

# Scottsboro City Schools

Scottsboro, Alabama



## CUSTOMER BENEFITS

- Reduced energy consumption and costs
- Increased energy and water efficiency
- Guaranteed savings
- Low-interest funding sources
- Single contact for service and support
- Completed all major projects on 5-year plan
- Increased student engagement
- Increased public awareness and goodwill

## PROJECT AT A GLANCE

### Location

Scottsboro, Alabama

### Project Type

Performance contract for energy and infrastructure renovations

### Properties

9 facilities (623,033 sq.ft.)

### Funding

\$5.6 million QEGB

\$169,000 TVA Energy Right Rebate

\$10,000 ARTAG grant

### ECMs

Lighting retrofits, occupancy sensors, exterior lights

Centralized BAS

Major mechanical system and equipment modifications

Water system commissioning

Computer optimization program

Solar learning lab

### Annual savings

33% of utility/operational costs (\$6.7 million over 20-year contract)

### Installation

2013



**Faced with unprecedented budgetary pressures and a long list of deferred capital improvements, this forward-thinking school district opted for a performance contract from Schneider Electric to fund major renovations.**

## The challenge

Located in the foothills of the Appalachian Mountains, Scottsboro is home to 14,770 Alabamans who value the small-town environment, competitive state business tax rates, and easy commute to jobs in Huntsville, Chattanooga (Tenn.) and Atlanta (Ga).

With a student population of 2,700, the city operates four elementary schools (K-6), a middle school (7-8) and a high school (9-12), and an adult learning center for those seeking a GED (general education diploma) or career training. By 2012 many of the facilities were in need of major renovations.

Outdated hydronic systems. Leaky pipes. Window A/C units. Obsolete technology. These were just a few of the challenges confronting school officials. Then the outdated piping infrastructure at one facility began to fail. Pipes burst and flooded the school, leading to disruptions and costly remedies.

School officials looked to partner with a company that could help them address their entire “wish list” — including funding improvements on a tight budget and bringing schools up to the rigorous codes enforced by the Alabama Building Commission. After talking with Schneider Electric representatives, they decided to consider an innovative approach to their situation.

Schneider Electric proposed a performance contract (a turnkey solution) that would not only take advantage of new technologies and systems, but would also generate a funding stream to help pay for the project through guaranteed energy and operational savings. (In the unlikely event those savings are not realized, Schneider Electric will pay the difference.

Scottsboro City Schools recognized that Schneider Electric had the requisite experience, expertise and strategic alliances to execute a project of this size and scope, and to navigate through complicated building codes. After district officials decided to team with Schneider Electric to get the work done, Schneider Electric and its strategic partners jumped right in to complete the bulk of the HVAC work during the summer break.

### The solution

After auditing all facilities, Schneider Electric submitted its plan to renovate or implement new systems for building automation, lighting, mechanical equipment, water commissioning, information technology (IT) and renewable energy.

A new, centralized building automation system (BAS) allows facilities staff to control everything from indoor environments to HVAC schedules. The BAS also monitors performance of all building systems and automatically notifies facilities staff if a problem arises.

Lighting retrofits, occupancy sensors and installation of new interior and exterior lighting enhances learning and work environments while aiding security efforts.

Comprehensive HVAC renovations in six schools included removing outdated, two-pipe cooling and heating systems and installing rooftop units in two schools. Schneider Electric also replaced ceilings in one school and brought a recently renovated HVAC system in another facility up to the latest indoor air quality code with an innovative, bioclimatic system.



“Our partnership with Schneider Electric delivers far-reaching benefits...and has been the best possible decision for our students, staff and community.”

**Dr. Judy Berry**  
Superintendent

“Saving 2.2 million kWh per year enabled the district to receive \$169,000 through the TVA Energy Right Rebate program”

Other mechanical projects included removing boilers at a few schools, installing supplemental HVAC equipment as needed, and making major renovations to large mechanical systems at the high school.

Properly commissioned water systems reduce water consumption and costs. Implementation of new IT software shuts down computers in any facility when they are not being used, saving energy and lowering operating costs.

Internet-based monitors installed in each building lobby keep students, staff and visitors informed about special events, schedules and the impact of the districtwide energy project. One elementary school has a solar learning lab that ties into a real-time energy dashboard, which is visible from the highway and accessible through the Web.

To fund all these improvements, Schneider Electric assisted school officials in applying for federal and state bonds, as well as grant and rebate programs, enabling the district to take advantage of attractive, upfront funding sources and historically low interest rates.

Federal assistance came in the form of a \$5.6 million QECCB (Qualified Energy Conservation Bond). The federal QECCB subsidizes about 70 percent of the credit rate, allowing the district to benefit from a low net interest rate of 1.3 percent.

Saving 2.2 million kWh per year enabled the district to receive \$169,000 through the TVA Energy Right Rebate program. Schneider Electric also partnered with ARTAG (Alabama Retirees Technical Advisory Group), which led to the district's receiving \$10,000 to put toward gym lighting equipment.

### **The bottom line**

This project provided Scottsboro City Schools with an effective way to fund long-needed, critical and comprehensive HVAC renovations that the district had no other way of funding.

Replacing outdated mechanical systems, implementing water conservation measures, updating IT capabilities, and using renewable energy (i.e., solar) increase operating and energy efficiency at all facilities.

Schneider Electric's knowledge and experience in implementing projects that comply with strict building codes helped streamline the process and prevent unnecessary waste. Financial expertise helped in sourcing and bundling opportunities to stretch guaranteed savings to fund more improvements — without capital outlay.

After commissioning each system, Schneider Electric's Performance Assurance Support Services (PASS) kicked in. PASS provides remote 24/7 monitoring and technical support along with a complete analysis and reporting of energy use, guaranteeing savings and project performance after the initial installation.

The environmental impact of the capital improvements is equivalent to:

- Removing 6,800 cars from the roadways
- Reducing CO<sub>2</sub> emissions by 30,850 tons
- Planting 7,650 acres of trees to balance the ecosystem

