County of Fresno
Fresno, California

Client Contact
John Hays
Facility Services & Procurement Manager with General Services
559-488-4721

Completion Date
January 2006

Contract Term
15 year Guaranteed Energy Savings Program

Cost
$13 Million

Annual Savings Guarantee
Cost Savings
- $1.29 Million

Energy Savings
- 15 Million kWh (59.4% reduction, electricity)
- 1,866 kW Avg/mo (40.8% reduction, electricity)
- (859,671) Therms (100.3% increase, natural gas)
- 64 Million gallons (33.1% reduction, water)

Emissions Reductions
Projected
- 5,086 Tons of CO2
- (3) Tons of NOX
- 0.5 Tons of SO2

Project Manager
Brian Elwell, PE
Burns & McDonnell
Energy Services

Project Design & Engineering
Burns & McDonnell Engineering Company, Inc.

Project Summary
Performed Investment Grade Audit and implemented the measures listed below. The Investment Grade Audit included detailed surveys of all buildings, analysis and modeling of a comprehensive list of energy conservation measures and associated cost estimates. Implementation includes the design, installation, and performance verification of the measures listed below.

Scope of Services
- New 1.25 MW Combined Heat & Power Facility (fuel switch)
- Conversion of Electrical Service from Secondary to Primary
- New Power Quality System
- High Efficiency Lighting Modifications
- Upgrade Chillers with Variable Frequency Drives
- Upgrade & Optimize the Existing Energy Management System
- New Air Handlers
- New VFDs and High Efficiency Motors on Fans & Pumps
- Convert Air Distribution System and Air Handlers to VAV
- New High Efficiency Boilers
- New Steam Distribution System to Optimize Boiler Performance
- New Low Flow Plumbing Systems in Detention Areas
- New Water Treatment Systems on Cooling Towers & Laundry for Water Conservation.
- New Irrigation Controls for Water Conservation.

Key Project Benefits
Burns & McDonnell developed and administered multiple rebates through two rebate programs. The Standard Performance Contract (SPC) Program was utilized to generate over $500,000 of rebates for the County of Fresno. The Self Generation Incentive Plan (SGIP) was utilized to generate $1 million of rebates for the cogeneration facility.