SMART ENERGY PLAN 2022 Progress Report











You deserve to know what the future of energy looks like and what it means for you and your loved ones. At Ameren Missouri, we are investing in smart technology, stronger poles and upgraded power lines to reduce outages and respond faster when they do occur. We are working diligently to create a more resilient, more reliable and more sustainable energy system while empowering you and your community every step of the way.







ENERGY TO STAY CONNECTED

With our Smart Energy Plan, we are investing in state-of-the-art technology to reduce customer outages and respond faster when they do occur, so you can live your life uninterrupted.

In 2018, the Missouri General Assembly passed forward-thinking energy policy legislation that enabled Ameren Missouri's Smart Energy Plan. Since then, Ameren Missouri has completed thousands of projects to help customers. In 2022, the Missouri General Assembly expanded and extended this very successful legislation to continue helping customers. The plan provides customers more stable and predictable energy costs, with rates well below the Midwest and national averages.* Thanks to this plan, grid modernization projects and economic development programs continue to support customer reliability and boost vitality in the communities we serve, providing Missourians with a smarter, stronger and cleaner energy future.

STRENGTHENING THE GRID

The Smart Energy Plan benefits customers by investing in upgrades to aging foundational grid infrastructure, including poles, wires, substations, transformers and cables. The plan also deploys smart technology to support reliability and resiliency on the electric grid and smart meters to provide customized energy usage data to customers.



Substations are the heart of the system.
They change voltage to safely and efficiently deliver energy to homes and businesses. The Smart Energy Plan is helping to upgrade the oldest substations — many are more than 50 years old — to support reliability, including deploying smart technology to detect outages even faster.

strategically placed along power poles, can reduce outages from hours to minutes and even seconds by rerouting power while Ameren Missouri crews safely repair damaged lines. These devices, in conjunction with correlated grid upgrades, can improve reliability up to 40%.

We are upgrading power lines and poles to better withstand storms and extreme weather events. These upgrades include stronger poles made of composite material. Increasing power line capacity provides flexibility to reroute power during an outage while crews safely make repairs.

We are upgrading aging underground cable, much of which is at least 40 years old. Due to degradation from direct contact with the soil, we are upgrading the cable and adding protective conduit, which will prevent outages and support the reliability of the energy delivery system.

New smart meters for Ameren Missouri customers mean convenience, choice and control, including new rate options that are tailored for customers. We have installed 772,000 smart meters so far, and all electric customers will have a new meter by the end of 2024.

^{*}According to the EEI "Typical Bills and Average Rates Report" for the 12 months ended June 30, 2022.

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GROWING MISSOURI'S ECONOMY

Ameren Missouri offers economic development incentives through the Smart Energy Plan to encourage businesses to invest or expand in Missouri, adding jobs and supporting local communities statewide. In 2022, 16 businesses announced plans to move to or expand in our state thanks in part to these incentives. This has resulted in more than \$450 million in capital investment in Missouri by those businesses, creating nearly 1,000 new Missouri jobs.



"It's exciting for us to expand our operation and create jobs that we know will attract exceptional talent from Missouri's diverse and skilled workforce."

— **Josh Grote** Executive Director of Chick-fil-A Supply





* Since the beginning of the Smart Energy Plan

51% of the suppliers we worked with are Missouri-based



\$94M

spent with Missouri-based diverse suppliers



spent with Missouri vendors and contractor jobs

For example, Chick-fil-A Supply is opening a new market distribution center in Maryland Heights. The \$16 million warehouse investment supports 40 Chick-fil-A restaurants in the region and allowed the company to apply for the Ameren Missouri Economic Development Incentive.

Clementine's Naughty and Nice Creamery, an ice cream chain based in St. Louis, recently purchased a 25,000-square-foot warehouse in North St. Louis. The electric load required to keep their freezers running allowed them to apply for the incentive.

"The incentives from Ameren Missouri were a key part of our decision to expand our business. It is because of the incentives that our expansion can contribute to the city we love."

— Tamara Keefe

CEO and founder of Clementine's Creamery

KEEPING RATES AFFORDABLE

We continue working to keep customer rates as low as possible while making the necessary investments to build a stronger, smarter and cleaner energy system that our customers expect. That's why our residential rates remain 18% below the Midwest average compared to other electric utilities.**

**According to the EEI "Typical Bills and Average Rates Report" for the 12 months ended June 30, 2022.

Residential rates

180/0

below the

Midwest average

PROJECT STORIES

Bringing new energy to the south metro

More than 100,000 Missouri residents are enjoying reliable energy thanks to the completion of the Metro South Reliability Project. The project included construction of two new transmission towers on both sides of the Mississippi River. Each tower stands 294 feet tall — roughly the height of the Statue of Liberty — and weighs 500,000 pounds. The project created a second power supply to help prevent outages and increase energy capacity.

"By bolstering the grid with needed upgrades, this project enabled a seamless transition for customers when we retired the Meramec Energy Center," said Suzanne Pohlman, project manager for the Metro South Reliability Project.





Festus upgrades improve winter reliability

Ameren Missouri upgraded the Howe substation in Festus to replace the community's existing transformer and bring more energy to the area. The \$3 million energy upgrades feature state-of-the-art smart technology that can more rapidly detect and isolate damage and deliver greater service reliability for customers.

"These energy upgrades mean improved reliability for 1,600 customers in Festus, including health care facilities," said Landy Wince, division director for Ameren Missouri. "We installed a new transformer that helps increase capacity as well, so the energy needed by customers is delivered no matter how hot or cold it gets outside. Additionally, this substation can keep energy flowing to customers even if one nearby is taken out of service by a storm or routine maintenance."

Supporting reliability in St. Louis County

In St. Louis County, Ameren Missouri crews completed upgrades by strengthening power lines and poles along Conway Road to support reliability for over 2,500 customers, including a local university and two health care systems. This \$6 million investment included the installation of over 100 new poles and new smart switches.



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Historic rainfall leaves St. Louis under water

On July 26, St. Louis experienced historic rainfall, causing flooding in the metro area. Over nine inches of rain fell in one day – the highest 24-hour rainfall on record. The area received 25% of the normal yearly rainfall in just 12 hours of time. This caused standing water to surround substations. Initial customer outages were near 26,000. Thanks to our Smart Energy Plan and the grid resiliency work we have accomplished, we were able to quickly restore power to customers from nearby substations. In addition, over 9,500 customers avoided extended outages due to smart switch operations during this event. Future Smart Energy Plan projects include upgrades to more substations to avoid flood-related issues.

Energy underground

In 2022, Ameren Missouri completed one of its last projects downtown to install new conduit under the streets of St. Louis. The work supports energy reliability for downtown residents, businesses and visitors. When complete, this system will be one of the first in the nation to have smart technology in a downtown environment that helps reduce outages for customers.

This multiyear project replaces and modernizes century-old systems. The new technology means fewer outages and shorter outages when they do occur, faster repairs when necessary, and remote operation capabilities. Crews will soon begin pulling cable through these new pipelines. The cable installation process also takes up less space and time, meaning fewer traffic diversions.



Reliability in Mid-Missouri

In Jefferson City, Ameren Missouri upgraded the 50-year-old Idlewood substation with automated sensors and smart technology to create a system that more rapidly detects and isolates outages, speeding power restoration. This project supports reliability for over 2,400 customers in the area. Upgraded substations offer greater service reliability for customers to meet their growing energy needs long into the future.

CUSTOMER BENEFITS OF SMART METERS

Ameren Missouri is running a full year ahead of schedule to install smart electric meters across its service territory. Since the project began in July 2020, customers living in the City of St. Louis, St. Charles County, and most of St. Louis County have already received upgraded smart meters. "We're pacing to complete the full project in just four years instead of five to give more customers access to the benefits of this technology sooner," said Megan Warnick, manager of customer engagement.

Thanks to the two-way communication capabilities of the new meters, Ameren Missouri has expedited the move-in and move-out process for customers. The meter's remote capabilities mean customers have a smoother, faster experience because no service person is sent to the property.

The new smart meters identify outages even faster, which helps Ameren Missouri speed up the restoration process. "This technology gives us better operational insight into what is occurring with power at homes or businesses," said Warnick. "The ability to more quickly identify problems and fix them has been a huge benefit to our customers."





YOUR ENERGY, YOUR WAY

With the addition of smart meter technology, Ameren Missouri now offers My Energy Manager to Ameren Missouri customers. The system is accessible from the customer's online account. With a new, interactive dashboard that shows the specific estimated energy usage of each appliance, Ameren can offer personalized savings recommendations based on individual usage data and surveys.



COMMITTED TO CLEAN

Cape Girardeau Renewable Energy Center

The largest Neighborhood Solar installation to date at 1.2 megawatts, with 3,500 solar modules, is providing enough energy to power more than 130 homes for a year. This facility is located on the campus of Southeast Missouri State University and also provides the convenience of covered parking for the Show Me Center. Construction began in October 2021, and it went into service in July 2022.



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WHAT'S AHEAD?

Thanks to the bipartisan legislation that created the Ameren Missouri Smart Energy Plan, we continue to move Missouri forward. In 2022, the Smart Energy Plan was extended and expanded to continue helping customers for years to come. Ameren Missouri is ready to continue this work for the benefit of our customers and the communities we serve, upholding our mission to power the quality of life.



Upgraded Power Line Miles*

Among 4,200 miles of line, we're addressing some of those with the lowest performance.

Smart Switches

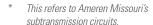
Installation of smart switches has improved reliability up to 40%.

Substations

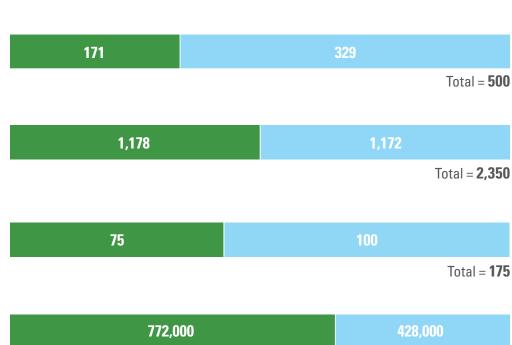
Among our 900 substations, this will address some of the oldest in the system.

Smart Meters**

Upgraded smart meters enable convenience, choice and control for customers.



^{**} Does not include gas modules. All installations by 2024.



"We continue to incorporate technology that improves system reliability. Smart Energy Plan investments have prevented an estimated 50,000 customer outages over the last two years. We know that makes a difference for our customers at home and at work. With the expansion and extension of the Smart Energy Plan, we will be able to provide a more resilient, reliable and sustainable energy system for generations to come."

— Mark Birk

Total = 1,200,000

Chairman and president of Ameren Missouri

^{***} Long-term targets are estimates and contingent on funding levels.