

SMARTCOOL™

IMPROVE YOUR BUSINESS BY E³

ENERGY EFFICIENCY - ECONOMIC BENEFITS - ENVIRONMENTAL SUSTAINABILITY

Smartcool's ECO³™ is a unique retrofit technology that saves energy on the compressors in air conditioning, heat pump and refrigeration systems. Working in conjunction with existing equipment and controls, the ECO³™ maintains pre-set temperatures without causing over-cycling and reduce compressor run time by up to 30%.

Smartcool clients confirm electricity demand and consumption savings averaging 15%, giving them a rapid return on investment and reducing their carbon footprint. Here's just one example of savings achieved with Smartcool:



CASE STUDY: RETAIL

HAWAII, USA

INSTALLED 2009



ABC Stores is one of Hawaii's major retailers, and includes a network of 78 stores located in Hawaii, Guam, Saipan and Las Vegas. ABC Stores has been ranked 37th amongst Hawaiian businesses, and supplies its customers with a wide variety of products ranging from groceries to souvenirs, pharmaceuticals and cosmetics. This project involved installation of Smartcool products in five locations across Hawaii.

ENERGY EFFICIENCY

49,324 KWH

Annual energy savings of five ABC Stores achieved by installing the ECO³™

ECONOMIC BENEFITS

< 24 MONTH

Return on investment

\$56,665

Savings over five years across the five stores

ENVIRONMENTAL SUSTAINABILITY

30,178 KG

= 66,532 LBS

Annual GHG emissions reduction

36 ACRES

Trees required to sequester the same amount of GHG emissions

4 HOMES

Could be powered for a year with the energy saved

EQUIPMENT

AIR CONDITIONING UNITS IN 5 STORES

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Savings achieved by the ECO³™ are easily quantifiable. The unit can be switched between ON and OFF modes, allowing for a comparison of energy usage by the air conditioning, heat pump or refrigeration compressors with and without the ECO³™.

Smartcool can provide a standard monitoring and verification package to interested clients, which includes recording the energy usage and temperature performance of their existing equipment both with and without the ECO³™ in the circuit. Smartcool will install energy data loggers to measure and record the KW, kWh and amperage used by the cooling system during a set evaluation period when the ECO³™ alternates between ON and OFF. These data loggers take a measure every 8 seconds and are set to provide a date stamped printout every 6 minutes. Temperature loggers are also used to measure and record the controlled space temperature is maintained.

EVALUATION DETAILS

ABC Stores launched a trial of Smartcool's ECO³™ on various air conditioning units in five of its Hawaiian stores. The air conditioning equipment consisted of packaged units with anywhere from one to four compressors, all responsible for cooling the sales floors of the various stores. As a result of the successful test period, ABC Stores has decided to pursue installation of Smartcool's technology at an additional twenty stores in Hawaii.



The ECO³™ units were installed to optimize the compressors in the air conditioning systems. Smartcool installed amperage and temperature loggers in order to monitor the performance of the equipment. This information was collected as the ECO³™ units were switched between OFF and ON modes to gain a comparison of performance with and without Smartcool technology. The energy savings shown here were achieved with no discernible impact on temperature.

TOTAL ESTIMATED RESULTS

Annual Energy Savings = 49,324 kWh
Return on Investment = < 24 months
GHG Emissions Reduction = 30,178 kg
or 66,532 lbs

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