



## INTERNATIONAL PARTNERSHIP FOR HYDROGEN AND FUEL CELLS IN THE ECONOMY

### IPHE Country Update March 2024: United Kingdom

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<b>Covered Period</b>	October 2023 to March 2024

#### 1. New Initiatives, Programs, and Policies on Hydrogen and Fuel Cells

- In December 2023, we published a [special edition of our Hydrogen Strategy Update to the Market](#), published approximately halfway to our future review point of the UK Hydrogen Strategy. **This presents the progress that UK Government and industry have made in delivering the UK Hydrogen Strategy** and reaffirms the government's continuing commitment to develop a thriving hydrogen economy.
- At the same time, the UK Government announced [eleven major new hydrogen projects](#) across the UK, representing **the largest number of commercial scale green hydrogen production projects announced at once** anywhere in Europe. These new projects **will deliver 125MW of new electrolytic hydrogen production capacity**.
- The Government [opened a second round of funding](#) to provide **up to an extra 875MW of production capacity**, which will help further cement energy security. We also published the [Hydrogen Production Delivery Roadmap](#), which sets out proposals for **annual allocation rounds from 2025 to 2030**, helping to provide certainty for industry.
- To link up production and demand, the UK announced its initial ambition for the [first allocation rounds of the hydrogen transport and storage business models](#), **to be launched in 2024**. This ambition will **support up to two storage projects at scale and associated regional pipeline infrastructure to be in operation or construction by 2030** – this is a major step forward in the delivery of critical hydrogen infrastructure.
- The [Energy Act 2023](#), which received Royal Assent in October 2023, includes legislative powers that are critical to kickstarting and developing the UK hydrogen economy, including provisions to bring forward the hydrogen production, transport and storage business models.



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- In December 2023, the UK Government said that it sees [potential value in supporting targeted hydrogen blending](#) of up to 20% into our gas distribution networks, subject to outcomes from the safety assessment. This could help **de-risk production projects** by supporting the early development of the UK's hydrogen industry.
- Also in December 2023, the Government published a consultation on the need for and design of a potential [hydrogen to power business model](#), and proposals to enable hydrogen to power plants to compete in the UK's Capacity Market as soon as practical.
- To support the expansion of strong, home-grown, clean energy supply chains, in November 2023 the Government announced the [£960 million Green Industries Growth Accelerator \(GIGA\) fund](#) to provide supply chain manufacturing support for UK sectors including hydrogen and CCUS, to seize growth opportunities through the transition to net zero.
- In February 2024, we published an updated [hydrogen investment roadmap](#), setting out the UK's world-leading offer to inward investors.
- In February, we also published the list of successful applicants for Round 2 of the [Net Zero Hydrogen Fund \(NZHF\)](#) Strands 1 and 2 competition, including 7 successful applicants that will be allocated a total of **around £21m for new hydrogen production projects across England, Scotland and Wales**, subject to contracts being signed. This announcement follows round one of the NZHF for Strands 1 and 2 through which 15 successful projects were offered £37.9m.

### 2. Hydrogen and Fuel Cell R&D Update

Through the UK government's **£1bn Net Zero Innovation Portfolio (NZIP)** 2021-2025, we continue to invest in innovation to **accelerate the commercialisation of innovative, low-carbon technologies**, systems and business models. Other support comes from UK Research and Innovation (UKRI), the Department of Transport and other public sector bodies. Some examples of recent projects are provided below:

- Through the **Aerospace Technology Institute (ATI) Programme**, government continues to co-invest in industry-led R&D projects to develop new aircraft technology. In November 2023, for example, we announced **£55m of joint government-industry investment for innovative R&D projects** as part of the Advanced Manufacturing Plan (AMP), including a £5.5m project aiming to develop and demonstrate a fuel control system for hydrogen gas turbine engines.
- The UK has established **2 new hydrogen research hubs**: [HyRES](#) and [Hi-ACT](#).
- The UK has joined the [Global Hydrogen Production Technologies Center](#).
- The UK Government is funding **further research on the atmospheric implications of increased hydrogen use**, including for transport.



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- Further updates on hydrogen and fuel cell R&D for transport can be found in the *Investments: Government and Collaborative Hydrogen and Fuel Cell Funding* update below.

### 3. Demonstration, Deployments, and Workforce Developments Update

- In December 2023 the UK Government announced [eleven major new hydrogen projects](#) across the UK, **delivering 125MW of new electrolytic hydrogen production capacity**. The new projects – stretching from the South West of England to the Highlands of Scotland – **will invest over £400 million up front over the next three years**, in a major boost to the UK's green economy. **More than 700 high quality jobs will be created** by the new projects in local communities across the country, ensuring that even more people benefit from our journey towards net zero and the growth generated.
- In February 2024 the Government also announced development and capital funding for [seven low carbon hydrogen production projects](#) through the **Net Zero Hydrogen Fund**. Combined, these could bring around 800MW of production to the UK.
- We anticipate that by 2030, the UK's growing hydrogen sector could support **over 12,000 jobs** and **unlock £11 billion in private investment**, as we work towards our target of deploying **up to 10GW low carbon production capacity**.
- **Innovation demonstration projects** are progressing well overall, and we are now seeing the first test periods starting for projects in the Low Carbon Hydrogen Supply 2 programme.

### 4. Events and Solicitations

- In February 2024, we hosted our **second Hydrogen Investment Forum drawing together nearly 400 attendees** including UK Ministers, policy officials and multi-national industry leaders and investors to showcase the growing UK investment opportunity in the hydrogen economy. We will likely repeat this in 2025.

### 5. Investments: Government and Collaborative Hydrogen and Fuel Cell Funding

In addition to the updates above on UK funding for hydrogen production, networks and supply chains through the first and second Hydrogen Allocation Rounds, hydrogen transport and storage business models and the £960 million Green Industries Growth Accelerator (GIGA), we can also update that:

- UK Export Finance (UKEF), the UK's export credit agency, has enhanced its support in the 2021 Export Strategy to **attract investment into hydrogen and CCUS supply chains and build export capability**. Through its Export Development Guarantee (EDG) product, UKEF has extended the repayment term



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for clean growth projects from 5 to 10 years for qualifying businesses and introduced an investment EDG which allows for overseas companies to come to the UK and establish themselves as future exporters. By encouraging overseas investment into nascent and emerging clean growth sectors, the **UK will establish new export supply chains, stimulating regional investment and jobs growth.**

- In February, the **UK Infrastructure Bank (UKIB) announced its first major investment in hydrogen** with £30 million to support the expansion of UK-based green hydrogen pioneer, GeoPura, to help facilitate the expansion of their production capacity.
- The UK Government is now investing £15.6 million in the [Tees Valley Hydrogen Transport Hub](#), which brings together hydrogen supply (refuelling infrastructure) and demand (transport applications) with the aim of demonstrating commercial viability of hydrogen in transport. Three projects are using hydrogen as a fuel with a fuel cell for a range of road vehicles, and through combustion for airside support vehicles. The demand is supporting new publicly accessible hydrogen refuelling stations to be built in the region, and we have given £300,000 to Tees Valley Combined Authority to support local colleges and education providers to upskill the local workforce.
- In October 2023, four winning projects were also announced as part of the **£200m Zero Emission HGV and Infrastructure Demonstrator Programme, with two of these projects demonstrating hydrogen and fuel cells**. The programme will support up to 370 new zero emission HGVs and supporting infrastructure and evidence and data generated from their real-world use will inform the sector.

### 6. Regulations, Codes & Standards, and Safety Update

- The **Low Carbon Hydrogen Certification Scheme consultation Government Response** was published in October 2023. This **confirmed the design of the low carbon hydrogen certification scheme** and stated the intention to publish a 'pathway to international alignment' ahead of its launch, which will set out how both the certification scheme and UK Low Carbon Hydrogen Standard will evolve in the future to facilitate international trade.
- The UK were also **signatories in December to the COP28 Declaration of Intent for the mutual recognition of certification schemes** for renewable and low carbon hydrogen and hydrogen derivatives.
- In December 2023, **Version 3 of the UK's Low Carbon Hydrogen Standard was published**. This clarified requirements of the standard for effective use under the UK's Hydrogen Production Business Model.
- We are now taking an active role in the **International Organisation for Standardisation's (ISO) development of standards** for the production of hydrogen and its derivatives.



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- DESNZ commissioned a research project, conducted by Verian, **to explore non-economic regulatory planning barriers for UK hydrogen projects and identify potential solutions to these challenges**. The [research report](#) for this project was published in December 2023.