



“The project not only ensures energy savings, but has also enhanced District 46’s learning environment to further support our students and staff for successful academic experiences.”

*Kathy Wolfe  
Assistant Superintendent*

**PROJECT AT A GLANCE**

- Project Type:**  
Energy Solutions
- Location:**  
Crystal Lake, IL
- Funding:**  
Tax-free, municipal lease/purchase
- Guaranteed Savings:**  
\$32,766 annually
- Number of Buildings:**  
2 (Total of 124,000 sq. ft.)
- Equipment installed:**  
TAC Vista EMS, unit ventilators, lighting, water softener
- Applications:**  
Energy management, lighting retrofit, water softening system

## Prairie Grove CSD 46

Like other school districts facing budget constraints, Prairie Grove Community School District 46 discovered that guaranteed savings from a performance contract could pay for energy management improvements ... and more.

### THE CHALLENGE

Prairie Grove CSD 46 is located about 60 miles northwest of Chicago. What began as a one-room schoolhouse in 1860 has evolved into a school district serving 1,000+ students in grades K-8.

Motivated by a desire to improve classroom comfort levels and decrease energy consumption and costs, the school district searched for an energy management solution it could afford. In a small school district where every dollar counts, finding the funding for energy improvements can be challenging – unless there’s a self-funding performance contract.

When TAC’s Energy Solutions group first talked with district officials about a performance contract solution, they had already been approached by another company. The difference between the two companies was in how they approached performance contracting.

The TAC Energy Solutions Group began by performing a feasibility assessment. Next, TAC hosted a workshop to “pull back the veil” on performance contracting, explaining the benefits as well as the risks. Then they performed a preliminary energy audit to determine potential savings. And finally, they followed up with a detailed energy audit to finalize the project scope for Prairie Grove CSD 46.

During the audits, TAC used the district’s actual utility bills and looked at a variety of utility rate tiers along with other factors, such as staffing and maintenance costs. The thoroughness of TAC’s approach maximized the ability to generate sustainable potential savings.

As with any project involving schools, TAC faced the challenge of installing the new energy management system and making other improvements while classes were in session.

### CUSTOMER BENEFITS

- Guaranteed energy savings
- Ease of operation and maintenance
- Interoperability with other systems
- Local and remote access
- Flexibility to expand

# Prairie Grove CSD 46

## THE SOLUTION

TAC's Energy Solutions group installed a TAC Vista® energy management system to give Prairie Grove CSD 46 the energy management capabilities it desired. Today, the district uses the TAC Vista system to schedule HVAC with an enable/disable capability to accommodate diverse building usage schedules.

A front-end computer helps the district use system reports for trending purposes and system optimization. Full color graphics, along with local and remote access to the system, make it easy for the district to monitor and manage comfort levels in both the elementary and middle schools. The new system also allows Prairie Grove CSD 46 to meter utility usage separately for each school.

The TAC Vista system also controls the boilers and big package, rooftop units. This capability provided additional control and savings for the school district.

Energy-efficient T8 lamps replaced T12 lamps in classrooms and hallways. High-bay fluorescent lights with "instant strike" capabilities replaced metal halide lamps in the elementary school's gymnasium. The retrofit dramatically increased light levels throughout both schools and helped cut energy costs, substantially improving the classroom learning environment.

## THE BOTTOM LINE

The project was completed in September 2003. In the first full year of the performance contract, the guaranteed savings exceeded projections. The school district also used extra savings generated by the energy management system and lighting retrofit to replace a wing of unit vents and add a water softener system.

Most importantly, though, is that Prairie Grove CSD 46 funded these improvements within its existing budget through a tax-free, municipal lease/purchase plan.

## EDUCATION PROFILE

Parents and students have high expectations when they select a school, whether it is public or private. They require a quality education and an experience that prepares students for the future. State-of-the-art facilities, safety and security are of primary concern. In order to meet rising expectations within this cost-sensitive market, schools, colleges and universities must invest wisely in their facilities as a strategic asset to keep occupants comfortable and attract faculty and staff.

TAC has proven experience with public schools, private schools and higher educational facilities in providing building management solutions that maximize energy efficiency and performance. This leads to a reduction in operating costs and enables the reallocation of saved resources to new programs for students within the same budget.

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