

How to be smart about being cozy this winter

Most South African homes are designed with tiled floors, open verandas and large windows to help keep them cool in the warm South African climate. However, what keeps the homes cool in summer makes them harder to heat in winter. Have you ever stopped to think about which heating option is the most energy efficient and appropriate for your home?



Money talks

Eskom asked an energy efficiency expert to work out the energy and costs needed to heat an average-sized room to 18°C and keep the temperature constant for one month. The study showed that the cost of heating the room from 11°C to 18°C was significantly more than maintaining a constant temperature and due to South Africa's low electricity tariffs; electricity is always the more cost-effective heating option.

Heating the room:

- with electricity R 24.17 - with gas R 50.81

Maintaining the room's temperature for 24 hours:

- with electricity R 3.29 - with gas R 6.91

Heating and maintaining the room temperature for 30 days:

- with electricity R 122.87 - with gas R 258.11



Heating smart this winter

The graph below illustrates the various methods of heating the average South African home and the relative efficiency of each heating option.

According to energy experts, **underfloor heating** is the most ineffective way to heat a home. The floor has to be heated before the temperature of the room can even be influenced, and even then, the warm air continues to rise into the ceiling. In homes without roof insulation, underfloor heating will fight a losing battle.

Because most **wall-mounted heaters** are quite small in size, raising the room temperature means that they have to be left on for a long time. A further disadvantage is that some of the heat is lost as it radiates into walls and heats up the bricks.

Gas heaters are not necessarily more effective than electric heaters but given the high cost of bottled gas, electric heating is still cheaper in South Africa. The main advantage of gas heaters is that they radiate heat almost immediately.

As far as increased comfort, cost and power usage goes, the most effective heating option is an **infrared heater**, like the ones often used in restaurants. These heaters are the most energy effective because they heat up objects and not the air.

All things considered, the most effective heater for your home this winter is either an **oil heater** or a **2 kilowatt fan heater**, both with thermostats. These two types of heaters consume around the same amount of electricity to heat a room but have different advantages and disadvantages.

Oil heaters are most effective in contained spaces, such as a single room. Open plan living areas are simply too big for an oil heater to make a real impact. They do take a little longer and a fair amount of energy before the heater's effect is felt because the oil and the metal takes time to warm up.

Fan heaters provide heat and comfort immediately and they can be directed to where the hot air is most needed. Most fan heaters come with a small container that can be filled with water to prevent the air in the room from drying out.

Heating hints and tips

- Insulation is the single most important factor when it comes heating a home. An insulated room requires 51% less energy than an uninsulated room. Insulating your home's ceiling is the simplest and most effective way to prevent the warm air generated by heaters from escaping.
- Only heat the rooms that you and your family are going to spend time in.

