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Welcome to the April instalment of **DeliveringDecarb**. This month, we bring you news stories that demonstrate real progress in the use of green hydrogen for UK industry, and enthusiasm for hydrogen technology from our nation's businesses. We've also got a Spotlight section on biomethane, with helpful resources for you to access - created in collaboration with two leading industry experts. Be sure to give the biomethane podcasts a listen if you're interested in finding out how increased production of this clean alternative to natural gas could help us build flexibility and resilience during the net zero transition.

And as usual, don't forget to check the Dates for your Diary section if you would like to join one of our panel discussions and add your voice to the conversations taking place this year around gas decarbonisation.

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01 Notable news

UK businesses are backing hydrogen

New research this month from Centrica has revealed that over three quarters (77%) of businesses back hydrogen as part of their energy improvement strategy, with a quarter (37%) planning to implement or trial hydrogen solutions within the next two years. Of those businesses that took part in the research, 77% had already implemented or planned to implement hydrogen-ready technologies such as combined heat and power (CHP) units. The biggest driver for doing so is cost, with businesses also seeking to optimise energy consumption and reduce carbon emissions.

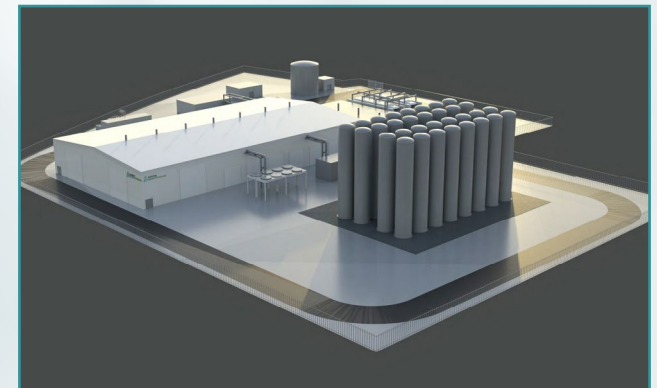
[Read the full report](#)

Funding awarded to Barrow Green Hydrogen Hub in Cumbria

On 30th March, the Department for Energy Security and Net Zero published the [shortlist of projects](#) set to receive financial support through the Hydrogen Business Model. Carlton Power's plan for a £40m hydrogen plant in Barrow-in-Furness was one of 20 projects to secure a place on the list. If planning permission can be achieved, the Barrow Green Hydrogen Hub could be operational in 2025. Renewable energy will be used to power the electrolysis process and the resulting hydrogen would be supplied to a nearby Kimberly-Clark manufacturing facility, reducing its dependency on natural gas. They would not be the only energy user to benefit, as the hub would be capable of producing around 3,000 tonnes of hydrogen each year. Carlton Power believes that the project could provide a catalyst for the development of a hydrogen economy in

Cumbria and encourage others to invest in net zero with confidence.

[Read more about the Barrow Green Hydrogen Hub](#)

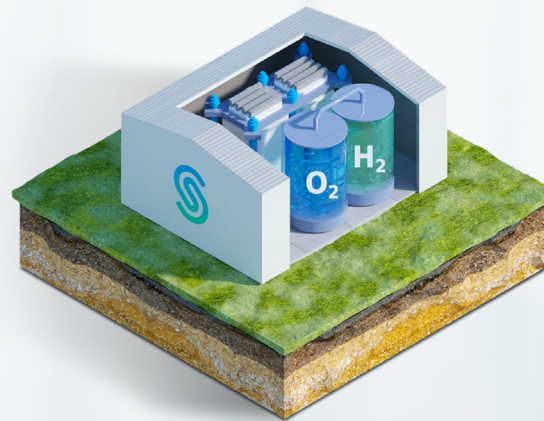


01 Notable news

HYRO invests in clean hydrogen projects for manufacturing

This month saw HYRO announce a partnership with Kimberly-Clark to use clean hydrogen to power two of its factories. HYRO is a joint venture between sustainable energy specialists Octopus Energy and the world's largest independent renewable energy developer RES. Its purpose is to foster on-site electrolysis of hydrogen by manufacturers who are currently dependent on fossil fuels and unable to transition to electric heat. HYRO will install electrolyzers powered by renewable energy sources, as well as hydrogen-ready boilers, at the two facilities in Kent and Wales. The project is expected to have a combined capacity of 22.5 MW and be capable of removing thousands of tonnes of carbon emissions each year from the manufacturer's carbon footprint. HYRO has a broader goal to invest £3 billion into green hydrogen plants across the UK.

[Read more about the HYRO venture](#)

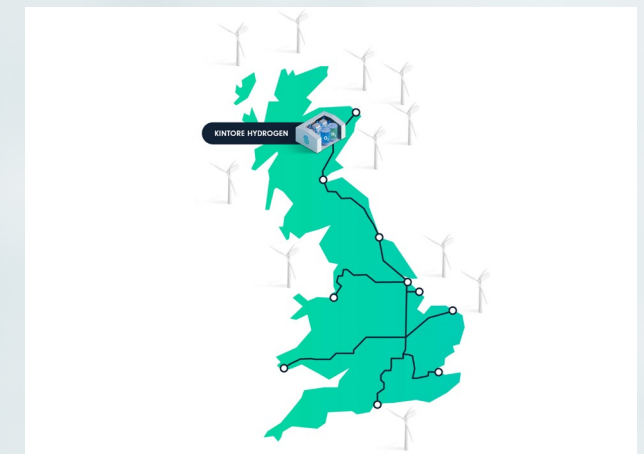


Plans unveiled for 3GW green hydrogen plant in Aberdeenshire

Kintore Hydrogen, a Statera Energy project, has secured funding from the government's Net Zero Hydrogen Fund. Electricity generated by wind farms in Scotland is forecast to greatly exceed local demand. This excess can in theory be supplied to the rest of the UK, however the network cannot currently accommodate this much electricity. The 3GW electrolyser project will see excess wind power used to create

green hydrogen. This will be used to supply not only Statera's power generating facilities, but also the UK's most energy intensive industrial clusters - to which it will be transported through existing gas transmission pipelines. Supply will initially be provided via blending and then via [Project Union](#). The government has backed the first 500MW phase of development, with the full 3GW of production expected by 2030.

[Read more about Kintore Hydrogen](#)



01 Notable news

Global 'Hydrogen Valleys' begin to emerge

As the global hydrogen market begins to grow and mature, 'Hydrogen Valleys' have started to emerge. These are areas where several hydrogen applications are combined to form an economically-efficient hydrogen ecosystem, ideally covering the entire hydrogen value chain: production, storage, distribution and final use. The Clean Hydrogen Partnership is an EU initiative that aims to advance the development of the new hydrogen economy. Its [Hydrogen Valleys Platform](#) provides insights and best practice guidance for project developers, policy makers and the industry.

Here in the UK, the Hydrogen Valley is an East to West corridor across central England, encompassing Norfolk in the East and Shropshire in the West. The programme is being delivered through a collaboration between Cadent and National Gas Transmission. It is expected to form an

important element of hydrogen development at a national level and provide supply resilience to key areas across the UK.

[Read more about the UK Hydrogen Valley](#)



8 CCUS projects selected to proceed to negotiations for government support

Following the selection by the Government of HyNet and East Coast Cluster as Track-1 CCUS clusters in November 2021, and the publication of the shortlist of power CCUS, industrial carbon capture (ICC), waste and CCUS-enabled

hydrogen projects in August 2022, eight projects have now been selected to proceed to negotiations for support through each relevant Business Model. The projects represent a range of innovative CCUS technologies that have the potential to accelerate the UK's decarbonisation ambitions; putting the UK on a path to decarbonising its power system by 2035, while maintaining security of supply.

[See the Cluster sequencing Phase-2: Track-1 project negotiation list](#)

01 Notable news

Gearing up towards the Hydrogen Village Trial

Detailed designs for a Hydrogen Village Trial have now been submitted to the Government and Ofgem for consideration. The Department for Energy Security and Net Zero (DESNZ) set out the expected requirements for applications for funding in an open letter to the four UK Gas Distribution Networks (GDNs) during May 2022. Northern Gas Networks (NGN) and Cadent have responded with a detailed design proposal which would see them convert a village of 1,000 to 2,000 properties to hydrogen or other sustainable heating solutions instead of natural gas. The community trial will require a seal of approval from the Health and Safety Executive (HSE). DESNZ is expected to announce their decision and the location of the trial later this year.

[Read more about the Hydrogen Village Trial](#)

Construction begins on H100 show homes

Construction of the H100 Fife hydrogen homes demonstration facility began during March, with the minimum 270 participants now signed up to take part in the project. The facility will comprise two hydrogen show homes where visitors will be able to try out hydrogen domestic appliances. Households in Buckhaven and Denbeath will be able to opt-in to be supplied with hydrogen through a new network set to go live in 2024. It will be the first 100% green hydrogen-to-homes network anywhere in the world and will provide important evidence to help the UK decarbonise domestic heating.

[Read more about H100 Fife](#)



01 Notable news

A hydrogen vision for the UK

On 19th April, the Energy Network Association (ENA) published their exclusive new report, 'A hydrogen vision for the UK', which lays out a realistic vision of how hydrogen will support decarbonisation of the gas network in Great Britain and Northern Ireland.

The report confirms the key role hydrogen could play in the future. Thanks to modelling developed in collaboration with DESNZ, the report illustrates a scenario where hydrogen is gradually introduced through five-year increments, mapping out how the network is going to be transformed in the path towards net zero by 2050.

[Download the full report](#)



02 Spotlight on...The Rise of Biomethane

A low carbon alternative to natural gas

Gas and electricity are more connected than most people outside of the energy industry realise, and gas will have an essential part to play in the net zero transition. Alongside hydrogen, biomethane is fast emerging as a promising, low carbon alternative to natural gas.

It all starts with biogas

Biogas is made up of methane, CO2 and small quantities of other gases, produced by anaerobic digestion of organic matter in an oxygen-free environment. Composition will vary according to the method used to produce the gas, which is most often from biodigesters, landfill gas recovery systems or wastewater treatment plants. The biogas produced can be upgraded to biomethane by removing CO2 and

other contaminants. It can then be supplied for direct use through a private network or blended into our existing gas network; to reduce the carbon content of our national gas supply.

Increase your biomethane knowledge

This month, Xserve has recorded two interesting and insightful DecarbDiscussions podcasts on the subject of biomethane; each with an accompanying blog.

In our first biomethane podcast, hear John Baldwin, CEO of biomethane producer CNG Services, discuss the benefits of biomethane, the applications where it has potential to really make a difference and the support needed from policymakers to develop production capacity.

[Listen to the podcast](#)

[Read the blog](#)

For our next biomethane podcast, Darren Elsom, Director of Hydrogen Development & Operations at Cadent Gas, talks about how biomethane will help us find the flexibility to transition to net zero faster - and find out how unwanted apples are already powering UK boilers.

Podcast and blog coming soon...



03 Things to look out for

A focus on blending

Stay tuned for our next DecarbDiscussions podcast, and blog on the topic of blending. We will learn more about the plans of 20% of hydrogen being safely deployed into the existing gas network.

Hydrogen homes visits

Visits to Hydrogen Homes are always a great learning experience for us all. It's wonderful to see key names from our industry collaborating to trial hydrogen in domestic settings, and working together towards decarbonisation of the UK gas system. We will be arranging future visits to Hydrogen Homes, if you are interested in attending, please get in touch:

box.xoserve.decarbonisation@xoserve.com

[Learn more about Hydrogen Homes](#)



04 Policy milestones

Here are the key Government policy / regulatory milestones:

- **2023** - Final policy decision on [hydrogen blending](#)
- **2023** - First [hydrogen support contracts](#) allocated
- **2023** - Decision on hydrogen village location
- **2024** - H100 trial to commence
- **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
- **2026** - Final policy decision on whether hydrogen will support domestic heating
- **2030** - New target for creating up to 10GW low carbon hydrogen production
- **2030** - Hydrogen town trial to commence



05 Dates for your diary

As always, we'd love to see you at our Hydrogen Implementation forums.
To join, please email box.xserve.decarbonisation@xserve.com

Don't miss these upcoming sessions:

Shipper working group	Friday 12th May	11.30 - 13.00
Metering working group	Friday 19th May	10.00 - 11.00
DN working group	Tuesday 23rd May	10.00 - 12.00
IGT working group	Friday 26th May	10.00 - 11.00



06 Keeping in touch

We've been working on a range of initiatives designed to help raise awareness of gas decarbonisation and keep everyone in the industry connected. Our DecarbDiscussions podcast is one such initiative and covers a range of topics from different industry perspectives. If you'd be interested in getting involved and hearing your voice on our podcast channel, please get in touch.

And don't forget to sign up to our industry 'intranet'. An exclusive resource for the gas industry, the intranet is designed to keep you up to speed with the latest news, new projects and policy changes. It acts as a central repository for essential information related to your industry, some of which may not yet be available as a public resource. If you would like access to this site, please contact:

box.xoserve.decarbonisation@xoserve.com

