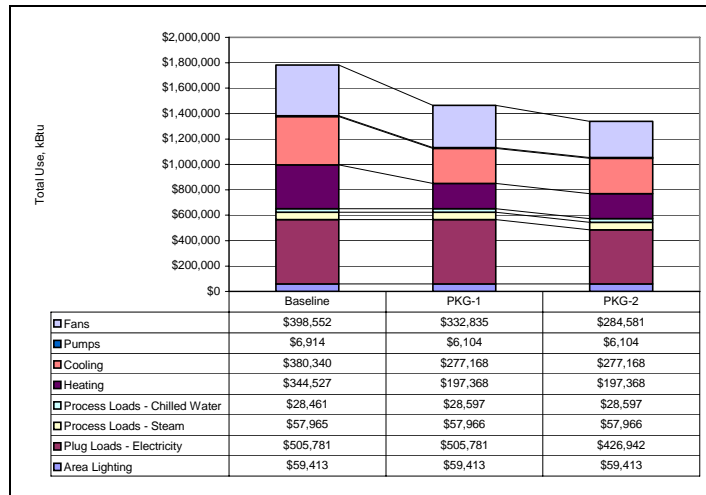


ARCHITECTURAL ENERGY CORPORATION
Integrated Engineered Solutions

Detailed Energy Study of Nine Buildings at Stanford University

Stanford University, California



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Architectural Energy Corporation performed detailed energy audits of nine campus buildings, encompassing 900,000 square feet of conditioned space. These buildings receive chilled water and steam from the campus heating and cooling system, and include academic buildings, medical buildings, and laboratories. Estimated annual energy consumption and demand cost savings resulting from the recommended energy conservation measures totaled over \$8,000,000 for a 32% reduction in operating costs.

Project Information: Stanford University

Project Type	Energy Conservation Potential Analysis Study
Client / Energy Services Team	<i>Client:</i> Stanford University <i>Energy Engineering Consultant:</i> Architectural Energy Corporation Boulder, Colorado
Size	Nine buildings encompassing 900,000 ft ²
Location	Stanford University, California
Project Highlights	<p>Walk-through audits performed, including as-built plan and document review, facility personnel and occupant interviews, and review of EMS trend data.</p> <p>DOE2.2 building energy simulation models developed for energy end-use analysis and energy conservation measure savings estimates at each building. Buildings included academic, laboratories, and three buildings from the University Medical School.</p> <p>Energy conservation measures recommended included the following:</p> <ul style="list-style-type: none">• VAV retrofits and VAV system optimization• Laboratory exhaust controls• Supply air temperature reset• Static pressure reset• Zone temperature reset• Removal of unnecessary pre-filters and sound attenuators• Fan sheaving and pump impeller trimming• Improved outside air fraction control and scheduling• Improved economizer control• System rebalancing• Lighting controls• Optimal start and stop strategies• Duct system redesign• Process chiller upgrades

