

Energy use in your business

The Gillard Government's Clean Energy Future package's central element is to improve energy efficiency. It can help businesses save money on their operating costs while also lowering Australia's greenhouse gas emissions.

The Textile, Clothing and Footwear Australia (TCF) online energy efficiency training and mentoring project offers an extensive range of specialist energy efficiency services to small businesses in the fashion, textile, clothing, footwear, leather, creative and associated industries across Australia.

Textile Clothing Footwear Australia online energy efficiency webinars include:

1. Understanding Energy Use in Your Business - how energy is produced, measured, monitored and tracked
2. Interpreting Your Business Energy Bills - identify problems, reduce costs and energy use in TCF Industries
3. Implementing Energy Efficiency at your Business - tips to reduce energy usage and develop energy strategies
4. Energy Efficiency Accreditation - tips in behavioural, low & no-cost initiatives and business accreditation
5. Business Opportunities in Energy Efficient Innovation - clean energy innovations, technologies and grants.

Understanding energy use

About 75% of Australian electricity is produced using coal, 15% by natural gas and most of the remaining 10% is from renewable sources. (Source: Energy in Australia 2012 www.bree.gov.au).

Most electricity in Australia is produced by coal-fired power stations. This is an inefficient and polluting process.

Natural gas is used both directly (mains gas) and indirectly (electricity generation) by many businesses. LPG, a petroleum by-product, is often used where mains gas is not available. Gas burns more cleanly and produces significantly less carbon emissions than coal.

The largest renewable energy contribution to the electricity network is made by hydroelectric power, with wind and solar making a small but growing contribution. On-site renewable energy generation, such as solar hot water and solar photovoltaic (PV) panels, are often cost-effective but under-utilised by businesses in Australia.

In terms of measurement, electricity consumption is measured in watts (W). The amount of electricity used over time is measured and billed in kilowatt-hours (kWh). For example if a piece of equipment or appliance in your business has power consumption

(listed on the Compliance Label) of 80W, this means that after two hours for example, the appliance would have used 160WH or 0.16kWh.

Electricity, gas and other energy consumption can be compared to each other by converting them to the same unit of measure. For example:

- 1 kWh = 3.6 MJ (useful for equating gas and electricity usage)
- 1 litre of LPG contains about 26 MJ of energy
- 1 kilogram of dry wood contains about 16 MJ of energy
- 1 litre of petrol contains about 34 MJ of energy.

A load assessment allows business owners to see where energy is being used within their business. Data collection should include information such as category (e.g. lighting, hot water, air conditioning), description, quantity, load (watts), usage (hrs), and duty cycle. The total consumption (kwh) can then be worked out.

Once a business owner has this information, they can compare this with received electricity bills, and seek more clarification from an expert if required.

Interpreting your electricity bill

There is a raft of information that can be gleaned from studying a quarterly electricity bill. For example:

- What your carbon footprint is from your energy usage
- How your usage is tracking in the daily usage and history section
- The total number of meters that your business has
- Cost per kWh.

For businesses that receive bills monthly, bills can sometimes appear more complex. The energy charges are shown grouped into peak, shoulder and off peak. Other categories to look at

include network charges and market charges.

To get the best deal for your electricity:

- Contact your supplier to see if you are eligible for any offers
- If you receive a quarterly bill, check the Internet for electricity bill comparison sites to see how your rates compare to others
- Consider using an energy broker
- If you receive multiple bills, consolidate these.

To monitor energy use tools such as electricity and gas meters, plug-in power meters and infrared thermometers.