

Iatan (Completed 2010)
John King
to:
Mark Stein, Sharon DeMeo
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Project Features

Alstom supercritical pulverized coal unit
Toshiba 850-MW net steam turbine generator
Powder River Basin coal with provisions for 10% blend of eastern bituminous
Zero liquid discharge facility
Very low emissions

Project Background and Description

The Iatan project consists of a new coal-fired steam electric power unit (Unit 2) with a nominal net electric power output of 850 MW as well as the addition of a new pulse jet fabric filter (PJFF) and wet flue gas desulfurization (WFGD) system on the existing Unit 1. The project will be located at the existing Iatan Generating Station just outside of Weston, Mo. The project includes the addition of a solid waste landfill for the combustion byproducts. The boiler is provided by Alstom and is of a supercritical, sliding-pressure, pulverized coal, balanced-draft, corner-fired design. The steam cycle includes eight stages of feedwater heating and will

operate with steam conditions of 3690 psi main steam pressure and 1080°
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for main steam and hot reheat temperatures.

Heat rejection from the facility is by a new cooling tower. Raw water for the project is supplied from a new collector well system located on the site. The project includes a vapor compression zero liquid discharge system to treat scrubber blowdown. Dry combustion byproducts will be placed in a new on-site solid waste landfill.

The unit will be fueled by Powder River Basin (PRB) sub-bituminous coal but will be designed to burn a 10% blend of eastern bituminous coal. Modifications to the existing fuel supply rail system are required to facilitate unloading of 150-car unit trains in the future. The existing unloading and fuel handling systems will be used and will be modified to provide additional redundancy and contingencies to facilitate maintenance of equipment without interruption of the operation of the current and proposed units.