Affairs and Chief Sustainability Officer serves on the Chamber Board. If PPL is not in agreement with the final position of the Pennsylvania Chamber, that difference would be provided to the full Board either in writing or verbally at a Chamber Board meeting.

We are a member of this organization primarily as it seeks to promote policy conducive to a strong business environment. This organization represents diverse business interests and is not solely focused on the energy sector or climate-related policies. To the extent it may adopt climate policies that are not consistent with PPL's policies, PPL seeks to influence its position to be more aligned with PPL's. We evaluate such policies on a case-by-case basis.

https://www.pachamber.org/advocacy/

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

Other, please specify

Energy Association of Pennsylvania (EAP)

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are attempting to influence them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

The Energy Association of Pennsylvania (EAP) is a trade association that represents and promotes the interests of regulated electric and natural gas distribution companies operating in Pennsylvania. To date, the association has not adopted a position directly related to climate change policy. EAP communicates industry positions and input on matters such as renewable portfolio standards and energy efficiency with a focus on reliability, affordability and safety.

Before taking a position on a state policy, regulation or proposed legislation, the EAP works through either its Regulatory Committee or its Legislative Committee to develop a consensus. General policy issues are discussed with the Board; however, as a general rule, EAP only agrees to develop a position on a policy, regulation or proposed legislation if there is a consensus among its members. PPL Electric's President serves on the EAP Board.

We are a member of this organization primarily as it seeks to promote policy conducive to a strong business environment and safe, reliable and affordable energy with a focus on regulated gas and electric distribution utilities and their customers.

https://www.energypa.org/who-we-are/

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

Solar Energy Industries Association (SEIA)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

SEIA is the national trade association for the solar and solar+storage industries and is working to create the framework for solar to achieve 20% of U.S. electricity generation by 2030. Its advocacy focuses on policies that promote reliable, low-cost solar power

and market rules that establish fair competition.

Safari Energy is an active member of SEIA.

https://www.seia.org/initiatives/solar-policyHi

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

New York Solar Industries Association (NYSEIA)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

NYSEIA works to achieve significant, long-term, and sustainable growth of solar energy for New York State. Its efforts include educating stakeholders on the environmental economic development, and energy-supply benefits of solar energy use, and participating in public policy and regulatory proceedings affecting the solar industry.

Safari Energy is an active member of NYSEIA.

https://49da7a77-7db8-45c2-8f29-58137f5c5afe.filesusr.com/ugd/a89dc9_8f56f65a2cf14c188f5553d2fbfaeb36.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.3c

(C12.3c) Provide details of the funding you provided to other organizations in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

Type of organization

Research organization

State the organization to which you provided funding

Electric Power Research Institute (EPRI)

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

EPRI provides thought leadership, industry expertise, and collaborative value to help the electricity sector identify issues, technology gaps, and broader needs that can be addressed through effective research and development programs. EPRI focuses on electricity generation, delivery, and use in collaboration with the electricity sector and its stakeholders. Of particular focus, EPRI's Low-Carbon Resource Initiative (LCRI) is focusing on the need to accelerate development and demonstration of low- and zero-carbon energy technologies.

PPL is a founding sponsor of the LCRI, and our CEO is a member of the Electric Power Research Initiative Board and chair of the LCRI Board Working Group, helping to identify the research priorities of the organization. Company executives have participated in several of EPRI's research and ESG initiatives.

https://www.epri.com/about

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Type of organization

Research organization

State the organization to which you provided funding

Smart Electric Power Alliance (SEPA)

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

SEPA envisions a carbon-free energy system by 2050 and works to assist electric power stakeholders address the most pressing issues they encounter as they pursue the transition to a clean energy future. It provides education, research, standards, and collaboration to help utilities and others across three pathways: electrification, grid integration, and regulatory and business innovation.

As a member, PPL Electric is actively engaged on several fronts, especially with respect to grid integration. PPL Electric was named the 2019 SEPA Power Players Investor-Owned Utility of the Year, in recognition of the company's comprehensive plan and strategy to prepare for the future by creating the next generation of advanced distribution management system functionalities through its Distributed Energy Resource Management System (DERMS).

https://sepapower.org/about/

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Type of organization

Research organization

State the organization to which you provided funding

National Association of Environmental, Health, Safety and Sustainability Management (NAEM)

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

NAEM's mission is to empower corporate leaders to advance environmental stewardship, create safe and healthy workplaces, and promote global sustainability by providing benchmarking, networking and professional development opportunities.

PPL uses the research, benchmarking and other services to improve internal sustainability practices and inform policy makers and other stakeholders.

PPL Electric is an active member of NAEM.

https://www.naem.org/our-community/mission

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In voluntary sustainability report

Status

Complete

Attach the document

PPL-Corporation-2021-Sustainability-Report.pdf

Page/Section reference

Pages: 5-6, 8, 16-19, 25-32, 59-64

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics
Other, please specify
Operational, community, employee, environmental

Comment

PPL's response to climate change and GHG emissions performance are included throughout PPL's 2021 Sustainability Report but are primarily addressed in the following sections: Key Metrics (p. 5): Public Policy Engagement (p. 16); Advance a Cleaner Energy Future (25-32); PPL's Contribution to U.N. Sustainable Development Goals; and Appendix which contains data aligned with GRI indicators.

Publication

In voluntary communications

Status

Complete

Attach the document

Page/Section reference

Climate Action webpage

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics
Other, please specify
Operational, community, innovation

Comment

In addition to PPL's 2020 Sustainability Report, PPL has a dedicated web page on the company's website to climate action initiatives. The climate action web page addresses the following: PPL's Clean Energy Strategy; Enterprise-wide Climate Goals; Non-Generation Operations Goals; and Commitment to R&D.

https://www.pplweb.com/sustainability/climate-action/

Publication

Other, please specify
EEI-AGA ESG Report

Status

Complete

Attach the document

PPL_Corp-EEI-AGA-ESG-2021-Sustainability-Report-09-12-2022.pdf

Page/Section reference

Clean energy and climate goals; Pages: 2-7

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Other, please specify
Operational, employee, environmental

Comment

The EEI-AGA ESG report enables consistent reporting of key metrics for investor-owned utilities. Metrics include climate-related emissions reporting and methane management, as well as a qualitative section that provides an overview of key sustainability-related initiatives and a climate response following the TCFD categories of reporting.

Publication

Other, please specify
Climate Assessment Report

Status

Complete

Attach the document

PPL_Corp-2021-Climate-Assessment_2022-01-04.pdf

Page/Section reference

Pages: 9-28

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics
Other, please specify
Operational, employee, environmental

Comment

PPL consistently assesses our climate risk and communicates with our stakeholders for transparency. We continually work toward alignment with the Task Force on Climate-Related Financial Disclosures (TCFD) framework and recommendations to ensure that we are taking a holistic view of our climate approach to inform our sustainability strategy and identify areas for action.

Our 2021 climate assessment report highlights risks and opportunities associated with climate change, evaluates potential future emissions under multiple scenarios and outlines the company's strategy and goals to enable a responsible and just transition to a cleaner energy future

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues
Row 1	No, and we do not plan to have both within the next two years

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Commitment to avoidance of negative impacts on threatened and protected species Other, please specify PPL's stewardship commitment to protect biodiversity and conservation of natural resources in our corporate environmental policy and sustainability commitments, including partnerships and creating awareness	SDG

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	Yes, we assess impacts on biodiversity in our downstream value chain only

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management

		Species management Education & awareness Law & policy Livelihood, economic & other incentives

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	State and benefit indicators Pressure indicators Response indicators

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Impacts on biodiversity Details on biodiversity indicators Risks and opportunities	2021 CSR: Pages 30 to 32 address resource management, biodiversity of natural habitats and species, and vegetation management. Pages 25 to 26 provides an overview of the company's goals to achieve net-zero carbon emissions with interim reductions. 1

[1]PPL-Corporation-2021-Sustainability-Report.pdf

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

This CDP Climate Change Response (“Response”) contains forward-looking statements regarding, among other things, the clean energy transition, our clean energy targets and achievement of climate commitments by certain dates, strategies or goals related to environmental, social, safety and governance performance, future energy demand, the availability and cost of natural gas, carbon reduction, third-party decarbonization, the growth of solar and other renewable forms of electricity generation and storage, potential rates of reduction in coal-fired electricity generation in Kentucky, low carbon technologies, enhancement of the grid, the expected operating life of existing coal-fired electricity generation plants and PPL Corporation’s corporate strategy. These statements, and all others that reflect beliefs, plans, estimates, projections, goals, targets, expectations, strategy or any other forward-looking information, are “forward-looking statements” within the meaning of the federal securities laws. PPL Corporation believes that the forward-looking statements in this Report reflect reasonable expectations and assumptions. However, it is important to understand that forward-looking statements, and their underlying assumptions, are subject to a wide range of risks and uncertainties, both known and unknown. Any number of factors could cause actual results to be materially different from those discussed in the statements, including: market demand for energy in our service territories; weather or other conditions affecting customer energy usage and operating costs; the effect of any business or industry restructuring; the profitability and liquidity of PPL Corporation and its subsidiaries; operating performance of its facilities; environmental, legal and regulatory requirements and the related costs of compliance; development of new projects, markets and technologies for the generation and delivery of electricity; performance of new ventures; asset or business acquisitions and dispositions; receipt of necessary government permits, approvals, rate relief and regulatory cost recovery; capital market conditions and decisions regarding capital structure; the outcome of litigation against PPL Corporation and its subsidiaries; the securities and credit ratings of PPL Corporation and its subsidiaries; political, regulatory or economic conditions in states, regions or countries where PPL Corporation or its subsidiaries conduct business; new state, federal or foreign legislation; commitments and liabilities of PPL Corporation and its subsidiaries; and catastrophic events such as fires, earthquakes, explosions, floods, hurricanes and other storms, droughts or other similar occurrences as well as cyber intrusion or other terrorist incidents and their direct or indirect effect on PPL Corporation’s businesses and the U.S. or U.K. electricity grids. All forward-looking statements in this Report should be considered in light of these important factors. Further information on these and other risks and uncertainties is available in PPL Corporation’s Form 10-K and other reports on file with the Securities and Exchange Commission.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Vice President-Public Affairs and Chief Sustainability Officer	Chief Sustainability Officer (CSO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options		Public

Please confirm below