

# INFORMATION SHEET

## Study Title

HyDeploy Project – In-Property Safety Checks October 2017 – March 2018 – Phase 1 of the proposed HyDeploy Project.

## Brief Summary

The overarching HyDeploy programme is looking to investigate the practicality of using a hydrogen blend (up to 20% hydrogen blend) with the existing natural gas distribution network. Natural gas releases CO<sub>2</sub> when it is burned – the main contributor to climate change. The main by-product of burning hydrogen is water.

The objective of HyDeploy is to investigate the feasibility of using a hydrogen mix in the gas network to help reduce the nation's greenhouse gas emissions.

Phase 1 - The Appliance Checks programme is all about checking the gas appliances in all homes and buildings which could be included in the trial network at Keele University. Appliances and systems will be checked using three different test gases, a standardised normal gas (methane) and two different hydrogen/natural gas mixes.

This will provide the data which will enable the Health and Safety Executive to decide if the HyDeploy Project can proceed to the next stage of a live trial on a portion of the Keele gas network.

Keele University is working with partner organisations Cadent Gas Ltd (formerly National Grid Gas Distribution), Northern Gas Networks, Progressive Energy, ITM Power and the Health & Safety Laboratory (part of the Health and Safety Executive).

## Aims of the Appliance Testing Programme

- To ensure that all gas installations and appliances in homes and offices in the proposed trial area on the Keele campus receive a complete check to meet current gas safety standards and are issued with a free gas safety certificate.
- Once this has been established – to test two hydrogen natural gas mixes on your appliances.
- To provide data to support the Health and Safety Executive in making an informed decision on whether to grant permission for the HyDeploy Project to progress to a live trial in the Spring of 2019.

## Why should I have my appliances tested?

Your home is in the carefully selected section of the University's private gas network which could be part of a live trial in the future.

This section of the network includes both residential homes and university buildings – replicating the variety of homes and offices, and appliances, found in the wider public gas network. It is supplied from a single point and self-contained.

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The Health and Safety Executive, under the Gas Safety Management Regulations, must approve the exact mix of gas before it can be used in the network. This is part of a rigorous national approval process to make sure that the gas you use in your home, and its distribution, is just as safe as the current gas system.

By taking part you will be helping the Health and Safety Executive decide if the project can proceed to the next stage – the live trial of a hydrogen/natural gas mix. You will be helping to ensure that this important research is delivered as comprehensively as possible, providing the research data which will help Government and industry to decide on the best ways forward to reduce our greenhouse gas emissions in the future.

## Consent - Do I have to take part?

You are being asked to give consent as your home is included in the Keele network area and your consent is needed to carry out gas safety checks on all of your gas appliances and their installation, and to record data about those appliances.

Details about these safety checks are set out in the next section **“What happens during the appliance checks?”** or at [www.hydeploy.co.uk](http://www.hydeploy.co.uk) .

To help you make an informed decision and to answer any further questions please come along to one of the drop-in sessions at the Sustainability Hub on 11 or 12 December 2017. If you would like a one-one slot with the team at these sessions, please ring 01782 733777 to book a time so that we can ensure a private room is available for you. You can sign and return your consent forms at these sessions too.

While only one member of the household needs to sign the consent form we would like to ensure that all adults in the household have been involved in and agree with the decision and you are asked to confirm that all agree with the decision on the consent form.

You do not have to consent to take part.

If you do not consent the Health and Safety Executive may still approve the live trial (based on an assessment of the available evidence collected).

You could end up having missed out on the free safety checks, free repairs or replacements, and still find yourself in the live trial zone.

Please take time to read this information carefully before you sign the consent form and return it to the Estates Office in the enclosed envelope.

You can withdraw your permission at any point in the checks. Just let a member of the customer care team know at any point, either face to face at pre-test briefings, when engineers visit, or by ringing the customer care line number 01782 733777.

If you have no further questions and want to register for your checks now, please visit [www.hydeploy.co.uk](http://www.hydeploy.co.uk) or call us on 01782 733777 to book in a convenient date and time.

Please note - if the Project progress to the next stage live operation for one year, starting in Spring 2019, the team may want to continue to monitor the performance of your appliances and you will be asked if you consent to this too, but later on in the project.

[www.hydeploy.co.uk](http://www.hydeploy.co.uk) [info@hydeploy.co.uk](mailto:info@hydeploy.co.uk) Call 01782 733777

HyDeploy Consortium: Cadent Gas Limited, Northern Gas Networks Limited, Keele University, ITM Power, Progressive Energy, Health & Safety Laboratory.

## What happens during the appliance checks?

- You book an appointment for your appliance safety checks on line ([www.hydeploy.co.uk](http://www.hydeploy.co.uk)) or via telephone – 01782 733777.
- You will be visited by a member of the Keele Estates team, Gas Safe registered engineer(s) and a specialist consultant from Kiwa Ltd – a leading UK expert on gas safety testing.
- The visit will take approximately 2 hours. During this time your gas will be disconnected. Temporary heating will be available if required.
- The check will include:
  - Evaluating the safety of your domestic gas appliances and their installation, using your normal gas supply, a standardised normal gas, and finally on two blends containing hydrogen.
  - Collecting data on the appliances in your home and their performance.
- If any appliance or any part of the installation is unsafe it will be repaired or replaced free of charge.

Please see the enclosed information leaflet for details about for appliance safety checks. Other supporting information can be found at [www.hydeploy.co.uk](http://www.hydeploy.co.uk).

## I am registered on the Priority Services Register how will I be affected?

If you are registered on the Priority Services Register the Keele Estates team will be aware of this and will contact you to make arrangements for your safety check in line with the Priority Services Register.

For more information about the Priority Services Register contact the Keele University Estates Helpdesk or visit <https://www.ofgem.gov.uk/consumers/household-gas-and-electricity-guide/extra-help-energy-services/priority-services-register-people-need>.

## Benefits of taking part in the appliance safety tests.

- All of your gas appliances will get free gas safety checks.
- The tests, and any repairs or replacements required, will make sure your home gas appliances and pipework meet the required gas safety standards.
- A Gas Safety Certificate will be issued for all the gas appliances in your home.
- The checks will ensure that your appliances operate normally using the hydrogen and natural gas blend (up to the levels approved by the Health and Safety Executive for the trial – should they give it the go ahead.)
- The checks will help identify any differences between laboratory testing results and real life performance.
- You will be contributing to a significant research and development project which will inform UK policy on a technology that could help reduce climate changing carbon emissions.
- If a leak is discovered in any appliance or its installation this could pose a safety threat to you and your family if it is not found and fixed.

## Risks of taking part in the appliance safety checks?

- One of your appliances could be found to be unsafe. Appliances that are found to be unsafe could be disconnected:-
  - If any safety issues are identified then the team will switch off your gas supply and will rectify the problem or replace the appliances free of charge to ensure they meet the required standards.

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- Switching off the gas supply will cause some inconvenience, but it will protect your safety. The team will then ensure that you have temporary heating facilities while they work to solve the problem or install a new appliance.

Bear in mind that if these checks had not been carried out, and your device continued with a fault, you would be a risk. The tests will uncover potential risks and deliver safety solutions for you and your family.

The Project has planned carefully to deal with potential risks.

- All checks will be carried out by specially trained Gas Safe qualified engineers.
- Scientific assessments of a range of appliances using the hydrogen gas blends have already been carried out, and the results rigorously analysed, by the Health and Safety Laboratory to inform the Project (see box below).
- Once the checks are done you will be able to use your system as normal and you will get a Gas Safety Certificate.

### **Details of the risk assessments carried out to prepare for the in-property test**

A thorough risk assessment of the process has been carried out led by gas testing specialist company, KIWA. This risk assessment is based on:

1. The routine risk assessments that are done for regular gas safety checks in homes and buildings carried out every day;  
Two additional aspects, specific to HyDeploy;
2. The connection and operation of bottled 'test gases' in homes and buildings.
3. Undertaking the standard tests on the different gas composition.

KIWA have safely undertaken over 1500 gas bottle tests in homes in Scotland for a previous project (Oban, SGN). They have also tested hydrogen blends on a range of appliances in their laboratory as part of HyDeploy. Based on this experience, they have undertaken the necessary risk assessments for the HyDeploy safety checks, which have been reviewed by Health and Safety Laboratory as well as Keele University.

The following risks are associated with the gas appliance safety checks:-

- Fire / explosion risks of working with gases.
- Carbon monoxide exposure during testing.
- Vehicular accidents.
- On site working – e.g. slips, trips and falls.
- Damage to house/building gas appliances.

Appropriate mitigation measures have been put in place to manage these risks:-

- All gas testing work will be carried out by suitably qualified gas professionals.
- Appropriate training for all gas engineers ahead of the safety checks.
- The vehicle with the gas bottles on it to be clearly marked and parked safely off road.
- Step-overs and warning signs to be used around gas pipes.
- The use of appropriate gas detection equipment by gas professionals.
- Carefully developed method statements.

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Please note - The Health and Safety Executive must approve the exact mix of gas to be used in the one year live stage of the Project (scheduled to start spring 2019). This rigorous approval process is designed to ensure the gas delivered to home is as safe as the natural gas you use today. Nevertheless, no consent is needed from householder once approval is given to use the new mix in the network.

## Data protection

The following new data will be collected:-

- Details of the gas appliances in the home.
- Details of the safety checks carried out at each property.
- Performance information about the gas appliances during the safety checks.

Details of your gas appliances and their performance will be used by the team to inform this Project - to ensure outcomes are accurate.

The outcomes of the Project are likely to be published.

Location details will not be specified (anonymised) and results will be presented in statistical form to ensure individual household details cannot be identified.

Special consideration will be taken to ensure that unusual data (e.g. rare gas appliances) cannot be identifiable to individual homes.

But please be aware that the size of the trial is not large and its limited scope and its specific location at Keele University could potentially allow identification of participants in the project. This is something we have no control over.

## Data storage

The Project team and all project partners will comply with all Keele University's policies and procedures for the management and security of customers' personal data.

At the end of the Project, any paper copies of customer's personal data will be destroyed following strict confidential waste procedures. Data held in electronic form for the purposes of the project will be erased completely from our servers.

## Funding

The costs of Phase One household testing will be covered by funding via Ofgem's (the government's energy regulator) Gas Network Innovation Competition, for the best innovation projects focused on environmental benefits, cost reductions and security of supply in the drive to a low carbon economy. Project partners Cadent Gas Limited and Northern Gas Networks have also contributed. Should the project go through to completion the total costs will be £7.7million (£6.8m of grant funded and £766k from Cadent and NGN).

## Further problems and concerns?

If you have a concern about any aspect of this project, please call the project helpline on 01782 733777. The advisor will answer your questions or, if the information you want is more specialised, will find the right expert to talk the issue through with you.

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If you remain unhappy about the research and/or wish to raise a complaint about any aspect of the way that you have been approached or treated during the course of the safety tests, please write to Nicola Leighton who is the University's contact for complaints regarding research at the following address:-

Nicola Leighton  
Research Governance Officer  
Directorate of Research, Innovation & Engagement  
IC2 Building  
Keele University  
ST5 5NH  
E-mail: [n.leighton@keele.ac.uk](mailto:n.leighton@keele.ac.uk)  
Tel: 01782 733306

[www.hydeploy.co.uk](http://www.hydeploy.co.uk) [info@hydeploy.co.uk](mailto:info@hydeploy.co.uk) Call 01782 733777

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