By email: HydrogenProduction@beis.gov.uk

Uniper UK Limited
Compton House
2300 The Crescent
Birmingham Business Park
Birmingham B37 7YE
www.uniper.energy

Uniper UK

Registered in
England and Wales
Company No 2796628

Registered Office:
Compton House
2300 The Crescent
Birmingham Business Park
Birmingham B37 7YE

Response to: Designing the Net Zero Hydrogen Fund – Consultation

19 October 2021

Uniper is an international energy company with around 12,000 employees in more than 40 countries. The company plans to make its power generation CO_2-neutral in Europe by 2035. With about 35 GW of installed generation capacity, Uniper is among the largest global power generators. Its main activities include power generation in Europe and Russia as well as global energy trading, including a diversified gas portfolio that makes Uniper one of Europe's leading gas companies. In 2020, Uniper had a gas turnover of more than 220 billion cubic metres. Uniper is also a reliable partner for municipalities, public utilities, and industrial companies for developing and implementing innovative, CO_2-reducing solutions on their way to decarbonizing their activities. As a pioneer in the field of hydrogen, Uniper has set itself the target of operating worldwide along the entire value chain in the future and implementing projects that will make hydrogen the mainstay of the future energy supply.

The company is headquartered in Düsseldorf and currently the third-largest listed German utility. Together with its main shareholder, Fortum, Uniper is also the third-largest producer of CO_2-free energy in Europe.

In the UK, Uniper operates a flexible generation portfolio of seven power stations capable of powering around six million homes, and a fast-cycle gas storage facility.

Consultation Response

We have set out below our answers to the questions in the consultation that are relevant to us. Our views in summary:

- Given the relatively small scale of the scheme, and the need to bring hydrogen production to market, the scope of the scheme should be limited to production facilities only.

- To be effective in bringing forward a range of hydrogen production technologies, the grant funding needs to be separated into two ringfenced pots; one for blue and one for other hydrogen.

- There should be funding rounds for blue hydrogen projects that are timed to support the CCUS Cluster Sequencing process.

Consultation questions:

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

By supporting the development of a robust domestic hydrogen production sector, the NZHF will support the delivery of the target of 5GW of domestic hydrogen production by 2030 as part of the net zero commitment, and meeting carbon budgets.

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

Yes.

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.**

We have no specific example, but the NZHF should not preclude other technologies. Having two funding pots, one for blue hydrogen and one for other hydrogen production technologies would keep open the option of bringing forward additional methods of producing low caron hydrogen.

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.**

The primary purpose of the NZHF should be the support of production facilities. The government needs to give further consideration to support to develop regional and national distribution and storage infrastructure, and how any support mechanism would interact with the innovation funding already available to gas distribution networks and National Grid through RIIO.

However, there would be value in the NZHF supporting the evaluation of point-to-point, short distance pipeline as part of FEED studies, as understanding the costs of transporting hydrogen from production facilities will be important to inform investment decisions.

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 helps de-risk early investment in projects.

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

Potentially, but we see this as much less attractive than capital grant funding in de-risking early investment in projects.

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

This is likely to differ from project to project, but in general it would help us by reducing our overall exposure to investment risk and supporting the development of a competitive strike price for the CfD under the Hydrogen Business Model.

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.

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

We support the approach of providing development and capital funding, which would support potential investors in refining their understanding of the project costs and risks, help to lower investment risk and lead to a better assessment of a required strike price under the CfD. We note that the NZHF is relatively small in scale, so recommend a focus on supporting projects to market and on bringing forward a range of different technologies.

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

Yes. In the absence of an established market framework, liquid market, and clear routes to market, support for development costs is essential to bring forward potential investment. Support for FEED will play a key role in helping us develop our business proposition and informing an FID.

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?**

The NZFH should focus on FEED and CAPEX support to bring hydrogen production to the market. We do not see an ongoing need for support for pre-FEED studies, which may not lead to commercial development. FEED is a more significant commitment, is crucial to developing commercial projects, and would be a small draw on the NZHF pot. CAPEX support, especially for larger scale and blue hydrogen plant, is essential to reach FID.

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

We broadly agree with the proposed high-level eligibility criteria, with a few queries/observations:

- We agree with the need for projects applying for CAPEX to demonstrate that they have an agreement in principle for the offtake of some or all of their production volumes. Would all off-takers need to be UK-based to be eligible for CAPEX support, or could projects that plan to export some/all of their volumes overseas be eligible? (We note that exported production volumes would not be eligible for the CfD under the Hydrogen Business Model).

- With regard to demonstrating demand for hydrogen in order to qualify for development funding (DEVEX), we note that an agreement in principle is unlikely to be achievable before FEED and recommend that government accepts a letter of intent, or equivalent, as sufficient evidence.
- We note the proposed timeframe for FID in the finance requirements and note that this will have implications for blue hydrogen production facilities in Track 1 of the CCUS Cluster Sequencing process and when they would need to be able to access NZHF funding. For example, we would have to begin FEED in H1 2022 for our first blue hydrogen production plant, in order to enable FID by 2024 and commencement of operation by end 2027 – in line with the Track 1 requirement.

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

Yes.

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.

We support the proposals to have multiple rounds and an eligibility screening stage before full application. We note the intent to launch in 2022 and would welcome more clarity on what the final bidding "system" will be: in our experience, the delivery of specialised IT systems takes longer than the time available to early 2022, so we advocate a simple process – for early rounds, at least – that does not require such a system.

As per our answer to Q12, blue hydrogen facilities will have to be covered in the first round and be linked to Track 1 of the CCUS Cluster Sequencing process. We would welcome further clarity on how the NZHF and Track 2 of the CCUS Cluster Sequencing process will be linked, as well as any future expansion of industrial clusters.

The NZHF should be split into two separate and ringfenced pots – one for blue and one for other production technologies – to be effective in bringing forward a range of production technologies. Bidding rounds for each pot could then be tailored to each – aligned with CCUS Cluster Sequencing for blue hydrogen and more frequently to support the development of smaller scale plant.

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.

We do anticipate applying to the NZHF. We would be seeking development support for FEED level study on blue and green hydrogen production. The need for capital support will depend on progress with the Hydrogen Business Model and results of the FEED studies.

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

We do not yet have sufficient visibility of whether capital support will be needed for construction.