



# Updates from our recent Member Consortium Meeting

SUMMER 2025

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[www.hydrogenvalley.co.uk](http://www.hydrogenvalley.co.uk)



Hydrogen Valley

Hydrogen Valley Newsletter

# Featured Speakers

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**Arran Williams**  
Cadent



**Amy Taylor**  
Talan



**Roger Barnfield**  
National Gas



**Mike Cairns-Terry**  
Progressive Energy



**Andrew McDermott**  
Ceramics UK



**Eric Adams**  
Carlton Power





## Arran Williams

### Cadent

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We recently held our second Consortium Meeting for members of the Hydrogen Valley Programme – a fantastic opportunity to share progress, collaborate, and showcase the growing momentum behind this initiative.

Hydrogen continues to play a crucial role in the UK's journey to net zero, with the Government's growing commitment increasingly evident. With shortlisted projects recently announced under the second Hydrogen Allocation Round (HAR2), and £500 million committed to support the UK's first regional hydrogen transport and storage network, it's clear that momentum is building. Further, the UK's new industrial strategy, launched last month, highlights clean energy as a key driver of future growth – and hydrogen is central to that vision.

The Midlands is rapidly becoming a focal point for hydrogen innovation, with over 100 industrial sites actively exploring hydrogen as a decarbonisation fuel across an impressive range of sectors. From ceramics and automotive to food and drink, industries are gearing up for a hydrogen-ready future.

The Hydrogen Valley Programme has the potential to kickstart the hydrogen economy in the Midlands, ensuring the region is not left behind and enabling creation of new jobs and regional economic growth. We have tremendous support from the ever-growing membership of the consortium – now is the time to drill down into the 'how' and turn the vision into a reality.





## Donald Oleforo National Gas

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A big thank you to all our members who attended the Hydrogen Valley Consortium Meeting, participated in the discussions, and shared their thoughts on the future of hydrogen. We were particularly pleased to see so much enthusiasm in our breakout sessions. Many participants were eager to continue the conversations and exchange contact details, so we have now created a dedicated LinkedIn group to keep the dialogue going and support continued collaboration across the network.

A special thanks goes out to our guest speakers from Progressive Energy, Ceramics UK and Carlton Power for showcasing the innovative projects that are actively driving decarbonisation forward. It was wonderful to hear from speakers across the hydrogen supply chain - from producers to end-users - who are each playing a vital part in that transformation.

It's also fantastic to see our membership expanding, with recent additions including H2 East, Carlton Power, and most recently Avara Foods. The momentum is clearly building in the wider hydrogen landscape, and we're delighted to see this reflected in the growth of our Consortium.

I look forward to the progress ahead and to continuing this collaboration across the consortium. Together, we can accelerate the hydrogen transition and unlock its full potential for a net zero future.





# New Members

We were delighted to welcome the newest members of the Hydrogen Valley programme in our consortium meeting on 26th June. We are excited to work with them to explore the future of hydrogen in the region and our ambitious plans to decarbonise industry and heavy transport in the Midlands. If you're interested in joining, please [contact us](#) today.



Avara Foods is a vertically integrated supplier of poultry, with seven main sites in the Cadent area (five in the Hydrogen Valley area), predominantly in the West of the country. Avara Foods intends to begin exploring alternative technologies to decarbonise their processes, with hydrogen included within their strategy.



Carlton Power is an energy development company who are leading two hydrogen projects with hard to decarbonise industry in the Midlands to produce and supply green hydrogen. The projects have been shortlisted for Government Support under the HAR2 process. Carlton Power has committed to work in conjunction with the activities of Hydrogen Valley to ensure developments remain complementary.



Hydrogen East was launched with the aim of advancing the hydrogen economy and supporting the hydrogen value chain across the East of England. Since its initial inception, its activities have expanded across an extended East of England geography to include the South East, aiming to capitalise on its potential as a leader in hydrogen development. It operates as a central body, helping to coordinate efforts across various sectors, exploring, promoting, and implementing hydrogen solutions.

# Breakout sessions

As part of our event, we facilitated a series of breakout sessions designed to encourage open discussion and cross-sector collaboration around the future of hydrogen in the UK.

To guide conversations, attendees were asked three key questions:

- Is your company currently involved in any hydrogen-related programmes or initiatives?
- Is there any additional public or private sector support that could help your organisation to realise any hydrogen programmes or initiatives?
- Are there any cross-sector opportunities for collaboration you'd like to explore?

The response was overwhelmingly positive. The sessions generated insightful conversations, with participants eager to share insights and experiences.

It was clear that there is a strong appetite for collaboration among our consortium members, and many attendees were keen to stay connected and build on the momentum.

As a result, we've created a [dedicated LinkedIn group](#) to keep the conversation flowing and provide a space for ongoing knowledge-sharing, networking, and partnership-building across the hydrogen sector.







**Roger Barnfield**  
National Gas

# Project Union Update

Roger Barnfield, Senior Hydrogen Development Engineer at National Gas provided an overview of National Gas's role in GB's hydrogen infrastructure. Roger focused on the Project Union project, an ambitious project that aims to develop a GB-wide hydrogen transmission network.

The creation of this hydrogen 'backbone' is pivotal to Hydrogen Valley's success enabling seamless integration with the wider GB hydrogen network, and allowing the region to grow into a thriving hydrogen hub.

National Gas owns and operates GB's high-pressure transmission network, which includes approximately 7,600 km of pipelines and up to 94 bar pressure. This extensive system supplies a wide range of users, including power generation, domestic, industrial, and commercial sectors.

Project Union aims to develop a hydrogen pipeline spanning around 2,500 km - about one-third of the current gas network - connecting strategic supply, demand, and storage locations across GB. The project primarily targets industrial clusters, linking the largest and most developed hydrogen users to enable efficient distribution and supply security.

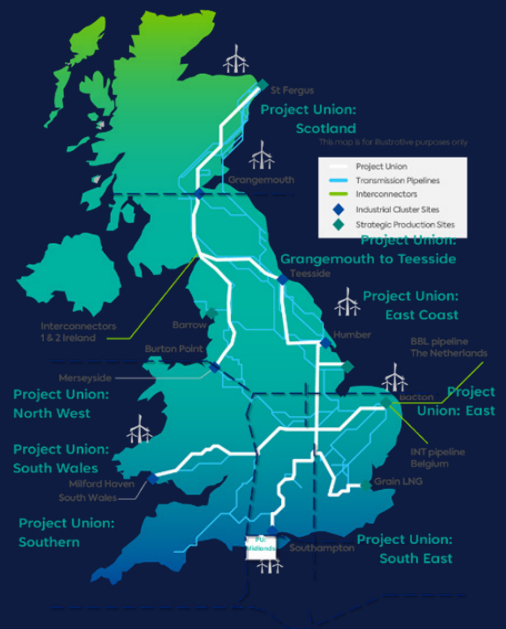
The project plans to leverage both new and existing infrastructure, repurposing suitable pipelines within the National Gas network for hydrogen transport.

Project Union is broken down into nine sections, broadly aligned with the identified industrial clusters. The development will start on the east coast, progressively expanding to connect northern Scotland, western projects like HyNet, and down to the Hydrogen Valley region.

## Latest update

Recently, Ofgem awarded £40 million in funding to advance the Front-End Engineering Design (FEED) stage of the East Coast section of Project Union. This funding enables progression in the East Coast area and sends a strong positive signal for the GB hydrogen economy, reinforcing the project's significance and boosting its momentum.

Reopeners have also been submitted for the Scotland, Teeside to Grangemouth and North West sections. With timelines indicating a 24-month FEED process for the East Coast region, aiming for completion by summer 2027. If all goes according to plan, operational status of these sections could be achieved around 2032, with subsequent sections following through the mid-2030s.







# Progressive Energy

**Mike Cairns-Terry**  
Progressive Energy

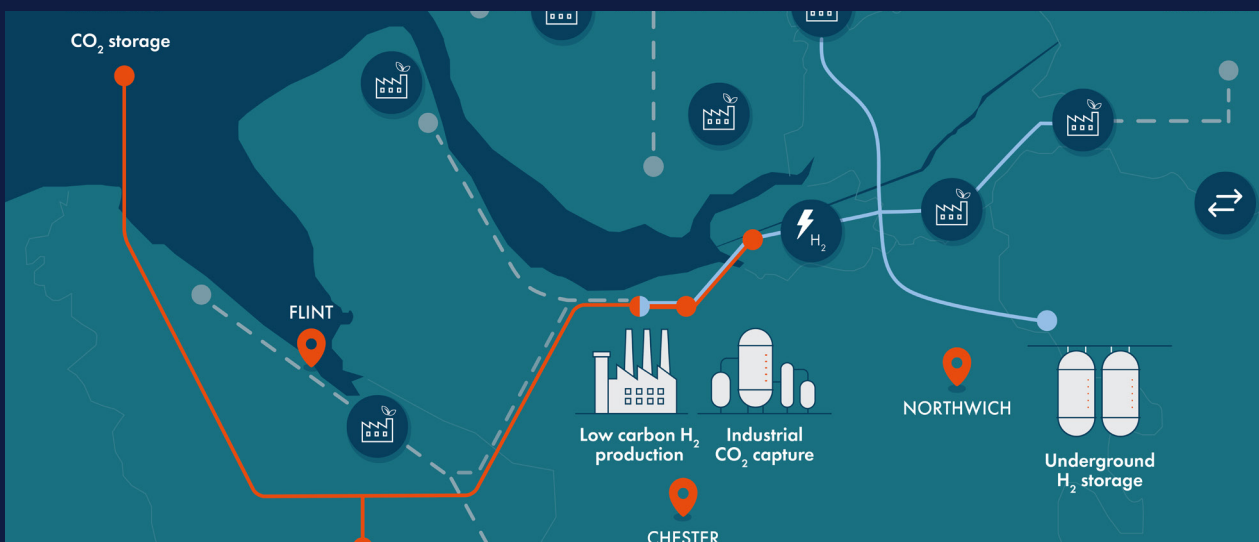
Progressive Energy develop and deliver large-scale low carbon energy projects, supporting them from concept all the way to deployment. Hydrogen is a huge part of Progressive Energy's work, as they work to lead the development of new technologies and establish a global hydrogen economy. Mike Cairns-Terry, Principal Engineer at Progressive Energy, took the time update us on the exciting hydrogen projects the team have been working on.

Progressive Energy have developed an impressive array of low carbon hydrogen and Carbon Capture & Storage projects that will accelerate the decarbonisation of industrial and power sectors.

## HyNet North West

Mike provided an update on the HyNet infrastructure project, one of the UK's leading industrial decarbonisation projects. It aims to:

- Provide locally produced low carbon hydrogen for industry, transport, and heating purposes
- Create an underground pipeline network in the North West to transport CO<sub>2</sub> emissions to permanent storage
- Build underground storage for hydrogen to be stored ready for use
- Create an underground hydrogen transportation network for end users
- Establish low carbon hydrogen production plants

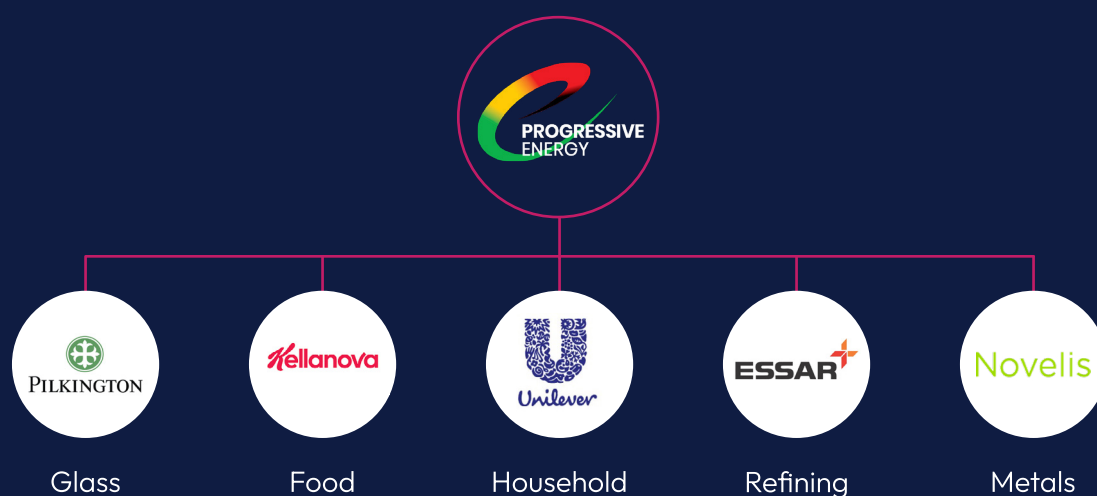


## Industrial Fuel Switching

- Progressive Energy are currently taking part in the Industrial Fuel Switching competition with the Government
- Industrial Fuel Switching provides funding for industries to develop and demonstrate how low carbon fuels such as hydrogen can help to decarbonise their processes
- Once available, these industries, operating within the HyNet region, will be ready to make the switch to hydrogen as a low carbon alternative

## Industries working with Progressive Energy to transform their business with hydrogen

Outcomes and learnings from hydrogen testing enabled by the Industrial Fuel Switching Programme below can be integrated for projects within the Hydrogen Valley region. In all demonstrations led by Progressive Energy, hydrogen was found to be a safe, suitable replacement for natural gas across the industries where trials were held.



### Glass – Pilkington's float glass furnace

- Hydrogen can provide a suitable fuel for high heat industries like glassmaking
- Hydrogen was tested for use at Pilkington's site
- Demonstration showed that hydrogen can be an efficient, suitable alternative



### Food & Drink – Kellanova cereal

- Hydrogen tested for fuelling the production of Rice Krispies and other core cereal product groups. Hydrogen was tested for use at Pilkington's site
- Hydrogen fuelled production achieved high quality benchmarks across their cereal brands

Progressive Energy



# Ceramics UK

**Andrew McDermott**  
Ceramics UK

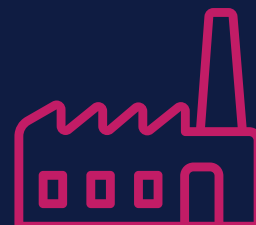
Ceramics UK represents the collective interests of the ceramics industry, representing over 90% of the UK ceramic industry's manufacturing capacity. From bricks to clay roof tiles, tableware to refractories, ceramics are at the heart of many UK industries.

The Hydrogen Valley programme is home to a crucial location for the ceramics sector, with Stoke-on-Trent described as the world capital of ceramics. Hydrogen is seen as the most essential contributor to decarbonising the sector, and we are working closely with Ceramics UK to investigate its use as an alternative fuel.

Andrew McDermott, Deputy Chief Executive of Ceramics UK, joined us to provide an update on how the ceramics industry is looking towards hydrogen as a key decarbonisation fuel.

## Facts and figures about the UK Ceramics industry

- £2 billion of annual sales across the UK
- The industry makes £600 million in export sales
- 75% of the industry is made up of SMEs
- The sector employs 20,000 direct full time employees
- Ceramics UK has 90+ member companies all over the country
- There are 150+ manufacturing sites scattered
- Currently, £750 million is spent by the industry on decarbonisation



## How to decarbonise the Ceramics sector

The ceramics industry is an energy intensive industry, with energy representing up to 50% of total production costs. The process involves high temperature product firing, and therefore large amounts of natural gas, which accounts for 86% of their energy mix.

Technologies such as hydrogen provide a great alternative for heavy industries that require high temperatures such as ceramics products. The industry has already invested £750 million over the last decade on technology upgrades and are looking for low carbon fuel alternatives that can energy security and thus improve business viability.

Ceramics applications:

### General Properties

Strength, Hardness, Durability,  
High-temp Stability, Low Thermal  
Conductivity, Chemical Inertness,  
Wear Resistance, Electrical Insulation,  
Biocompatibility

### Products

Clay Construction Products, Tableware  
& Giftware, Sanitaryware, Wall & Floor  
Tiles, Refractories, Technical Ceramics,  
Material Suppliers, Equipment Suppliers

### Applications

Aerospace, Automotive, Construction &  
Housing, Consumer Goods, Defence &  
Security, Electronics, Energy, Healthcare  
Industrial Processes



# The Ceramics UK Hydrogen Project

Andrew joined our latest consortium meeting to provide an update on Ceramics UK's exciting Hydrogen Project.

## Industrial Fuel Switching

### Phase 1 Project

A Government funded project enabled Ceramics UK to work with 12 member companies on a feasibility study to demonstrate 100% hydrogen firing of ceramics.

### Successes

- The results demonstrated that various ceramics can be fired with 100% hydrogen without affecting product quality



## Industrial Fuel Switching

### Phase 2 Project

A Government funded project enabled Ceramics UK to expand on efforts to demonstrate the technical and economic viability of hydrogen firing ceramics

A pilot kiln was developed for testing a number of products, including brick bodies and a range of other industrial partner products

### Progress

- Early results from the pilot kiln show indistinguishable product performance
- Key insights gained from two detailed site studies
- Technoeconomic model developed and in use



Ceramics UK



**Eric Adams**  
Carlton Power

# Carlton Power

Carlton Power are one of the Hydrogen Valley programme's newest advocates. The energy development company are leading two hydrogen projects in the Midlands that will produce and supply green hydrogen to hard to decarbonise industries in the region.

Recently, Carlton Power have had their projects shortlisted for support under the Government's Hydrogen Allocation Round (HAR2) process. Eric Adams, Hydrogen Projects Director at Carlton Power, joined us to talk more about these innovative projects and what's next for the future hydrogen producer.

## Carlton Power's work in the hydrogen sector

- Signed contracts for three advanced hydrogen projects under the first phase of the Government's Hydrogen Allocation Round (HAR1), allowing construction to begin
- Two further projects shortlisted in the second subsidy allocation round for green hydrogen (HAR2)
- Projects focus on decarbonising large industrial gas users



## Trafford, Green Hydrogen

- Green hydrogen production facility – planning permission granted
- Hydrogen pipeline to potential offtakers – planning permission granted
- Offtaker in the Ceramics industry to take 100% of all hydrogen produced
- Plans for future expansion from 15 MW project to 200MW
- Received support from HAR1
- Aiming to save 11,700 tonnes of carbon emissions

### Walsall, Green Hydrogen

- Shortlisted project in HAR2
- Initial 25 MW project aiming to provide hydrogen to hard to decarbonise industries, mainly in the ceramics industry
- Future expansion opportunity up to 50MW
- Grid connection secured, and planning permission granted
- Aiming to save 19,500 tonnes of carbon emissions

### Hartlebury, Green Hydrogen

- Shortlisted project in HAR2
- Initial 20 MW project aiming to provide hydrogen to hard to decarbonise industries, mainly in the ceramics industry
- Future expansion up to 50 MW
- Land secured for the project, with planning permission in progress
- Aiming to save 15,600 tonnes of carbon emissions

## How to overcome challenges in the hydrogen sector

Carlton Power also reflected on their experience delivering hydrogen infrastructure projects across the country, and the challenges that need to be addressed to scale up the use of the alternative fuel.

### Electricity supply for green hydrogen

- Price
- Availability
- LCHS Compliance



Carlton Power's HAR1 projects have revealed that the price of electricity compared to gas has hindered some progress. A mechanism to encourage the use of electricity from renewable sources could help to bring costs down.

### Equipment supply

- Capex costs
- Performance (efficiency & degradation)
- Warranties



The scale up of the equipment supply chain can drive down costs, but only if the demand for hydrogen products increases.

## Demand

- Demand Variability
- Managing Supply Interruptions



Demand from industrial offtakers varies based on demand for their end product and energy demand across their industrial processes. Variability in hydrogen supply must be accounted for, and interruptions in the supply of hydrogen due to market conditions or maintenance must also be considered.

As the hydrogen sector scales up, focus is moving from technical feasibility to commercial feasibility. Hydrogen producers like Carlton Power will be looking at how to produce assurance of hydrogen supply to offtakers and encourage new customers to make the switch.



# Thank you to our Consortium Members





# New Members

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Thank you to everyone who have been involved with the creation of the Hydrogen Valley programme, and to those who work tirelessly to make the case for a hydrogen economy and the infrastructure needed to support this.

### Contact us:



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Hydrogen Valley