For additional information please contact
Info@PhaseChange.com

Case Study

Business Case for Single-Story Retail Site

ENRG Blanket® Enables Retail Sites to Reduce HVAC Consumption by 23% or More and Reduce Carbon Emissions by Over 20 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 was only two years old and compliant with modern energy code standards. It is a well-insulated concrete masonry, single story facility which utilizes new heat pump 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, 2,720 sq. ft. of ENRG Blanket was installed over the drop ceiling, covering roughly 60-70% of the occupied space. 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 bank 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 23% reduction in HVAC consumption (28,454 kWh/yr).

% HVAC Energy Savings	23%
% Total Building Savings	8%
% kW Demand Reduction	32%
Annual Energy Savings	$4,220
Verified Energy Savings	28,454 kWh/year
Expected 10-year Energy Saving	$42,000
Avoided Carbon Dioxide Emissions	20 metric tons/year
Additional Benefits	• 1.7 years ROI • 12.4% reduction in HVAC cycling • 14% HVAC life extension