

Denton County



CUSTOMER BENEFITS

- Guaranteed energy savings over 11 years
- Centralized and remote monitoring
- Improved environmental control
- Continued project support

PROJECT AT A GLANCE

Project Type:
Energy Performance Contract

Location:
Denton, Texas, USA

Number of Buildings:
7

Guaranteed Annual Savings:
\$69,970

Energy Conservation Measures:

- TAC I/NET™ control system
- 1,000+ control points
- Power correction
- Rooftop units replacement
- 12 micro controller interfaces
- 70 AHU micro regulators
- 7 NetPlus™ routers



County governments understand that sometimes you have to spend money in order to reduce energy costs. They also know it makes good business sense to choose an energy solution that guarantees savings over an extended period of time.

The Challenge

Denton County had a pre-existing energy management system installed in some of its facilities. In a plan to further trim energy costs, Schneider Electric identified seven additional buildings in 2001 that required further energy conservation measures. The targeted buildings included several courthouses, the county jail, and a government center.

Installing new systems and retro-fitting equipment in these facilities presented some interesting challenges. All work would have to be performed without disrupting day-to-day operations. The jail, which operates on a 24x7 basis, would require workers to be escorted by guards, whether they were installing tamperproof lighting fixtures in cells or replacing rooftop units. Moreover, the project would have to be completed in a short timeframe.

Denton County wanted an energy solution that offered guaranteed savings. The county selected Schneider Electric over three other companies because it offered the best value for the proposed work with a solid reputation in the industry.

The Solution

In addition to reducing utility costs and air pollution, Denton County wanted to extend EMS capacity to previously unmonitored areas. Schneider Electric proposed leveraging the TAC I/NET™ system and adding Direct Digital Controls (DDCs) for air handling units and a central heating and cooling plant. Temperature sensors interfacing with the TAC I/NET™ system enable optimal start/stop and setback/setup features to conserve energy in administrative areas. In addition to enabling the facilities staff to schedule the system for occupied, unoccupied and holiday periods, the TAC I/NET™ system provides a temporary after-hours override capability by zone. Workers retro-fitted light fixtures with more efficient lamps and electronic ballasts. Replacing old equipment not only improved lighting quality in these facilities, but also enhanced energy efficiency by cutting utility consumption and costs.

The project also called for implementing power factor correction capacitors to lower energy costs. Installation of new, more efficient rooftop equipment with DX cooling and gas heat at the jail trimmed costs as well.

Today, the facilities staff monitors, controls and supports the EMS and lighting system using two workstations and a laptop computer. Since the jail is always occupied, one of the workstations is located on-site to ensure an appropriate environment at all times. In addition, the TAC I/NET™ system permits remote dial-up access for systems control.

The Bottom Line

The performance contract offered a self-funding project with an expected annual savings of \$83,318 for 11 years, beginning in 2001. To date, this project has generated energy savings greater than the original estimate. The cost-cutting energy conservation project was completed on time, on budget, and without disruption to the day-to-day operations at the seven County facilities.