



PROJECT AT A GLANCE

Project:

Energy Solutions

Location:

Denton, Texas, USA

Guaranteed Savings:

\$69,970 annually

Energy Conservation Measures:

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

Number of Buildings:

7

Denton County

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 already had energy management systems installed in some of its facilities. In a plan to further trim energy costs, TAC® identified seven additional buildings in 2001 that needed energy conservation measures. The targeted buildings included several courthouses, the county jail, and a government center.

Installing new systems and retrofitting 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 time frame.

Denton County wanted an energy solution that offers guaranteed savings. The county selected the TAC Energy Solutions group over three other companies because it offered the best value for the proposed work and has 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. The Energy Solutions group proposed leveraging the I/NET™ system and adding Direct Digital Controls (DDCs) for air handling units and a central heating and cooling plant. Temperature sensors interfacing to the I/NET system enable optimal

CUSTOMER BENEFITS

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

Denton County

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 I/NET system provides a temporary after-hours override capability by zone. Workers retrofitted light fixtures with more efficient lamps and electronic ballasts. Replacing the old equipment not only improved the 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 I/NET system permits remote dial-up access for systems control.

THE BOTTOM LINE

The energy solutions contract offered a self-funding project with 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 these seven County facilities.

GOVERNMENT PROFILE

For government facilities, a building solution that delivers energy efficiency, comfort and security is critical and necessary. TAC's proven solutions and reliable service provide government officials with a controlled, dependable indoor environment backed by savings that help protect the investment of taxpayers.

TAC has proven experience in working with government agencies to take advantage of building management solutions that maximize energy efficiency and performance. This is all part of Building IT solutions for government facilities – designed for economy, operational efficiency and the flexibility to address future needs.

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