

Hydrogen boilers: everything you need to know

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Hydrogen boiler

You might have heard about the latest plans to switch the UK's gas supply to hydrogen – and that the gas boilers we currently use will eventually be phased out.

But what does that mean for you and your home? And does it mean you'll have to fork out for a completely new kind of boiler?

In this article, we'll bring you up to speed with the latest plans. We'll explain why it's happening, when the changes are likely to start – and why it's good news for everyone.

Are gas boilers being banned soon?

Short answer: no, not really.

You might have seen headlines about natural gas boilers being banned from 2025. But that's just for new-build properties, not for existing homes and boilers.

In fact, as you'll see from the estimated timescales below, a [boiler you buy today](#) will probably use natural gas for all its working lifetime.

After that, we the two main ways to heat your home are likely to be with a [heat pump](#) or with a boiler that runs – at least partly – on hydrogen.

The big switch to hydrogen

The UK government is looking at plans to replace natural gas with hydrogen gas – because it's much more environmentally friendly.

But if this happens, it will be a gradual process that takes years, rather than something that changes all at once. And that means it shouldn't be extra hassle or expense for homeowners. In fact, some of the biggest boiler manufacturers in the UK have promised that hydrogen-ready boilers won't cost any more than a regular gas-powered boiler.¹

Nobody knows the exact timescales, and a lot of the technical details still need to be ironed out, but the change is likely to happen in three main stages.

The first step in the hydrogen transition is likely to be introducing a 20% hydrogen blend into the UK mains supply. Most boilers will be able to use this hydrogen blend without any problems. In fact, many new boilers are already labelled 'hydrogen-blend ready' ahead of this first move towards hydrogen.

In the meantime, boiler manufacturers are working on a new 'hydrogen-ready' standard which will mean the UK can switch as easily as possible to 100% hydrogen much further down the line. The important thing to realise is that 'hydrogen-ready' boilers are still in development, whereas 'hydrogen-blend ready' boilers are [widely available](#).

The government is currently carrying out trials to work through all the cost, feasibility and safety issues – and they're expected to make firm decisions on what role hydrogen will play in heating the UK's homes by 2026.

But although the timescales and exact details are still be ironed out, any switch to hydrogen is likely to happen in three main stages.

Stage 1

New boilers will be built to a new 'hydrogen-ready' standard, which means they'll work with natural gas but can also be easily modified to run on 100% hydrogen. According to some industry estimates, these boilers should be available before 2025.

Stage 2

A 20% hydrogen blend will be introduced into the gas supply. Most boilers will be able to use this as normal – including all new British Gas boilers. The rollout of 20% hydrogen isn't expected to begin until 2028 at the very earliest.

Stage 3

If the country switches to 100% hydrogen, every new boiler sold in the UK will simply be a hydrogen boiler. If this does happen, it probably won't happen until the mid-2040s.



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What is a hydrogen boiler?

A hydrogen boiler is very similar to a natural gas boiler, which is why many people think they're the best way to decarbonise our homes.

Hydrogen does burn differently to natural gas, so there will be some design changes inside the boiler itself. But the basic principles are the same.

How much will hydrogen boilers cost?

Good news. Hydrogen boilers are still at prototype stage, but [manufacturers are confident they won't cost any more than the equivalent natural gas boilers.](#)

So why the change?

Natural gas is a fossil fuel that produces CO₂ when burned. And that makes heating our homes one of the biggest contributors to climate change in the UK.

Hydrogen is very different though. Burning hydrogen creates no CO₂ – and there are also ways of making hydrogen gas that are very carbon efficient.

Hydrogen is so promising as a low-carbon fuel that the government is exploring whether it could help reach our goal of being net zero as a country by 2050.

If you want to learn a bit more about what makes hydrogen boilers so important, [take a look at this blog post by Chris O'Shea, our CEO](#).



Hydrogen boilers are becoming increasingly more important.

When will the transition to hydrogen happen?

The simple answer is nobody really knows for sure at the moment.

Our best guess is that the introduction of the 20% hydrogen blend will happen within the next decade, but the switch to 100% hydrogen will take significantly longer.

This relatively slow change means most people will have updated to a hydrogen-ready boiler by the time the switch happens, so adapting to the new type of gas should be relatively painless.

It's also important to realise that hydrogen boilers are just one part of the government's plan to decarbonise the heating of our homes.

Heat pumps are also expected to play a key role in keeping us warm and cosy while protecting the planet too. [You can find out more about them in this article.](#)

Why can't we go 100% hydrogen faster?

There are a few reasons.

Firstly, converting all the boilers in the UK is a big job, even if the changes needed to each boiler are fairly small.

Secondly, hydrogen boilers are still at prototype stage, so manufacturers aren't ready to roll them out yet.

And finally, there's the supply issue – the UK doesn't currently produce enough hydrogen to power everyone's boilers.

Solving these challenges will take a bit of time, but a lot of progress has been made already. So it's possible that a cleaner, greener, hydrogen-powered future is just around the corner!

[View our range of hydrogen-blend ready boilers](#)

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