



Which heating system should I buy?

In Victoria a big chunk of our household energy use goes to heating our homes, so which heating system you use can have a big impact on your greenhouse gas emissions, and on your winter energy bills. To work out which is the best heating system for you, decide first if you're looking for something cheap and temporary, or if you're willing to spend a bit more. But remember, it's not just the heater but how you use it which matters, so also see the information on the next page on running a heater well.

Looking for something cheap and temporary

Portable electric heaters are expensive to run — it's often cheaper in the long run to install a better, more efficient heating system. There is not a huge amount of difference between the best and the worst portable electric heater — which is best for you will depend more on the type of space you are heating. Generally, heaters with thermostats and fans are better. Your options are:

Bar heaters



running cost	greenhouse gas emissions	installation cost
\$\$\$\$	🌍🌍🌍🌍	\$

These are best suited to large or draughty spaces, because they give out radiant heat, meaning they don't try to heat the air, just the person sitting in front of them. If your space isn't draughty, it will be cheaper to run a heater with a thermostat and a fan. Bar heaters can also be a fire hazard.

Fan heaters



running cost	greenhouse gas emissions	installation cost
\$\$\$	🌍🌍🌍	\$

These give out convective heat — they heat the air. They are best suited to small, draught free spaces. They won't heat large spaces.

Willing to spend money, natural gas available

If you have a bit of money to spend, and natural gas is available, you can choose anything in this column or the column to the right. Gas is usually a much better option than electricity, as it is cheap and low on greenhouse gas emissions. Electricity is only better when it's from renewable sources (e.g. 100% GreenPower), and you can afford to pay the extra cost of using this for heating. By the way, natural gas is the gas which gets piped to houses, and LPG is the gas which usually comes in gas bottles.

Natural gas wall heaters



running cost	greenhouse gas emissions	installation cost
\$	🌍	\$\$\$

These are cheap to run, don't emit much greenhouse gas, and are good at heating large (and small) spaces quickly. Make sure you get one with a high star rating for efficiency.

Willing to spend money, natural gas not available

If you have a bit of money to invest in heating, but don't have access to natural gas, then your options are:

Reverse cycle heater



running cost	greenhouse gas emissions	installation cost
\$\$	🌍🌍	\$\$\$

These are easily the cheapest way to heat your house with electricity. Get one with a high energy star rating, and try not to use it for cooling more than is really necessary.

Reverse cycle central heating

running cost	greenhouse gas emissions	installation cost
\$\$	🌍🌍🌍	\$\$\$\$

These systems are also relatively cheap to run and low on greenhouse gas emissions. However this changes if you heat the whole house — make sure you get a system which allows you to only heat the rooms you're using.

LPG wall heater

running cost	greenhouse gas emissions	installation cost
\$\$\$\$	🌍	\$\$\$

These are like natural gas wall heaters, but expensive to run.

[more options on the next page...](#)

Oil heaters (column heaters)



running cost	greenhouse gas emissions	installation cost
\$\$\$	🌍🌍🌍	\$

These are best suited to medium sized draught free rooms, rooms with high ceilings, and rooms where there are small kids (as they are less of a burn risk than other heaters). They give out both convective and radiant heat. If you get one without a fan, all the heat might go to your ceiling. They take awhile to heat a room.

Convection heaters



running cost	greenhouse gas emissions	installation cost
\$\$\$	🌍🌍🌍	\$

These are best suited to small to medium sized draught free rooms with low ceilings. They heat slowly.

Flat panel heaters



running cost	greenhouse gas emissions	installation cost
\$\$\$	🌍🌍🌍	\$\$

These give out either convective heat or both convective and radiant heat. They are similar to oil heaters, but can heat up faster.

How big a heater?

No matter how good a heater is, if it's too small for your room, it won't be able to heat it properly. Sustainability Victoria recommends 100 watts or 0.5 MJ of heat per square metre, for a room with an insulated ceiling which is less than 2.7 metres above the floor. So for a 20 square metre room you will need a 2000 watt or 100 MJ heater.

How to run a heating system well

Having an efficient heating system isn't much use if all the heat then disappears out the window. To make sure any heating system works well, there are a few things you should always do. Make sure your home is insulated – even without a rebate, insulation pays for itself in reduced energy bills. Make sure any windows have thick curtains which extend below the bottom of the window, and pelmets (boxes which sit over the top of the curtain rod). A cheap alternative to pelmets is to sit a thick scarf over the curtain rail. Only heat the space you're using, not the whole house. Block any draughts – cheap draught blocking materials are available from hardware stores. If you have a fan, try running it on low, so all the heat doesn't accumulate at the ceiling. Finally, try heating to only 19 or 20° – with a jumper on this should be warm enough.

Natural gas central heating

running cost	greenhouse gas emissions	installation cost
\$	🌍🌍	\$\$\$

Natural gas central heating can also be cheap to run and low on greenhouse gas emissions. However emissions and costs are a lot higher if you heat the whole house and not just the room(s) you're using. Getting a system which allows you to turn off the heating to unused rooms helps, but most systems will still require you to keep a minimum number of vents open.

Hydronic heating powered by gas



running cost	greenhouse gas emissions	installation cost
\$	🌍	\$\$\$\$\$

These are panels on the wall which have heated water in them. Hydronic heating with gas has low greenhouse gas emissions and is very cheap to run, but is one of the most expensive heating systems to install.

LPG central heating

running cost	greenhouse gas emissions	installation cost
\$\$\$\$	🌍🌍	\$\$\$

These are like natural gas central heating, but expensive to run.

Hydronic heating powered by wood, solar or heat pump

Similar to gas hydronic heating (see centre column).

Slow combustion wood stove



running cost	greenhouse gas emissions	installation cost
\$	🌍	\$\$\$

These are low on greenhouse gas emissions but cause other air pollution problems, especially when wood is burnt the wrong way. They are suited to heating large spaces for long periods. However open fires (i.e. the ones not in metal boxes) lose most of their heat up the chimney, so are a bad option.

In-slab/underfloor heating

running cost	greenhouse gas emissions	installation cost
\$\$	🌍🌍🌍🌍	\$\$\$

This is installed in the concrete floor slab, usually while the house is being constructed. It is a bad option, as it is responsible for very high greenhouse gas emissions.