

Grand River Energy Center

Turbine Inlet Chilling Application

Chouteau, Oklahoma



Rendering of GRDA Energy Center Unit #3 Courtesy of the GRDA website

PROJECT FACTS

Power Increase:

Incremental 60 MW Added

Hybrid Refrigeration System:

(1) TAS F70, 7,585 TR, Multi-stage Centrifugal

Ambient Design Conditions:

99.4F DB, 75.82F WB

Gas Turbine Information:

Mitsubishi 501J

CHALLENGE & SOLUTION

With an increase in power demand among their customers, and a company-wide goal to increase efficiency and decrease reliance on coal power, the Grand River Dam Authority determined to construct a new gas plant on the same site of their existing two unit coal plant. With an effort towards efficiency, and lowered cost, GRDA considered a number of power augmentation solutions. After a thorough analysis with assistance from Black and Veatch, Kiewit, and The Industrial Company, it was determined that TAS Energy's Turbine Inlet Chilling System offered the lowest \$/kw power at the best efficiency. Combined with the high efficiency Mitsubishi 501J gas turbine selected, this plant is expected to be among the most efficient in the country.

About TAS Energy

TAS Energy provides clean and highly efficient solutions through the design and manufacturing of modular energy conversion and cooling systems for the power generation industry; district, commercial, and industrial process cooling; data center/mission critical; and the renewable energy sectors.