



Backgrounder: The White Bluff Environmental Controls Project

Entergy Arkansas, Inc. plans to install environmental controls on its White Bluff coal plant to reduce sulfur dioxide (SO₂) emissions by more than 95 percent and nitrogen oxide (NO_x) emissions by more than 50 percent. The White Bluff plant is an important source of power for Entergy Arkansas' customers, providing a reliable and low-cost supply of electricity.

Installing dry SO₂ scrubbers and low NO_x equipment complies with Arkansas' implementation plan of the U.S. Environmental Protection Agency's Clean Air Visibility Rule. These environmental controls are required for the plant to operate beyond September, 2013.

After conducting a thorough environmental and economic analysis and evaluating the alternatives (including a plant purchase, new plant construction and purchased power), Entergy Arkansas concluded that installing the new scrubber equipment at White Bluff would best serve our customers as the most cost-effective alternative.

White Bluff Facts

White Bluff Units 1 and 2:

1,657 megawatts (Unit 1 – 815 MWs, Unit 2 – 840 MWs).

Plant Ownership:

Entergy Arkansas, Inc. – 57%
AR Electric Cooperative – 35%
City of Jonesboro – 5%
City of Conway – 2%
City of West Memphis – 1%

Location:

Redfield, Ark.

Employees:

Approximately 145.

Fuel:

Coal, primarily from the Powder River Basin in Wyoming.

Date of Commercial Operation:

Unit 1 – 1980; Unit 2 – 1981

Scrubber Project Overview

Cost: Entergy Arkansas, Inc.'s portion of the estimated \$1.04 billion total is \$631 million.

Timeline: Construction is expected to start late 2010 with start-up of the second unit scrubber in spring 2013.

Technology: A spray dryer flue gas desulphurization system, or scrubber, will be installed to remove SO₂ and the furnace will be modified as low NO_x burners with separated overfire air.

How it Works: The dry scrubber system works by mixing gases exiting the furnace with a slurry of lime in large vessels. In these vessels (two or three per unit), the SO₂ and lime mix to form a powder, which is captured by a second system called a baghouse. This powder byproduct is then collected and disposed in an on-site landfill.

SO₂ and NO_x Reduction: Spray dryer technology will remove greater than 95 percent of SO₂ from the furnace gases before they enter the atmosphere. Low NO_x burner equipment will reduce NO_x emissions by more than 50 percent. Particulate matter and other air pollutants will also be reduced.

Economic Benefits: At peak construction activity, there will be 1,100 new jobs and an estimated 25 permanent new jobs at White Bluff. There will be additional economic impact through businesses and suppliers providing material, equipment and services in support of construction and operation of new facilities.

How prevalent is the scrubber technology?

Seventy percent of U.S. coal plants have installed scrubbers or have announced plans to install scrubbers: 196 operating coal units in the U.S. have been retrofitted with scrubbers, 211 units have scrubbers planned or under construction, and 134 units had scrubbers installed to meet environmental regulations when they were built.

What is Entergy doing about other emissions not mitigated by scrubbers, such as CO₂?

Entergy was the first U.S. electric generating company to establish a voluntary commitment to stabilize carbon dioxide emissions from its power plants at 2000 levels from 2001 through 2005. In 2006, Entergy made a second commitment to stabilize CO₂ emissions from its power plants at 20 percent below 2000 levels through 2010. Entergy’s cumulative CO₂ emissions for the years 2006, 2007 and 2008 were 122.9 million tons, 4 percent better than our stabilization goal of 127.7 million. Since Entergy made its first stabilization commitment in 2001, the company has emitted 327.4 million tons of CO₂, which is 20 percent below our cumulative stabilization goal for the eight-year period.

As a Matter of Fact:
White Bluff is a relatively low emitting unit for SO₂ because it has federal permits limiting its sulfur emissions and requiring it burn low sulfur coal. In fact, over the last 20 years, other utilities have had to make investments to install scrubbers to bring their emissions more in line with standards Entergy has already met.

Where would Entergy Arkansas’ \$631 million share of the project come from?

The costs of the capital expended on the project (like financing costs you would have on a construction loan on a new house) will be recovered over time from Entergy Arkansas’ customers through rates approved by the Arkansas Public Service Commission.



Artist rendering of installed scrubbers at White Bluff.