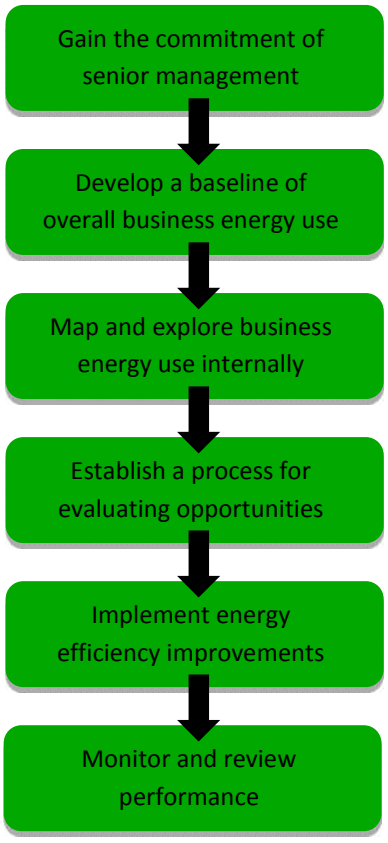
Winery Energy Saver Toolkit — Factsheet
A planned approach to energy efficiency improvements

Introduction

Without a planned approach, the management of energy efficiency improvements can become complicated, especially for businesses that are new to energy efficiency projects and have limited resources. Effective management requires planning, evaluation, staff engagement, and often, the engagement of external experts. By engaging staff, you can: raise awareness of energy issues, increase staff morale, and encourage a proactive culture of communication and improvement (including the low-cost identification of further opportunities). These changes can lead to higher productivity and safer and more-organised workspaces. External experts can bring technical experience that might: help to identify non-obvious opportunities, inform estimates of benefits and costs, and reduce the overall costs and time of the project.

This factsheet outlines an effective, six-step management approach to planning energy efficiency improvements. It notes where more detail on the steps can be found in the *Winery Energy Saver Toolkit* (WEST) and in the *Energy Efficiency Opportunities Modelling Tool*, a Microsoft Excel tool that assists in calculation of the important business parameters that you may consider in evaluating energy efficiency improvements. For more detail on the other steps of the management approach, this section refers to the following resources:

- 'Guide to Energy Efficiency Innovation'
  Department of Industry, Tourism and Resources (2003): *A guide to energy efficiency innovation in Australian wineries – energy efficiency best practice*, www.ret.gov.au/energy/Documents/best-practice-guides/energy_bpg_wineries.pdf
- 'Guidelines for Energy Management'
  Energy Star: *Guidelines for Energy Management Overview*, www.energystar.gov/index.cfm?c=guidelines.guidelines_index



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STEP ONE: Gain the commitment of senior management

Find a senior manager with appropriate responsibility and authority who will promote the improvement initiatives, engage staff (and possibly create an energy-efficiency team), and provide the project with sufficient resources. For more information on this step, see *Guide to Energy Efficiency Innovation (pp. 2, 4-5)* and *Guidelines for Energy Management*.

STEP TWO: Develop a baseline of overall business energy use

Engage staff in the following (or similar) process:

A. Select a physical boundary within which the energy use of your business operations will be assessed and a timeframe that the baseline will represent. A one-year timeframe is appropriate to capture the baseline energy use and the peak energy use during vintage.

B. Identify and quantify all significant energy inputs and their costs to your business over the selected timeframe. Make note of any operational anomalies that may account for unusually high or low energy consumption in the baseline timeframe.

C. Identify and quantify all significant products, saleable by-products, and emissions (if possible) from your business over the selected timeframe.

D. Summarise the information for easy interpretation by management and staff. Include performance targets and key performance indicators (KPIs) that measure energy use and costs per litre of product. To avoid erroneous comparison, targets and indicators should distinguish between vintage-period and non-vintage-period performance by specifying the timeframe or by limiting the scope to a particular process.

For the details of the above process, see *Guide to Energy Efficiency Innovation (pp. 8, 15, 57-60)*.

STEP THREE: Map and explore business energy use internally

Engage staff in the following (or similar) process:

A. Conduct a team working session or desktop analysis to develop a map of energy use across the nominated baseline area.

B. Conduct a site walk-around inspection and/or energy audit. *WEST* describes the energy efficiency opportunities that you might seek in your inspection or audit. It also includes *Supplier Checklists* of the important information that you could collect to support your conversations with suppliers. If your staff lack expertise for these tasks, consider engaging an energy auditor for a site-level audit and an expert or equipment supplier for process-level inspection and/or audit.

For the details of the above process, see *Guide to Energy Efficiency Innovation (pp. 16, 18, 41-42)*.

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STEP FOUR: Establish a process for evaluating opportunities

Engage staff, and use the information gathered in the *Step Three*, to prioritise and select energy efficiency improvements. Again, if your staff lack expertise for this task, consider engaging an external expert to assist in the process. Consider the following factors in your evaluation:

- Does the opportunity address a significant commercial impact or other identified issue, risk or priority of the business when considering current and future projected energy use?
- Is the opportunity technically feasible and likely to work as intended?
- What are the full lifetime costs and benefits of the opportunity?
- Is the business ready and able to take on this improvement?

The *WEST* toolkit (Business Case Assessment tab) explains how to develop a detailed business case, including the assessment of the following business factors, for your selected energy efficiency improvements:

- Benefits (costs savings, improved productivity, reduced maintenance costs, enhanced brand and company profile).
- Costs (including the opportunity cost of alternative investment) and risks.
- Capabilities (including J-curve management and sources of funding).

The *Energy Efficiency Opportunities Modelling Tool* (available on request) simplifies this assessment by providing a tool with which to estimate and compare these factors for your selected energy efficiency improvements.

STEP FIVE: Implement energy efficiency improvements

Procure equipment and services from your preferred supplier. The *Supplier Checklists* may be used to support conversations and negotiations with suppliers, and the identification of an appropriate supplier. Install new equipment or processes with the assistance of an equipment supplier, if required. Consider implementing the improvement in stages, if possible, starting with a short-term trial of part of the overall improvement where you monitor performance to ensure correct installation and minimise risk. For more information on this step, see *Guidelines for Energy Management*.

STEP SIX: Monitor and review performance

Monitor energy efficiency improvements. Compare actual performance with the previously-estimated benefits, costs, and J-curve in the business case established in *Step Four*. Seek to understand and correct discrepancies before unexpected costs blow out significantly, which might render the improvement to never become cost effective. The *Energy Efficiency Opportunities Modelling Tool* may be used as a diagnostic tool. Once a particular improvement is earning money for your business, consider moving on to a new improvement opportunity. For more information on this step, see the *Guide to Energy Efficiency Innovation (pp. 19-20)* and *Guidelines for Energy Management*.

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