

Consultation on the need and design for a hydrogen to power market intervention.

Fuels Industry UK Response

1. What are your views on the vision we have set out for hydrogen to power?

Fuels Industry UK's view is that the vision for hydrogen to power set out in the consultation is a reasonable and pragmatic way forward in the development of the sector.

It builds on previous announcements, such as the 2021 Hydrogen Strategy and the Decarbonisation Readiness proposals that were consulted on in March 2023.

By providing consistency of approach over time, the vision for hydrogen to power encourages investor confidence in the sector.

2. In your view, what role should hydrogen to power plants be playing in the power system? Please provide details and an explanation of your reasoning.

For green hydrogen, hydrogen to power plants could act as a balancing mechanism to ensure resilience in the electricity supply system; hydrogen can be produced during periods of excess low carbon electricity production such as windy days and then stored in an appropriate form. This hydrogen can then be reconverted into electricity during periods of low carbon electricity generation such as during high pressure periods in the winter.

For blue hydrogen, hydrogen to power offers an enabling technology to grow the sector by providing additional demand for hydrogen, enabling the CCUS sector to become established and proven. It can also offer a low carbon means of providing additional electrical supply during periods of high demand such as the peak evening period.

3. Do you agree with our assessment that less CAPEX-intensive plants and/or plants with ready access to low carbon hydrogen fuel could deploy in the short term without bespoke support? Please provide an explanation of your reasoning.

Fuels Industry UK broadly agrees that less CAPEX-intensive plants and/or plants with ready access to low carbon hydrogen could deploy in the short term.

However, the need for bespoke support may need to be determined on a case-by-case basis, as it depends on the technology and equipment required, including any specific modifications that may be needed. For example, some plant may need minor modifications to equipment such as furnace burner technology while others may need significant new investment such as gas turbines.

Therefore, flexibility in approach needs to be taken to allow a range of projects to be developed.

4. What are your views on our proposal to enable hydrogen to power plants to compete in the Capacity Market as soon as practical?

Fuels Industry UK cannot comment on this question in detail.

Given the challenges and nascent nature of the industry we would expect an appropriate business model would to be introduced to enable hydrogen to power plants to compete in the capacity market.

5. Are there any additional changes to existing markets which could support the deployment of hydrogen to power? Please provide details and an explanation of your reasoning.

Fuels Industry UK cannot comment on this question in detail.

6. Do you agree with the risks and barriers to hydrogen to power deployment that we have identified? Please provide an explanation of your reasoning.

Fuels Industry UK broadly agrees with the risks and barriers to hydrogen to power deployment that have been identified. This is a list of the critical risks and barriers that we would expect to see in the emerging sector.

We would also suggest adding planning and regulatory approvals to the list of risks and barriers; these can take time to progress, and Final Investment Decisions (FIDs) are unlikely to be taken without them.

We would therefore encourage greater interaction with the HSE Competent Authorities to ensure that sufficient resources are in place to approve modifications or new plants in a timely manner.

7. In your view, what should industry's role be in addressing the barriers that we have identified? Please provide details and an explanation of your reasoning.

Fuels Industry UK's view is that industry will look to move once the business cases are established for projects, including clear direction on long-term government policy.

8. Are there any other potential risks and barriers that we should be considering? If so, which ones? Please provide details and an explanation of your reasoning.

As we outline in our response to Q6, we would also suggest adding planning and regulatory approvals to the list of risks and barriers; these can take time to progress, and Final Investment Decisions (FIDs) are unlikely to be taken without them.

We would therefore encourage greater interaction with the HSE Competent Authorities to ensure that sufficient resources are in place to approve applications for modifications or new plants in a timely manner.

- 9. Do you agree with our assessment that bespoke hydrogen to power market intervention is required to mitigate our identified deployment barriers and accelerate the deployment of hydrogen to power plants, likely those which are more CAPEX-intensive? Please provide an explanation of your reasoning.**

Fuels Industry UK agrees with the assessment that bespoke hydrogen to power market intervention is required to mitigate the deployment barriers.

As we outline in our response to Q3, the need for bespoke support depends on the technology and equipment required, including any specific modifications that may be needed. For example, some plant may need minor modifications to equipment such as furnace burner technology while others may need significant new investment such as gas turbines.

Therefore, flexibility in approach needs to be taken to allow a range of projects to be developed.

- 10. Have we considered all credible market intervention options for hydrogen to power? Please provide details of any design options you think we may have missed and explain your reasoning.**

Fuels Industry UK agrees that DESNZ have considered all the credible market intervention options for hydrogen to power.

We have no further comments on this question at this time.

- 11. Do you agree with our shortlisted three market intervention design options? Please provide an explanation of your reasoning.**

Fuels Industry UK agrees with the shortlisted three market intervention design options.

These offer the most pragmatic approach, given the complexities involved and recognising the nascent nature of the industry.

- 12. Have we accurately identified the benefits and risks of a DPA-style mechanism? If not, are there any further benefits and risks to consider? Please provide details and an explanation of your reasoning.**

Fuels Industry UK agrees that DESNZ have accurately identified the benefits and risks of a DPA-style mechanism.

The analysis seems robust, and pragmatic based on the nascent nature of the industry. It is also consistent with the approach being taken on other measures such as that supporting Power in Track 1 of the cluster sequencing process.

We would encourage any learning from the Track 1 process to be included in any updates to the DPA process used in development of the wider hydrogen to power support mechanisms.

13. Do you agree with government's assessment that a mechanism based on the Dispatchable Power Agreement is the most suitable option for bespoke hydrogen to power market intervention to support the accelerated deployment of hydrogen to power? Please provide an explanation of your reasoning.

Fuels Industry UK agrees with the government's assessment that a mechanism based on the DPA is the most suitable option.

The analysis seems robust, and pragmatic based on the nascent nature of the industry. It is also consistent with the approach being taken on other measures such as that supporting Power in Track 1 of the cluster sequencing process.

We would encourage any learning from the Track 1 process to be included in any updates to the DPA process used in development of the wider hydrogen to power support mechanisms.

14. What are your views on the need for a Variable Payment? Please provide details and an explanation of your reasoning.

Fuels Industry UK cannot comment on this question in detail.

However, we would suggest that allowing as much flexibility as possible in the bespoke negotiations required is a pragmatic approach given the nascent nature of the sector. This includes allowing an option for a variable payment, which may be beneficial in certain project circumstances.

15. Have we accurately identified the benefits and risks of a Split CM? If not, are there any further benefits and risks to consider? Please provide details and an explanation of your reasoning.

Fuels Industry UK agrees that DESNZ have accurately identified the risks and benefits of a Split CM in the consultation.

We have no further comments on this question at this time.

16. Do you agree with our proposal to discount the Split CM as an option for bespoke hydrogen to power market intervention to support the accelerated deployment of hydrogen to power? Please provide an explanation of your reasoning.

Fuels Industry UK agrees with the proposal to discount the Split CM as an option for bespoke hydrogen to power market intervention as outlined in the consultation.

The Split CM seems an overly cumbersome and interventionist approach and does not provide the certainty needed for investment in this nascent sector.

- 17. Have we accurately identified the benefits and risks of a Revenue Cap and Floor? If not, are there any further benefits and risks to consider? Please provide details and an explanation of your reasoning.**

Fuels Industry UK agrees that DESNZ have accurately identified the benefits and risks of a Revenue Cap and Floor in the consultation.

We have no further comments on this question at this time.

- 18. Do you agree with our proposal to discount the Revenue Cap and Floor as an option for bespoke hydrogen to power market intervention to support the accelerated deployment of hydrogen to power? Please provide an explanation of your reasoning.**

Fuels Industry UK agrees with the proposal to discount the Revenue Cap and Floor as an option for bespoke hydrogen to power market intervention as outlined in the consultation.

The Revenue Cap and Floor approach does not provide the certainty needed for investment in this nascent sector. It will also take significant time and effort to introduce and administer.

- 19. What is your view on the need for price-based competitive allocation within/between bespoke business models versus moving assets straight to a technology-wide competitive market? Please provide an explanation of your reasoning.**

Fuels Industry UK cannot comment on this question in detail.

However, we agree in broad terms with the vision and approach taken, in that focused support should be offered to plants, including FOAK plants, to establish the industry and allow its early development in order to meet international commitments.

Support can then be removed as the technology develops, provided that viable commercial operations can be maintained.

- 20. How should a bespoke hydrogen to power business model be evolved to promote competition between low carbon flexible technologies? Please provide details and an explanation of your reasoning.**

Fuels Industry UK cannot comment on this question in detail.

However, we agree in broad terms with the vision and approach taken, in that focused support should be offered to plants, including FOAK plants, to establish the industry and allow its early development in order to meet international commitments.

Support can then be removed as the technology develops, provided that viable commercial operations can be maintained.

21. What are your views on the alignment of hydrogen support and policies needed to enable the deployment of hydrogen to power capacity. Please provide details and an explanation of your reasoning.

Fuels Industry UK broadly agrees with the alignment of hydrogen support and policies needed to enable the deployment of hydrogen to power capacity.

This approach seems a pragmatic one recognising the nascent nature of the industry. A coordinated approach is vital to minimising the potential for market distortions, while ensuring that public money is focused in the most appropriate areas.

As the sector matures, then a transition to a market-based approach is favourable, provided that ongoing commercially viable operations can be maintained.

22. Do you have any reflections on the feasibility of hydrogen producers, or qualifying offtakers, to facilitate the volume of storage required for hydrogen to power – for example, regarding sourcing finance/capital? Please provide details

Fuels Industry UK cannot comment on this question in detail.

This would be a commercial matter for companies to consider recognising the complexities and hazards of installing significant hydrogen storage infrastructure.

23. What are your views on the feasibility of developing commercial arrangements between hydrogen producers, storage providers, and electricity generators that meet the Hydrogen Production Business Model (HPBM) requirements relating to Risk Taking Intermediaries (RTIs)?

Fuels Industry UK's view is that it is entirely feasible to develop commercial arrangements between hydrogen producers, storage providers and electricity generators within the framework described.

Such arrangements are commonplace in the energy industry, and our members have experience in their use.

The legal framework and agreements such as a hydrogen to power DPA need to be put in place to enable these agreements to be subsequently made.