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Response to: Targeting net zero - Next steps for the Renewable Transport Fuels Obligation

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Uniper

Uniper is an international energy company with around 12,000 employees in more than 40 countries. The company plans to make its power generation CO2-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, CO2-reducing solutions on their way to decarbonizing their activities. As a pioneer in the field of hydrogen, Uniper is active worldwide along the entire value chain and is implementing projects to make hydrogen usable as a mainstay of 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 CO2-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. A broad range of commercial activities is offered through the Engineering Services division, while the Uniper Engineering Academy delivers high-quality technical training and government-accredited apprenticeship programmes for the utility, manufacturing and heavy industry sectors.

Uniper Hydrogen

Uniper is investigating the feasibility of CCUS, hydrogen fuel switching, and other decarbonisation options for the UK fleet. Uniper is developing options for low carbon hydrogen production both by electrolysis and gas reformation with CCS, at our Killingholme site, utilising the Zero Carbon Humber infrastructure, and at our

Connah's Quay site in North Wales, to connect to the Hynet North West infrastructure.

Consultation Response

We have set out our answers to the questions below. Please note that due to the very short duration of this consultation, which coincided with the Easter break, we have not had time to consider and respond to this consultation as fully as we would have liked. In future, we would like to see respondents given more time to consider and respond to such consultations.

Our views in summary:

- We recognise and support the need for clear definitions and certification for the different types of renewable and low-carbon gases. Renewable hydrogen, hydrogen produced from power-to-gas processes powered by renewable electricity (green hydrogen), must include hydrogen produced from electrolysers powered by renewable electricity taken from the grid, especially during the first phase of hydrogen market ramp-up.
- We do not support the proposal to require additionality in renewable electricity production as a criteria in the definition of renewable hydrogen. It confuses two policy objectives for delivering the zero-carbon future: promoting zero-carbon hydrogen, and delivering a net-zero or net-negative electricity grid. Hydrogen producers are not best placed to be responsible for decarbonising the power grid.
- Enabling the creation of a market for renewable and low-carbon gases such as hydrogen will be key to support their uptake.
- Hydrogen produced by electricity should be treated as green when accompanied by REGO certificates (just as cars and buses driven by electricity are treated), or evidenced through a power purchase agreement (PPA).
- We welcome the proposals to extend eligibility for RFTCs to renewable fuels used for train, non-road vehicles and commercial vehicles, and to reward RNFBOs for use in maritime transport.

Consultation questions:

(Note, we have not sought to answer all of the questions)

Introducing support for recycled carbon fuels

3. Do you agree or disagree that recycled carbon fuels should be eligible for support under the RTFO given their potential to deliver GHG savings?

We agree. This avoids the need to separate waste according to the source of the carbon (biomass and non-biomass) as the non-biomass waste has already been produced. Allowing RCFs to be eligible for RTFO support ensures that processing and separation can be done in the most efficient way to maximise reuse, recycling and conversion into fuels.

4. **Do you agree or disagree that only RCFs derived from refuse derived fuel and industrial wastes gases should be eligible for RTFO support? If not, please provide an alternative approach and set out why.**

We agree that only RCFs derived from non-recyclable waste-derived feedstocks should be eligible.

5. **Do you agree or disagree that RCFs produced from solid feedstocks should contain at least 25% biogenic content, by energy? If not, please set out an alternative approach with evidence as to why.**

We disagree. There are some technologies (such as gasification) that favour high calorific value fuels (such as non-recyclable plastic) and some that favour high biomass wastes (such as digestion-based approaches). If an arbitrary figure such as “25% biomass” is required on the feedstock, it will drive gasification technology owners to reduce the source separation or blend in order to meet that target and qualify for the subsidy, adding cost without adding climate or other environmental benefits. Provided the feedstock can be demonstrated to be a non-recyclable waste, it should be eligible.

6. **Do you agree or disagree that support for RCFs should focus on those RCFs which can meet the UK’s future strategic needs? That is, that only RCF types which are equivalent to current development fuels should be eligible for support. As such they would be eligible for development fuel certificates and to count towards the development fuel sub-target under the RTFO.**

It is not obvious why the applicable fuels should be restricted in this way. This policy aim is to support the decarbonisation of transport and therefore any transport fuel should be eligible for support rather than just those selected as strategic. Having said this, RCFs have the potential to reach substantial volumes, so should have their own sub-target. For RCFs to share the development fuel sub-target risks undermining support for existing development fuels.

7. **Do you agree or disagree with the proposed GHG minimum thresholds and the timeline for increasing GHG emission saving criteria for RCFs? Please provide an explanation as to why.**

We agree. The threshold levels seem reasonable. Clarity of support over a longer timeframe than 2032 is desirable to support investment so the timeline should be extended. The thresholds for future projects should be kept under review as the policy is rolled out. We believe that the level of carbon reduction should link to the financial reward.

8. **Do you agree or disagree with the proposed GHG emissions methodology to assess the GHG savings for recycled carbon fuels? Please provide an explanation to why.**

We agree; the proposed methodology and counterfactuals seem reasonable and workable. Once the scheme is introduced, they should be kept under review to ensure they are delivering the desired policy objectives.

9. **Do you agree or disagree with our proposal that RCFs from solid feedstocks are eligible for two x 0.25 dRTFCs per litre, and RCFs produced from gaseous feedstocks are eligible for two x 0.5 dRTFCs per litre?**

We don't have a view on the level of support proposed for RCFs but are concerned at the proposal that RCFs be rewarded from the same funding pot as dRTFCs. RCFs and dRTFCs are both important for decarbonising transport, but at this early stage of development involve different technologies, scales and different costs: RCFs have the potential to reach substantial volumes, so should have their own sub-target. For RCFs to share the development fuel sub-target risks undermining support for existing development fuels.

Hydrogen and renewable fuels of non-biological origin

11. **Is "renewable energy that would not have been available to the grid in the absence of power demand from the RFNBO plant in question" an appropriate definition of additional renewable energy?**

No, we do not agree with this definition and approach. Although we note that this could be subject to further consultation on separate guidance, it is not clear how, in practice, it will be possible to demonstrate how much renewable energy would have been available to the grid in the absence of the power demand from the RFNBO plant in question, taking into account the electricity system conditions at the time the hydrogen was produced.
We recognise and support the need for clear definitions and certification for the different types of renewable and low-carbon gases. Renewable hydrogen, hydrogen produced from power-to-gas processes powered by renewable electricity (green hydrogen), must include hydrogen produced from electrolysers powered by renewable electricity taken from the grid, especially during the first phase of hydrogen market ramp-up. Hydrogen produced by electricity should be treated as green when accompanied by REGO certificates (just as cars and buses driven by electricity are treated) or evidenced through a power purchase agreement (PPA).

12. **Should the Administrator be able to take into account the use of power purchase agreements (PPAs) as evidence that suppliers have purchased additional renewable energy in order to allow the renewable power generation to be located in a separate location from the RFNBO production facility?**

We strongly support measures to enable recognition of hydrogen produced from electrolysers powered by renewable electricity taken from the grid evidenced either through a power purchase agreement (PPA) or REGOs. We do not support the proposal to require additionality in renewable electricity production as a criteria in the definition of renewable hydrogen.

13. **A consequence of allowing the use of PPAs to demonstrate renewability, in combination with also permitting other suppliers to use a grid average renewability, is that the same renewable energy could be accounted for more than once. We consider this to be low risk when hydrogen energy and other RFNBO demand is small compared to the total renewable**

energy available on the grid. We are seeking views on whether this risk is acceptable. Is this risk acceptable?

Yes. The risk of GHG saving reductions through use of renewable electricity for hydrogen production would only occur if the development of electrolyser capacity and the take up of hydrogen powered vehicles outpaced the development of new renewable generation sources. In the near term, the two development pipelines and existing supporting policy mechanisms make this very unlikely.

14. **Should appropriate adjustments be made to the amount of renewable energy supplied to a RFNBO production facility to account for transmission losses where renewable energy is transferred over the electricity grid?**

Transmission losses should be accounted for as per current settlement processes, reflecting the locations of both facilities, etc. Any further recognition of losses would in effect be a double penalty.

15. **Do you have any comments on the proposal to use a 30-minute time period for temporal correlation of renewable energy production and use, in cases where renewable energy has been purchased and transmitted across the grid?**

We recognise and support the need for clear definitions and certification for the different types of renewable and low-carbon gases. Renewable hydrogen, hydrogen produced from power-to-gas processes powered by renewable electricity (green hydrogen), must include hydrogen produced from electrolysers powered by renewable electricity taken from the grid, especially during the first phase of hydrogen market ramp-up. Enabling the creation of a market for renewable and low-carbon gases such as hydrogen will be key to support their uptake.

Temporal correlation creates a barrier to hydrogen production, which, at least in the early days, will need to achieve high utilisation factors, have predictable offtake demands and therefore energy supply, and stable incomes to secure board level commitment and investment. Furthermore, this confuses two policy objectives for delivering the zero-carbon future: promoting zero-carbon hydrogen, and delivering a net-zero or net-negative electricity grid. Hydrogen producers are not best placed to be responsible for decarbonising the power grid.

16. **Should the Administrator be able to permit fuel suppliers to use local grid GHG emissions factors in RFNBO GHG emission calculations? Circumstances in which this might be appropriate include where there are local grid constraints or other local conditions which mean that the local grid GHG intensity differs substantially from that of the national grid.**

It is unclear whether this is directed at recognising different grid carbon intensity levels across the geography of the UK, or whether it is referring to imported fuels from countries with state grids etc., (p47). For the UK, we would not agree with a local interpretation of grid carbon intensity by geography as this is subject to significant variance due to time of day and system conditions. If it is desired to recognise different carbon intensities at various locations and various times on the UK system then real time data is available and should be used as evidence.

Using real time data would enable the demonstration of use for low carbon energy from the grid in numerous locations, as time of use in many areas is of greater influence than location. However, the administration of this level of data is likely to be a significant undertaking which should be recognised.

17. **A consequence of allowing local grid GHG emissions to be used in calculating the GHG intensity for a RFNBO is that GHG savings may be claimed by a production facility on a low GHG emission regional/local grid which have also been accounted for in the average national grid GHG intensity. Is this risk acceptable?**

The risk of this scenario appears low and the materiality is not obvious, and it is therefore acceptable.

21. **Hydrogen is likely to be an important power source for parts of the railway that are not possible to electrify. Do you agree or disagree that renewable fuel used in trains powered by fuel cells should eligible for RTFCs?**

Agree

22. **Hydrogen also has the potential to be an important power source for construction and other non-road vehicles. Do you agree or disagree that renewable fuel used in these vehicles powered by fuel cells should eligible for RTFCs?**

Agree

23. **Hydrogen supplied to retail customers is already eligible for RTFCs. Do you agree or disagree that the assessment time for hydrogen should be amended to make clear that fuel supplied to commercial customers can also qualify for RTFCs?**

Agree

Annex A The Role of the RTFO in Domestic Maritime

Chapter 2: Support for renewable fuels of non-biological origin used in shipping

3. Do you agree that RFNBO's for use in maritime transport such as renewable hydrogen and ammonia should be eligible for reward under the RTFO?

Agree.

4. Do you agree that renewable ammonia should be eligible for reward under the RTFO when used in marine fuel cell applications?

Agree.

5. Do you agree that renewable ammonia should be eligible for reward under the RTFO when used in marine combustion applications, if air quality concerns can be adequately addressed? If yes, do you have any views on what standards should apply to the use of ammonia in ICE applications that might be eligible for this support, for example IMO (International Maritime Organization) NOx Tier III22? Please include in your response any evidence on air quality implications arising from the use of ammonia in ICE applications.

Agree.

6. Do you agree with the proposed treatment under the RTFO for RFNBOs used in shipping, including the proposed level of reward for renewable hydrogen, ammonia and methanol? Please provide an explanation as to why you agree or disagree.

Agree, as the number of certificates provided for these RFNBO's is the equivalent energy to one litre of liquid biofuel.