



# Building a Cleaner Energy Future





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# AN INTRODUCTION TO AMEREN

Ameren Corporation and its subsidiaries' (collectively, "Ameren," the "Company" or "we") mission is *To Power the Quality of Life* for the over six million people and the hundreds of communities we serve in Illinois and Missouri. In addition, Ameren's co-workers live, work, raise their families and volunteer in those same communities. We are committed to delivering safe, reliable and affordable energy. Further, we are committed to being good environmental stewards, which is why we work to reduce emissions and waste, preserve natural resources, increase the use of renewable and other forms of cleaner energy, and create programs that allow customers to manage their energy use, such as energy efficiency programs.

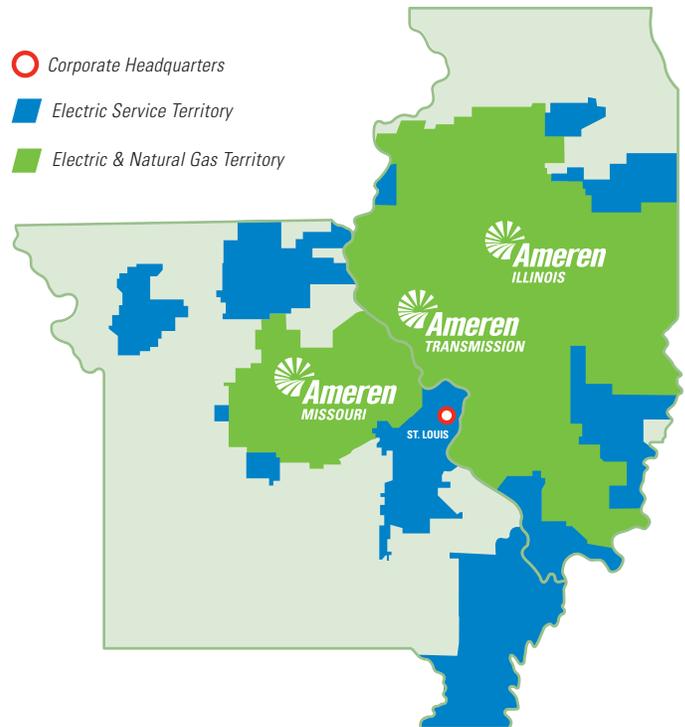
Ameren's family of operating companies includes:

- **Ameren Illinois:** Our Illinois regulated electric company provides electric transmission and distribution service and natural gas distribution service.
- **Ameren Missouri:** Our Missouri regulated energy company provides electric generation, transmission and distribution service, as well as natural gas distribution service.
- **Ameren Transmission Company of Illinois:** Ameren Transmission develops, owns and operates rate-regulated regional electric transmission projects.

Together, our companies provide safe, reliable and affordable energy, which is critical to the well-being and security of the 2.4 million electric customers and 900,000 natural gas customers we serve.

## ABOUT THIS REPORT

This report was published in March 2019. An internal working group coordinated the preparation of this Report and obtained input from subject matter experts 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. We engaged external experts and partnered with the Electric Power Research Institute (EPRI) to assess our plan against the prevailing body of knowledge around climate modeling and conferred with peer utilities that previously produced similar reports to help inform our approach. This Report has been reviewed by our Board of Directors, as well as its Nuclear and Operations Committee and Nominating and Corporate Governance Committee.



The emissions pathway scenarios presented in this report are based in part on third party information, including from the United Nations Intergovernmental Panel on Climate Change (IPCC). These scenarios are based on specific assumptions and estimates made in the context of such scenarios and should not be mistaken for the Company's forecasts or predictions. As such, these scenarios are inherently subject to significant uncertainty, and caution should be exercised when interpreting the information provided. The actions of no single country, industry or company, for example, will determine the achievement of global climate emissions reduction goals. Except as otherwise expressly indicated, the results are not indicative of, and this Report does not represent, preferred or expected future outcomes.

# EXECUTIVE SUMMARY



We recognize that climate change is a critical issue for our customers, our communities, our nation and our planet, and we are committed to do our part to protect and preserve the environment. This Report provides a comprehensive look at the steps the Company is taking to manage our climate-related risks – including policy and legal, physical, reputational and financial risks – while continuing to meet our obligation to provide safe, reliable and affordable energy to serve our customers. As part of our policy and legal risk analysis, this Report also highlights the results of Ameren’s scenario-based climate assessment.

**Our strategy to address and respond to climate risk 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. Specifically, our strategy addresses:

1. **Electricity 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.

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.

**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.** We strongly believe that the plan

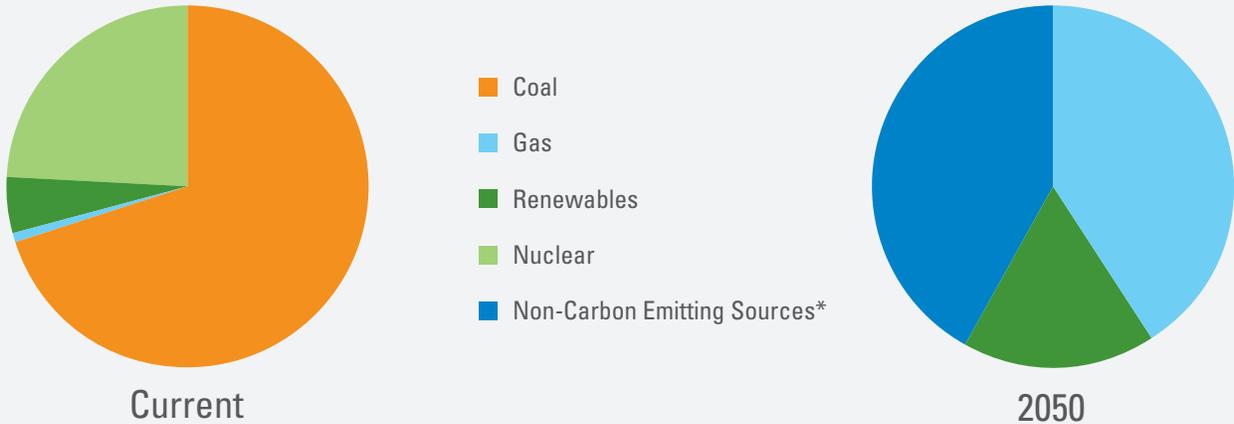
set forth in our IRP will enable us to effectively achieve our goals. To test the resilience of our IRP, we compared our expected emission reductions under that plan to the emissions pathways recently analyzed by EPRI. These emissions pathways, which represent estimated global annual carbon dioxide (CO<sub>2</sub>) emissions levels over a given period of time, included over 1,000 emissions pathways published by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body that assesses the science related to climate change. As discussed in greater detail in the Scenario Analysis section of this Report, our projected CO<sub>2</sub> emissions are consistent with limiting global temperature rise to 2 degrees Celsius (2°C). Further, we have flexibility in our plan to meet more stringent emissions constraints, keeping in mind that adjusting the plan to achieve greater emissions reductions may increase customer costs and/or reduce reliability. Our plan transitions our generation fleet to a cleaner and more diverse portfolio over time.

Our strategy and actions are subject to stringent governance requirements, both internally and externally. Internally, we have robust enterprise risk management (ERM) and governance programs to identify, evaluate and manage risks, and to ensure the actions we take are prudent and likely to receive full cost recovery from regulators, including a fair return on our investments. Our ERM program is a

comprehensive, consistently applied management framework that captures all climate-related policy and legal, physical, reputational and financial risks. Risk management is embedded into the business processes and key decision-making at all levels of the Company. In addition, our Board of Directors has extensive oversight over our strategy and execution and all aspects of risk, including key climate risks. Externally, we have extensive regulatory oversight by state and federal regulators to ensure that our planned actions responsibly comply with applicable laws and regulations and protect the public interest.

In summary, we strongly believe that Ameren’s strategy to address climate-change risk effectively balances and addresses the key climate-change risks described previously and positions Ameren to deliver long-term value to its customers, the communities we serve and shareholders. As the climate-change risk landscape continues to evolve, so too will our pursuit of advanced technological solutions, as well as policies and related investments that will support a cleaner energy future, including efficient electrification, distributed energy resources (e.g., storage and generation), smart grid technologies, energy efficiency (EE), and demand response (DR) programs. Looking ahead, we will continue to work collaboratively with key stakeholders to address climate-change risks in a responsible manner and deliver a brighter energy future for our customers, our communities and our country.

### CURRENT AND PROJECTED 2050 FUEL MIXES



\*Expected to include a combination of renewables, energy storage, nuclear generation and/or new technologies.

# AMEREN'S CLIMATE RISK STRATEGY:

## Our Approach to Addressing Climate Change



Greenhouse gases trap heat and warm the planet. When producing, transmitting and distributing energy, these gases are released in two primary ways:

- 1. Generation.** Burning fossil fuels releases GHGs as by-products, including carbon dioxide (CO<sub>2</sub>) and nitrous oxide (N<sub>2</sub>O). Worldwide, this is the single largest contributor to GHG emissions. At Ameren, our largest GHG contribution comes from our fossil-fueled generation fleet. As a result, the largest reduction in our emissions, both now and over the long-term, will come from finding ways to reduce generation emissions and integrating cleaner energy sources into the grid.
- 2. Delivery and transmission.** Other GHGs, such as sulfur hexafluoride (SF<sub>6</sub>) and methane (CH<sub>4</sub>), are released on a much smaller scale through the process of delivering electricity and natural gas to customers' homes and businesses. SF<sub>6</sub> is used as an insulator for transmission equipment, such as circuit breakers, and CH<sub>4</sub> 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.

We are committed to finding ways to manage and reduce GHG emissions from our operations, such as electrifying the

Company's transportation fleet. Advances in technology and decreases in the cost of clean and renewable energy are helping us take steps across our business to reduce GHG emissions significantly. Our goal is to integrate these new sources and technologies so that we can deliver meaningful reductions in carbon emissions, while effectively balancing and managing key risks associated with climate change, including financial and reputational risks, with customer costs and reliability.

### Our Integrated Resource Plan Will Drive Significant Emission Reductions

Every three years, Ameren Missouri files an updated IRP with the Missouri Public Service Commission (MoPSC), as required by Missouri law. At its core, this plan is based on two questions: for each of the next 20 years, what is our customers' peak demand, and what is the best way to meet that demand? Each IRP filing requires a complex analysis that takes into account a range of trends, expectations and assumptions. The end result is a robust analysis that provides insights about the costs, risks and opportunities of our future resource decisions. The IRP also considers key implications for customers, investors, the environment and the communities we serve.

## DEVELOPING AN IRP IS MUCH LIKE CLIMATE MODELING

Like the models used to evaluate climate change, our IRP modeling reflects assumptions about energy use, energy production and the broader economy. These include assumptions regarding:

- Changes in the use of electricity, including:
  - Economic growth and energy intensity.
  - Improvements in energy efficiency.
  - Electrification, including adoption of electric vehicles.
  - Adoption of customer-owned generation, such as private solar.
- The price of fuels, such as natural gas and coal.
- The cost of new energy generation technologies, such as wind, solar, natural gas, nuclear, and hydro.
- The retirement of coal-fired and other generation.
- The addition of new generation, including wind, solar, and natural gas-fired generation.
- Interest rates and investment returns.
- Environmental regulations and legislation.

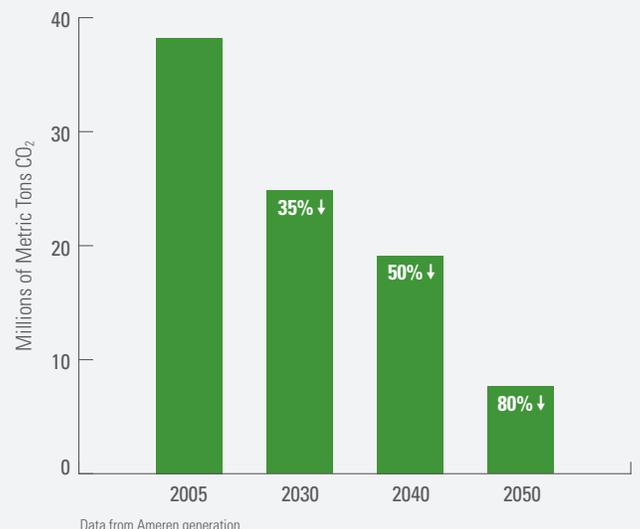
One part of the IRP analysis is evaluating the GHG emissions impact of our generation plan. Our 2017 IRP represented a significant change over our prior plans by setting explicit carbon reduction goals consistent with the objectives of the Paris Agreement: a 35 percent reduction in CO<sub>2</sub> emissions by 2030, a 50 percent reduction by 2040 and an 80 percent reduction by 2050 from 2005 levels.

Ameren's overall plans, including the Ameren Missouri IRP, reflect the following strategies to achieve our targeted reductions:

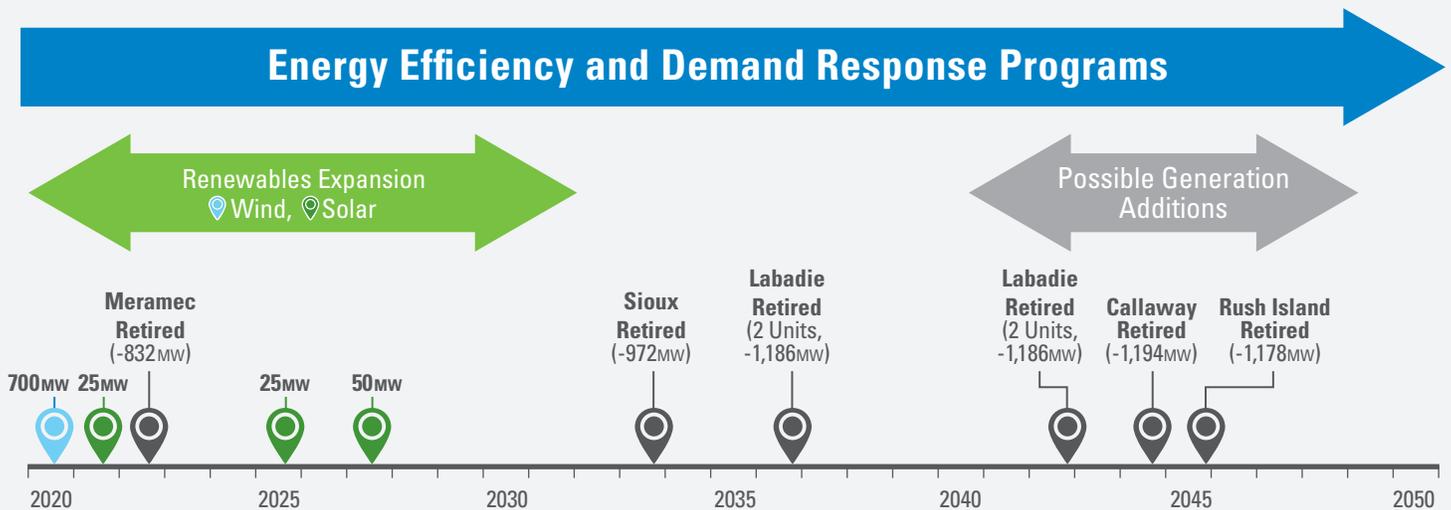
1. Retiring older energy centers. Meramec Energy Center will be retired in 2022. By 2037, half of our current coal-fired capacity will have reached the end of its useful life and will have been retired. Callaway Energy Center's operating license expires in 2044, but we will continue to evaluate options to extend the license of this zero-emission generation facility consistent with prevailing industry best practices.
2. Building new clean energy sources. Ameren has historically diversified its generation portfolio to utilize

coal, nuclear, hydro, wind, solar and natural gas. Over the last 100 years, we have generated power at a number of zero- and low-emission energy centers, including our Callaway Energy Center, our Keokuk, Osage, and Taum Sauk hydroelectric energy centers, and our Maryland Heights landfill gas facility. We also have a purchased power agreement for 102 megawatts (MW) of wind generation, and we have installed more than 19,000 solar panels at our O'Fallon Renewable Energy Center. We expect to continue to transition our portfolio to cleaner and more diverse sources of generation by adding at least 700 MW of new wind generation by 2020 and 100 MW of solar generation by 2027. Ameren Missouri has already entered into agreements to acquire, after construction, two wind generation facilities for 400 MW and up to 157 MW, respectively, representing an investment of approximately \$1 billion. The MoPSC has approved the acquisition of both facilities. Both transactions remain subject to obtaining a Midcontinent Independent System Operator (MISO) generation interconnection agreement and other customary contract terms. Moreover, aided by the continuing decline in the costs of wind and solar generation, we are also pursuing opportunities to add even more renewable generation to meet the growing demand from our customers for

**FIGURE 1**  
**AMEREN'S PLANNED CARBON DIOXIDE EMISSIONS AND PERCENT REDUCTION FROM 2005**



## KEY ELEMENTS OF AMEREN MISSOURI'S IRP



cleaner energy. In June 2018, Ameren Missouri secured approval from the MoPSC for the Renewable Choice Program, a 400 MW program that provides options for large customers and municipalities to obtain their energy from renewable sources.

**3. Meeting renewable standards.** Missouri's Renewable Energy Standard requires investor-owned utilities to acquire renewable energy equal to 15 percent of retail sales by 2021, subject to an average annual retail rate impact limitation of no more than one percent. A key component of our Missouri compliance is the addition of at least 700 MW of wind generation as described above. Similarly, the state of Illinois, through its Renewable Portfolio Standard, requires investor-owned utilities to obtain 25 percent of retail sales from renewable sources by 2025. We are investing in transmission improvements to enhance access to renewables in order to comply with these standards. Achieving each state's renewable energy goals will help to further reduce GHG emissions.

**4. Upgrading delivery infrastructure.** Ameren has specific programs designed to reduce and eliminate methane emissions by building a smarter, more reliable delivery infrastructure. For example, since 2015, our Illinois and Missouri businesses have replaced over 175 miles of older, leak-prone, mechanically-coupled steel and older vintage polyethylene distribution gas mains and plan to replace an additional 235 miles of these materials over the next five years. These ongoing efforts will continue to reduce future methane emissions.

**5. Supporting energy efficiency programs.** Helping our customers use energy more efficiently is a key part of reducing overall emissions. Together, Ameren Missouri and Ameren Illinois are investing nearly \$182 million annually to fund electric and natural gas programs that reward customers for installing newer, more efficient technology or operations and for making smart choices about how they use energy. EE and DR programs offered to our residential and business electric customers in Missouri and Illinois include LED lighting upgrades, installation of energy efficient heating and air conditioning systems, home energy audits, low-income weatherization, programmable thermostat rebates and educational outreach.

Ameren Missouri and Ameren Illinois also offer natural gas EE programs that provide incentives to customers when they purchase specific energy efficient gas equipment, such as furnaces, boilers or manufacturing equipment. These programs further our efforts to reduce GHG emissions and lower customer bills. We estimate the annual savings for 2018 to be approximately 750,000 megawatt-hours of electricity and 7.7 million therms of natural gas. That's enough to power more than 65,000 average-sized homes in the Ameren service territory for a year. In addition to these customer-facing programs, Ameren has implemented various voluntary initiatives to improve efficiency and reduce GHG emissions at Company-owned facilities.

## LEADING THE WAY THROUGH INNOVATION

Ameren is leveraging innovation to help address climate change and reduce emissions, both today and in the future. These efforts provide the means to create and develop forward-thinking ideas – internally and externally – to advance promising technological solutions. A sampling of these efforts include:

- *Partnering with and investing in The Ameren Accelerator and Energy Impact Partners* – to bring external perspectives and ideas for development and to enable cleaner energy choices for customers and the Company.
- *Partnering and collaborating with the University of Illinois and Missouri University of Science and Technology* – to evaluate the potential of microgrids and distributed energy resources to increase the amount of cleaner energy in the electric grid, while giving customers more choices, bolstering system resiliency and enhancing the customer experience.
- *Developing and delivering programs that support efficient electrification and electric transportation technologies* – to reduce GHG emissions by offering cleaner alternatives to burning fossil fuels.

Actively promoting and enabling technological innovations will continue to position Ameren as a leader in developing business and regulatory solutions to implement new products and services that help to address climate change.

**6. Maintaining a Long-Term View.** Planning for the long-term transition of our generation portfolio is an important part of evaluating and addressing climate-related risks. It is also subject to a range of uncertainties associated with technology, energy costs, load forecasts, and regulatory and policy changes that make it difficult to accurately predict our energy mix that far into the future. Today, coal-fired and nuclear generating units currently supply the vast majority of the energy we generate. While the Ameren Missouri IRP is focused on the 2018-2037 timeframe, we also evaluated our resource portfolio through 2050 to account for the retirement of a number of these units. As a result of these retirements, we anticipate that additional generation – a combination of renewables, energy storage,

gas, nuclear generation and/or new technologies – will be needed to meet customer energy needs after 2045.

### Ameren is Focused on Innovation to Further Reduce Emissions

The electric grid of tomorrow will become more complex. While the grid will remain at the center of value creation, Ameren believes the traditional central station generation, transmission and distribution system will evolve into what EPRI calls the “integrated grid.” The integrated grid will incorporate increasing levels of distributed energy resources (such as community and private solar panels), improved customer energy management tools (such as smart home devices) and electric vehicle (EV) infrastructure, all working together in a coordinated fashion to continuously and reliably maintain the balance between energy supply and demand.

The integrated grid offers a wide range of opportunities to further address climate risks, but it also comes with significant complexity and challenges. Some examples of how we are innovating within the Company and with key external partners to reduce GHG emissions and improve system operations and reliability include:

1. **Efficient Electrification** – The use of electric alternatives to displace higher emitting fossil-fueled end-use technologies assists customers in increasing operational efficiencies and reducing their overall energy consumption and emissions. On a system basis, electrification supports better utilization of the electric grid 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 EV adoption, including charging opportunities for multi-family dwellings and lower income areas, as well as public transportation and fleet electrification. Our near-term strategy also focuses on material handling (e.g., forklifts, ground support equipment at airports), truck refrigeration units and truck stop electrification. Longer-term, our efforts will be extended to other commercial and industrial equipment where electrification will deliver similar benefits to customers and the environment.
2. **Data Analytics** – We have established an internal Data Analytics team to enhance our analytics capabilities. We believe data analytics will be a valuable skill set going forward as we analyze increasing amounts of data to make our operations more efficient and environmentally friendly.



*The integrated grid offers a wide range of opportunities to further address climate risks, but it also comes with significant complexity and challenges.*

3. **Advanced Street Lighting** – The installation of LED street lights reduces energy consumption.
4. **Microgrids** – The installation of a microgrid at our Technology Applications Center (TAC) in Champaign, Illinois provides us with the experience of integrating solar, wind and gas-fired generation with energy storage, which will promote reliable operation of cleaner, low-carbon emission generation. As the prices for these various technologies continue to decline, we can expect to see more distributed and intermittent resources placed on our grid, enhancing the customer experience around reliability, resilience and load optimization to reduce costs or emissions. The knowledge gained through our experience at the TAC will allow us to better integrate these systems on our grid, develop and promote programs to help customers adopt these technologies and guide our efforts to promote supportive energy policies.
5. **Strategic Alliances** – We are actively engaged in innovative activities with several strategic partners and

independent groups. Key objectives in working with these groups are to identify, assess and potentially implement innovative technologies for the benefit of our customers in a timely fashion, identify necessary policy changes to implement these technologies and enhance our innovative culture at Ameren. These alliances include:

- Energy Impact Partners (EIP), where our direct investment and collaboration is focused on strategic investments in high-growth companies involved in new energy technologies. Several of the companies in EIP's portfolio of investments offer products designed to deliver a cleaner energy future.
- EPRI, where we are leveraging programs to advance our long-term vision by investing in forward-looking technologies, including electric transportation, energy storage, artificial intelligence, information and communication technology, and security architecture for distributed energy resources (DER) integration,

and transmission and substation asset analytics. Most recently, Ameren engaged EPRI to provide an objective overview of energy storage technologies, applications and the current understanding of their costs and benefits when applied to the electric power system. Also included in the study were examples of energy storage deployments and the results of initial investigations into deployment opportunities within Ameren's service territory.

- Alliance for Transportation Electrification, formed to accelerate the deployment of EVs and support grid transformation by promoting open standards, helping shape state policies and rate structures, and facilitating expansion of EV infrastructure. Ameren is a founding member and board member.
- Local/regional universities, where we collaborate with faculty and students on projects related to innovation and the integrated grid, including robotics, sensors, distribution automation, weather forecasting, DERs, and energy storage. Through the Microgrid Industrial Consortium, Ameren is partnering with Missouri University of Science and Technology to develop a living laboratory for microgrid studies at the campus's EcoVillage. Here, the Consortium is testing advanced

lead battery energy storage and renewable energy sources for communities of the future. The batteries are managed by cloud-based charging algorithms, with students occupying the homes and participating in research on smart living.

- Institute for Electric Innovation, where we leverage the learnings of other investor-owned utilities in electrification, renewable energy, providing customer value, and the integrated grid.

6. **Ameren Missouri's Community Solar and Renewable Choice Programs** – designed to offer customers access to additional renewable energy resources, thereby reducing dependence on fossil fuel resources.

7. **Ameren Accelerator** – an innovative public-private partnership between and among Ameren Corporation, the University of Missouri System, UMSL Accelerate, and Capital Innovators that assesses, mentors and invests in energy technology startup companies. One of the key goals of the program is to accelerate the implementation of startup companies' innovative products and services that will ultimately help Ameren deliver a cleaner energy future to our customers in a responsible fashion.



*Ameren is partnering with Missouri University of Science and Technology at the campus's EcoVillage living laboratory.*

# SCENARIO ANALYSIS:

## Testing Our Carbon Reduction Plan

To help us assess the resilience of Ameren Missouri's IRP against potential future climate policies and associated emissions requirements, we leveraged the recently completed 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. The EPRI study also included other scenario data from sources reviewed by the IPCC, as well as some scenario data from sources not reviewed by the IPCC, such as the Natural Resources Defense Council and Bloomberg New Energy Finance.

### Scenario Ranges and Analysis

Much of EPRI's study builds on the scenario results released by the IPCC in its Fifth Assessment Report. In the IPCC report, 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 CO<sub>2</sub> 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 Ameren Missouri's 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, as illustrated in Figure 2, we found that the projected CO<sub>2</sub> 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, EE, fossil fuel unit retirements and electrification.

### Beyond 2°C

While our current plan 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.

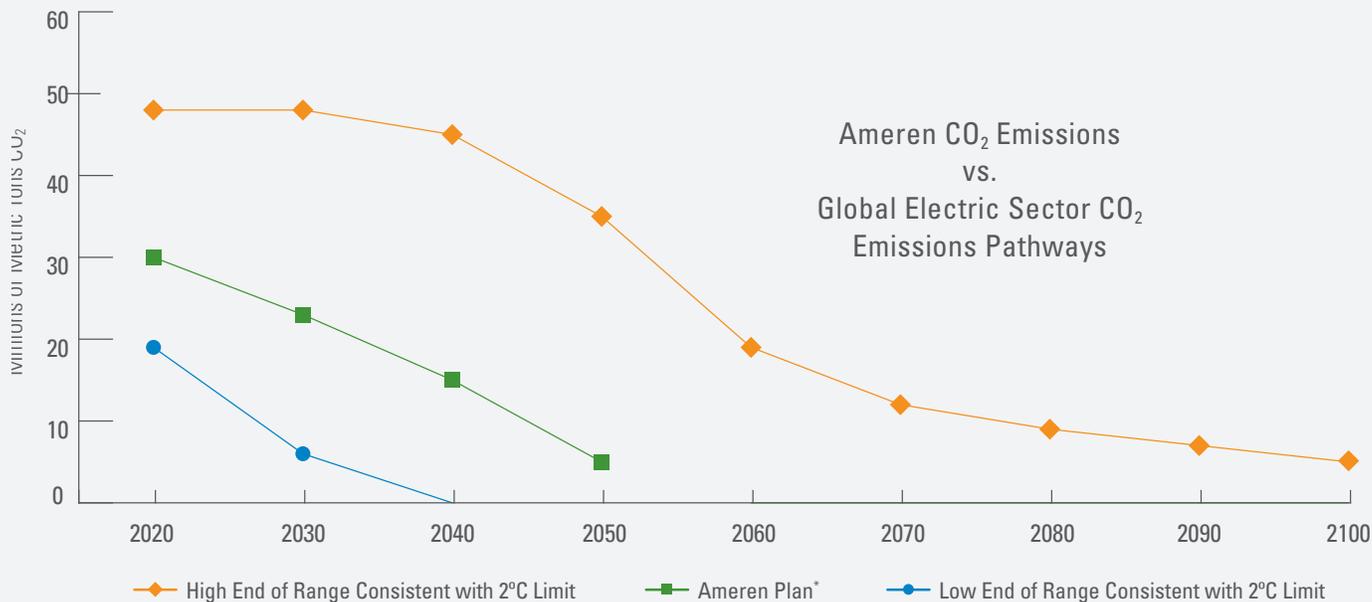


### EPRI is ....

- An independent, nonprofit organization for public interest energy and environmental research, focused on electricity generation, delivery and use in collaboration with the electricity sector and its stakeholders.
- A provider of thought leadership and technical expertise to help the electricity sector identify issues, technology gaps, and broader needs that can be addressed through effective research and development programs.
- A more than 1,000 member organization, with members from around the world. While most members are electric utilities, other stakeholders include government agencies, regulators, NGOs and public or private entities engaged in some aspect of the generation, delivery or use of electricity.

FIGURE 2

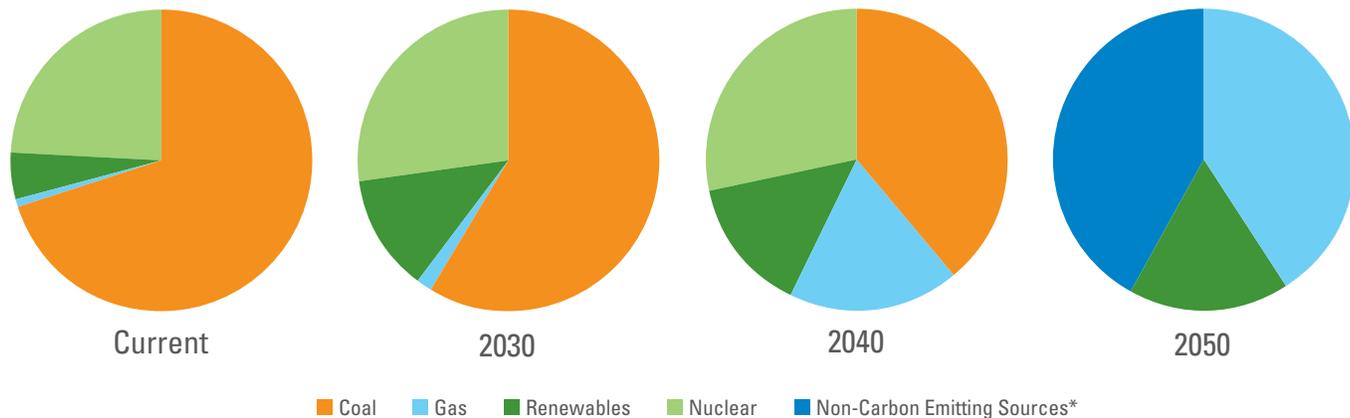
## AMEREN'S CO<sub>2</sub> EMISSIONS PATHWAY



Should a more aggressive approach to climate-change policy result in more stringent emission-reduction requirements, we believe that 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.

As discussed elsewhere in this Report, our current plan represents a balanced and cost-effective approach to meet the 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.

## AMEREN'S TRANSITION TO CLEANER GENERATION – FUEL MIX



\*Expected to include a combination of renewables, energy storage, nuclear generation and/or new technologies.

# RISK MANAGEMENT AND GOVERNANCE:

## Protecting Our Customers' and Shareholders' Interests



We believe that prudent compliance measures, undertaken in accordance with applicable regulatory frameworks, effectively mitigate the policy and legal, physical, reputational and financial risks associated with climate-related issues. Ameren embeds risk management into its business processes and key decision-making at all levels of the Company. We have robust risk management and governance systems to identify, evaluate and manage these risks.

Reflecting our balanced approach to sustainability, we integrate environmental protection considerations, including climate policy and legal risk, into our broader ERM and strategic planning initiatives. Our ERM program is a comprehensive, consistently applied management framework that captures climate-related policy and legal, physical, reputational and financial risks. Risk owners within the Company are accountable for the quantification and mitigation of individual risks.

Some of the most important climate-related risks we consider and prepare for include:

- **Policy and Legal** – How we comply with existing laws and regulations, as well as assessing how changing climate policy, laws and regulations could potentially affect our business going forward.

- **Physical** – How changes in the climate, like extreme weather, affect our physical infrastructure and system reliability.
- **Reputational** – How our response to climate-related changes impacts relations with our key stakeholders.
- **Financial** – How climate change may affect our business, as well as our customers and shareholders.

We believe that being thoughtful about our impact on the environment, while also preparing for climate-related risks, is not only the right thing to do – it's also a smart business decision.

### How We Mitigate Policy and Legal Risks

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, such as those outlined below, 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.

### **The Paris Agreement**

The central goal of the Paris Agreement is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century below 2°C from pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C.

The Paris Agreement also establishes Nationally Determined Contributions (NDC), which reflect each nation's emissions targets. The U.S.'s NDC provides for an economy-wide 26 to 28 percent reduction below 2005 levels by 2025, with the Clean Power Plan (CPP) being viewed as a key element in developing the U.S. target.

### **The Clean Power Plan**

The CPP was a regulation proposed in 2014 to establish emission guidelines for states to follow in developing plans to reduce CO<sub>2</sub> emissions from existing fossil-fuel-fired electricity generating facilities. The CPP was stayed by the U.S. Supreme Court after several challenges to the EPA's authority to promulgate the regulations.

### **The ACE Rule**

The EPA announced the proposed Affordable Clean Energy (ACE) Rule in August 2018 as a replacement for the CPP. As proposed, the ACE Rule will set the best system of emission reduction (BSER) for CO<sub>2</sub> emissions for existing coal-fired electric generating units. States will be required to establish the standard of performance for each affected unit under the BSER guidance and submit plans to the EPA for approval.

### **Other Potential Climate-Related Policies**

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 our IRP has sufficient flexibility to meet any reasonable changes in emissions-reduction policies, but exercising such flexibility may have a negative impact on customer costs and reliability. As a result of the IRP's flexibility,



*System hardening with the use of composite poles.*

we further believe we are effectively mitigating policy and legal risks associated with climate-related activities.

### **How We Mitigate Physical Risks**

Certain climate assumptions indicate present and continuing patterns of increased variability and severity of weather-related events. Electricity transmission and distribution systems can be particularly affected by regional flooding and extreme weather.

The primary means of mitigating physical risks of extreme weather events is to make certain asset enhancements and improvements, commonly known as "system hardening," to avoid potential impacts and damages that may otherwise occur. At the same time, Ameren deploys an increasingly comprehensive strategy to ensure the reliability and stability of the grid, from the energy center to the customer. This strategy includes system hardening and three additional distinct and complementary levels of planning and execution – emergency planning, situational awareness and emergency response – in support of asset protection, system reliability and resiliency. We believe that system hardening and these planning and



Example of enhanced berm at an Ameren substation for additional flood protection.

execution measures taken together directly address the potential impacts posed by changes in near-term weather patterns and longer-term climate trends.

### **System Hardening**

Ameren designs and incorporates physically robust features into the electric grid in anticipation of weather-related or other disruptive events. Ameren's work to incorporate many of the system hardening measures described below has resulted in improved customer reliability over the past decade.

We plan and develop our transmission and distribution systems based on system performance requirements associated with standards governing these assets.

To harden the electric grid, we bury lines most susceptible to weather-related damage, including those in heavily forested areas and crossing over interstate and multi-lane state highways. For overhead line assets, we increasingly use composite material poles and cross-arms, line post insulators, 360-degree pole guying, and mechanical line dampers. All are effective in neutralizing the otherwise destructive effects of wind and moisture.

Following recent flooding events, we implemented more vigilant surveillance and monitoring of local river stages following extreme rainfall or drought conditions. We have also constructed flood walls, upgraded berms, implemented storm water capture and control efforts, and relocated equipment within substation sites susceptible to flooding.

We also engaged an independent engineering firm to produce a Water Resilience Assessment Report to assess current and future availability of water resources in Ameren's region, as well as the Powder River Basin area of Wyoming, a key location in Ameren's supply chain. Based on the report's findings, we do not expect material impacts on our operations through 2030 due to water resource availability. A more complete discussion of the weather- and climate-related risks associated with key water resources can be found in Ameren's Water Resilience Assessment Report and Report on Our Responsible Management of Coal Combustion Residuals at [Ameren.com/Sustainability](https://www.ameren.com/Sustainability).

### **Emergency Planning**

Ameren builds management and risk-management systems into its policies and procedures to mitigate emergencies.

To mitigate substation-related emergencies due to adverse weather events, such as tornadoes, flooding and thunderstorms, Ameren stores spare transformers, switchgear and other substation-related equipment across our service territory.

At the transmission system level, Ameren participates in multiple industry transformer-sharing agreements for catastrophic events that require more equipment than what is stored in Ameren warehouses. In addition, as a member of MISO, Ameren participates in MISO's transmission-planning process, which considers multiple scenarios involving various contingency events, load growth rates, generator retirements,



An Ameren co-worker installs a real-time weather monitor.

renewable energy levels and carbon policies. Ameren also actively participates in the Midwest Mutual Assistance Group, a consortium of regional electric utilities created to provide members with a means of receiving and providing emergency support during or after large-scale outage events due to extreme weather.

### **Situational Awareness**

Ameren monitors, forecasts and prepares for disruptive events. Several years ago, Ameren established a crisis management function as a means of more formally developing a corporate culture of situational awareness, planning and preparation. This included the formation of a Watch Center that monitors events on national, regional, state and local levels, including large weather-related service interruptions.

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.

### **Emergency Response**

Ameren activates operational protocols in immediate response to a disruptive event. In addition, Ameren utilizes an Incident Command and Control structure of emergency management to address large-scale infrastructure or customer service interruptions. Incident Command and Control is a standard incident management framework that enables a coordinated response, establishes common processes for the management of resources and allows for integration within a common organizational structure.

As a result of the collective actions described above, we strongly believe we are effectively mitigating physical risks associated with climate change and weather-related events.

### **How We Mitigate Reputational Risks**

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 EVs, and impact of EE programs.

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 all of 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. Through implementing our strategy to significantly reduce GHG emissions, we strongly believe that we are effectively mitigating reputational risks associated with climate change.

### **How We Mitigate Financial Risks**

We are taking actions to transition our generation fleet to cleaner and more diverse resources, while keeping customer rates stable and predictable. Should a more aggressive approach to climate-change policy result in more stringent emission reductions, we continue to believe that our current

plan contains sufficient flexibility to meet these additional constraints. Exercising the flexibility of our plan will require careful evaluation of options to justify the need for new investment, whether such investments are to be made in maintaining existing equipment or in the development and construction of new generation, as well as reliability implications of changes to the plan. While future conditions are subject to uncertainty, our planning indicates that new generation investments beyond our planned wind and solar additions will be needed at some point in the future.

As part of our ongoing planning process, we monitor costs and technological advancements in various types of generation resources. We expect costs for wind and solar resources to continue to decline and to be cost-effective in the future, even with the investment and production tax credits phasing out. We expect advancements in nuclear technology to continue; however, costs would need to come down for this resource to be competitive with other types of generation resources. Battery storage is currently cost-effective for a limited range of use cases. Further improvement in technology and costs may increase its range of use. We also expect additional advancements in technology and efficiency of natural gas resources.

The electric rates that Ameren Missouri charges its customers are determined by the MoPSC and reflect the prudently incurred costs of the energy centers, including those related to compliance with environmental laws and regulations. Full and timely recovery of our investments, the related returns on our investments and the operating costs associated with any climate-related activities are critical to our shareholders. A key aspect of recovering all of our capital and operating costs for environmental matters through electric rates approved by the

MoPSC is complying with existing laws and regulations in a prudent fashion.

Another key consideration is ensuring that our compliance plans effectively take into consideration cost-effective options to keep our customers' rates stable and predictable and the system reliable. We intend to comply with all climate-related laws and regulations if, and when, they are enacted. As described earlier in this Report, while we continue to evaluate alternatives, we believe the actions outlined in our current IRP are technically feasible and represent a cost-effective plan for our customers. We strongly believe that our compliance plan included in the IRP is prudent and complies with all existing laws and regulations and, as a result, we expect that all costs associated with this plan will be recoverable through customer rates, subject to final approval by the MoPSC. Accordingly, we strongly believe we are effectively mitigating the financial risks associated with climate change through the execution of our IRP.

## **Governance, Oversight and Engagement**

### **Board of Directors**

Ameren's Board of Directors, currently comprising 13 independent Board members and Ameren's CEO as chairman, oversees environmental policy matters and strategies, including those related to planning for the potential implications of climate-related issues. Ameren's Board has a diverse range of skills that make it well-positioned to address the risks and opportunities associated with climate change. These include extensive energy industry, strategic planning, financial, cyber, and regulatory experience, as well as environmental expertise. In addition to the Board's direct oversight, standing committees of the Board have the following responsibilities:



- **Audit and Risk Committee:** Oversees Ameren’s ERM program, which includes strategic and operational risks, as well as the processes, guidelines and policies for identifying, assessing, monitoring, and mitigating such risks, which, as noted above, include climate-related risks.
- **Nuclear and Operations Committee:** Oversees and reviews the Company’s operations, including safety, performance and compliance issues. This includes environmental compliance matters and related risk-management policies and practices. Senior management updates the Nuclear and Operations Committee on all aspects of the Company’s operations throughout the year, including long-term generation planning and compliance with environmental regulations.
- **Nominating and Corporate Governance Committee:** Oversees Ameren’s corporate governance. This oversight includes review of Ameren’s proxy statements, shareholder proposals, the Company’s responses to shareholder proposals, and reports the Company issues in response to shareholder proposals.
- **Environmental:** Monitor state and federal regulatory developments and participate with industry groups on climate-related issues, as well as develop compliance plans that address regulatory requirements and support safe operations that are protective of the environment.
- **Innovation:** Study and plan for the integration of technologies, such as those related to renewable resources, EE, DERs, and EVs, that can be leveraged to enhance Ameren’s business.
- **Legislative and regulatory affairs:** Develop and support Ameren’s position on proposed legislation and regulation addressing emissions and climate risk.
- **Corporate planning:** Evaluate and recommend capital allocation plans to optimize our investments for the benefit of our customers, employees, shareholders and the environment.
- **Engineering:** Carefully design and implement all energy center and electric transmission and gas pipeline construction projects.
- **Generation, transmission, distribution and gas operations:** Manage operational risks 24 hours a day, seven days a week.

Working together, these teams are constantly anticipating, monitoring and adjusting to prepare for risks and protect our stakeholders and the future of Ameren.

## Management Teams

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:



## CONCLUSION

We recognize that climate change is a critical issue for our company, our customers, our communities, our nation and our planet, and we are committed to do our part to protect and preserve the environment.

Ameren has developed a robust and thoughtful plan that we believe is consistent with and contributes to the reductions in CO<sub>2</sub> emissions contemplated under the Paris Agreement. Our plan benefits all stakeholders, is efficient and executable and will deliver results.

This plan is expected to achieve significant reductions in GHG emissions consistent with a range of climate scenarios, while improving reliability and keeping customer rates stable and predictable.

We recognize that there is a great deal of uncertainty and debate around climate-related regulations. As a result, we have also built flexibility into our plans.

The technological and policy decisions made in response to climate change present both risks and opportunities for our business. We will continue to employ our robust risk management, governance, and strategic planning processes to identify these risks and opportunities, and execute our plans to address them in the best interests of all our stakeholders.

As we have discussed throughout this Report, our plan targets specific actions directly aimed at reducing GHG emissions, including:

- Transitioning our generation portfolio to cleaner and more diverse resources in a thoughtful manner that optimizes the

economic benefits from existing resources to our customers.

- Promoting energy efficiency and demand response programs that save our customers money on their energy bills while requiring less generation from fossil fuels.
- Promoting efficient electrification to further reduce GHG emissions.
- Modernizing our grid to allow for more customer control and to accommodate more energy from renewable and/or intermittent resources.

Our plan also addresses the impact of climate change by fostering innovation to keep up with evolving customer needs and hardening our system to be more resilient to climate change and weather-related events.

As Ameren continues to assess its climate-related risks and evaluate options for mitigation, we will continue to employ a framework that accounts for the kind of uncertainty inherent in this complex issue and strive for solutions that provide options that benefit our customers, the communities we serve, the environment and our investors.

Ameren has participated in the Carbon Disclosure Project (now known as CDP) every year since 2008 and has published numerous Corporate Social Responsibility reports addressing environmental stewardship and sustainability topics since 2011. This Report represents Ameren's first comprehensive effort at communicating our approach to assessing and responding specifically to the risks and opportunities associated with climate change. As such, we welcome feedback from interested parties on the content of this Report. Comments should be emailed to [CSR@Ameren.com](mailto:CSR@Ameren.com).



# 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. In connection with the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995, we are providing this cautionary statement to identify important factors that could cause actual results to differ materially from those anticipated. The following factors, in addition to those discussed within Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2018, and elsewhere in this report and in our other filings with the Securities and Exchange Commission, could cause actual results to differ materially from management expectations suggested in such forward-looking statements:

- regulatory, judicial, or legislative actions, and any changes in regulatory policies and ratemaking determinations, such as those that may result from an appeal filed by the Missouri Office of Public Counsel in January 2019 in Ameren Missouri’s renewable energy standard rate adjustment mechanism case, and future regulatory, judicial, or legislative actions that change regulatory recovery mechanisms;
- the effect of Missouri Senate Bill 564 on Ameren Missouri, including as a result of Ameren Missouri’s election to use plant-in-service accounting and the resulting customer rate caps;
- the effects of changes in federal, state, or local laws and other governmental actions, including monetary, fiscal, and energy policies;
- the effects of changes in federal, state, or local tax laws, regulations, interpretations, or rates, amendments or technical corrections to the Tax Cuts and Jobs Act of 2017 (TCJA), and challenges to the tax positions we have taken;
- the effects on demand for our services resulting from technological advances, including advances in customer energy efficiency, energy storage, and private generation sources, which generate electricity at the site of consumption and are becoming more cost-competitive;
- the effectiveness of Ameren Missouri’s customer energy efficiency programs and the related revenues and performance incentives earned under its Missouri Energy Efficiency Investment Act programs;
- our ability to align overall spending, both operating and capital, with frameworks established by our regulators and to recover these costs in a timely manner in our attempt to earn our allowed returns on equity;
- the cost and availability of fuel, such as ultra-low-sulfur coal, natural gas, and enriched uranium, used to produce electricity; the cost and availability of purchased power, zero emission credits, renewable energy credits, and natural gas for distribution; and the level and volatility of future market prices for such commodities and credits, including our ability to recover the costs for such commodities and credits and our customers’ tolerance for any related price increases;
- disruptions in the delivery of fuel, failure of our fuel suppliers to provide adequate quantities or quality of fuel, or lack of adequate inventories of fuel, including nuclear fuel assemblies from the one Nuclear Regulatory Commission-licensed supplier of Ameren Missouri’s Callaway energy center’s assemblies;
- the cost and availability of transmission capacity for the energy generated by Ameren Missouri’s energy centers or required to satisfy Ameren Missouri’s energy sales;
- the effectiveness of our risk management strategies and our use of financial and derivative instruments;
- the ability to obtain sufficient insurance, including insurance for Ameren Missouri’s Callaway energy center, or, in the absence of insurance, the ability to recover uninsured losses from our customers;
- the impact of cyberattacks on us or our suppliers, which could, among other things, result in the loss of operational control of energy centers and electric and natural gas transmission and distribution systems and/or the loss of data, such as customer, employee, financial, and operating system information;
- business and economic conditions, including their impact on interest rates, collection of our receivable balances, and demand for our products;
- disruptions of the capital markets, deterioration in our credit metrics, including as a result of the implementation of the TCJA, or other events that may have an adverse effect on

# FORWARD-LOOKING STATEMENTS (CONTINUED)

- the cost or availability of capital, including short-term credit and liquidity;
- the actions of credit rating agencies and the effects of such actions;
- the inability of our counterparties to meet their obligations with respect to contracts, credit agreements, and financial instruments;
- the impact of weather conditions and other natural phenomena on us and our customers, including the impact of system outages;
- the construction, installation, performance, and cost recovery of generation, transmission, and distribution assets;
- the effects of breakdowns or failures of equipment in the operation of natural gas transmission and distribution systems and storage facilities, such as leaks, explosions, and mechanical problems, and compliance with natural gas safety regulations;
- the effects of breakdowns or failures of electric generation, transmission, or distribution equipment or facilities, which could result in unanticipated liabilities or unplanned outages;
- the operation of Ameren Missouri's Callaway energy center, including planned and unplanned outages, and decommissioning costs;
- the impact of current environmental laws and new, more stringent, or changing requirements, including those related to carbon dioxide and the proposed repeal and replacement of the Clean Power Plan and potential adoption and implementation of the Affordable Clean Energy Rule, other emissions and discharges, cooling water intake structures, coal combustion residuals, and energy efficiency, that could limit or terminate the operation of certain of Ameren Missouri's energy centers, increase our operating costs or investment requirements, result in an impairment of our assets, cause us to sell our assets, reduce our customers' demand for electricity or natural gas, or otherwise have a negative financial effect;
- the impact of complying with renewable energy requirements in Missouri and Illinois and with the zero emission standard in Illinois;
- Ameren Missouri's ability to acquire wind and other renewable generation facilities and recover its cost of investment and related return in a timely manner, which is affected by the ability to obtain all necessary project approvals; the availability of federal production and investment tax credits related to renewable energy and Ameren Missouri's ability to use such credits; the cost of wind and solar generation technologies; and Ameren Missouri's ability to obtain timely interconnection agreements with Midcontinent Independent System Operator, Inc. or other regional transmission organizations, including the costs of such interconnections;
- labor disputes, work force reductions, changes in future wage and employee benefits costs, including those resulting from changes in discount rates, mortality tables, returns on benefit plan assets, and other assumptions;
- the impact of negative opinions of us or our utility services that our customers, legislators, or regulators may have or develop, which could result from a variety of factors, including failures in system reliability, failure to implement our investment plans or to protect sensitive customer information, increases in rates, or negative media coverage;
- the impact of adopting new accounting guidance;
- the effects of strategic initiatives, including mergers, acquisitions, and divestitures;
- legal and administrative proceedings; and
- acts of sabotage, war, terrorism, or other intentionally disruptive acts.

New factors emerge from time to time, and it is not possible for management to predict all of such factors, nor can it assess the impact of each such factor on the business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained or implied in any forward-looking statement. Given these uncertainties, undue reliance should not be placed on these 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.

# FURTHER READING

## Information Available at [Ameren.com/Sustainability](https://www.ameren.com/Sustainability)

### **Ameren Missouri's Integrated Resource Plan**

A 20-year plan that supports cleaner energy in Missouri, including major expansions of solar and wind power. The IRP, 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.

### **EI ESG/Sustainability Report**

Ameren is participating in the EI ESG/Sustainability Report, a voluntary industry initiative coordinated by EI, to provide electric industry investors with more uniform and consistent environmental, social, governance and sustainability-related (ESG/sustainability) metrics.

### **2018 Corporate Social Responsibility Report**

Our Corporate Social Responsibility Report describes the actions we are taking to improve the environment and the communities we serve. As you will see, our actions are consistent with one of Ameren's core values – stewardship – to leave it better.

## Third Party Report

### **EPRI Climate Study**

EPRI summarized over 1,000 climate scenarios from the Intergovernmental Panel on Climate Change and others. The resulting study report, entitled "Grounding Decisions: A Scientific Foundation for Companies Considering Global Climate Scenarios and Greenhouse Gas Goals," 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.

### **CDP (Formerly Known as the Carbon Disclosure Project)**

Ameren has participated in this voluntary disclosure report for many years. Learn more about Ameren's environmental and risk-management initiatives through our CDP Questionnaires.

- 2018 CDP Climate Questionnaire
- 2018 CDP Water Questionnaire

### **Water Resilience Assessment Report**

This voluntary report assesses current and future availability of water resources in Ameren's region and also in the Powder River Basin, a key component of our supply chain. The report summarizes water resource availability trends under various climate assumptions.

# APPENDIX A:

## AMERICA'S ELECTRIC COMPANIES ARE LEADING THE CLEAN ENERGY TRANSFORMATION

The nation's investor-owned electric companies continue to provide the reliable, affordable, secure, and increasingly cleaner energy that customers need and expect, and are making significant investments in clean energy and smarter energy infrastructure.

### **The electric power sector's CO<sub>2</sub> emissions are dropping significantly.**

- As of year-end 2017, the electric power sector's CO<sub>2</sub> emissions were 28 percent below a 2005 baseline – the lowest level since 1988.
- More than 30 EEI member companies, including Ameren, have announced significant voluntary commitments to further reduce their CO<sub>2</sub> emissions by 2030 and 2050 – many committing to reduce emissions 80 percent by 2050.

### **Electric companies are adding more clean energy to the nation's energy mix.**

- By 2024, our industry plans to retire more than 100 gigawatts of coal-based electricity, a transition that began in 2010.
- Since 2005, the percentage of renewable sources in the energy mix has quadrupled, and more than half of new electricity generation capacity each year is wind and solar.

### **With the right policies, further emissions reductions are possible.**

The industry will continue to advocate for responsible energy policies that put customers first, focus on outcomes, support progress, and accelerate innovation. Key areas of focus include the following:

- Research and development funding and support for the range of technologies needed to achieve clean energy goals, including energy efficiency, energy storage, renewables, existing and next-generation nuclear, other carbon-free technologies, and carbon capture utilization and storage.
- Policies that encourage the necessary investments and incentives to support the electrification of the transportation sector – now the largest source of emissions in the U.S.
- Ongoing investments in the energy grid, which are necessary to increase cost-effective electrification and to integrate advanced clean energy technologies reliably and affordably.

With the right policies in place, electric companies can further reduce their emissions, help dramatically reduce the most significant emissions from other industries, and deliver the clean energy future that Americans want and expect.

### **Transparency in Reporting**

To better serve customers and investors, EEI launched an environmental, social, governance, and sustainability-related (ESG/sustainability) reporting template, with the goal of helping EEI's member electric companies provide the financial sector with more uniform and consistent ESG/sustainability data and information. As noted in the Further Reading section, Ameren is a participant in this initiative.