

Sandow Steam Electric Station Unit 5



The Sandow Steam Electric Station Unit 5 is being built adjacent to existing units.

Bechtel is providing lump-sum, turnkey engineering, procurement, construction, and startup services for the Sandow Steam Electric Unit 5, a 564.6 MW (net) lignite-fired circulating fluidized bed (CFB) boiler power plant in Milam County, Rockdale, Texas, approximately 65 miles northeast of Austin. Plant construction began in June 2006 and is targeted for completion in summer 2009.

PLANT CONFIGURATION

The plant consists of two 315 MW (nominal) boilers and a single steam turbine generator. The boilers are being supplied by Foster Wheeler, and the steam turbine generator is being furnished by Alstom. The thermal cycle is based on a reheat steam cycle with seven stages of feedwater heating. Each boiler is designed to provide approximately 2,045,000 pph of steam at 2,400 psig and 1,000 °F at the steam turbine inlet.

FUEL DELIVERY

The lignite coal will be conveyed to an existing crusher tower where it will be screened, crushed, and mixed. New power block feed conveyors will convey the coal to the silo feed tripper conveyor for storage in 4-hour silos.

EMISSIONS CONTROL

Nitrogen oxides (NO_x) are controlled through flue gas cleanup performed by a selective noncatalytic reduction (SNCR) system. Secondary sulfur dioxides (SO₂) and other acid gases are captured using a fluidized bed flue gas desulfurization (FB-FGD) scrubber system. Particulates are captured using a pulse-jet baghouse.



Location:

Rockdale, Texas, USA

Customer:

TXU US Holdings Company

Scope of Services:

Project Management
Engineering
Procurement
Construction
Startup

Project Completion:

2009

Units and Megawatts:

2 x 315 MW



Significant Features/ Accomplishments:

- New circulating fluidized bed boiler being built adjacent to existing units
- Uses a fluidized bed flue gas desulfurization (FB-FGD) system
- Material handling and water treatment systems integrated with existing facility
- Surpassed more than 1 million hours without a lost-time accident