



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Kentucky Utilities Company Settlement Information Sheet

OVERVIEW

(WASHINGTON) – On February 3, 2009, the U.S. Environmental Protection Agency (EPA) and the Department of Justice announced a major Clean Air Act New Source Review (NSR) settlement agreement with Kentucky Utilities Company (Kentucky Utilities). The Consent Decree resolves EPA’s enforcement action against Kentucky Utilities for Clean Air Act violations at one of Kentucky Utilities’ coal-fired electricity generating units at the E.W. Brown Generating Station, Brown Unit 3, located on Lake Herrington in Mercer County, Kentucky.

Under the settlement, Kentucky Utilities will spend approximately \$135 million to install state-of-the-art pollution control technology for the reduction of sulfur dioxide (SO₂) and nitrogen oxides (NO_x). Kentucky Utilities will also surrender 53,000 SO₂ allowances shortly after entry of the Consent Decree and annually surrender any excess NO_x allowances resulting from the installation and operation of selective catalytic reduction (SCR).

Upon full implementation, the United States anticipates that the settlement will reduce NO_x and SO₂ emissions by more than 31,000 tons per year as measured from the unit’s 2007 emissions. The use of SCR is expected to reduce annual NO_x emissions by approximately 3,000 tons. The use of flue gas desulfurization (FGD) is expected to reduce annual SO₂ emissions by approximately 28,500 tons. The United States also estimates an annual reduction of 1,041 tons of particulate matter (PM). Kentucky Utilities will pay a \$1.4 million civil penalty and expend no less than \$3 million in environmentally beneficial projects.

THE DEFENDANT

Kentucky Utilities is a Kentucky corporation headquartered in Lexington, Kentucky. It is a wholly-owned subsidiary of LG&E Energy LLC, which also owns Western Kentucky Energy and Louisville Gas & Electric Company. LG&E is a subsidiary of Louisville, Kentucky-based E.ON U.S., which is in turn owned by E.ON AG of Dusseldorf, Germany. Kentucky Utilities generates and distributes electricity to more than 500,000 customers in the Commonwealths of Kentucky and Virginia. It owns and operates five coal-fired electric generating stations in Kentucky. These plants provide approximately 4,570 megawatts of electricity from eleven separate generating units. The proposed Consent Decree covers one of the three coal-fired electric generating units at the E.W Brown plant, Brown Unit 3, which began commercial service in 1971.

THE POWER PLANTS ENFORCEMENT EFFORT

The United States has filed lawsuits against several coal-fired electric utilities for alleged violations of the Clean Air Act. This series of cases seeks to bring the power plant industry into full compliance with the NSR and Prevention of Significant Deterioration (PSD) requirements of the Clean Air Act. This settlement with Kentucky Utilities represents the sixteenth judicial settlement under the power plants enforcement effort. EPA has reached similar settlements with Salt River Project Agricultural Improvement and Power District, American Electric Power, East Kentucky Power Cooperative, Nevada Power Company, Alabama Power, Minnkota Power Cooperative and Square Butte Power Cooperative, First Energy (Ohio Edison Company, W.H. Sammis Power Station), Illinois Power Company and Dynegy Midwest Generation, Southern Carolina Public Service Authority (Santee Cooper), Southern Indiana Gas and Electric Company Culley Station, Wisconsin Electric Power Company, Virginia Electric Power Company, Alcoa, Inc. (Rockdale, TX facility), PSEG Fossil, and Tampa Electric Company.

CLEAN AIR ACT VIOLATIONS

The Complaint, filed in March 2007, alleges the following Clean Air Act violations:

- **PSD Violations.** The United States alleges that Kentucky Utilities violated the PSD requirements of the Act and the Kentucky State Implementation Plan (SIP) by modifying and subsequently operating Brown Unit 3 without obtaining a PSD permit and without retrofitting the unit with the Best Achievable Control Technology (BACT);
- **NSPS Violations.** The United States alleges that Kentucky Utilities violated the New Source Performance Standards (NSPS) by modifying Brown Unit 3 and continuing to operate this unit without complying with NSPS emission standards and other requirements;
- **Title V Permit Violations.** The United States alleges that Kentucky Utilities violated Title V of the Act and the Kentucky Title V regulations at Brown Unit 3 by operating this unit without revising its deficient Title V operating permit to incorporate NSPS or PSD BACT requirements for Kentucky Utilities' prior modifications; and
- **Operating Permit Violations.** The United States alleges that Kentucky Utilities operated the unit at a heat rate input in excess of the limit in its operating permit.

ENVIRONMENTAL BENEFITS

- **Harmful Pollutants Addressed by this Settlement.**

NO_x: Nitrogen Oxides cause a variety of health problems and adverse environmental impacts, such as ground-level ozone, acid rain, PM, global warming, water quality deterioration, and visual impairment. Nitrogen oxides play a major role, with volatile organic chemicals, in the atmospheric reactions that produce ozone.

SO₂: High concentrations of sulfur dioxide affect breathing and may aggravate existing respiratory and cardiovascular disease. Sensitive populations include

asthmatics, individuals with bronchitis or emphysema, children, and the elderly. Sulfur dioxide is also a primary contributor to acid deposition, or acid rain.

PM: Health effects of PM include increased hospital admissions and emergency room visits, increased respiratory symptoms and disease, decreased lung function, and alterations in lung tissue and structure and in respiratory tract defense mechanisms and premature death. PM also is the major cause of reduced visibility in many parts of the nation.

- **NO_x Emission Controls and Emission Limitations.**

The Consent Decree requires Kentucky Utilities to install and continuously operate an SCR at Brown Unit 3 by December 31, 2012, and to achieve and maintain a 30-day rolling average emission rate for NO_x of 0.070 lb/mmBTU – the lowest NO_x emission rate that the United States has obtained under power plant initiative. Kentucky Utilities will be allowed to comply with a slightly higher 30-day rolling average emission rate of 0.080 lb/mmBTU, however, if it can demonstrate that it has become technically infeasible to continuously operate the SCR because a drop in the demand for power from this unit causes the unit's temperature to drop below the minimum temperature required to run the SCR. With an emission rate of 0.070 lbs/mmBTU, Kentucky Utilities will reduce its NO_x emissions from Brown Unit 3 by more than 90% from its current levels.

- **SO₂ Emission Controls and Emission Limitations.**

The Consent Decree requires Kentucky Utilities to install and continuously operate a wet FGD at Brown Unit 3 by December 31, 2010, to reduce emissions of SO₂. Kentucky Utilities will be required to comply with a 30-day rolling average removal efficiency of 97% or a 30-day rolling average emission rate of 0.100 lb/mmBTU. In addition, Kentucky Utilities will be required to comply with an annual tonnage cap for SO₂ at Brown Unit 3 of 2,300 tons. This represents approximately 28,500 tons of SO₂ that will be reduced annually from Brown Unit 3 as a result of the wet FGD installation and operation.

- **PM Emission Limitations.**

Kentucky Utilities is required, beginning on the effective date of the settlement, to optimize the operation of its electrostatic precipitator (ESP) to maximize reductions of PM from Brown Unit 3. In addition, by December 31, 2010, Kentucky Utilities is required to meet a PM emission rate of 0.030 lb/mmBtu. Though compliance with the PM emission rate will be determined based on annual stack tests, Kentucky Utilities will also install a Continuous Emission Monitor by June 30, 2011 to monitor PM emissions from the common stack for Brown Units 1, 2, and 3.

CIVIL PENALTY AND ENVIRONMENTAL PROJECTS

Kentucky Utilities has agreed to pay \$1.4 million in civil penalties. As part of the settlement, Kentucky Utilities has also agreed to expend no less than \$3 million to perform three environmental projects to mitigate the adverse consequences of the alleged violations. The three projects include: a carbon capture and sequestration pilot, a school bus retrofit project, and a National Park restoration project.

- Kentucky Utilities will contribute \$1.8 million to a \$7 million carbon capture and sequestration pilot project led by the University of Kentucky and the Kentucky Geological Survey. The purpose of the project is to establish the effectiveness of storing compressed carbon dioxide gas, a by-product of coal combustion and a significant contributor to climate change, in deep injection wells in Kentucky. The success of this project may lead to more widespread carbon storage injection wells in Kentucky and reduce carbon dioxide emissions from coal-fired power plants in that state and possibly elsewhere.
- Kentucky Utilities will spend \$1 million to retrofit school buses in districts in Kentucky with filters or other controls to lower emissions of particulate matter breathed by students who ride those buses.
- Kentucky Utilities will pay \$200,000 to the National Park Service to be used in accordance with the Park System Resource Protection Act, 16 U.S.C. § 19jj, for the restoration of land, watersheds, vegetation, and forests in Mammoth Cave National Park.

COMMENT PERIOD

The proposed settlement, lodged in the U.S. District Court for the Eastern District of Kentucky, is subject to a 30-day public comment period and final court approval. Information on submitting comment is available at the Department of Justice website.