



The best ways to run your heat pump

Finding the best way to run your heat pump can depend on various factors, including lifestyle, desired temperature and budget.

To keep it simple, we've broken down the most efficient and cost-effective ways to heat your home. Plus **we've explained references to common heat pump terminology, COP & SCOP, on pg 2.**

What will happen to my energy bills now?

When you switch to a heat pump, you'll see your gas bill drop considerably (or even drop to zero if you choose to have your meter removed). Your electricity bill will increase as it's now covering your heating and general electricity usage.

Keep your heating bills down

There are two main ways to keep heat pump costs low - lowering the cost of energy with a smart tariff and maximising the efficiency of your heat pump. Here's how to make these options work for you:

Join a smart tariff

Overall, we've found that customers save most money on a smart tariff like Cosy Octopus.

If you've signed up for a smart tariff like Cosy Octopus (which offers two periods of super cheap energy, and slightly more expensive rates during the 'peak' time), running your heat pump all day, as described below, may give you the best SCOP but might cost more to run.

To maximise savings, we recommend setting your schedule to heat during the cheaper 'off-peak' periods when possible. Because the heating isn't kept at a continuous temperature, you'll use more energy and increase SCOP during the heating periods, but you will likely have saved money by utilising cheaper rate electricity.

Most heat pumps can only do one thing at a time. We'd suggest heating your hot water first, it should only take a few hours and stay warm for most of the day, and then heat your home in the remaining off peak time. *(Find a recommended heating schedule for Cosy Octopus on pg 3).*

Maximising efficiency

When it comes to cost, desired room temperatures make a big difference. **A good comfort setting for a heat pump would be around 19° or 20°.** If you set it to 22°, for example, then the heat pump will stay on longer until the room temperature meets its target. This is likely to cost a bit more, and may reduce your efficiency (SCOP). It's also worth noting that if you have good insulation, heat will be retained for longer.

Like with any heating system, it's also best to reduce radiator temperature in rooms that are used less, like your bedroom, so the hot water can be directed to where it's needed most.

Most textbooks recommend running heat pumps continually at low temperatures (around 19°), apart from when you're out or sleeping. This means that the heat pump works hard to bring the

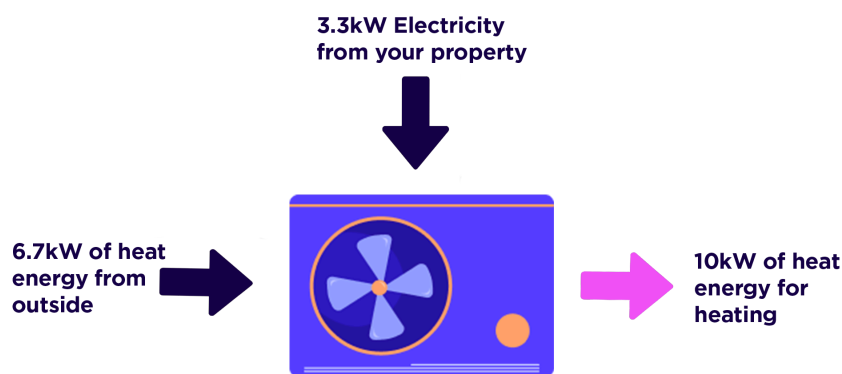
temperature of the room up, then will idle at minimum output to maintain that temperature - keeping it working efficiently for longer. This method should have your heat pump meeting or exceeding a SCOP of 3.3, which Octopus has designed your heat pump to achieve. (See pg 3 for an example of a heating schedule on the Flexible Octopus tariff).

What is the SCOP and why is it important?

The COP (Coefficient of Performance) is a figure that's often used to measure the efficiency of your heat pump, which in turn will impact its cost to run. A low COP indicates low efficiency, and a high COP indicates high efficiency.

COP is the efficiency measured over a short period of time. The Seasonal Coefficient of Performance, or "SCOP", is measured over a full 12 months.

Technically COP is the measurement of the amount of energy you get out (in this case, heat) versus the amount of energy that goes into the heat pump.



$$\text{Heat energy out} \div \text{electrical energy in} = \text{Coefficient of Performance (COP)}$$
$$10\text{kW} \div 3.3\text{kW} = 3$$

The COP is influenced by various factors, but it's mainly affected by what's happening in your home, like if the water is heating.

Another factor can be the temperature outside. For example, on the coldest day of winter, if you are extracting heat from the air to warm up the water, then efficiency will be low and so will the COP. However if you are doing the same on a warm summer day, the efficiency (and COP) will be high. **So don't be alarmed if your COP is lower during colder months - this is normal.**

SCOP VS COP

Octopus Energy designs heat pump installations to achieve an average SCOP of 3.3 over a 12-month period, using a maximum flow temp of 50° at the coldest time of the year.

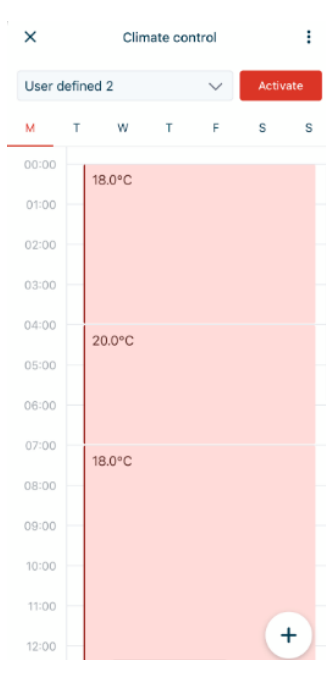
This means that there are times throughout the year when your "COP" might be higher (e.g 4.8 in the warmer months) or lower (e.g. it may dip below 2.0 on the coldest days), but over 12 months, your heat pump should meet a SCOP of 3.3 at 50°.

Smart tariff schedule example (Cosy Octopus)

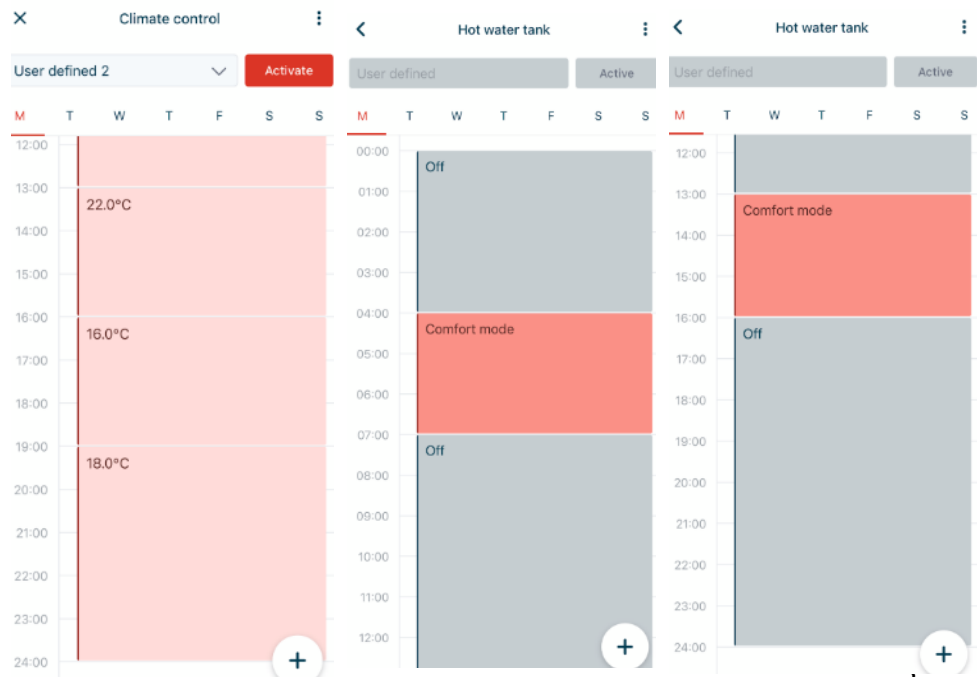
The following charts show a recommended heating schedule for a heat pump on the Cosy Octopus tariff, set on the Daikin ONECTA app, run with the intention of maximising efficiency and saving money. It's important to note that all temperatures below are suggestions for a 'normal comfortable' temperature but should be adjusted to your home and preferences.

	STANDARD	COSY	STANDARD	COSY	PEAK	STANDARD
HEATING	10pm - 4am	4am - 7am	7am - 1pm	1 - 4pm	4-7pm	7pm - 10pm
Daily schedule	MED - 18°	HIGH - 20° (if you're heating hot water that will take priority)	MED - 18°	HIGH - 22° (if you're heating hot water that will take priority)	LOW - 16° (effectively switches off your heat pump)	MED - 18°
	STANDARD	COSY	STANDARD	COSY	PEAK	STANDARD
HOT WATER	10pm - 4am	4am - 7am	7am - 1pm	1 - 4pm	4-7pm	7pm - 10pm
Daily schedule	OFF	COMFORT (hot water will switch off when it gets to temperature)	OFF	COMFORT (hot water will switch off when it gets to temperature)	OFF	OFF

Heating



Hot water



Standard tariff schedule example (Flexible Octopus)

The following charts show a recommended heating schedule for a heat pump on the Flexible Octopus tariff, set on the Daikin ONECTA app, run with the intention of maximising efficiency and saving money. It's important to note that all temperatures below are suggestions for a 'normal comfortable' temperature but should be adjusted to your home and preferences.

	STANDARD				
HEATING	10pm - 4am	4am - 9am	9am - 4pm	4-10pm	
Daily schedule	MED - 18° (while you sleep)	HIGH - 20° (if you're heating hot water that will take priority)	MED - 18° (if you're out of the house)	HIGH - 20° (if you're heating hot water that will take priority)	
	STANDARD				
HOT WATER	10pm - 4am	4am - 6:00am	05:30am - 4pm	4-6pm	6pm - 10pm
Daily schedule	OFF	ECONOMY (hot water will switch off when it gets to temperature)	OFF	ECONOMY (hot water will switch off when it gets to temperature)	OFF

Heating

Hot water

