

Flint Creek Power Plant Environmental Retrofit



A unit of American Electric Power



Quick Facts:

About Flint Creek Power Plant

- Location: Gentry, Arkansas
- Capacity: 528 megawatts (MW)
- Ownership: 50 percent (264 MW) - AEP SWEPCO
50 percent (264 MW) - Arkansas Electric Cooperative Corp. (AECC)
- Operated by AEP SWEPCO
- Fuel: Low-sulfur coal
- Avg. annual coal use: 1,960,000 tons
- Employees: 90
- Annual payroll: \$7.5 M
- Annual property/real estate taxes: \$1.33 M
- Total economic output: \$28.2 M (Benton and Washington Counties)
- Cooling reservoir: 500-acre SWEPCO Lake
- Home of Eagle Watch Nature Trail

Environmental Retrofit

To comply with new U.S. Environmental Protection Agency regulations, SWEPCO and plant co-owner Arkansas Electric Cooperative Corp. (AECC) are investing \$408 million to install additional environmental control systems on the unit. The retrofit project allows the plant to continue to provide reliable electric power in Northwest Arkansas beyond the April 2015 EPA deadline (extended to 2016 for project under construction). Construction began following receipt of the air permit in October 2013.

- \$408 million project (\$204 million each by AEP SWEPCO and AECC)
- Dry Flue Gas Desulfurization (DFGD or scrubber) with pulse jet fabric filter (commonly called baghouse), Activated Carbon Injection (ACI) and related digital controls – to reduce emissions of sulfur dioxide (SO₂), particulate matter (PM), acid gases, mercury and other metals. New Low-Nitrogen Oxide (NO_x) Burners and Overfire Air to reduce NO_x emissions.

- July 2013 – Arkansas Public Service Commission ruling – project in the public interest
- October 2013 – Air permit issued by Arkansas Department of Environmental Quality
- June 2016 - DFGD, ACI and related facilities placed in service
- May 2018 - anticipated in-service date for Low-NO_x Burners and Overfire Air
- Approximately 600 construction jobs at peak
- 21 new permanent jobs to operate new equipment

Flint Creek Power Plant is a base load, coal-fueled power plant located near Gentry in Northwest Arkansas. Generating capacity is 528 megawatts (MW). The unit was placed in commercial service in 1978 and has anchored the regional grid during decades of economic growth (including Walmart headquarters, Tyson Foods, JB Hunt and the University of Arkansas). As a base load plant, Flint Creek meets customer demand and regional reliability reserve requirements, and provides voltage support for the local transmission grid.

Southwestern Electric Power Company and American Electric Power

Southwestern Electric Power Company (SWEPCO) is an operating unit of American Electric Power (AEP). SWEPCO serves 530,000 customers in Louisiana, Texas and Arkansas. SWEPCO's headquarters are in Shreveport, La. AEP, headquartered in Columbus, Ohio, is one of the largest electric utilities in the United States, delivering electricity and custom energy solutions to nearly 5.4 million customers in 11 states. AEP owns the nation's largest electricity transmission system, a more than 40,000-mile network that includes more 765-kilovolt extra-high voltage transmission lines than all other U.S. transmission systems combined. AEP also operates 223,000 miles of distribution lines. AEP ranks among the nation's largest generators of electricity, owning approximately 31,000 megawatts of generating capacity in the U.S.

Protecting the Environment

AEP SWEPCO operates Flint Creek Power Plant under its Environmental Leadership Principles, which state in part: “We will actively seek to prevent pollution by minimizing our emissions to the environment. We will pay particular attention to the protection of the surrounding environment at existing facilities, company-owned land and when planning new facilities.” Flint Creek Power Plant meets or exceeds the environmental standards set by state and federal regulations.

Flint Creek employees take great pride in providing electricity while protecting air and water quality, recycling materials and maintaining an exemplary record of public and work safety.

Environmental Systems Prior to Retrofit

- Low-sulfur fuel supply
- Low-Nitrogen Oxide (NOx) Burners reduce NOx formation
- Electrostatic precipitator (ESP) removes more than 99% of fly ash (particulate) from the flue gas stream
- Continuous emission monitoring system (CEMS) helps ensure compliance with regulations

New Retrofit Technology:

- Dry Flue Gas Desulfurization (DFGD or scrubber) with pulse jet fabric filter (commonly called baghouse), Activated Carbon Injection ACI and related digital controls to reduce emissions of sulfur dioxide (SO₂), particulate matter (PM), acid gases, mercury and other metal. Includes NID technology (Novel Integrated Deacidification) by Alstom
- New Low-NOx Burners and Overfire Air to reduce NOx emissions

Environmental Stewardship / Eagle Watch Nature Trail

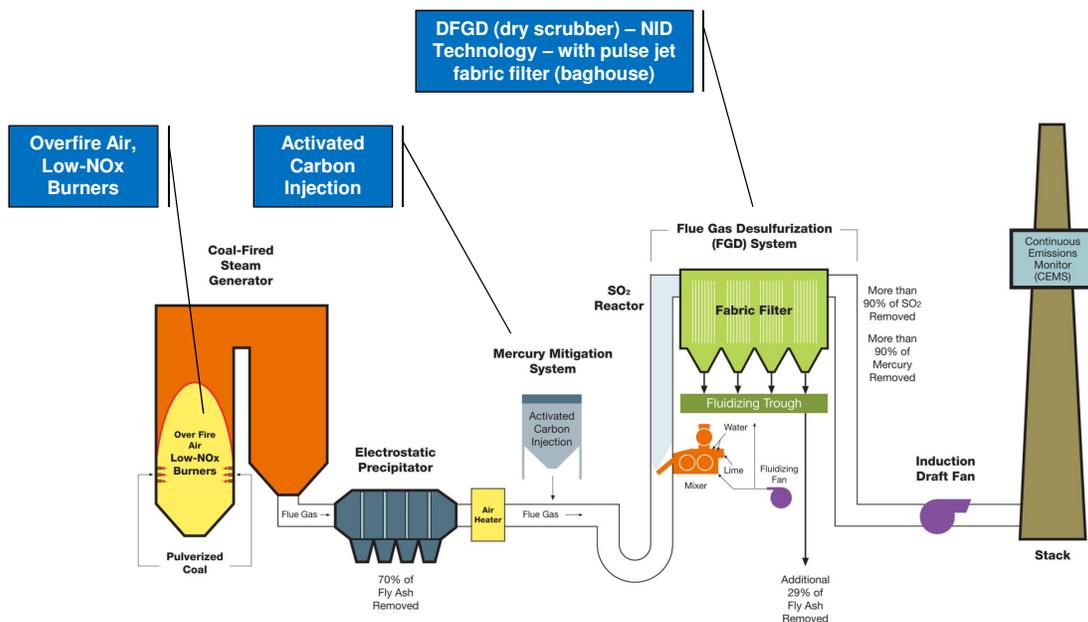
Flint Creek Plant is located on approximately 1,800 acres in Benton County, Ark., including the 500-acre SWEPCO Lake. As a cooling reservoir for the power plant, SWEPCO Lake has year-round warm water that is ideal for sport fishing. The Arkansas Game & Fish Commission stocks the lake and maintains an excellent boat ramp and fishing pier.

SWEPCO Lake is home to the Eagle Watch Nature Trail:

- Wildlife viewing pavilion and half-mile nature trail, Hwy. 12, 1 mile west of Gentry
- Built in 1999 on 65 acres by plant employees and Gentry Boy Scouts
- Well known for wintering American bald eagles, plus more than 100 bird species, wildlife and habitat management
- Open to public year-round
- Community partnerships with Gentry and other schools, 4-H, FFA and many other groups
- Earth Day celebrations and outdoor education programs
- Important Bird Area (IBA) designation by Audubon Arkansas
- Wildlife Habitat Council (WHC) Conservation Certification
- Become a fan on Facebook:
www.facebook.com/SWEPCOEagleWatch

Learn more at: www.SWEPCO.com/environment

Flint Creek Power Plant - New Environmental Controls



This illustration is conceptual. Relationships in size and volume may not be accurately portrayed.