SMARTCOOL™

Improve your business by E³

Energy Efficiency - Economic Benefits - Environmental Sustainability

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

Smartcool clients confirm electricity demand and consumption savings in excess of 20%, giving them a rapid return on investment and reducing their carbon footprint. Here's just one example of the savings that can be achieved with Smartcool:

Case Study: Hotel

West Covina, CA, USA — Installed 2003

South Hills Country Club

"Cost controls for a club such as ours is imperative. The Smartcool system has not only allowed us to generate considerable cost savings on our electric bills, but has also preserved the life of our compressors. The addition of the environmental impact is certainly a bonus too."

- Art Barajas, General Manager
South Hills Country Club

Energy Efficiency

41,790 kWh
Annual energy savings achieved by installing the ESM™

Economic Benefits

$7,000
Annual financial savings

27 month
Return on investment

Environmental Sustainability

25,568 kg
= 56,369 lbs
Annual GHG emissions reduction

31 acres
Trees required to sequester the same amount of GHG emissions

4 homes
Could be powered for a year with the energy saved

Equipment

3 Carrier packaged units for A/C

www.smartcool.net
info@smartcool.net

ENERGY STAR PARTNER

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

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 ESM™ 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 ESM™ alternated 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

The South Hills Country Club includes a large kitchen to service the banquet room and dining areas. Smartcool's ESM™ was installed on the three Carrier units responsible for air conditioning thes parts of the building.

ESM™ units were installed in March 2003 to optimize the packaged units. Smartcool's standard monitoring and verification process was initiated to determine the performance of the units. Data was collected as the ESM™ units alternated between OFF and ON modes. The energy savings shown below were achieved with no discernable impact on temperature.

Evaluation Period Results

ESM™ OFF = 581 kWh
ESM™ ON = 498 kWh
Average Daily kWh Savings = 83 kWh

Annual Estimated Results

Annual Energy Savings = 41,790 kWh
Return on Investment = 27 months
GHG Emissions Reduction = 25,568 kg
or 56,369 lbs

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INFO@SMARTCOOL.NET

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