

# Designing the Net Zero Hydrogen Fund – Consultation

1 November 2021

## About Energy UK

Energy UK is the trade association for the energy industry with over 100 members spanning every aspect of the energy sector – from established FTSE 100 companies right through to new, growing suppliers and generators, which now make up over half of our membership. We represent the diverse nature of the UK’s energy industry with our members delivering over 80% of both the UK’s power generation and energy supply for the 28 million UK homes as well as businesses.

The energy industry invests £13bn annually, delivers £31bn in gross value added on top of the £95bn in economic activity through its supply chain and interaction with other sectors, and supports 738,000 jobs in every corner of the country.

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Energy UK welcomes the opportunity to respond to this consultation, we provide comments to the questions below:

### **1. What wider benefits could the NZHF deliver, such as local growth and low carbon leadership opportunities?**

Energy UK expects the NZHF to help to unlock private investment to stimulate the hydrogen market and start innovation learning by doing to help longer term cost reduction. It can help to overcome first of a kind (FOAK) disadvantage to demonstrate commercial viability, start decarbonising industrial and various other sectors, and in parallel support the early establishment of supply chains along with the associated jobs and skills base in the UK that can then serve a global market.

It may also help to bridge the funding gap for projects looking to secure funding via the business models.

However, at £240M the fund is modest and these benefits may not be realised. The additional £100M in 2023 and further funds in 2024 for electrolytic projects, as announced in the Net Zero Strategy Industrial Decarbonisation and Hydrogen Revenue Support (IDHRS) scheme is welcome, and will help to deliver these benefits. We look forward to understanding the eligibility and assessment criteria of this scheme.

### **2. Do you agree with the proposed scope for the NZHF?**

Energy UK agrees that the scope of the fund should include DEVEX and CAPEX but to enable construction of early hydrogen production projects, that can be delivered in the next few years, CAPEX should be the main focus of the fund. We agree with a technology neutral approach, but expect some CCUS enabled projects may only seek support via the business model rather than the NZHF.

Early projects are likely to be part of an end-to-end scheme including production and end use to one or a few customers. Most Members consider that some limited distribution and storage infrastructure is likely to be needed to enable these projects to go ahead. Whilst this will be a small fraction of the overall cost it should be considered on a case-by-case basis for support, in the absence of any other funding.

Other Members consider distribution and storage infrastructure is intrinsic to the production process, noting the Hydrogen Strategy suggests large scale infrastructure would be required by 2028, and so should be eligible for NZHF support.

To deliver the ambition for 2030 we would like to understand the approach to support beyond 2025.

**3. Are there any technologies for low carbon hydrogen production, other than CCUS enabled and electrolytic hydrogen, that you think could begin production of low carbon hydrogen during the early 2020s? Please give details.**

NO, other technologies have technology readiness levels that are too low, but are likely to have access to other funding sources for innovation. All applications for NZHF support should have a credible plan to commission by 2030.

**4. What boundary should the NZHF set around production projects? Please explain your rationale, including any considerations that may change over time and / or vary according to the types of projects.**

Energy UK thinks that funding should include CAPEX funding to ensure delivery of hydrogen production in short timescales, as well as other elements such as distribution and storage facilities to support the success and efficient operation of the production plants and widescale deployment of end-to-end projects.

If the support from the NZHF for distribution and storage is limited to that necessary for supply / demand matching and not sized for third party use, then larger scale, shared distribution and storage facilities will need funding via a different mechanism, which supports DEVEX and potentially post- FID CAPEX as well.

**5. Noting the importance of revenue support which could be covered by the Hydrogen Business Model, do you agree that capital grant funding is the most effective option for low carbon hydrogen projects to come forward? Please explain your answer.**

YES, capital grant funding (for both DEVEX and CAPEX) will help low carbon hydrogen projects come forward.

For projects also seeking revenue support (likely to be those outside the RTFO) via the business models, any capital support received will need to be considered when assessing business model support to ensure a level playing field. For example, a project receiving CAPEX support will not need to factor this into its strike price.

In the longer term we think OPEX support as proposed by the business models will be more effective in supporting hydrogen projects.

**6. If capital grants were not available, would you consider applying for government loan funding?**

No comment

**7. Do you agree that CAPEX support through the NZHF will help projects to reach Final Investment Decision? Please explain your answer.**

YES, agree the CAPEX support should help projects reach FID, but we anticipate most projects will also need revenue support so it is important to consider how applications can be co-ordinated from application through to decision to enable FID.

The design of the fund should carefully consider the split of funds across small / large CAPEX and DEVEX to ensure the fund provides the maximum impact in achieving the 2030 target.

**8. Do you know of any projects that may only want CAPEX support, without a requirement for a hydrogen specific business model, in order to take FID? If so, please give details of the project(s).**

No comment

**9. What reflections do you have on the approach we have identified to address the main challenges in building new hydrogen production facilities?**

Energy UK considers this is a good starting point but production should not be seen in isolation from wider requirements to support development of the hydrogen economy, including; co-ordination with demand for hydrogen, including market build and blending as a demand sink, transmission and storage (both small and large scale) and CO<sub>2</sub> stores for CCUS enabled projects.

This does not suggest that the NZHF should be directed to all these elements but that they are necessary for production to proceed.

Most members have reservations about this fund being used to support larger CCUS enabled projects, as this could take a large fraction of the fund, and funding is available elsewhere. This could undermine the commitment to a twin-track approach and they believe the focus should be on delivery of a meaningful pipeline of smaller electrolytic projects to support learning by doing and cost reduction.

Others consider that supporting FEED for CCUS enabled projects, can help get them to FID, and that achieving 5GW of hydrogen production by 2030 is likely to require more CCUS enabled production than the CCUS cluster sequencing process will support.

There is a general point about multiple funding options and co-ordination, in application, review and decision.

**10. Do you agree that there is a need/demand for government intervention to support hydrogen production projects with their development costs?**

YES, there is a need for DEVEX funding for early projects to help with the higher cost of FOAK projects

**11. In light of available funding sources for project development, at what stage of the project life cycle would government support ensure the most effective use of the NZHF's resources and why?**

Government support should focus on viable projects with a clear path to delivery of production, we expect this to be mostly CAPEX and some FEED and pre-FEED. The relative importance of the type of funding varies by project scale and type

For CAPEX the timing of the funds being released should align with the start of construction.

**12. Do you agree with the proposed high-level eligibility criteria for NZHF applications? Please expand your answer.**

Energy UK broadly agrees with the criteria, being able to meet the low carbon hydrogen standard will be key. We also think a clear methodology is required to calculate GHG emissions and impact on meeting the 2030 GW target, to create a level playing field, enable comparisons between projects and ensure a diverse project portfolio.

With respect to offtaker agreements further clarity is needed on details, such as; what constitutes 'agreement in principle' and what level of production needs to be covered. For DEVEX support we agree this should be less onerous, perhaps an agreement to explore the project rather than for demonstration of demand. It would be too onerous to expect the offtaker to commit to FID on adaption when the production is still under development.

**13. Do you agree with the proposed high-level assessment criteria for NZHF applications, and in particular? Please expand your answer.**

Broadly yes, we agree the focus should be on credible low carbon hydrogen projects in the UK, whilst the application and assessment process should be proportional to the project size, subject to the following:

- A level playing field between RTFO and non RTFO projects
- Clarity of sequencing of the application process, including linkage with applications for business models support and synergies with Phase 2 of the cluster sequencing process
- Costs recognising first mover disadvantage
- Safe guarding jobs as well as job creation included as economic benefit

- Emissions reduction being considered relative to the size of the project to avoid large project bias
- Clarity on whether all criteria are weighted equally

**14. Do you have any comments on the application process for the NZHF? Please explain any practical considerations the government should take into account when designing the final bidding system.**

Energy UK would welcome further clarity on the timeline from 'early 2022' so developers can best prepare applications and agrees that initial eligibility screening is appropriate, supported by dialogue and feedback.

Whilst it is desirable to have a robust and transparent process in place as soon as possible we acknowledge, bilateral arrangements may be suitable for early projects before an enduring process is put in place. However,

Other practical considerations, include:

- Clarity on timing, sequencing and interaction of applications e.g., if NZHF and business model support is required to proceed.
- Co-ordination with other sources of funding, particularly business model support
- Applicants should be required to disclose other funding received / being sought, e.g., RTFO as this will impact the grant needed
- Application forms tailored to the funding being sought, with appropriate detail
- Sufficient time to complete applications forms, say 3 months
- May need to be ongoing engagement with industry with respect to the criteria.

**15. If your organisation is likely to apply to the NZHF, could you please state whether you would be seeking capital or development support and the estimated size of the bid? If your projects require capital support, please also express this as percentage of the overall costs.**

No comment

**16. If you are seeking capital support, what stage of your construction are you looking to get funding for?**

No comment

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