

The UK and Taiwan advance collaboration in hydrogen and fuel cell technology

Co-hosted by the British Office in Taipei and the Taiwan Institute of Economic Research, the inaugural UK-Taiwan Hydrogen Forum took place virtually on 21 October, with supports by Taiwan Hydrogen and Fuel Cell Partnership and Scottish Hydrogen and Fuel Cell Association. The Forum brought together more than 100 UK and Taiwanese hydrogen and fuel cell companies with 11 companies presenting at the Forum to explore possible areas for collaboration.

To mark the occasion, the UK and Taiwan's respective hydrogen trade associations, the Taiwan Hydrogen and Fuel Cell Partnership and Scottish Hydrogen and Fuel Cell Association, signed a Memorandum of Understanding (MoU), committing to improving bilateral engagement, supporting skills development, education and outreach activities, and coordinating industry-related information and events. This MoU signing was witnessed by John Dennis, Representative of British Office Taipei, Lord Faulkner, UK Trade Envoy to Taiwan and YU Cheng-Wei, Director General of Bureau of Energy, Ministry of Economic Affairs.

In August 2021, the UK Government published a hydrogen strategy that sets out the approach to developing a thriving low carbon hydrogen sector in the UK to meet its ambition for 5GW of low carbon hydrogen production capacity by 2030. The strategy also includes a chapter on how the UK is working with other leading hydrogen nations to drive global leadership on the development of low carbon hydrogen to support the world's transition to net zero.

John Dennis, Representative of British Office Taipei said:

This is just the right time for the UK and Taiwan to come together and explore closer collaboration on this fuel of the future. UK-Taiwan collaboration is growing fast in low carbon energy development, especially offshore wind. And Taiwan's domestic fuel cell industry which is already a vital part of global hydrogen supply chains is increasingly strong and innovative.

Emerging UK-Taiwan collaboration opportunities include the deployment of hydrogen in medium-to-long distance public road transportation, the production of green hydrogen from offshore wind, and partnering on project opportunities in third markets where the UK and Taiwan share a common interest.

Lord Faulkner of Worcester, UK Prime Minister's Trade Envoy to Taiwan said:

Low carbon hydrogen has a critical role to play in our collective transition to net zero, with the potential to overcome some of the trickiest decarbonisation challenges facing our economy. Today, low carbon hydrogen technologies remain at a relatively early stage of deployment. This makes international collaboration especially important, to help mitigate early-stage development risks and create larger shared markets for the deployment of low carbon hydrogen. We look forward to working with Taiwan on these important efforts.

YU Cheng-Wei, Director-General of Bureau of Energy, MOEA also commented:

Moving from the “energy transition” to the “net-zero transition” by 2050, Taiwan has included hydrogen energy in our decarbonisation plans to effectively reduce carbon emissions in the energy and industrial sectors. In addition, MOEA has established a “Hydrogen Energy Promotion Group” to expand the promotion of the application and development of hydrogen energy. We will continue to pay attention to the global development trend of hydrogen energy and actively promote the decarbonisation of energy and industry.

Nigel Holmes, CEO, Scottish Hydrogen and Fuel Cell Association as said:

With just 10 days to go until the COP26 climate summit in Glasgow, the focus is now clearly on the urgent need to make the transition to zero-emission energy solutions. This MoU between the Taiwan Hydrogen and Fuel Cell Partnership and the Scottish Hydrogen and Fuel Cell Association will help us to share experience from the deployment of zero emission hydrogen fuel cell buses in Aberdeen, the production and local use of hydrogen in Orkney, and the H100 Fife demonstration of hydrogen from offshore wind for heating and cooking, replacing carbon intensive fossil fuels.

Dr. Tso Chunto, Vice President of Taiwan Institute of Economic Research & Convener of Taiwan Hydrogen and Fuel Cell Partnership also commented:

To reach net-zero emissions by 2050, hydrogen would be one of the most crucial projects in the near future. As for Taiwan, we have completed hydrogen and fuel cell technology supply chains, which international collaborations could be greatly promoted. Through today’s UK- Taiwan Hydrogen Forum, it could bring endless possibilities for more mutual collaborations. We believed that Taiwan’s hydrogen industry is well-prepared for the better future.

UK Hydrogen Strategy Executive Summary

Hydrogen is one of a handful of new, low carbon solutions that will be critical for the UK's transition to net zero. As part of a deeply decarbonised, deeply renewable energy system, low carbon hydrogen could be a versatile replacement for high-carbon fuels used today – helping to bring down emissions in vital UK industrial sectors and providing flexible energy for power, heat and transport. The UK's vision, resources and know-how are ideally suited to rapidly developing a thriving hydrogen economy. Our world-class innovation and expertise offer opportunities for UK companies in growing domestic and global markets. The UK Hydrogen Strategy sets out how we will drive progress in the 2020s, to deliver our 5GW production ambition by 2030 and position hydrogen to help meet our Sixth Carbon Budget and net zero commitments. To see [full strategy] (<https://www.gov.uk/government/publications/uk-hydrogen-strategy>)

List of the 11 UK and Taiwanese companies that presented at the inaugural UK-Taiwan Hydrogen Forum:

- UK – Ceres Power, developer of solid oxide fuel cell technology
- UK – Howden, the world's leading provider of air and gas handling solutions
- UK – Petrofac, integrated international energy services company
- UK – Arcola Energy, specialist developer of hydrogen transportation infrastructure
- UK – Alexander Dennis, manufacturer of next generation hydrogen buses
- Taiwan – Linde LienHwa Group, Taiwan's largest industrial gas supplier
- Taiwan – YC Synergy, fuel cell and electric drive system provider
- Taiwan – Asia Hydrogen Energy, developer of solid oxide fuel cell technology
- Taiwan – M-Field Energy, industrial and residential fuel cell system provider
- Taiwan – hiPower Green Technology, hydrogen R&D and services company
- Taiwan – TÜV Rheinland, the world's leading provider of technical

testing services