HyDeploy

Keele UNIVERSITY

A little change can make tonnes of difference

It's the Keele difference.

About the HyDeploy project

HyDeploy is an energy trial hosted at Keele University. It will explore the potential of blending hydrogen (up to 20%) into the normal gas supply to reduce carbon emissions.

Following comprehensive testing overseen by the Health & Safety Laboratory in Phase 1; HyDeploy aims to carry out a year-long live trial on part of the private gas network on the Keele University campus, starting in 2019. HyDeploy could provide important practical evidence that will help inform the national debate over routes to decarbonising our economy.

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Why is this project important?

The UK is committed to an 80% reduction in carbon dioxide (CO_2) emissions by 2050. CO_2 enters the atmosphere through burning fossil fuels such as natural gas. Gas provides heat to over 80% of UK homes, and is crucial to meet peak demands in domestic and commercial use. Heat accounts for around one third of UK CO_2 emissions. In recent years while progress has been made to decarbonise electricity, there has been little progress in reducing emissions from heat.

HyDeploy is one of a number of research projects investigating how hydrogen could help to meet this challenge. The basis for HyDeploy is to demonstrate that a blend of hydrogen (20% maximum) and normal gas could be delivered and used in the same way as normal gas only. This would reduce CO_2 emissions without the need to replace gas appliances or heating systems in peoples' homes. If it is successful, it could help a move towards hydrogen being blended with normal gas across the UK.

Why hydrogen?

Hydrogen is seen by many experts as a flexible way to deliver low carbon energy. When it is burned it doesn't produce CO_2, it just releases water and energy, and it can be produced in a low carbon way.

Safety

A live trial of hydrogen blended with normal gas will only go ahead with approval from the UK Health & Safety Executive (HSE). The HSE must be satisfied that the blended gas will be as safe to use as normal gas.

To help them make this decision, evidence will be collected from laboratory research and household and building safety checks - Phase 1 of the proposed HyDeploy Project.

Project partners the Health & Safety Laboratory are overseeing all safety aspects of HyDeploy.

If hydrogen blended gas was delivered across the UK it could save around 6 million tonnes of CO_2 emissions every year, the equivalent of taking 2.5 million cars off the road.

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Why Keele?

Keele University is an ideal location to carry out this trial. It has its own private gas network and as the largest campus in the UK, it is like a small town, with a mix of residential housing and commercial buildings. The project also reflects Keele's commitment to developing a carbon free future through its innovative Smart Energy Network Demonstrator project (SEND).

My home is part of the trial, what happens next?

To help inform the safety case for the HSE, the HyDeploy project team aim to carry out safety checks on all gas appliances in the trial area over the next 3 months. If your home is included you will receive further information about how to book a gas safety check for your home.

Finding out more

Full details about the project, including frequently asked questions can be found at **www.hydeploy.co.uk**. Alternatively you can call **01782 733777** to speak to a project advisor or e-mail **info@hydeploy.co.uk**.

HyDeploy timeline

2017

April to September 2017
Project planning and laboratory safety tests.

Phase 1
To June 2018
Safety check in homes and buildings at Keele. Preparation of safety case for Health & Safety Executive.

HSE approval required for future phases

Phase 2
July 2018 to March 2019
Design and building of on-site equipment.

Phase 3
April 2019 to March 2020
Live trial of hydrogen blend into the gas network. Project conclusion and report on results.

2020

Official project end 31/03/20

If you need this information in another format or language please call **01782 733777** or e-mail **info@hydeploy.co.uk**