Department for
Energy Security
& Net Zero

Hydrogen Delivery Council

Thirteenth Meeting – Summary

11 March 2024

Attendees

Co-Chairs:

The Rt Hon Claire Coutinho MP, Secretary of State for Energy Security and Net Zero.

Lord Callanan, Minister for Energy Efficiency and Green Finance, Department for Energy Security and Net Zero.

Jane Toogood, former UK Hydrogen Champion and former CEO of Catalyst Technologies at Johnson Matthey.

Council members:

Name	**Role**	**Organisation**
Wouter Bleukx	Business Director, Hydrogen	Inovyn
Amir Mansouri (Deputising for Paul Bogers)	Vice President, Hydrogen	Shell
David Wellard (Deputising for Olivia Breese) Olivia Breese	CEO Power-to-X and Senior Vice President	Orsted
Jon Butterworth	Chief Commercial Officer	National Gas
Andrew Doyle	Executive Director	Mitsubishi UFJ Financial Group
James Earl	Gas Goes Green Champion	Energy Networks Association
Sam French	Business Development Director	Johnson Matthey
James Dobing (deputising for Rajesh Kedia)	Banking Director and Investments	UK infrastructure bank
Ben Madden (Deputising for Jo Bamford)	Chief Technical Officer	Ryze
Chris Manson-Whitton	CEO	Progressive Energy
Alex Grant	VP, Carbon Markets – Senior Advisor – Policy and Regulation	Equinor
Sarah Potts	Hydrogen and CCS Process Technical Authority	Storegga
Catherine Raw (Deputising for Alistair Phillips-Davies)	Managing Director	SSE Thermal
Dennis Schultz	CEO	ITM Power
Darren Davidson	Vice President , UK and Ireland	Siemens Energy
Prof Nilay Shah	Director, Centre for Process Systems Engineering	Imperial College London
Sopna Sury	COO	RWE
Armando Botello	Business President, Region UK & Ireland	BOC Linde
Louise Kingham	Head of Country, UK	BP

Working Group Chairs:

Name	Role	Organisation
Catherine Raw	Managing Director	SSE Thermal
Nick Wye	Director	Waters Wye Associates

Observers:

Name	Organisation
Debbie Baker	Aviso
Emma Bulmer	Deputy Director, HICC, Department for Energy Security and Net Zero
Rich Denny	Infrastructure and Projects Authority
Simon Green	Deputy Director, HICC, Department for Energy Security and Net Zero
John Howells	Welsh Government
Edward Kerr	Northern Irish Government
Paro Konar	Director, HICC, Department for Energy Security and Net Zero
Josh Lawrence	Department for Business & Trade
Professor Ron Loveland	Welsh Government
Will Lochhead	Deputy Director, HICC, Department for Energy Security and Net Zero
Andrew Mackenzie	Department for Transport
Professor Paul Monks	Chief Scientific Adviser (CSA) - Department for Energy Security and Net Zero
Bob Moran	Department for Transport
Iona Mylek	Deputy Director, HICC, Department for Energy Security and Net Zero
Katie Ostheimer	Deputy Director, HICC, Department for Energy Security and Net Zero
Margo MacIvor	Scottish Government
Robert Schulz	German Hydrogen Council
James Walker	Ofgem

Also in attendance, officials from: Department for Energy Security and Net Zero, Infrastructure and Projects Authority, Ofgem, Welsh Government, Department for Business & Trade, Department for Transport and Scottish Government.

NB: This is a summary of Council member comments made in an **advisory** capacity. The summary of member comments does not represent Government policy or views.

Item 1: Industry co-chair Welcome & Updates - Jane Toogood (JT)

JT opened the meeting with feedback on her recent engagement with industry including at the DESNZ and Hydrogen UK hosted the 2nd Hydrogen Investor Forum and Westminster Energy, Environment and Transport Forum.

JT also welcomed the newest member of the Council, Julian Leslie, Director of Strategic Energy Planning and Chief Engineer at the National Energy Systems operator.

Item 2: Ministerial Comment & Q&A Session - Claire Coutinho, Secretary of State for Energy Security and Net Zero (SoS)

SoS then opened the floor to questions from Council members. Council members welcomed these remarks and raised points on topics including:

- Funding for upcoming Hydrogen Allocation Rounds.
- Non-cost barriers to hydrogen demand and the work of the HDC Offtaker Working Group.
- The importance of syncing transport and storage with production, and linking work on the Review of Electricity Market Arrangements with work on hydrogen to power.
- The challenges of scaling up green hydrogen quickly.
- Regulations for gold and white hydrogen.
- Growing the UK hydrogen supply chain and jobs.
- Public awareness of the benefits of hydrogen.
- HAR 1 UK content.
- The opportunity for hydrogen exports.

Item 3: Item 3: Working Group progress against Work Plan (Summary) (JT)

JT gave a high-level summary of progress against objectives for Working Groups (WG) that were not providing deep-dive updates at this meeting.

The Production WG is considering the strategic role of different production technologies to ensure a support approach to system integration of electrolysis, and to increase awareness of the environmental impacts of hydrogen production.

The Offtaker WG will produce a report by mid-2024 on the barriers to offtakers and end use of low carbon hydrogen.

The Low Carbon Hydrogen Standard and Certification WG and Regulators Forum are both making good progress against their objectives.

Item 4: Item 4: HDC WG Deep dives: Jobs, Skills & Supply Chains and Transport & Storage Nick Wye (NW) & Clare Jackson (CJ)

JT passed over to NW.

NW outlined the successful completion of phase 1 of the HDC T&S WG and the launch of phase 2 of work in summer 2023. One workstream will identify shortcomings in the incumbent market framework for hydrogen networks and propose new fit-for-purpose arrangements. The WG will identify “tipping points” in the growth of the hydrogen economy where the market framework may need to transition from one arrangement to another. A Sub-group has taken forward this work and aims to produce a report on the market framework by May 2024.

A second workstream, which will be led by another sub-group, is focussed on T&S strategic planning. This workstream will consider how industry might best support government in its transitionary role as strategic planner for hydrogen T&S infrastructure before the ambition for the National Energy System Operator (NESO) to take up this role in 2026.

The Council raised questions and comments including:
- NESO oversight of market framework development.
- Lessons learned from CCUS, gas market and power market.
- Consideration of existing infrastructure in strategic planning work.
- Consideration of broader energy sector and end users in strategic planning work.

JT brought discussion to a close and passed over to CJ.

CJ presented an update on the Hydrogen Supply Chain Strategy work, which Hydrogen UK is leading. The executive summary of the strategy was published in December 2023, and CJ gave an overview of the strategy content. This included:

- Challenges through the development cycle for hydrogen projects.
- Recommendations to achieve the UK supply chain ambition of a voluntary ambition of 50% UK local content across the hydrogen value chain from 2030.

CJ also laid out a workplan for the WG for 2024 which included:

- Publication of phase 1 of the supply chain strategy in April.
- Defined KPIs for the strategic pillars of the UK supply chain ambition.
- Completion of phase 2 of the supply chain study.
- Development of a monitoring and evaluation framework.

The Council raised questions and comments including:
- The importance of phase 2 of the strategy to look at the impact of modularisation on achieving the UK supply chain ambition of UK content.
- Alignment on this report with the current call for evidence on the GIGA fund.
- Rationale for 50% local content ambition.
- Challenge of balancing local content ambition with market competition.

Item 5: Break

Item 6: Hydrogen Allocation Round (HAR) 1 Lessons Learned - DESNZ Officials (DOs)

DOs presented on the HAR1 outcomes announced in December 2024 including 11 successful projects totalling 125MW capacity and over £2bn revenue support from the Hydrogen Production Business Model and over £90m Net Zero Hydrogen Fund CAPEX provided. They outlined some of the main benefits that will come from these projects, which will be fully operational by 2026.

DOs then discussed key lessons learned from the first HAR process including that:

- Projects continually optimise throughout the allocation process.
- Offtaker commitment is a key risk for projects.
- To allow projects to be competitive, risk must be shared appropriately between projects and government.

- Electricity costs have been the biggest component in strike prices for electrolytic projects.

DOs then discussed the key features of HAR2 which opened as HAR1 winners were announced in December. These include:

- Aim to support up to 875MW, subject to affordability and value for money.
- HAR2 applications will be open for longer than the HAR1, closing in April 2024.
- Hoping to award contracts from early 2025.
- HAR2 is open to more technology types.
- The HAR2 process is more streamlined and has a wider delivery window for projects.

The Council raised questions and comments including:

- The changing prices of electricity in the future and how this is factored into strike prices.
- The challenge for mature projects in the HAR2 process being successful, given the greater accuracy of their cost projections, and the importance of project maturity.

Item 7: Advanced Manufacturing Plan Industry Taskforce - Paolo Favino (PF)

PF outlined that there is work to be done to maximise UK content in the transition of manufacturing of hydrogen propulsion technologies for aerospace, automative, marine and rail.

The taskforce will set out a report including recommendations to government and industry on how we can maximise the UK content in the manufacturing hydrogen propulsion technologies for aerospace, automotive, marine and rail. This includes recommendations on how we unlock inward investment for that manufacturing and how we keep building supply chains for growth in these sectors. This will be published in 2024. The taskforce will not duplicate existing government workstreams and will not focus on taxation and spend, emission policy, any policy not directly related to propulsion technology.

The taskforce will be delivered in partnership with Hydrogen Innovation Initiative.

The Council raised questions and comments including:

- The parameters of the taskforce including Non-Road Mobile Machinery.
- Barriers to hydrogen propulsion manufacturing such as zero emission tailpipe regulation.

Item 8: Closing Remarks & AOB – Lord Callanan & Jane Toogood (JT),

LC thanked the presenters for their time and for the educational discussions has during the meeting.

LC thanks Hydrogen UK and DESNZ officials for delivery the recent Hydrogen Investment Forum.

LC raised the importance of delivery this year including on the GIGA fund and HAR2.

JT thanked **LC** for his remarks and the Council for their participation.

There were no outstanding actions from the previous meeting.

The next Council meeting is due to take place in July 2024.