

Utility Improves Efficiency and Saves Money by Using Thermal System Monitoring Software

Overview

Salt River Project, Coronado Station is a 773 MWe coal-fired, steam electric generating station in eastern Arizona.

Like many other utilities, Salt River Project monitors plant instruments to track efficiency. GSE TrueNorth was able to support Salt River Project by utilizing a Thermal System Monitor (TSM Enterprise) to aid in identifying a costly maintenance issue.

Customer: Salt River Project
Plant Type: Coal-fired
Solution: TSM Enterprise



Challenge

Salt River Project wanted to establish new thermal performance baselines by conducting a heat rate test for Unit 2. GSE TrueNorth was brought in to help with the performance of the heat rate tests.

While evaluating data for Unit 2, GSE TrueNorth engineers identified anomalies in the gas exit temperature which can indicate a possible soot blower problem. Further evaluations were required to pin-point the exact nature of the problem.

Solution

GSE TrueNorth selected TSM Enterprise to evaluate the Salt River Project Unit 2 heat rate test data. TSM Enterprise is a tool designed to perform thermal performance analysis and reporting functions, while also providing a platform to do further analysis. TSM Enterprise is designed to display a topdown evaluation of a plant's thermal performance.

GSE TrueNorth's TSM Enterprise identified a 30°F differential in gas exit temperatures for Unit 2 air heaters A&B.

A physical inspection of the air heater soot blowing equipment was performed. Although the control room indicators were not reporting a problem, the inspection revealed that one of the heaters had an inactive blower. The soot blowing equipment was activated and a heavy cleaning of the air heater was performed.

Results

Using TSM Enterprise software, Salt River Project was able to identify and resolve an issue with their air heater performance, resulting in overall gas exit temperature improvement. Reducing the gas exit temperature increases boiler efficiency and subsequently lowers the unit heat rate, resulting in lower fuel consumption and fuel costs.

Evaluating data using the right tools identifies underlying issues and aids in disbursing maintenance dollars properly. TSM Enterprise provides an over-all summary to quickly grasp the status of the unit while providing the ability to easily obtain detailed reporting of significant thermal performance behavior.

Knowledge, experience and the right tools are critical for quickly identifying costly maintenance issues in today's power industry.

GSE TrueNorth is committed to providing the best tools and experience available with the goal of improving the plant's bottom line whether it is lower fuel costs or increased power output.

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