

# Hydrogen Advisory Council

Inaugural Meeting – Summary

20 July 2020

## Attendees

**Co-chairs:** Rt Hon Kwasi Kwarteng MP, Minister for Business, Energy and Clean Growth  
Sinead Lynch, UK Country Chair, Shell

## Council members:

Buta Atwal	CEO	Ryse
Paul Bogers	Vice President - Hydrogen	Shell
Baroness Brown	Deputy Chair	Committee on Climate Change
Duncan Clark	Head of UK Region	Orsted
Graham Cooley	CEO	ITM Power
Andrew Doyle	Executive Director	Mitsubishi UFJ Financial Group
Richard Halsey	Capabilities Director	Energy Systems Catapult
Alan James	Managing Director	Pale Blue Dot
Jon Maddy	Senior Lecturer	University of South Wales
Dominic Martin*	Vice President, Governmental and Regulatory Affairs	Equinor
Peter Mather	UK Head of Country	BP
John Panikar	CEO	BOC
David Parkin	Director	Progressive Energy
Professor Nilay Shah	Director of the Centre for Process Systems Engineering & Head of Chemical Engineering	Imperial College London
Steve Scrimshaw	Vice President	Siemens Energy Limited UK & Ireland
Jane Toogood	Sector Chief Executive, Efficient Natural Resources	Johnson Matthey

\*Deputising for Al Cook, Executive Vice President of Global Strategy and Business Development & UK Country Manager, Equinor

## Government observers:

Professor John Loughhead	BEIS
Rita Wadey	BEIS
Professor Phil Blythe	Department for Transport
Bob Moran	Department for Transport
Danny Dunne	Department for International Trade
Stuart Jefford	Her Majesty's Treasury
James Fleming	EPSRC
Jonathan McAdams	Northern Irish Government
Margo MacIver	Scottish Government
Professor Ron Loveland	Welsh Government
John Howells	Welsh Government

## **Welcome from Sinead Lynch**

Sinead welcomed Members to the inaugural meeting of the Hydrogen Advisory Council. She is acting as impartial co-chair, not representing Shell in co-chair capacity.

## **Introduction from Minister Kwarteng**

Minister Kwarteng recognised the importance of government setting out its approach to hydrogen. It is one of his top priorities.

Believes the UK is well-placed to take advantage of hydrogen's potential, but success depends on involvement, collaboration and joint action from industry.

The Minister set out his vision and ambition for the Council. It will inform the strategic approach to hydrogen and will be action-focussed. It will explore pathways to deployment for low and zero carbon hydrogen. Initially, the Council will focus on actions to scale up hydrogen production.

## **Rita Wadey, Deputy Director, Hydrogen Economy team (BEIS)**

Rita emphasised that hydrogen is a critical part of achieving net zero. UK has a good academic base, and favourable geography and geology for hydrogen.

Rita highlighted recent IEA report<sup>1</sup> which recommended countries need to coalesce around shared interests (for example, coastal clusters). In the UK, industrial clusters can be used as a jumping off point for hydrogen, like other North Sea countries (Norway, Netherlands).

There is an opportunity for international collaboration, while also recognising competition.

## **Discussion on ambition**

The Council were invited to consider what a hydrogen production ambition for 2030 would look like in a UK context. In particular: what are the limiting factors; what is the role of the various players in delivering an ambition; what kind of strategic investment would be required and from whom; where would demand come from and how would an ambition drive real benefits for UK plc.

The following points were made in discussion:

- The UK has shown leadership on net zero by setting a legally binding target.
- Any ambition for hydrogen production needs to be ambitious enough to garner interest from investors, create volume to drive cost reduction and establish the UK as an international player with associated export opportunities.
- Near-term targets are important for credibility; need real small scale delivery projects in the early years and manageable steps to attract investors.
- Need to consider an integrated, whole system approach to supply, transport and storage, which is underpinned by infrastructure, as significant planning and structural change is required to support the use of hydrogen.
- Council members agreed that a twin-track approach, supporting the development of both blue and green hydrogen, is required.
- Demand will be driven from industry, heat, flexible power, transport.

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<sup>1</sup> IEA (2020), *Hydrogen*, IEA, Paris <https://www.iea.org/reports/hydrogen>

- CCUS is an opportunity for UK to show leadership. Should learn from development of other sectors like offshore wind and consider how we maximise supply chain opportunities for the UK.
- 2030 targets in the region of 100-150 TWhr were suggested by members.
- Clear planning and structure for hydrogen supply for transport and other markets will allow customers to start planning based on quantity, price and timescales of availability of hydrogen and businesses can invest in infrastructure, R&D, etc.
- Clusters have an important role to play; can ensure that production, distribution and use are seen as part of wider smarter integrated systems and considered as part of plans for decarbonising local areas particularly in relation to heat and mobility.
- Targets should be stretching across all aspects, including industrial fuel switching, transport, and heat.
- Need to consider how we stretch to the rest of the UK, beyond industrial clusters - this requires greater emphasis on green hydrogen and infrastructure.
- Some Council members stated it is currently difficult to access Renewable Transport Fuel Obligation (RTFO). Suggested access to incentives under existing schemes should be simplified; RTFO guidance could also be reducing the potential for inward investment.

### **Discussion on strategic framework**

The Council considered the role of long-term policy frameworks alongside targets, referencing strategies and goals set out by Germany and the EU. The following points were made in discussion:

- Members agreed that it is important to be bold on any future export ambition. Cited examples of successful inward investment.
- Important to build UK supply chain and industrial base but should not exclude non-UK firms.
- Consider introducing something quantitative in the vision, or, if not the vision, then some clear targets that underpin it. Belief this helped with offshore wind.
- Key to have an integrated UKRI programme in innovation and research.

### **Discussion on challenges**

The Council considered the key challenges to scaling up low carbon hydrogen, and the following points were made in discussion:

- Business models are key to demonstrate low carbon hydrogen at scale.
- Suggestion that government could lead with procurement of hydrogen for many of its assets/operations to help build market.
- Important to consider impact of Covid-19 on power prices and development of projects.
- Need for a pricing structure that allows people to get tomorrow's prices today.
- Essential that there is collaboration and competition – Government has a role to play in fostering collaboration between companies.
- Innovating to achieve very high carbon capture rates is important if blue hydrogen is to play a major role in a net zero energy system in 2050.
- On regulations, question raised as to whether Ofgem needs greater direction in ensuring (RIIO-GD2) determinations prioritise hydrogen infrastructure.
- Challenges around understanding the role for hydrogen in transport in the Department for Transport thinking and the need to ensure a joined up approach across different Government departments.

- Agreed action: to return to challenges in detail as Council develops strategic approach.

### **Terms of Reference (ToR)**

Members were invited to comment on Council Terms of References, objectives and membership. Some observed that the membership was too light on demand side.

Action for BEIS to clarify relationship with the existing CCUS council and note in Terms of Reference.

### **Working Groups discussion**

The Council discussed how the working groups might interact with the Council. The following points were made:

- Broad consensus that it is important to learn lessons from other BEIS/HMG for and avoid duplication. It is a busy environment and there is a role for government in setting out more clearly how responsibilities are shared.
- Support for small nimble groups with clear focus and appropriate representation.
- Point raised that there should be an innovation element to most of the priority workstreams.
- BEIS officials assured members business models are a top priority for the Minister – the Hydrogen Business Models Expert Group will report into the Council.
- Exports and skills also important to consider in scaling-up.
- Some members suggested that BEIS should consider a hydrogen sector deal.
- Members highlighted need for consistency across support regimes – use established, understood models opposed to creating different regulatory/contractual schemes.
- Consider how to showcase hydrogen at COP26.
- There are opportunities for international learning on structures and incentives, for example, the SDE++ mechanism in the Netherlands.
- Council members will consider how their organisations or associations can support working groups.
- BEIS officials agreed to share map of responsibilities, and timelines for hydrogen across government with Council members.

### **Closing remarks from Sinead Lynch**

There is a shared sense of urgency and opportunity for development of hydrogen as a strategic low carbon energy carrier for the UK. Through the Council, we can create a shared government and business vision for hydrogen in the UK.

### **Next steps**

The next meeting of the Hydrogen Advisory Council will take place on 14 October 2020.