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Welcome to our August newsletter your quick roundup of what's happening in gas decarbonisation across the UK, as well as key dates for your diary. This month, we're taking a look at how the nation's first government-appointed hydrogen champion could help to accelerate decarbonisation of the gas system, and highlighting other notable projects to watch out for as autumn approaches. We'll also shine a spotlight on National Grid's ambitious hydrogen project: Future Grid.

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01 Notable projects

HyDeploy project completes

The HyDeploy Winlaton project officially completed at the end of June, having supplied 668 properties with up to 20% hydrogen blend for 11 months. This was the first project to have blended hydrogen with natural gas within a public gas network, with previous trials having taken place within a closed network.

The project has received a positive reaction from participants, who demonstrated a willingness to be involved in a project to tackle climate change, without making any changes in their home.



The project also required new industry processes to be established, to ensure that shippers and suppliers serving these properties passed on voluntary payments to consumers which bridged the gap between "normal" usage and consumption of blended gas, as hydrogen has a different calorific value than natural gas.

The body of evidence provided from HyDeploy Winlaton is so extensive that a planned third larger scale project is no longer considered necessary, Instead, the HyDeploy team is now concentrating on proving that blended hydrogen can be used in industrial processes. More information can be found here.

Ofgem publishes SIF Project Directions for funding recipients

Ofgem's <u>Strategic Innovation Fund (SIF)</u> aims to 'find and fund ambitious, innovative projects with the potential to accelerate the transition to net zero'.

The SIF will invest around £8 million, as part of the £450 million Strategic Innovation Fund.

To win funding, projects must demonstrate the potential to help shape the future of our energy networks and to succeed commercially. Following its decision to fund 18 round 1 alpha phase projects, Ofgem has published Project Directions to guide those awarded funding. Approved alpha phase projects include National Grid's HyNTS project, which aims to introduce hydrogen into the national gas transmission system, and Southern Gas Network's Intelligent Gas Grid and Velocity Design with Hydrogen projects.

More information and full SIF Project
Directions can be found here.



01 Notable projects

20 projects shortlisted for the next stage of CCUS clusters process

20 carbon capture, usage and storage projects have been shortlisted for funding as part of the UK government's CCUS cluster process, which it plans to deploy in two industrial clusters by the mid-2020s and another two by 2030. CCUS technology is expected to be key to our nation achieving its net zero goals, aided by North Sea storage facilities.

The 20 shortlisted projects will now be considered for government funding to join one of the two 'track 1' clusters: the HyNet cluster in North West England and North Wales, and the East Coast Cluster in Teesside and Humberto.

The aim is to use carbon capture technology to help decarbonise businesses in the cluster areas. Further information can be found here.

Coming soon: CCC Insights Briefing

Readers of our July edition of DeliveringDecarb will recall our coverage of the Climate Change Committee (CCC) Progress Report. The CCC is now due to publish a new insights briefing, summarising their approach to developing a net zero pathway. With recommendations likely to be adopted by the government and impactful for the gas industry, the briefing will be one to watch out for. You'll be able to find it here.

The UK's first hydrogen champion is appointed

On 20th July, the UK Business and Energy Secretary appointed Jane Toogood as the nation's first Hydrogen Champion.

Toogood is currently the sector chief executive for catalyst technologies at Johnson Matthey and serves as co-chair of the Hydrogen Advisory Council. The new appointment will require her to help drive industry investment and deployment of hydrogen projects, identify current barriers to building a strong UK hydrogen economy, and develop creative solutions for how issues can be addressed.

Toogood is quoted as saying, 'Hydrogen deployment as a clean energy source is one of the key solutions to help the UK reach its net-zero targets and I strongly believe there is an opportunity to accelerate this, working collaboratively across industry and government to land projects and infrastructure on a timeline that serves stakeholder and customers' needs'. Read more here.



02 Spotlight on... Future Grid

FutureGrid

National Grid's FutureGrid programme seeks to build a hydrogen test facility in Northern England and is billed as 'the first of many steps towards a full-scale conversion of the existing National Transmission System (NTS) to transport hydrogen'.

Currently, only a 0.1% hydrogen blend is permitted in the natural gas mix supplied to UK homes, businesses and industry. The eventual move to 100% hydrogen will require extensive infrastructure updates. Planning for this will begin with testing of how the existing gas pipeline network will perform when hydrogen is introduced into it.

FutureGrid will provide a specially-constructed hydrogen research facility that will test the feasibility of hydrogen blends at increasing concentrations up to 100% on gas transmission assets. On their Heating Homes with Hydrogen page, National Grid tells us:

'At a national scale, it's estimated that hydrogen blending could have the same carbon-saving effect annually as taking two million cars off the road. This has encouraged the Energy Networks Association (ENA) to back hydrogen blending plans across the UK. It's expected necessary upgrades to the UK's national transmission system could deliver a 2% blend by 2024 and a 20% blend by 2027'.

Construction of the FutureGrid test facility began in 2021, with testing due to begin in early 2023. Read more about the programme here.





03 Policy milestones

Here are the key Government policy / regulatory milestones:

Autumn 2022 - Indicative assessment on the value-for-money case for <u>blending</u> <u>hydrogen</u> in the existing network

Q4 2022 - <u>Business model</u> for hydrogen support finalised

2022 - Decision on <u>rebalancing policy</u> <u>costs</u> between electricity and gas

2022 - Final investment decisions on two 'Track 1' Carbon Capture & Storage (CCS) clusters **2023** - Final policy decision on <u>hydrogen</u> <u>blending</u>

2023 - First <u>hydrogen support contracts</u> allocated

2023 - Hydrogen heating trials to commence in local neighbourhood

2023 - Decision on hydrogen village location

2025 - New business models for hydrogen transport and storage infrastructure designed

2025 - Hydrogen certification scheme introduced

2025 - Hydrogen village trials to commence

2025 - Target for reaching 1GW electrolytic hydrogen production capacity and price competitive annual allocation rounds

2030 - New target for creating up to 10GW low carbon hydrogen production

2030 - Hydrogen town trial to commence





04 Dates for your diary

We'd love to see you at our Hydrogen Implementation forums! To join, please email box.xoserve.decarbonisation@xoserve.com

Don't miss these upcoming summer sessions:

Shipper working group	Friday 2nd September	11:30 - 13:00
Network working group	Monday 19th September	10:00 - 12:00
Metering working group	Thursday 22nd September	10:00 - 12:00
IGT working group	Friday 16th September	10:00 - 11:00





05 Things to look (and listen) out for

With so many projects in flight at the moment, we're building a new section on our website dedicated to decarbonisation. This will be more user friendly and will act as a resource hub for some of the more prominent projects discussed in the implementation group.

Some of the resources we're developing right now that will be shared are:

- H100 explainer video
- H100 supplier comms
- Hydrogen village video
- Hydrogen GoO video
- HyDeploy blog

We'll also be launching a new podcast series looking at the various issues, projects and developments in gas decarb. We have a number of episodes in development and are expecting the channel to launch in September.

We're all ears and would love feedback on the topics you would like us to cover - so please let us know.



06 Keeping in touch

Have you signed up to our Xoserve industry 'intranet' yet?

Designed to help you stay up to speed with the latest news, new projects and policy changes, the intranet acts as a central repository for essential information related to your industry.

If you would like access to this site, please contact box.xoserve.decarbonisation@xoserve.com

