

Welcome to your CDP Climate Change Questionnaire 2020

C0. Introduction

C0.1

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

Ameren Corporation, headquartered in St. Louis, MO, is a public utility holding company with annual revenues of more than \$5.9 billion and the parent company of Ameren Illinois Company (AIC), Union Electric Company, doing business as Ameren Missouri (AMO) and Ameren Transmission Company of Illinois (ATXI). Ameren serves approximately 2.4 million electric and more than 900,000 natural gas customers across 64,000 square miles in Illinois and Missouri. Ameren's net generating capacity, all of which is owned by AMO, was approximately 10,100 MWs as of 12/31/19. In 2019, AMO's energy supply was approximately 63% from coal, 23% from nuclear, 5% from hydro, 1% from purchased wind, 1% from natural gas and 7% from purchased power.

AMO operates rate-regulated electric generation, transmission and distribution business and a rate-regulated natural gas distribution business in Missouri. AIC operates rate-regulated electric transmission, electric distribution, and natural gas distribution businesses in Illinois. ATXI operates a rate-regulated electric transmission business.

In May 2020, we released our 2020 Ameren Sustainability Report (available at AmerenCSR.com), which offers a comprehensive view of our actions on key environmental, social and governance (ESG) matters. Ameren also participates in a voluntary industry initiative coordinated by the Edison Electric Institute (EEI) and the American Gas Association (AGA) to provide electric and gas industry investors with uniform and consistent ESG and sustainability-related metrics. The EEI AGA ESG/sustainability reporting template, along with other reports, are available under the ESG section of AmerenInvestors.com.

Ameren's 2019 year end rate base consisted of 75% from electric and natural gas distribution investments, 12% coal generation, 9% nuclear generation, 2% gas generation, and 2% renewable generation. These percentages reflect strategic allocation of increasing amounts of capital to distribution and transmission businesses and Ameren's view that the energy grid will be increasingly important and valuable to its customers, the communities it serves and its shareholders. This increasing value of the grid is expected to be driven by the need for a smarter, more hardened energy delivery system to incorporate increasingly more distributed and renewable generation sources. Ameren expects the percentage of its rate base represented by fossil fuel-fired generation investments to decline in the years ahead as it focuses on increased grid and renewable generation investment.

Ameren's strategy for addressing climate risk is largely embedded in AMO's Integrated Resource Plan (IRP). The current IRP, issued in September 2017, outlined plans to significantly increase AMO's renewable energy portfolio, including the planned retirement of more than half of AMO's coal-fired generation capacity over the next 20 years, with the retirement of the Meramec Energy Center by the end of 2022 and others between 2033 and 2036 and the addition of at least 700 MWs of wind generation. We expect a 400 MW wind project and the majority of a 300 MW wind project to be placed in-service by the end of 2020. We expect a portion of the 300 MW wind facility will be placed in-service in the first quarter of 2021. AMO has a goal to reduce CO2 emissions 35% by 2030, 50% by 2040 and 80% by 2050, as compared to 2005 levels. Ameren Missouri expects to file its next integrated resource plan in September 2020. More information is available at AmerenMissouri.com/IRP.

FORWARD-LOOKING STATEMENTS. Statements in this report not based on historical facts are considered "forward-looking" and, accordingly, involve risks and uncertainties that could cause actual results to differ materially from those discussed. Although such forward-looking statements have been made in good faith and are based on reasonable assumptions, there is no assurance that the expected results will be achieved. These statements include (without limitation) statements as to future expectations, beliefs, plans, strategies, objectives, events, conditions, and financial performance. We are providing this cautionary statement to identify important factors that could cause actual results to differ materially from those anticipated. We refer you to our Annual Report on Form 10-K for the year ended December 31, 2019, its Quarterly Report on Form 10-Q for the quarter ended June 30, 2020, and our other reports filed with the Securities and Exchange Commission, which contain a list of factors and a discussion of risks that could cause actual results to differ materially from management expectations suggested in such forward-looking statements. Except to the extent required by the federal securities laws, we undertake no obligation to update or revise publicly any forward-looking statements to reflect new information or future events.

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
Reporting year	January 1, 2019	December 31, 2019	No

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

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.

Operational control

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

Micro grids

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	Working closely with the Nuclear, Operations and Environmental Sustainability Committee (NOESC), the full Board of Directors oversees environmental matters as they relate to policy and strategy, including those related to planning for the potential implications of climate-related risks. The Board routinely considers environmental issues (including climate issues) and assesses how they impact the

	<p>Company’s operations, strategies and risk profile. The Company’s directors engage in vigorous discussions regarding these issues in which they express and consider diverse points of view. The Board has a diverse range of skills that make it well-positioned to address the risks and opportunities associated with environmental issues. These include extensive energy industry, strategic planning, financial, cyber, and regulatory experience, as well as environmental and legal expertise.</p> <p>The NOESC was renamed from the Nuclear and Operations Committee and undertook additional oversight responsibilities in March 2020 to reflect the Board’s focus on environmental sustainability matters and to further support our commitment to environmental stewardship. In addition to overseeing and reviewing the Company’s operations, including safety, performance, environmental and compliance issues, the committee’s duties and responsibilities were expanded to include oversight of the Company’s risks, policies, and performance related to environmental sustainability matters, including those related to climate change and water resource management. Senior management updates the NOESC on all aspects of the Company’s operations throughout the year.</p> <p>Case Study: Climate Risk Report (Situation) We recognize climate change is a critical issue for our customers and stakeholders. (Task) An internal working group coordinated the preparation of the Ameren Climate Risk Report to provide a comprehensive look at the steps the Company is taking to manage our climate-related risks. (Action) In March 2019, we issued our climate risk report that noted, among other things, Ameren Missouri’s plans outlined in its 2017 Integrated Resource Plan are consistent with and supports a 2 degree Celsius goal as outlined in the Paris Agreement. The report was reviewed by the Board of Directors. (Result) The report is available publicly at Ameren.com/sustainability.</p>
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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 major plans of action Reviewing and guiding risk management policies	The Nuclear, Operations and Environmental Sustainability Committee (NOESC) was renamed from the Nuclear and Operations Committee and undertook additional oversight responsibilities in March 2020 to reflect the Board’s focus on environmental sustainability matters and to further support our commitment to environmental stewardship. In addition to overseeing and reviewing the Company’s operations, including safety,

	<p>Reviewing and guiding annual budgets</p> <p>Reviewing and guiding business plans</p> <p>Setting performance objectives</p> <p>Monitoring implementation and performance of objectives</p> <p>Overseeing major capital expenditures, acquisitions and divestitures</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<p>performance, environmental and compliance issues, the committee’s duties and responsibilities were expanded to include oversight of the Company’s risks, policies, and performance related to environmental sustainability matters, including those related to climate change and water resource management. Senior management updates the NOESC on all aspects of the Company’s operations throughout the year, including long-term generation planning, compliance with environmental regulations, and environmental sustainability matters.</p> <p>The Audit and Risk Committee oversees Ameren’s enterprise risk management program, which includes strategic and operational risks, as well as the processes, guidelines, and policies for identifying, assessing, monitoring, and mitigating such risks, which include climate-related risks.</p> <p>The Nominating and Corporate Governance Committee oversees the Company’s corporate governance, including the Company’s proxy statements, shareholder proposals, the Company’s responses to shareholder proposals and any reports the Company issues in response to shareholder proposals.</p> <p>The Finance Committee oversees and reviews major capital projects, including projects related to environmental (climate) compliance.</p> <p>Case Study: Climate Risk Report (Situation) We recognize climate change is a critical issue for our customers and stakeholders. (Task) An internal working group coordinated the preparation of the Ameren Climate Risk Report to provide a comprehensive look at the steps the Company is taking to manage our climate-related risks. (Action) In March 2019, we issued our climate risk report that noted, among other things, Ameren Missouri’s plans outlined in its 2017 Integrated Resource Plan are consistent with and supports a 2 degree Celsius goal as outlined in the Paris Agreement. The report was reviewed by the Board of Directors. (Result) The report is available publicly at Ameren.com/sustainability.</p>
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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

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 CEO is the highest position responsible for climate-related issues at Ameren. We have several other officers who are responsible or climate-related issues, including (i) Senior Vice President – Innovation & Corporate Strategy, who reports to the Executive Vice President & Chief Financial Officer (CFO); (ii) Senior Vice President – Finance & Chief Accounting Officer, who reports to the Executive Vice President & CFO; (iii) Senior Vice President - General Counsel & Secretary, who reports directly to the CEO and (iv) Business Unit Presidents, who report directly to the CEO. Our CFO also reports directly to our CEO. Our strategy and actions are subject to stringent governance requirements.

In 2018, Ameren created the Corporate Social Responsibility (CSR) department to lead efforts on environmental, social, and governance (ESG) matters, climate-related issues and shareholder advocacy efforts. Additionally in 2018, Ameren created a CSR Executive Steering Committee to lead Ameren's enterprise-wide social responsibility efforts including providing input to our CSR strategy and advocating for a culture of sustainability among co-workers and suppliers. In 2019, Ameren further emphasized the importance of managing ESG and climate-related issues by establishing a Vice President-Sustainability & Electrification that reports directly to the Senior Vice President-Innovation & Corporate Strategy. The Vice President-Sustainability & Electrification guides climate-related corporate strategy by working closely with leadership, management teams and subject matter experts, including an internal climate policy core team. The core team was created in 2019 to help guide climate-related corporate strategy and review potential climate policy and U.S. legislation. Team findings are regularly shared with corporate executive and in management briefings.

We have a robust enterprise risk management (ERM) and governance programs to identify, evaluate and manage risks. Our ERM program is a comprehensive, consistently applied management framework that captures all climate-related policy and legal, physical, reputational and financial risks. Risks are evaluated using criteria associated with financial and qualitative impacts and probability associated with the likelihood of impact. Risk management is

embedded into the business processes and key decision making at all levels of the Company. A variety of management teams throughout our organization plan and execute our risk strategy, as well as coordinate with internal and external subject matter experts to inform the Board and company leadership of specific issues. These teams include, but are not limited to: environmental, innovation, legislative and regulatory affairs, corporate planning, engineering and generation, transmission, distribution and gas operations. Most of these teams report to the officers with responsibilities for climate-related issues (e.g., CSR, environmental, innovation, and corporate planning teams report to the SVP of Innovation & Corporate Strategy). Our Board of Directors has extensive oversight over our strategy and execution and all aspects of risk, including key climate risks.

In March 2019, Ameren published a climate risk report titled "Building a Cleaner Energy Future." The report noted that Ameren Missouri's plans, as outlined in its 2017 Integrated Resource Plan, are consistent with and supports a 2 degree Celsius goal, as outlined in the Paris Agreement. It also describes the comprehensive steps Ameren is taking to meet its obligation to provide safe, reliable and affordable energy in an environmentally responsible manner to its customers and the communities it serves while effectively balancing climate-related risks. This report leveraged the results of our participation in the Electric Power Research Institute's study regarding utility industry scenario analyses with respect to climate change. The report was prepared by a cross-functional group of subject matter experts from across the company, including representatives from our communications, corporate planning, corporate social responsibility, environmental, finance, legal, electric and gas operations, and strategy and innovation departments. Members of Ameren's Executive Leadership Team oversaw and provided guidance on the report's preparation. The report was reviewed by the Board of Directors, as well as the Nuclear and Operations Committee (now known as the Nuclear, Operations, and Environmental Sustainability Committee) and Nominating and Corporate Governance Committee.

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	Incentives are provided for the management of climate-related issues.

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
Energy manager	Monetary reward	Efficiency target	Co-workers in Ameren Illinois, co-workers in the Ameren Missouri Community Economic Development and Energy

			<p>Solutions area, and co-workers in Ameren Services are eligible for annual monetary incentive compensation related to energy-efficiency as follows:</p> <p>Ameren Illinois: Achievement of mwh savings associated with energy-efficiency programs, low/moderate income energy-efficiency programs and weatherization of single-family homes.</p> <p>Ameren Missouri Community and Economic Development & Energy Solutions: Achievement of mwh performance associated with energy-efficiency programs.</p> <p>Ameren Services co-workers (all except officers): Achievement of mwh savings and performance associated with energy-efficiency programs, low/moderate income energy-efficiency programs and weatherization of single-family homes through the Ameren Illinois and Ameren Missouri programs.</p>
Corporate executive team	Monetary reward	Emissions reduction project	<p>In 2020, Ameren added a long-term incentive metric for officers of the company based on renewable energy and energy storage additions. Ameren officers have a 10% compensation target associated with the implementation of renewable generation and energy storage additions (in terms of megawatts) during a 3 year performance period. This change is aligned with Ameren's commitment to strong environmental stewardship and executing a balanced and flexible generation strategy.</p>

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	5	Short-term: From 0 to 5 years

Medium-term	5	10	Medium-term: From 5 to 10 years
Long-term	10	30	Long-term: From 10 to equal to or greater than 30 years

C2.1b

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

Oversight, accountability and risk management are important elements of an effective strategy for identifying and assessing climate-related risks. We have established robust risk management and governance systems to identify, evaluate and manage these risks. Reflecting our balanced approach to sustainability, we integrate our priorities into our broader enterprise risk management and strategic planning initiatives.

We assess climate-related risks, including risks related to regulatory changes, changes in customer behaviour, reputation, and weather. Short (from 0 to 5 years), medium (from 5 to 10 years), and long-term (from 10 to 30 years and beyond) risks are part of the identification, assessment, and management processes. The Audit and Risk Committee (ARC) of Ameren's Board of Directors oversees our enterprise risk management (ERM) program. The goals of the ERM program are to enhance the ERM structure, further enable cross segment risk portfolio management, create solid ties to emergent risks, and incorporate detailed analysis of topical areas including environmental. Ameren's ARC meets at least five times per year.

Subject matter experts evaluate potential risks/opportunities that could have a financial impact greater than \$1M or other qualitative impacts for the company or an asset (e.g., potential substantive financial impact). That evaluation is robust and includes regulatory, physical, financial and reputational risks and opportunities. This process helps senior management identify risks/opportunities, mitigation strategies and potential financial implications. Recommendations are communicated to the appropriate functions, business segments and the Ameren Executive Leadership Team as necessary. Ameren established an ERM program for governance and oversight of enterprise risks and opportunities. Each enterprise risk has an internal owner who is required to periodically review that risk and update it along with the current risk mitigation plan. The risks are evaluated on criteria associated with financial impacts and the probability associated with the likelihood of the impacts. The ERM process is used to ensure that corporate objectives are consistent with the overall risk tolerance and integrates the risk assessment into decision making at appropriate levels, while effectively mitigating significant risks. ERM increases accountability for risk identification, assessment and mitigation. In addition, Ameren management reports regularly on environmental compliance matters to the Nuclear, Operations and Environmental Sustainability Committee of Ameren's Board of Directors. The Board of Directors oversees environmental policy and the potential impact of climate change on the company's strategy.

All risks and opportunities are assessed using a consistent risk framework and methodology. Financial impacts can be quantified and related to capital and O&M expenditures. Qualitative impacts are scored using a consistent criteria and can be related to regulatory, safety, and

velocity. After the assessment process is complete, the risks and opportunities are reviewed by the risk owner, function/department owner, and ultimately approved by the segment/business line owner. Risks and opportunities are then prioritized by their financial impact to the company or qualitative impact scores. Those with the highest impact are prioritized based on the scoring criteria. The business lines perform a review into the top three exposed values in each category/profile type. The review includes a discussion of the risk/opportunity tolerance, residual mitigation plans, and cost to mitigate.

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

Long-term

Description of process

Oversight, accountability and risk management are important elements of an effective strategy for identifying and assessing climate-related risks. We have established robust risk management and governance systems to identify, evaluate and manage these risks. Reflecting our balanced approach to sustainability, we integrate our priorities into our broader enterprise risk management and strategic planning initiatives.

We assess climate-related risks, including risks related to regulatory changes, changes in customer behavior, reputation, and weather. Short (from 0 to 5 years), medium (from 5 to 10 years), and long-term (from 10 to 30 years and beyond) risks are part of the identification, assessment, and management processes. The Audit and Risk Committee (ARC) of Ameren's Board of Directors oversees our enterprise risk management (ERM) program. The goals of the ERM program are to enhance the ERM structure, further enable cross segment risk portfolio management, create solid ties to emergent risks, and incorporate detailed analysis of topical areas including environmental. Ameren's ARC meets at least five times per year.

In 2018, Ameren created the Corporate Social Responsibility (CSR) department to lead efforts on ESG, climate-related issues and shareholder advocacy efforts. Additionally in

2018, Ameren created a CSR Executive Steering Committee to lead Ameren's enterprise-wide social responsibility efforts, including providing input to our CSR strategy. In 2019, Ameren further emphasized the importance of managing ESG and climate-related issues by establishing a Vice President-Sustainability & Electrification. Climate-related risks and opportunities are identified by numerous functions within the Company, including CSR and Ameren Missouri Power Operations, Energy Efficiency, Innovation & Corporate Strategy, and others through analysis, research and discussions by and among our different business segments. Subject matter experts evaluate potential risks/opportunities that could have a financial impact greater than \$1M or other qualitative impacts for the company or an asset (e.g., potential substantive financial impact). That evaluation is robust and includes regulatory, physical, financial and reputational risks and opportunities. This process helps senior management identify risks/opportunities, mitigation strategies and potential financial implications. Recommendations are communicated to the appropriate functions, business segments and the Ameren Executive Leadership Team as necessary. Ameren established an ERM program for governance and oversight of enterprise risks and opportunities. Each enterprise risk has an internal owner who is required to periodically review that risk and update it along with the current risk mitigation plan. The risks are evaluated on criteria associated with financial impacts and the probability associated with the likelihood of the impacts. The ERM process is used to ensure that corporate objectives are consistent with the overall risk tolerance and integrates the risk assessment into decision making at appropriate levels, while effectively mitigating significant risks. ERM increases accountability for risk identification, assessment and mitigation. In addition, Ameren management reports regularly on environmental compliance matters to the Nuclear, Operations and Environmental Sustainability Committee of Ameren's Board of Directors. The Board of Directors oversees environmental policy and the potential impact of climate change on the company's strategy.

All risks and opportunities are assessed using a consistent risk framework and methodology. Financial impacts can be quantified and related to capital and O&M expenditures. Qualitative impacts are scored using a consistent criteria and can be related to regulatory, safety, and velocity. After the assessment process is complete, the risks and opportunities are reviewed by the risk owner, function/department owner, and ultimately approved by the segment/business line owner. Risks and opportunities are then prioritized by their financial impact to the company or qualitative impact scores. Those with the highest impact are prioritized based on the scoring criteria. The business lines perform a review into the top three exposed values in each category/profile type. The review includes a discussion of the risk/opportunity tolerance, residual mitigation plans, and cost to mitigate.

An example of how transitional climate-related risks and opportunities are managed at Ameren is demonstrated through the development of the 2017 Ameren Missouri Integrated Resource Plan (IRP). The 2017 IRP is designed to ensure that customers' long-term energy needs are met in a reliable, cost-effective and environmentally responsible manner. The IRP includes a goal of reducing Ameren Missouri's CO₂ emissions 35% by 2030, 50% by 2040 and 80% by 2050 compared to 2005 levels. AMO

is finalizing the comprehensive process of completing the next 20-year IRP, which is expected to be issued in September 2020.

(Situation) We recognize climate change is a critical issue for our customers and stakeholders. (Task) An example of how physical risks are mitigated is provided in our “Building a Cleaner Energy Future” report issued in March 2019. Under the Risk Management and Governance section, we identified the four critical climate-related risks that affect the company: policy and legal, physical, reputational, and financial. Within each risk, we identify key mitigation strategies. (Action) Our strategy includes system hardening, emergency planning, situational awareness and emergency response.

(Result)

- System Hardening: Enhancements that improve reliability and protect against a changing climate include burying lines most susceptible to weather-related damage and selecting material that neutralizes the destructive effects of wind and moisture.
- Emergency Planning: Ameren stores spare transformers, switchgear, and other substation-related equipment across our service territory. Regional preparedness measures include the MISO transmission scenario planning process, membership in the Midwest Mutual Assurance Group (a consortium of electric utilities that provide emergency support for one another in events following extreme weather events), and transformer-sharing agreements.
- Situational Awareness: Ameren’s monitoring and forecasting of disruptive events included the formation of a Watch Center and incorporation of real-time weather prediction information.
- Emergency Response: In addition to proactive measures, Ameren utilizes an Incident Command and Control structure for emergency management, which enables a coordinated immediate response to a disruptive event.

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	Ameren has a corporate process for identifying significant risks and opportunities that allow our businesses to make prudent decisions while meeting our customers’ energy needs in a safe, reliable, efficient and environmentally responsible manner, including consideration of climate-related risks. Ameren develops action plans that mitigate risk, manage long-term customer costs and create shareholder value. Operating an electric utility is a highly regulated activity. Current and emerging regulations, including those related to climate change are systematically analyzed. For example, we believe our 2017 Ameren Missouri Integrated Resource Plan (IRP) has sufficient flexibility to

		<p>meet any reasonable changes in emissions-reduction policies, but exercising such flexibility may have a negative impact on customer costs and reliability. The IRP included a goal of reducing Ameren Missouri's CO2 emissions 35% by 2030, 50% by 2040, and 80% by 2050 from 2005 levels. As a result of the IRP's flexibility, we further believe we are effectively mitigating policy and legal risks associated with climate-related activities. Ameren Missouri expects to file its next integrated resource plan in September 2020.</p> <p>As of December 31, 2019, Ameren Missouri's fossil fuel-fired energy centers represented 12% of Ameren's rate base. Our five year plan (2020-2024) to invest \$16 billion directs significant investments to transmission and distribution systems and renewable generation. Investments in transmission and distribution allow systems to be more efficient and provide access to renewable resources. The following initiatives are part of our plan: energy efficiency programs; optimizing energy center operations; evaluating the potential retirement of existing coal-fired generation and new low/ zero-emitting generation; and acquiring hybrid bucket trucks, natural gas fuel trucks and electric vehicles. Ameren Illinois joined with energy stakeholders in supporting the Future Energy Jobs Act, which extends the state's landmark Illinois Energy Infrastructure Modernization Act and gives Ameren Illinois the ability to continue modernizing its electric distribution system while seeking recovery under a formula ratemaking process.</p>
Emerging regulation	Relevant, always included	<p>Current and future policies at the national and state level can have a significant impact on the electric power industry, our business, our customers, the communities we serve and our shareholders. In addition to complying with existing laws and regulations, Ameren actively engages with key stakeholders and monitors and reviews applicable policies for potential impacts to our current and future operational analysis and decision making. The changing nature of international efforts and domestic rules and regulations highlights the high level of uncertainty around energy policy we face in shaping our future decisions, particularly as they relate to reshaping our generation portfolio.</p> <p>Typically, environmental policies, rules and regulations have considered technical feasibility, costs, timelines and other factors when implemented. Other potential climate-related policies and regulations could be enacted and create challenges in these areas, which could result in higher costs and lower levels of reliability for our customers. We will continue to advocate for responsible energy and environmental policies that benefit our customers, the communities we serve and the environment. We believe the 2017 Ameren Missouri Integrated Resource Plan (IRP) has sufficient flexibility to meet any reasonable changes in emissions-reduction policies, but exercising such flexibility</p>

		<p>may have a negative impact on customer costs and reliability. The IRP included a goal of reducing Ameren Missouri CO2 emissions 35% by 2030, 50% by 2040, and 80% by 2050 from 2005 levels. As a result of the IRP's flexibility, we further believe we are effectively mitigating policy and legal risks associated with climate-related activities. Ameren Missouri expects to file its next integrated resource plan in September 2020.</p>
Technology	Relevant, always included	<p>The design, implementation, and management of several programs associated with reduction of climate-related risk (e.g., energy efficiency programs, and smart grid programs) create performance and technology risks. The performance risk issues are associated with the potential outcomes and measurable results of programs and the risk that programs do not deliver the expected results, such as sufficient energy savings or improved reliability. The performance of programs may affect Ameren's ability to recover costs through regulatory proceedings and may also negatively affect customers' perception of energy efficiency programs. The technology risks are associated with the risk that technologies targeted by a program will not perform as expected and fail to deliver results as expected. For example, a failure of equipment that was installed to reduce carbon emissions would expose Ameren to potential under-recovery of costs. In addition, new technologies that may emerge as a result of increased focus on GHG reduction technologies could change the use of natural gas and electricity. Improvements in technologies, such as plug-in electric vehicles and fuel cells, may increase demand for these products and provide additional stress on Ameren's delivery system. These demands could require development of additional transmission and distribution systems. These and other technologies could also affect natural gas and electric sales.</p> <p>Ameren addresses these risks by designing programs that contain a mix of initiatives to avoid over-reliance on any one approach, technology or market. This mix includes different services, delivery mechanisms, and incentive types/levels. In 2010, Ameren created the Technology Point of View Team to address technology expected to have significant future impact on our business. This team offered a framework for evaluating and monitoring potential "game-changing" technologies. In 2015, Ameren's Innovative Technologies initiative was established to advance innovative technologies and related impacts on customer loyalty, regulatory/policy frameworks, and economic opportunities with a view 15 years into the future. The teams assess various technologies and recommend action plans to create successful change. The initiative's efforts complement other related innovation activities occurring across Ameren.</p>

<p>Legal</p>	<p>Relevant, sometimes included</p>	<p>EPA intends to regulate carbon emissions from coal fired electric generating units (not natural gas) and finalized its Affordable Clean Energy regulations on July 8, 2019. Based upon various appellate court and United States Supreme Court decisions, Ameren believes that climate-related litigation would likely be pre-empted under the Clean Air Act by such EPA regulations.</p> <p>Specifically, the rejection by appellate courts of litigation brought following Hurricane Katrina effectively put to rest the risk of common law claims relating to GHG (i.e., nuisance, reduction in property values) and EPA's decision to regulate power plant CO2 emissions has reduced the likelihood of similar lawsuits. A growing number of courts view such litigation as posing political questions and not proper for judicial review. Ameren continually reviews its capital budget to manage its future needs. Consideration is given to potential impacts of climate legislation/regulations as Ameren plans its long-term capital needs. Current investment in the grid, including smart grid, distribution, and transmission enhances our ability to manage these risks by facilitating the addition of newer technologies that may be more carbon friendly.</p>
<p>Market</p>	<p>Relevant, always included</p>	<p>If market prices do not reflect increased costs associated with needed investments, Ameren Missouri may sell less energy in the market. However, because Ameren Missouri is a regulated utility it is allowed to request changes in its rate structure as market conditions fluctuate. Other risks to consider include investor uncertainty, which could have financial implications for both the company and for customers.</p> <p>Ameren is committed to its role as a leader in providing a secure energy future for our customers. It is imperative that future business plans continue to be prudent and in the best interest of our customers. There is a risk that customer satisfaction levels will decrease as a result of higher rates due to increased costs associated with actions taken to address climate change. Ameren is taking steps to reduce the risks related to poor recovery mechanisms and customer bad debt expense. Ameren's risk management department has polices to address fuel price volatility. As climate legislation/regulation is finalized, Ameren's risk management department will review those policies to ensure they will be sufficient to address any fuel price volatility that may arise. Robust policies and processes exist to allow Ameren management to review and approve each offset or allowance financial hedge that may be executed. Caps or limits on specific transactions may be implemented to diversify the portfolio of hedges to minimize the negative financial impact associated with any single hedge or offset</p>

		project.
Reputation	Relevant, always included	<p>We manage our business in a sustainable fashion, balancing the needs of the customers and communities we serve, our co-workers, the environment and our shareholders. Being mindful of potentially differing priorities among our stakeholders, we spend significant effort analyzing strategic and operational options. We consider variables such as energy and environmental regulation, policy uncertainty (including climate), cost of renewables, cost of energy, demand for power, adoption of innovations such as Electric Vehicles, and impact of energy efficiency programs.</p> <p>We take appropriate measures and actions to comply with existing rules and regulations so as to protect our environment and the communities we serve. We manage our business with a commitment to sustainability, exercising disciplined cost management to meet our customers' expectations for affordability and reliability. We proactively communicate with our stakeholders on our compliance strategies through robust disclosure, shareholder engagement and regulatory filings. And our strong governance framework demonstrates our commitment to oversight and accountability. Ameren is advancing our commitment to environmental stewardship through Ameren Missouri's Integrated Resource Plan (IRP) issued in September 2017. The 2017 IRP is designed to ensure that customers' long-term electric energy needs are met in a reliable, cost-effective and environmentally responsible manner. This plan includes significant increase in our renewable energy portfolio and a goal to reduce Ameren Missouri's CO2 emissions 35% by 2030, 50% by 2040, and 80% by 2050. Through implementing our strategy to significantly reduce GHG emissions, we strongly believe that we are effectively mitigating reputational risks associated with climate change. Ameren Missouri expects to file its next integrated resource plan in September 2020.</p>
Acute physical	Relevant, always included	<p>Many physical risks exist and uncertainty is associated around the timing of the physical changes in weather patterns or extreme weather events. In general, most storm events are managed and planned based on available information; however, it is difficult to anticipate the severity of storm events until they occur.</p> <p>Changes in weather patterns, including those that impact temperatures and precipitation, could significantly affect customer load patterns. These effects may increase or decrease the volume of electric and natural gas sales. In particular, the warming of the climate could increase electricity sales and reduce gas sales for heating load. This could result in increases or decreases in revenues for Ameren, depending on the level of warming. It also could reduce the production</p>

		<p>from renewable resources.</p> <p>Staying ahead of weather related impacts requires constant monitoring of weather conditions in our territories and requires planning and preparation that is constantly updated and tested. Recovery of weather related expenditures is directly related to preparation, reporting, and fulfillment of requirements imposed by regulators. One focus is on vegetation management in conjunction with requirements set forth by our regulators. Ameren also receives real-time weather prediction information from independent providers. To enhance weather preparedness, Ameren Missouri partners with Saint Louis University on a unique weather forecasting system called Quantum Weather. A network of monitoring stations provides neighborhood-by-neighborhood predictions of potential severe weather – hours in advance of its arrival.</p> <p>Ameren is investing in transmission system improvements to ensure that we will be able to provide reliable, safe service now and in the future. Ameren addresses fuel supply disruption risks via implementation of new fuel inventory policies and the development of alternative delivery options at many of its facilities. Ameren conducted assessments of the potential impact of limited water resources on the operation of our energy centers along rivers.</p>
Chronic physical	Relevant, always included	<p>Changes in weather patterns, including those that impact temperatures and precipitation, could significantly affect customer load patterns. These effects may increase or decrease the volume of electric and natural gas usage. In particular, the warming of the climate could increase electricity sales and reduce natural gas sales for heating load. This could result in increases or decreases in revenues for Ameren, depending on the level of warming. It also could reduce the production from hydroelectric, wind, and solar renewable resources. It could also impact reliability and increase customer cost.</p> <p>Induced changes in natural resources may include low water levels in rivers; warmer water in rivers due to lower flows and higher ambient temperatures, reduced water quality due to low flows and higher ambient temperatures, increased flooding events along rivers; and longer growing seasons with increased vegetation. Changes that resulted in flooding could potentially impact generation. Transmission systems, distribution systems and substations. This could potentially cause system failure which may result in additional requirements for hardening of the system. Longer growing seasons could result in increased vegetation that could potentially interfere with transmission and distribution lines. Over the next five years (2020-2024) Ameren plans to invest \$3.2 billion in transmission system improvements to</p>

		<p>ensure that we will be able to provide reliable, safe service now and in the future. In addition, we have a robust enterprise risk management (ERM) and governance programs to identify, evaluate and manage risks. Our ERM program is a comprehensive, consistently applied management framework that captures all climate-related policy and legal, physical, reputational and financial risks. Risks are evaluated using criteria associated with financial and qualitative impacts and probability associated with the likelihood of impact.</p>
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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

Technology

Transitioning to lower emissions technology

Primary potential financial impact

Increased capital expenditures

Company-specific description

The 2017 Ameren Missouri's Integrated Resource Plan (IRP) is designed to ensure that customers' long-term electric energy needs are met in a reliable, cost-effective and environmentally responsible manner. Ameren's preferred plan focuses on transitioning the generation fleet to a cleaner and more fuel diverse energy portfolio in a responsible manner and includes: the addition of at least 700 MW of wind generation (representing an investment of approximately \$1.2 billion)---we expect a 400 MW wind project and the majority of a 300 MW wind project to be placed in-service by the end of 2020. We expect a portion of the 300 MW wind project will be placed in-service in the first quarter of 2021. The plan also includes: the addition of 100 MW of solar generation by 2027; the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity over the next twenty years; continuation of cost-effective customer energy-efficiency programs; and continued development of smart grid, communications and other

advanced technologies. Ameren Missouri has a goal to reduce CO2 emissions 35% by 2030, 50% by 2040, and 80% by 2050 compared to 2005 levels. Ameren Missouri expects to file its next integrated resource plan in September 2020.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,200,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Ameren's strategy for addressing climate change is largely embedded in Ameren Missouri's 2017 Integrated Resource Plan (IRP).

The potential financial impact represents Ameren Missouri pursuing ownership of at least 700 MW of wind generation (representing an investment of approximately \$1.2 billion) with multiple wind developers.

Ameren Missouri expects to file its next integrated resource plan in September 2020.

Cost of response to risk

1,200,000,000

Description of response and explanation of cost calculation

The potential financial impact represents Ameren Missouri pursuing ownership of at least 700 MW of wind generation (representing an investment of approximately \$1.2 billion) with multiple wind developers. We expect a 400 MW wind project and the majority of a 300 MW wind project to be placed in-service by the end of 2020. We expect a portion of the 300 MW wind project will be placed in-service in the first quarter of 2021.

Ameren has a process for identifying risks and opportunities that allow our businesses to make prudent decisions while meeting our customers' energy needs in a safe,

reliable, efficient and environmentally responsible manner. Ameren develops action plans that mitigate risk, manage long-term customer costs and improve shareholder value.

As of December 31, 2019, Ameren Missouri fossil fuel-fired energy centers represented, 12% of Ameren's rate base. Our five year plan (2020-2024) directs significant investments to transmission and distribution systems and renewable generation. Investments in transmission and distribution allow systems to be more efficient and provide access to renewable resources. The following initiatives are part of our plan: energy efficiency programs, optimizing operations at our energy centers; evaluating the potential retirement of existing coal-fired generation and new low/ zero-emitting generation, and acquiring hybrid bucket trucks, natural gas fuel trucks and electric vehicles. Ameren Illinois joined with energy stakeholders in supporting the Future Energy Jobs Act. Under the Act, Ameren Illinois has increased its investments in energy efficiency. The law also extend the Illinois Energy Infrastructure and Modernization Act that gives Ameren Illinois the ability to continue modernizing its electric distribution system while seeking recovery under a formula ratemaking process.

Comment

The IRP outlines plans to significantly increase our renewable energy portfolio, including the addition of at least 700 MW of wind generation. It also includes the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity over the next 20 years, with the retirement of the Meramec Energy Center by the end of 2022 and others between 2033 and 2036. More information is available at AmerenMissouri.com/IRP. Ameren Missouri expects to file its next integrated resource plan in September 2020.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical

Changes in precipitation patterns and extreme variability in weather patterns

Primary potential financial impact

Other, please specify

Increased operational cost, Increased capital cost, Reduced demand for goods/services, Reduction/disruption in production capacity, Reduction in capital availability, and Reduced stock price (market valuation)

Company-specific description

Changes in the levels of precipitation, including drought, could create potential difficulties with distribution systems from excessive rainfall and flooding to a potential loss of water supply at energy centers due to lower river levels. There is a potential for disruption in fuel supply due to high levels of rainfall and/or flooding. Changes in precipitation could impact the water levels in the Missouri and Mississippi rivers and affect the operation of a number of Ameren Missouri's energy centers. Low water levels in these rivers, due to extreme or prolonged drought, could potentially negatively affect the efficiency of plant operations and a plant's ability to meet thermal discharge effluent regulatory limits that could result in load reductions and/or plant shutdowns. Low water levels could potentially force the installation of cooling towers at the Ameren Missouri energy centers, requiring a large capital investment. Changes in precipitation could cause flooding that would potentially impact transmission and distribution systems. This could potentially cause system failure which may result in additional requirements for hardening of the system.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

3,200,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Changes in weather patterns, impacting temperatures and precipitation, could impact customer load patterns. These effects may increase or decrease the volume of electric sales and natural gas usage. In particular, the warming of the climate could increase electricity sales and reduce gas sales for heating load. This could result in increases or decreases to revenues for Ameren, depending on the level of warming. It also could reduce production from hydroelectric, wind, and solar renewable resources.

The potential financial impact represents the total investment in transmission infrastructure of \$3.2 billion over the next five years (2020-2024) to ensure system reliability.

Cost of response to risk

3,200,000,000

Description of response and explanation of cost calculation

The potential financial impact represents the total investment in transmission infrastructure of \$3.2 billion over the next five years (2020-2024) to ensure system reliability.

Staying ahead of weather-related impacts requires constant monitoring of weather conditions in our territories and requires planning and preparation that is constantly updated and tested. Recovery of weather related expenditures is directly related to preparation, reporting, fulfillment of requirements imposed by regulators. One particular focus is on vegetation management in conjunction with requirements set by our regulators. Ameren is investing in transmission system improvements to ensure that we will be able to provide reliable, safe service now and in the future. Ameren Missouri continues grid modernization efforts with our Smart Energy Plan. The Smart Energy Plan will provide reliance service to reduce outages---strengthening the energy grid from overhead to underground to stand up to storms and high winds. Ameren Missouri initiated the Quantum Weather program to pinpoint severe weather activity on a localized basis. Ameren addressed fuel supply disruption risks via implementation of new fuel inventory policies and the development of alternative delivery options at many of its facilities. Over the next five years (2020-2024) Ameren plans to invest over \$3.2 billion in transmission system improvements to ensure that we will be able to provide reliable and safe service.

Comment

Service interruptions can occur due to failures of equipment as a result of severe or destructive weather or other causes.

The ability of Ameren Missouri and Ameren Illinois to respond promptly to such failures can affect customer satisfaction.

If customers, legislators, or regulators have or develop a negative opinion of us and our utility services, this could result in increased costs associated with regulatory oversight and could affect the returns on common equity we are allowed to earn. Additionally, negative opinions about us could make it more difficult for our utilities to achieve favorable legislative or regulatory outcomes. Negative opinions could also result in increased use of distributed generation by our customers. Any of these consequences could adversely affect our results of operations, financial position, and liquidity.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Reputation
Shifts in consumer preferences

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

Changes in consumer behavior could impact the consumption of electricity and natural gas in our service territory. Consumers could implement life style changes due to climate change as well as a response to higher electricity and natural gas costs. Customers could also install more customer owned renewable generation. This could result in decreased electric sales.

Energy conservation, energy efficiency, distributed generation, energy storage, and other factors that reduce energy demand could adversely affect Ameren's results of operations, financial position, and liquidity.

Without a regulatory mechanism to ensure recovery, declines in energy usage will result in an under-recovery of Ameren Missouri's revenue requirement.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

740,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The potential financial impact represents the combined Ameren Missouri and Ameren Illinois anticipated energy efficiency program investments of approximately \$740,000,000 over the next five years (2020-2024).

Cost of response to risk

740,000,000

Description of response and explanation of cost calculation

The potential financial impact represents the combined energy efficiency program spend over the life of the current approved programs (a total of approximately \$740,000,000 investment: 2020-2024). The total costs of Ameren Missouri's Energy Efficiency programs is approximately \$240 million from 2020-2024. The total costs of Ameren Illinois's Energy Efficiency total program cost is approximately \$100 million per year (\$500 million, 2020-2024). Therefore, the \$740,000,000 investment equals \$240 million plus \$500 million.

Comment

Pursuant to the Future Energy Jobs Act, Ameren Illinois plans to invest up to approximately \$100 million per year in electric energy-efficiency programs through 2024. While the Illinois Commerce Commission (ICC) has approved a plan consistent with this spending level through 2021, the ICC has the ability to reduce the amount of electric energy-efficiency savings goals in future plan program years if there are insufficient cost-effective programs available, which could reduce the investments in electric energy-efficiency programs.

In 2018, the Missouri Public Service Commission issued an order approving Ameren Missouri's MEEIA 2019 plan. The initial plan included a portfolio of customer energy-efficiency programs through December 2021 and low-income customer energy-efficiency programs through December 2024. Ameren Missouri intends to invest \$226 million over the life of the plan, including \$65 million per year through 2021. In August 2020, the MoPSC issued an order approving a unanimous stipulation and agreement with respect to the 2022 program year of Ameren Missouri's MEEIA 2019 program. Ameren Missouri intends to invest \$70 million in energy efficiency programs during the 2022 program year.

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

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

The 2017 Ameren Missouri Integrated Resource Plan (IRP) is designed to ensure that customers' long-term electric energy needs are met in a reliable, cost-effective and environmentally responsible manner. Ameren's preferred plan focuses on transitioning the generation fleet to a cleaner and more fuel diverse energy portfolio in a responsible manner and includes: the addition of at least 700 MW of wind generation (representing and investment of approximately \$1.2 billion)--- we expect a 400 MW wind project and the majority of a 300 MW wind project to be placed in-service by the end of 2020. We expect a portion of the 300 MW wind project will be placed in-service in the first quarter of 2021. The plan also includes the addition of 100 MW of solar generation by 2027; the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity over the next twenty years; continuation of cost-effective customer energy-efficiency programs; and continued development of smart grid, communications and other advanced technologies. Ameren Missouri has a goal to reduce CO2 emissions 35% by 2030, 50% by 2040, and 80% by 2050 compared to 2005 levels. Ameren Missouri expects to file its next integrated resource plan in September 2020.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,200,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The potential financial impact represents Ameren Missouri pursuing ownership of at least 700 MW of wind generation (representing an investment of approximately \$1.2 billion) with multiple wind developers.

Cost to realize opportunity

1,200,000,000

Strategy to realize opportunity and explanation of cost calculation

The potential financial impact represents Ameren Missouri pursuing ownership of at least 700 MW of wind generation (representing an investment of approximately \$1.2 billion) with multiple wind developers. We expect a 400 MW wind project and the majority of a 300 MW wind project to be placed in-service by the end of 2020. We expect a portion of the 300 MW wind project will be placed in-service in the first quarter of 2021.

Ameren Missouri's 2017 Integrated Resource Plan (IRP) is designed to ensure that customers' long-term electric energy needs are met in a reliable, cost-effective and environmentally responsible manner. Ameren's preferred plan focuses on transitioning the generation fleet to a cleaner and more fuel diverse energy portfolio in a responsible manner and includes: the addition of at least 700 MW of wind generation (representing and investment of approximately \$1.2 billion); the addition of 100 MW of solar generation by 2027; the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity over the next twenty years; continuation of cost-effective customer energy-efficiency programs; and continued development of smart grid, communications and other advanced technologies. Ameren Missouri has a goal to reduce CO2 emissions 35% by 2030, 50% by 2040, and 80% by 2050 compared to 2005 levels. Ameren Missouri expects to file its next integrated resource plan in September 2020.

Comment

Ameren's strategy for addressing climate risk is largely embedded in Ameren Missouri's Integrated Resource Plan (IRP). The IRP outlines plans to significantly increase our renewable energy portfolio. It also includes the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity over the next 20 years, with the retirement of the Meramec Energy Center by the end of 2022 and others between 2033 and 2036. More information is available at AmerenMissouri.com/IRP. Ameren Missouri expects to file its next integrated resource plan in September 2020.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resilience

Primary climate-related opportunity driver

Other, please specify

Investments in transmission and distribution

Primary potential financial impact

Other, please specify

Increased market valuation through resilience planning (e.g., infrastructure, land, buildings)

Company-specific description

At year-end 2019, electric and gas transmission and distribution investments comprised 75% of Ameren's regulated infrastructure rate base, while fossil fuel-fired generation investments comprised only 12% of rate base. These percentages reflect our strategic allocation of increasing amounts of capital to distribution and transmission businesses and our view that the energy grid will be increasingly important and valuable to our customers, the communities we serve and our shareholders. This value is expected to be driven by the need for a smarter, more hardened grid to incorporate increasingly more distributed and renewable generation sources. Further, we expect the percent of rate base represented by fossil fuel-fired generation investments to decline in the years ahead as we focus on transmission and distribution investments and our announced preferred plan to increase renewable generation investments.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

3,200,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

At year-end 2019, electric and gas transmission and distribution investments comprised 75% of Ameren's regulated infrastructure rate base, while fossil fuel-fired generation investments comprised only 12% of rate base. These percentages reflect our strategic allocation of increasing amounts of capital to distribution and transmission businesses. This value is expected to be driven by the need for a smarter, more hardened grid to incorporate increasingly more distributed and renewable generation sources.

The potential financial impact represents the total investment over \$3.2 billion in transmission infrastructure over the next five years (2020-2024) to ensure system

reliability.

Cost to realize opportunity

3,200,000,000

Strategy to realize opportunity and explanation of cost calculation

Over the next five years (2020-2024) Ameren plans to invest over \$3.2 billion in transmission system improvements to ensure that we will be able to provide reliable, safe service now and in the future.

Comment

Ameren provides safe, reliable, affordable, and cleaner energy that is foundational to the well-being and security of millions of people as well as the economy of our region and country.

Over the next five years (2020-2024) Ameren plans to invest over \$3.2 billion in transmission system improvements to ensure that we will be able to provide reliable, safe service now and in the future. There is a strong long-term infrastructure investment pipeline beyond 2024.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Other, please specify

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

Company-specific description

To educate and help customers become more efficient users of energy, Ameren Missouri and Ameren Illinois have implemented robust energy-efficiency programs. In Missouri, the Missouri Energy Efficiency Investment Act (MEEIA) established a regulatory framework that, among other things, allows electric utilities to recover costs (both program costs and margin reductions resulting from energy-efficiency programs) related to MoPSC-approved customer energy-efficiency programs. In December 2018, Ameren Missouri's MEEIA 2019 plan was approved. The plan includes a portfolio of customer energy-efficiency programs through December 2021 and low-income

customer energy-efficiency programs through December 2024, along with a regulatory recovery mechanism. Ameren Missouri intends to invest \$226 million over the life of the plan, including \$65 million per year through 2021. In August 2020, the MoPSC issued an order approving a unanimous stipulation and agreement with respect to the 2022 program year of Ameren Missouri's MEEIA 2019 program. Ameren Missouri intends to invest \$70 million in energy-efficiency programs during the 2022 program year.

In September 2017, the Illinois Commerce Commission approved Ameren Illinois' energy-efficiency savings targets and investments for the 2018 through 2021 period. The order authorized electric and natural gas energy-efficiency program expenditures of \$394 million and \$62 million, respectively, for the 2018 through 2021 period. Ameren Illinois plans to invest up to approximately \$100 million per year in electric energy-efficiency programs through 2024, and will earn a return on those investments.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

740,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The potential financial impact represents the combined Ameren Missouri and Ameren Illinois anticipated energy efficiency program investments of approximately \$740,000,000 over the next five years (2020-2024).

Cost to realize opportunity

740,000,000

Strategy to realize opportunity and explanation of cost calculation

The potential financial impact represents the combined energy efficiency program spend over the life of the current approved programs (a total of approximately \$740,000,000 investment: 2020-2024). The total costs of Ameren Missouri's Energy Efficiency programs is approximately \$240 million from 2020-2024. The total costs of Ameren

Illinois's Energy Efficiency total program cost is approximately \$100 million per year (\$500 million, 2020-2024). Therefore, the \$740,000,000 investment equals \$240 million plus \$500 million.

Comment

Pursuant to the Future Energy Jobs Act, Ameren Illinois plans to invest up to approximately \$100 million per year in electric energy-efficiency programs through 2024. While the Illinois Commerce Commission (ICC) has approved a plan consistent with this spending level through 2021, the ICC has the ability to reduce the amount of electric energy-efficiency savings goals in future plan program years if there are insufficient cost-effective programs available, which could reduce the investments in electric energy-efficiency programs.

In 2018, the Missouri Public Service Commission issued an order approving Ameren Missouri's MEEIA 2019 plan. The initial plan included a portfolio of customer energy-efficiency programs through December 2021 and low-income customer energy-efficiency programs through December 2024. Ameren Missouri intends to invest \$226 million over the life of the plan, including \$65 million per year through 2021. In August 2020, the MoPSC issued an order approving a unanimous stipulation and agreement with respect to the 2022 program year of Ameren Missouri's MEEIA 2019 program. Ameren Missouri intends to invest \$70 million in energy-efficiency programs during the 2022 program year.

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform its strategy?

Yes, qualitative and quantitative

C3.1b

(C3.1b) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios and models applied	Details
2DS	Ameren's strategy for addressing climate risk is largely embedded in Ameren Missouri's Integrated Resource Plan (IRP). To help us assess the resilience of

<p>Nationally determined contributions (NDCs)</p>	<p>the IRP against potential future climate policies and associated emissions requirements, we leveraged the EPRI study “Grounding Decisions: A Scientific Foundation for Companies Considering Global Climate Scenarios and Greenhouse Gas Goals,” which summarized over 1,000 climate scenarios from the IPCC and others. The study presents a scientifically-based framework for considering uncertainty in climate-scenario analysis and provides insights that can be applied by an individual company or organization.</p> <p>Much of EPRI’s study builds on the scenario results released by the IPCC in its Fifth Assessment Report, in which over 1,000 scenarios were placed into one of seven categories according to their probabilities of limiting increases in global average temperature to less than 2°C. Each category includes a range of emissions pathways, which represent projected global annual CO2 emissions levels over a given period of time, along with a range of probability of staying below 2°C. EPRI focused much of its analysis on those climate scenarios contained in the two IPCC categories that exhibited the highest probability of achieving a 2°C goal. To provide proper context for a review of the IRP, we calculated Ameren’s pro-rata share of emissions for the global electric sector scenarios from the EPRI analysis using Ameren’s share of 2005 emissions. This allows us to compare the emission reductions associated with our plan to the emissions pathways represented in the scenario analysis data used by EPRI. Comparing the IRP against those scenarios that exhibit a high probability of achieving a 2°C goal, we found that the projected CO2 emissions under our current plan fall well within the range of the emissions defined by these scenarios. We expected these results because our current plan was tailored to be consistent with meeting a 2°C goal, as outlined in the Paris Agreement, and includes significant levels of renewable energy, energy efficiency, coal retirements and electrification.</p> <p>While our current plan to reduce CO2 emissions 35% by 2030, 50% by 2040, and 80% by 2050 (time horizon considered) compared to 2005 levels is consistent with and supports a 2°C goal, as outlined in the Paris Agreement, we recognize there are efforts to limit the temperature increase even further, such as to 1.5°C.</p> <p>Should a more aggressive approach to climate-change policy result in more stringent emission-reduction requirements, we believe our current plan provides sufficient flexibility to meet these additional constraints. This flexibility owes to our favorable position with regard to long-term generating capacity needs. Because our need for new generating capacity will occur well into the future, we are able to monitor changes in technology and market conditions before committing to significant investments in new generation resources. We will continue to monitor technology advances that may present economically feasible and cleaner solutions in our ongoing effort to reduce GHG emissions.</p> <p>Our current plan represents a balanced and cost-effective approach to meet the</p>
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	<p>long-term energy needs of our customers and address the needs and expectations of our other key stakeholders. Further, we have flexibility in our plan to meet more stringent emissions constraints. While adjusting the plan to achieve greater emissions reductions may increase customer costs and/or reduce reliability, having flexibility allows us to better manage and mitigate these potential impacts. Under any climate policy, we will continue to work closely with regulators and other key stakeholders to balance the needs of all stakeholders and to reduce the potential for stranded costs related to current and future investments.</p> <p>Learn more from our 2019 Building a Cleaner Energy Future Report available under the ESG section of AmerenInvestors.com.</p>
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C3.1d

(C3.1d) 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	<p>Ameren has a process for identifying significant risks and opportunities that allow our business to make prudent decisions while meeting our customers' energy needs in a safe, reliable, efficient and environmentally responsible manner, including climate-related risks. Ameren develops action plans that mitigate risk, manage long-term customer costs and improve shareholder value.</p> <p>The 2017 Ameren Missouri Integrated Resource Plan (IRP) is designed to ensure that customers' long-term electric energy needs are met in a reliable, cost-effective and environmentally responsible manner. Ameren's preferred plan focuses on transitioning the generation fleet to a cleaner and more fuel diverse energy portfolio in a responsible manner and includes: the addition of at least 700 MW of wind generation (representing and investment of approximately \$1.2 billion); the addition of 100 MW of solar generation by 2027; the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity over the next twenty years; continuation of cost-effective customer energy-efficiency programs; and continued development of smart grid, communications and other advanced technologies. Ameren Missouri has a goal to reduce CO2</p>

		emissions 35% by 2030, 50% by 2040, and 80% by 2050 compared to 2005 levels. Ameren Missouri expects to file its next integrated resource plan in September 2020.
Supply chain and/or value chain	Yes	Ameren's Market risk management department has policies to address fuel price volatility and supply chain risks. As climate legislation/regulation is finalized, Ameren's risk management department reviews those policies to ensure that the policies will be sufficient to address any fuel price volatility that may arise. Robust policies and processes exist to allow Ameren management to review and approve each offset or allowance financial hedge that may be executed. Caps or limits on specific transactions may be implemented to diversify the portfolio of hedges to minimize the negative financial impact associated with any single hedge investment or offset project. Climate change has not materially impacted or supply chain.
Investment in R&D	Yes	<p>Ameren has invested in research relating to alternative forms of generation. In 2019, Ameren spent over \$1.35 million for CO2 emissions reduction research, including the Electric Power Research Institute (EPRI) electrification programs, Energy Sustainability Interest Group, Sustainability Benchmarking Project, Distributed Energy Resource projects, cyber security, and Grid Modernization Programs. In addition to EPRI activities, Ameren participated in the Missouri S&T Intelligent Systems Center, the Gas Technology Institute Emerging Technology Program, and energy storage programs</p> <p>In 2017, Ameren announced the launch of Ameren Accelerator, an innovative public-private partnership with the University of Missouri System, UMSL Accelerate and Capital Innovators, that assesses, mentors and invests in energy technology startup companies. The unique partnership, one of the first of its kind in the United States, is also the St. Louis region's first to focus on energy technologies. Leveraging the expertise of all of the partners, the goals of this program are to better position Ameren to meet its customers' future energy needs and expectations, create new jobs through these start-up companies and provide university students opportunities to be more engaged in the energy business. Ameren has also invested in Energy Impact Partners, a fund focused on strategic investments in high-growth companies involved in new energy technologies.</p>
Operations	Yes	Ameren develops action plans that mitigate risk, manage long-term customer costs and improve shareholder value. As

		<p>of December 31, 2019, Ameren Missouri's fossil fuel-fired energy centers represented 12% of Ameren's rate base. By year end of 2024, we estimate our rate base will include 79% from electric and natural gas transmission and distribution investments with coal generation declining to 8%. These percentages reflect our strategic allocation of increasing amounts of capital to distribution and transmission businesses and our view that the energy grid will be increasingly important and valuable to our customers, the communities we serve and our shareholders. This value is expected to be driven by the need for a smarter, more hardened grid to incorporate increasingly more distributed and renewable generation sources.</p> <p>Investments in transmission and distribution allow systems to be more efficient and provide access to renewable resources. The following initiatives are part of the solution: energy efficiency programs, optimizing operations at our energy centers; evaluating the potential retirement of existing coal-fired generation and new renewable generation, and acquiring hybrid bucket trucks, natural gas fuel trucks and electric vehicles.</p> <p>The 2017 Ameren Missouri Integrated Resource Plan focuses on transitioning the generation fleet to a cleaner and more fuel diverse energy portfolio in a responsible manner and includes: the addition of at least 700 MW of wind generation (representing an investment of approximately \$1.2 billion); the addition of 100 MW of solar generation by 2027; the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity over the next twenty years; continuation of cost-effective customer energy-efficiency programs; and continued development of smart grid, communications and other advanced technologies. Ameren Missouri's goal is to reduce CO2 emissions 35% by 2030, 50% by 2040, and 80% by 2050 compared to 2005 levels.</p>
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C3.1e

(C3.1e) Describe where and how climate-related risks and opportunities have influenced your financial planning.

Financial planning elements that	Description of influence
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	have been influenced	
Row 1	Capital expenditures Capital allocation	<p>Our strategy to address and respond to climate risk and opportunities requires us to evaluate all aspects of our electric, natural gas and transmission businesses. The primary sources of Ameren's greenhouse gas (GHG) emissions are Ameren Missouri's fossil-fueled energy centers. Smaller amounts of GHG emissions can also be attributed to our natural gas and electric delivery operations. As a result, we are taking actions across all parts of the business as we address the potential impacts of climate change and strive to reduce our GHG emissions significantly.</p> <p>Our strategy addresses:</p> <ol style="list-style-type: none"> 1. Electric Generation. We are transitioning our generation fleet to cleaner resources, as set forth in Ameren Missouri's 2017 Integrated Resource Plan (IRP or "plan"). This plan is consistent with achieving our goal of an 80 percent reduction in GHG emissions by 2050, as compared to 2005 levels. Ameren Missouri is finalizing the comprehensive process of completing the next 20-year IRP, which will be expected to be in September 2020. 2. Electric Transmission. We are expanding and enhancing our electric transmission grid to integrate additional clean, renewable energy resources while reducing energy losses and improving system reliability. 3. Electric Grid. We are modernizing the electric grid to accommodate more energy from renewable sources, strengthen our system to be more resilient to climate change and weather-related events, and improve efficiency and reliability, as well as to enable our customers to have greater control over their energy use, both in terms of how much they use and when they use it. 4. Energy Efficiency. We are implementing expanded programs that incentivize customers to reduce their energy consumption because the cleanest energy is the energy that is never used. 5. Other Non-Energy Center Emissions. We are promoting customer programs related to renewable energy and electrification of transportation and other end-use applications, installing advanced street lighting and reducing methane leakage on our natural gas distribution system. <p>Our strategy for addressing climate risk, which is largely embedded in our IRP, is expected to deliver significant reductions in carbon emissions, while effectively balancing customer costs and reliability, and managing policy and legal, physical, reputational and financial risks. Ameren's preferred plan focuses on transitioning the generation fleet to a cleaner and more fuel diverse energy portfolio in a responsible manner and includes the addition of at least 700 MW of wind generation (representing</p>

	<p>an investment of approximately \$1.2 billion)---We expect a 400 MW wind project and the majority of a 300 MW wind project to be placed in-service by the end of 2020. We expect a portion of the 300 MW wind project will be placed in-service in the first quarter of 2021. The plan also includes the addition of 100 MW of solar generation by 2027; the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity over the next twenty years; continuation of cost-effective customer energy-efficiency programs; and continued development of smart grid, communications and other advanced technologies.</p> <p>Capital expenditures/capital allocation are factored into Ameren's financial planning and risk management processes and are regularly considered.</p> <p>For example, the construction and acquisition of, and capital improvements to, electric and natural gas utility infrastructure involve substantial risks. These risks include escalating costs; unsatisfactory performance by the projects when completed; the inability to complete projects as scheduled, which could affect the ability to qualify for some or all of the anticipated federal production or investment tax credits; cost disallowances by regulators; and the inability to earn an adequate return on invested capital. Any of which could result in higher costs, inability to complete anticipated projects, or facility closures.</p> <p>We expect to make significant capital expenditures to maintain and improve our electric and natural gas utility infrastructure and to comply with existing environmental regulations. We estimate that we will invest up to \$16.6 billion (Ameren Missouri – up to \$8.4 billion; Ameren Illinois – up to \$8.0 billion; ATXI – up to \$0.2 billion) of capital expenditures from 2019 through 2024. These estimates include allowance for equity funds used during construction, but do not include any capital expenditures related to pollution control equipment that may be request as a result of the NSR and Clean Air Act litigation. Investments in Ameren's rate-regulated operations are expected to be recoverable from customers, but they are subject to prudence reviews and are exposed to regulatory lag of varying degrees by jurisdiction.</p> <p>Our ability to complete construction projects successfully within projected estimates and to acquire wind generation facilities after they are constructed is contingent upon many variables and subject to substantial risks. These variables include, but are not limited to, project management expertise, escalating costs for labor and materials, including changes to tariffs on materials, reliance on third parties, the ability to obtain required project approvals, and the ability to obtain necessary rights-of-way, easements, and transmission connections. The schedule, performance, and/or cost, including qualifying for federal production or investment tax</p>
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		<p>credits, of these projects can be affected by many factors. These factors include delays in obtaining permits or regulatory approvals; shortages in materials, equipment, and qualified labor; suppliers and contractors who do not perform as required under their contracts; changes in the scope and timing of projects; the inability to raise capital on reasonable terms; or other events beyond our control, including construction delays due to weather.</p> <p>For more information see Ameren's 2019 Annual Report on Form 10-K for the year ended December 31, 2019 and other reports filed with the Securities and Exchange Commission.</p>
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C3.1f

(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

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

2018

Target coverage

Business division

Scope(s) (or Scope 3 category)

Scope 1

Base year

2018

Covered emissions in base year (metric tons CO₂e)

29,587,976

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

1

Target year

2019

Targeted reduction from base year (%)

0

Covered emissions in target year (metric tons CO₂e) [auto-calculated]

29,587,976

Covered emissions in reporting year (metric tons CO₂e)

314,700

% of target achieved [auto-calculated]

Target status in reporting year

Achieved

Is this a science-based target?

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

Please explain (including target coverage)

Ameren Missouri Energy Efficiency Electric Programs (01/01/2019-12/31/2019).

2019 Savings Target: 202 GWh (approximately 162,600 metric tons of CO₂, assuming CO₂ emission factor of 0.75 metric ton/MWh and adjusting for line losses)

2019 Savings Actual: 390 GWh (approximately 314,700 metric tons of CO₂, assuming CO₂ emission factor of 0.75 metric ton/MWh and adjusting for line losses)

Exceeded 2019 savings target by 93%,

Targeted reduction is approximately 1% of Scope 1 emissions.

Target reference number

Abs 2

Year target was set

2018

Target coverage

Business division

Scope(s) (or Scope 3 category)

Scope 1

Base year

2018

Covered emissions in base year (metric tons CO₂e)

29,587,976

**Covered emissions in base year as % of total base year emissions in selected
Scope(s) (or Scope 3 category)**

1

Target year

2019

Targeted reduction from base year (%)

0

Covered emissions in target year (metric tons CO₂e) [auto-calculated]

29,587,976

Covered emissions in reporting year (metric tons CO₂e)

277,438

% of target achieved [auto-calculated]

Target status in reporting year

Achieved

Is this a science-based target?

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

Please explain (including target coverage)

Ameren Illinois Energy Efficiency Electric Programs (Planning Year: 01/01/2019-
12/31/2019)

2019 Savings Target: 356 GWh (approximately 287,000 metric tons of CO₂, assuming
CO₂ emission factor of 0.75 metric ton/MWh and adjusting for line losses).

2019 Savings Actual: 344 GWh (approximately 277,400 metric tons of CO₂, assuming
CO₂ emission factor of 0.75 metric ton/MWh and adjusting for line losses)

Completed 2019 savings target by approximately 97%.

Targeted reduction is approximately 1% of Scope 1 emissions.

Target reference number

Abs 3

Year target was set

2018

Target coverage

Business division

Scope(s) (or Scope 3 category)

Scope 1

Base year

2018

Covered emissions in base year (metric tons CO₂e)

29,587,976

**Covered emissions in base year as % of total base year emissions in selected
Scope(s) (or Scope 3 category)**

0

Target year

2019

Targeted reduction from base year (%)

0

Covered emissions in target year (metric tons CO₂e) [auto-calculated]

29,587,976

Covered emissions in reporting year (metric tons CO₂e)

22,233

% of target achieved [auto-calculated]

Target status in reporting year

Achieved

Is this a science-based target?

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

Please explain (including target coverage)

Ameren Illinois Energy Efficiency Natural Gas Programs (Planning Year: 1/1/2019 –
12/31/2019)

2019 Savings Target: 3,524,551 therms (approximately 18,700 metric tons of CO₂)

2019 Savings Actual: 4,188,155 therms (approximately 22,200 metric tons of CO₂)

Completed 2019 savings target by approximately 119%.

Targeted reduction is <1% of Scope 1 emissions.

Target reference number

Abs 4

Year target was set

2018

Target coverage

Business activity

Scope(s) (or Scope 3 category)

Scope 1

Base year

2005

Covered emissions in base year (metric tons CO₂e)

35,754,207

**Covered emissions in base year as % of total base year emissions in selected
Scope(s) (or Scope 3 category)**

100

Target year

2030

Targeted reduction from base year (%)

35

Covered emissions in target year (metric tons CO₂e) [auto-calculated]

23,240,234.55

Covered emissions in reporting year (metric tons CO₂e)

23,962,991

% of target achieved [auto-calculated]

94.2244043377

Target status in reporting year

Underway

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

Please explain (including target coverage)

Ameren Missouri 2017 Integrated Resource Plan (IRP) is designed to ensure that customers' long-term electric energy needs are met in a reliable, cost-effective and environmentally responsible manner. Ameren's preferred plan focuses on transitioning the generation fleet to a cleaner and more fuel diverse energy portfolio in a responsible

manner and includes: the addition of at least 700 MW of wind generation (representing and investment of approximately \$1.2 billion)---we expect a 400 MW wind project and the majority of a 300 MW wind project to be placed in-service by the end of 2020. We expect a portion of the 300 MW wind facility will be placed in-service in the first quarter of 2021. The plan also includes the addition of 100 MW of solar generation by 2027; the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity; continuation of cost-effective customer energy-efficiency programs; and continued development of smart grid, communications and other advanced technologies. Ameren expects the percent of its rate base represented by fossil fuel-fired generation investments to decline in the years ahead as it focuses on increased grid and renewable generation investment. In addition, Ameren Missouri has a goal to reduce CO2 emissions 35% by 2030, 50% by 2040, and 80% by 2050 compared to 2005 levels. The 2005 base year reported is CO2 not CO2e.

The target is underway.

Target reference number

Abs 5

Year target was set

2018

Target coverage

Business activity

Scope(s) (or Scope 3 category)

Scope 1

Base year

2005

Covered emissions in base year (metric tons CO2e)

35,754,207

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2040

Targeted reduction from base year (%)

50

Covered emissions in target year (metric tons CO2e) [auto-calculated]

17,877,103.5

Covered emissions in reporting year (metric tons CO₂e)

23,962,991

% of target achieved [auto-calculated]

65.9570830364

Target status in reporting year

Underway

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

Please explain (including target coverage)

Ameren Missouri 2017 Integrated Resource Plan (IRP) is designed to ensure that customers' long-term electric energy needs are met in a reliable, cost-effective and environmentally responsible manner. Ameren's preferred plan focuses on transitioning the generation fleet to a cleaner and more fuel diverse energy portfolio in a responsible manner and includes: the addition of at least 700 MW of wind generation (representing and investment of approximately \$1.2 billion)--- we expect a 400 MW wind project and the majority of a 300 MW wind facility to be placed in-service by the end of 2020. We expect a portion of the 300 MW wind project will be placed in-service in the first quarter of 2021. The plan also includes the addition of 100 MW of solar generation by 2027; the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity; continuation of cost-effective customer energy-efficiency programs; and continued development of smart grid, communications and other advanced technologies. Ameren expects the percent of its rate base represented by fossil fuel-fired generation investments to decline in the years ahead as it focuses on increased grid and renewable generation investment. In addition, Ameren Missouri has a goal to reduce CO₂ emissions 35% by 2030, 50% by 2040, and 80% by 2050 compared to 2005 levels. The 2005 base year reported is CO₂ not CO₂e.

The target is underway.

Target reference number

Abs 6

Year target was set

2018

Target coverage

Business activity

Scope(s) (or Scope 3 category)

Scope 1

Base year

2005

Covered emissions in base year (metric tons CO₂e)

35,754,207

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2050

Targeted reduction from base year (%)

80

Covered emissions in target year (metric tons CO₂e) [auto-calculated]

7,150,841.4

Covered emissions in reporting year (metric tons CO₂e)

23,962,991

% of target achieved [auto-calculated]

41.2231768978

Target status in reporting year

Underway

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

Please explain (including target coverage)

Ameren Missouri 2017 Integrated Resource Plan (IRP) is designed to ensure that customers' long-term electric energy needs are met in a reliable, cost-effective and environmentally responsible manner. Ameren's preferred plan focuses on transitioning the generation fleet to a cleaner and more fuel diverse energy portfolio in a responsible manner and includes: the addition of at least 700 MW of wind generation (representing and investment of approximately \$1.2 billion)---we expect a 400 MW wind project and the majority of a 300 MW wind project to be placed in-service by the end of 2020. We expect a portion of the 300 MW wind project will be placed in-service in the first quarter of 2021. The plan also includes the addition of 100 MW of solar generation by 2027; the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity; continuation of cost-effective customer energy-efficiency programs; and continued development of smart grid, communications and other advanced technologies. Ameren expects the percent of its rate base represented by fossil fuel-fired generation investments to decline in the years ahead as it focuses on increased grid and renewable generation investment. In addition, Ameren Missouri has a goal to reduce CO₂ emissions 35% by 2030, 50% by 2040, and 80% by 2050 compared to 2005 levels. The 2005 base year reported is CO₂ not CO₂e.

The target is underway.

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

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

2019

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

MWh

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

10

Target year

2019

Figure or percentage in target year

10

Figure or percentage in reporting year

10

% of target achieved [auto-calculated]

Target status in reporting year

Achieved

Is this target part of an emissions target?

The 2019 Missouri Renewable Energy Standard requirement was 3,211,938 10% of the total retail electric sales of 32,119,373 MWh for 2019. REC's generated in previous years, through the banking provision in the law, from solar, wind, landfill gas, and hydroelectric (Keokuk Energy Center) were used to meet compliance.

Is this target part of an overarching initiative?

Other, please specify

Renewable Energy Standard - Missouri

Please explain (including target coverage)

The 2019 Missouri Renewable Energy Standard requirement was 3,211,938 10% of the total retail electric sales of 33,699,583 MWh for 2019. REC's generated in previous years, through the banking provision in the law, from solar, wind, landfill gas, and hydroelectric (Keokuk Energy Center) were used to meet compliance.

Target reference number

Low 2

Year target was set

2019

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

MWh

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

10

Target year

2019

Figure or percentage in target year

10

Figure or percentage in reporting year

10

% of target achieved [auto-calculated]

Target status in reporting year

Achieved

Is this target part of an emissions target?

2019 Ameren Illinois RECs: 1,748,076 MWhs (RECs 4.9% of total retail load). Total retail load was 35,800,566 MWh for calendar year 2019 and includes all retail customers, regardless of whether they took the supply component of the utility bill from Ameren Illinois or an alternative supplier.

Is this target part of an overarching initiative?

Other, please specify

Renewable Energy Credits – Illinois Renewable Portfolio Standard

Please explain (including target coverage)

2019 Ameren Illinois RECs: 1,748,076 MWhs (RECs 4.9% of total retail load). Total retail load was 35,800,566 MWh for calendar year 2019 and includes all retail customers, regardless of whether they took the supply component of the utility bill from Ameren Illinois or an alternative supplier.

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

Company-wide

Target type: absolute or intensity

Absolute

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

Low-carbon vehicles

Percentage of low-carbon vehicles in company fleet

Target denominator (intensity targets only)

Base year

2015

Figure or percentage in base year

5

Target year

2020

Figure or percentage in target year

5

Figure or percentage in reporting year

5

% of target achieved [auto-calculated]

Target status in reporting year

Underway

Is this target part of an emissions target?

Ameren has pledged to commit 5% of its annual fleet spending on plug-in electric technologies. We have met this goal for the past four years and are on track to do so again in 2020.

Is this target part of an overarching initiative?

Other, please specify

Part of an industry-wide effort (EEI)

Please explain (including target coverage)

Electrification supports better utilization of the electric grid, reduces carbon emissions and helps lower energy costs for all customers. Our electrification strategy includes efforts to implement policies and programs, and the related infrastructure investments, to promote and enable electric vehicle adoption.

Missouri business owners can apply for incentives to offset construction costs of electric vehicle charging stations. Ameren Missouri expects to assist with the deployment of 1,000 local-level charging stations at more than 350 locations. Travelers looking to drive long-distance in their electric vehicles will enjoy use of one of 11 DC Fast Chargers strategically located along highways. This part of the Ameren Missouri Charging Ahead Program (\$11 million investment).

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	0	0
To be implemented*	0	0
Implementation commenced*	0	0
Implemented*	5	654,162
Not to be implemented	0	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

Lighting, heat pump, and HVAC upgrades

Estimated annual CO2e savings (metric tonnes CO2e)

96

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

2,401

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

288,875

Payback period

>25 years

Estimated lifetime of the initiative

Ongoing

Comment

Ameren has implemented various voluntary initiatives to improve efficiency and reduce GHG emissions at facilities dedicated to housing its personnel and operating equipment. These initiatives include replacing heating and cooling units and replacing fluorescent fixtures with energy efficient LED fixtures. Adjusting lighting levels to meet current standards, in facilities where applicable. In 2019, Ameren completed several energy efficiency projects that will reduce energy consumption by approximately 108,000 kWh annually and reduce our CO2 emissions by 96 metric tons annually (assuming 0.75 metric tons of CO2 per 1 MWh and adjusting for line losses). Ameren continues to promote and operate a single stream recycling program at operating centers and office buildings that will divert office waste from landfills. Ameren has two buildings that are LEED (Leadership in Energy & Environmental Design) certified. Also, Ameren installed 149 electric vehicle charging stations at our buildings with a total of 152 activated ports.

Initiative category & Initiative type

Energy efficiency in production processes

Other, please specify

Ameren Efficiency Programs

Estimated annual CO2e savings (metric tonnes CO2e)

616,666

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

18,593,050

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

183,000,000

Payback period

4-10 years

Estimated lifetime of the initiative

3-5 years

Comment

Energy efficiency programs are offered to our electric customers in both Missouri and Illinois. These help Ameren reduce exposure related to GHG's while improving our relationship with our customers. These energy efficiency programs include education programs, installation of efficient heating and air conditioning systems, home energy audits, low-income weatherization, programmable thermostat programs, and other residential and business programs. Ameren Missouri has an energy efficiency program that saved 390,700 MWh (2019) and avoided approx. 314,700 metric tons, assuming 0.75 metric tons of CO₂ per 1 MWh and adjusting for line losses. In 2019 Ameren Illinois saved 344,400 MWh and avoided approximately 277,400 metric tons, assuming 0.75 metric tons of CO₂ per 1 MWh and adjusting for line losses. Energy efficiency programs are offered to our natural gas customers in Illinois and Missouri. Ameren Illinois' program saved approx. 4.18 million therms in 2019 and avoided approximately 22,200 metric tons of customer CO₂, assuming 11.7 pounds of CO₂ per 1 therm. Ameren Missouri is actively engaged in implementing gas energy efficiency measures although there are no currently defined savings targets. Ameren Missouri saved approx. 432,000 therms in 2019 and avoided approx. 2,290 metric tons of customer CO₂, assuming 11.7 pounds of CO₂ per 1 therm. While these programs are voluntary there are earnings opportunities for implementing.

Initiative category & Initiative type

Other, please specify

Other, please specify

Process emission reductions: Optimize operations at energy centers

Estimated annual CO₂e savings (metric tonnes CO₂e)

28,400

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

0

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

0

Payback period

16-20 years

Estimated lifetime of the initiative

Ongoing

Comment

Ameren Missouri implemented projects to optimize operations at its energy centers in 2019. Ameren Missouri is unable to calculate the savings from these investments.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	<p>The Missouri Renewable Energy Standard (MoRES) took effect in 2011. In 2019, Ameren purchased RECs and operated renewable facilities to comply with this standard. This included a 15-year wind power purchase agreement for 102 MWs of wind energy ; 15 MW (gross) of landfill gas generation which went operational in June 2012; 5.7 MW (DC gross) of solar generation at the O’Fallon Renewable Energy Center; 90 kW of solar generation at Ameren’s headquarters; and an upgrade of existing hydroelectric facilities. In 2019, Ameren Missouri’s non-solar generation requirement was 3,147,699 MWhs and was met by retiring RECs associated with generation from the Ameren Missouri Keokuk Energy Center, Maryland Heights Renewable Energy Center, and Pioneer Prairie wind farm, and banked solar RECs. Both Maryland Heights and the banked solar REC’s were eligible for a 1.25 multiplier due to being Missouri based renewable generation. In 2019, the solar requirement was 64,239 MWhs and was met with S-RECs generated from Ameren Missouri customer installed solar and the O’Fallon Renewable Energy Center. In Illinois, Ameren Illinois continued to comply with the Illinois Renewable Portfolio Standard. Ameren Illinois purchased RECs to comply with its requirements as it has no renewable generation.</p> <p>Ameren Missouri 2017 Integrated Resource Plan (IRP) is designed to ensure that customers’ long-term electric energy needs are met in a reliable, cost-effective and environmentally responsible manner.</p>

	<p>Ameren's preferred plan focuses on transitioning the generation fleet to a cleaner and more fuel diverse energy portfolio in a responsible manner. That portfolio includes the addition of more renewable generation, expansion of its energy efficiency programs, planned retirement of more than half of its coal fleet and implementation of advanced technologies. All of these investments and activities are expected to result in a reduction in CO2 emissions.</p>
<p>Dedicated budget for energy efficiency</p>	<p>Much of the technical and policy discussion related to climate change and a sustainable energy future focuses on energy efficiency. Ameren energy efficiency programs help reduce GHG emissions, lower the cost impact on the consumer, and improve our relationship with our customers. Ameren Illinois and Ameren Missouri programs spent approx. \$183 million on a number of energy efficiency programs in 2019 (electric and natural gas programs). Through these energy efficiency initiatives, Ameren estimates it avoided approx. 616,600 tons of CO2 in 2019. Through Ameren's automated meter reading capabilities in Missouri and Illinois, Ameren is able to provide customer information through the Manage My Energy analysis tools to allow customers to better understand and manage their energy consumption.</p> <p>In December 2018, Ameren Missouri's Missouri Energy Efficiency Investment Act (MEEIA) 2019 plan was approved. The plan includes a portfolio of customer energy-efficiency programs through December 2021 and low-income customer energy-efficiency programs through December 2024, along with a rate-adjustment mechanism. Ameren Missouri intends to invest \$226 million over the life of the plan, including \$65 million per year through 2021. In 2019, Ameren Missouri spent about \$72 million on energy efficiency programs. Through these energy efficiency initiatives, Ameren Missouri estimates it avoided approx. 317,000 metric tons of CO2.</p> <p>State law requires Ameren Illinois to offer customer energy-efficiency programs, and imposes electric energy-efficiency savings goals and a maximum amount of investment in electric energy-efficiency programs through 2030, which is approximately \$100 million annually. In September 2017, Ameren Illinois' electric and natural gas energy-efficiency plans, as well as regulatory recovery mechanisms were approved. The order authorized electric and natural gas energy-efficiency program expenditures of \$394 million and \$62 million, respectively, for the 2018 through 2021 period. In 2019, Ameren Illinois spent \$111 million on energy efficiency programs. Through these energy efficiency initiatives, Ameren Illinois estimates it avoided approx. 299,600 metric tons of CO2.</p>

	All of these programs are expected to reduce customer energy consumption and result in reduced CO2 emissions.
Dedicated budget for low-carbon product R&D	<p>Ameren has invested in research relating to alternative forms for generation. In 2019, Ameren spent over \$1.35 Million for CO2 emissions reduction and alternative energy generation R&D programs.</p> <p>In 2017, Ameren announced the launch of Ameren Accelerator, an innovative public-private partnership with the University of Missouri System, UMSL Accelerate and Capital Innovators, that will assess, mentor and invest in energy technology startup companies. The unique partnership, one of the first of its kind in the United States, is also the St. Louis region's first to focus on energy technologies. Leveraging the expertise of all of the partners, the goals of this program are to better position Ameren to meet its customers' future energy needs and expectations, create new jobs through these start-up companies and provide university students opportunities to be more engaged in the energy business. The program continued in 2018 and 2019.</p>
Employee engagement	<p>In 2018, Ameren created a Corporate Social Responsibility (CSR) Executive Steering Committee. The CSR Executive Steering Committee leads Ameren's enterprise-wide social responsibility efforts and fosters and advocates for a culture of sustainability among co-workers and suppliers that is consistent with Ameren's mission and vision. In 2010, Ameren created a CSR Council (formerly known as Corporate Sustainability Council) to research and recommend policies and improvement objectives, track our sustainable practices, develop ways to engage employees and stakeholders on the issues, and help guide Ameren to be more sustainable in the future. Ameren continues to promote and operate a single stream recycling program at operating centers and office buildings that will divert office waste from landfills. It is estimated to be a net neutral cost to the company.</p> <p>Ameren released its 2020 Ameren Sustainability Report in May 2020. The 2020 Sustainability report describes a variety of activities Ameren is doing to engage employees reduce emissions activities at work, home and in the community. In 2019, Ameren developed and implemented a biodiversity policy.</p> <p>Ameren offered plug-in electric vehicle (EV) incentives to co-workers in 2019. Available incentives included \$2,500 for new EV purchases and \$1,500 for leased or used EV purchased. Ameren offers free charging for co-workers at our facilities.</p>
Internal price on carbon	Ameren includes a carbon price in its evaluation of long-term resource planning for its Missouri regulated business through its Integrated

	<p>Resource Plan (IRP) process (i.e., Scope 1 emissions from generation). The price is included to represent the expectation for either regulation of carbon dioxide emissions through a mechanism that establishes an explicit price for carbon dioxide emissions, such as a carbon tax or cap-and-trade program, or through voluntary emission credit trading markets established by RTO's or state or regional alliances. For its 2017 IRP, Ameren Missouri used a base and high scenario price of \$3.71 per short ton (\$3.37 per metric ton) starting in 2025 and escalating at approximately 12% per year. The prices used in the IRP process are established based on discussions with Company executives involved in environmental, regulatory and legislative activities. Establishment of the carbon price assumptions includes a review of price assumptions used or produced by other utilities, policy analysts, and government agencies, including the Social Cost of Carbon estimates used by the federal government. Ameren Missouri's 2017 IRP describes in detail the process used to establish carbon price assumptions for its evaluations at that time. The same general process continues to be used. Inclusion of a carbon price affects Ameren Missouri's evaluation of both new and existing generation resources, including potential retirement of fossil generation, and also increases the cost effectiveness of energy efficiency measures.</p>
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C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Product

Description of product/Group of products

Pure Power voluntary renewable energy credit (REC) program for customers

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify
based on emission factors in eGRID

% revenue from low carbon product(s) in the reporting year

0

Comment

Ameren Missouri's voluntary green program called Pure Power sold 69,202 RECs to customers in 2019. Since the start of the program in 2007, the RECs were retired on behalf of these customers with a potential reduction in over 640,480 metric tons of Scope 1 CO₂ assuming 0.75 metric tons of CO₂ per 1 MWh and adjusting for line losses.

Level of aggregation

Product

Description of product/Group of products

Ameren Missouri Solar Rebates

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify
based on emission factors in eGRID

% revenue from low carbon product(s) in the reporting year

0

Comment

In 2010, Ameren Missouri began to issue solar rebates to customers who installed solar electric generating systems on their homes and businesses. By the end of 2019, Ameren Missouri had approximately 79 MWs of customer-installed private solar generation in its service territory. By generating emissions-free renewable energy at their homes and businesses, customers reduce the amount of energy they purchase from the utility. This has the potential to produce in excess of 96,000 MWh per year, avoiding over 72,500 metric tons of Scope 1 CO₂, assuming 0.75 metric tons of CO₂ per 1 MWh. The utility generates less energy and therefore lowers its GHG emissions, as a result of these systems.

Level of aggregation

Product

Description of product/Group of products

Ameren Missouri Energy Efficiency Program

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify
based on emission factors in eGRID

% revenue from low carbon product(s) in the reporting year

0

Comment

Changes in how our customers use electricity can reduce emissions through implementation of more efficient technologies or operations. Demand Side Management-Electricity energy efficiency programs are offered to our electricity customers in both Missouri and Illinois. This provides opportunities for Ameren to implement energy efficiency programs that enable the achievement of climate goals and lower the impacts of climate costs to the consumer, improving our relationship with our customers. The energy efficiency programs include education programs, installation of energy efficient heating and air conditioning systems, home energy audits, low-income weatherization, programmable thermostat programs, and other residential and business programs. Ameren Missouri has an energy efficiency program that saved 390,700 MWh and avoided approximately 314,700 metric tons of Scope 1 CO₂, assuming 0.75 metric tons of CO₂ per 1 MWh and adjusting for line losses in 2019.

Level of aggregation

Product

Description of product/Group of products

Ameren Illinois Energy Efficiency Program

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify
based on emission factors in eGRID

% revenue from low carbon product(s) in the reporting year

0

Comment

Ameren Illinois has an energy efficiency program approved through 2021 that in 2019 saved 344,400 MWh and avoided approximately 277,400 metric tons of Scope 1 CO₂, assuming 0.75 metric tons of CO₂ per 1 MWh and adjusting for line losses in 2019.

Level of aggregation

Product

Description of product/Group of products

Ameren Natural Gas Energy Efficiency Program

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify
based on emission factors in eGRID

% revenue from low carbon product(s) in the reporting year

0

Comment

Demand Side Management-Natural Gas. Energy efficiency programs are offered to our natural gas customers in Illinois and Missouri. The natural gas energy efficiency programs provide incentives to customers when they purchase specific energy efficiency gas equipment, such as furnaces, boilers or manufacturing equipment. Ameren Illinois has a program approved through 2021. In 2019, it saved approximately 4,188,000 therms and avoided approximately 22,200 metric tons of Scope 1 CO₂, assuming 11.7 pounds of CO₂ per 1 therm. Ameren Missouri is engaged in implementing gas energy efficiency measures although there are no currently defined savings targets; however, in 2019 it saved about 432,000 therms and avoided approximately 2,290 metric tons of Scope 1 CO₂.

C-EU4.6

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

Ameren Missouri assets employ leak detection sensors throughout the generating units that operate using natural gas: Meramec Energy Center (Units 1&2) and Ameren Missouri Combustion Turbine Fleet. The leak detection sensors are utilized to monitor, alarm operators, and in some cases isolate methane leaks if/when they exist. Primarily these devices are utilized within turbine enclosure packages as well as specific applications where detection is employed in other areas such as our natural gas compression and cleaning systems in operation at the Maryland Height Renewable Energy Center (landfill gas to energy facility).

The 2017 Ameren Missouri Integrated Resource Plan (IRP) is designed to ensure that customers' long-term electric energy needs are met in a reliable, cost-effective and

environmentally responsible manner. Ameren's preferred plan focuses on transitioning the generation fleet to a cleaner and more fuel diverse energy portfolio in a responsible manner. This transition will result in increased amounts of renewable generation and reduced amounts of fossil generation, which includes natural gas fuelled units. This should reduce methane emissions from our electric generation activities. One example is the retirement of the Meramec Energy Center which currently uses natural gas for Units 1&2. In addition, Ameren Missouri has a goal to reduce CO2 emissions 35% by 2030, 50% by 2040, and 80% by 2050 from 2005 levels---including methane emission reductions.

The 2017 Ameren Missouri Integrated Resource Plan (IRP) is designed to ensure that customers' long-term electric energy needs are met in a reliable, cost-effective and environmentally responsible manner. Ameren's preferred plan focuses on transitioning the generation fleet to a cleaner and more fuel diverse energy portfolio in a responsible manner. This transition will result in increased amounts of renewable generation and reduced amounts of fossil generation, which includes natural gas fueled units. This should reduce methane emissions from our electric generation activities. One example is the retirement of the Meramec Energy Center which currently uses natural gas for Units 1&2. In addition, Ameren Missouri has a goal to reduce CO2 emissions 35% by 2030, 50% by 2040, and 80% by 2050 from 2005 levels---including methane emission reductions.

(Situation) Ameren has specific programs designed to reduce and eliminate methane emissions by building a smarter, more reliable delivery infrastructure. (Task) To reduce the highest sources of methane leaks on our natural gas delivery system, we've replaced 100% of cast and wrought iron pipeline. (Action) In addition, by the end of 2021, all unprotected pipelines will be eliminated. (Result) For example, since 2015, our Illinois and Missouri businesses have proactively replaced over 265 miles of older, leak-prone, mechanically-coupled steel and older vintage polyethylene distribution gas mains... Since 2013, Ameren has reduced underground methane leaks by 77%. In addition, Ameren uses renewable natural gas (a pipeline-quality gas derived from landfills and grain processing waste digesters to reduce the environmental impact of methane emissions). These ongoing efforts will continue to reduce future methane emissions.

Delivery and transmission. Other GHGs, such as sulfur hexafluoride (SF6) and methane, are released on a much smaller scale through the process of delivering electricity and natural gas to customers' homes and businesses. SF6 is used as an insulator for transmission equipment, such as circuit breakers, and methane is the principal component in natural gas. Our investments in smarter, cleaner, and more efficient and reliable delivery and transmission technology will continue to reduce these kinds of emissions.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO₂e)

29,587,976

Comment

Scope 1 emissions include: Ameren Missouri Generation, Ameren Missouri & Ameren Illinois Vehicle Fleet; Ameren Missouri equipment oil; propane usage, Ameren Illinois Natural Gas consumption for buildings; Ameren Illinois and Ameren Missouri electric distribution; and Ameren Illinois and Ameren Missouri natural gas supply.

Scope 2 (location-based)

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO₂e)

74,622

Comment

Our Scope 2 emissions are the same for location-based and market-based. Scope 2 includes electricity usage at Ameren Illinois Buildings and our headquarters.

Scope 2 (market-based)

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO₂e)

74,622

Comment

Our Scope 2 emissions are the same for location-based and market-based. Scope 2 includes electricity usage at Ameren Illinois Buildings and our headquarters.

C5.2

(C5.2) 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

Other, please specify

USEPA Clean Air Act Acid Rain Program

C5.2a

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

USEPA Clean Air Act Acid Rain Program

Ameren measures Scope 1 CO₂ emissions from its electric generation facilities by using continuous emission monitoring systems mandated by the USEPA under Title IV of the Clean Air Act. These monitors (using calibrated comparison gases) operate throughout the day, every day of the year, and are annually checked for accuracy. The CO₂ emissions from our electric generation facilities are estimated to account for more than 99% of the GHG emissions from our generation operations and more than 95% of the CO₂ emissions for the entire corporation. Some of our generating units (predominantly oil-fired units) are considered by USEPA to be governed under Part 75 of the Clean Air Act as Low Mass Emitters, so their CO₂ emissions are conservatively determined using emission factors.

Emissions from our electric and natural gas distribution systems were determined using methods and values described in 40 CFR Part 98.

Emission factors for Greenhouse Gas Inventories from USEPA eGRID2018, March 2020 for SRMW (SERC Midwest) were used as needed.

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)

24,413,651

Comment

2019 Scope 1 emissions include: Ameren Missouri Generation, Ameren Missouri & Ameren Illinois Vehicle Fleet; Ameren Missouri equipment oil; propane usage, Ameren Illinois Natural Gas consumption for buildings; Ameren Illinois and Ameren Missouri electric distribution; and Ameren Illinois and Ameren Missouri natural gas supply.

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Our Scope 2 emissions are the same for location-based and market-based.

C6.3

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

Reporting year

Scope 2, location-based

62,836

Scope 2, market-based (if applicable)

62,836

Comment

Our 2019 Scope 2 emissions are the same for location-based and market-based.
Scope 2 includes electricity usage at Ameren Illinois Buildings and our headquarters

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?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

All consumption at Ameren Missouri owned buildings with the exception of the General Office Building

Relevance of Scope 1 emissions from this source

Emissions are relevant but not yet calculated

Relevance of location-based Scope 2 emissions from this source

Emissions are relevant but not yet calculated

Relevance of market-based Scope 2 emissions from this source (if applicable)

Explain why this source is excluded

There is no metering equipment installed at these facilities to estimate their electric and natural gas consumption to include in the Scope 1 and 2 emissions summary.

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, calculated

Metric tonnes CO₂e

64,293

Emissions calculation methodology

Emission Intensity Factor used from 2015 Corporate and Social Responsibility Report from Peabody Energy - primary fuel supplier

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

0

Please explain

Method is using information from the primary source; however the Company derived the emission number based on the amount of coal purchased for our facilities and an estimate of the emission intensity factor using Peabody Energy data from 2015 Corporate and Social Responsibility Report (page 44)

Capital goods

Evaluation status

Relevant, not yet calculated

Please explain

Scope 3 emissions for capital goods is likely relevant. In 2019, Ameren did not calculate Scope 3 emissions for capital goods.

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

Evaluation status

Relevant, not yet calculated

Please explain

Scope 3 emissions for fuel-and energy-related activities are likely relevant. In 2019, Ameren did not calculate Scope 3 emissions for fuel-and energy-related activities.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

721,118

Emissions calculation methodology

Union Pacific Website - UP Carbon Emission estimator from rail delivery of coal

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

0

Please explain

Method is from the primary source - Union Pacific; however the Company derived the emission number based on the number of train deliveries and estimated distance traveled for 2019.

Waste generated in operations

Evaluation status

Relevant, not yet calculated

Please explain

Scope 3 emissions for waste generated in operations are likely relevant. In 2019, Ameren did not calculate Scope 3 emissions for waste generated in operations

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

6,941.77

Emissions calculation methodology

Data provided by Enterprise Holdings for vehicle rentals made by Ameren. Personal vehicle emissions for company business calculated using emission factor from USEPA Emission Factors Nov. 2015, Table 9, Passenger Car

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

17

Please explain

Enterprise Holdings rental cars are a small portion (<20%) of total miles driven for company business. USEPA Table 9 is more representative of the types of personal vehicles used for company business.

Employee commuting

Evaluation status

Relevant, not yet calculated

Please explain

Scope 3 emissions for employee commuting are likely relevant. In 2019, Ameren did not calculate Scope 3 emissions for employee commuting.

Upstream leased assets

Evaluation status

Not evaluated

Please explain

Scope 3 emissions for upstream leased assets are not evaluated.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

Our product is delivered by wire or pipeline. Thus, there is no downstream issue. Actual emissions from these methods are captured in our Scope 1 emissions.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Ameren makes and delivers electricity and delivers natural gas to the ultimate consumers of these products. Thus, our products are not processed, they are simply consumed.

Use of sold products

Evaluation status

Relevant, not yet calculated

Please explain

Scope 3 emissions for use of sold products are likely relevant. In 2019, Ameren did not calculate Scope 3 emissions for use of sold products.

End of life treatment of sold products

Evaluation status

Not evaluated

Please explain

Our products, electricity and natural gas, are consumed and have no end of life issues.

Downstream leased assets

Evaluation status

Not evaluated

Please explain

Scope 3 emissions for downstream leased assets are not evaluated.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

We are required to deliver energy in our franchised service territory. Thus, it is a duplication of other items as we only delivery natural gas and electricity to ultimate customers in these franchised service territories.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

Ameren makes investments in assets it will own. Thus, emissions will be captured in Scope 1 or Scope 2 after they enter service.

Other (upstream)

Evaluation status

Please explain

Other (downstream)

Evaluation status

Please explain

C6.7

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

No

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

0.004142

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

24,476,487

Metric denominator

unit total revenue

Metric denominator: Unit total

5,910,000,000

Scope 2 figure used

Location-based

% change from previous year

11.7

Direction of change

Decreased

Reason for change

Electricity production and revenues were lower in 2019 compared to 2018. Our 2019 CO₂e emissions were lower compared to 2018. The result was a decrease in intensity for 2019.

Intensity figure

0.6298

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

24,476,487

Metric denominator

megawatt hour generated (MWh)

Metric denominator: Unit total

38,864,154

Scope 2 figure used

Location-based

% change from previous year

2.37

Direction of change

Decreased

Reason for change

Electricity production from fossil resources was lower in 2019 compared to 2018. Our 2019 CO2e emissions were lower compared 2018. This resulted in a decrease in the intensity for 2019.

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
CO2	24,118,429	Other, please specify Table A-1 in 40 CFR Part 98, Subpart A
CH4	157,712.5	Other, please specify Table A-1 in 40 CFR Part 98, Subpart A
N2O	120,057	Other, please specify

		Table A-1 in 40 CFR Part 98, Subpart A
SF6	17,452	Other, please specify Table A-1 in 40 CFR Part 98, Subpart A

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	0	0	0.77	17,452	
Combustion (Electric utilities)	24,073,361	2,766	0	24,262,474.7	
Combustion (Gas utilities)	936	3,540	0	89,438	
Combustion (Other)	44,132	2	0	44,286.8	
Emissions not elsewhere classified	0	0	0	0	

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	24,413,651

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)
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Generation	24,246,468.5
Distribution	167,182

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 CO ₂ e	Comment
Electric utility activities	24,413,651	2019: Scope 1 emissions

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?

Decreased

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 CO ₂ e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	Renewables have no emissions.
Other emissions reduction activities	11,786	Decreased	19	Scope 2 Emissions from electricity consumption at our buildings (Ameren Missouri and Ameren Illinois). In 2019, Ameren used less electricity and a decrease in emissions.
Divestment				
Acquisitions				
Mergers				
Change in output	5,186,111	Decreased	17.5	Scope 1 Emissions from generation activities. Electricity production in 2019 lower than 2018. A total

				decrease of 5,186,111 tons CO2e compared to 2018; therefore, we calculated a decrease of 17.5% as follows: $(5,186,111 / 29,662,598) * 100 = 17.5\%$.
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?

Location-based

C8. Energy

C8.1

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

More than 30% but less than or equal to 35%

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)	2,078,166	36,509,428	38,587,594
Consumption of purchased or acquired electricity		276,560		276,560
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		2,354,726	36,509,428	38,864,154

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	No
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.

Fuels (excluding feedstocks)

Subbituminous Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

1,578,015

MWh fuel consumed for self-generation of electricity

26,645,428

MWh fuel consumed for self-generation of heat

0

Emission factor

97.02

Unit

kg CO2 per million Btu

Emissions factor source

Table C-1 to Subpart C of 40 CFR Part 98

Comment

Fuels (excluding feedstocks)

Fuel Oil Number 2

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

1,306

MWh fuel consumed for self-generation of electricity

4,487

MWh fuel consumed for self-generation of heat

0

Emission factor

73.96

Unit

kg CO2 per million Btu

Emissions factor source

Table C-1 to Subpart C of 40 CFR Part 98

Comment

Fuels (excluding feedstocks)

Natural Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

24,378

MWh fuel consumed for self-generation of electricity

214,830

MWh fuel consumed for self-generation of heat

0

Emission factor

53.02

Unit

kg CO2 per million Btu

Emissions factor source

Table C-1 to Subpart C of 40 CFR Part 98

Comment

Fuels (excluding feedstocks)

Other, please specify

Propane

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

1

MWh fuel consumed for self-generation of electricity

1

MWh fuel consumed for self-generation of heat

0

Emission factor

62.87

Unit

kg CO2 per million Btu

Emissions factor source

Table C-1 to Subpart C of 40 CFR Part 98

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)

5,379

Gross electricity generation (GWh)

26,645.43

Net electricity generation (GWh)

25,067.41

Absolute scope 1 emissions (metric tons CO2e)

24,075,571

Scope 1 emissions intensity (metric tons CO2e per GWh)

903.55

Comment

The 2019 reported values are based on units operating on coal at Labadie Energy Center; Meramec Energy Center (Units 3&4); Rush Island Energy Center; and Sioux Energy Center.

Emissions intensity based on gross generation.

Lignite

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Ameren does not have generating units that utilize lignite.

Oil

Nameplate capacity (MW)

312

Gross electricity generation (GWh)

5.8

Net electricity generation (GWh)

4.49

Absolute scope 1 emissions (metric tons CO2e)

5,527

Scope 1 emissions intensity (metric tons CO2e per GWh)

953.49

Comment

The 2019 reported values are based on units operating on oil at our energy centers.

Five units operate on oil.

Emissions intensity based on gross generation.

Gas

Nameplate capacity (MW)

3,761

Gross electricity generation (GWh)

214.83

Net electricity generation (GWh)

190.45

Absolute scope 1 emissions (metric tons CO₂e)

130,280

Scope 1 emissions intensity (metric tons CO₂e per GWh)

606.43

Comment

The 2019 reported values are based on units operating on natural gas at our energy centers. Ameren Missouri operates a fleet of nine natural gas-fired energy centers in Missouri and Illinois, including Meramec Energy Center (Units 1&2). Emissions intensity based on gross generation.

Biomass

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

Ameren does not have generating units that utilize biomass.

Waste (non-biomass)

Nameplate capacity (MW)

14

Gross electricity generation (GWh)

61.51

Net electricity generation (GWh)

52.48

Absolute scope 1 emissions (metric tons CO₂e)

35,090

Scope 1 emissions intensity (metric tons CO₂e per GWh)

570.5

Comment

The 2019 reported values are based on our landfill gas energy center: Maryland Heights Renewable Energy Center. Added to Ameren Missouri's fleet in 2012, this renewable energy center captures an otherwise untapped resource—methane gas from a landfill—and uses it to create clean, reliable electricity.

Nuclear

Nameplate capacity (MW)

1,236

Gross electricity generation (GWh)

9,606.25

Net electricity generation (GWh)

9,189.86

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

2019 data based on our Callaway Energy Center. Nuclear is a non-carbon emitting energy resource.

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

Ameren does not have fossil-fuel plants fitted with CCS.

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Ameren does not have geothermal generating units.

Hydropower

Nameplate capacity (MW)

333

Gross electricity generation (GWh)

2,009.51

Net electricity generation (GWh)

1,998

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

The 2019 reported values are based on our hydroelectric generation resources: Keokuk Energy Center & Osage Energy Center. Hydroelectric power is a non-carbon emitting energy resource.

Wind

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

276.56

Net electricity generation (GWh)

276.56

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

The 2019 reported values are based on Ameren Missouri's wind power purchase agreement. Wind is a non-carbon emitting energy resource

Solar

Nameplate capacity (MW)

8

Gross electricity generation (GWh)

7.14

Net electricity generation (GWh)

7.14

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

The 2019 reported values are based on Ameren Missouri's solar energy centers. Solar is a non-carbon emitting energy resource.

Marine

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

Ameren does not have marine units.

Other renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

Ameren does not have other renewable generating units.

Other non-renewable

Nameplate capacity (MW)

408

Gross electricity generation (GWh)

37.17

Net electricity generation (GWh)

19.61

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

The 2019 reported values are based on Ameren Missouri's Taum Sauk Energy Center—a pumped hydroelectric energy center. The net generation includes energy input for pumping.

The generation less pumping energy is the reported net generation value. The reported net generation value is a negative value.

Total

Nameplate capacity (MW)

11,451

Gross electricity generation (GWh)

38,864

Net electricity generation (GWh)

36,766

Absolute scope 1 emissions (metric tons CO₂e)

24,246,468

Scope 1 emissions intensity (metric tons CO₂e per GWh)

623.88

Comment

The 2019 reported values are based on Ameren's generation.

Emissions intensity based on gross generation.

Ameren's strategy for addressing climate risk is largely embedded in Ameren Missouri's Integrated Resource Plan (IRP). The 2017 IRP outlines plans to significantly increase our renewable energy portfolio, including the addition of at least 700 MW megawatts of wind generation. It also includes the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity over the next 20 years, with the retirement of the Meramec Energy Center by the end of 2022 and others between 2033 and 2036. Further, Ameren Missouri has a goal to reduce carbon dioxide (CO₂) emissions 35% by 2030, 50% by 2040 and 80% by 2050, as compared to the 2005 levels. More information is available at AmerenMissouri.com/IRP.

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)

2,542

Annual energy losses (% of annual load)

1

Scope where emissions from energy losses are accounted for

Scope 2 (location-based)

Emissions from energy losses (metric tons CO₂e)

1,934

Length of network (km)

4,781

Number of connections

1,220,000

Area covered (km²)

52,576

Comment

Ameren Missouri transmission data reported. Connections based on approximate number of retail electric customers. Annual load data based on 2018 values.

Country/Region

United States of America

Voltage level

Transmission (high voltage)

Annual load (GWh)

4,934

Annual energy losses (% of annual load)

1

Scope where emissions from energy losses are accounted for

Emissions from energy losses (metric tons CO₂e)

3,754

Length of network (km)

7,472

Number of connections

1,220,000

Area covered (km²)

113,182

Comment

Ameren Illinois transmission data reported. Connections based on approximate number of retail electric customers.

Ameren Illinois Transmission Company (ATXI) owns 505 miles of transmission lines not reflected in this table.

Country/Region

United States of America

Voltage level

Distribution (low voltage)

Annual load (GWh)

34,168

Annual energy losses (% of annual load)

6

Scope where emissions from energy losses are accounted for

Scope 2 (location-based)

Emissions from energy losses (metric tons CO₂e)

25,996

Length of network (km)

54,158

Number of connections

1,220,000

Area covered (km²)

52,576

Comment

Ameren Missouri distribution data reported. Connections based on approximate number of retail electric customers. Annual load data based on 2018 values.

Country/Region

United States of America

Voltage level

Distribution (low voltage)

Annual load (GWh)

30,865

Annual energy losses (% of annual load)

4

Scope where emissions from energy losses are accounted for

Scope 2 (location-based)

Emissions from energy losses (metric tons CO2e)

23,483

Length of network (km)

73,817

Number of connections

1,220,000

Area covered (km2)

113,182

Comment

Ameren Illinois distribution data reported. Connections based on approximate number of retail electric customers.

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 total planned CAPEX in your current CAPEX plan for power generation.

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
Wind	1,200,000,000	40	2024	Ameren's strategy for addressing climate risk is largely embedded in Ameren Missouri's (AMO) Integrated Resource Plan (IRP). The 2017 IRP outlines plans to significantly increase our renewable energy portfolio, including the addition of at least 700 MW of wind generation. (\$1.2 billion investment). We expect a 400 MW project and the majority of a 300 MW project to be placed in-service by the end of 2020. We expect a portion of the 300

				<p>MW project will be placed in-service in the first quarter of 2021. The 2017 IRP also includes the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity over the next 20 years, with the retirement of the Meramec Energy Center by the end of 2022 and others between 2033 and 2036. Further, Ameren Missouri has a goal to reduce carbon dioxide (CO₂) emissions 35% by 2030, 50% by 2040 and 80% by 2050, as compared to 2005 levels. More information is available at AmerenMissouri.com/IRP. AMO is finalizing the comprehensive process of completing the next 20-year IRP, which is expected to be in September 2020</p> <p>The capital expenditures plan for power generation is based on the current 2020-2024 forecast.</p>
Solar	180,000,000	6	2027	<p>Ameren's strategy for addressing climate risk is largely embedded in Ameren Missouri's (AMO) Integrated Resource Plan (IRP). The 2017 IRP outlines plans to significantly increase our renewable energy portfolio, including the addition of at least 100 MW of solar generation by 2027. AMO is finalizing the comprehensive process of completing the next 20-year IRP, which is expected to be issued in September 2020.</p> <p>The capital expenditures plan for power generation is based on the current 2020-2024 forecast.</p>

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	End of year CAPEX plan

			products and services	
Smart grid	<p>Ameren Missouri Smart Grid Program: Ameren Missouri's Smart Energy Plan (SEP), is designed to upgrade the electric grid and improve the quality of life for Missouri families, businesses and communities we serve. Over the next 5 years (2020-2024), Ameren Missouri expects to invest approximately \$287 million in smart grid operations pursuant to the SEP.</p> <p>One component of the SEP is smart grid investments, which includes automated switching devices, cutout reclosers and a private fiber wireless communication network in St. Louis to enable remote visibility and control of the grid. With new smart technology, we can reduce some outages from hours to seconds.</p> <p>Smart Grid also includes investments in the LED streetlight program and the Missouri Technical Application Center (TAC). Ameren Missouri, in collaboration with communities, upgrades streetlights to energy-efficient LED bulbs. The TAC will facilitate more rapid testing of new technologies and the development of a more integrated grid. It would allow us to pilot technologies that could unlock new power applications and increase customer options.</p>	287,408,000	3.8	2024
Other, please specify Ameren Missouri Smart Meter Program	<p>Ameren Missouri Smart Meter Program: Ameren Missouri's Smart Energy Plan (SEP) is designed to upgrade the electric grid and improve the quality of life for Missouri families, businesses and communities we serve.</p> <p>One component of the SEP is the deployment of 120,000 smart meters in</p>	279,277,000	3.7	2024

	<p>2020 with rollout continuing in the following years. Our next generation of smart meters work through two-way communications, helping us to learn more and allowing customers to take more control of their energy usage. Smart meters communicate with the Ameren Missouri network to rapidly detect and isolate outages. Customers will have more convenience, choice and control. Over the next 5 years (2020-2024), Ameren Missouri expects to invest approximately \$279 million in smart meters pursuant to the SEP.</p>			
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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	<p>Ameren has invested in research relating to alternative forms of generation. In 2019, Ameren spent over \$1.35 Million for CO2 emissions reduction and alternative energy generation R&D programs.</p> <p>In 2017, Ameren announced the launch of Ameren Accelerator, an innovative public-private partnership with the University of Missouri System, UMSL Accelerate and Capital Innovators, that will assess, mentor and invest in energy technology startup companies. The unique partnership, one of the first of its kind in the United States, is also the St. Louis region's first to focus on energy technologies. Leveraging the expertise of all of the partners, the goals of this program are to better position Ameren to meet its customers' future energy needs and expectations, create new jobs through these start-up companies and provide university students opportunities to be more engaged in the energy business. The program continued in 2018 and 2019.</p>

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
<p>Other, please specify</p> <p>CO2 emissions reduction and alternative energy generation R&D programs</p>	<p>Applied research and development</p>	<p>21-40%</p>	<p>1,350,000</p>	<p>Ameren has invested in research relating to alternative forms of generation. In 2019, Ameren spent over \$1.35 Million for CO2 emissions reduction and alternative energy generation R&D programs.</p> <p>Research includes the EPRI Electrification Portfolio Assessment, Social Cost of Carbon Project, Integration of Distributed Energy Program, Energy Sustainability Interest Group, Sustainability Benchmarking Project, Feasibility Study for Microgrids, Energy Storage Program, and Grid Modernization Program. In addition to EPRI activities, Ameren participated in the Missouri S&T Microgrid Consortium, The University of Illinois Distributed Generation Analysis, and the Gas Technology Institute Emerging Technology Program.</p> <p>In 2017, Ameren announced the launch of Ameren Accelerator, an innovative public-private partnership with the University of Missouri System, UMSL Accelerate and Capital Innovators, that will assess, mentor and invest in energy technology startup companies. The unique partnership, one of the first of its kind in the United States, is also the St. Louis</p>

				<p>region's first to focus on energy technologies. Leveraging the expertise of all of the partners, the goals of this program are to better position Ameren to meet its customers' future energy needs and expectations, create new jobs through these start-up companies and provide university students opportunities to be more engaged in the energy business. We are unable to calculate the savings from these investments.</p>
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C10. Verification

C10.1

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

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

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Third party verification/assurance underway

Attach the statement

Page/ section reference

Relevant standard

Proportion of reported emissions verified (%)

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Attach the statement

Page/ section reference

Relevant standard

Proportion of reported emissions verified (%)

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, but we are actively considering verifying within the next two years

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, and we do not anticipate being regulated in the next three years

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

Navigate GHG regulations
Stakeholder expectations
Stress test investments
Other, please specify
Ameren Missouri Integrated Resource Plan

GHG Scope

Scope 1

Application

The use of CO2 prices is applied to the ongoing costs for the Ameren Missouri. Specifically those generation facilities that burn coal and natural gas.

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

3.37

Variance of price(s) used

Ameren includes a carbon price in its evaluation of long-term resource planning for its Missouri regulated business through its Integrated Resource Plan (IRP) process (i.e., Scope 1 emissions from generation). The price is included to represent the expectation for either regulation of carbon dioxide emissions through a mechanism that establishes

an explicit price for carbon dioxide emissions, such as a carbon tax or cap-and-trade program, or through voluntary emission credit trading markets established by RTOs or state or regional alliances. For its 2017 IRP, Ameren Missouri used a base and high scenario price of \$3.71 per short ton (\$3.37 per metric ton) starting in 2025 and escalating at approximately 12% per year. The prices used in the IRP process are established based on discussions with Company executives involved in environmental, regulatory and legislative activities. Establishment of the carbon price assumptions includes a review of price assumptions used or produced by other utilities, policy analysts, and government agencies, including the Social Cost of Carbon estimates used by the federal government. Ameren Missouri's 2017 IRP describes in detail the process used to establish carbon price assumptions for its evaluations at that time. The same general process continues to be used. Inclusion of a carbon price affects Ameren Missouri's evaluation of both new and existing generation resources, including potential retirement of fossil generation, and also increases the cost effectiveness of energy efficiency measures.

Type of internal carbon price

Other, please specify

Explicit Price

Impact & implication

The addition of an explicit price on CO₂ raises the cost of generation on carbon emitting generation sources and by implication the market value of wholesale electricity. This assumption provides a cost advantage for any resource that does not emit CO₂ to meet the utilities obligations to serve its customers.

Ameren includes a carbon price in its evaluation of long-term resource planning for its Missouri regulated business through its Integrated Resource Plan (IRP) process (i.e., Scope 1 emissions from generation). The price is included to represent the expectation for either regulation of carbon dioxide emissions through a mechanism that establishes an explicit price for carbon dioxide emissions, such as a carbon tax or cap-and-trade program, or through voluntary emission credit trading markets established by RTOs or state or regional alliances. For its 2017 IRP, Ameren Missouri used a base and high scenario price of \$3.71 per short ton (\$3.37 per metric ton) starting in 2025 and escalating at approximately 12% per year. The prices used in the IRP process are established based on discussions with Company executives involved in environmental, regulatory and legislative activities. Establishment of the carbon price assumptions includes a review of price assumptions used or produced by other utilities, policy analysts, and government agencies, including the Social Cost of Carbon estimates used by the federal government. Ameren Missouri's 2017 IRP describes in detail the process used to establish carbon price assumptions for its evaluations at that time. The same general process continues to be used. Inclusion of a carbon price affects Ameren Missouri's evaluation of both new and existing generation resources, including potential retirement of fossil generation, and also increases the cost effectiveness of energy efficiency measures.

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, our customers

C12.1a

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

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

2

% total procurement spend (direct and indirect)

48

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

0

Rationale for the coverage of your engagement

Ameren is a member of the Electric Utility Industry Sustainable Supply Chain Alliance (EUISSCA) which collaborates with other utilities and suppliers to advance sustainable best practices in supply chain. EUISSCA created an assessment for suppliers to disclose information regarding sustainability, including water-specific aspects, and to indicate actions they are willing to take to improve.

In 2019, Ameren asked 100 suppliers to complete the assessment (representing 48% of annual spend). Suppliers are selected based on (1) top annual spend due to top suppliers having a large impact within our supply chain and (2) those having a unique position in our supply chain.

While voluntary, suppliers are incentivized to participate because the assessment offers industry specific benchmarking information and the quantified value (e.g. financial, environmental etc) of taking certain actions, which provides suppliers a value-creating, cost-free, best-practice road map.

Impact of engagement, including measures of success

The survey provides an indication to our supply base that sustainability is an initiative that Ameren cares about. We will informally recognize our top supplier(s) from the 2020 survey results.

Comment

Ameren engages our suppliers through our involvement with the EUISSCA. In 2019, EUISSCA sent a voluntary survey to its members top 100 suppliers to assess their commitment to sustainability (metrics include: reductions in GHG emissions, waste and water usage). This represents approximately 48% of Ameren's total 2019 supplier spend. Additional activities in 2017 included Ameren's participation in the development of "Commodity Documents" that provide sustainability guidance to suppliers on specific products (wood poles, transformers, wire, Investment Recovery, etc.). In 2017/2018, Ameren will improve its maturity level in multiple attributes of EUISSCA's sustainability model. The attributes are primarily in the area of incorporating sustainability in the supplier relationship management program for top tier suppliers.

C12.1b

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

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to education customers about your climate change performance and strategy

% of customers by number

50

% 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

Ameren's strategy for addressing climate change is largely embedded in Ameren Missouri's 2017 Integrated Resource Plan (IRP). The 2017 IRP outlines plans to significantly increase our renewable energy portfolio, including the addition of at least 700 MW of wind generation. We expect a 400 MW wind project and the majority of a 300 MW wind project to be placed in-service by the end of 2020. We expect a portion of the 300 MW wind project will be placed in-service in the first quarter of 2021. The 2017 IRP also includes the planned retirement of more than half of Ameren Missouri's coal-fired generation capacity over the next 20 years, with the retirement of the Meramec Energy Center by the end of 2022 and others between 2033 and 2036. Further, Ameren

Missouri has a goal to reduce CO2 emissions 35% by 2030, 50% by 2040 and 80% by 2050, as compared to the 2005 level. More information is available at AmerenMissouri.com/IRP.

Ameren utilized both owned communications channels and the media to announce a goal of reducing carbon emissions 80% by 2050. The goal was to reach all 1.2 million Ameren Missouri customers along with other stakeholders including regulators, shareholders and employees. We recognize that our customers may belong to numerous stakeholder groups. Engaging the media was the most efficient way to amplify our message and as a result it was able to reach far beyond what we would have been able to accomplish on our own. The engagement included numerous media interviews with local and nationally-based news organizations, a nationally-distributed press release and a revised website.

In addition, to better share information about Ameren's community impacts and to learn directly from community leaders about needs in their neighborhoods, Ameren held a "Community Voices Workshop" in September 2019. Attendees to the first-time event included non-profit executives, clergy, and elected officials from across Ameren Missouri's service territory. Attendees exchanged information about energy efficiency, energy assistance, charitable contributions, workforce development, supplier diversity, and sustainability. In addition, participants were able to discuss the highest priority needs of their communities.

Impact of engagement, including measures of success

For Ameren-owned channels, including website and social media, we achieved more than 76,000 impressions with a potential reach of nearly 3,000,000. A majority of our social media engagement is with customers who live in the St. Louis metro area in Missouri and Illinois.

The impressions through media channels were likely much higher as stories highlighting the carbon reduction goal appeared in print, online and were broadcast on television and radio across the state of Missouri. The combined television market audience is more than 1.8 million households. Newspaper subscriptions in those areas surpass 100,000 homes and the media outlet's combined Facebook followers are well beyond 2 million individuals. The story went beyond local outlets in the Ameren service territory. National media outlets reported on the goals as well. These numbers are approximate as media do not share specific data on their audiences.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

- Direct engagement with policy makers
- Trade associations
- Funding research organizations

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Adaptation or resilience	Support	Ameren Missouri supported the "21st Century Grid Modernization and Security Act" to modernize the regulatory process for electrical corporations to more closely align the interests of electrical corporations and customers they serve by: allowing for the imposition of earnings caps, rate caps, performance standards and other customer protections; (providing a meaningful opportunity for electrical corporations to recover on a timely basis the actual, prudently incurred costs of providing reliable electric service; establishing policies that encourage investment in Missouri electrical infrastructure; and providing globally competitive electric power rates for energy intensive customers.	<p>The 21st Century Grid Modernization and Security Act creates a performance-based regulatory construct for electrical corporations that provides greater certainty to both customers and electrical corporations, and fosters the provision of reliable and affordable electric services for the benefit of customers. In addition, this will improve reliability and accelerate more efficient energy delivery systems and create opportunities for lower energy consumptions by customers and reduced line losses. This bill was approved by the Missouri Legislature in 2018</p> <p>Ameren Missouri is executing on our Smart Energy Plan. The plan is designed to upgrade Ameren Missouri's electric infrastructure and includes investments that will upgrade the grid and accommodate more renewable energy. Investments under the plan are expected to total approximately \$7.6 billion over the five-year period from 2020 through 2024.</p>

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

Edison Electric Institute (EEI)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

EEI member companies are committed to addressing the challenge of climate change. EEI member companies have significant commitments towards CO2 reductions. As the US Congress works to address this issue, it is essential to include effective consumer-protection measures that help to reduce price increases for consumers and avoid harm to U.S. industry and the economy.

How have you influenced, or are you attempting to influence their position?

Ameren serves on several committees and in leadership positions in EEI. Ameren tracks the activities of EEI and we provide input.

Trade association

American Gas Association (AGA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The AGA encourages the use of lower carbon emitting fossil fuels. The 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 consumers.

AGA works with members and leading experts to evaluate how new federal environmental regulatory proposals could impact natural gas local distribution systems and customers. AGA advocate for government rules and policies that protect the environment while allowing our natural gas utility members to continue to deliver clean, affordable natural gas to customers, safely and reliably.

How have you influenced, or are you attempting to influence their position?

Ameren serves on several committees and in leadership positions in AGA. Ameren tracks the activities of AGA and we provide input.

Trade association

Nuclear Energy Institute (NEI)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

NEI promotes a low-carbon economy using clean energy sources, such as nuclear energy, which produces carbon free electricity. Renewable technologies (e.g., wind and solar) are on the rise, NEI advocates for climate policies that ensure these technologies complement, not replace, nuclear's clean energy production.

How have you influenced, or are you attempting to influence their position?

Ameren serves on several committees and in leadership positions in NEI. Ameren tracks the activities of NEI and we provide input.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

Yes

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Ameren and its subsidiaries, including Ameren Missouri and Ameren Illinois, communicate positions on climate and the environment to co-workers, industry peers, regulators and other stakeholders. The company's Corporate Social Responsibility group recently brought together a cross-functional team from across Ameren to produce the company's first report addressing climate risk "Building a Cleaner Energy Future". It is published on the company's website. The report is a clear articulation of the company's plans to address climate change. It includes building new clean energy sources and retiring old energy centers while setting explicit carbon reduction goals consistent with the objectives of the Paris Agreement. This climate report was shared in a number of forums, including engagement with relevant trade associations, investors and media across the country. Ameren also has internal documents which clearly articulate positions on important issues, such as climate change, and how Ameren's plans and actions have been executed for the ultimate benefit of the company's customers and communities served. We establish and revise our positions as issues and regulations evolve and we continuously review and discuss positions through corporate executive and management briefings.

In addition, an internal climate policy core team was created in 2019 to help guide climate-related corporate strategy and review potential climate policy and U.S. legislation. Team findings are regularly shared with corporate executive and in management briefings.

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 mainstream reports

Status

Complete

Attach the document

 2019_AEE_Annual_Report_Final.pdf

Page/Section reference

2019 Annual Report. Form 10-K

Content elements

Governance
Strategy
Risks & opportunities
Emission targets

Comment

The Annual Report provides financial information and highlights the Company's CO2 goals.

Publication

Other, please specify
In voluntary communications, in line with TCFD recommendations

Status

Complete

Attach the document

 buildingacleanerenergyfuture.pdf

Page/Section reference

Ameren Corporation Climate Risk Report - Building a Cleaner Energy Future; Entire Report

Content elements

Governance
Strategy
Risks & opportunities
Emission targets

Comment

Ameren's Climate Risk Report – Building a Cleaner Energy Future. The report is a comprehensive look at the steps Ameren is taking to meet its obligation to provide safe, reliable and affordable energy in an environmentally responsible manner to its customers and the communities it serves while effectively balancing climate-related risks.

Publication

In other regulatory filings

Status

Complete

Attach the document

 Ameren Missouri 2017 Integrated Resource Plan - Executive Summary.pdf

Page/Section reference

2017 Ameren Missouri Integrated Resource Plan: Executive Summary

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

Ameren Missouri Integrated Resource Plan. A 20-year plan that supports cleaner energy in Missouri, including major expansions of solar and wind power. The IRP, which is filed every three years, describes our preferred approach to meeting electric customers' projected long-term energy needs in a cost-effective fashion that maintains system reliability as we move to cleaner and more diverse sources of energy generation.

The 2020 Ameren Missouri IRP is expected to be filed in September 2020.

Publication

In voluntary sustainability report

Status

Complete

Attach the document

 2020 Ameren Sustainability Report.pdf

Page/Section reference

2020 Ameren Sustainability Report. Our Sustainability Story: Customers at the Center.
Entire Report.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Our 2020 Ameren Sustainability Report describes the actions we are taking to improve
the environment and the communities we serve.

Publication

In voluntary communications

Status

Complete

Attach the document

 Ameren EEI-AGA-ESG-Sustainability-Template-Version-2-FINAL-20191107.1.pdf

Page/Section reference

EEI AGA ESG Sustainability Template – Version 2

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Ameren is participating in the EEI AGA ESG/Sustainability Report, a voluntary industry
initiative coordinated by the Edison Electric Institute (EEI) and the American Gas

Association (AGA), to provide electric industry investors with more uniform and consistent environmental, social, governance and sustainability-related (ESG/sustainability) metrics.

C15. 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.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Vice President, Sustainability & Electrification	Other, please specify Vice President, Sustainability & Electrification

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	

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

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?

SC3.1

(SC3.1) Do you want to enroll in the 2020-2021 CDP Action Exchange initiative?

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2019-2020 Action Exchange initiative?

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 am submitting to	Public or Non-Public Submission
I am submitting my response	Investors	Public

Please state the main reason why you are declining to respond to your Customers

Prefer to work directly with customer, not through a third party

Please confirm below

I have read and accept the applicable Terms

Independent Assurance Statement to Ameren Corporation

ERM Certification and Verification Services (ERM CVS) was engaged by Ameren Corporation to provide limited assurance in relation to specified 2019 GHG data in its 2020 CDP Climate Change Questionnaire ('the Report') as set out below.

Engagement summary	
Scope of our assurance engagement	<p>Whether the 2019 data for specified indicators as listed below are fairly presented in accordance with the reporting criteria</p> <ul style="list-style-type: none"> Total Scope 1 emissions (absolute) [metrics tons CO₂e] (<i>Sources include Ameren Missouri Generation, Ameren Missouri & Ameren Illinois vehicle fleet, Ameren Missouri equipment oil, propane usage, Ameren Illinois natural gas consumption for buildings, Ameren Illinois & Ameren Missouri electric distribution, and Ameren Illinois & Ameren Missouri natural gas supply</i>) Total Scope 2 emissions (absolute) (location-based) [metric tons CO₂e]
Reporting criteria	US EPA Mandatory GHG Reporting Rule and Ameren's internal reporting criteria and definitions (where relevant).
Assurance standard	ERM CVS' assurance methodology, based on the International Standard on Assurance Engagements ISAE 3000 (Revised).
Assurance level	Limited assurance.
Respective responsibilities	<p>Ameren is responsible for preparing the data and for its correct presentation in the Report to third parties, including disclosure of the reporting criteria and boundary.</p> <p>ERM CVS's responsibility is to provide conclusions on the agreed scope based on the assurance activities performed and exercising our professional judgement.</p>

Our conclusions

Based on our activities, nothing has come to our attention to indicate that the 2019 data for the selected GHG data as shown below and reported in section C6.1 and C6.3 of Ameren's 2020 CDP Climate Change Questionnaire are not fairly presented, in all material respects, with the reporting criteria.

Total Scope 1: **24,413,651 MT CO₂e**
Total Scope 2 (location-based): **62,836 MT CO₂e**

Our assurance activities

Our objective was to assess whether the assured data are reported in accordance with the principles of completeness, comparability (across the organisation) and accuracy (including calculations, use of appropriate conversion factors and consolidation). We planned and performed our work to obtain all the information and explanations that we believe were necessary to provide a basis for our assurance conclusions. We applied a 5% material error threshold.

A multi-disciplinary team of GHG and assurance specialists performed the following activities:

- Virtual Interviews with corporate staff to understand and evaluate the data management systems and processes (including IT systems and internal review processes) used for collecting and reporting the selected data.
- A review of the calculations of the GHG emissions from underlying activity data, including the conversion factors and emission factors used, and the accuracy of the consolidation of the GHG data at the corporate level; and
- A review of the results of Ameren's internal QA/QC procedures on the GHG emissions.

The limitations of our engagement

ERM CVS is a member of the ERM Group. The work that ERM CVS conducts for clients is solely related to independent assurance activities and auditor training. Our processes are designed and implemented to ensure that the work we undertake with clients is free from bias and conflict of interest. ERM CVS staff that have undertaken this engagement work have provided no consultancy related services to Ameren in any respect.

Our engagement covers the following sources: Ameren Missouri Generation, Ameren Missouri & Ameren Illinois vehicle fleet, Ameren Missouri equipment oil, propane usage, Ameren Illinois natural gas consumption for buildings, Ameren Illinois & Ameren Missouri electric distribution, and Ameren Illinois & Ameren Missouri natural gas supply. The reliability of the assured data is subject to inherent uncertainties, given the available methods for determining, calculating or estimating the underlying information. It is important to understand our assurance conclusions in this context.

Force Majeure – COVID-19

During our assurance engagement, travel restrictions were in place due to the outbreak of COVID-19. As a result of this we replaced the planned 'in person' head office visit with 'virtual' visits via video calls for this year's assurance engagement. While we believe these changes do not affect our limited assurance conclusion(s) above, we draw attention to the possibility that if we had undertaken in person visits we may have identified errors and omissions in the assured information that we did not discover through the alternative assurance program.

Beth C. B. Wyke

Beth Wyke
 Partner, Head of Corporate Assurance
 16 Feb 2021

ERM Certification and Verification Services, Inc.
 email: post@ermcvs.com

ERM CVS
 Informed Assured