

Smart Energy Plan

2020 Progress Report

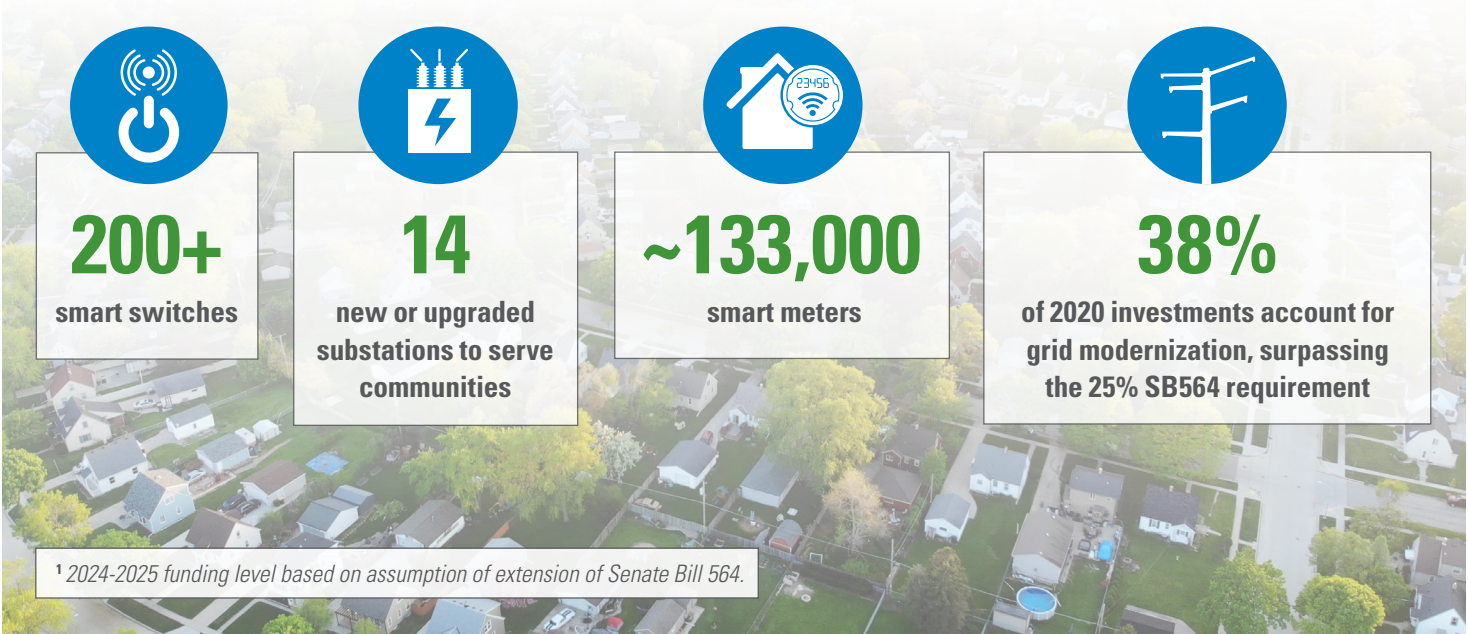


We know you need reliable power now more than ever. Homes have become workplaces, classrooms and so much more. Ameren Missouri, through the Smart Energy Plan, is investing in smart technology, stronger poles and upgraded power lines to help reduce outages and respond faster when they do occur. The Smart Energy Plan is one way we are Powering the Quality of Life now and for the future to benefit Missouri families, businesses and communities.

WHAT IS THE SMART ENERGY PLAN?

In 2018, the Missouri General Assembly passed forward-thinking energy policy legislation (Senate Bill 564) that enabled Ameren Missouri’s Smart Energy Plan. In the first two years of implementation, Ameren Missouri has completed more than 1,500 projects across our territory that spans 24,000 square miles. With each project we are providing customers and communities with significant benefits and value.

Our \$8.4 billion plan¹ for 2021 to 2025 will further our efforts to create a stronger, smarter, cleaner, more resilient and secure electric grid, including new, clean wind energy. In 2020, we completed or installed:



¹ 2024-2025 funding level based on assumption of extension of Senate Bill 564.

BUILDING A BETTER SYSTEM FOR OUR CUSTOMERS

- **Installing smart switches** – Smart switches rapidly detect outages, reroute power and restore service for customers while we safely make permanent repairs. These devices can reduce outages from hours to minutes and even seconds, and have improved reliability up to 40%.
- **Modernizing substations** – Substations are critical infrastructure that help to transfer energy to your homes and businesses; however, some are more than 50 years old. We’re modernizing our oldest substations to continue providing the power you depend on every day to continue to serve our communities.
- **Installing smart meters** – Current Ameren Missouri electric meters are 20 years old and technology has greatly advanced. With new smart meters, customers will have more convenience, choice and control including new rate options.
- **Upgrading power lines** – Upgrading power lines and installing new, stronger poles made of composite material such as fiberglass, can better stand up to severe weather to protect customers from outages and improve reliability.
- **Upgrading underground cable** – Upgrading underground cable installed in new protective conduit will create a more reliable and efficient energy delivery system.

After a power outage at the Unilever plant in Jefferson City, one customer raved,

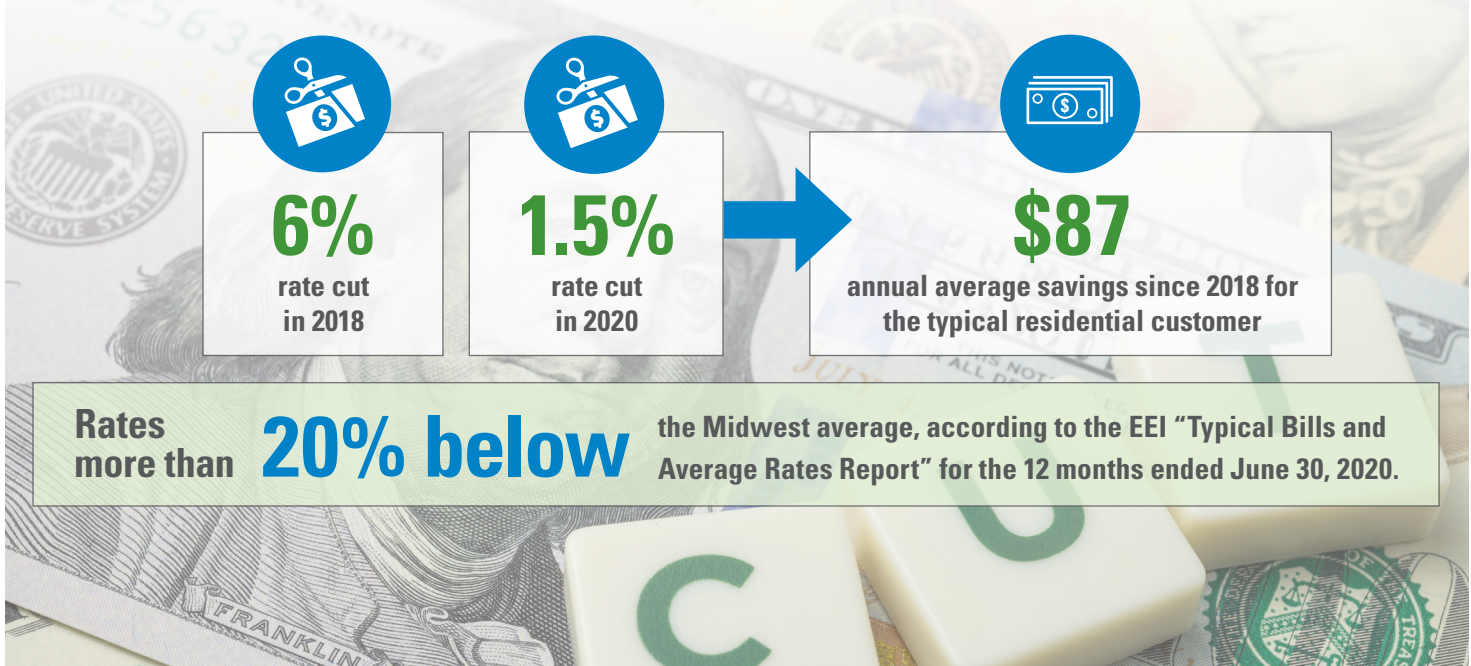
“Thankfully, the new ‘smart’ protection metering device Ameren Missouri installed on the new power lines to our facility saved our bacon.”

— **Marc Anderson**,
Project Delivery Engineer,
Unilever, Jefferson City



KEEPING RATES AFFORDABLE

While Ameren Missouri upgrades the grid and improves reliability for our customers, we’re also working hard to keep rates stable and affordable. Since launching the Smart Energy Plan, we reduced customer rates twice and continue to look for operating efficiencies across our service territory.



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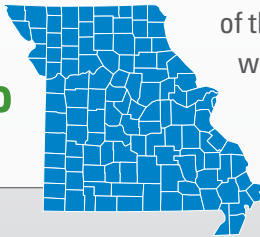
EXPANDING OUR ECONOMY

The Smart Energy Plan supports Missouri’s economic growth through job creation and retention, as well as increased local tax revenues. When the economy grows, everyone benefits.



\$10 million tax revenue for local communities in 2021 is generated by 2020 Smart Energy Plan projects.

57%



of the suppliers we worked with in 2020 were Missouri-based.



141 supplier applications received through the new online portal since 2018, **\$225M** with diverse suppliers. That’s 32% of sourceable spend.



SUPPORTING DIVERSE SUPPLIERS

LUZCO Technologies, a St. Louis-based company, was founded in 2017 as an engineering and project management company run by Venezuelan-born American, Lusnail Haberberger. Since the beginning of the Smart Energy Plan, Ameren Missouri has partnered with Haberberger and her team to complete seven large projects such as upgrading and installing new substations and power lines throughout St. Louis. Thanks to the Smart Energy Plan, LUZCO has more than doubled its staffing.

“It’s amazing to think that one piece of legislation can create so many new positions. Our company could not have grown so rapidly and achieved such success without Ameren Missouri’s Smart Energy Plan.”

— Lusnail Haberberger
President and founder, LUZCO Technologies

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ONE OF THE BEST ECONOMIC DEVELOPMENT INCENTIVES IN THE COUNTRY

Good jobs are the backbone of strong communities. Thanks to the Smart Energy Plan Economic Development Incentive, companies are expanding and jobs are staying in Missouri.



200 JOBS*
created in
MOBERLY



150 JOBS*
created in
ST. CHARLES



55 JOBS*
created in
BERKELEY

**All job figures are estimates*

NEW JOBS IN FRANKLIN COUNTY

In Washington, Missouri, a new state-of-the-art substation and equipment will increase energy capacity allowing more businesses to grow and have reliable power. Work like this supports the community in so many ways, including the local economy. The transformers for this substation were built in Missouri, by Missourians, for the benefit of Ameren Missouri customers. The local manufacturer of these transformers, WEG Transformers, recently opened a new facility in Washington to expand operations.



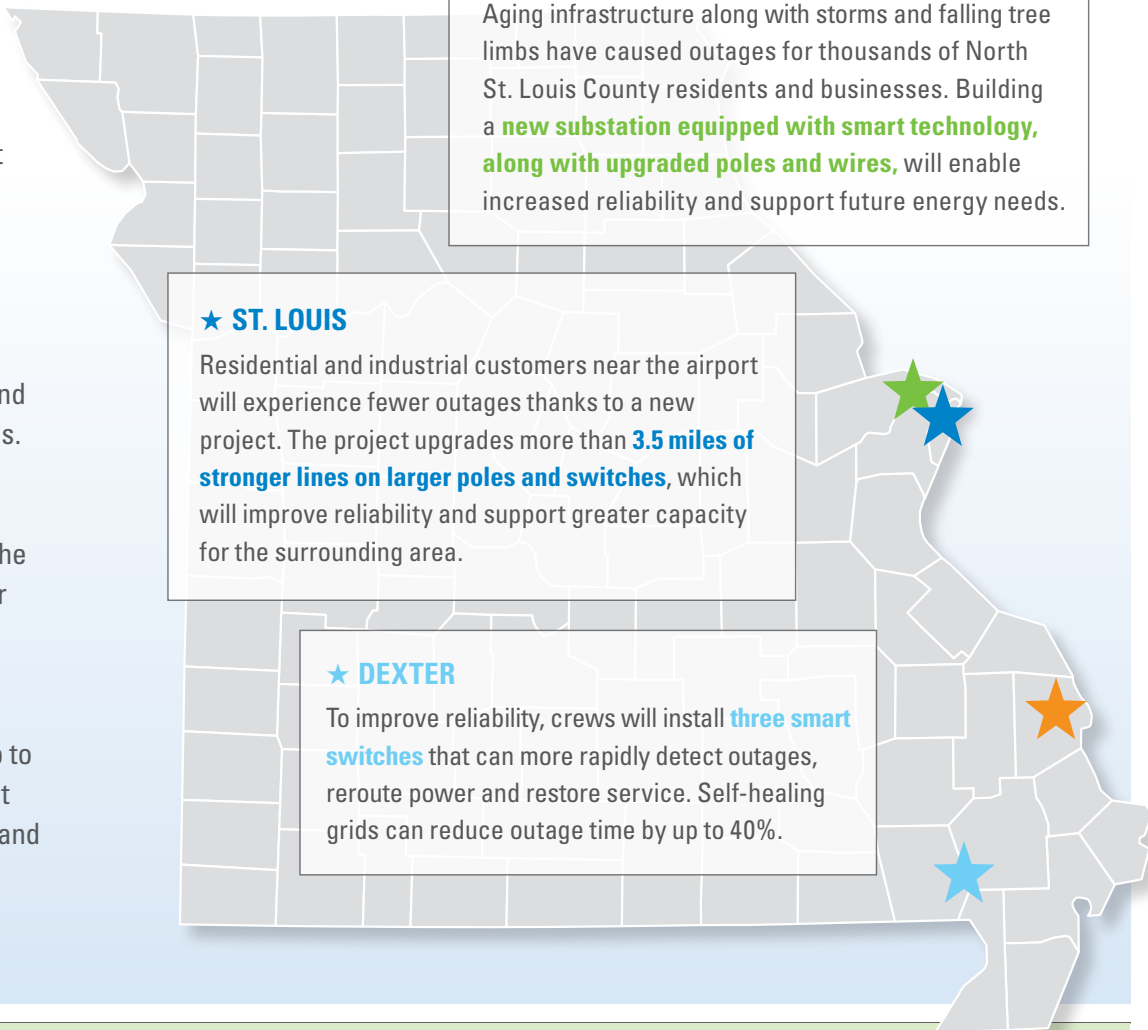
With this expansion, WEG Transformers plans to hire additional employees, bringing the total to **500 employees** in Washington.



BUILDING A MORE RELIABLE ENERGY GRID FOR SOUTHEAST MISSOURI

The Buzzi Viaduct project **upgrades the grid for 3,400 business and residential customers in CAPE GIRARDEAU** and will improve reliability by reducing the frequency and duration of power outages. This Smart Energy Plan project replaced one mile of overhead line, built in the 1930s, with new, stronger poles made of wood and composite material such as fiberglass. Stronger poles can better stand up to severe weather to protect customers from outages and improve reliability.

LOOKING AHEAD ▶▶▶



TRANSFORMING TO NET-ZERO CARBON EMISSIONS

Ameren Missouri is committed to continue building a brighter energy future for our customers, the communities we serve, and our country. Together with our parent company, we have established a net-zero carbon emissions goal by 2050. In addition, we've laid out plans for our largest-ever expansion of clean wind and solar generation that maintains the reliability and affordability that customers have come to expect.



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LARGEST WIND ENERGY GENERATION IN MISSOURI

Ameren Missouri is now the largest operator of wind energy generation in the state. Since 2020, Ameren Missouri acquired its first two wind energy centers, both located in northern Missouri. The new energy centers are the first of many renewable energy additions anticipated by Ameren Missouri.

Smart Energy Plan investments are key to making clean energy a reality, including:

“Missouri-based clean energy is good for our customers, the environment and the economy. The ongoing operation of these facilities is the next step in getting the energy we provide as clean as we can, as fast as we can, without compromising on reliability or affordability.”

— **Ajay Arora**
Chief Renewable Development Officer, Ameren Missouri

Community Solar



Community Solar, which allows customers to support solar energy without having to install panels on their home or property. The program was so popular with customers that we are now planning for a facility with more energy than originally planned. **The new community solar facility will add six megawatts of energy to the grid.**

Neighborhood Solar



Neighborhood Solar partners with organizations to install solar panels on their property.



More than **\$2M** provided in **solar rebates** during 2020.



ST. LOUIS COUNTY

In August 2020, a powerful wind storm known as a derecho swept through parts of the Midwest. Much of Ameren Missouri’s service territory faced strong winds and rain, resulting in 78,000 power outages across

several communities. Despite the extensive damage from the storm, we restored power to 50,000 Missouri customers during the first night – thanks to our co-workers and Ameren Missouri’s investments in the Smart Energy Plan.

Smart sensors and switches, both part of our Smart Energy

Plan investments, enabled Ameren Missouri to rapidly detect which areas faced an outage, and reroute power to many of those customers. This reduced their outage times while crews safely made repairs to damaged power lines. Other Smart Energy Plan upgrades, including new storm-resilient utility poles and stronger overhead power lines, better prepared parts of our service area to withstand the severe weather.

As our customers’ homes now double as workplaces and schools, even a short outage is critical. The investments we’ve already made in the Smart Energy Plan are providing customers with more dependability during this time, and we continue to focus on building smarter, cleaner, more reliable energy for the future.

SMART METERS THAT IMPROVE SERVICE AND ENABLE NEW RATE OPTIONS

We will upgrade approximately 1.2 million electric meters by 2024. Upgraded smart meters use advanced meter infrastructure technology to provide two-way meter communication. This two-way meter communication allows us to more quickly and accurately pinpoint outages, which results in faster outage restoration. Smart meter technology also provides customers better insights into their energy usage. The precise energy usage information from



these meters gives customers more convenience, choice and control by enabling them to choose a rate plan that best fits their lifestyle. This usage information can help customers manage and shift their energy use – and potentially save on their bill.

Smart meters offer customers the following key benefits:

Convenience

Customers will enjoy quicker restoration after outages and faster connection when moving or starting service thanks to how the meters communicate with the updated grid.



Choice

Customers have the power to choose a rate that fits their lifestyle.



Control

Customers can use the more precise energy usage information from their smart meter to help them shift their energy usage – and potentially save on their bill.



ENHANCING DIGITAL INFRASTRUCTURE

Ameren Missouri will begin constructing a new, private wireless communication network based on the LTE standard used by cellular carriers. This project will upgrade the current communication network to provide better connectivity and coverage to our equipment, including recently implemented smart technology and equipment. This project will begin construction in the St. Louis metro area.



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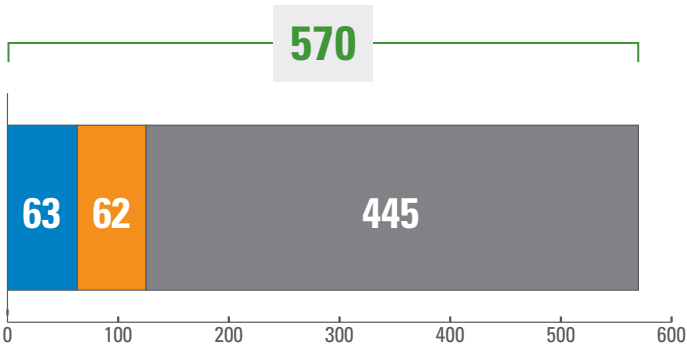
WHAT'S AHEAD?

Thanks to the bipartisan legislation that created the Ameren Missouri Smart Energy Plan, we continue to move Missouri forward. Our current Smart Energy Plan extends through 2023, but there will still be more work to do, and Ameren Missouri is committed and ready to continue doing it for the benefit of our customers and the communities we serve, upholding our mission to *Power the Quality of Life*.

Long-Term Goals

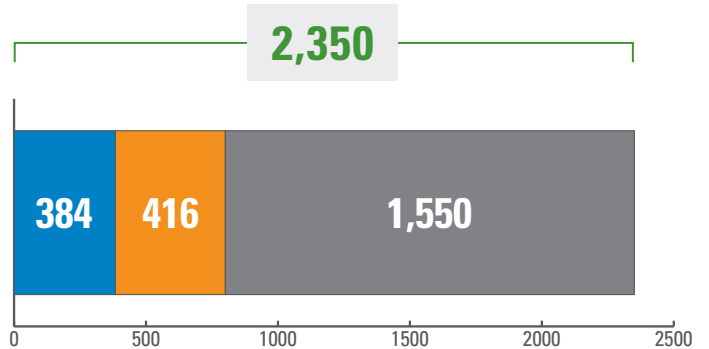
Upgraded Power Line Miles*

Among 4,400 miles of line, we're addressing some of those with the lowest performance.



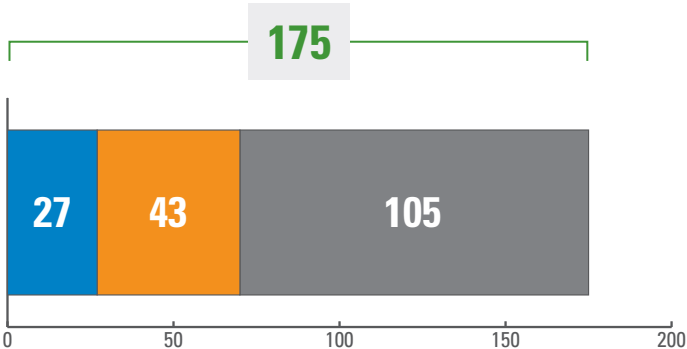
Smart Switches

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



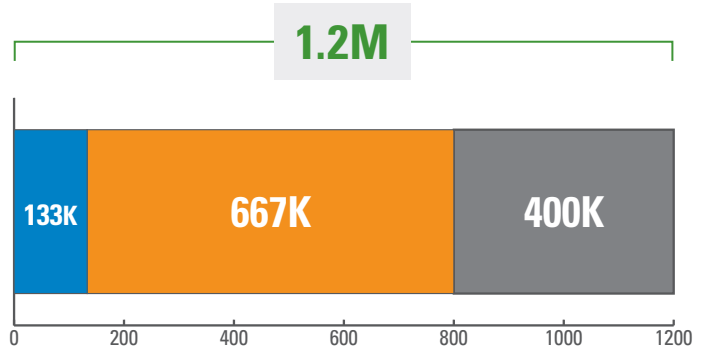
Substations

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



Smart Meters**

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



* This refers to Ameren Missouri's subtransmission circuits.
 ** Does not include gas modules. All installations by 2024.
 *** Long-term targets are estimates and contingent on funding levels.