



Australian Government  
Department of Industry



Ethnic Communities'  
Council of NSW inc.

**BEST**

BUSINESS ENERGY SMART TIPS



# Know your business's energy use and save dollars

Your energy bill is a business cost that you can manage and reduce, saving you money. To do this you need to know how much electricity is being used and what equipment is using it.

This information helps you to decide what changes you can make. If you are a larger business, a professional energy auditor can provide you with information to make decisions.

It makes good business sense to keep track of your energy use and costs. Here are some tips.

## How much electricity are you using and what is it costing?



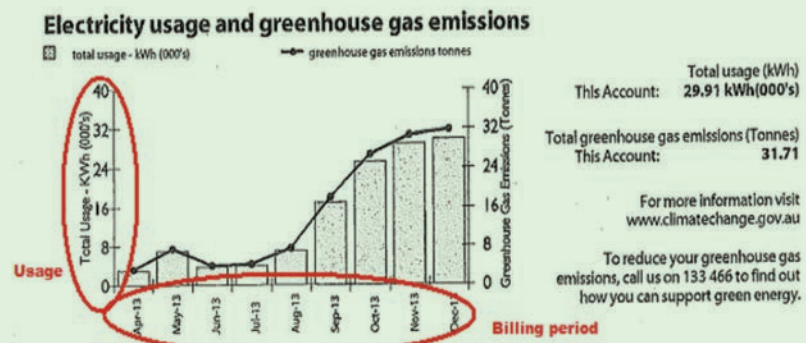
**Review your electricity bills for the last two years**

It is useful to keep records of your bills to track changes in usage and costs over time.

At right is an example of a record keeping procedure.

Time Period of Bill	Total cost (\$) of the bill	Electricity consumption (kWh)	Cost per kWh (Cents)
Eg, 5/1/2014 - 4/3/2014	\$6525.60	21752	30
<b>Total Days:</b>	<b>Total Cost</b>	<b>Total kWh:</b>	
	Average Cost per day: = Total cost / Total Days	Average kWh per day: = Total kWh / Total Days	

If it is difficult for you to get two years of electricity bills use the usage graph shown on the bill to work out how much electricity has been used.



A sample of an Energy Australia bill

## What can this tell you?

How much are you paying for electricity (kWh) and has it changed?

Has the amount of electricity that is used changed? if so what is different in your business eg new staff, longer opening hours, new equipment ?

What other fees and charges are you paying and has this changed?

Further information on reading bills can be found in the BEST fact sheet *Understanding Your Bill*.

## What uses energy in your business?

What is using electricity in your business and how often and how long is it used each day?

- lights
- heating and cooling equipment, like air-conditioning system, electric fans, electric heaters etc.
- kitchen equipment, ovens, range hoods etc.,
- refrigeration such as cool rooms, freezers, drink fridges etc.
- electric hot water system
- other shop and office equipment

As each business is different use the BEST checklist for your business for more information.



### Estimate your business's electricity use

Your business is charged on your bill by kilowatt hours (kWh) so it is useful to understand the electricity usage of equipment. The following tables provide general information on common equipment found in many businesses. If you want to find the exact watts of your equipment look on the products themselves, on the package, or get advice from your contractors.

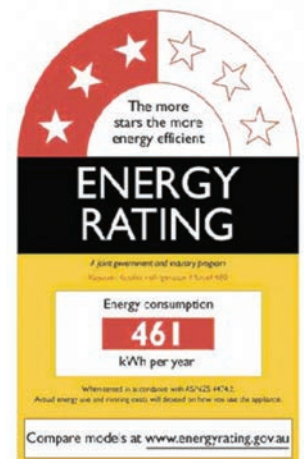
Power is measured in watts and 1000 watts is one kilowatt. Kilowatt Hours (kWh) is power (watts) and the time in hours. Most appliances and equipment in your business will have information about the number of watts used. The tables can help to understand how usage of this equipment contributes to the kWh in your bill.

Some equipment such as air conditioners, fridges and freezers are only on 30% of the time so a further calculation is required. Additionally fridges and freezers are mostly on for 24 hours.

To find out how many watts an air-conditioning system uses, check the outside unit, the manual, or ask the supplier.

Electric hot water systems are difficult to calculate usage. Get this information from your supplier.








Use the following tables as a guide for your business's equipment.







SAMSUNG ELECTRONICS	
AIR CONDITIONER	
MODEL	ASV12ESLN
CAPACITY (COOL)	11.63 kJ/h
VOLTAGE/FREQUENCY	230V~,60Hz
CURRENT (COOL)	4.0 A
POWER INPUT (COOL)	840 W
REFRIGERANT	R410A 910g(32.10oz)
CLIMATE CLASS	T1

Made in Thailand  
SAMSUNG ELECTRONICS CO., LTD.

## Lighting

Light name	Light photo	Watt range	Note	How many?	Hours on each day	Energy (kWh) used/day = how many x watts x hours on each day divided by 1000
T8 tube light		20-45	Most commonly used and seen.			
T5 tube light		14-31	Thin tube. Smaller than a T8 tube. More energy efficient than T8.			
Halogen down light		50-65	Gives out more heat than light. They can be replaced by more efficient LED down lights.			
Par38		75-150	Commonly used as flood lights or sometimes down light. There are more efficient LED replacements for Par 38 lights on the market.			
Compact Fluorescent Light		10-24	Energy efficient. They range from 5W to 25W. Most commonly used are around 15 Watts.			
Halogen flood light/ Shop light		75-400	There are more efficient LED replacement on the market			
LED down lights		4.5-14	They are widely used to replace the halogen down lights. They are used in restaurant dining area and many other retails shops.			

## Refrigeration










Fridge name	Fridge photo	Watt range	Note	How many?	Hours on each day	Energy (kWh) used/day = how many x watts x hours on each day divided by 1000 and then by 30%
Drinks fridge – one door Drinks fridge – 2 door Drinks fridge – 3 door		1 door – 700 2 door – 800 3 door – 1200	Close the doors to keep the cold air in;  Check the seals regularly and replace the broken ones;  If the fridge is supplied by the drink company, ask for the most energy efficient model.  The T8 tube lights in display or drink fridges can also be replaced by LED tube lights or LED strips to save power.			
Open display fridge		1350– 2450	It is recommended to cover the open fridges at night to save energy. The lights in the fridge should be turned off at night.			
Chest Freezer		125–500	They are generally more efficient than the upright freezers.			
Ice cream freezer		650	Use a blanket to cover up the glass at night can reduce energy use.			
Under bench freezer		700–880	Relatively energy efficient.			
Upright freezer – 1 door Upright freezer – 2 door		1 door – 700 2 door – 1100	Check the seals regularly,  Check the temperature.  Defrost the freezers regularly.			

Fridge name	Fridge photo	Watt range	Note	How many?	Hours on each day	Energy (kWh) used/day = how many x watts x hours on each day divided by 1000 and then by 30%
Display fridge		750	Make sure the display fridges are maintained well and sealed well			
Butcher's display fridge		1500				
Cool room - small		Small - 1000	Choose cool rooms of the right size for your need.			
Cool room - medium		Medium - 1700				
Cool room - big		Big - 3000				
Freezer room - small		Small - 1600	Choose freezer rooms of the right size for your need.			
Freezer room - medium		Medium - 2300				
Freezer room - big		Big - 2700				

## Heating and Cooling



Heating or cooling device	Photo	Watt range	Note	How many?	Hours on each day	Energy (kWh) used/day = how many x watts x hours on each day divided by 1000 and then by 30%
Reverse cycle air-conditioning system		1000–4000	Only use air-conditioning system when necessary.			
Ducted air-conditioning system		2400–7500	Make sure your ducted air conditioning has zoning system.			
Portable fan		40	Efficient.			
Ceiling fan		60	A much more efficient cooling solution than air-conditioning system.			
Oil heater		1200–2400	Try not to use the heater or choose to use it wisely.			
Radiant heater		1200–2400	Try not to use the heater or choose to use it wisely.			

## Kitchen/bakery and butcher's equipment




Kitchen and butcher equipment	Photo	Watt range	Note	How many?	Hours on each day	Energy (kWh) used/day = how many x watts x hours on each day divided by 1000
Baking oven		3000-9000	Very energy intensive. Use off peak. Make sure it is full.			
Pie oven		600-1200	Turn it off when not in use.			
Range hood		80-2000	The size of the range hood makes a big difference in its energy consumption.			
Coffee machine		500-5000	Turn off the coffee machine over night.			
Dish washer - domestic		domestic - 1600	Commercial or industrial dish washers are much more efficient than domestic ones.			
Dish washer - commercial		commercial - 2250				
Bain maree - small		800	Buy the right size; Leave the cover on when possible.			
Bain maree - large		2400				
Microwave		1000	Turn off the microwave at the wall when not in use to avoid standby power use.			







Kitchen and butcher equipment	Photo	Watt range	Note	How many?	Hours on each day	Energy (kWh) used/day = how many x watts x hours on each day divided by 1000
Rice cooker		500-1600				
Deep fryer - small  Deep fryer - large	 	Small: 2400-6000  Large: 15000-32000	Turn one side off if only one side is needed.			
Electric grill		2400-4400	Turn it off when not in use or when not busy.			
Meat cutting machine/ Bone saw	 	550-800	Choose the right size for your business. Usually the bigger the machine is, the more power it uses.			
Meat grinder		200-3750	The size of the grinder makes a big difference.			
Meat slicer		130-400	Turn equipment off at the wall.			



Kitchen and butcher equipment	Photo	Watt range	Note	How many?	Hours on each day	Energy (kWh) used/day = how many x watts x hours on each day divided by 1000
Dish washer		1000-2000	Commercial dish washers are usually more energy and water efficient than domestic ones.  Only operate dish washer when full.			
Flour mixer		300-1200	Choose the right size for your business. And turn it off at the wall.			

## Other office and shop equipment

Other office and shop equipment	Photo	Watt range	Note	How many?	Hours on each day	Energy (kWh) used/day = how many x watts x hours on each day divided by 1000
Cash register		150	Check if you are able to turn off cash register when it is not in use eg at night.			
Electric scale		40	Turn off the electric scale before finishing work.			
Television		50-300	Turn off TV at the wall.			

Other office and shop equipment	Photo	Watt range	Note	How many?	Hours on each day	Energy (kWh) used/day = how many x watts x hours on each day divided by 1000
Stereo		50-80	Turn off at the wall.			
Surveillance monitor  Surveillance Camera	 	Monitor: 50  Camera: 3-5 each	Turn off the video monitor at night at the wall.			
Desktop computer  Laptop computer	 	100  50	Laptops use less energy and space than desk top computers			
Cordless phone/ answering machine		7				

## Develop an action plan to save money and electricity



Compare results of the review of your bills with the summary of what uses energy in your business and develop a plan.

What activities/ equipment use the most energy?

Energy user	Estimate of total kWh /day	Your observations
Lighting		
Refrigeration		
Heating and Cooling		
Kitchen		
Office and shop		

What can be changed?

- Consider no cost actions such as switching off equipment at the powerpoint and involving your staff in saving energy.
- Low cost actions such as placing 24 hour timers on equipment to switch off at night or changing lighting
- higher cost/ longer term actions such as replacing fridges and air conditioners with more energy efficient equipment.

Get some ideas from the **BEST Checklist** for your type of business.  
[www.eccnsw.org.au/best](http://www.eccnsw.org.au/best)



