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We are heading well into warmer months, with longer days and (slightly) higher temperatures. However, gas still plays a significant role in our energy mix. During these months, depleted gas storage begins to replenish in preparation for the next winter, and gas continues to generate 34% of our power.

Like the seasons, the energy landscape is constantly changing as we are moving closer to our goal of achieving net zero emissions. In the April issue of DeliveringDecarb, we explore the decisions, developments, and events that are shaping the future of the gas industry, including the use of poo for power and the search for gold hydrogen.

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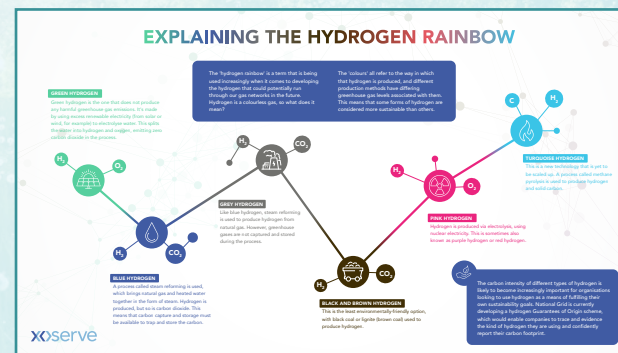
## 01 Notable news

### Tech firm embarks on discovery of vast reserves of white hydrogen.

British tech firm Getech plans to uncover reserves of white hydrogen within the geological formations of Cornwall, Scotland, and Northern Ireland using artificial intelligence integrated with a comprehensive global geological database derived from oil and gas industry data. The company aims to pinpoint mineral deposits, including those of white hydrogen, by creating a 'digital genome' of the Earth. This fusion of technology and natural science promises to "revolutionise energy sourcing and utilisation by identifying optimal drilling locations."

White hydrogen, also known as gold hydrogen, exists as a naturally occurring gas found in underground deposits. While white hydrogen exploration activities are underway in some countries, there is currently no plan to exploit this source of hydrogen here in the UK.

[Discover more about white hydrogen](#)



### Bills are still high despite energy prices falling to the lowest point in two years.

Ofgem implemented its latest price cap, lowering the energy price cap from £1,928 to £1,690 annually. This is the lowest level since Russia's invasion of Ukraine in February 2022.

On the 1st of April, gas prices were reduced from 7.42p per kWh to 6p per kWh, and electricity went from 28.62p per kWh to 24p per kWh under the new price cap. Households on prepayment meters will pay slightly less than those on direct debit, with a typical bill of £1,643. However, standing charges have risen to 60p a day for electricity and 31p a day for gas, (although they vary by region).

The next announcement is expected in July for the period July to September 2024.

[Read the full story](#)

## 01 Notable news

### Energy Trends report shows record low energy production

The Government released its latest Energy Trends report, revealing domestic energy production in the UK reached the lowest level since 1948. Despite lower energy demand, the UK's dependency on imports increased to 41.1% in 2023, from 37.3% in 2022.

Fossil fuels generated 36.3% of the country's electricity, compared to 40.8% in 2022 with gas accounting for 34.3% contributing to the second-lowest level on record for gas production. The report also highlighted that renewable sources generated 47.3% of the UK's electricity, a new record for the third consecutive year. Wind generated a record 28.7% of the UK's electricity needs in 2023.

[Read more on the story](#)

### UK's first waste-to-energy carbon capture pilot plant moves ahead

Waste to energy company Enfinium plans to install a carbon capture pilot plant at one of its facilities in West Yorkshire, UK. The plant will use an amine-scrubbing solution, part of Hitachi Zosen Inova's BioMethan gas upgrading technology, to absorb CO<sub>2</sub> from the flue gas generated by the facility. It is the first of its kind in the UK and is expected to capture up to 1 t/d CO<sub>2</sub>, running for at least 12 months from July.

The pilot plant will be used to assess the potential commercial scalability of CO<sub>2</sub> removal technology at all Enfinium waste-to-energy facilities and aims to take the company a step closer to its aim of implementing carbon capture and storage (CSS) at both its Ferrybridge 1 and 2 facilities.

[Find out more about the plant](#)



Photo: Enfinium

## 01 Notable news

### Poo to power 4,000 homes in West London

Sewage sludge will be used to heat homes in West London early this year after Thames Water successfully delivered its second gas-to-grid (G2G) project. Currently serving over 2 million customers, Mogden is the third largest Sewage Treatment Works in the UK and has the potential to reach and supply gas to 4000 homes.

The project at Mogden will use sewage sludge, a by-product of sewage treatment to generate electricity via Combined Heat and Power engines. The Gas-to-Grid plant, which will be managed by SGN, intends to take a proportion of this biogas and upgrade it so it can be used as fuel for cooking and heating.

[Read more on the story](#)



### Hydrogen-powered vehicles could become commonplace following consultation

Following new regulations set out in a consultation by the government, hydrogen-powered construction and farming vehicles such as diggers, tractors and forklifts could start being tested on UK roads. The consultation, which closed on 24 April 2024, could provide a route to pave the way for the use of hydrogen across the UK transportation market. According to a statement made by the government, the proposals will grant further permission for companies to test hydrogen-powered vehicles, such as diggers, on the UK's roads.

[Discover more about the consultation](#)

## 01 Notable news

### Increased renewable energy while using less than 3% of England's land

A new analysis by Exeter University, commissioned by Friends of the Earth (FoE) suggests that England could produce 13 times more renewable energy while using less than 3% of its land. The research found there is potential for 130TWh to come from solar panels, and 96TWh from onshore wind, a significant increase compared to the approximate 17 terawatt hours of electricity a year that comes from homegrown renewables on land.

Although some groups have expressed concern that solar farms will reduce the UK's ability to grow food, the new analysis suggests there is plenty of land that can be used without impairing agricultural production. The FoE produced a map showing potential sites for onshore wind and solar generation with North Yorkshire, Lincolnshire and the East Riding of Yorkshire showing good potential.



[More on the story here](#)

### HyNet's HPP1 hydrogen plant is ready for a final investment decision.

HyNet's low-carbon hydrogen production plant (HPP1) is ready for a final investment decision in September, making it the first blue hydrogen project to reach this milestone. HPP1 was one of two hydrogen production projects chosen in the UK's Phase 2 cluster sequencing round, which would see it given a low-carbon hydrogen "Contract for Difference" agreement to produce hydrogen.

Progressive Energy, which is linked to the HPP1 initially estimated that the facility would deliver a levelised cost of hydrogen (LCOH) of £43.46 per MWh, based on gas prices in 2018. Gas prices are now much higher than they were before 2022 and this cost is likely to be more, but EET's CEO Joe Seifert believes that the strike price for blue hydrogen could be "considerably cheaper" than for green projects.

[Read the full story here](#)

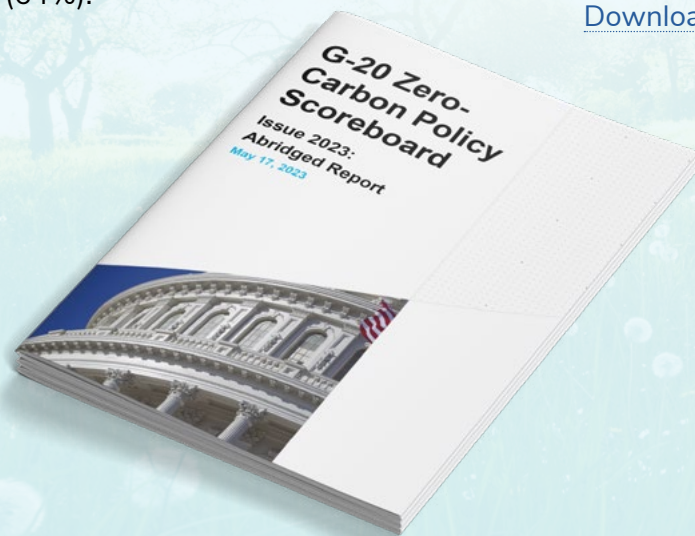
## 01 Notable news

### The UK's decarbonisation score dropped to 63% according to a new report.

The UK's decarbonisation efforts over the past year have been slow to progress, according to BloombergNEF's latest report on the G-20 Zero-Carbon Policy Scoreboard. The UK's overall score dropped to 63% for 2023 from 65%, positioning it as the fifth overall, behind France (71%), Germany (71%), the EU (68%) and Italy (64%).

Delays in implementing regulations on energy performance certificates and phasing out internal combustion engine vehicle sales are thought to have contributed to the drop. Yet, despite falling by 2% from the previous year overall, the UK's score increased by 5% for clean power initiatives.

[Download the full Scoreboard](#)



### Publications impacting the UK renewable fuels market released.

The UK Government issued several publications impacting the UK renewable fuels market including:

- a consultation addressing a potential incentives loophole for renewable fuels and their chemical precursors in the UK through changes to the Renewable Transport Fuel Obligation (RTFO) and upcoming sustainable aviation fuel (SAF) mandate
- a response to a consultation in 2022 confirming the Government's intention to bring recycled carbon fuels (RCFs) within the scope of the RTFO
- a consultation regarding a future policy framework for biomethane production

[Access the publications](#)

## 02 Spotlight on... Fuel Bank Foundation

Last month, Xserve collaborated with the Fuel Bank Foundation to organise an event focused on fuel crisis for leaders in the energy industry, government departments, and consumer advice services.

We had over 45 attendees on the day come to learn more about the lives of people who have or are experiencing fuel crisis. The event featured immersive elements to capture the emotional and human-centric aspects that can be often forgotten or overlooked when forging the path to net zero. This event aimed to remind those integral to decarbonising heat to consider those it will affect the most and the steps they can take going forward to help alleviate the financial burden for vulnerable people as we transition away from natural gas.



## 03 Things to look out for

Following on from the fuel crisis event, we have received a fantastic response and feedback from the attendees, and we are currently working on compiling an attendee report that we will share shortly.

We are working on something exciting that we hope to be able to tell you about soon. In the meantime, keep an eye out for our blog post on the event and revisit the [Decarb Discussions](#) podcast to listen to Matthew Cole, Head of Fuel Bank Foundation, talk about the impact the organisation has on those experiencing fuel crisis.





## 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](mailto:decarbonisation@xserve.com)

### Monthly decarb updates

We have appointed **John Elsegood** as our Interim Development Manager for Decarbonisation and he is looking forward to reaching out to you in the next couple of weeks.



As well as our regular sessions, we'd also like to invite you to these additional events:

### Hydrogen Information Sharing Group

**Hydrogen Information Sharing Group**

Friday 3rd May 2024

10:00 - 12:00

## 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.

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:

[decarbonisation@xoserve.com](mailto:decarbonisation@xoserve.com)

