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A new year – new legislation and opportunities in the hydrogen sector

The end of 2023 and start of 2024 has seen several important developments for stakeholders in the UK hydrogen sector.

As was hoped and needed, the UK government has been busy developing and implementing new legislation to support private investment and the scale-up deployment of low-carbon hydrogen production.

Given the imminent deadlines and importance of the recent legislative developments, we have issued this update in advance of our next hydrogen quarterly update.

1. The Hydrogen Production Revenue Support Regulations (Directions, Eligibility and Counterparty) 2023

The Energy Act 2023 (the "**Act**") came into force in October 2023 and provides the legal framework for government funding of UK hydrogen projects.

Arising out of the Act came the Hydrogen Production Revenue Support (Directions, Eligibility and Counterparty) Regulations 2023 (the "**Regulations**"). This new secondary legislation has been swiftly implemented to provide a legal framework for the Hydrogen Production Business Model ("**HPBM**").

The Regulations implement the proposals set out in the government's response published on 30 October 2023 and are relatively straight forwardly written spanning only 12 pages in total.

The Regulations outline specific eligibility criteria for revenue support. The legislation now stipulates that hydrogen production must align with the Low Carbon Hydrogen Standard ("**LCHS**") and satisfy an 'additionality requirement' to qualify for support. The 'additionality requirement' of the Regulations states that only new hydrogen production facilities (or existing hydrogen production facilities adding new production capacity) that can demonstrate that their hydrogen production can comply with the UK low-carbon hydrogen standard will be considered eligible.

Amongst other administrative rights and obligations, the Regulations confirm that the Secretary of State has a right to revoke an offer where that offer has not been accepted in writing by the eligible low carbon hydrogen producer and also, that once the hydrogen production revenue support contract has been entered into, subject to the necessary redactions, the producer must publish the contract as soon as reasonably practicable.

A copy of the legislation can be found here.

2. New Low-Carbon Hydrogen Standard (LCHS)

The LCHS establishes what constitutes "low-carbon hydrogen" at the point of production ("**Standard Compliance**").

On 21 December 2023, DESNZ published version 3 of the LCHS replacing version 2. Version 3 was prepared with input from industrial, technical, and legal stakeholders and attempts to ensure the requirements applied under the Hydrogen Business Model contract are easily understood and correctly applied. Version 3 spans 169 pages and is therefore not necessarily a quick read. That said, the differences between versions 2 and 3 are listed within the document.

Version 3 will be used for assessing eligibility under the Regulations moving forwards, in accordance with Regulation (1) and 2(2). This aligns the legislative requirements and the Hydrogen Allocation Round 2 (HAR2). We anticipate an updated version will be published relatively quickly once projects start producing hydrogen and the drafters identify where improvements to Version 3 can be made.

Under version 3, it is important to note that persons who currently qualify as eligible low-carbon hydrogen producers in accordance with the previously applicable version 2 of the LCHS are not subsequently rendered ineligible on account of the publication of version 3 of the LCHS. However, the Secretary of State may require a hydrogen production revenue support contract to be offered on terms that require compliance with a later version of the standard.

Standard 3.1 states that Standard Compliance shall apply only to Consignments, rather than to the Hydrogen Production Facility. The LCHS defines Consignment as either a discrete consignment or a weighted average consignment. The rationale behind this standard is that claims of Standard Compliance should not apply until hydrogen production actually begins. Therefore, until such time, only claims of likely standard compliance may be made.

Standard 3.5 of the LCHS sets out that additional evidential requirements relating specific inputs and outputs of the hydrogen production facility can be found in the annexes to the LCHS. However, it is important to note that some of these requirements may not be necessary to achieve Standard Compliance.

The LCHS can be found here.

3. Low-Carbon Contracts Company Ltd (LCCC) designated as counterparty

On 2 January 2024, DESNZ formally notified the LCCC of its appointment as a counterparty to hydrogen production revenue support contracts.

LCCC will soon be directed to offer contracts with the 11 UK hydrogen projects previously announced by the government on 14 December 2023.

4. Hydrogen Allocation Round 1 (HAR1)

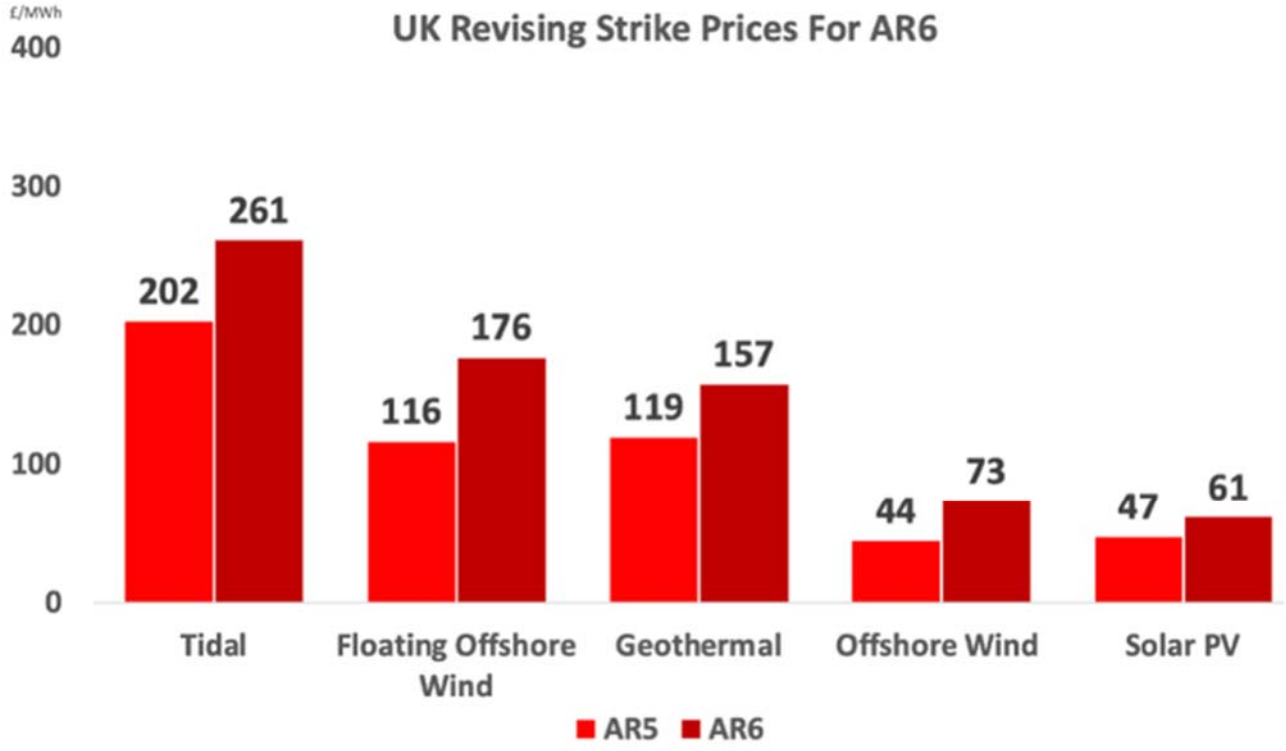
Following the launch of HAR1 in July 2022, the Department for Energy Security and Net Zero ("**DESNZ**") confirmed on 14 December 2023 that 11 UK green hydrogen projects will benefit from funding through its HPBM. Collectively, if all these projects are completed, they will generate 125MW of new renewable hydrogen production capacity in the UK. The 11 projects have been agreed at a weighted average strike price of £241/MWh (£175/MWh in 2012 prices). Congratulations to all the successful projects. A list of the successful projects can be found in Table 1.

Table 1

Project Name	Lead Developer	Location	Capacity (MW)
Barrow Green Hydrogen	Carlton Power	North West	21.0
Bradford Low Carbon Hydrogen	Hygen	Yorkshire	24.5
Cromarty Hydrogen	Scottish Power and Storegga	Scotland	10.6
Green Hydrogen 3	HYRO	South East	10.6
HyBont	Marubeni Europower	Wales	5.2
HyMarnham	JG Pears and GeoPura	East Midlands	9.3
Language Green Hydrogen	Carlton Power	South West	7.0
Tees Green Hydrogen	EDF Renewables Hydrogen	North East	5.2
Trafford Green Hydrogen	Carlton Power	North West	10.5
West Wales Hydrogen	H2 Energy and Trafigura	Wales	14.2
Whitelee Green Hydrogen	Scottish Power	Scotland	7.1

Compared to other renewable technologies, a weighted average strike price of £241/MWh is competitive with tidal and floating offshore wind production (261 MWh and 176 MWh respectively). Figure 1 also illustrates the government's 16 November 2023 announcement to increase strike prices between allocation round 5 and 6 for renewable energy generation technologies under a similar contract for difference scheme.

Figure 1



Source: Taiyang News[1]

5. Hydrogen Allocation Round 2 (HAR2)

The UK's second Hydrogen Allocation Round ("**HAR2**"), which opened to applicants on 14 December 2023, also intends to provide HPBM support for up to 875MW of low-carbon hydrogen projects. However, unlike HAR1, HAR2 projects will not be able to receive Capex support through the Net Zero Hydrogen Fund ("**NZHF**"). Given the number of applicants in HAR1, it will be interesting to see the number of applicants in HAR2 rises notably. Of particular interest of course for many monitoring the sector will be whether or not the cost reductions predicted by DESNZ come to fruition. Given the challenging conditions for obtaining finance and constructing projects on time and within budget, reductions of any percentage will be impressive.

We will comment on HAR2 further in our next quarterly update.

Please see below for deadlines and notable guidance points from the Application Guidance Document published by DESNZ.

Key dates

Engagement sessions: **22 January 2024** 14.30-16.00

The engagement sessions will provide information about the application form and supporting template. You can register interest here.

Expression of interest (EoI): Due by 23.59 on **5 February 2024**

[1] https://taiyangnews.info/uk-increasing-strike-prices-for-2024-re-auction/#:~:text=Among%20other%20technologies%2C%20floating%20offshore,for%20tidal%20energy%20by%2029%25.

Projects looking to apply under HAR2 must submit an EOI, which will allow access to the final engagement session and the online application form. DESNZ will also complete an initial eligibility check and may give feedback to applications which appear ineligible. The EoI form can be found here.

Final engagement session: **February 2024** – exact date to be confirmed

The final engagement session will focus on the HAR2 process and criteria, with the opportunity to ask submission specific queries. An invitation will only be shared with projects that submit an EoI form.

Clarification questions: before 23.59 on **22 March 2024**

Projects may submit clarification questions on the application process by emailing: mailto:HAR2@energysecurity.gov.uk

Submission window: **6 February – 19 April 2024**

Final application (online application form) must be submitted to DESNZ.

Conclusion

The enactment of the hydrogen provisions in the Energy Act 2023 and the subsequent incorporation of the Regulations represent significant regulatory progress in the hydrogen sector.

In the short term, the focus will be on whether all 11 HAR1 projects get through final investment decisions and start their construction phases in time, noting that each project must be operational no later than the end of December 2025.

Overall, the legislative progress is welcomed and the growth of viable projects across the UK continues to increase which is encouraging.

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