PROJECT DESCRIPTION:
Eudora Unified School District 491 is concluding several energy-conservation projects, facility renovations and new building construction. For the first two phases, USD 491 used performance contracting as a financial mechanism for capital improvements. Projects involved replacing a pneumatic-control system with a digital-control system, retrofitting T12 lighting fixtures with T8 fixtures, replacing failing rooftop units, and retro-commissioning a one-year-old HVAC system.

After struggling with a new facility that did not meet performance expectations and yielded higher than expected utility costs, the district selected an energy-efficient, properly functioning water-source heat pump system for its new elementary school. USD 491 is sharing its awareness of and commitment to energy conservation with students by installing a 2.6 kW wind turbine that will integrate with the high school science and math curricula.

PROJECT GOALS:
• Reduce energy consumption by reducing maintenance expenditures, upgrading outdated lighting fixtures and replacing failing HVAC equipment in two existing buildings.
• Design mechanical systems in the most budget-conscious, energy-efficient means possible for building additions and new facilities.
• Supplement facility energy usage and teach students about renewable energy and weather with a wind turbine located at the high school.

COMMUNITY BENEFITS AND LESSONS LEARNED:
The combined impact of the district renovations and close attention to HVAC system selections for new construction equals a reduction of nearly 12 million kilowatt hours (kWh) in electricity and more than 400,000 hundred cubic feet (CCF) of natural gas. This reduction is equivalent to $1.2 million tax dollars, 10,432 tons of CO2, and 2,300 cars removed from the road this year or 3,128 acres of trees planted.

By reallocating tax dollars and reinvesting them in district facilities, Eudora USD 491 has significantly reduced its environmental impact and increased energy savings in its operational budget. The district has also improved the learning environment for students and created educational opportunities. These projects also had a positive effect on the local economy. USD 491 received the 2010 Development Award from the K-10 Corridor Association for the construction of the new elementary school.

FUNDING SOURCES AND PARTNERSHIPS:
Eudora USD 491 used money from energy savings, which are guaranteed through a performance contract, to fund the first two phases of renovations. The new construction projects were funded with a community-passed bond.

Grants from the U.S. Department of Agriculture’s A Wind for Schools Project and the M.R. and Evelyn Hudson Foundation, combined with partnerships with Schneider Electric, Westar Energy and Smalley Energy funded the design and installation of the wind turbine.

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