

# Managing your geyser for a more energy efficient future

**During peak periods electricity consumption by Eskom's residential customers rockets from about 17.5% of the total electricity generated to over 30%.**



Your geyser is one of the biggest electricity guzzlers in your home – it's responsible for between 30% and 50% of your household's energy consumption – so, switching it off between 6am and 9pm is an excellent way for you to help reduce the load on the system.

## Frequently asked questions

**Q:** If I switch my geyser off during the day, does it mean that I can't enjoy a warm bath in the evening?

**A:** It takes a 3kW, 150l geyser about 2 hours and 40 minutes to heat the water from 20°C to 65°C. When a geyser is switched off and stores its water at the thermostat set point, the water temperature only drops by about 10°C over 24 hours. So, you can still enjoy a warm bath even if your geyser has been off during the day.

**Q:** Doesn't a geyser use more electricity when it is switched on and off?

**A:** Less energy is needed to re-heat the water to the thermostat level than it would be if the geyser had been switched on the whole time.

**Q:** Will switching my geyser on and off damage the thermostat?

**A:** Switching your geyser on and off will not damage the thermostat because, by nature of their operation, thermostats switch on and off all the time.

**Q:** Will switching my geyser on and off cause it to crack?

**A:** Switching your geyser on and off won't cause cracks because the thermal range during normal operation is much greater than the slow cooling of a geyser that is simply switched off.

**Q:** Do I have to install an automatic timer?

**A:** You don't need to install a timer on your geyser. Whether you opt for the convenience of an automated timer device or choose to do it manually, the impact will be exactly the same.

## Turning down the thermostat saves electricity and money

An average household with a 150l geyser, consuming about 200 litres of water per day, can achieve a monthly energy saving of 122kWh and R67 on cost of energy if the thermostat temperature is reduced from 70°C to 60°C and the geyser is switched off between 6am and 9pm.

That's because a 150l geyser that is switched off for 15 hours a day with the thermostat set at 60°C will use 238kWh of electricity over the course of the month at a cost of R131. Compare this to a geyser set at 70°C, and left on all day, that uses the 360kWh of electricity at a cost of R198 per month.

Even reducing the geyser's thermostat temperature from 70°C to 60°C, *without* turning the geyser off during the day, will achieve a small saving because electricity usage drops from 360kWh to 342kWh.



Thermostat Temperature	Switched off	Monthly Energy Used kWh	Monthly Cost Rand
70°C		360	198*
60°C		342	188*
60°C	06:00 and 21:00	238	131*

\* Calculated with a tariff of R0.55/kWh

Remember, the amount of electricity and money you save will depend on your household's consumption, ambient temperature, the temperature the thermostat is set at and how long the geyser is switched off for during the day.

### Maximise savings

#### Enhance geyser efficiency

##### - Insulate your geyser and pipes

Geyser blankets and additional pipe insulation are highly effective in helping to conserve energy. A geyser blanket slows down the cooling rate of a geyser when it is switched off, reducing the heat loss to the atmosphere. This means that less electricity is needed to reheat the water after the geyser has been switched off. Ideally, you should insulate the first 1,5m of hot water outlet pipe and from the geyser 1m of cold water inlet pipe.

Tests have shown that geyser blankets save 20% of the 2.59kWh of electricity required to reheat the water in a geyser that's been off for 24 hours. A geyser blanket and pipe insulation will save an average household of four between R180 and R250 annually. A geyser covered by a geyser blanket is not at a higher risk of overheating, exploding or catching fire provided the correct materials are used.

##### - Fit your geyser close to the points where hot water is used

The further your geyser is away from the points of hot water consumption, the further the water must travel to get there and the greater the heat loss. By fitting your geyser close to the points of hot water consumption you can reduce heat loss to the atmosphere while the water is in the pipes.



#### Manage hot water usage

- When using small quantities of water, e.g. washing your hands, use cold water if hot water is not necessary.
- By taking a shower instead of a bath you can save the 1kWh required to heat an average bath.
- Install an efficient showerhead and you'll further reduce your energy and hot water consumption by up to 24%.
- Do not let hot water run unnecessarily. Get into the habit of using basin plugs when washing.
- If your clothes are not particularly dirty, skip the pre-wash cycle on your washing machine. This can save up to 20% of the hot water usage.
- Wash bed linen at 60°C not 90°C and make sure it's a full load.
- Only use the dishwasher when it's full, turn it off before the drying cycle and dry the dishes with a cloth.

For more information visit [www.eskom.co.za/dsm](http://www.eskom.co.za/dsm)