



CLEAN AIR: *Pollution Prevention and Control at Ameren*

At Ameren, we're committed to providing our customers with clean, reliable energy, while preserving, protecting and improving the environment. This fact sheet describes some of the ways we work with our communities, industry and government to meet our commitment to delivering energy in an environmentally sensitive way.

ABOUT AMEREN

Ameren Corporation companies provide energy services to 2.4 million electric and nearly one million natural gas customers over a 64,000-square-mile area of Missouri and Illinois. Among the nation's top utility companies in size and sales, Ameren companies' net generating capacity is more than 16,400 megawatts. Based in St. Louis, Mo., Ameren Corporation is the parent company of AmerenCILCO, based in Peoria, Ill.; AmerenCIPS, based in Springfield, Ill.; AmerenIP, based in Decatur, Ill.; and AmerenUE, based in St. Louis, Mo. The company is also the parent of non-rate-regulated generating, energy marketing and fuels services companies.

INVESTING TO MEET — OR EXCEED — CHANGING REGULATIONS

Under the 1990 Clean Air Act, Ameren companies were required to reduce total annual emissions of sulfur dioxide (SO₂) by about two-thirds by the year 2000. However, the Ameren companies started to reduce these emissions long before the act was passed and met this goal well ahead of schedule.

The Clean Air Interstate Rule (CAIR), which became law in 2005, required further reductions in SO₂ emissions from coal-fired power plants and significant reductions in nitrogen oxide (NOx). CAIR works with another set of new regulations — the Clean Air Mercury Rule (CAMR) — to establish the first requirements for mercury reductions in the world.

Further controls — including scrubbers and selective catalytic reduction (SCR) units — will be necessary to meet the CAIR standards. Mercury-control technology is still evolving, but Ameren's cutting-edge trials of removing mercury by injecting activated carbon into exhaust gases have shown promise. Ameren now estimates the company will spend between \$3.5 billion and \$4.5 billion by 2016 to meet these new requirements.

BUILDING ON A LEGACY OF ENVIRONMENTAL STEWARDSHIP

Ameren is known throughout the electric utility industry for its commitment and leadership in lowering emissions at its coal-fired power plants — often using technology and techniques developed by Ameren employees.

AmerenUE, Ameren's Missouri utility, has spent more than \$300 million to reduce sulfur dioxide and nitrogen oxide emissions from its power plants since the enactment of the 1990 Clean Air Act.

- AmerenUE has reduced the emission rate of sulfur dioxide by 78 percent and the emission rate of nitrogen oxide by 83 percent since 1990. AmerenUE is now collecting more than 99 percent of all particulate emissions from the stacks at its coal-fired plants. AmerenUE's SO₂ emission rate has dropped as all of the company's coal-fired plants have converted to low-sulfur coal, while low-nitrogen oxide burners and combustion control technology have been used to reduce NOx.

AmerenEnergy Generating, Ameren's non-rate-regulated generating company in Illinois, has a multi-emission environmental compliance strategy that includes SO₂ scrubbers, low-sulfur coal and SO₂ allowance purchases. Low-nitrogen oxide burners, selective catalytic reduction units and combustion control technology have also been installed to reduce nitrogen oxide emissions.

- Since 1990, AmerenEnergy Generating plants have reduced the sulfur dioxide emission rate by 81 percent and the nitrogen oxide emission rate by 72 percent. As examples, AmerenEnergy Generating's Newton Power Station has installed low-nitrogen oxide burners with over-fire air systems on both of its units, while Coffeen Power Station, its sister plant in Coffeen, Ill., has installed over-fire air on its cyclone units and selective catalytic reduction systems on both boilers.

AmerenEnergy Resources Generating Company, owner of the E.D. Edwards and Duck Creek power stations in the Peoria, Ill., area, also uses a combination of low-NOx burners, SCR and digital combustion controls to increase operational efficiency and further reduce NOx emissions by 15 to 20 percent.

- The Duck Creek Power Station earned praise from the Illinois Environmental Council for installing a wet limestone scrubber system,

which removes between 85 and 90 percent of all SO₂, while E.D. Edwards Power Station uses a “dual conditioning” system to reduce particulate emissions.

EARNING RECOGNITION AS AN INDUSTRY LEADER

Because of these efforts, Ameren has gained national recognition for its efforts to develop and employ technologies that have significantly reduced emissions of SO₂ and NO_x — all while meeting the rising demand for energy.

- Ameren companies have been selected for state and national honors — earning everything from the Missouri Governor’s Pollution Prevention Award to top utility industry recognition for operating Labadie Plant, one of the nation’s cleanest, most efficient coal-fired power plants.
- In 2005, AmerenUE’s coal-fired power plants had seven of the nation’s 11 lowest emitters of NO_x among units that do not have selective catalytic reduction or selective non-catalytic reduction systems installed to reduce NO_x emissions, according to U.S. Environmental Protection Agency data. In addition, Ameren Energy Generating’s Illinois-based Newton Power Plant Units 1 and 2 ranked 20th and 21st in the 2005 survey of units in the same category.
- In 2006, Ameren’s Illinois-based generating subsidiaries signed a landmark agreement with the administration of Illinois governor Rod Blagojevich. That agreement will significantly reduce mercury emissions beginning in 2009, NO_x emissions by 2012 and sulfur dioxide SO₂ emissions by 2015. Ameren was the first to reach out to state officials in forging this agreement.
- Also in 2006, Ameren signed an alliance agreement with Hitachi Power Systems North America Ltd. that will allow both companies to benefit from technology exchange in the areas of air quality control and efficient power generation.

REDUCING GREENHOUSE GASES

While requirements for carbon dioxide (CO₂) emissions are still in development, the electric power industry has been aggressive in taking voluntary actions to reduce, avoid or sequester greenhouse gas emissions. Ameren is proud to be a part of this effort.

At Ameren, we are:

- Seeking partners to develop wind-powered generation for our portfolio.
- Purchasing power from alternative energy sources like generators using mine, biomass, and landfill sourced methane and photovoltaics.
- Exploring, testing and evaluating opportunities for using coal-bed methane gas, landfill gas, agricultural methane and other alternative energy sources to generate electricity.
- Participating in Department of Energy (DOE) sponsored research into the feasibility of sequestering CO₂ underground in the Illinois basin.
- Working to develop a voluntary Renewable Energy Credit (REC)-based program to encourage the development of wind power in the Midwest.
- Participating in a DOE and Missouri Department of Natural Resources project evaluating Missouri wind resources for the next generation of wind turbines.
- Increasing the operating efficiency and capacity of our nuclear and hydroelectric plants to provide more energy to offset fossil fuel generation.
- Funding a project investigating opportunities to reduce nitrous oxide (N₂O), a potent greenhouse gas, from agricultural usage and track those reductions.
- In addition, in 2006 AmerenUE’s Labadie Power Plant opened the AmerenUE/Charah, Inc. Concrete Packaging Facility, a concrete packaging facility that will recycle more than 10,000 tons of fly ash and 60,000 tons of bottom ash annually into about two million bags of high-quality concrete mix. The fly ash is used as a partial replacement for Portland cement in the concrete manufacturing process. Because approximately one ton of carbon dioxide is emitted for every ton of Portland cement used to manufacture concrete, the facility represents a 10,000-ton reduction in annual CO₂ emissions. AmerenUE is also a partner in EPA’s Coal Combustion Products Partnership (C2P2), a program to help promote the beneficial use of coal combustion products.

Ameren also participates in PowerTree Carbon, a corporation formed by 25 U.S. electric utilities to fund forestation projects in the lower Mississippi River Valley as a means of removing carbon dioxide. In addition, we participate in UtiliTree Carbon Company. Formed with 40 other U.S. utilities in 1995, it sponsors a portfolio of forestry projects that manage greenhouse gases, especially CO₂. These projects involve a diverse mix of rural tree planting, forest preservation, forest management and research efforts at both domestic sites and international sites. Both programs are promoted by the investor-owned utility association, Edison Electric Institute, and other electric power industry groups for the Power Partners Program — a voluntary electric power industry climate initiative conducted in partnership with the federal government to help meet the U.S. presidential greenhouse gas intensity reduction goal.