

Hy4Heat – demonstrating hydrogen for heat

It's nearing the end of the year and this is the last newsletter of 2018 but do keep an eye out as we'll drop you a line with any Hy4Heat developments.

If you're new to the Hy4Heat programme, then it's worth explaining that Hy4Heat is a range of an inter-related various work packages that form the feasibility study – to establish if it is technically possible, safe and convenient to replace natural gas (methane) with hydrogen in residential and commercial buildings and gas appliances. This will enable the government to determine whether to proceed to a community trial.

Hy4Heat.info

We've created a website, Hy4Heat.info to keep you up to date with our activity. We've focused on the different work packages that make up the whole programme and we've published past presentations and papers too. Have a look and let us know what you think.

A progress report

We're one year into the programme, so by the end of the year we'll published a progress report on our website. If you would like a paper copy of the report then just email Hy4Heat@aup.com with your name and address and we can pop one in the post to you.

Developing hydrogen meters (work package 10)

The Hy4Heat programme has expanded to include the development of hydrogen gas meters.

We will be holding an engagement event on Friday 14 December 2018 at BEIS Conference Centre, 1 Victoria St SW1E 5ND from 11am to 1pm (light lunch will be provided). This event aimed primarily at manufacturers interesting in bidding to be part of this work package and develop hydrogen gas meters, but other interested organisations are welcome too. If you're interested to attend and find out more, [please sign up here](#).



Industrial appliances (work package 6)

Element Energy, along with partners Jacobs and Cardiff University, has been commissioned to complete analysis on the potential use of full hydrogen for heat in industry. The study will involve developing a comprehensive understanding of applications of hydrogen for heat in industry, including costs, technical and commercial requirements, timeframes, safety considerations, barriers and opportunities.

Commercial appliances (work package 5)

Element Research Management has been appointed to investigate and produce a research report on the feasibility of converting commercial sector appliances from natural gas to hydrogen. It's a market research study into the variety of commercial appliances and the issues to be addressed in their conversion or replacement with hydrogen appliances.

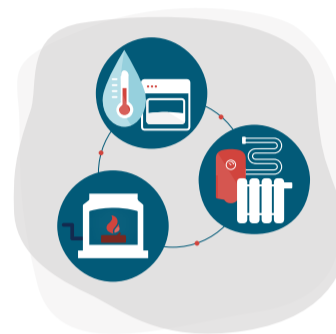
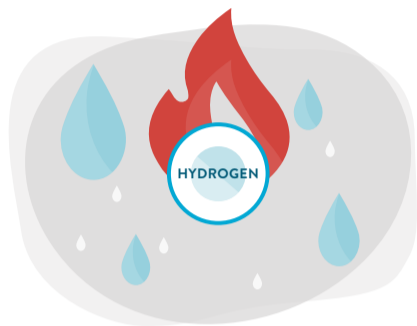
Spreading the word

We've presented Hy4Heat at a few conferences and events over the past few months including:

- Low Carbon Networks and Innovation in October
- All party parliamentary group – energy studies in September
- Scottish Hydrogen & Fuel Cell conference in September
- IGEM conference September

The IGEM magazine also has **an article** about Hy4Heat based on the presentation we gave.

If you'd like us to present at your conference or event, then just drop us a line with the details and we'll do our best.



Hydrogen standards (work package 2)

DNV GL has been appointed to lead the delivery of work package 2, alongside The Health and Safety Executive Laboratory (HSL), The National Physical Laboratory (NPL), Element Energy and Loughborough University. Work package 2 will look specifically at hydrogen purity and flame colourisation and will follow two distinct phases:

- Phase 1 will evaluate the varying hydrogen purity levels available in the UK and the potential impacts and cost effectiveness of introducing hydrogen at these quality levels into the wider distribution network and to recommend a purity level for use by the Hy4Heat programme
- Phase 2 will determine if there is a requirement for adding a colourant to hydrogen to ensure safe burning and user acceptance is achieved and to investigate the optimum solution if a colourant is required

A separate workstream regarding odorant is also being carried out.

Suppliers appointed to develop domestic hydrogen appliances (work package 4)

We are in the process of agreeing contracts with a number of suppliers who've been successful in their application to be part of the work package 4 competition to develop domestic hydrogen gas appliances: gas cookers, gas fires, gas boilers and innovative hydrogen appliances. Once the contracts are finalised we will publish details of the companies online. The competition is in phases:

- Phase 1 is to produce solution design documents covering the detail of the prototype development
- Phase 2a is prototype development and focuses on the physical development of the first prototype which will be tested for functionality and safety
- Phase 2b is the further development of prototype 2.0 aimed at being community-trial ready and certified for use in an occupied home

Get in touch

If you've received this quarterly newsletter you're on our database and will be receiving updates about Hy4Heat's progress. If you've been forwarded the newsletter by a colleague, just send us a note with your contact details and your organisation's name to **Hy4Heat@arup.com** or sign up on our website. We won't bombard you – and you can unsubscribe anytime.