

This brochure gives typical running costs for common electrical and gas appliances. They are based on what a typical four person family in Victoria would pay. Of course, your own running costs may vary somewhat from these depending on factors such as climatic conditions, thermostat settings, family size and the age and efficiency of the appliance.

Operating costs of electrical appliances

Calculating your own costs

The running costs of a specific appliance can be calculated if you know its wattage and your electricity tariff.

The wattage is usually printed on the appliance or its packaging, along with other technical information. Look for a figure followed by 'W' Watts or 'kW' kilowatts. This tells you how much electricity the appliance consumes. For instance, a 1000 Watt radiator would use 1000 Watts or 1 kilowatt of electricity. Each hour it runs it will use what is known as 1 kilowatt hour or 1 kWh. A 100 Watt light globe would use 0.1 kW, and therefore consume 1 kWh in 10 hours.

Examples:

A 200 Watt TV set used for 6 hours –
 Total electricity used: 200 Watts x 6 hrs
 = 1200 Watthours or 1.2 kWh
 A 2400 Watt (2.4 kW) fan heater used for 8 hours -
 Total electricity used: 2.4 kW x 8 hrs = 19.2 kWh

The electricity tariff is the cost for each kilowatt hour of electricity used. There are different tariffs for peak and off-peak usage. The tariff you are charged can be found on your electricity account.

The appliance running costs listed on the following pages are based on the average electricity tariff.

Average Peak rate (GD or GR) 17 cents/kWh
 Average Off-Peak 9 cents/kWh

These costs do not include supply charges, which can add up to \$50 to each quarterly bill. All costs are GST inclusive .

Refrigeration	Monthly cost
Fridge/freezer (2 door, 500 litres)	\$13 - \$16
Fridge/freezer (2 door, 350 litres)	\$10 - \$14
Fridge/freezer (2 door, 250 litres)	\$9 - \$11
Bar fridge	\$5 - \$6
Freezer (chest/vertical), 300 litres	\$10 - \$13
Freezer (chest/vertical), 250 litres	\$5 - \$7
Freezer (chest/vertical), 150 litres	\$5 - \$6

Hot water systems	Monthly cost
Monthly costs assume a water usage of 180-260 litres/day	
Day rate (instantaneous) electric	\$64 - \$90
Off-peak electric storage	\$34 - \$56
Solar hot water (electric boosted)	\$14 - \$18

Laundry	Hourly cost
Clothes dryer	40c
Washing machine	15c

Lighting	Hourly cost
Bathroom fan/heater/light	22c
Incandescent globe - 100W	2c
Compact fluorescent globe - 11W	2c every 6 hours
Compact fluorescent globe - 20W	2c every 4 hours

Lighting	Hourly cost
Fluorescent tube – 20W	2c every 4 hours
Fluorescent tube – 40W	2c every 2 hours
Quartz halogen globe – 50W	2c every 2 hours

Cooking	Hourly cost
Blender/food processor	7c
Coffee percolator	10c
Electric kettle	26c
Frypan/deep fryer	20c
Hotplate (maximum setting)	21c - 35c
Microwave oven	25c
Oven (conventional or fan-assisted)	30c - 43c
Sandwich maker	11c
Toaster (two slice)	11c

Appliances	Hourly cost
Computer	1.5c
Dishwasher – cold water connection	32c
Dishwasher – hot water connection	27c
Electric blanket – double	3c
Electric drill	10c
Electric saw	16c
Games console only	2c
Hair dryer	24c
Iron	16c
Spa bath with 5 kW heater	85c
Stereo system	0.7c
Swimming pool filter pump (1 HP/750w)	13c
TV – console (small - large)	1c - 3.5c
TV - LCD (medium - large)	1c - 4.5c
TV – plasma (medium - large)	4.5c - 9c
Vacuum cleaner	16c
Video cassette recorder	1.6c (in use)
Water bed	1.7c

Heating

Running costs can vary considerably based on such factors as heater size and efficiency, thermostat setting, length of use, climate and building efficiency.

Portable heaters	Hourly cost
Oil-filled column heater or fan heater (1.2 kW)	12c – 20c
Oil-filled column heater or fan heater (2.4 kW)	24c – 40c
Bar radiator/strip heater (1.2 kW)	20c
Bar radiator/strip heater (2.4 kW)	40c

Standby energy consumption

Some appliances use electricity when they are plugged in, even when they are not being used. This is generally referred to as 'standby' energy consumption and can amount to over 10% of total electricity used in a typical home.

Appliances and equipment with a standby mode include VCR's, televisions, home entertainment systems, air conditioners, battery chargers, games consoles, whitegoods (except refrigerators), and other equipment which consumes power while not performing its primary function.

The following table provides a guide to the standby wattage and average annual standby energy cost for various appliances.

Appliances	Average standby Energy use (Watts)	Annual cost (approx)
Clock radio	4	\$6
Computer monitor	5	\$8
Cordless phone	3	\$5
Games console	2	\$3
Microwave oven	4	\$6
Mobile phone charger	1	\$2
Personal computer	2	\$3
Printer	8	\$11
Stereo	10	\$15
Television	10	\$15
VCR	8	\$11

Space heaters

The following figures are based on heating an area of 60m² to 21°C. Calculations for the size of your rooms can be estimated proportionately from these figures.

Space heaters	Hourly cost
Reverse cycle air conditioner (2-3 star rating)	24c – 28c
Reverse cycle air conditioner (5-6 star rating)	16c – 20c
Space heater	42c – 54c
Bar radiator/strip heater (2.4 kW)	40c

Central heating

All figures are for homes of 150m² heated to 21°C. Calculations for the size of your rooms can be estimated proportionately from these figures.

Central heating systems	Hourly cost
Off peak electric in-slab heating (heating whole home to 18°C) for one day	30c – 45c
Off peak electric in-slab heating (heating living areas to 18°C, other areas to 16°C) for one day	26c – 30c
Ducted reverse cycle air conditioning (heating whole home to 21°C)	50c – 72c
Ducted reverse cycle air conditioning (zoned system)	30c – 42c

Cooling

The following figures are based on cooling an area of 60m² to 26°C. Calculations for the size of your rooms can be estimated proportionately from these figures.

Cooling systems	Hourly cost
Fan (portable or ceiling)	1.5c
Evaporative cooler (portable)	2.5c
Evaporative cooler (ducted)	11c – 16c
Reverse cycle air conditioner (4-5 star rating)	34c – 38c
Reverse cycle air conditioner (2-3 star rating)	30c – 34c
Reverse cycle air conditioning (cooling whole home)	63c – 91c
Ducted Reverse cycle air conditioning (zoned system)	36c – 54c

Operating costs of gas appliances

This section provides typical running costs for common domestic gas appliances. They are based on what a typical four person family in Victoria would pay. Of course, your own running costs may vary somewhat from these, depending on factors such as climate conditions, the energy efficiency of your home, thermostat settings, family size and the age and efficiency of appliances.

Natural gas

Natural gas is measured in units known as megajoules (MJ). The gas tariff is charged at a cost per MJ of gas the appliance consumes. The tariff you are charged can be found on your gas account.

Calculating your own costs

The running costs of a specific gas appliance can be calculated if you know its MJ input and the gas tariff. The MJ input is usually printed on the appliance or in its technical information.

Wherever possible, hourly running costs have been provided so you can easily estimate your own monthly or annual costs. Costs are provided for both natural gas and LPG (bottled gas).

The Domestic General Tariff is the most common tariff used by households. Currently, natural gas is charged at the following prices (GST inclusive):

Gas used	Peak*	Off-peak*
First 4000 MJ	1.3c/MJ	1.15c/MJ
Consumption after 4000 MJ	1.0c/MJ	1.0c/MJ

* Average gas price June 2009.

Most households with gas heating would use much more than 4000 MJ per billing period. Appliance running costs listed are based on peak rates for consumption over 4000 MJ (i.e. 1.0c/MJ).

The appliance running costs do not include supply charges which add approximately \$25.00 to each gas account, every two months.

LPG (Liquefied Petroleum Gas)

LPG is generally used in areas where natural gas is not available. It is sold by the litre or kilogram (bottle size). One litre of LPG provides approximately 26 MJ of energy, one kilogram contains two litres of LPG or approximately 52MJ of energy.

LPG prices are highly variable depending on factors such as geographical location and world prices. The price of LPG can be more than two and a half times that of natural gas. Prices do not include bottle rental or delivery charges.

Heating

Annual heating costs assume heating is used for eight hours per day in Victoria during the colder months of the year, unless otherwise specified. For each degree the thermostat is increased costs will increase by up to 15%. Energy efficient homes can reduce heating costs by up to 30%.

Central heating

All costs are given for homes of 150 m² with 2.4m ceilings heated to 21°C. Calculations for larger or smaller homes can be estimated proportionately from these figures. Add \$69 per year if your heater has a fan (all gas ducted heaters have one). Add \$27 per year for natural gas heaters with pilot lights.

Heating system	Natural gas hourly cost	LPG hourly cost
Gas ducted (1-2 star rating)	30c - 47c	83c - \$1.30
Gas ducted (4-5 star rating)	22c - 36c	61c - \$1.00
Gas ducted (1-2 star rating - zoned*)	16c - 23c	44c - 66c
Gas ducted (4-5 star rating - zoned*)	12c - 18c	33c - 51c
Hydronic (panel radiators)	28c - 43c	76c - \$1.22

* assumes 50% of the home is not heated.

Gas space heating

The following costs are based on heating an area of 60m² with 2.4 m ceilings to 21°C. Calculations for the size of your rooms can be estimated proportionately from these figures. Add \$21 per year if your heater has a fan. Add \$21 per year for natural gas heaters with pilot lights and \$58 per year for LPG heaters with pilot lights.

Heating system	Natural gas hourly cost	LPG hourly cost
Gas space (1-2 star rating)	13c - 20c	35c - 57c
Gas space (3-4 star rating)	11c - 17c	30c - 48c
Gas space (5-6 star rating)	10c - 15c	26c - 42c

Hot water systems

Costs are based on hot water usage for a typical four person household. The lower figures apply to efficient water users and the higher figures for high volume water users.

Hot water system	Natural gas monthly cost	LPG monthly cost
Storage (5 star efficiency)	\$16 - \$22	\$45 - \$63
Storage (2 star efficiency)	\$20 - \$28	\$56 - \$77
Instantaneous (5 star efficiency)	\$16 - \$22	\$45 - \$63
Solar (gas boosted)	\$7 - \$8	\$17 - \$21

Cooking

Appliance	Natural gas hourly cost	LPG hourly cost
Burner	11c	29c
Griller (horizontal)	Up to 14c	Up to 38c
Oven	Up to 14c	Up to 38c

Energy rating labels

When buying a new appliance look for the gas or energy rating label. Energy rating labels help you buy an energy efficient model which could save you money over the lifetime of the appliance. The higher the stars the bigger the savings.

Detailed information for current models can be found at www.energyrating.gov.au

To find more ways to live sustainably, visit resourcesmart.vic.gov.au