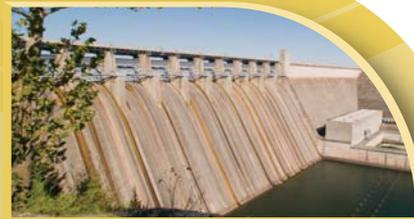


# Diverse fuels

## Associated Electric Cooperative Inc.

A Touchstone Energy® Cooperative 



### Power supply facts

## Ensure reliable, economical power supply

Your electricity is produced using a mix of fuels and technologies: coal, natural gas, hydropower, wind and energy efficiency. This allows for flexibility while providing reliable and affordable electricity.

Our wholesale power supplier, Associated Electric Cooperative, uses the lowest-cost resources first to serve member load. Resources include hydropower, coal, wind or natural gas. AECEI also looks for opportunities to purchase power from other utilities at a cost that is lower than it can generate.

### Hydropower

AECEI receives supplemental and peaking power from Southwestern Power Administration, the federal power marketing agency that supplies power from 17 reservoirs across Oklahoma, Arkansas and Missouri. While hydropower is one of our cheapest resources, it is a limited commodity dependent on rainfall and the capacity of lakes and dams to store the water.

### Coal and natural gas

Coal generation supplies the bulk of members' electricity, although lower natural gas prices have led to increased natural gas generation. While not as inexpensive as supplemental hydropower, coal and natural gas are typically less expensive fuels for electricity generation than intermittent wind or solar sources. Because power plants can operate around the clock and do not depend on the ability of storage like wind, water and solar power, fossil fuel-based generation is currently the most reliable form of electricity for members.

### Wind

Rural electric cooperatives took the lead in Missouri wind power when AECEI teamed up with Wind Capital Group to bring four wind farms to Missouri totaling 300,000 kilowatts.

Associated's signing of long-term agreements, as well as its high-voltage transmission system, made these wind farms a reality.

Associated then signed two more long-term wind power purchase agreements: for 300 MW from BP Wind Energy's Flat Ridge 2 farm, operational in late 2012; and for 150 MW from Enel Green Power North America's Osage wind farm in northeast Oklahoma, completed in June 2015.

Associated announced in February 2018 a power purchase agreement with Tenaska, which is developing a 236-MW wind farm in northwest Missouri. It is expected to be operational in late 2020.

Locking in long-term, economical fixed-cost wind power helps Associated mitigate expected fuel cost increases, as well as expected increases in the market price for wind as more utilities are required to meet renewable portfolio standards. The Kansas and Oklahoma wind farms add geographic diversity to Associated's Missouri's wind farms and brought its contracted wind power to 750 MW, increasing to 986 MW in 2020.

Because it is intermittent, however, wind cannot be relied on to produce electricity during periods of peak demand. Some form of electric generator that can be relied on to produce electricity when it is called for, such as coal or natural gas, backs up wind generators to ensure reliable power for members.

AECEI remains open to evaluating economical options for adding power supply to the system. To satisfy electricity demand, we must look at all cost-effective generation resources that are available. In addition, we continue to implement energy efficiency and equipment rebate programs that reduce energy consumption, as well as reduce the need for new electricity plants.

## 2017 generation to supply members

