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# Impact of the Hydrogen Business Model restrictions on risk taking intermediaries (RTIs)

## Context

BEIS has taken a decision not to support sales of low carbon hydrogen to 'Risk taking intermediaries' under the Hydrogen Business Model (HBM) in the first allocation round.

This is confirmed in the Application Guidance for the Hydrogen Business Model and Net Zero Hydrogen Fund: Electrolytic Allocation Round. Excerpt from the guidance below:

*'Risk taking intermediaries as offtakers Volumes sold to a risk-taking intermediary will not be eligible for subsidy under the HBM through this Electrolytic Allocation Round. For the purpose of determining eligibility, a risk taking intermediary is defined as a person that purchases hydrogen for the purpose of resale. Risk-taking intermediaries would make it more challenging to monitor the use of hydrogen subsidised through the business model and to enforce the contractual measures regarding restricted and non-qualifying end users. Though government recognises the potential contribution of risk-taking intermediaries in a well-functioning market, government does not consider that allowing such entities to directly benefit from subsidy would represent value for money for the taxpayer in the early hydrogen economy*

*....*

*Government will consider the need to review this position in future, both for existing contracts and future allocation rounds .....'.*

The REA is aware of several members that are concerned with this restriction. Risk taking intermediaries are considered by industry as critical to de-risk projects, bring costs down, accelerate price discovery ie the emergence of a real hydrogen price and support the development of a liquid market for hydrogen. Our members believe that not subsidising this route will effectively rule out risk taking intermediaries, exclude certain project structures and delay the establishment of a liquid market.

The REA has therefore put together a paper setting out how risk-taking intermediaries benefit the hydrogen market and highlight to BEIS why it is critical this route is eligible under the Hydrogen Business Model.

We have identified below a few high-level scenarios where we believe BEIS HBM restriction on RTIs would have the implication of precluding risk taking intermediaries from participating in the hydrogen market and why this matters. We have also mentioned a few examples of good project structures that would be ruled out by this provision.

There are also a number of practical issues about how RTIs will be defined, risks of that not being clear or interpretations shifting over time and risks of end users not doing what they said they would do. REA will continue to engage on these points as well, which are important, but this paper is focussed on the higher level points on introducing the restriction itself.

## High level scenarios that would be precluded by BEIS' current rules on risk taking intermediaries

*Aggregation services*

Government's aspiration is to support the development of a functioning, liquid market for hydrogen and to ensure a real market price for hydrogen emerges/is discovered as soon as possible. For this to happen, producers need to be connected with end users and there needs to be many available buyers and sellers.

A hydrogen producer may need contracts with offtakers that can take all their production, not knowing or being able to anticipate exactly how much they will be able to produce and what will be the demand for that hydrogen. A potential solution for them would be to use intermediaries that can buy all their product, regardless of the exact amounts. Intermediaries can then enter into separate contracts with other parties and sell the hydrogen on to meet market demand.

This structure is effectively ruled out under the HBM under this approach. Under the HBM, a producer can sell their hydrogen directly to an end user for any price that is not lower than the natural gas price and still be topped up to the strike price. Although there is some incentive to seek a higher price (the PDI) this is unlikely to outweigh the driver to reduce the sales price in order to make the sale. The policy as it stands is effectively an indirect fuel switching subsidy for end users. Although this may not be a bad thing, it means there will be minimal price discovery on the 'true' value of hydrogen.

By contrast with this example, if the producer is considering selling to a RTI under the government's current approach they would need to sell the hydrogen at the price they actually need – in other words at or around the strike price. The RTI would need to sell on at a higher price to cover their costs and a profit margin. So, it is likely that the lowest price a RTI could offer to an end user would be very significantly higher than that available to a consumer able to buy directly from the producer. The only reasonable conclusion is that potential RTI businesses will choose not to enter this market.

In the absence of RTIs providing aggregation services, direct contracts between producers and sellers will have to be more cautious in the volumes involved. The risk of over or under production relative to demand will have to be borne by someone. In our discussion with BEIS, they have noted that brokers are not necessarily prevented from entering the market – they can provide services and charge for them, so long as they do not take ownership of the hydrogen and

therefore price risk. But it is precisely the mitigation of risks around matching up supply and demand that is needed and that RTIs can provide.

The current position can only result in a less liquid market than would otherwise be the case with RTIs. Participation of risk taking intermediaries in the hydrogen market would support the achievement of a liquid market and therefore lead much faster to discovery of what is the real price of hydrogen.

*Hydrogen producer's own consumption*

Even in the scenario where a company is producing hydrogen for their own consumption, there will be mismatches between hydrogen production and demand that need to be managed and risk taking intermediaries are key to doing this.

There will be situations, for example, where a producer can't produce enough hydrogen to meet demand and may therefore need to buy extra sources from risk taking intermediaries. Conversely, if they produce an excess of hydrogen and don't have sufficient on site storage infrastructure, they may need to spill the hydrogen into the gas network. Risk taking intermediaries such as gas shippers are likely to be the companies buying the hydrogen that goes into the network, but they won't be able to do this under the HBM for the same reasons outlined under the first scenario.

Assuming the hydrogen production project goes ahead at all, this will create a strong incentive for the producer to undersize hydrogen production and meet the remainder of their energy demand with other sources of energy / fuels so that they are not faced with the issue of having to deal with excess production. This will in turn result in lower low carbon hydrogen production and may compromise the chances for the UK to meet the 10GW hydrogen capacity target by 2030.

*Transport*

This sector presents an extra layer of difficulties as the company that produces the fuel is very rarely the same company that supplies/ dispenses/distributes it (the fuel supplier). The producer is likely to enter into a number of contracts with a number of third-party companies that sell the fuel onto other companies or supply it to end users in the mobility sector for transport applications.

Fuel suppliers are normally companies specialised in distribution ie they will be expert in obtaining planning applications and permitting for the dispensing site/activities, they will know how to comply with all the relevant H&S rules (e.g. DSEAR, COMAH etc). This is the model seen in the expansion of biomethane as a transport fuel over the last 5 years. Unless the producer owns everything (ie production and distribution), the exclusion of RTIs from the HBM will simply not work for applications such as transport, as there are lots of elements of running a

transport business that are not normally a concern or an area of expertise for the hydrogen producer.

*Making projects bankable*

The cost of production for a project will be locked in at FID as this is when the source of energy and the capital cost of the electrolyser will be contracted for. The industry expects the cost of future renewable sources and electrolysers to lower over time as technology improves, risks are better managed, and lessons are learned. To be bankable most of the planned production will need a long-term hydrogen purchase agreement in place at FID.

When developers are raising finance to build a hydrogen production site, potential lenders will assess the risk of the planned offtaker becoming unavailable, either temporarily, or permanently. In the absence of RTIs this would require every project to develop deep and complex contingency plans directly with other offtakers. This would be unworkable without the much simpler option of intermediaries. This is one way in which the UK Hydrogen Business Model is less attractive than more straightforward support available in other countries.

**Examples of projects that our members would like to develop but are ruled out because of this exclusion**

***Example 1***

*A hydrogen production project is being developed by company 1 which will supply a number of customers in a geographical area using tube trailers. The trailers will go to the customers for them to use hydrogen as they need. Company 1 is not a specialist in fuel distribution but is forced by the HBM restriction on RTIs to own the tube trailers and to be the distribution company. This adds significant costs to the project - both capital and operational.*

***Example 2***

*Two mid-sized wind farms produce renewable electricity and both plan to add an electrolyser. Company A plans to supply fuel to a local authority bus fleet. The capacity of its wind farm is limited so it intends using its own production and some hydrogen purchased under a long-term contract from producer B who wants to be a pureplay hydrogen producer and not be involved in transport and storage. In this situation company A is both a producer and an intermediary for different batches of hydrogen. If B is then unable to receive a HBM subsidy because they are selling via intermediary A, the arrangement will not work and A will be forced to build an additional production site itself.*

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