



# Hydrogen to Power: Consultation on the Need and Design for Market Intervention

OEUK Response

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## 1 Introduction

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### 1.1 Offshore Energies UK

Offshore Energies UK is the leading trade body for the UK's integrating offshore energies industry. Our membership includes over 400 organisations with an interest in offshore oil, gas, carbon capture, transportation and storage, hydrogen, and wind. From operators to the supply chain and across the lifecycle from production to decommissioning, they are safely providing cleaner fuel, power, and products to the UK. Working together with our members, we are a driving force supporting the UK in ensuring security of energy supply while helping to meet its net zero ambitions. We work on behalf of the sector and our members to inform understanding with facts, evidence, and data, engage on a range of key issues and support the broader value of this industry in a changing energy landscape.

### 1.2 Delivering on targets

Hydrogen to Power (H2P) offers a method to contribute to decarbonising the power sector by 2035, providing low-carbon flexible generation at a range of scales. The scale-up of such an opportunity comes with developer risks in terms of financing, access to enabling infrastructure and uncertainty in the future role. Therefore, for H2P plants to be feasible, short to medium-term market interventions are required to build investor confidence and de-risk projects.

This consultation is a welcome signal to project developers and reaffirms the government's strategic direction for the hydrogen sector. OEUK support the proposal to develop market intervention for the H2P sector as this has the potential to contribute to the security of supply and help develop a homegrown energy transition alongside other key hydrogen sector enablers.

## 2 Hydrogen to Power: Strategic Vision

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### Question 1 and 2

The government's vision of using H2P technology as one of many ways to support the transition to a net zero power system and provide security of supply is considered appropriate given the characteristics of hydrogen and its opportunities relating to unabated gas. Potential limitations of this strategic vision arise when considering the energy efficiency of H2P, the alternative use cases for hydrogen, and the requirement to enable T&S infrastructure.

The government has set an ambitious target of decarbonising the power sector by 2035 and, as such, having a mix of options available for responding to more rapid variations in renewable output, replicating system services traditionally provided by fossil fuel generation and continuing to provide output during extended periods of renewable generation is crucial. H2P could be one of these options, and while developing the hydrogen sector in the short term, it could provide certainty about demand.

The role that H2P plants play in the power system allows for flexibility and security, and having a diverse range of options is beneficial. However, the extent and scale of which H2P plants should be developed need to be continually assessed if they are part of a diverse mix of options. If the utilisation of hydrogen in this way will undermine other hydrogen use cases. Therefore, incremental but certain H2P deployment is required and should be reviewed by government and the FSO when their remit considers hydrogen. Developing the hydrogen sector necessitates

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transparency and certainty, and if the outcome of this consultation does confirm the need for market intervention, the information and timescales on the intervention mechanism must be robust and continue to provide certainty that that industry needs to develop a nascent sector.

## 3 Case for Change

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### **Question 3, Question 4 and Question 5**

Although it may be possible for less CAPEX-intensive plants to deploy in the short-term utilising existing methods, i.e. the Capacity Market (CM). The analysis that was published alongside this consultation shows that the anticipated upper clearing price for some H2P technologies would not be comparable to recent average or low CM clearing prices. As such, plants may bid in the CM but not be competitive with the clearing price, and therefore, enabling them in the CM as soon as possible would not help to realise their utilisation as fast as hoped.

Within the supporting evidence, it is suggested that the price cap for the CM could be raised such that H2P technologies are competitive. Clarity on whether this is one of the intended updates to the CM referenced in the consultation would be welcome. If this is the case, then there is potential that this could set a higher clearing price, and higher payments to non-H2P plants could be made.

Although the CM offers an efficient option in the short term to enable H2P plants, it would be pertinent to assess whether potential higher prices paid to non-H2P plants would be warranted if there is an alternative mechanism that could be deployed at scale. Further, with the hydrogen sector in its infancy, there could be supply-side issues for H2P developers, who may then be required to pay penalties, which may reduce the likelihood of participation in the CM.

The benefits of deploying H2P at pace are appreciated, but if there is an overall system impact whereby the price paid from the CM is increased due to the inclusion of H2P plants, the mechanism utilised must be assessed carefully.

Therefore, the Option to have a CM with a separate auction for low-carbon dispatchable power is preferable for the short to medium-term aspirations. Although the implementation of this would be longer, it would allow for a lesser whole system impact.

### **Question 6, Question 7, Question 8**

The two main barriers identified are interlinked and impact a substantial amount of the hydrogen value chain. These barriers and their associated risks are mitigated through strategic hydrogen network and asset planning, and government should continually revisit how H2P fits in with their strategic vision. This presents a further risk for developers and investors, and government's vision and policy for H2P should be evaluated and updates provided. Until the point when FSO consider hydrogen, government must provide clarity and transparency so that risks can be identified.

### **Question 9**

OEUK agree that bespoke hydrogen-to-power market intervention is required. As indicated above, there are possible scenarios where H2P will not be able to compete in the CM, or the inclusion of H2P plants will increase the clearing price of all technologies. This could be the case for less CAPEX-intensive plants, and therefore, a bespoke intervention may be most appropriate so as to not distort the existing CM payments.

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## 4 Approach to Assessing Market Intervention Options

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### Question 10 and Question 11

The options considered for the consultation and accompanying study are comprehensive and are similar to or iterations of market intervention options, allowing them to be more easily used and implemented.

The criteria that the options were assessed against were robust for addressing the barriers identified earlier in the consultation. It would be beneficial to understand if the 'strategic fit and deliverability' criterion assessed the mechanism with consideration to the developing hydrogen sector. The role that a market intervention mechanism could play alongside other hydrogen support mechanisms is crucial as wider policy frameworks.

## 5 Market Intervention Options

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### Question 12 and Question 13

The DPA style mechanism is appropriate for mitigating cross-chain risks and providing certainty for investors. The two key barriers identified in the consultation warrant a mechanism that can simultaneously decrease investment risk and account for interactions with other sections of the hydrogen sector. The proposal to utilise the DPA method with initial bilateral negotiations allows for both strategic deployment of plants and consideration of market changes.

The DPA also benefits from the translatability into a long-term mechanism that could encourage price-based competition alongside Power CCUS, which may be critical in continuing to stimulate competition and a downward trend on cost. This method would also benefit from the ability to incorporate lessons learnt from the DPA used for Power CCUS.

### Question 14

No comment.

### Question 15 and Question 16

The benefits and risks of a Split CM assessed indicate why this mechanism would not be appropriate in the short term to deploy H2P.

A possible benefit to this option is considering the medium-term opportunity a Split CM could provide when more low-carbon flexible technologies become available. Consideration of this a subsequent stage following the initial short-term first of a kind deployment should be assessed.

### Question 17 and Question 18

The revenue cap and floor mechanism are unlikely to complement the strategic aims of H2P as well as other options, given the limited incentivisation for dispatch. Further, the balance between increasing the ability to invest and reducing dispatch distortions could be complex and not as effective as alternative options.

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## 6 Market Intervention Value, Alignment and Interactions

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### **Question 19 and Question 20**

The answers to these questions have been addressed in the above questions.

### **Question 21**

No comment.

### **Question 22 and Question 23**

No comment.