

HyDeploy is a pioneering hydrogen energy project to reduce UK CO₂ emissions.

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The HyDeploy programme is designed to show that a blend of hydrogen (up to 20% vol.) and natural gas can be used by customers safely and with no changes to their domestic appliances. HyDeploy will be the first practical demonstration of hydrogen into a modern UK gas network.

HyDeploy @ Keele

The first HyDeploy trial has been approved by the UK Health & Safety Executive (HSE) to go ahead from 2019 on part of the Keele University campus. This is a private gas network with approximately 130 homes and buildings, and provides an ideal place for the first trial.

HyDeploy₂

HyDeploy₂ is the next phase of this work and will look to run trials on two public networks in the North of England.

It will work through a similar process as HyDeploy @ Keele with customer engagement and the preparation of a full safety case for the HSE. With HSE approval, and success at the first trial site at Keele University, the public network live trials will go ahead in the early 2020s.

HyDeploy₂ will also develop a full deployment plan for hydrogen blending on the gas network based on the results of these trials.

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2 live trials

Planning for two live trials in the North of England.

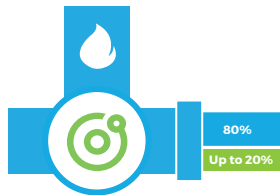
750 homes

Around 750 homes and buildings in each trial area.



A hydrogen first

HyDeploy aims to be the first injection of hydrogen into modern UK gas grids.



20% hydrogen

Hydrogen is expected to make up a maximum of 20% of the volume of gas in the network.

Safety approved

The first delivery of blended hydrogen and natural gas has been approved as part of HyDeploy @ Keele.



Easy for customers

Customers receiving the blended gas should not notice any differences in the way they use gas or how their appliances work.



CO₂ savings

Blending hydrogen across the UK could save around 6 million tonnes of carbon dioxide emissions every year, the equivalent of taking 2.5 million cars off the road.

FAQs

What is HyDeploy₂?

HyDeploy₂ is the next phase of work to find out if blending hydrogen, up to 20% vol, with natural gas could be a way to reduce CO₂ emissions from home cooking and heating, with no changes to customer appliances.

It will plan trials on two public networks in the North of England. Following Health & Safety Executive approval, and success at the first trial site at Keele University, these trials will go ahead in the early 2020s.

It will also develop a full deployment plan for hydrogen blending on the gas network based on these trials.

Where will the live trials for HyDeploy₂ be?

The two trial locations are still to be confirmed. One will be in the North West and one will be in the North East of England.

Will a live trial definitely go ahead?

The UK Health & Safety Executive must approve both live trials of blended gas in the same way as the first demonstration trial for HyDeploy @ Keele. A safety case will be prepared and submitted to the HSE for approval.

Will the live trials happen at the same time?

No. With Health & Safety Executive approval, the first live trial will take place in 2020. The second live trial will follow in 2021.

How will you isolate the trial area from the rest of the network?

Areas are chosen where isolation is possible following a thorough review of the gas network. Isolation equipment will be installed at strategic locations to make sure blended gas is kept within the identified trial areas.

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How much will it cost customers?

The change from normal gas to blended gas during the live trial will not cost customers in the trial areas more. The details of how this is applied will be agreed with Ofgem, the energy regulator.

Have you started engaging with customers yet?

No. When the trial areas are finalised we will start our engagement with customers and authorities in those communities.

Is it safe for customers to use the blended gas?

Yes. Based on the evidence collected from the first trial site at Keele University, the UK Health & Safety Executive have approved delivery of a blend of hydrogen 20% vol. and natural gas under the Gas Safety (Management) Regulations. This means the blended gas is considered as safe as natural gas for customers to use.

Consortium

HyDeploy is being delivered by the HyDeploy consortium, which has technical expertise and practical experience.

Cadent

Cadent is leading HyDeploy. It owns and operates four of the eight gas distribution networks in the UK, including the West Midlands.



Northern Gas Networks is partnered with Cadent to deliver HyDeploy. The project supports its work by exploring the future role of gas. It owns and operates the gas network in the North East, Northern Cumbria and much of Yorkshire.



Keele University is hosting HyDeploy on its campus and the University's Materials Department are carrying out research on the impact of hydrogen on materials.



Health & Safety Laboratory is the scientific arm of the Health & Safety Executive. It is overseeing all safety aspects of HyDeploy, providing expert, impartial advice.



ITM Power manufacture integrated hydrogen energy solutions. It will be supplying the hydrogen production unit for HyDeploy.



Progressive Energy is an independent UK clean energy company. It will be supporting HyDeploy through development and implementation.

Supporting companies:



Kiwa specialise in gas testing. It is carrying out offsite testing on a range of common household appliances to inform the project; and will lead the gas safety appliance checks on the campus.

davelanderconsulting

Dave Lander is an internationally recognised expert in gas quality and safety and is co-ordinating the application to the HSE.



Otto Simon Limited is an engineering consultancy and project delivery organisation, responsible for the installation of hydrogen equipment onsite.