

OPERATING PERFORMANCE

- The Callaway Energy Center is a highly-efficient, low-cost source of electricity for Ameren Missouri’s 1.2 million customers. In 2019, the plant was the second-largest energy producer on the Ameren system — accounting for 19 percent of Ameren Missouri’s generation. Its net generation of 9.2 million megawatt-hours of electricity was enough to supply the needs of 800,000 average households.
- In 2019, the Callaway Energy Center generated 9.2 million megawatt-hours of electricity. Through 2019, Callaway achieved the fourth highest lifetime generation among the 96 nuclear power plants operating in the United States, and 10th highest in the world out of 425 nuclear plants operating in 30 countries for which data was available.
- In 2018-19, the Callaway Energy Center operated continuously for 467 days, achieving what is known in the industry as a “breaker-to-breaker” run — which means it operated from one refueling to the next without ever being out of service. This marked Callaway’s fifth breaker-to-breaker run since it began operating in 1984, the first coming in 2008 (520 days), second in 2012 (489 days), third in 2013 (500 days), and fourth in 2017 (514 days). Callaway is one of only 26 of the nation’s 98 nuclear plants to achieve a breaker-to-breaker run.
- Reliable, low-cost electricity from the Callaway Energy Center has been a key factor in keeping the price of electricity low for Ameren Missouri’s 1.2 million customers. Ameren Missouri’s electric rates are the lowest of any investor owned utility in Missouri.
- Ameren Missouri has sufficient installed spent fuel storage capacity at Callaway Energy Center until 2044.* This

capacity includes wet pool storage within the Energy Center, as well as the recently completed dry cask storage system built next to the Energy Center. This level of storage capacity will be sufficient for the licensed life of the Energy Center.

SAFETY PERFORMANCE

- The Callaway Energy Center has established a strong record of safe operation throughout its 30-year operating history.
- In annual performance assessments, the U.S. Nuclear Regulatory Commission (NRC) staff has consistently reported that the plant operated in a manner that preserved public health and safety.
- The Callaway Energy Center also is a very safe place to work. In 2006, the plant received the prestigious Edison Electric Institute (EEI) Safety Achievement Award for outstanding worker safety.
- The Callaway Energy Center received a 2013 Electric Power Research Institute (EPRI) Technology Transfer Award for its plans to implement water jet peening for mitigation of primary water stress corrosion cracking in U.S. Nuclear Power Plants.

BENEFITS TO THE STATE AND LOCAL ECONOMY

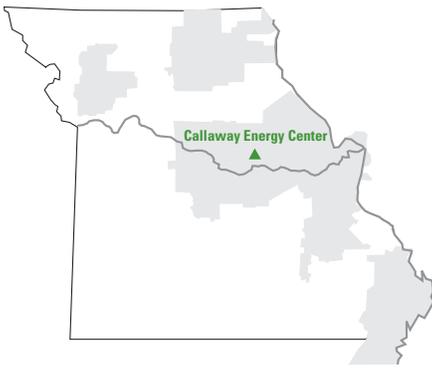
- The Callaway Energy Center is a major source of good-paying jobs, with more than 800 Ameren Missouri employees and contractors working there. During refueling outages, which occur every 18 months, hundreds of supplemental workers are typically brought in for several weeks — providing a significant additional boost to the local economy.
- The Callaway Energy Center is a major source of tax revenue to fund education and other critical services. On average, the plant accounts for about \$9.8 million of Ameren Missouri’s annual property taxes paid to Callaway County, with about \$6.9 million of that amount going to local schools. In addition, assessed values based on Ameren Missouri’s investment in the plant typically result in an additional \$21.5 million in taxes shared by the remaining 66 Missouri



counties where the company has facilities.

SECURITY

- Ameren Missouri has spent more than \$24 million on security enhancements and additional security manpower since the Sept. 11, 2001 terrorist attacks on New York and Washington, D.C. For the U.S. nuclear power industry as a whole, such expenditures have totaled more than \$2 billion.
- Security enhancements at Callaway have included:
 - Extending and fortifying security perimeters around the plant
 - Increasing patrols within security zones
 - Installing new barriers to provide greater protection against vehicle bombs
 - Installing additional high-tech surveillance equipment
 - Strengthening the coordination of security efforts with local, state and federal agencies
- Plant security is routinely tested in drills and exercises every year. In addition, the NRC conducts “force on force” exercises at each plant — using highly-trained paramilitary personnel — at least once every three years.
- The most recent force-on-force exercise was conducted at Callaway in Feb. 2020. Although details are confidential, plant security personnel performed at a very high level, resulting in no regulatory findings, violations or unresolved items.



CALLAWAY ENERGY CENTER PROFILE

Location: Callaway County, Missouri. Ten miles southeast of Fulton, 25 miles northeast of Jefferson City, 100 miles west of St. Louis.

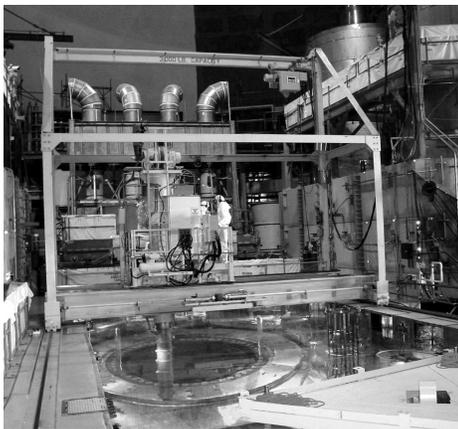
Owner: Ameren Missouri (formerly known as Union Electric Company). Ameren Missouri is a subsidiary of St. Louis-based Ameren Corporation. The Ameren companies serve 2.4 million electric customers and nearly 900,000 natural gas customers in a 64,000-square-mile area of Missouri and Illinois.

Plant Design: Standardized Nuclear Unit Power Plant System (SNUPPS), using a Westinghouse four-loop pressurized water reactor and a General Electric turbine-generator.

Generating Capacity: 1,190 megawatts (net).

Cost to Build: \$3 billion.

Engineering/Construction: Bechtel Power Corporation, architect-engineer; Sverdrup & Parcel and Associates, Inc., architect-engineering consultant for site development; Daniel International Corporation, general contractor.



During refueling, which occurs every 18 months, Callaway operators use the refueling machine to replace approximately 90 of the 193 nuclear fuel assemblies in the reactor core.

Construction History:

July 16, 1973

Project announced and site selected.

April 1, 1975

Certificate of Convenience and Need granted by the Missouri Public Service Commission.

August 14, 1975

Limited Work Authorization granted by the U.S. Nuclear Regulatory Commission (NRC).

April 16, 1976

Construction permit granted by the NRC.

October 19, 1979

Application made to the NRC for the plant's operating permit.

November 16, 1982

Initial fuel delivery.

June 11, 1984

"Low power" operating license issued by the NRC.

June 13, 1984

Initial fuel load.

October 2, 1984

First nuclear chain reaction took place.

October 18, 1984

"Full power" operating license issued by the NRC.

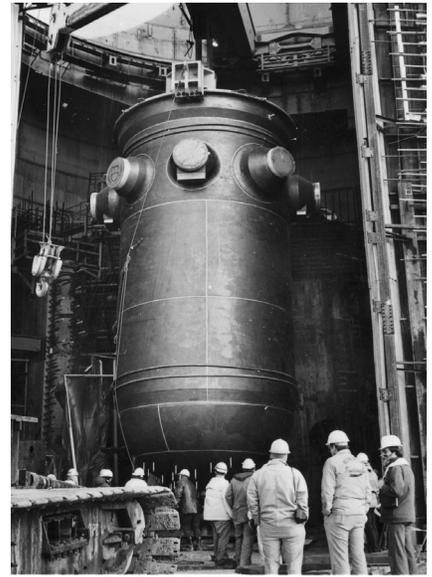
December 19, 1984

Required testing completed; plant declared "fully operational."

SITE

- Plant is five miles north of the Missouri River on a plateau 300 feet above the average level of the Missouri River.
- Ameren Missouri owns 7,200 acres of land at the site, 6,300 of which are administered by the Missouri Department of Conservation as the Reform Conservation Area (named after the small town of Reform that was once located there).
- More than 70 sites in four states were studied before the Callaway County site was selected.

A key milestone in the Callaway Plant's construction occurred in March 1979 when workers hoisted the 330-ton reactor vessel into place inside the reactor building.



REACTOR CONTAINMENT BUILDING

- 205 feet tall.
- 150 feet in diameter.
- Constructed of reinforced concrete and steel.

COOLING TOWER

- 553 feet tall (77 feet shorter than the St. Louis Gateway Arch).
- 430 feet in diameter at the base.
- Constructed of reinforced concrete. More than 40,000 cubic yards of concrete were used in its construction.
- Cools approximately 585,000 gallons of water per minute when the plant is operating at full power.
- About 15,000 gallons per minute are lost out the top through evaporation. This water is replaced with water from the river, which is five miles south of the plant.
- Cooling tower basin holds 11 million gallons. The water is 12 feet deep under the tower, and 20 feet deep at the intake to the circulating water pumps that pump the water through the plant.
- Temperature of the water going into the tower is 125 degrees Fahrenheit. The tower cools it to 95 degrees.