Market Engagement on the second Hydrogen Allocation Round Consultation

UKPIA Response

1. Should it be available, would you look to seek CAPEX co-funding in HAR2? Yes/No/Don't know. Please explain your answer. If yes, please provide a summary of the reasons for seeking CAPEX support and the impact of not receiving CAPEX support would have on your project.

   Don't know.

   This question concerns matters that are company and project specific. For reasons of competition law we are not able to comment on specific commercial elements of the potential projects by members.

2. In HAR1, NZHF support was made available for up to 20% of eligible CAPEX costs. If your organisation is likely to apply for NZHF CAPEX co-funding support in HAR2, if possible, please provide the estimated size of bid required to support the deployment of your project. Please present this bid as a percentage of your overall costs.

   Don't know.

   This question concerns matters that are company and project specific. For reasons of competition law we are not able to comment on specific commercial elements of the potential projects by members.

   We note the consultation comments regarding claiming support for low carbon hydrogen under both the RTFO and the Hydrogen Production Business Model (HPBM). While this may offer a lower cost option for the UK Government, it is a significant difference from the offer for low carbon hydrogen in other jurisdictions, notably the US under the Inflation Reduction Act (IRA)[1] where some stacking of incentives is permitted.

   The UK approach makes investment in UK low carbon hydrogen less attractive, with a consequent risk that international companies will not invest here with significant impact on the UK Energy Transition[2]. The UK approach must be revaluated to ensure that the UK offer remains competitive with other jurisdictions in order to ensure the UK is an attractive place for international investment.

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

   No

   UKPIA broadly agrees with the list of application criteria and welcomes the change in approach on delivery years proposed in HAR2.

[1] https://www.mckinsey.com/industries/public-and-social-sector/our-insights/the-inflation-reduction-act-heres-whats-in-it

[2] https://www.reuters.com/business/sustainable-business/uk-must-align-sustainable-rules-with-eu-where-possible-or-risk-losing-capital-2023-02-23/

However we continue to be concerned that the gas-grid remains an ineligible off taker for support under HAR2.

As we have outlined in our response to previous consultations, including the 2022 Hydrogen Transport and Storage consultation[3], the gas grid offers scope for being an off-taker of last resort for companies, including during outages of primary off-takers in order to allow hydrogen production to continue. It also improves UK resilience by reducing reliance of imported Liquified Natural Gas, which remains a significant portion of the UK natural gas mix.

Continued delays in announcing the government strategy decision lead to investor uncertainty, particularly when international competitors such as the US are moving at pace on investment.

4. We are seeking information from biomass or waste gasification and pyrolysis to hydrogen, and solid carbon production projects interested in HAR2 funding, should it be available. We are asking these projects to provide information on the following:
   - Projected hydrogen production capacity of individual projects (MW H2 HHV) and estimated date of commercial operation.
   - Expected load factors for production facilities of these technologies.
   - Fuel input requirements (energy input required to produce a unit of hydrogen output), and proposed source of feedstock.
   - Cost (expected capital and operational costs of producing hydrogen using these technologies).
   - Evidence that these technologies meet TRL 7 or more.
   - Potential for wider environmental impacts from these routes, including consideration of air quality impacts and water requirements.
   - Details of any residues produced by these processes and how these will be managed.
   - For pyrolysis to hydrogen and solid carbon production technologies only, plans for carbon black usage or disposal, and evidence of the environmental impacts associated with this.

   This question concerns matters that are company and project specific. For reasons of competition law, we are not able to comment on specific technical elements of the potential projects by members.

5. 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.

   Don't know.

   UKPIA is not aware of any additional non-electrolytic hydrogen production technologies that should be considered for funding in this round.

[3] https://www.ukpia.com/media/2987/hydrogentransportandstorage.pdf

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

Yes

UKPIA broadly agrees with the proposed evaluation criteria for HAR2. These seem to capture most of the appropriate criteria except for location scoring as outlined in our response to Q7 below.

7. 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.

No

UKPIA questions the practicalities of applying scoring based on location, noting that the areas with the most positive impact on the electricity network are in the north of Scotland, with the next tier in the Scottish Central Belt.

This has a strong inverse correlation to population density, with these areas having a lower population density and so lower demand for low carbon hydrogen.

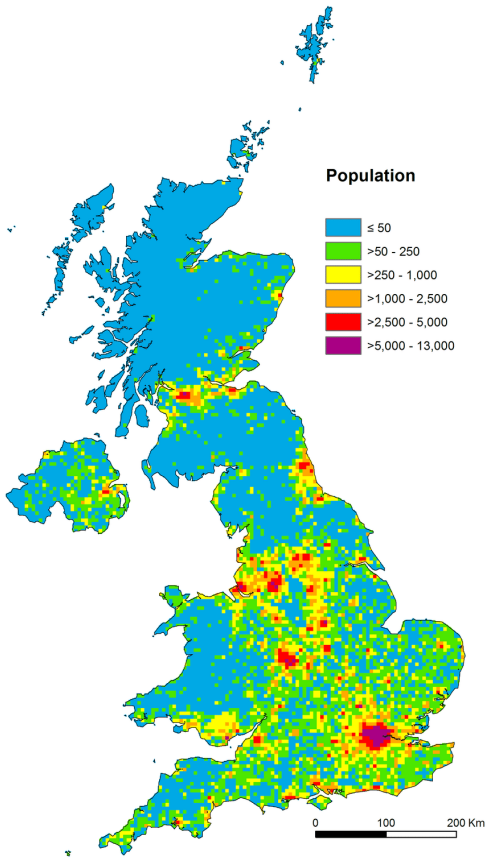

Figure 1: UK Indicative Population Density [4]

Scoring in this way is likely to incentivise areas with lower demand, leading to either stranded low carbon hydrogen production assets or the need to transport the same from remote areas. This potentially increases GHG emissions from road haulage or requiring significant investment in hydrogen transport infrastructure such as pipelines.

Appropriate investment in the National Grid infrastructure would enable electrolytic hydrogen to be manufactured close to areas of demand. The current extended delivery times for grid connections for new low carbon electricity production[5] are extremely concerning and need to be urgently addressed.

8. Do you agree with our proposed delivery approach? Yes/No/Don't know. Please explain your answer.

Don't know.

The information provided in the consultation document suggests that the approach is largely strategic in nature. Individual companies will not have access to information on all available projects to fund. The delivery approach should be managed by the UK Government to holistically meet the requirements of the energy sector across a range of sectors.

9. If you are a project looking to apply for funding for this allocation round, are you planning on sourcing electricity from a CfD or RO-subsidised generator? Yes/No/Don't know.

Don't know.

This question concerns matters that are company and project specific. For reasons of competition law, we are not able to comment on specific commercial elements of the potential projects by members.

10. If yes, are you planning to co-locate your hydrogen production facility with a CfD or RO-subsidised generator, what do you consider the main benefits and risks of co-location, and what is your project archetype e.g. co-location via private wire connection.

Don't know.

[4] https://www.researchgate.net/figure/Gridded-UK-population-density-based-on-the-UK-census-at-the-5-km-5-km-grid-spatial_fig8_281137363

[5] https://www.theguardian.com/business/2023/may/16/grid-connection-delays-low-carbon-projects-ofgem-energy

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