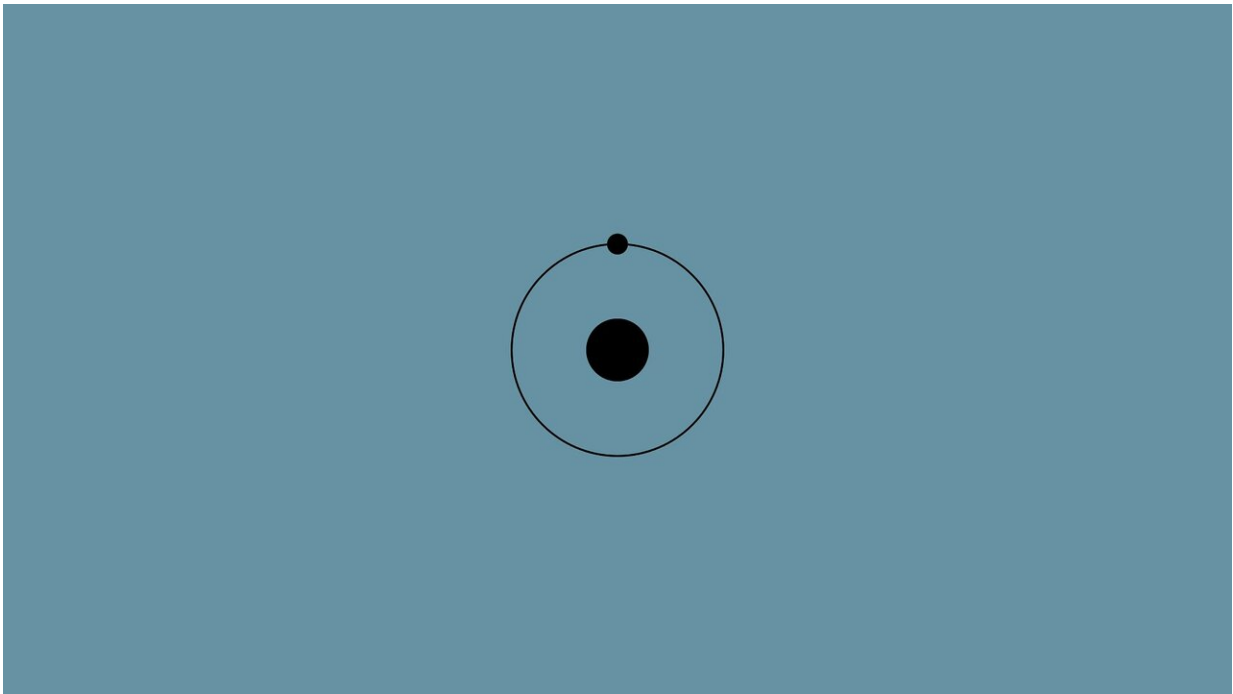


UK households support a return to hydrogen as a domestic fuel

November 22 2019



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Households in the U.K. would support a return to the use of hydrogen as a domestic fuel and believe it would have a positive environmental impact, research shows.

Researchers at Newcastle University, U.K., found that when people were informed that hydrogen-rich gas was previously used in the U.K. and

that most domestic gas appliances in the U.K. are required by law to be tested with a mixture of natural gas and hydrogen during product certification, more than eight out of 10 respondents said they would be willing to use it in their home.

Additionally, 70 percent of respondents believed that using blended hydrogen would have a positive environmental impact. The same proportion of survey respondents cited potential costs as their main concern, indicating they would be unable or unwilling to pay more on their [energy bills](#).

Newcastle University's research team is now calling for greater public involvement in discussions about the benefits and costs of using blended hydrogen in order to build awareness and acceptance of it being used in homes.

Dr. Matthew Scott, Research Associate, Newcastle University, said: "Although cost was the most significant individual objection, overall most people did not reject the idea of hydrogen as a fuel for their home. While full conversion is realistically still some time away, our research shows that there is an appetite for small amounts of zero carbon hydrogen to be safely blended with existing domestic gas supplies."

From the early 19th century until the late 1970s, manufactured town gas containing up to 60 percent hydrogen was used extensively as an energy source for lighting and heating until it was replaced by North Sea natural gas.

As the country moves towards a low carbon economy, hydrogen is increasingly viewed as once more having a key role to play in the U.K.'s energy mix. Hydrogen-powered transport is growing in support, with cities such as Liverpool and Aberdeen switching from diesel to hydrogen buses while hydrogen taxis are now on the road in London. Plans to

convert rail stock from diesel to hydrogen are also being developed.

But despite domestic heating and industry accounting for nearly half of all energy use in the U.K. and one third of the country's total carbon emissions, the use of hydrogen in homes will not become widespread without further research.

From December 2020, a series of blended hydrogen demonstrations will take place on public gas networks across the North of England.

HyDeploy is being delivered by Cadent Gas and Northern Gas Networks, backed by £22 million of OFGEM innovation funding.

The demonstrations will show that a blend of up to 20 percent hydrogen can be safely used by customers for heating and cooking, without changing appliances. Since 1993, all gas appliances manufactured and sold in the U.K. have been tested with a blend of 23 percent hydrogen and 77 percent natural gas.

If hydrogen was blended with natural gas across the U.K. at this level, it could save around six million tonnes of carbon dioxide emissions every year, the equivalent of taking 2.5 million cars off the road.

Mark Horsley, Chief Executive for Northern Gas Networks said:

"Hydrogen has a key role to play in a low carbon energy future, and understanding public perceptions of hydrogen is crucial to customer acceptance of the technology, and its ability to make a positive difference to climate change.

"Important research like the Newcastle University report helps us further understand the key issues and challenges customers need us to address around hydrogen, while work continues to deliver the evidence base

supporting its role in decarbonizing heat."

Ed Syson, Chief Safety and Strategy Officer, Cadent, said:

"Hydrogen will play an essential role in a net-zero energy system. We are just at the very start of the journey and things need to happen at a pace to avoid the worst impacts of climate change.

"Flagship projects like HyDeploy are vital to enabling a [hydrogen](#) future and a key aspect of this is to understand people's views. So the work done by Newcastle University has been really important to our understanding of how we will look to develop our future projects."

Provided by Newcastle University

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