

Graham Independent School District



CUSTOMER BENEFITS

- Guaranteed energy savings
- Reduction of manual system and equipment maintenance
- Improved occupant comfort
- Local and remote access from the desktop
- Self-maintained and managed system

PROJECT AT A GLANCE

Project Type:
Energy Performance Contract

Location:
Graham, Texas, USA

Number of Buildings:
6 schools

Guaranteed Annual Savings:
\$65,885

Energy Conservation Measures:

- Lighting retrofits
- HVAC upgrades
- New control system

Environmental Facts:

Graham Independent School District annually saves energy that is equivalent to ...

- Reducing 1,130 tons of CO₂ from the atmosphere
- Removing 226 automobiles off of the roadway
- Planting 307 acres of trees



Motivated to make much-needed retrofits to its building systems, Graham Independent School District opted to pay for the retrofits with energy savings guaranteed by a performance contract.

The Challenge

This picturesque community of 9,000 people just northwest of Fort Worth has a student enrollment of 2,400 in grades K-12. With six schools scattered across 491 acres, the district realized that the time had come to retrofit aging building systems.

The multi-zone design at the junior high was functioning poorly and required most zones to be manually changed over from heating to cooling. In addition, throughout the district there was no way to automatically schedule building systems to turn off after hours, on weekends and during holidays.

Graham ISD decided to pursue a solution that would make the district's systems more energy efficient and manageable. The challenge was to find an innovative way to fund the system retrofits.

Schneider Electric proposed a performance contract that would allow Graham ISD to use guaranteed energy savings to fund the \$1.2 million project. And a state program provided the financing at a special rate because the design of the retrofits would conserve energy.

The Solution

After conducting an energy audit, Schneider Electric worked closely with Graham ISD to develop a plan to meet the district's specific needs.

To improve comfort levels throughout the junior high school, Schneider Electric converted the main air conditioning system from packaged, multi-zoned units with chilled water and steam heating to individual classroom units. Also, the addition of new air conditioning units in the senior high school's competition gym and the junior high school's gym greatly enhanced the comfort of all who use these facilities.

Districtwide retrofits included replacing T12 lighting with more energy-efficient and better quality T8 lamps to cut energy consumption and costs. Also, installing a new building control system gives the facilities staff local and remote access to adjust all building schedules quickly and easily.

The Bottom Line

In the first year of the performance contract, Graham ISD saved more than \$75,000 – exceeding the projected annual energy savings of \$65,885.

Schneider Electric trained the district's staff to self-maintain and manage the new building control system. As a result, the staff is now able to schedule automatic shutdown of building systems throughout the district to conserve energy and control costs when school facilities are not in use.