

Hydrogen Advisory Council

Eighth Meeting – Summary

09 May 2022

Attendees

Co-Chairs:

Rt Hon Greg Hands MP, Minister of State for Energy, Clean Growth and Climate Change (BEIS)

Jane Toogood, Sector Chief Executive, Johnson Matthey

Council members:

Name	Role	Organisation
Buta Atwal	CEO	Ryze
Paul Bogers	Vice President - Hydrogen	Shell
Baroness Brown [apologies sent]	Champion for Offshore Wind Sector Deal	
Alex Grant	Executive Vice President of Global Strategy and Business Development & UK Country Manager	Equinor
Duncan Clark	Head of UK Region	Orsted
Marcus Newborough	Development Director	ITM Power
Andrew Doyle	Executive Director	Mitsubishi UFJ Financial Group
Richard Halsey	Capabilities Director	Energy Systems Catapult
Susi Wiseman	Hydrogen and CCS project technical authority	Pale Blue Dot
Jon Maddy	Senior Lecturer	University of South Wales
Louise Kingham	UK Head of Country	BP
Jim Mercer	President UK & Ireland	BOC / Linde
Chris Manson-Whitton	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
Sam French	Business Development Director	Johnson Matthey
Wouter Bleukx	Hydrogen Business Director	Inovyn
Chris Train	'Gas Goes Green' lead	Energy Networks Association
Catherine Raw (deputising for Alistair Phillips-Davies)	Managing Director	SSE
Katharine Palmer	Global Head of Sustainability	Lloyd's Register, Marine & Offshore
Jane Dennett-Thorpe [deputising for Jonathan Brearley]	Decarbonisation & Energy Transition lead	Ofgem

Government observers:

Name	Organisation
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Professor Paul Monks	Chief Scientific Adviser - Department for Business Energy and Industrial Strategy
Stef Murphy/Paro Konar [apologies sent]	Department for Business Energy and Industrial Strategy
Ben Rimmington	Department for Business Energy and Industrial Strategy
Alison Conboy	Department for Business Energy and Industrial Strategy
Will Lochhead	Department for Business Energy and Industrial Strategy
Simon Green	Department for Business Energy and Industrial Strategy
Bob Moran	Department for Transport
Neil Cosgrove	Office for Investment (Department for International Trade)
Edward Kerr	Northern Irish Government
Margo MacIver	Scottish Government
Professor Ron Loveland	Welsh Government
John Howells	Welsh Government
Rich Denny	Infrastructure and Projects Authority

Also in attendance, officials from: Department for Business Energy and Industrial Strategy; Department for Transport CSA; Department for International Trade; Her Majesty's Treasury; Ministry of Defence; Engineering and Physical Sciences Research Council and Innovate UK/UKRI.

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: Welcome & Introductions - Jane Toogood (JT)

JT welcomed Council members and introduced new members – Sam French, who will now represent Johnson Matthey while **JT** co-chairs in an independent capacity. Introduced new observers from Ministry of Defence, and Infrastructure and Projects Authority. **Ben Rimmington**, Director General of Net Zero Buildings and Industry, BEIS, introduced himself to the Council.

Item 2: Ministerial Update - Minister Hands (MH)

MH welcomed council members and outlined the importance of the Council in progressing BEIS hydrogen policy. **MH** discussed the profound impact on energy markets and the significant increases in gas prices as a result of the Ukraine crisis and noted BEIS' leading role in the government response to the crisis. Government has acted in the interest of domestic energy security and has a renewed focus on hydrogen and cheaper, cleaner power for UK energy resilience.

The British Energy Security Strategy (BESS), published in April, included increased ambitions on renewable energy, including the doubled ambition of up to 10GW of low carbon hydrogen production capacity by 2030, with at least half of this from electrolytic, drawing on the scale up of other renewables.

MH outlined the other hydrogen policy commitments made in the BESS including on the Hydrogen Business Model (HBM), transport and storage, and on the hydrogen certification scheme. He also noted the publication of the Hydrogen Investment Package (HIP). **MH** thanked the Council for their hard work and engagement.

Item 3: Hydrogen Investment Package discussion

BESS & HIP recap – Alison Conboy (AC), Deputy Director of Hydrogen Production:

AC summarised the BESS including the significant increase to the UK's 2030 hydrogen production capacity ambition, the shorter-term ambition of up to 2GW of hydrogen

production capacity by 2025 which was doubled from 1GW. At least half of the 10GW would be electrolytic, reflecting synergies with other increased ambitions for renewables in the BESS.

There were also new commitments on allocation rounds, with the first allocation round for electrolytic hydrogen expected this summer. This will be a joint round for NZHF (CAPEX) and HBM (revenue support).

Government had committed to bring forward policy measures on transport and storage (T&S) infrastructure quickly, recognising the need for investment, committing to designing new business models by 2025.

Government also committed to launching a certification scheme by 2025, to underpin deployment of low carbon hydrogen and support future international trade.

AC provided an overview of the HIP, which marked a substantial step forward in opening the funding mechanism with the electrolytic allocation round and included the launch of the electrolytic market engagement exercise which closed 6 May. NZHF opened on 25 April, paving the way to allocating funding and getting projects built.

Council members welcomed the HIP and BESS ambitions and made the following points:

- Some questioned whether ambition in the short term (i.e. to 2025) was sufficient to reach the 2030 ambition. Businesses need predictability and a route to market for projects to take final investment decisions that will help them reach the 2030 target. Government should expedite policy development for T&S infrastructure business models.
- T&S infrastructure should be looked at in conjunction with production, and funding for HBM should be operational by 2025.
- Noted that demand will need to match the production ambition, and asked for incentives for end users, such as capital support.
- Commented that decisions on blending and hydrogen for heat have a significant impact on the scale and nature of T&S infrastructure.
- Question about the £100 million funding for IDHRS and whether this would be enough to support increased ambition.

Officials responded:

- Funding for projects operational before March 2025 will be provided by IDHRS, with HBM intended to be levy-funded beyond that.
- The BESS showed that government understands the importance of T&S and BEIS will be consulting on this later this year.

Hydrogen Business Model (HBM) overview – BEIS officials:

The Head of Hydrogen Business Model Team covered key elements of the policy set out in the government response to the HBM consultation. Intend to deliver HBM on a UK wide basis, for new projects, and delivered through a private law contract. Also covers risk mitigation (price risk and volume risk), indexation of the strike price, contract duration and allocation, as well as the structure of the payment mechanism.

Questions, answers, and comments were raised on:

- Government role in bilateral contracts between end users and the hydrogen producers.

- Engagement with industry on offtaker contracts.
- Impact of high gas prices on using gas price as the floor price for blue hydrogen.
- Subsidy accumulation – on the NZHF, Renewable Transport Fuel Obligation (RTFO) and HBMs.
- Detail on volume protection.
- Qualifying end users for the HBM.

Net Zero Hydrogen Fund update – BEIS officials:

BEIS policy leads provided an update on the progress of the NZHF. Since presenting to the Council on the NZHF in September 2021, Government has undertaken significant industry engagement, policy consultation, and recently, published the consultation responses.

Officials provided a summary of consultation responses:

The launch of the fund was announced as part of the HIP in April. The fund has been split into four strands, with strands 1 and 2 now open for applications. Officials provided an overview of the fund eligibility criteria including that production must meet the Low Carbon Hydrogen Standard; that the project must be based in the UK and led by a UK-registered business; that production routes must have a technology readiness level (TRL) of 7 or above; that they must have private sector financial backing secured and that they must demonstrate the demand for the hydrogen they plan to produce. Officials also explained the award threshold, maximum grant request, and timeline requirements for strands 1 and 2 of the fund.

Questions, answers, and comments were raised on:

- Targets for UK supplied material from the supply chain and Government / industry engagement on UK content.
- Accelerating support for T&S infrastructure not on project sites.

Electrolytic Market Engagement –BEIS officials:

The joint allocation of NZHF & HBM (strand 3) will be an opportunity for electrolytic projects to apply for both capital funding via the NZHF and revenue support through the HBM (or alternatively just revenue support). BEIS policy leads explained the proposed approach to allocating HBM and NZHF support to electrolytic projects as per the market engagement exercise.

The exercise closed on 6 May. BEIS currently analysing feedback. Officials provided an overview of the strategic objectives and proposed timelines of the strand 3 allocation round. Aiming to launch the application window in July 2022. Officials gave an overview of the proposed eligibility criteria and the rationale of the market engagement exercise.

Questions, answers and comments were raised on:

- Level of evidence required for project financing at application stage.
- The requirement for projects to secure procurement, including finalised procurement for electrolyzers.
- The option of a rolling deadline for applications for strand 3.

Low Carbon Hydrogen Standard (LCHS) –BEIS officials:

The BEIS policy lead thanked the Council for input into the standard to date. Officials provided an overview of the LCHS including the strategic objectives of the standard. These included: ensuring hydrogen production supported by government contributes to our carbon reduction targets; defining what is meant by low carbon hydrogen to access the NZHF and

HBM; establishing a threshold for greenhouse gas (GHG) emissions and a methodology for calculating GHG emissions.

The BESS confirmed government's intention to draw on LCHS in developing a certification scheme by 2025.

Officials provided an overview of the LCHS compliance criteria for low carbon electricity, including the key requirement of the NZHF and HBM for evidence of contractual arrangement with low carbon electricity generator. This threshold must be met monthly.

Questions, answers, and comments were raised on:

- Ensuring that the consignment approach works with the HBM design.
- The use of 'waste gases' from industrial processes as feedstock for hydrogen production and the compliance of this process with the current LCHS criteria.

Investor Roadmap –BEIS officials:

The head of the Sector Development team provided an overview of the Hydrogen Sector Investor Roadmap. Roadmap sets out the policy and regulatory landscape for hydrogen in the UK as well as a timeline for policy development and implementation. The roadmap is valuable to new and potential investors in hydrogen. This is a live document that will be updated regularly.

Next steps will be to continue engagement and facilitate ministerial engagement with industry and prospective investors to further understand the investment pipeline.

Questions, answers and comments were raised on:

- Launching a live picture of pipeline projects to increase visibility across the sector to socialise investment opportunities.
- Support for bringing co-produced hydrogen to the UK market.

Item 4: Hydrogen Blending update – BEIS officials:

Officials provided an overview of the hydrogen blending policy development including government's commitment to make a policy decision in 2023 on whether to enable blending up to 20% hydrogen by volume into the GB gas networks.

Current position is that the strategic role hydrogen blending should play is as a shorter term 'demand sink' or 'back stop' for hydrogen producers facing volatile or temporarily unavailable demand, rather than being financially supported by the government as a long-term, majority offtaker.

Government views blending as a transitional option due to the limited role of natural gas in heating under net zero analyses. Blending has less long-run decarbonisation potential than other end-users for 100% hydrogen, such as industry, transport, and power generation.

Questions, answers and comments were raised on:

- Analysis of alternative variable 'demand sinks' including power for demand risk management.
- Importance of linking up with other related policy decisions, such as hydrogen for heat policy.
- The challenge of matching supply and demand as the market develops.
- Blending as a facilitator to getting customers/ end-users on to a hydrogen system/ network.
- How blending could support the development of T&S infrastructure.

- Eligibility of blending projects for the HBM.
- The potential opportunity to use blending to get low-carbon fuels into hard-to-reach regions quickly.

Item 5: 2022 Forward look and update to market – BEIS officials

Officials provided a short update on the delivery of several major commitments made in the UK Hydrogen Strategy, including the application and allocation windows for the NZHF and HBM, CCUS cluster sequencing process, T&S business models, upcoming hydrogen sector development action plan, domestic boilers consultation, and further detail on the hydrogen ready industrial boiler equipment policy.

In the UK Hydrogen Strategy, Government committed to providing regular updates to the market as our policy thinking develops. BEIS will provide these updates to encourage an ongoing dialogue with industry and to keep industry informed on the range of policy development. The first of these will be published in early summer including an update on our hydrogen production strategy as well as policy development across the value chain.

Item 6: Actions from Previous Meeting (JT):

There were no actions from the previous meeting.

Item 7: Closing Remarks (JT):

JT thanked BEIS colleagues for all their work since the last Council meeting which includes the BESS increased ambitions and the HIP publication.

Industry is ready and keen to engage on all issues raised in this meeting, including on expediting policy development, in particular the T&S infrastructure business models.

JT thanked members for their engagement in the Council as well as its working groups. The next Council meeting will likely take place in October.