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energy
solutions

case study

West Chester Area School District

Phased Energy Conservation Program Focuses on Awareness First

Project Description/Services:

- Multi-phased service agreement:
 - Phase 1 (completed March 2008): Utility bill analysis, consumption pattern evaluation, and trend analysis of electrical usage at 15 of the 16 district schools. Practical Energy Solutions identified major components of the annual cost of electricity, as well as seasonal patterns and other factors having a significant impact. Included two-year CO₂ emission baselines and monthly utility cost projections.
 - Phase 2 (underway): Comprehensive education & awareness program for faculty; administrative staff; maintenance, operations, engineering and custodial personnel; and students in all 16 schools. Targeted seminars at each school demonstrate how behaviors impact energy consumption and guide behavior modifications. To help staff and students track progress, we display monthly results in the lobbies of all 16 schools. The Phase 2 target is a 10% reduction in electricity cost.
 - Phase 3 (winter 2009) involves monitoring, data logging, and retro-commissioning of all 16 schools and administration buildings in the district. Results will be combined with those from Phase 2 and presented to staff & students to continue the awareness campaign. Phase 3 will also include a review of ENERGY STAR and LEED certification opportunities. Target savings for Phase 3 is an additional 10%.
 - Phase 4 is an investment-grade audit of specific systems, where Practical Energy Solutions has identified opportunities, with recommendations for retrofits and/or upgrades.



Outcomes:

- The PES education and awareness program produced a 14% reduction in electricity consumption and a 9% reduction in utility costs during the first 11 months of 2009. Nearly 3.6 million pounds of CO₂ emissions have been averted to date, the equivalent absorption capacity of nearly 75,000 mature trees.
- We expect a 20% reduction in energy use and costs, before capital investments, with recommissioning, peak demand management and ongoing conservation efforts.
- The comprehensive awareness program engages the faculty, staff and students in the entire process--producing an impact that goes beyond the schools and positively impacts the entire community.

Project Stats:

- October 2007 – December 2010
- Target Annual Savings: \$300,000

Contact:

Kevin Campbell, Director of Facilities & Operations — (484) 266-1255 — kcampbell@wcasd.k12.pa.u