

Smart Energy Plan Progress Report 2019



POWER TO DO WHAT MATTERS MOST. Like introducing your newborn to loved ones at the local hospital. Keeping your fridge on and its contents fresh. Keeping the lights on at the championship game. We know how even a short outage affects you. As Ameren customers, they affect us, too.

Power should be there when you need it. **THE SMART ENERGY PLAN** includes investments to make sure the grid delivers clean and reliable energy. We are strengthening the grid to stand up to storms with new power lines and poles. We are replacing aging substations with state-of-the-art new ones. Smart equipment will further reduce outages and restore service even faster when they do occur. Other projects will speed the transition to clean energy, which is important to everyone. Our current plan lasts for 5 years, but there will be more work to do, and Ameren Missouri is committed and ready to do it.

Customers want and need affordable rates. That's why rates have been cut by 6% and capped for the rest of the life of the plan.

AFFORDABLE RATES, ¢/KWH

Ameren Missouri	10.08
Midwest Average	12.85
U.S. Average	13.19

Ameren Missouri's residential rates are **22% lower** than the Midwest Average and **24% lower** than the U.S. Average.

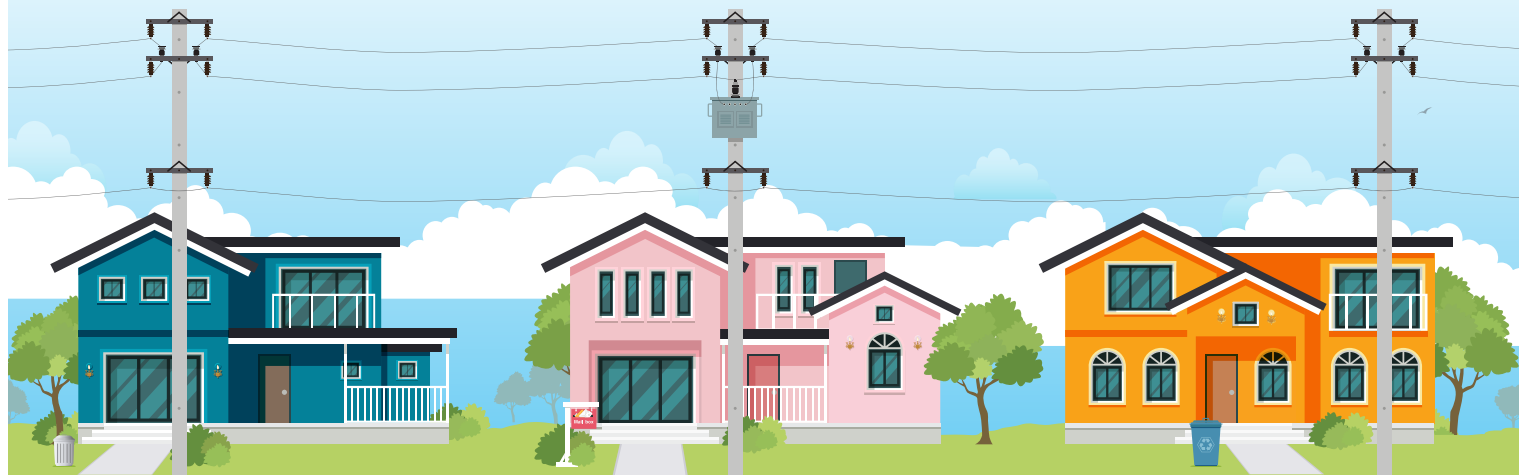
AVERAGE RESIDENTIAL ELECTRIC PRICES — Edison Electric Institute, "Typical Bills and Average Rates Report" for the 12 months ended June 30, 2019.

900+ projects completed in 2019

24% lower rates than the U.S. average

As many as **30,000** hours in avoided outages for customers in 2020, which equals one storm day per year*

**for those customers with upgraded smart switches in 2019*



In 2019:

9K

new storm-resilient utility poles installed

180+

smart switches installed

13

substations upgraded to serve growing communities and improve reliability

WORKING IN THE COMMUNITY

2019 Project Highlights

★ St. Louis

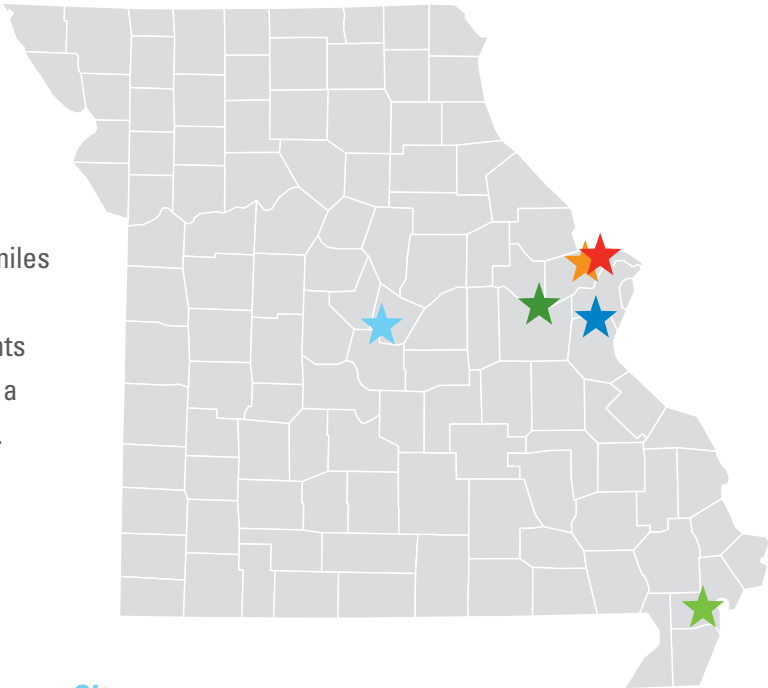
In St. Louis County, patients and doctors will now see fewer outages when every minute counts. A new substation, 10.5 miles of power lines and 200 stronger utility poles will stand up to storms. These upgrades improve reliability for 10,000 residents and businesses and three critical medial facilities, including a Level I Trauma Center and a children’s specialty care center.

★ Portageville

Neighbors and families can now spend more time with those they love and less time worrying about a power outage. To strengthen the system against storms and high winds, we installed 56 new, stronger utility poles and nearly three miles of upgraded power lines. Now, 2,000 families and businesses will see fewer outages and faster service restoration.

★ Jefferson City

Ensuring state officials and critical services have energy to keep our state running is essential. A new underground electric system and communication network in downtown Jefferson City will reduce most outages from hours to seconds and enable faster storm restoration.



PLANNING FOR 2020 AND BEYOND ▶ ▶ ▶ ▶ ▶ ▶ ▶ ▶

★ St. Louis

Aging infrastructure along with storms and falling tree limbs have caused outages for thousands of North St. Louis County residents and businesses. Building a new substation equipped with smart technology will enable the replacement of aging substations and power lines. This project will also lay the foundation for converting the St. Louis region to a 12kV grid, which will increase reliability and support future energy needs.

★ High Ridge

To help detect and isolate outages and more quickly restore service, we will install smart, automated switches, which will impact more than 2,400 customers. Historically, on average, we see a 40% improvement in reliability for these types of upgrades.

★ Washington

Industrial customers have suffered short outages, which disrupt their daily workloads. We will install two miles of upgraded power lines and 95 wooden poles with stronger lines to protect against storm damage and lightning. These upgrades will reduce outages for 4,500 families and businesses.

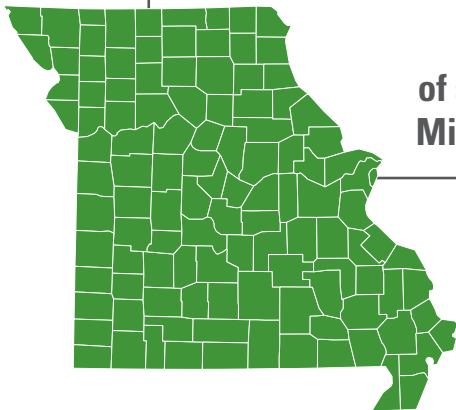
GROWING THE COMMUNITY



77 supplier applications received through online portal, launched in 2018



\$5M+ increased tax revenue for local communities in 2020



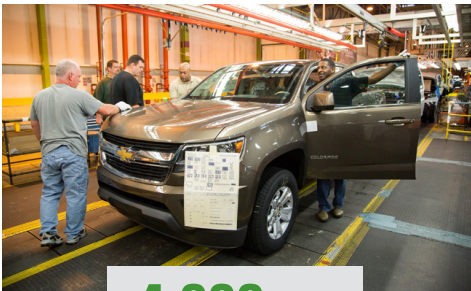
~55% of suppliers are Missouri-based

"Ameren had this smart grid installation project and we were awarded part of it. It was a place we wanted to work, as a Missouri company. To date we've hired 12 new employees, and we're excited about the opportunity."

- Bryan Simpson, vice president, BBC Electric

One of the best economic development incentives in the country

Thanks to the Smart Energy Plan Economic Development Incentive, jobs are staying in Missouri to grow the economy.



4,000 jobs

retained, as announced by GM Wentzville in December 2019



100 jobs

created by Quaker Windows' Eldon plant



50 jobs

created by Western's Smokehouse in Kirksville



25 Economic Development Incentive applications pending at end of 2019 that could bring more than

3,000 jobs to Missouri

KEEPING COMMUNITIES INFORMED

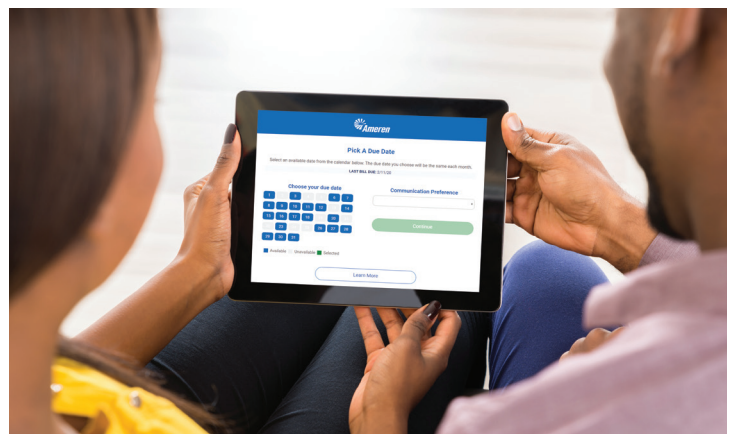
Smart Meters
Smart meters allow for two-way system communications, helping us to learn more and allowing customers to take more control of their energy usage.

The first smart meter will be installed in St. Charles, Missouri in summer 2020.

- 120K smart meters** to be installed in 2020
- 1.2M electric smart meters and 132K smart gas modules** will be installed by 2025
- Customers can make **informed decisions on their energy usage** with easy access to their own data.

Modernizing internal and external communication systems and tools provide an enhanced customer experience. In 2019, customers saw improvements of our digital platforms including:

- A revamp of the Ameren.com website with optimal functionality across devices.
- A new outage communication hub, which ensures consistent outage notifications and updates to customers until they're restored.
- Updates to our self-service options such as alerts, paperless billing and start/stop service.
- The opportunity to **"pick a due date,"** which allows customers to choose the date most convenient for them to pay their energy bill.



In 2020, we will begin development of a communication network in the St. Louis metro area, which enables the support of smart grid technologies. We will invest in technology for skilled craft professionals to streamline processes and better serve customers.


INVESTING IN A CLEANER COMMUNITY

TARGETING SUBSTANTIAL REDUCTIONS IN CARBON EMISSIONS (From 2005 levels)

35% REDUCTION BY 2030

50% REDUCTION BY 2040


80% REDUCTION BY 2050

Neighborhood Solar 

This program partners with organizations to install solar panels on their property.

90+ applications submitted

\$14M investment by 2023

Community Solar 

This program allows customers to support addition of solar energy to the grid without installing panels on their home.

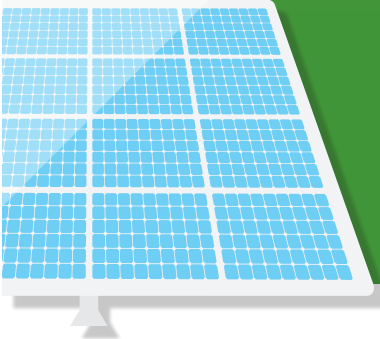
350 customers enrolled at 1MW Lambert solar facility

590 customers on waitlist representing over 2 MW

Wind  2 wind facilities

700MW of power

Both facilities expected to be acquired and in-service by end of 2020

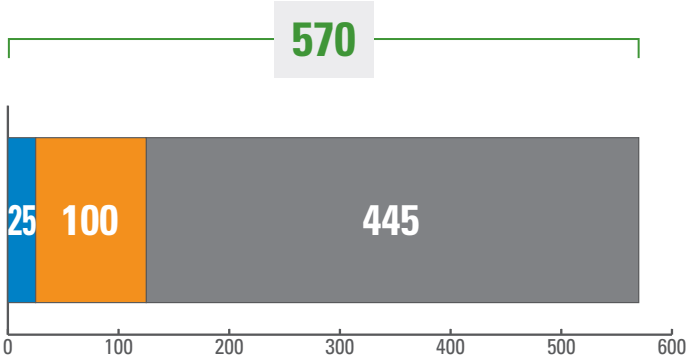


The largest solar facility in St. Louis City is located at BJC in partnership with Ameren Missouri. The facility generates 1.8 MW of power for the local community.

Long-Term Goals

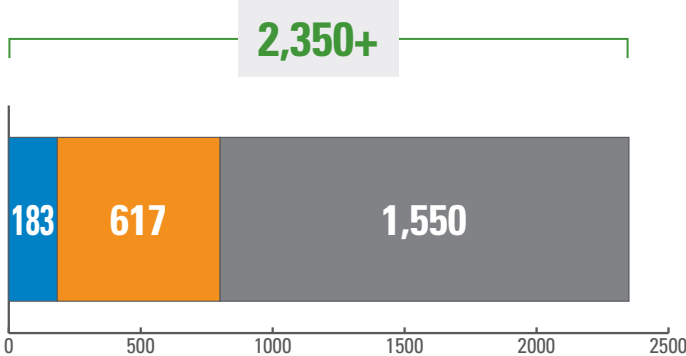
Upgraded Power Lines Miles*

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



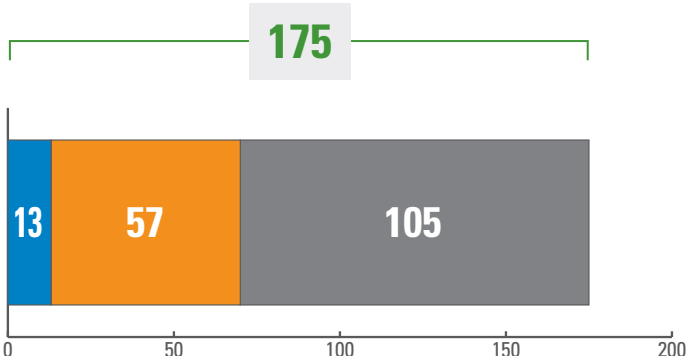
Smart Switches

Installation of smart switches have historically, on average, improved reliability by 40%.



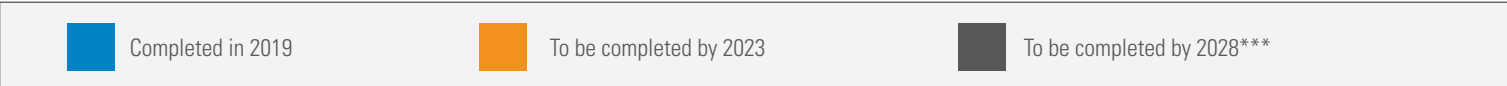
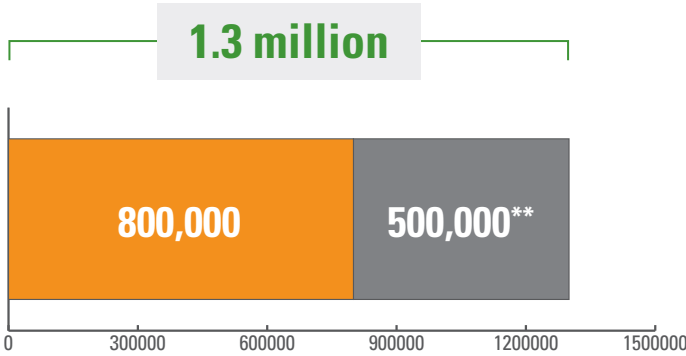
Substations

Among our 900 substations, this will address 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.
 ** The 500,000 includes 132,000 gas modules.
 *** Long-term targets are estimates and contingent on funding levels.