



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

### IPHE Country Update April 2023: United Kingdom

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<b>Covered Period</b>	December 2022 – April 2023

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

On 30 March 2023, the UK Government made several announcements related to hydrogen:

- We confirmed the first 15 winning projects from the £240 million [Net Zero Hydrogen Fund](#) and announced our intention to launch a second competition round in Spring.
- Announced a shortlist of [20 projects](#) for due diligence in the first electrolytic hydrogen allocation round, through which we intend to support up to 250MW of new electrolytic hydrogen production capacity, subject to affordability and value for money. Successful projects in this round will be funded by government until the hydrogen levy is in place.
- Further, we announced our intention to launch a second electrolytic allocation round later this year, through which we intend to support up to 750MW capacity, and to publish a hydrogen production delivery roadmap by the end of the year.
- We named the [two CCUS-enabled hydrogen projects](#) moving forward on the Track-1 clusters, intended to support our ambition for up to 1GW of CCUS-enabled hydrogen in operation or construction by the end of 2025.
- To bring forward hydrogen transport and storage infrastructure business models, we are also aiming to introduce legislative powers when parliamentary time allows, which will be crucial to designing these new business models by 2025.

In December 2022, the UK Government also published a number of documents which covered new initiatives on hydrogen. These were summarised in the [Hydrogen Strategy Update to the Market](#), including:

- Publishing the [Heads of Terms for the Hydrogen Production Business Model](#) contract, providing a framework for the principal terms and conditions that are expected to be included in the Low Carbon Hydrogen Agreement for initial projects.
- Launching a consultation on [Improving Boiler Standards and Efficiency](#), in line with the commitment in the UK Hydrogen Strategy to develop a government



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consultation on hydrogen-ready boilers and broader boiler and heating system efficiency.

- Government is planning to take a strategic policy decision in 2023 on whether to seek to enable the blending of hydrogen in the existing gas distribution network. Further details will be provided this year including through the government response to our consultation on hydrogen transport and storage infrastructure, which we aim to publish by the end of June 2023.

### 2. Investments: Government and Collaborative Hydrogen and Fuel Cell Funding, R&I, and Demonstration Projects

#### Department for Energy and Net Zero:

- On 30<sup>th</sup> March 2023, the Low Carbon Hydrogen Supply 2 innovation programme [awarded £19 million of funding to 5 new demonstration projects](#) to develop technologies in the production and supply of hydrogen. The competition also [published 22 feasibility studies](#) completed over the last year.
- The [Industrial Hydrogen Accelerator](#) programme launched Stream 2B in December 2022, with up to £20m in funding available for innovation projects that can demonstrate end-to-end industrial fuel switching to hydrogen. The programme also [awarded £3.1m in funding to H2GO Power Ltd](#) to demonstrate a full system including electrolysis, low pressure storage and industrial heat generation using hydrogen.
- On 6<sup>th</sup> February 2023, UKRI Innovate UK published the £4.35m [Hydrogen storage and distribution supply chain collaborative R&D](#) Fund for projects related to the hydrogen storage and distribution supply chain.
- The [Hydrogen BECCS Innovation Programme Phase 2 competition](#) closed on 10<sup>th</sup> February 2023, receiving applications from projects that were supported in Phase 1. Up to £25m of funding is available to take projects from innovation design through to innovation demonstration, and successful Phase 2 projects are expected to be announced and kick off in May 2023.
- The £10m NZIP [Green Distilleries Competition](#) is progressing [3 demonstration](#) projects.
- On 19<sup>th</sup> January 2023 the £40m [Red Diesel Replacement programme](#) launched the phase 2 applications, with up to £32.5m in grant funding available. Several projects are looking to demonstrate hydrogen in the construction, and mining and quarrying sectors.
- The £55m [Industrial Fuel Switching programme](#) funded 21 feasibility projects during Phase 1 of the programme. [Phase 2](#) of the programme offers around £50m for fuel switching demonstration projects, and the winners of this phase are expected to be announced shortly.
- In April 2023, the updated [UK Hydrogen Investment Roadmap](#) was published online. Showcasing the UK's hydrogen offer, it spotlights investment opportunities across the hydrogen value chain from production, through transmission and storage, to potential end uses, including power, transport and heating.



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### Department for Transport:

- £20 million [Tees Valley Hydrogen Transport Hub](#) which will see demand and supply for hydrogen transport collocated and £300,000 to support the development of relevant skills in hydrogen transport. Winning bids will be announced shortly.
- [Zero Emission Road Freight Demonstrator \(ZERFD\) programme](#) which will demonstrate zero emission HGV technologies, including hydrogen fuel cell, at-scale on UK roads over the coming years. Winning bids will be announced shortly.
- Launch of the [Zero Emission Vessel and Infrastructure \(ZEVI\) competition](#) on 6 February, with £77m available to accelerate the roll out of zero emission solutions for vessels and port-side infrastructure that are nearing commercialisation. Hydrogen and hydrogen related fuels are in scope. The application window will close on 19 April and winners will be notified later this year. ZEVI will provide funding until March 2025 to cover construction of infrastructure and vessels, ahead of an unfunded demonstration period of 3 years in a fully operational environment to March 2028.
- Launch of the [Clean Maritime Research Hub competition](#) on 6 February to support early research in clean maritime. UK SHORE and the Engineering and Physical Sciences Research Council (EPSRC) will jointly allocate £7.4m funding for a competition to establish the flagship hub. The successful Hub, made up of a consortia of research organisations, will run from September 2023 – March 2027 and address early research challenges in clean maritime, including low and zero-emissions fuels, energy sources and vessel technologies.
- Announced the winners of the third round of the [Clean Maritime Demonstration Competition \(CMD3\)](#) on 15 February. Over £60m has been allocated to 19 projects to conduct technology and system demonstrations in clean maritime solutions between April 2023 and March 2025, with six projects exploring the use of hydrogen and/or hydrogen derived fuels.
- Findings of the Zero Emission Flight Infrastructure Project, independent research funded by the UK Government, on handling hydrogen at airports was published in March 2023 [Preparing UK airports for zero emission aircraft - Connected Places Catapult](#).

Table1 – Deployment Figures Road Transport

Transportation	Current Status
Fuel Cell Vehicles (Total)	233
Fuel Cell Buses	37
Fuel Cell Trucks	1



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Hydrogen Refuelling Stations	9

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

- In February 2023, the UK government launched its [consultation](#) on a low carbon hydrogen certification scheme, due to be set up by 2025. The consultation seeks views on the design elements of the scheme with the overall objective of supporting decarbonisation of the hydrogen economy. The consultation closes on the 28th April, and a government response is expected to be published later in the year.
- In April 2023, the UK government also updated its [Low Carbon Hydrogen Standard](#) and published Version 2 of the guidance. In this Version 2, we are introducing policies that were part of the 2021 consultation on a UK Low Carbon Hydrogen Standard, but which had, due to lack of precedent, been deferred to a subsequent update so that more evidence could be considered. Amongst other clarifications, this version includes the introduction of a materiality threshold to ease the reporting and verification burden; a waste fossil feedstock counterfactual emissions methodology to reflect the system-wide emissions benefits; a revised process to include new technology pathways; and a new chapter on consignments.