



## **RIO-2 NZASP Re-opener Draft Determinations: Project Union (PU) St Fergus to Teesside and North West Hydrogen Network FEED Studies**

### **Executive Summary**

We welcome Ofgem's draft determinations to fund FEED studies for Project Union's St Fergus–Teesside and North West hydrogen pipelines. These projects are strategically vital to connecting North East Scotland's renewable hydrogen potential with English storage and demand centres. However, to fully unlock the opportunity, FEED must explicitly address the role of green hydrogen production in stabilising *unstable excess wind generation in the North East of Scotland*. This requires (a) pipelines and storage access, (b) complementary flexible loads such as data centres, and (c) urgent reform of the CfD regime to allow curtailed wind volumes to be monetised via hydrogen production.

## Question 1: Needs Case

We agree with Ofgem's assessment that both the St Fergus–Teesside and North West projects present strong needs cases:

- **Curtailment challenge:** In H1 2025, ~4 TWh of Scottish wind generation was curtailed (86% of GB curtailment), imposing significant costs on consumers. Without new offtake pathways, this curtailment will rise materially as offshore wind expands.
- **North East Scotland potential:** Surplus offshore wind in the North of Scotland is expected to produce ~126 TWh of hydrogen by 2045, significantly exceeding regional demand. St Fergus is the logical anchor point for transporting this hydrogen to industrial demand centres in Grangemouth, Teesside, and the North West, as well as to geological storage.
- **Hydrogen as stabilising load:** Electrolysers located in the St Fergus/Peterhead area provide a large, flexible sink for surplus renewables, avoiding constraint payments and creating valuable green hydrogen output.
- **System resilience:** Connecting Scotland to storage at Cheshire and Teesside will provide essential balancing capacity, mitigating risks from variable renewable output and ensuring hydrogen availability for industry and power.
- **Cluster integration:** Connecting St Fergus to Teesside and Cheshire storage underpins Grangemouth's ~8.2 TWh annual hydrogen demand and enables seasonal balancing. Linking St Fergus/Peterhead to wider UK markets allows producers, such as Evolution Hydrogen Peterhead, to reach diverse offtakers.
- **Export opportunities:** A backbone route from St Fergus to Teesside could facilitate future exports to EU markets via Rough storage and interconnectors.

We urge Ofgem to ensure the FEED studies quantify avoided renewable curtailment, system balancing value, and industrial competitiveness benefits. These should be included alongside traditional cost–benefit metrics.

## Question 2: Approach to Protecting Consumer Value

We support the principle of consumer protection through standardised funding approaches. However:

- **Funding reductions:** The proposed deep cuts (50–60% of requested budgets) risk constraining study scope, particularly technical validation of repurposing versus new-build. Robust FEED outcomes are vital to derisking future CAPEX and supporting investment decisions for producers.
- **Counterfactuals:** The current CBA does not adequately consider cluster-only or regional networks as counterfactuals. These alternatives should be robustly tested, but producers emphasise that a national backbone is ultimately necessary to unlock scale economies and enable export potential.

## Question 3: Efficient Costs, Contingency & Private Contributions

- **Contingency:** A 10% contingency is reasonable given “first of a kind” risks. However, flexibility should remain if unforeseen technical challenges emerge, particularly in repurposing pipelines.
- **Private contributions:** While risk-sharing is appropriate, the blanket 10% minimum cash contribution risks delaying mobilisation. Ofgem should permit in-kind contributions (e.g., technical expertise, data access from producers) or phased contributions to avoid project delays.

## Question 4: Land, Planning & Consents

We support Ofgem’s decision to fund preparatory and non-statutory consultation activities. However, alignment with planning timelines is critical. If hydrogen production projects in NE Scotland reach FID in the late 2020s, delays in consents could create stranded capacity. We urge Ofgem to ensure FEED outputs include realistic delivery timelines and early coordination with planning authorities in both Scotland and England.

### Question 5: Regulatory Treatment

We welcome Ofgem's proposal to fund these projects through Totex with TIM, but producers urgently require clarity on the long-term framework:

- **Transition to HTBM/RAB:** Producers need early visibility on whether hydrogen transmission tariffs will be regulated under the Hydrogen Transport Business Model (HTBM) or a RAB-type mechanism. Uncertainty over tariff structures undermines bankability of production projects.
- **100% hydrogen readiness:** FEED must confirm pipelines will be designed for 100% hydrogen service. This is essential for producers' investment cases.
- **Storage access:** Ofgem should clarify principles for open and non-discriminatory access to Cheshire and Teesside caverns. Producers need assurance of transparent capacity allocation.

### Question 6: Draft Directions

We broadly support the draft directions but recommend Ofgem explicitly require:

- Engagement with hydrogen producers in North East Scotland and Grangemouth to align network capacity with production ramp-up.
- Quantify avoided curtailment and consumer cost savings from redirecting constrained energy into hydrogen.
- Assessment of export potential to the EU as part of the FEED studies.
- A roadmap showing how FEED outputs will integrate with DESNZ's HTBM allocation process and timelines.

## Additional Feedback – CfD Reform

Hydrogen production at the required scale will only be feasible with reform of the Contracts for Difference (CfD) regime:

- Current CfDs disincentivise generators from selling curtailed output to hydrogen, as curtailed volumes are treated as “lost” for settlement.
- We propose creation of a **Curtailment Allocation Mechanism** (CAM) allowing CfD-backed generators to nominate curtailed volumes for sale to certified electrolyzers without penalty.
- Alternatively, a **Curtailment Credit** could be introduced within CfD settlement for volumes directed into hydrogen, reflecting avoided system costs.
- Parallel adjustments to the Low Carbon Hydrogen Standard (LCHS) should allow hydrogen made from curtailed power to qualify as low-carbon.
- These reforms are essential to align generator incentives with the national interest of maximising renewable utilisation and enabling green hydrogen.

## Conclusion

The Project Union FEED studies are critical enablers of the UK hydrogen economy. However, their value will only be realised if they:

1. Explicitly model the role of electrolyzers in absorbing curtailed wind in North East Scotland.
2. Quantify the benefits of avoided curtailment, system balancing, and export readiness.
3. Guarantee 100% hydrogen-ready design and open storage access.
4. Align with production project timelines and HPBM allocation rounds.
5. Support CfD and LCHS reforms to monetise curtailed volumes for hydrogen production.

By adopting these measures, Ofgem and DESNZ can turn wasted renewable power into productive green hydrogen, reduce consumer costs, and underpin the UK's position as a hydrogen leader.