

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 and refrigeration systems. Working in conjunction with existing equipment and controls, the ECO³™ maintains pre-set temperatures without causing over-cycling and reducing compressor run time. The ability to save energy on the heating and cooling cycles of compressor driven heat pumps, along with its quick installation, make the ECO³™ a highly economical solution.

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



CASE STUDY: SUPERMARKET
PENTICTON, CANADA INSTALLED 2009



Whole Foods Market is the largest natural and organic grocer in the southern Okanagan region of British Columbia, Canada. Offering high quality natural foods as well as a café and catering, Whole Foods Market has been serving the Penticton area for more than 22 years.

ENERGY EFFICIENCY

30,675 KWH

Annual energy savings achieved by installing the ECO³™

ECONOMIC BENEFITS

\$3,070

Annual financial savings (CDN)

ENVIRONMENTAL SUSTAINABILITY

18,768 KG

= 41,377 LBS

Annual GHG emissions reduction

33 ACRES

Trees required to sequester the same amount of GHG emissions

4 HOMES

Could be powered for a year with the energy saved

EQUIPMENT
7 REFRIGERATION UNITS, 2 AIR CONDITIONING UNITS

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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 or refrigeration compressors with and without the ECO³™. Alternatively, energy savings can be tracked by taking regular readouts off the screen on the unit.

Smartcool also provides 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™ 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

Whole Foods Market was originally located in a smaller building, but upgraded to a 9,100 square foot facility in order to house its expanding product and service offerings. The performance of the ECO³™ (both Single and Dual models) was evaluated on seven refrigeration units and two air conditioning units. Together, these units provided cooling for the majority of the store.



ECO³™ units were installed in May 2009 to optimize the compressors in the refrigeration and air conditioning systems for Whole Foods Market. Over a four week period, the ECO³™ units were switched between ON and OFF mode to gain comparative energy usage data. The clear display screen on the ECO³™ provided readouts on the run, save, bypass and over-ride hours of the units, demonstrating that a daily average of 102.3 kWh was saved by the ECO³™ for the Market.

ANNUAL ESTIMATED RESULTS

Annual Energy Savings = 30,675 kWh
Annual Financial Savings = \$3,070 (CDN)
GHG Emissions Reduction = 18,768 kg
or 41,377 lbs

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