ENERGY MANAGEMENT

– An Energy Management System ensures you make the best energy efficiency investments

An embedded Energy Management System is critical to ensuring your business makes the most cost effective investments in improving your energy efficiency, but it's success relies on ongoing commitment.

By managing energy effectively, you can decrease your costs, improve profitability, reduce carbon emissions and reduce waste.

A focused approach to energy management will also allow you to understand your energy use, decide which technologies, processes and practices to apply and measure improvements in your performance over time.

Australian supermarkets rely heavily on energy to provide their stores with facilities and services. Natural gas is commonly used for water heating and in some cases cooking and space heating. Electricity is used to provide refrigeration, lighting and ventilation. Figure 1 shows the breakdown of energy use in an average supermarket.

Energy use in the average Australian supermarket

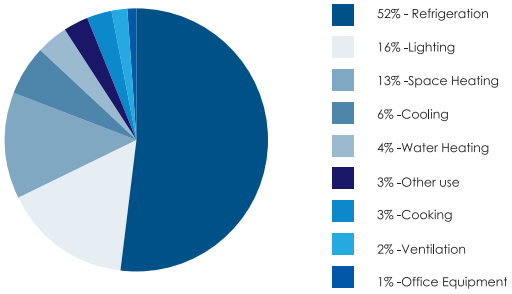
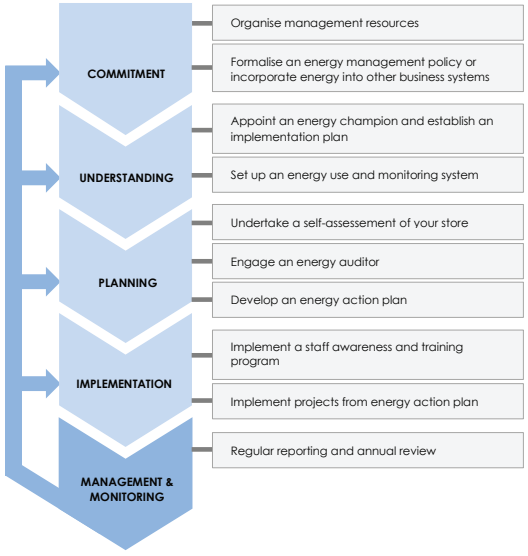


Figure1. Source: Australian Grocery and Food Council (2003)

ENERGY MANAGEMENT SYSTEM

Establishing an Energy Management System should be the first step in any approach to managing energy use. An Energy Management System will help you to build business value by establishing lasting processes that monitor energy use and enhance energy efficiency. The scope of an Energy Management System should be aligned with existing business priorities and systems. The key elements of an Energy Management System are shown in Figure 2.



For more details refer to Handbook - Managing Energy Use, page3, Figure 3.1.4

Commitment

Management and staff commitment are the foundation of a successful Energy Management System. By having clear energy performance objectives, allocating sufficient resources and communicating your intent across the business, you will establish energy management as a business priority. An energy management policy is an excellent way of solidifying this intent.

Understanding

Apoint an energy champion to develop, establish and implement your Energy Management System. If your business is large enough, form an energy team with staff from across your operations to support your energy champion. Make sure that you establish an energy monitoring and reporting system that can be used to collect, analyse and report on energy costs and usage. This will be critical when determining the value of energy efficiency investment opportunities.

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Planning
Identify energy efficiency opportunities across your business by: a self-assessment of your business' energy use; an audit by an experienced energy auditor to show where you are using energy inefficiently; the opportunities to reduce energy use and the business case for making improvements and develop an energy action plan that prioritises the energy efficiency opportunities on a cost/benefits basis.

Implementation
Implement the energy efficiency improvement projects identified in your action plan according to business priorities. Improvement opportunities that are focused on changing staff behaviour will require a focus on education including building awareness of energy issues and encouraging and positively reinforcing energy efficient actions and behaviours.

Management and monitoring
Report on the outcomes of the projects implemented under the energy action plan together with regular updates on the energy performance of the business – this will ensure continued focus on achievements. Communicating these achievements across the business and to external stakeholders as well, will reinforce a positive energy efficiency culture and decrease the barriers to implementing future projects.

TOOLS & RESOURCES

The following tools and resources will help you implement your Energy Management System

Energy management policy	A sample policy which you can adapt to suit your business' objectives
Self-assessment tool	MGA's tailored tool to help you identify where in your business you can improve your energy efficiency
Energy action plan	A sample action plan, which you can use to detail and prioritise energy efficiency opportunities in your business.

SUCCESS STORY

White's IGA, Mt Coolum
Whites IGA located at Mt Coolum recently engaged SEDAC, an energy management company, to assess their store energy use and recommend cost savings based on the identification and implementation of energy efficiencies. Areas that were investigated included lighting, HVAC and refrigeration systems. Through the application of smart solutions, such as, lighting controls, HVAC compressor optimisation and recommissioning of timers to control on/off periods, it was determined that the store was able to save 12% of the site's total consumption for an investment of under $30,000 which included:

Cost	$$$
Benefit	☺☺☺
Simplicity	✓

Achieving an 8.5% reduction in 3 months given the circumstances is a fantastic result
- Roz and Michael White Store owners

- Capital cost - $27,970
- Savings per annum: $9,364
- Payback: less than 3 years

To date, the site has reduced energy use by 8.5% with some refrigeration tuning still to be completed. SEDAC is continuing to monitor energy use at the site to quantify the savings.

THE BUSINESS CASE – ENERGY MANAGEMENT SYSTEMS

Successful Energy Management Systems can be used to consistently identify low or no cost projects, for example, in the case above where behaviour changes that have led to unnecessary lighting being turned off when not required.

MORE INFORMATION

For further information about the opportunities to implement an Energy Management System to reduce your energy costs and a selection of tools and resources, refer to **Section 2** of the Handbook.

Cost	$ = lowest cost, $$$ = highest cost
Benefit	☺ = lesser energy efficiency, ☺☺☺ = greater energy efficiency
Simplicity	✓ = requires external/technical expertise, ✓✓ = can be undertaken in-house but may require some external expertise, ✓✓✓ = can be undertaken in-house.