



**ENERGY
SAVINGS SCHEME**

Knowledge Global - Fitness First Efficiency Verification Program

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A case study describing a strategy aimed at reducing energy consumption through equipment upgrades and behavioural change, which was implemented in 37 gyms in NSW

Knowledge Global is a specialist sustainability company working with businesses to identify areas to reduce their energy and environmental footprint.

The project at Fitness First is a comprehensive energy efficiency strategy that includes equipment upgrades and promoting behavioural change, to further reduce energy consumption, while maintaining, or improving service levels.

ESS Role

Fitness First is the original energy saver

Knowledge Global is the nominated energy saver

Key equipment

This project includes a series of energy efficiency projects including:

- behavioural changes and reporting
- lighting and controls upgrades
- HVAC maintenance and upgrades.

Opportunity

Health clubs are very energy intensive locations with large lighting and HVAC loads, as well as energy consumption from pool heating and pumping, hot water use, saunas and other equipment. Fitness First embarked on a series of energy savings projects to lower the electricity consumption and increase profitability.

Various projects and behavioural change programs were applied to 37 gyms in NSW using Knowledge Global's sustainability reporting platform, EMMA, to measure, report and reduce energy consumption. Some energy savings projects include:

- lighting upgrades, lamps and controls (timers and sensors)
- HVAC maintenance and upgrades
- competitions between gyms
- reporting to raise awareness and identify issues.

Calculation method

This project was accredited under the Metered Baseline Method - Baseline Unaffected by Output. This method established a consumption baseline for each of the 37 sites before the project was implemented, using 5 years' worth of data from monthly electricity bills.

They opted to use a monthly measurement period to increase the confidence factor applied to the calculation of energy savings certificates and to be able to create energy savings certificates on a monthly basis, as energy savings are made. The baseline is established for each month by averaging the same month from the 5 years of data. The energy savings are then determined by calculating the difference between the actual energy consumption and the corresponding baseline consumption for that month.

The advantage of this calculation method is that each energy savings activity does not need to be assessed separately, and the savings from behavioural changes, which are hard to quantify, are also eligible to create certificates.

Finance

	Number	Value (approx.)
Project cost	--	\$780,000
Certificates	4,800 certificates (upfront)	\$120,000/year*
Energy saved	4,528 MWh/year	\$679,200/year*
Payback period	1 year	

*Energy Savings Certificate value has been estimated at \$25 per certificate and electricity at \$150 per MWh

This project was accredited on 4 August 2011 and the values presented above are only estimates. They expect to include further new projects, which will increase the energy savings, and creation of energy savings certificates.

Outcomes

The energy efficiency strategy is delivering financial benefits from reduced energy consumption and additional revenue from the creation and sale of certificates, increasing Fitness First's profitability compared to 'business-as-usual'. The forecast income from certificate sales is \$120,000 per year.
