For additional information please contact
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Case Study

Business Case for Single-Story Retail Site

ENRG Blanket® Enables Retail Sites to Reduce HVAC Consumption by 33% or More and Reduce Carbon Emissions by Over 10 Metric Tons in a Year

The Challenge

The customer wanted to reduce energy consumption and improve thermal comfort in retail sites, while adhering to aggressive corporate environmental goals and meeting their ROI requirements. This 4,100-square foot retail site is occuopied for 70 hours per week and compliant with modern energy code standards. It is a well-insulated concrete masonry, single story facility which utilizes two roof top units equipment for both heating and cooling.

The Solution

PCES completed a detailed site audit, followed by a measurment and verification (M&V) analysis of branch HVAC energy consumption. Approximately, 2,678 ft^2 of ENRG Blanket was installed over the drop ceiling, covering roughly 60-70% of the occupied space, providing a thermal capacity of 71,500 BTUs in the form of latent heat. The ENRG Blanket was selected to optimize the building's thermal performance based on its operational characteristics and the weather patterns in the building's geographic location. The ENRG Blanket was installed in less than 3 hours in one evening, with no disruption in operation. M&V analysis of HVAC energy consumption resumed after the installation to validate the ENRG Blanket's performance.

The Results

The impact of ENRG Blanket on the HVAC energy consumption was immediate. Post installation M&V indicated a significant decrease in HVAC current consumption. After accounting for annual weather patterns, the project resulted in a total of 33% reduction in HVAC consumption (14,988 kWh/yr).

% HVAC Energy Savings	33%
% Total Building Savings	15%
Annual Energy Savings	$2,390 per year
Verified Energy Savings	13,690 kWh/year
Expected 10-year Energy Savings	$23,900
Avoided Energy per Unit Area	3.7 kWh/ft^2
Avoided Carbon Dioxide Emissions	10 metric tons/year
Return on Investment	~3 years ROI