

# Consultation on a UK low carbon hydrogen certification scheme

**26 April 2023**

## About Energy UK

Energy UK is the trade association for the energy industry with over 100 members - from established FTSE 100 companies right through to new, growing suppliers, generators and service providers across energy, transport, heat and technology.

Our members deliver nearly 80% of the UK's power generation and over 95% of the energy supply for 28 million UK homes as well as businesses.

The sector invests £13bn annually and delivers nearly £30bn in gross value - on top of the nearly £100bn in economic activity through its supply chain and interaction with other sectors - and supports over 700,000 jobs in every corner of the country.

The energy industry is key to delivering growth and plans to invest £100bn over the course of this decade in new energy sources.

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Energy UK welcomes the opportunity to respond to this consultation on an important aspect of the hydrogen economy framework to support decarbonisation.

### **1. Do you agree with the design features set out in the introduction?**

#### **a. Please explain your answer and suggest any alternative or additional features and how they should be prioritised.**

Energy UK agrees with the key design features assuming that cross border trade means international trade, not just with adjacent countries.

We also consider that the design features are interrelated and should be considered on an equal footing. For example, taking insufficient account of compatibility with international schemes could limit trade which in turn would not stimulate growth in the hydrogen economy nor incentivise low carbon hydrogen production. Similarly, a scheme which places too much emphasis on traceability may not be compatible with international schemes and then limit growth opportunities.

### **2. Do you agree with the principles set out in the introduction?**

#### **a. Please explain your answer and suggest any alternative or additional principles for the development of the scheme.**

Energy UK broadly supports these principles. In addition, the scheme may also need to evolve as international schemes develop, compatibility will be important, particularly with the EU wide scheme which is currently under development. A level playing field, in terms of full lifecycle emissions for trade across physically connected markets will be important for fair competition.

### **3. Do you agree that there should be a single certification scheme covering the UK?**

#### **a. Please explain your answer.**

Yes, standardisation and compatibility are important for growth. Fragmented approaches within the UK would add complexity, administrative costs and may inhibit growth.

### **4. Do you agree that participation in the scheme should be voluntary initially?**

#### **a. Please explain your answer.**

Whether any scheme should be voluntary or mandatory will depend on what the scheme is intended to achieve. A scheme may need to move from voluntary to mandatory in time.

Early production is likely to be connected directly to offtakers by a short direct pipe or dedicated transport arrangements. Where production is supported by a low carbon hydrogen agreement the criteria for that will need to be met and a mandatory scheme may add unnecessary complexity and administrative burden. It could also add costs and potentially be a barrier to market growth.

If the main objective is to grow the market, then a voluntary scheme may be more appropriate as it helps to communicate the green credentials of the hydrogen, which could be led by offtaker demand, rather than imposing costs on all parties.

If the main objective is to guarantee the traceability of the hydrogen, a key feature of this seems to be retiring of certificates and it is difficult to see how this could work on a voluntary basis.

### **5. If LCHS changes through time, do you think the certification scheme should offer 'legacy' certificates based on compliance with previous versions of the LCHS?**

Energy UK understands that compliance with the LCHS for support under the LCHA is to be grandfathered based on the LCHS at the time the agreement was entered. We think that the approach to certification should mirror this for the duration of the LCHA. Any alternative approach could be problematic if production under a grandfathered LCHS could not obtain certificates, it may impact investment decisions in the coming months and years, so early clarity on this point is needed.

Essentially all hydrogen compliant with a LCHS is making a useful contribution to decarbonisation of the economy and is free of carbon emissions at the point of use with the emissions related to production being the responsibility of the producer.

**6. How do you think 'legacy' certificates would impact the certification scheme and the market for certified hydrogen?**

Energy UK is not sure that certificates should be labelled as legacy, rather a standard certificate that has additional information in mandatory fields. In this way the market will have the information it needs if parties wish to trade or purchase a particular 'type' of hydrogen, produced by a particular technology for instance.

**7. Do you agree that certificates should be issued based on MWhs of hydrogen?**

YES, gas is traded in energy units and there is an expectation that hydrogen will be too. Other schemes also seem to be based on MWhs which will be important for compatibility.

**a. If you answered "no" to question 7, please state your concerns and suggest your preferred alternative.**

**8. Do you agree with our indicative list of mandatory disclosure fields?**

**a. Please explain your answer and suggest any additional mandatory disclosure fields.**

Yes, this seems reasonable.

**9. Do you have any suggestions for potential voluntary fields that may be of use?**

Composition may be useful for direct supply, where there is only one source of hydrogen serving customer(s).

Any fields which help integration with other schemes

**10. What markets or schemes would you like to use the voluntary disclosure field to demonstrate compliance with?**

EU and other international schemes

**11. Would you prefer a single label, or multiple tiers?****a. Please explain your answer.**

Energy UK offers cautious support for a system that provides offtakers with additional information beyond the binary compliance with the LCHS or not, and therefore supports customer choice. However further consideration on how this is structured is needed, for example is there a certificate with factual disclosure or is the 'labelled' certificate itself different in some way.

However, the focus should be on driving decarbonisation and growing the market and avoiding design pitfalls that could have unintended consequences. These include reputational risks for CCS supported production, threshold effects impacting running of electrolyzers, running on less green electricity so long as within the band, or running less to just meet the next tier.

Other considerations:

- Value to customers of easy to identify single threshold standard vs value of supporting greater customer choice with more information
- Are tiers needed / desirable at the outset or a possible future development?
- Need to consider labelling 1 or A should be the 'best' (least emissions)
- An additional level(s) may be needed for negative emissions, where demonstrated.
- Do the tiers change with changes to the LCHS?

**12. If stating a preference for multiple tiers to question 11, do you have any suggestions on how tiers should be structured?**

See 11 above.

**13. Do you agree with a Mass Balance system of Chain of Custody?****a. Please explain your answer and suggest the alternative you'd recommend if you disagree.**

Energy UK has been cautious in this response so far to avoid using the terms mass balance (MB) or book and claim (BC), since neither has been articulated beyond a simple description in two sentences. We agree that certification is needed which suits the nascent market, supports growth, is robust but avoids excessive cost and complexity. It is not clear which approach supports all of these objectives, particularly when the details of implementation are considered. Further consideration of the linkage between the physical gas, commercial arrangements and details of the certification arrangements are needed before preferences are expressed.

Discussions with members revealed a range of understanding and observations on the different approaches:

- BC supports market growth, and 'gets the market going'
- BC may be more appropriate in the early stages of the market
- BC certificates have inherent value
- Most voluntary schemes are BC
- Government schemes, in other countries, tend to be MB
- MB needs a certificate linked with every trade
- MB perceived to be more robust from customer viewpoint
- The Dutch system seems like a cross between BC and MB
- What happens at borders?
- How do either work in a blended system
- Can customers claim hydrogen if they are not hydrogen ready?

With so many issues, it is difficult to provide an informed response. A greater depth of understanding of how each scheme would work is needed, what it means for all the parties in the supply chain; producer, shipper / trader, storage, offtaker and how they engage with the systems. If the vision is for a traded hydrogen market like the current gas market with an entry / exit system and trading at a virtual point, either OTC or on a trading platform some of the certification issues seem quite challenging. It may be that a system with features of both BC and MB can deliver the desired objectives.

**14. Do you agree that a Mass Balance system of Chain of Custody would provide the most consumer confidence over the credentials of the hydrogen?**

**a. Please explain your answer**

Yes, from the simple description, as every trade is traced with a certificate, but see Qn13 above. In a network the customer will not physically receive the hydrogen linked to the certificate, as is the case for biomethane. It may be possible as a feature of the scheme to ensure that the customer is at least connected to the same network that the producer injects hydrogen into.

**15. Do you have any thoughts on how our consignment approach should be structured?**

Energy UK's initial view is that there needs to be flexibility for producers to operate in a way that suits them, whilst recognising that the approach may need to become more prescriptive as the scheme matures. This provides for discrete and monthly consignments.

**16. Are you planning to import or export hydrogen? If yes, where to/from?**

Energy UK is not responding to this question.

**17. Do you have any suggestions on how the certification scheme can best enable imports of hydrogen, and ensure that imported hydrogen can be certified accurately?**

To enable both import and export, consideration needs to be given to this at the early stage of scheme design, we agree that working closely with international partners will be helpful here. There will need to be mutual recognition of schemes to allow certificates to be converted or re-issued at the border point, this is likely to be in the interests of all parties.

However, as there is already a diversity of schemes, full compatibility is unlikely, but can be supported using voluntary fields on certificates.

Such arrangements will need to be part of the audit process.

**18. Do you have any suggestions on how the certification scheme can best support exports of hydrogen from the UK?**

We agree export is likely to be more straightforward than import with the UK scheme operating to the point of export and the certificate being retired at the deemed border point. Again it will be critical that the certificate contains sufficient information to enable a new certificate to be issued on entry to the new country. This will be essential if the importing country has different carbon intensity thresholds or composition parameters.

Whilst tiers may add complexity, they may be useful in this respect.

**19. Are there any additional areas to consider in the midstream beyond those set out above?**

Energy UK agrees with the midstream issues identified, the practicalities and operational issues of which need greater exploration and consideration.

In addition to transport and distribution, shipping / trading activities also need further exploration if there is to be a traded market for hydrogen, particularly if there is the desire to track every trade.

Liquid markets need standardised products, for natural gas the quality is standardised by GS(M)R, price and delivery point are the other main considerations, with most gas traded at the virtual NBP hub. For biomethane, certificates are considered only at entry to and exit from the network, being decoupled from the physical gas for trading purposes. If every trade at a trading hub needed to be linked with a certificate, traders would need to tag a certificate (multiple and or partial depending on

certificate size and trade size) to every transaction. This would add complexity to systems or OTC trading particularly if tiers gave rise to product differentiation, this would reduce standardisation and impact liquidity.

Blending may add further considerations if the blend level varies within day and day on day. Averaging may be necessary and perhaps some kind of reconciliation between blend gas delivered and certificates retired if suppliers do not hold sufficient in a given time period. For large sites the blend composition may even need to be directly measured.

Whilst a liquid market in hydrogen is some time away, it is important to consider market evolution and avoid designing a certification scheme which could inhibit market growth and trading. A robust scheme that is suitable for the early market and evolves overtime as the market grows whilst being administratively simple is desirable, and hopefully achievable.

**20. Do you agree that monthly self-reporting with light touch verification is the most appropriate reporting method?**

**a. If answering yes to question 20 please state why. Or if answering no, what would you consider more appropriate?**

Verification will be an important feature of the scheme; we agree utilising the reporting framework for the LCHS compliance as much as possible is desirable. Digital or automated systems would also be desirable to manage administrative costs.

**21. Do you think there is anything else that should be assessed during annual audits?**

The description of the annual audit is high level, so it is not entirely clear what will be assessed and so what additional items could be needed.

There needs to be clear guidance at the outset at an appropriate level of detail on what the audit will review to avoid surprises which could be costly if the necessary information had not been retained in the correct format.

**22. Which would you prioritise, immediacy of certificates or the flexibility of averaging consignments across a month?**

This may vary according to the operations of each project

**23. Do you have any suggestions for the approach to certificate retirement?**

The approach suggested is one of bulk transfer of certificates at point of sale rather than for each transaction and the possibility to retire certificates. We are not clear why retirement may not be required at the point of use or export?

More information is needed to consider the most appropriate approach, considering the chain of custody and what the main driver of the scheme is.

Bulk transfer may seem more administratively simple than for each transaction, but would this be daily or monthly? It is also not clear how voluntary information would be tracked or tiers for instance, that might accompany a premium price for the hydrogen. How would a customer wanting a particular 'type' of hydrogen be assured their supplier had secured that?

Retirement would be critically important if certificates could be used in other government schemes such as ETS to reduce carbon costs, but perhaps slightly less so for evidence of sale to customers.

Consideration will also need to be given to retirement for use by the network operators, shrinkage and unaccounted for gas.

The treatment of certificates for gas held in storage will also need further consideration, as this may be for short or long duration. We do not think that an expiry date is appropriate as this could distort the market and operational activities.

**24. Are you aware of any industry-led hydrogen certification schemes being developed? If yes, please give details.**

We believe a pilot is being developed by the GGCS.

**25. How important is Government backing to provide confidence in the scheme?**

Energy UK considers government backing is essential to provide confidence and robustness in the scheme as this will provide credibility and a joined-up approach with other policies. It also ensures independence and longevity of the scheme. Government will also be best placed to determine if / when scheme elements need to become mandatory.

**26. What would you consider to be the main advantages of Government oversight of a certification scheme?**

Alongside giving the scheme credibility, government can take a joined-up overview of the certification scheme alongside the LCHA and LCHS which are linked and can determine how they evolve together in a consistent manner. It can also in the future consider interoperability with other schemes including potentially ETS in the future.

**27. Noting that a decision has yet to be taken on whether to go out to external tender, do you have an interest in being considered as a delivery partner for the certification scheme, and if yes, in what role?**

No

However, there could be merit in the approach and efficiency in administration, if there was streamlining in the bodies involved in verifying compliance with the LCHS for the LCHA, determining eligibility for the LCH certification scheme and issuing LCH certificates.

**28. If you are a producer of hydrogen, would you sign up to a Government-led certification scheme?**

**a. Please give your reasons.**

Members to respond.

**29. If you are a purchaser of hydrogen, do you see the value in a Government-led certification scheme?**

Energy UK is not a purchaser of hydrogen.

**a. Please give your reasons.**

**The Questions below relate to the de minimis assessment:**

**following questions.**

**30. Would there be any significant costs of participating in the certification scheme that are not captured?**

**a. Please provide details.**

Energy UK is not responding to this question.

**31. Are the assumptions about the time taken for, and the cost of, each activity reasonable?**

**a. Please provide details.**

Energy UK is not responding to this question.

**32. Do you expect there to be a green premium associated with the certification of hydrogen?**

**a. If so, please provide details, including indications – if possible – of how large you expect this green premium to be.**

A green premium is likely to emerge if customers value this, however the design of the scheme may impact the extent to which this is possible.

Energy UK would like to understand the next steps for further engagement and consultation. There are clearly many areas where further considerations are needed, and we would like to participate in further discussions.

We think the engagement approach used for the production business model has worked well and would like to see this used for the certification scheme.

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