

## Cogeneration

### Addition of Package Boiler Ensures Meeting Contractual Obligations

Saguaro Power Company, located in Henderson, Nevada, an industrial suburb of Las Vegas, operates a 90 megawatt power generation facility with two natural gas powered turbines. Turbine exhaust is directed through heat recovery steam generators (HRSG). Excess steam produced in the HRSG units is sold to nearby industrial customers.

Saguaro Power Company has contracts with nearby industrial firms to supply them with process steam. One firm in particular depends on Saguaro for a continuous steam supply to support on-going, around-the-clock production operations. If the supply is interrupted, the firm is forced to shut down. Occasionally, Saguaro must take its turbines and associated HRSG units off-line for inspection, maintenance, and repair. During those periods, an alternate steam supply must be provided to meet the company's contractual obligation to its customers.

When Saguaro Power Company's Henderson, Nevada, plant was built in 1991, an auxiliary boiler was installed. It was large enough to meet the company's facility demands as well as to maintain a steam supply to local steam customers when one turbine and associated HRSG were taken off line. However, since 1991 there has been a significant increase in customer demand for process steam. The one auxiliary boiler became inadequate in situations where both turbines and associated HRSG units were shut down. Therefore, to guarantee an uninterrupted supply to its customers, Saguaro decided to increase off-line steam production capability. The company did this by adding an additional auxiliary boiler.

Saguaro Power contracted with Nationwide Boiler to provide a new, 70,000 lb/hr, 300 psig boiler with a Todd low NOx burner and an EconoStak economizer. The boiler was available from Nationwide Boiler's inventory,



and, after outfitting it with the required burner and economizer, it was delivered to Saguaro Power. Engineering and installation were handled by Saguaro Power with technical support from Nationwide Boiler. To reduce capital outlay, Saguaro opted to lease the new boiler for the duration of the contract with its customers.

The boiler was delivered to Saguaro Power Company by Nationwide Boiler and was quickly outfitted with the low NOx burner and efficient economizer. The company was able to meet its' contractual obligations, without interference with ongoing operations.

### Customer Profile

- Saguaro Power Company
- Henderson, NV
- Operates a 90 megawatt power generation facility with two natural gas powered turbines

### Supplied Equipment

- 70,000 lb/hr, 300 psi working pressure, package watertube boiler
- Low NOx burner
- EconoStak economizer

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