REA Member Meeting on Hydrogen Certification Consultation

Briefing for: REA Staff and Membership
Purpose: Notes from REA Member Meeting on Hydrogen Certification Consultation
Date: 22 March 2023

1. Introduction and welcome

- REA staff outlined purpose of the session and agenda overview
- REA staff encouraged members to give feedback into REA response to consultation. Deadline for response is 2345, Friday 28 April

2. DESNZ presentation on the certification scheme and key topics for discussion

- DESNZ gave an overview of basic scheme features and highlight topics they are particularly keen to hear from REA members on
- DESNZ keen to hear suggestions for broader policy development as well
- Consignment approach and international trade are where DESNZ particularly need industry feedback due to the complexity of these issues
- Scheme's overarching objective is to support the decarbonisation of the hydrogen economy. But also looking to stimulate market growth and to facilitate cross border trade
- DESNZ proposes voluntary scheme at first to build confidence before potentially becoming mandatory further down the line
- It is important certificates communicate the right information at the right level of detail
    - Looking to have both mandatory and voluntary disclosure fields
    - DESNZ particularly keen to hear what information would be useful to see on a certificate
- DESNZ proposes using a mass balance system for Chain of Custody
    - Mass balance will provide strong traceability and mesh well with international schemes
- The LCHS allows for consignments using average emissions of hydrogen produced over a month
- Also questions around how certificates work in the mid stream, how the certificate changes ownership as ownership of hydrogen changes
- DESNZ proposes government led scheme
- Scheme will require a certification body to certify compliance with the scheme, and an issuing body to manage certificates, this would include an IT system to manage these certificates
    - Question on whether certificates should be retired after hydrogen is used

3. Member Discussion

- REA staffed open discussion between REA members and the DESNZ team

- *"Post use should certificates be retired?" - yes this is essential - its a key weakness of existing PoS systems and a strength of GoO systems. Without retirement (often called cancellation) there is no validation that a Certificate has been allocated only to one end user"*

- Member discussed **certification bodies**
    - *"Why only one certification body? Surely should set clear requirements of the scheme and then more than one organisation could offer certification against it. Restricting it to a single one could result in bottlenecks in providing those services and removes any incentive to keep a lid on prices. This comment only in relation to Certification Bodies. Agree that it makes sense to have a single issuing body."*
    - *"Generally you would want more than Certification Body as the quality / competence / capacity can vary. As there are several technologies and feedstocks available for Hydrogen it is high risk to only have one Certification Body as if they don't have expertise, capacity or quality then the whole scheme falls over and loses credibility"*
        - DESNZ: *"yes we agree that certification and issuing could be done by separate bodies. We are considering both options and whether both functions could be carried out by a single delivery partner. Keen for your views on which would be the better option."*
    - *"Thanks for that. Just to avoid any misunderstanding, I think the basic structure is good (i.e. separate roles for body setting scheme rules - ie DESNZ, certification bodies and delivery partner. Just would want multiple certification bodies rather than a single one."*

- Members queried more details for **mass balancing system**, particularly on additionality
    - DESNZ asked how mass balancing worked as biomethane markets developed
        - GGCS does not cover this, and is not a common occurrence in the biomethane industry. DfT sets rules for mass balancing in the context of biomethane delivered via the gas grids for use in RTFO Mass balancing. rules were changed to 6 months, ongoing moving picture. DfT is the best person to consult on biomethane mass balancing.
    - DESNZ queried where hydrogen mass balancing should be at the once per month end or longer
        - A month may not be enough time, but more information needed
        - Important to state that neither mass balance nor book and claim are inherently reliable, both dependant on checks and balances. Mass balance in particular requires key choices on period over which mass balancing occurs and the site boundary
        - Clarity is increasingly important, need to be a clear checklist that certification bodies can provide
    - GGCS has evolved over time and is now a solid recognised way of trading, but this took a long time to evolve to its current form
    - Likely hydrogen will be blended into the gas grid and can be homogenised very quickly,
        - DESNZ accepts the points, will include possibility of blending in further considerations (chapter 4) through midstream interactions with blending
        - Mass balance in its purest form doesn't apply so well to a grid, although the gas grids as a whole are managed through a mass balance approach

    - DESNZ queried that LCHS has an approved list of eligible pathways, but each batch will need checking for the emissions of those consignments. DESNZ not proposing production facilities could have blanket certification. Instead for each consignment producers would need to set out how the consignment meets the LCHS
        - Process that's making hydrogen needs to have sensors on it that automatically reports hydrogen to certification schemes, otherwise it will become onerous.
            - DESNZ looking at streamlining and automation
            - Likely in early stages government funded projects will be first projects accessing the scheme
- *"One thing worth discussing is how market requirements (and value perceived) from particular types of hydrogen may develop over time. This could be on an absolute gCO2eq GHG value, a feedstock or technology pathway. Evolution of the market for biomethane certificates is a good example here. This feeds into thinking about labelling certs for hydrogen. It makes me think the most important decisions are the hard information provided in the 'factual disclosure' part of the cert, leaving the market to develop an understanding of which features are most closely linked to value.*
- *Are Proofs of Sustainability issued by Voluntary Schemes recognised by the EC? and possible interaction with the Union Database for biofuels (which may become the union database for mass balancing of all fuels for all sectors)". Re international compatibility - the EU has a clear framework and space for alignment - for GoO it is article 19 of RED II and a "mutual recognition agreement" for "third countries". aligned schemes must issue GoO in line with EN 16325 (still in draft). Is that something the department has thought...*
    - *DESNZ: we do want the scheme to work for imports/exports, and we are on a couple of intl. forums with other nations including the EU that are looking at solutions for harmonisation of schemes*

- Member queried **shipping** and how shipping could be treated under the scheme
- Members raised a DESNZ report with E4tech on hydrogen in port chains, in that analysis emissions from shipping were included in the assessment.
    - In terms of shipping DESNZ knows there's more to consider to reflect extra emissions from distribution and transport
    - Very difficult to count emissions that for down the supply chain
- *"My personal view is that end users will want to know about the total GHG emissions - i.e. including getting to point of use. There is at least a possibility that LCHS will evolve to include it in future. I think you would certainly want to know that the certification scheme could adapt in future to include this - either because directly required by future changes to scope of LCHS or because of market demand from end users. Not sure that getting to the point of end use is harder in principle to do, as this is covered within RTFO. And not just literally about putting on ships. GHG impacts of moving hydrogen across UK/Europe by road should also be counted - if for no other reason than to have a robust answer to claims of greenwashing."*
- *"I think total GHG emissions will be important for the type of large organisations possibly buying certifications in the future - for CSR and incoming emissions reporting requirements (eg TCFDs)."*
- DESNZ believes international recognition is best way to make scheme work for shipping

- *"Just some questions re "distribution" and ensuring the hydrogen remains low carbon until the point of use… In transportation : form of energy used for compression, leakage (H2 is a GHG), etc?"*
    - *"Interested in views on whether all transport emissions should be included or whether just transport emissions for imported hydrogen could be a good first step? e.g. including transport emissions from France to point of injection into the UK. also interested if our suggestion for voluntary disclosure fields could help here?"*
- For completeness DESNZ really needs to consider ammonia in the certification scheme, will it apply at factory gates like LCHS or at the end user's facility? If that is later than transport emissions would need to be included.
- Distance travelled might not be as carbon intensive as one thinks, i.e a very efficient ship vs on road by diesel
- Also how do we understand transport from hydrogen injected in another country with a physical connection to the GB gas grid (i.e. similar to biomethane produced elsewhere and used to claim RTFCs?)

- Member queried DESNZ thinking around **ammonia**
    - DESNZ do not have clear position on ammonia at this point, still very much an open question

- Members discussed **voluntary disclosure**
    - Any information provided as a voluntary disclosure would have to be as credible as other information provided on a certificate or risk undermining credibility. That would imply a limited range of additional information that could be provided and clear rules on how this can be demonstrated. So this would be more like a limited selection of optional additional modules rather than resemble a 'free text' box on a form

- Members discussed **REDII**
    - *"One consideration from REDII is how you account for CO2 capture and replacement, or CO2 capture and storage. The Hydrogen Scheme and the LCHS should make it clear how a Hydrogen producer can account for this and what evidence it needs. For example CCS needs long term storage which is difficult for an auditor or certification body to audit / certify. Carbon credit schemes generally have a permanence period for carbon sequestration, of say 100 years but the Scheme Rules need to allow for reversal events. e.g. if the CCS leaks then the GHG emissions originally certified would change"*
        - *"I think the LCHS already has a methodology for calculating emissions for CCS enabled H2 production"*

- Members discussed **costs**
    - *"Short comment on costs - Certify is not a good reference point for set up costs. Can't speak for how civil servants time would be costed but having been part of a Certify working group it was a lot of discussion relative to the actual work in building the rules and IT. Their costs would include paying everyone on this call and all your other calls as project partners. We are commissioning an IT system in the coming months to improve*

the platform being used now for GoO for biomethane, which will be several orders a magnitude lower than £1.8m - happy to share more info directly with the team."

- Members discussed **negative emissions**
    - *"Has there been any thought on the possibility of negative emissions - i.e. gCO2eq less than zero. Very much what people are aiming for where some or all of the feedstock used for (say) a gasification route is biogenic. This obviously begs the question of interaction with CCS policy and how the GHG benefits of this are demonstrated. Including via the sequestration of carbon through the production of solid carbon!*
    - Proposed tiering bands did not allow for negative emissions i.e. lower than zero through alternative hydrogen production pathways with CCUS
        - DESNZ tiering proposals are very much indicative at the moment
        - DESNZ are open to negative tiers if strong support from industry in the consultation response, want more information on how this could work

- Members discussed **tiering**
    - *"I think tiering will be less useful for users than providing a calculated figure for emissions intensity."*
    - Feedstocks are always likely to stay largely the same, would it not be easier and less complex for all parties involved to apply case scheme to production facility, rather than 2-3 monthly average
    - Demonstrating compliance on a consignment basis of hydrogen produced rather than certifying production facilities could slow nascent market getting off the ground
        - DESNZ accepted this would be easier but not as robust. LCHS means scheme has to capture the real carbon intensity as closely as possible
        - DESNZ gave example of wind farm hydrogen connected to grid that could be powered by fossil fuels
            - Member countered that many green hydrogen developers are not connecting to the grid at all. DESNZ suggested might be possible to consider simpler approach in such circumstances

4. Next Steps and Summary of Key Points

- DENZ explained consultation deadline & where to access, as well as timescales around government response and further policy development
- REA staff summarised key points from members