



Southeast of Saline USD 306

Students promote “green,” produce “green” for their school district

Gypsum, Kansas -- It was the students at Southeast of Saline (SES) school district who envisioned and promoted high performance upgrades in their district to initiate a \$1.4 million infrastructure improvement effort that is projected to cut energy consumption by at least 21 percent, saving about \$83,000 per year in energy and operating costs. Just as importantly, the project has improved the learning and teaching environment and has served to build student interest in science, technology, engineering and math.

Below: Dr. Justin Henry, Superintendent of Southeast of Saline USD 306, receives the Kansas Governor’s Energy Achievement Award from Lt. Governor Troy Findley, left.



About Southeast of Saline USD 306

Southeast of Saline USD 306 includes more than 700 students with all grades located in a single, 151,000 square-foot building. The school is located near Salina, Kansas, five miles west of Gypsum.



Southeast of Saline students drove high performance changes to save energy and improve learning.

Systems & services

- HVAC systems upgrades for better efficiency, improved IAQ and better comfort control
- Trane donated a Tracer Summit™ building automation system (BAS)
- Phillips Lighting donated new, high-efficiency light bulbs to cut light energy use by nearly half

Challenge

A few years ago the students at SES developed an interest in conservation and learning what they could do to help preserve and improve the environment. This interest led to the creation of a leadership class and a "Going Green Club," plus the "BTU Crew" which is an energy-efficiency curriculum developed by Trane to educate students on how to make buildings--and their own homes--more energy efficient. Initial efforts included a paper recycling program. Then the students began studying energy use at their school and what could be done to save energy. They recommended replacing about 10,000 light bulbs with new high-efficiency bulbs that would nearly halve the energy use. They also recommended replacing the school's old HVAC equipment with new, high efficiency units from Trane. In fact, the Class of 2009 indicated that one of the Top Ten reasons they were ready to graduate from high school was due to the old ineffective and inefficient air conditioning.

Solution

Impressed by commitment of their students to improving their school's performance, the SES district leaders put into action a plan to make the infrastructure improvements. Facing tough budgets, the school board used a creative approach to finance the \$1.4 million in improvements using a performance contract under the state's Facility Conservation Improvement Program that uses guaranteed

savings in energy and operating costs to pay for the project. SES worked with Trane on HVAC improvements to improve efficiency, indoor air quality and thermal comfort. Trane also donated a new Tracer Summit™ building automation system (BAS) to help optimize HVAC comfort and efficiency. Phillips Lighting donated 4,000 high-efficiency bulbs for the lighting improvement portion of the project.

Results

The HVAC and lighting improvements are expected to save SES about \$83,000 per year (\$29,657 in guaranteed energy savings and \$53,953 in operating and maintenance costs) over the fifteen year performance contract. Savings are being validated and verified by International Performance Measurement Verification Protocol (IPMVP) Option A Calibrated Simulation and Option D Stipulated Savings. Dr. Justin Henry, SES Superintendent, said, "Upgrades will benefit both student learning and the environment while saving the district money. Although we cannot measure the health, academic and environmental benefits of these improvements in monetary terms, they represent significant outcomes."

Lindsey Lockhart, a student at SES and a Leadership Class 101 member, said, "Thanks to our school administration and board of education, we were able to make our ideas about energy conservation and waste management a reality. We are showing the future SES students ways that they can be a part of the Going Green movement."



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