Hydrogen Energy Association
108 Lexden Road
West Bergholt
Colchester
Essex
CO6 3BW

Tel: 0044 (0) 1206 241360
Mob: 0044 (0) 7788 780317

Email: c.greaves@ukhea.co.uk

Date: Thursday, 29 June 2023

Dear Colleague,

Hydrogen Energy Association's Response to the Department for Energy Security and Net Zero's 'Hydrogen Allocation Round 2: market engagement'

I am writing on behalf of the Hydrogen Energy Association (Formerly the UK Hydrogen and Fuel Cell Association) and in response to your current consultation on the second Hydrogen Allocation Round. The Hydrogen Energy Association (HEA) is the leading pan-UK trade body in the hydrogen energy sector, with a Mission to support the growth of our members and the sector, and to ensure that the right policy framework is in place. Our 110 plus member companies represent over 200,000 employees globally, with combined revenues over £400 billion, and cover the entire value chain from raw material sourcing, to supply chain and components, financing, professional services, B2B and consumer facing solutions.

With over 15 years of experience, the HEA is a leader in advocating for and accelerating the transition to Net Zero in the UK through the deployment of hydrogen & fuel cell solutions. We promote and represent our members' interests across the hydrogen value chain, and campaign for the best policy outcomes for the industry across the full range of applications and opportunities.

Q3) Do you agree with the proposed eligibility criteria for HAR2? Yes/ No/ Don't know. If not, please explain why.

See our answer to Q5.

Q5) Are there any other non-electrolytic hydrogen production technologies that we should be considering funding in this round? Yes/No/Don't know. If yes, please provide information on the technology and how they meet eligibility criteria and strategic aims for the round and any information on relevant points listed in question 4.

As the HAR 2's objective is to facilitate the rapid development of low carbon hydrogen production, the HEA recommends that all low carbon production technologies that demonstrate compliance with the Low Carbon Hydrogen Standard (LCHS) are eligible to participate, recognising that CCUS & Storage is being funded through the cluster sequencing process. This would help to match the positive steps made by other international hydrogen markets, which have also simplified definitions around manufacturing processes.

Broadening the funding scope to include LCHS compliant hydrogen production technologies will ensure that the HAR 2 leverages on the diverse range of innovative low carbon hydrogen production technologies that exist in the UK, this supporting 2030 deployment targets. It will also create a more resilient production environment, reducing supply chain bottlenecks, driving competitive pricing. The alternative would mean that the potential to produce low carbon hydrogen for a diverse range of applications and sectors is excluded. Innovative use of thermochemical processes to split water to create hydrogen is an example of an eligible manufacturing process that currently isn't being encouraged through policy.

Q6) Do you agree with the proposed evaluation criteria for HAR2? Yes (partly)/No/Don't know. If not, please explain why.

The HEA broadly agrees with the proposed evaluation criteria, in particular the weighting on deliverability, which the HEA considers the most important factor. However, we have reservations regarding:

- the way that the evaluation criteria have been streamlined e.g. removal of 'Environment and emissions reduction'
- the weighting of production costs in the evaluation criteria without the provision of other supporting policy related to costs
- the weighting of additionality with network constraints

The HEA does not agree with the 35% weighting placed on production costs when evaluating projects for HAR 2. We believe that this level of emphasis on production costs and, more broadly, the intention to move towards price competitive allocation by 2025 are not appropriate at this stage in the industry's evolution. The hydrogen industry is a long way in its development from that which characterised the offshore wind industry when price competitive allocation was introduced, including low market liquidity. The early market is characterised by bilateral agreements between

producer and offtaker with no real flexibility - the HAR process itself demands that the offtaker is identified. Liquidity and opportunity for cost reduction will increase in future years when more production projects have been built and there are the first parts of the hydrogen network in operation.

We also observe that those projects awarded HAR1 contracts will only just have come on- line by 2025 and the practical working on the Hydrogen Business Model Contracts will only then be tested. Without a certain level of deployment with consequent opportunity to build supply chain and then implement cost reduction and without the market (developers, supply chain, investors and funders) having gained experience on the HBM working in practice, it seems premature to introduce price competition.

The HEA recommends increasing the "Economic benefits and supply chain development" weighting from 20% to 25%, while reducing the "Costs" weighting from 35% to 30%. The evaluation criteria should reward a low carbon hydrogen production project's ability to deliver broader benefits as result of production - e.g. local jobs and emission reductions. Changing the weighting in this way would ensure that HAR 2 remains streamlined yet effective in fostering the critical characteristics of projects, e.g. highest emission reduction possibilities and evidence of more UK jobs. These characteristics have greater potential in creating market enabling characteristics that drive down and stabilise the market cost of Hydrogen, reaching Net Zero goals and contributing to the UK's energy resilience objectives. In addition, the removal of the consideration of carbon benefits in favour of costs may be a barrier to promising projects in hard-to-decarbonise sectors which are geographically remote from the major hydrogen clusters.

The HEA would like to see a broader array of project costs, not just production, being considered as part of project evaluation. We also recommend that greater detail is provided on how the HAR 2 sits alongside other policy developments – for example, by providing assurance and clarification on the Hydrogen Transportation and Storage Business Model and how it will align with the HAR 2. We raise this issue here as we could have given a more precise critique of the evaluation criteria if there was more detail on how the Government is intending to drive down the broader costs that have implications for the hydrogen market price, such as Transportation and Storage.

Finally, we seek clarity on how Additionality and Network constraints are weighted alongside one another - whether it is an even split or one is recognised to have greater importance. We support the inclusion of Additionality criteria yet stress that any further weighting on Additionality could have a detrimental impact on the success of electrolytic projects in the HAR 2. Too high a weighting on Additionality may force hydrogen developers to tie their project to a renewable generation development, adding complexity to the delivery of both hydrogen and renewable projects, and risk of delays.

Q7) Do you agree that we should reward project locations that provide wider electricity system benefits, as set out above, as well as additionality? Yes/No/Don't know. Please explain your answer.

The HEA agrees that project locations which provide wider electricity system benefits should be rewarded to ensure that a geographically broad spread of production locations is fostered. We would like to particularly highlight the value of recognising and incentivising projects that alleviate electricity network constraints in areas with grid congestion. For example, if a large industrial customer is taken off the electricity grid, by switching to hydrogen, in a constrained area, like in Northern Ireland, this should be captured as a benefit. A move to reward project locations delivering

wider benefits could result in significant reductions in grid stress, and such system advantages should be adequately captured and highlighted as a key benefit within the evaluation criteria.

The HEA would welcome the opportunity to discuss our recommendations further.

Kind Regards,

Celia Greaves

CEO