



# turn up the heat

With such a wide range of home heating options available on the market today, it's easy to be confused when considering the most energy-efficient way of heating our houses. What criteria should we use when making a decision?

Resene  
Fahrenheit 

If, like me, you live in a draughty old colonial villa, with sash windows that rattle in the wind and (blush) where ceiling and under-floor insulation are still on the to-do list, you'll need to install effective heaters. However, if you already live in, or are planning to build, a new home that incorporates passive solar heating and has plenty of insulation lining the ceiling and walls, then turn the page – this story is not for you.

So, assuming that you live in an existing home and you've done your best to insulate the ceiling, walls and floor, what's next? Do you want a short-term solution or a long-term one? – you may end up spending more upfront, but less in the long run. Do you want to heat a single room or a whole house? Do you wish to keep some rooms at a lower temperature than others? Do you favour gas or electric heating?

### **Heating a whole house**

Consult an experienced heating engineer before you start to make sure you're on the right track. Have the size and complexity of the job detailed in writing and quoted, and make sure that you get a certificate of compliance for electrical work.

### **Under-floor heating**

This is most appropriately installed when a house is under construction, although retrofitting is possible in some situations. Usually, hot water pipes are installed in the concrete foundation slab, but an alternative is under-tile heating, where electric cables are laid between the existing floor and your ceramic tiles.

### **Ducted central heating**

A gas, diesel, or electric central heating unit or heat pump can be installed under the floor or outside the house, with warm air ducted to the different rooms.

### **Woodburners**

Modern, fuel-efficient woodburners are a cheap form of heating. They are effective in open-plan houses, but are not so good in older homes with separate rooms. Remember, your wood must be dry.

### **Heating a room**

#### **Electric heaters**

Features and functions:

- > Thermostat: for fine-tuning the power to maintain your preferred room temperature.
- > Timer: for turning a heater on and off automatically.
- > Tilt switch: good safety feature – it switches the heater off if it topples over.
- > Thermal cut-out switch: stops heater from overheating.
- > Weight/wheels: is portability important to you?

#### **Convection heaters or oil-filled column heaters**

These provide background warmth, circulating the warm air by natural convection.

Advantages:

- > Valuable in situations where they'll be left on for long periods or used overnight in a bedroom.
- > Silent when fan not in use.
- > The surface is not as dangerous to touch as some other heaters.

Check:

- > Does the heater have a fan? This is a must. Use it at intervals to heat up a room quickly.
- > Does it have a thermostat?
- > Does it have a tilt switch?
- > Does it have a thermal cut-out if the heater tips over?
- > Does it have a range of heat settings and a timer?

### Radiant heaters

These use glowing electric elements with reflectors to radiate heat directly onto you.

Advantage:

- > Good for heating an individual.

Disadvantages:

- > Inefficient at heating air in a whole room.
- > Heating element could be a fire and safety hazard.

### Radiant ceiling panels

Heating foil is inserted between the framing and the ceiling plasterboard, and a thermostat is buried in the ceiling. This provides quick-acting warmth.

### Portable fan heater

These supply a blast of warm air directly onto you. They are good in a small room, but not for areas you need to heat over long periods of time.

Disadvantages:

- > Can be noisy and cause draughts.
- > Not as effective as convection heaters for providing general background warmth.

Check:

- > Does it have a tilt switch?
- > Does it have a metal or plastic grille? If you have children playing around the heater, a plastic grille may be safer than a metal one.
- > Do you go for flat or upright? Upright ones perform better, but they're more likely to tip over.

### Panel heaters

These are convection heaters mounted permanently on a wall. They provide great background heat.

### Heat pumps

Heat pumps collect heat from the air outside a house and release it inside. Sizes vary from small – capable of heating one room – to models of sufficient size and capacity to heat an open-plan environment.

Advantages:

- > Expensive to install, but cheap to run.
- > They collect more energy than they use.

Disadvantage:

- > They are less efficient the colder it is outside.

### Night storage heaters

These are permanently installed convection heaters and are ideal for people who are home most of the time. They can spread warmth into several rooms, for lower running costs than oil column heaters, radiant heaters, fan heaters and convection heaters, but they're not cheap to install.

### Gas heating

Your options here include flued or unflued natural gas or LPG. The Consumers' Institute of New Zealand does not recommend unflued gas heaters. It suggests using a type that is fixed to the wall and where the flame is completely enclosed.

### Practical tips for reducing draughts and maximising your heating efficiency:

- > Leave your curtains open when you're at home, and open doors and windows to dry and air the house whenever possible.
- > Use draught stoppers under doors.
- > Block off open fireplaces if you're not using them.
- > Close your windows and curtains at sunset during the winter months.
- > Keep connecting doors between rooms closed.
- > Heat only the rooms you're using.
- > Place heaters away from windows.
- > Check air-tightness of windows, doors and floors.
- > Wear extra warm clothing when it's cold.
- > Use ceiling fans on a low speed to help to distribute warm air in winter.

You'll find lots of information on home heating at Consumer online, as well as a guide for calculating the size of heater you need for the size of your room.

Visit: [www.consumer.org.nz](http://www.consumer.org.nz). H



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