

Case Study – ESM™

El Rancho MarketPlace

Business Type	Supermarket
Location	The El Rancho MarketPlace is located in Solvang CA, which is approximately 150 miles north of Los Angeles.
A/C or Refrigeration	Refrigeration
Brand	Copeland
Type	1 low temp. even parallel rack with 4 compressors and 1 med. temp. uneven rack with 5 compressors
# of Units	2 Racks
Controller	CPC Reflects Controller



Result Highlights

Return on Investment
19 Months

Annual kWh Reduction
107,899

kWh Savings
16.3%

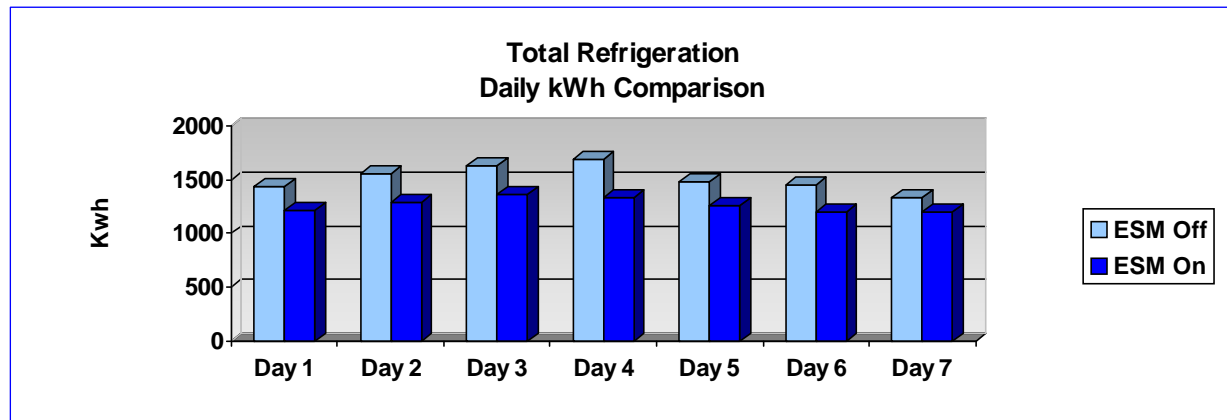
Greenhouse Gas Reduction
145,542 lbs

Evaluation Period	<p>The two week evaluation was carried out during April - May 2004</p> <ul style="list-style-type: none"> • Energy Saving Module™ Off period: April 24, to April 30, 2004. • Energy Saving Module™ On period: May 1, to May 7, 2004.
Project Description	<p>Energy data loggers were installed on the electrical mains to each refrigeration rack to measure and record the kW, kWh, and Amps consumption of each refrigeration system throughout the evaluation period.</p> <p>The data loggers take a measure every 8 seconds and are set to provide a date stamped printout every 6 minutes. During the analyses the data is accumulated and/or averaged over one hour periods to compile the comparative data.</p> <p>Throughout the evaluation, temperature loggers were also used to measure and record the ambient air temperatures, ice cream case temperatures and meat case temperatures.</p>

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Results Summary

Results from the evaluation clearly demonstrate that the Energy Saving Module System™ significantly reduces kWh consumption providing both financial and environmental benefits without compromising temperature requirements of the MarketPlace.



Electricity Reduction	
ESM OFF: Avg. Daily kWh	1,512
ESM ON: Avg. Daily kWh	1,266
Average Daily kWh Reduction	246
kWh % Reduction	16.3%
Annual kWh Reduction	107,899
Return on Investment	19 Months

Environmental Benefits	
Greenhouse Gas Reduction	145,542 lbs
Tree Equivalent	79 Acres
Enough Electricity to Supply	10 Homes