

Case Study – ESM™

North Sydney Council Library

Business Type	Commercial Real Estate
Location	200 Miller Street North Sydney NSW 2060
A/C or Refrigeration	A/C
Brand	Carrier
Type	Five compressor 10 stage loading chilled water system
# of Units	5



Result Highlights

Return on Investment
29 Months

Annual kWh Reduction
35,413 kWh

kWh Savings
19.4%

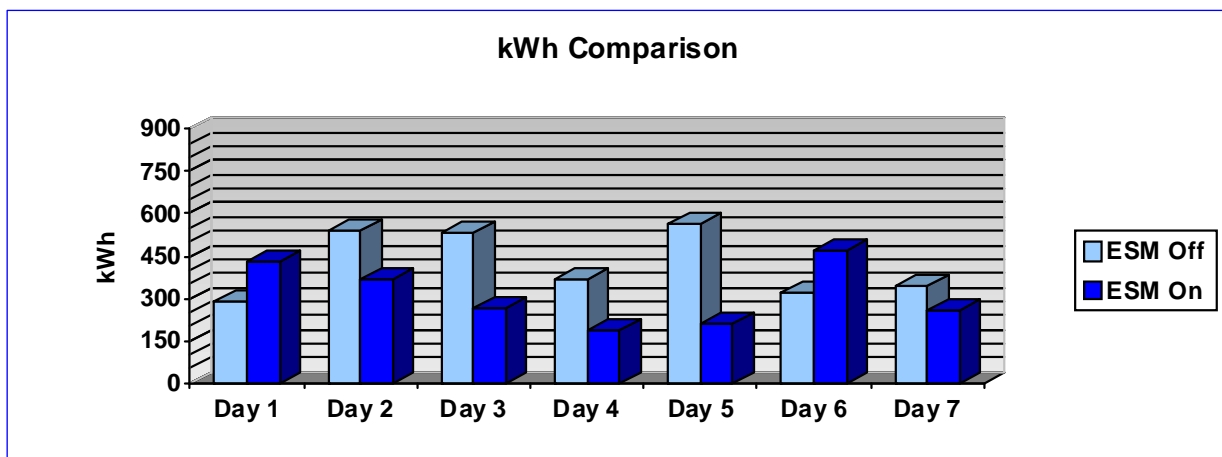
Greenhouse Gas Reduction
47,768 lbs

Evaluation Period	ESM™ Off: September 29 – Oct 5, 2007 ESM™ On: October 06 – 12, 2007
Project Description	<p>5 units were installed at the North Sydney Council Library. The following results are for the single unit that the ESM™ was installed on for testing purposes.</p> <p>Energy data loggers were installed on each compressor to measure and record the amperage consumption of the chiller throughout the evaluation period.</p> <p>The data loggers take a measure each 8 seconds and are set to provide a date stamped print every 4 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.</p>

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Results Summary

Results from the evaluation clearly demonstrate that the Energy Saving Module™ significantly reduces kWh consumption of the chiller providing both financial and environmental benefits, without compromising system performance.



Electricity Reduction	
ESM OFF: Avg. Daily kWh	422.5
ESM ON: Avg. Daily kWh	312
Average Daily kWh Reduction	110.5
kWh % Reduction	25.89%
Adjusted kWh % Reduction <small>(Allowance for Higher Ambient Conditions - 3.6% per 1 degree Celsius)</small>	20.08%
Annual kWh Reduction	35,413 kWh
Pay Back Period	29 months

Environmental Benefits	
Greenhouse Gas Reduction	47,768 lbs.
Tree Equivalent	26 Acres
Enough Electricity to Supply	3 Homes