Fort Martin Units 1 and 2

**Plant Owner**
Monongahela Power
a subsidiary of FirstEnergy Corp.

**Plant Name**
Fort Martin Units 1 and 2

**Location**
Maidsville, West Virginia

**Contract Order**
2006

**Commercial Operation**
2009

**Overview**
The wet flue gas desulfurization (FGD) system from Babcock & Wilcox (B&W) features a combination of design components to provide a high level of reliability and removal efficiencies. These include B&W’s signature dual tray tower design that provides excellent gas-to-liquid contact and uniform flow distribution through the absorber spray zones; its patented inlet awning; interspatial headers to reduce absorber height, pump power requirements, and internal support costs; forced oxidation system; and advanced mist eliminators.

**Boiler/Plant Information**
- 2 x 550 MW
- Boiler type: Pulverized coal
- Design fuel: Bituminous
- Additional environmental equipment: Electrostatic precipitator (ESP)

**Project Summary**
- Engineering, procurement and construction of a wet FGD system
- System designed to remove 98% of the entering sulfur dioxide (SO₂)
- Type: Limestone forced oxidation with gypsum byproduct
- Project awarded: April 2006
- Construction plan included on-site scrubber module fabrication area
- Operation dates: November 2009 (Unit 1); December 2009 (Unit 2)

**B&W Scope**
- Two (2) limestone milling systems (one per boiler)
- Gypsum dewatering system including three (3) horizontal table filters (two operating, one spare)
- Buildings and structural steel
- Construction of B&W-supplied equipment and steel provided by Babcock & Wilcox Construction Co., Inc.

**Results**
- Both of the commissioned units have met performance guarantees
- Achieved mechanical and substantial completion milestones ahead of schedule
- Units 1 and 2 started up on schedule one month apart

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The construction plan included an on-site scrubber module fabrication area that produced absorber modules for both the Fort Martin and Hatfield’s Ferry sites. This plan optimized modularization opportunities because off-site modularization was not feasible due to access constraints created by locks on the adjacent Monongahela River.