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**MISSOURI PUBLIC SERVICE COMMISSION**

**FILE NO. ER-2019-0335**

**DIRECT TESTIMONY**

**OF**

**WARREN WOOD**

**ON**

**BEHALF OF**

**UNION ELECTRIC COMPANY**

**D/B/A AMEREN MISSOURI**

St. Louis, Missouri  
July 2019

*Ameren* Exhibit No. 001  
Date 3/4/20 Reporter *JNB*  
File No. ER-2019-0335

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**DIRECT TESTIMONY**

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**I. INTRODUCTION**

1

2 **Q. Please state your name and business address.**

3 A. My name is Warren Wood and my business address is One Ameren Plaza,  
4 1901 Chouteau Avenue, St. Louis, Missouri 63103.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by Union Electric Company d/b/a Ameren Missouri  
7 ("Ameren Missouri" or "Company") as Vice President, Legislative and Regulatory Affairs.

8 **Q. Please describe your duties and responsibilities as Vice President,**  
9 **Legislative and Regulatory Affairs.**

10 A. I oversee state legislative and regulatory policy development and  
11 compliance for the Company.

12 **Q. Please describe your qualifications.**

13 A. In December 1987, I received a Bachelor of Science degree in Civil  
14 Engineering with honors from the University of Missouri at Columbia, Missouri. Upon  
15 graduation, I accepted employment with Black & Veatch and worked in the Energy and  
16 Environmental Divisions for a little over ten years.

17 While at Black & Veatch, I designed a wide range of power generation and water  
18 treatment facilities, acted as an engineering liaison between the design office and joint  
19 venture partner offices, developed specifications, drafted engineering drawings, designed

1 mechanical equipment supports, and wrote customer computer programs to assist in  
2 solving many types of engineering problems. My work while at Black & Veatch focused  
3 on new and retrofit work on coal, combustion turbine, and nuclear power plant projects.

4 I worked for Questec Engineering in Columbia, Missouri in 1997 and 1998. While  
5 at Questec Engineering, I was a project manager in charge of site development and  
6 completion of numerous engineering projects for industrial, commercial, and residential  
7 customers.

8 I worked for the Missouri Public Service Commission ("Commission") for a little  
9 over eight years. Initially, I was hired as a Regulatory Engineer in the Procurement  
10 Analysis Department of the Commission. While working in the Procurement Analysis  
11 Department, I investigated the natural gas purchasing practices of Missouri's natural gas  
12 utilities and filed testimony in procurement analysis and actual cost adjustment audit cases.  
13 Later, I was employed as the Natural Gas Department Manager, promoted to the newly  
14 created Energy Department Manager position, and was later promoted to Utility Operations  
15 Division Director. As the Natural Gas Department Manager, I oversaw regular tariff filings  
16 at the Commission of the natural gas utilities in the state, the Commission's activities in  
17 interstate natural gas pipeline cases at the Federal Energy Regulatory Commission, and the  
18 activities of the Commission's natural gas safety section. As the Energy Department  
19 Manager, I oversaw the activities of the natural gas department sections listed above in  
20 addition to the activities of the engineering and economic analysis sections, which dealt  
21 primarily with electric utilities in the state. As the Utility Operations Division Director, I  
22 oversaw the day-to-day activities of the Operations Division, regularly participated in  
23 Commission policy development efforts, participated in discussions and gave presentations

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1 to stakeholder groups and legislative committees, conducted roundtables, and facilitated  
2 rulemaking workshops.

3 While at the Commission, I filed testimony in the following cases: Ozark Natural  
4 Gas Co., Inc., Case No. GA-96-264; Laclede Gas Company, Case No. GR-96-193;  
5 Missouri Gas Energy, Case No. GR-96-285; The Empire District Electric Company, Case  
6 No. ER-97-81; Missouri Public Service, Case No. GR-95-273; Missouri Gas Energy, Case  
7 No. GO-97-409; Associated Natural Gas Company, Case No GR-97-272; United Cities  
8 Gas Company, Case No. GO-97-410; Kansas City Power & Light Company, Case No.  
9 EO-2005-0329; Aquila Inc. electric divisions MPS and L&P, Case No. EO-2005-0293;  
10 The Empire District Electric Company, Case No. EO-2005-0263; and Aquila Inc., Case  
11 No. EA-2006-0309.

12 I was employed by the Missouri Public Utility Alliance in 2007 and was later  
13 employed as President of the Missouri Energy Development Association ("MEDA"). I left  
14 MEDA in 2010 to work for Ameren Missouri as Vice President, Legislative and Regulatory  
15 Affairs. While working for Ameren Missouri, I have filed testimony on behalf of the  
16 Company for its 2011 Integrated Resource Plan in File No. EO-2011-0271 and the  
17 Company's recent natural gas rate case filing in File No. GR-2019-0077.

## 18 II. PURPOSE OF TESTIMONY

19 **Q. What is the purpose of your direct testimony in this proceeding?**

20 **A.** The purpose of my testimony is to set out the drivers of this rate case and to  
21 discuss the overall strategy Ameren Missouri is employing in order to provide safe,  
22 reliable, and affordable energy options to its customers and explain how this rate review

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1 enables this goal. I will also be providing an overview of the testimony provided by other  
2 witnesses in this case.

3 To facilitate this discussion, my testimony is divided into the following sections:

4 III. Rate Case Drivers

5 IV. Customer-Focused Actions

6 V. Introduction of Witnesses

7 **III. RATE CASE DRIVERS**

8 **Q. Ameren Missouri has filed several rate cases over the past ten years,**  
9 **but this is the first decrease in general rates it has requested. Why is the Company**  
10 **making this request?**

11 A. We are filing to decrease rates for the same reason that we filed in the past  
12 to increase our rates – it is what the cost of service study shows should be done to  
13 appropriately adjust our rates. Additionally, the statute that authorizes the fuel adjustment  
14 clause requires a rate review to be filed at least every four years. This filing fulfills that  
15 requirement.

16 **Q. What factors are driving the proposed decrease in rates?**

17 A. As is always true (regardless of whether a rate review indicates an increase  
18 or decrease), many changes have occurred since Ameren Missouri's last rate review. A  
19 reduction in net base energy costs represents the largest decrease in costs since our prior  
20 rate review. Increased capital investment and the associated increases in depreciation,  
21 return, and income taxes are the largest increases in costs. These primary factors, as well  
22 as all other changes, are set forth more fully in the testimony of Ameren Missouri witness  
23 Laura M. Moore. The combined effects indicate a customer rate reduction of approximately

1 \$1 million is appropriate. It is notable that this case is the first case before the Commission  
2 to include Plant in Service Accounting ("PISA") as authorized by statute last year.

3 **IV. CUSTOMER-FOCUSED ACTIONS**

4 **Q. Beyond reducing customer rates, please summarize what Ameren**  
5 **Missouri is seeking to accomplish in this proceeding.**

6 A. Ameren Missouri is focusing on a variety of actions to provide our  
7 customers greater reliability, more energy options, and rate stability while also resetting its  
8 base rates to reflect a more appropriate cost of service given changes that have occurred  
9 since its electric rates were last reset. This includes, of course, delivery on the promises the  
10 Company made in filing its five-year Smart Energy Plan.<sup>1</sup> As you can see in this rate  
11 review, we are initiating actions and laying the groundwork for future enhancements, while  
12 still reducing rates to customers by approximately \$1 million. These enhancements include  
13 the aforementioned Smart Energy Plan, more innovative and modern rate designs, as  
14 discussed by Company witnesses Steven Wills and Dr. Ahmed Faruqui of the Brattle  
15 Group, and other customer-focused initiatives such as the introduction of paperless billing  
16 incentives discussed in the testimony of Ameren Missouri witness Mark Birk.

17 **Q. You mentioned the Smart Energy Plan and referenced PISA. How do**  
18 **those items relate to this rate review?**

19 A. This rate review will help us lay the groundwork for implementing the  
20 Smart Energy Plan, through which we are:

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<sup>1</sup> File No. EO-2019-0044.

- 1       • Exploring additional, innovative solar energy options including more Community  
2       Solar opportunities, as well as distributed solar partnerships and other non-wire  
3       alternatives for clean energy;
- 4       • Planning for electric grid operations upgrades that will reduce the frequency and  
5       duration of outages, and reduce momentary outages, which will decrease the  
6       number of truck rolls, shorten the required restoration time, and improve grid  
7       resiliency; and
- 8       • Preparing for the installation of Advanced Metering Infrastructure ("AMI"), which  
9       will give customers increased insights into and control of their energy usage.<sup>2</sup>

10       The Smart Energy Plan was enabled by the passage of Senate Bill 564 which,  
11       among other things, prevents rate increases from exceeding a compound annual growth  
12       rate in excess of 2.85%, allows for PISA for certain infrastructure assets, and enables  
13       increased renewable energy investments.

14       **Q.     Please describe any other actions the Company is taking.**

15       A.     Certainly. The examples I listed above represent just a small part of a much  
16       larger strategy. In August 2018, Ameren Missouri announced a three-year, \$5 million  
17       energy assistance program to help limited income customers within our service territory.  
18       We passed the money we received from the income tax rate cuts in Tax Cuts and Jobs Act  
19       back to both our electric and gas customers in a timely manner.<sup>3</sup> In March 2019, we rolled  
20       out the largest energy efficiency plan in the state of Missouri to date, with dozens of  
21       programs and a budget in excess of \$205 million over three years.<sup>4</sup> We have already

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<sup>2</sup> See the Direct Testimony of Mr. Wills.

<sup>3</sup> See File Nos. ER-2018-0362 and GR-2019-0077.

<sup>4</sup> See File No. EO-2018-0211.

1 deployed text and email alerts to customers to keep customers up to date when there is an  
2 outage in their area. We have also rolled out a new website design that will help our  
3 customers more easily navigate to the information they want to see.

4 We believe that being customer centric is vital to the success of our company and  
5 this includes embracing diversity and inclusion within our workforce. Ameren defines  
6 diversity as "recognizing, respecting and appreciating the differences in people and  
7 embracing the strengths in each of us to accomplish the vision, mission and values of the  
8 corporation." Ameren takes diversity seriously: building a diverse workforce for the future,  
9 expanding our expenditures to more diverse suppliers, and serving the diverse needs of our  
10 communities are critical to achieving performance leadership in our industry.

11 Ameren has been recognized by *DiversityInc* as the top utility in the nation and  
12 region for diversity, best place to work for LGBTQ Equality by Corporate Equality Index,  
13 and for Disability Equality by the American Association of People with Disabilities and  
14 the US Business Leadership Network.

15 These diversity and inclusion efforts extend to our suppliers. As the energy provider  
16 for the communities we serve, we believe providing diverse-owned businesses an  
17 opportunity to compete in the performance of goods and services for Ameren is a critical  
18 component of our company's business strategy. This includes providing equal access and  
19 opportunity to all qualified suppliers, including diverse suppliers (e.g. minority-, women-,  
20 veteran-, service disabled veteran- and LGBT-owned businesses). This strategy is focused  
21 on providing access, development and sustainable opportunities for qualified diverse-  
22 owned business participation within our organization. In 2018 we exceeded our corporate

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1 goal of 19% non-fuel spending with diverse suppliers, finishing with \$624 million in total  
2 diverse spending, or 25.2%.

3 Being customer centric must also recognize the financial challenges that some of  
4 our customers face. The poverty rate in Missouri is approximately 14%, in St. Louis this  
5 jumps to almost 25%. In some counties the number even goes over 30%.

6 Our Mission is "To Power the Quality of Life" and our challenge with low income  
7 customers is to increase energy security while reducing energy poverty. We are taking on  
8 this challenge through several approaches. These approaches include energy assistance  
9 donations, weatherization assistance, the Dollar More program, special programs,  
10 community partnerships, coworker education including poverty simulation training, and  
11 several new and innovative approaches that are being developed.

12 Not all of these initiatives have an impact on this rate review. However, they all  
13 demonstrate the commitment Ameren Missouri has to its customers.

14 **Q. Please describe some of the steps Ameren Missouri is taking with**  
15 **regard to enhancing its customers' experiences.**

16 A. We are looking into various ways to offer our customers services that will  
17 be both meaningful and practical. As I mentioned before, we are looking deeper into  
18 potential rate design options for our customers. For example, we are examining what  
19 changes are needed to help customers who want to increase electrification including Time  
20 of Use options, to best facilitate our AMI roll-out, in a manner that promotes both equity  
21 and efficiency. Mr. Steven M. Wills, Ameren Missouri's Director – Rates & Analysis,  
22 provides more details regarding these options.

1           Additionally, Mr. Mark C. Birk, Senior Vice President, Customer and Power  
2 Operations, will be providing the regulatory support necessary to implement a new  
3 customer-focused initiative, with a provision of incentives to encourage customers to adopt  
4 paperless billing.

5           **Q.     Please tell us more about Senate Bill 564 and, in particular, PISA.**

6           A.     Senate Bill 564, among other things, imposes a cap on rate increases by  
7 preventing rate increases from exceeding a compound annual growth rate in excess of  
8 2.85%, allows for Plant in Service Accounting for certain infrastructure assets, and  
9 facilitates increased renewable energy investments.

10          **Q.     You mention PISA as a component of Senate Bill 564. Please describe**  
11 **the PISA mechanism and why it is important.**

12          A.     PISA is similar to construction accounting in that it permits the utility to  
13 partially recover the cost of investing in capital projects, thus reducing the disincentive to  
14 invest created by regulatory lag. When a utility constructs a capital project, it accrues an  
15 Allowance for Funds Used During Construction ("AFUDC"), which represents the cost of  
16 capital used during construction. Once the project is put into service, the accrual of AFUDC  
17 stops and the depreciation of the capital project – including AFUDC – begins. Of course,  
18 the utility cannot recover the capital cost of the project or the cost of its depreciation until  
19 the next rate case. Depending on the in-service date of the project and the filing of the next  
20 rate case, it could be months or even years before the utility can reflect the project costs in  
21 its rates. During those intervening months or years, the utility is effectively bearing a  
22 financial penalty for investing in the project. The more the utility invests, the greater a  
23 financial penalty it bears.

1 PISA, as adopted in Senate Bill 564, substantially mitigates the utility's financial  
2 penalty by allowing the utility to defer depreciation and a return on its investment in non-  
3 revenue producing plant up until the time the investment and related depreciation expenses  
4 can be included in rates. Senate Bill 564's PISA mechanism in particular allows the utility  
5 to defer 85% of all depreciation expenses and return associated with qualifying electric  
6 plant.<sup>5</sup> With PISA in place, the utility is able to make more robust investments in qualifying  
7 plant because the financial harm in doing so is substantially mitigated.

8 **Q. Are there any requirements on a utility that wants to utilize PISA?**

9 A. Yes. To use PISA, Senate Bill 564 also requires a utility to submit a five-  
10 year capital investment plan setting out the general categories of planned capital  
11 expenditures intended to replace, modernize, and secure its infrastructure. The first year of  
12 that plan must include specific capital investments with a higher level of specificity. The  
13 utility is also required to allocate no more than 6% of the total investment to smart meter  
14 deployment, and to allocate at least 25% of planned expenditures to grid modernization  
15 projects.

16 Ameren Missouri submitted its five-year capital plan, its Smart Energy Plan, to the  
17 Commission in February 2019 in compliance with this portion of the statute.

18 **Q. Does this rate review case include PISA in line with its Smart Energy**  
19 **Plan?**

20 A. Yes. In her testimony, Ms. Moore describes the utilization of PISA for  
21 existing assets, as well as assets that will be included in the Company's true-up later in this

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<sup>5</sup> Section 393.1400(3) defines qualifying plant as "all rate base additions, except rate base additions for new coal-fired generating units, new nuclear generating units, new natural gas units, or rate base additions that increase revenues by allowing service to new customer premises."

1 proceeding. I am glad to state that even though we are already including PISA in this rate  
2 review, we are still able to request the approximately \$1 million rate decrease for our  
3 customers.

4 **Q. Why is Ameren Missouri's Smart Energy Plan important?**

5 A. The Smart Energy Plan, as I alluded to above, contributes significantly to  
6 Ameren Missouri's ability to serve its customers. The Smart Energy Plan's intense  
7 customer focus is well encapsulated in my Schedule WW-D1, a bill insert developed for  
8 our customers. This schedule includes the statement, "The Smart Energy Plan supports our  
9 mission to power the quality of life for Missouri families and businesses, making our state  
10 an even better place to live and do business." After all, Ameren Missouri's future is  
11 critically dependent upon its ability to provide its customers with reliability, options, and  
12 rate stability.

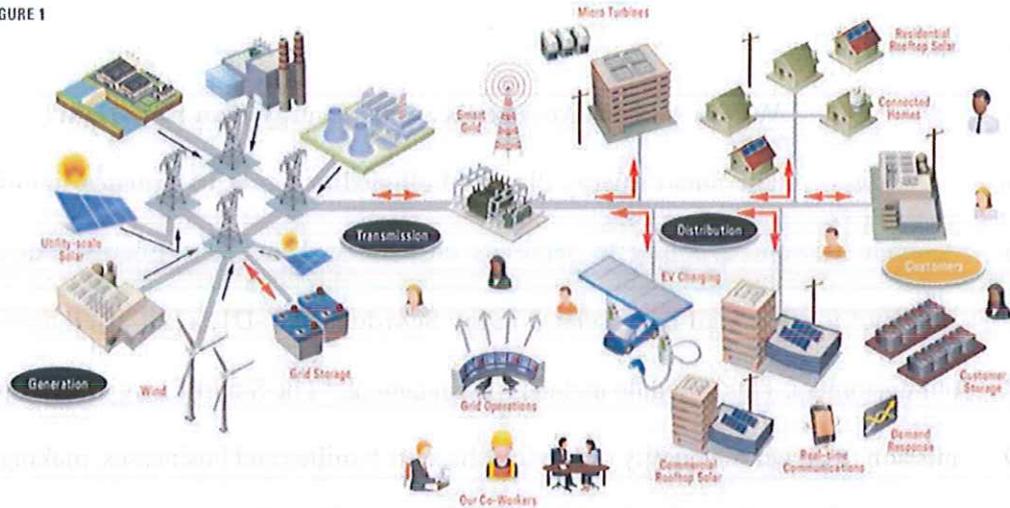
13 **Q. What kind of future is Ameren Missouri planning for?**

14 A. The historic, typical grid is already undergoing significant change. It is no  
15 longer comprised of simply a generator, transmission lines, transformers, and customers.  
16 We've already seen increases in distributed generation, more diversified types of  
17 generation, developments in more efficient and cost-effective storage mechanisms, and  
18 customers' desires to take advantage of any and all of these options. The grid is only going  
19 to become more diversified going forward, as micro turbines, smart grid applications,  
20 demand response, additional technological advances in storage capabilities, and other  
21 options continue to evolve. The relatively linear grid of the past is disappearing in favor of  
22 a far more complicated, integrated model, like that shown in Figure 1. Our Smart Energy  
23 Plan helps us plan for this future, which is already in development now.

Figure 1

### THE INTEGRATED GRID OF THE FUTURE

FIGURE 1

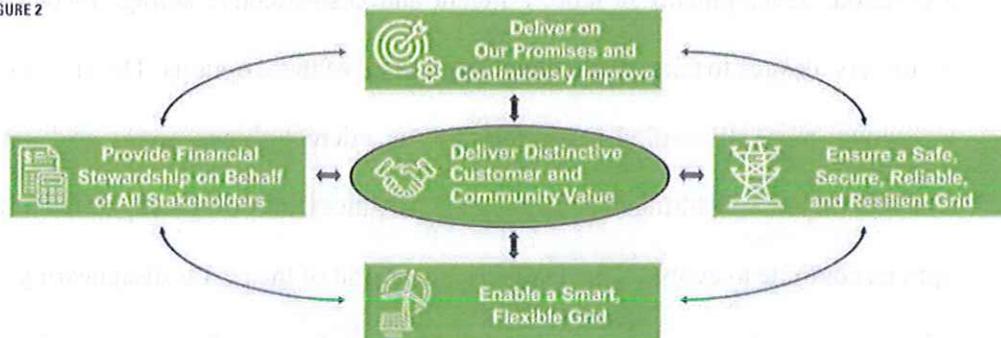


- 1 We are planning carefully for this future, and planning with our customers in mind. We
- 2 know we must be innovative and forward-thinking, but we also must be good stewards for
- 3 our customers. To guide us on this journey, we have established Smart Energy Plan
- 4 Principles, which you can see in Figure 2 below. At the center of all of our planning is our
- 5 commitment to deliver value to our customers and our communities.

Figure 2

### SMART ENERGY PLAN PRINCIPLES

FIGURE 2



1  
2  
3  
4  
5

**V. INTRODUCTION OF WITNESSES**

**Q. Please introduce the other witnesses who will be providing testimony in this proceeding.**

**A. Certainly. The following witnesses provide testimony to support this rate review:**

<b>Witness</b>	<b>Title and Company</b>	<b>Testimony Subject</b>
Tom Byrne	Senior Director – Regulatory Affairs Ameren Missouri	Rate Case Expense
Laura M. Moore	Controller Ameren Missouri	Revenue Requirement
Mark C. Birk	Senior Vice President – Customer and Power Operations Ameren Missouri	Paperless Billing; Unregulated Competition Waiver
Kelly S. Hasenfratz	Director – Compensation & Performance Ameren Services Company	Ameren Services Wages and Benefits
John J. Spanos	President Gannett Fleming Valuation and Rate Consultants, LLC	Depreciation Study
Brenda I. Weber	Assistant Treasurer & Director – Corporate Finance Ameren Services Company	Lead-Lag Study
Robert B. Hevert	Partner and Rates, Regulation, and Planning Practice Leader Scott Madden, Inc.	Return on Equity

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<b>Witness</b>	<b>Title and Company</b>	<b>Testimony Subject</b>
S. Hande Berk	Manager - Electric Resource Planning Ameren Services Company	Production Cost Modeling
Darryl T. Sagel	Vice President and Treasurer Ameren Missouri and Ameren Services Company	Capital Structure and Overall Rate of Return
Marci L. Althoff	Manager – Finance Transformation Ameren Services Company	Fuel Adjustment Clause
Andrew M. Meyer	Senior Director – Energy Management & Trading Ameren Missouri	Power/Transmission Components of Fuel Adjustment Clause; Volatility and Uncertainty of FAC Components
Ahmad Faruqui	Principal The Brattle Group	Rate Design – Industry trends and the need for residential tariff reforms
Steven M. Wills	Director- Rates & Analysis Ameren Missouri	Rate Design – overview of, and key considerations guiding, Company's proposed rate designs; support for Company's proposed rate structure, including new rate offerings and vision for future offerings
Thomas Hickman	Regulatory Rate Specialist Ameren Missouri	Class Cost of Service Study
Michael W. Harding	Manager – Rates & Analysis Ameren Missouri	Rate Design – allocation of overall revenue requirement into class specific revenue responsibilities

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<b>Witness</b>	<b>Title and Company</b>	<b>Testimony Subject</b>
Ryan P. Ryterski	Regulatory Rate Specialist Ameren Missouri	Rate Design for the Lighting Class
John J. Reed	Chairman and Chief Executive Officer Concentric Energy Advisors, Inc. and CE Capital Advisors, Inc.	Ameren Services Company Charges

1           **Q.    Does this conclude your direct testimony?**

2           **A.    Yes, it does.**





# MOVING MISSOURI FORWARD WITH SMART ENERGY



Ameren Missouri's Smart Energy Plan gives you a smarter grid and cleaner, more reliable energy, all while keeping rates stable and predictable.

## SMART TECHNOLOGY, FASTER SERVICE RESPONSE

New smart sensors and self-healing equipment will more rapidly detect and isolate outages – speeding power restoration.

## RELIABLE SERVICE

A stronger, more secure energy backbone will better withstand severe weather.

## CLEANER, RENEWABLE ENERGY SOURCES

We're expanding solar and wind energy for communities across Missouri.

## STABLE AND PREDICTABLE RATES

For the first time ever, Missouri has rate caps over the next five years.



Keeping You Informed at:  
[AmerenMissouri.com/SmartEnergyPlan](http://AmerenMissouri.com/SmartEnergyPlan)



# STABLE RATES. GREATER RELIABILITY.



The Smart Energy Plan supports our mission to power the quality of life for Missouri families and businesses, making our state an even better place to live and do business. Here's what our infrastructure investments will deliver for you over the next several years.

## SMART TECHNOLOGY, FASTER SERVICE RESPONSE

New, smart technology will help reduce or eliminate power outages and more quickly restore your power in the event of a service disruption. For example, our expanded wireless footprint with fiber-enabled cell sites will allow us to respond to some outages without having to send a crew. Smart Grid sensors, switches and self-healing equipment will more rapidly detect and isolate outages.

## RELIABLE SERVICE

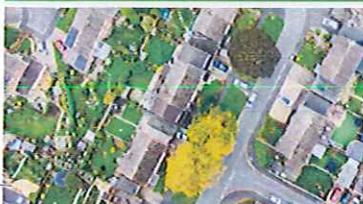
High winds and severe storms wreak havoc on aging power lines and utility poles. We're replacing both. Smarter, automated equipment and 12,000 stronger, fortified poles are designed to better withstand severe weather and high winds. More than 70 new or upgraded substations will increase energy service reliability. And we're installing more than 400 miles of new underground cable and equipment to create a more efficient underground energy delivery system.

## CLEANER, RENEWABLE ENERGY SOURCES

Planned investments in solar and wind generation will provide you with energy from cleaner, renewable sources. These projects help Ameren Missouri meet its goal to reduce carbon emissions by 80 percent. New projects across the state combine solar energy with battery storage and will boost reliability, particularly in rural areas.

## STABLE AND PREDICTABLE RATES

Your rates were cut by 6% in August 2018. Your base electric rates won't change before April 2020 because the Ameren Missouri Smart Energy Plan includes a rate freeze. And, for the first time ever, rate caps will limit the size of any future rate increases for the life of the plan, making your energy costs stable and predictable.



Keeping You Informed at:  
[AmerenMissouri.com/SmartEnergyPlan](http://AmerenMissouri.com/SmartEnergyPlan)

