Relocation and Rebuild of BFB Boiler Readies Snowflake White Mountain Power for Renewable Energy Market

Project Case History

Snowflake White Mountain Power
Snowflake, Arizona

Project positions plant to generate electricity, reap renewable benefits

Background/Scope
Snowflake White Mountain Power’s goals serve to define project scope:

- The retired unit, originally supplied by The Babcock & Wilcox Company (B&W), was converted to an open-bottom bubbling fluidized-bed (BFB) combustor and relocated to Snowflake, Arizona.
- Boiler drums and supporting ancillary equipment from a decommissioned boiler in Sheldon, Texas, were reused.
- The new unit was configured to utilize wood and paper mill sludge to generate electricity.
- For fuel flexibility, the bubbling bed was designed for deep staged combustion, resulting in a close-coupled gasification process.

Solution: Purchasing a New BFB while Reusing Existing Equipment Enabled Customer to Meet Schedule and Reduce Project Costs
B&W has extensive experience with boiler conversions and modifications, including almost total replacement of older and inactive boilers.

B&W’s renewable solution: an open-bottom, BFB combustor unit – to increase steam flow, meet low emissions requirements, enhance fuel flexibility and deliver reliable capacity.

This BFB boiler reused an existing boiler drum, environmental and supporting auxiliary equipment from a retired unit enabling B&W to meet the customer’s schedule and reduce project costs.

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Benefits

- Increased steam capacity on renewable fuels positions customer as a viable, independent electricity producer in today’s renewable marketplace.
- Burning paper mill sludge as a fuel source reduces associated landfill needs and costs.

Positive Outlook

B&W’s expert design and technical prowess with products for the renewable energy market are assets for its customers – like Snowflake White Mountain Power – assuring their project’s certainty of outcome.

This renewable project, slated for operation in the 4th Quarter 2007, resulted in converting a once abandoned boiler into a valuable asset at a lower capital cost. It is anticipated that the plant will serve as a benchmark project, which could be replicated in other areas of the country.