

DOMESTIC CONSUMERS

HOW TO REDUCE YOUR ELECTRICITY ACCOUNT

Before considering ways and means of reducing your electricity account one should first consider the cost of operating the various types of domestic appliances.

The following table details the average cost of electricity consumed by the various electrical appliances used in the home. (KWh cost is based on 31 cents average)

ELECTRICAL APPLIANCES/DEVICE	RATING (kW)	COST PER HOUR (CENTS)
Lamp		
100 watt	0,1	3,1
75 watt	0,075	2,33
60 watt	0,06	1,86
40 watt	0,04	1,24
Stove		
Small hot plate (on high)	1,5	46,50
Small hot plate (on low)	0,375	11,63
Large hot plate (on high)	2,0	62,00
Large hot plate (on low)	0,5	15,50
Oven (approximately 200°C)	2,0	62,00
Dish Washer	1,0	32,00
Electric Blanket		
(Pre heat)	0,05	1,55
(All night setting)	0,015	0,47
Electric Frying Pan	1,5	46,50
Fan	0,07	2,17
Floor Polisher/Vacuum Cleaner	1,00	32,00
Hair Dryer	0,5	15,50
Hi-Fi Equipment	0,2	6,2
Hot Water	See Note 1 below	
Iron	0,5	15,50
Kettle	2,0	62,00
Microwave	1,3	40,30

ELECTRICAL APPLIANCE/ DEVICE	RATING (kW)	COST PER HOUR (CENTS)
Personal .Computer.	0,05	1,55
Power Drill	0,25	7,75
Deep Freeze	0,2	6,2
Refrigerator	0,1	3,1
Sewing Machine	0,07	2,17
Slow cooker	0,15	4,65
Space heating		
1- Bar Heater	1,00	3,1
2- Bar Heater	2,00	62,00
Swimming Pool Pump	1,0	3,1
Television Set	0,3	9,3
Tumble Dryer	3,0	93,00
Washing Machine		
(Hot wash)	1,0	3,1
(Cold wash)	0,5	15,50

Note 1: **Cost of hot water**

Usage	Cost (cents)
Bath (12cm)	96,10
Shower (5 min)	48,1

Note 2: **1 kW** = 1000 watts and 1 kWh = 1 unit is equivalent to 1000 watts being used for 1 hour or 500 watts for two hours or 2000 watts for hour.

Due to the water heater having an element of relatively high rating and this element being energised for long periods each day the water heater is the largest user of electricity of all the equipment in a normal house. The next largest users of electricity are the stove and in some households space heaters in winter.

Therefore, by reducing the use of the hot water cylinder, stove and space heaters, an appreciable reduction in total overall consumption can be made.

An analysis of the monthly cost of operating the different classes of appliances in a typical home is given below:

	CHARGE PER UNIT (CENTS)	SUMMER COST		WINTER COSTS	
		UNITS	®	UNITS	®
Hot Water	31.00	311	96.41	352	109.12
Stove	31.00	70	21.70	104	32.24
Space Heating	31.00		0,00	200	62.00
Appliances	31.00	104	32.24	104	32.24
Lights	31.00	35	10.85	70	21.70
Swimming Pool	31.00	120	37.20	46	14.26
Monthly Consumption kWh	31.00	640	198.40	876	271.56

Hot Water Cylinder

1. Encourage all household members, particularly your helper/domestic worker as well as children to use hot water economically.
2. When bathing, use as little water as possible, or better still, have a shower
3. Do not wash one cup at a time under the hot tap but rather stack the dirty dishes and wash them together in the sink at the same time.
4. Do not allow hot water taps to drip.
5. Have the hot water cylinder thermostat set as low as the household's hot water demand will permit
6. Switch off the cylinder when not in use, for example at night, or should the family go out to work during the day, the cylinder could be switched off in the morning. More importantly, switch off the cylinder when away for relatively long periods, such as when on holiday.

Stove

1. When boiling water, turn the heat down as low as possible so that the water just boils. Do not cook food with the controls set higher than absolutely necessary.
2. It is more economical to heat water in a kettle than to heat it in a pot on the stove.
3. Do not cook food for longer than necessary.
4. Make sure that the bottoms of pots and pans are flat so that proper contact is made on the stove surface.

5. For stoves with the heavy solid plates which retain their heat, switch off the plate a few minutes before removing the pot.
6. Small pots should be heated on the stove's small plates to avoid unnecessary heat loss.
7. A microwave oven is cheaper to operate than a stove.

Refrigerators and Deep Freezers

1. Open the refrigerator or deep freeze door as little and for as short a period as possible.
2. Do not place hot food in the refrigerator or deep freeze. Allow it to cool externally first.
3. Ensure that door seals are in good condition.

Space Heaters and Air Conditioners

1. Sit as close as practically possible to a heater to avoid as far as possible the need to have both elements switched on together.
2. Switch off the heater when leaving the room for a length of time.
3. When using heaters or air conditioners, limit or restrict as far as possible the opening of windows.
4. Curtains help retain the heat in a room. Draw the curtains early in the evening especially during cold weather.
5. It is cheaper to use an electric blanket than to heat the bedroom with a heater.

Other Electrical Appliances and Lights

1. When using a kettle, do not fill it right to the top if you only intend making one cup of tea.
2. Store excess hot water from the kettle in a vacuum flask for the odd cup of coffee or for washing up later
3. Dishwashers and washing machines should only be used when one has a full load to wash and not just a few items.
4. Do not leave lights on unnecessarily.

Swimming Pools

1. Operate the filter pump for minimum periods.
2. During winter algae growth is restricted and the use of the filter cleaning system can be limited to once every few days.

HOW TO HANDLE ELECTRICAL SHOCK AT HOME

- ❖ Disconnect the main switch: if this cannot be done, and only if safely possible, disconnect the electricity at the wall plug to which the appliance is connected.
- ❖ If the electricity cannot be disconnected, **do not touch the victim** as you could be electrocuted as well. Rather **take hold of his clothing** and drag him from the point of contact. If his clothing is wet, protect yourself by means of dry rubber gloves or dry newspapers or plastic. A wooden/plastic broom handle may also be used.
- ❖ Push the victim away from the source of electricity with a non-conducting object like a broom or a chair (wood/plastic). Do not touch any metal objects.
- ❖ Evaluate the victim's breathing (ceased/irregular) and check for a pulse. Attempt heart massage/artificial ventilation to restore spontaneous heart/breathing functions. If another person is available, get him to call an ambulance.
- ❖ Treat injuries which may have been caused by a fall.
- ❖ Even in the event of serious electrical shocks, the after effects are, as a rule, not serious. However, a person who has lost consciousness must be kept under observation for at least 24 hours. Even if there are no obvious injuries after a heavy electrical shock, a doctor should be consulted in any case.

ELECTRICAL SAFETY IN THE HOME

- ❖ Replace worn and frayed electrical cords immediately.
- ❖ Keep electric cords away from stoves, hot and abrasive surfaces.
- ❖ Electrical cords should be routed in such a manner that it is unnecessary to walk over them.
- ❖ Do not route electrical cords under carpets.
- ❖ Never disconnect a plug by pulling at the cord. Ensure that the switch is in the "OFF" position before disconnecting the plug.
- ❖ Never use electrical appliances in the bathroom.
- ❖ Never connect electrical appliances to light sockets.
- ❖ Do not connect too many plugs to one socket.
- ❖ Do not touch metal objects like taps, refrigerators or stoves while holding an electrical appliance.
- ❖ Do not fill electric kettles while they are connected to power plug.
- ❖ Do not operate and electrical mower while touching a garden hose or tap.
- ❖ Always comply with the equipment manufacturer's prescribed safety precautions.
- ❖ Follow the golden rule: **always disconnect the power supply at the main switch when electrical appliances are being repaired.**
- ❖ All household appliances must be earthed wherever possible.
- ❖ Test your earth leakage unit regularly by depressing the test button.
- ❖ Do not operate the washing machine when you are barefoot. Place a rubber strip in front of the washing machine or wear shoes with rubber soles when operating the washing machine.

- ❖ Do not attempt to retrieve something out of a toaster with a metal utensil whilst supply is switched on.
- ❖ Do not overload a wall plug with appliances – it can cause overheating and a fire.
- ❖ Do not touch electrical appliances with wet hands and do not attempt to switch on a wall plug while washing dishes.
- ❖ Periodically check all appliances for secure leads and proper earthing - rather replace a worn lead than fixing it.
- ❖ If fuses are used, ensure that the correct rating is installed when replacing a blown fuse.
- ❖ Do not pass electric cords from one room to another through hinges of doors or windows where they can be squashed and damaged.

ELECTRICAL SAFETY OUTSIDE THE HOME

- ❖ Electric lawnmowers should be handled with care. Do not mow the lawn while it is wet. Wear shoes with rubber soles when mowing the lawn. If the cord gets cut accidentally, or if the cord of your lawnmower or edge trimmer is entangled in the blades, do not touch the equipment. Switch off and remove the plug from the socket before working on the machine.
- ❖ Weed eaters should only be used in dry conditions. Do not tug on the lead while on if it is stuck.
- ❖ Electrical tools, e.g. drills, extension leads, etc. Must be in good condition when used.
- ❖ An extension lead socket outlet must not be placed on a wet surface. Choose the correct size lead with an appropriate length for the job.
- ❖ A coiled lead forms an electrical field (heat) around the lead – rather uncoil the lead totally before it is used.
- ❖ Do not wash electrical equipment with water. **Switch the appliance off, remove the plug and wipe it off with a dry cloth.**

GENERAL ELECTRICAL SAFETY

- ❖ Always isolate the supply when attempting repairs on electrical equipment; remove the plug and put it next to you. This will prevent someone accidentally switching it on and cause you injury.
- ❖ Ensure that all electrical repairs or extensions to an existing installation are carried out by a qualified person to comply with the law and safety requirements.
- ❖ If you have children in the house, install dummy plugs. These will prevent children from putting their fingers or objects into the socket outlet.
- ❖ **Never try to put out a fire caused by a faulty electrical appliance by throwing water on it while the power is still on. First unplug the appliance or switch off the power at the main switch, and use a dry chemical or carbon dioxide fire extinguisher.**