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Greetings from another world – the world of energy, that is!

As the spooky season draws near and the nights are getting longer and colder, we're reminded of the luxury of instant heat and the need for affordable and secure energy.

In this month's edition, we focus on the crucial developments in hydrogen as a key element of the energy transition. We'll explore the latest partnerships driving hydrogen adoption, highlight ongoing hydrogen and biomethane projects, and provide insights from recent industry reports on the role of hydrogen in decarbonising the gas network.

So grab those stashed treats, brew up a warm drink, and settle in for a frightfully informative read. Don't worry, we promise no tricks... just the latest news on gas decarbonisation.

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01 Notable news



University of Birmingham to research hydrogen production and waste energy

University researchers have received funding from the Birmingham Research Institute for Materials and Corrosion (BIRMAC) to further their study into hydrogen production and waste heat utilisation.

Although the amount of funding from BIRMAC has not been disclosed, the development of the project will focus on the feasibility of developing a system that integrates hydrogen production and waste energy-driven power

generation. It also will look at whether the system can be scaled up and integrated into existing district heating networks.

This research is a collaboration between the University of Birmingham and McMaster University in Canada. The team aims to advance knowledge in hydrogen production methods and explore effective systems for heat reutilisation.

[Read more on the story](#)

£21.7 billion was pledged to support carbon capture clusters and hydrogen production

The UK Government announced plans to support the HyNet North West project and the East Coast Cluster with £21.7 billion in funding over 25 years. These projects aim to capture carbon dioxide emissions from industrial processes and store them underground alongside low-carbon hydrogen production.

The projects are forecast to bring in £8 billion of private investment to the region and are expected to play a key role in meeting the UK Government's target of capturing and storing between 20–30mn t/y of CO2 by 2030.

Some environmental campaigners have expressed criticism, arguing that Government funding should be directed towards renewable energy sources instead of CCS and hydrogen production.

[Read more on the story](#)

01 Notable news

EET welcomes Government backing of its hydrogen project

EET Hydrogen, a subsidiary of the Essar Group, has welcomed the UK Government's recent announcement confirming its support for the HyNet cluster – part of plans to decarbonise industry in the North West of England.

EET Hydrogen is in the process of developing the UK's first large-scale, low-carbon hydrogen production hub. This hub will produce 1,350 MW of hydrogen capacity over two phases, starting with HPP1 and followed by HPP2 and capture around 2.5 million tonnes of carbon annually.

The initial phase, HPP1, is expected to begin construction in 2025 and produce low-carbon hydrogen by 2028. EET Hydrogen's overall target capacity for the hub is to exceed 4,000 MW by 2030.

[Read EET Hydrogen's full announcement](#)

GeoPura closes £22 million to grow its green hydrogen offering

UK-based clean energy company GeoPura has completed its inaugural debt funding with £22 million. Raising a total of £114 million in the past two years, this latest investment will grow its fleet of Hydrogen Power Units and invest in its green hydrogen production facilities, including HyMarnham Power in the East Midlands.

The company's mission is to “decarbonise the global economy by making zero-emission fuels through renewable energy.” It aims to achieve this by using its HPU technology to replace diesel generators and power commercial EV charging.

[Read the full story](#)

Plans submitted for the UK's first utility-scale green hydrogen project

Statera Energy has proposed plans for a green hydrogen project in Aberdeenshire. The project, Kintore Hydrogen, aims to harness excess renewable energy to produce hydrogen and is expected to help decarbonise heavy industry and flexible power generation. The project has the potential to save up to 1.4 million tonnes of carbon dioxide emissions annually. If approved, the Kintore Hydrogen project will be the largest of its kind in Europe and the UK's first utility-scale green hydrogen project.

[Discover more about the project](#)

01 Notable news



Element 2 drives hydrogen mobility growth with a new partnership

HRS, a European manufacturer of hydrogen refuelling stations, has partnered with hydrogen refuelling company Element 2 to help decarbonise transport through hydrogen. The partnership's first instalment is an HRS14 station at Teesside International Airport to refuel commercial vans, passenger cars and airside support vehicles.

This agreement forms part of Element 2's plan to develop the first large-scale national hydrogen refuelling station network in the UK and Ireland. The company aims to meet the growing demand from commercial fleet operators and support the UK's ambitious strategy to install 10 GW of hydrogen production by 2030.

[Find out more](#)

Encyclis replaces diesel in its processes with HVO biofuel alternative

Energy-from-waste provider, Encyclis, has successfully concluded its research and development programme focused on the use of low-carbon fuels in the energy-from-waste sector. The 12-month programme investigated the feasibility of replacing diesel fuel with hydrogenated vegetable oil (HVO) to reduce fossil carbon emissions.

This achievement has resulted in a UK industry first, with the Newhurst Energy

Recovery Facility in Leicestershire integrating HVO into its operations following a planned maintenance outage. The plant now uses HVO to fuel its auxiliary burners, plant vehicles, and emergency generators to eliminate fossil CO2 emissions.

[Find out more](#)

02 Spotlight on...2024 Winter Outlook industry reports



National Gas and the National Energy System Operator (NESO) released their winter outlooks for 2024/25 this month. Both highlight the interconnectedness of the gas and electricity markets and the importance of gas in energy security.

National Gas's report provides an assessment of gas supply and demand for the upcoming winter, highlighting key trends and factors influencing the gas industry. Here are some of the key takeaways:

- Total gas demand for winter 2024/25 is projected to be similar to the previous year, with a slight increase in residential demand.
- The UK will continue to rely on domestic production and imports, particularly during cold weather.
- The increase in renewable energy sources, particularly wind power, is contributing to a reduction in gas demand for electricity generation.
- However, gas-fired power stations are playing a crucial role in balancing the electricity system.
- Britain's wholesale gas prices for this winter in the forward markets are below last year's and significantly lower than the highs seen over winter 2022/23.
- High stocks in European gas storage heading into winter give the market a greater cushion to manage supply shocks or high-demand events like a cold winter.

[Delve into the Gas Winter Outlook 2024](#)

[Explore NESO's Winter Outlook 2024](#)

NESO's report predicts an improved energy supply margin, supported by new interconnections, battery storage growth and increased distributed generation capacity. Key findings from the report show:

- Structural changes in European gas markets have increased the resilience of the whole energy system.

03 Things to look out for

The Labour Government has been in power for 100 days this month. So far they have lifted the onshore wind ban, appointed Chris Stark to lead “Mission Control” and injected billions into clean energy initiatives, including hydrogen and biomethane.

However, the gas industry still awaits clarity on the specifics of Britain’s decarbonisation strategy. While the Government’s ongoing investigation into a future biomethane and hydrogen framework is encouraging, the energy industry as a whole is eager to understand how these technologies will be integrated into a holistic energy system.

As decarbonisation projects secure funding and move towards implementation, a clearer picture of Britain’s future energy landscape will begin to emerge. We hope this momentum for decarbonising heat and power continues into 2025.



04 Policy milestones

Here are key Government Energy policy/regulatory milestones:

- **2024** - Energy Bill expected to complete
- **2024** - Future systems operator appointed
- **2024** - Smart meter rollout completed
- **2025** - H100 trial to commence
- **2025** - New business models for hydrogen transport and storage infrastructure designed
- **2025** - Hydrogen certification scheme introduced
- **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
- **2026** - MHHS (Marketwide Half Hourly Settlement) begins
- **2030** - New target for creating up to 10GW low carbon hydrogen production
- **2030** - Hydrogen town trial to commence



05 Dates for your diary

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

**Hydrogen
Information
Sharing Group**

Friday 8th November 2024 10:00 - 12:00

**Shipper Hydrogen
Implementation
Forum**

Friday 20th December 2024 10:00 - 11:00

**IGT Hydrogen
Implementation
Forum**

Friday 20th December 2024 11:30 - 12:30

**Metering Hydrogen
Implementation
Forum**

Friday 20th December 2024 14:00 - 15:00



06 Keeping in touch

If you've found any of the topics in this month's newsletter particularly interesting, please get in touch or share your comments on [LinkedIn](#), tagging @Xoserve.

You can also delve deeper into decarbonisation with our [Decarb Discussions](#) podcast, which covers topics from different industry perspectives. To get involved and have your voice heard on our podcast channel, please get in touch.

To help you stay ahead of the curve, we've created the [Decarbonisation Knowledge Centre](#), for the latest news, exciting new projects, and important policy updates. We're confident you'll find a wealth of valuable resources on decarbonisation. If you'd like to suggest any ideas, please contact:

decarbonisation@xoserve.com

