

Hydrogen Village Factsheet:

3 Making heating more environmentally-friendly

To tackle the **climate emergency, we need to change how we heat our homes. Hydrogen offers one means of doing that, but in a way we're already familiar with.**

We understand that residents may have questions about the role of hydrogen in home heating and cooking, and what makes it an environmentally-friendly alternative to natural gas. This factsheet gives you more information about hydrogen to help answer those questions.

How can hydrogen help tackle climate change?

The UK Government has committed, in law, to reaching net zero by 2050. This means achieving a balance between the greenhouse gases put into the atmosphere and those taken out. Most UK homes and businesses rely on natural gas, a fossil fuel, for heating and cooking. In the average home, this causes around 2.5 tonnes of carbon dioxide (CO₂) to be released into the atmosphere every year.

Hydrogen can be used in a similar way to natural gas for cooking and to heat our homes. When burned, it emits **no CO₂**, which makes it a better, greener choice for the planet.

We anticipate hydrogen being used alongside other energy technologies, such as electricity, to help meet demand and offer consumers a range of appliance options.

How is hydrogen produced?

Government has set a Low Carbon Hydrogen Standard to ensure that all future hydrogen is produced in a low carbon way that reduces emissions.

At first, most of the hydrogen produced in the UK will be made using natural gas, with the CO₂ from production removed and stored away – this is more commonly known as 'blue' hydrogen and it will predominantly be supplied to industry. Over the longer term, hydrogen will increasingly be made using renewable energy, with almost no CO₂ emissions – also known as 'green' hydrogen.

Cadent is committed to a low carbon Hydrogen Village programme and will use green hydrogen produced locally. To ensure a resilient supply of hydrogen and keep our customers **safe, warm and connected**, we are currently looking at a number of sources of hydrogen for the village.

Did you know?

Heat in buildings is one of the biggest sources of greenhouse gas emissions, accounting for around 23% of the UK's CO₂ emissions.

Got any further questions?

Call us on 0800 035 3371 (Freephone), send us an email at enquiries@hydrogenvillage.com or pop in to see us at the Hydrogen Experience Centre, McGarva Way, Whitby CH65 9AB

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Answering your questions

With so many different ways to produce hydrogen and countless projects in the pipeline, we recognise that there are lots of questions about where hydrogen comes from and why it's good for the planet. We have answered some of the more common queries below.

Will 'blue' hydrogen be supplied to the village?

Currently, none of the hydrogen supply options we are looking at are 'blue' - but that doesn't mean 'blue' hydrogen isn't a great low carbon solution. One of the main benefits is that it can be produced in large quantities using some of the oil and gas infrastructure that the UK already has in place.

Is 'blue' hydrogen more polluting than natural gas?

No – 'blue' hydrogen has a much lower carbon intensity than that of natural gas, which falls firmly within the Government's Low Carbon Hydrogen Standard. 'Blue' hydrogen production projects will also capture around 97% of all carbon dioxide, making a significant contribution to reducing CO₂ emissions.

Is HyNet the same project as the Hydrogen Village?

Although Cadent is involved in both projects, HyNet and the Hydrogen Village are two separate projects. HyNet is focused on producing hydrogen to decarbonise the surrounding industry.

Why not just go all electric?

In the future, we will need to ensure there are zero carbon emissions from our heat sources. However, we will also need to ensure that supply can meet demand. Like today, the best way to deliver that will be through a mix of energy sources – one of which could be hydrogen.

What about heat pumps?

We will need heat pumps, but this option won't be suitable for everyone. We will also need hydrogen for those unable to afford the high upfront costs of a heat pump or for people who would prefer not to have to make some of the changes needed to properties to make them work efficiently.

Further information

Please visit hydrogenvillage.com/information-hub where you'll find our handy information library on all things hydrogen.