

CHRISTIAN COUNTY SCHOOL DISTRICT

Christian County, Kentucky



EDUCATIONAL FACILITY

Western Kentucky school district improves HVAC operations and learning environments in partnership with Harshaw Trane. District faced facility issues and a large gap in facility needs versus available capital revenues for 9,700 enrolled students.

CHALLENGE

- Lack of comfort – Several facility infrastructure challenges in 14 educational buildings totaling 1,225,000 square feet of space, which were affecting students' and educators' comfort and performance.
- Outdated equipment – Overwhelming maintenance needed for existing aged and unreliable HVAC systems.
- Scarcity of control – Facility control restricted due to rising energy costs and limited capital funds.
- Achieve energy costs savings - \$100M in unmet facility needs required for upgrades with only \$20M available in bonding revenues, leaving a big gap between needs and available funding.

CHRISTIAN COUNTY GUARANTEED NUMBERS

Electric Savings - 2,420,594 kWh

Demand Reduction - 4,806 KW

Natural Gas Savings - 34,398 Therms

Water Savings - 3,809 KGALS

Energy Savings

\$282,197

Operational Savings

\$92,459

Cost Savings
\$374,656 in year 1



ENVIRONMENTAL IMPACT IF THESE SAVINGS ARE ACHIEVED

614

Passenger cars not driven for one year

6,592

Barrels of oil not burned for one year

23

Acres of forest preserved

SOLUTION

- New HVAC systems were installed as well as new interior and exterior lighting, new ceilings and windows, and equipment for water conservation.
- Increase in HVAC operations and building automation and effective district-wide facility staff management using web access and single point responsibility.
- Harshaw Trane's Intelligent Services installed to monitor energy and performance in real time
- As a result of the upgrades, the energy savings will pay for the project over time, closing the gap between available funds and facility needs.

RESULTS

- 20-year PACT™ agreement to ensure the project remains financially manageable, sustainable, and monitored for increased savings and achievable long-term results.
- Guaranteed annual data analysis.
- Real-time energy and performance tracking to govern optimum energy and cost-saving results.
- Ongoing verification and training program to assure continued success.