



Carbon Capture Usage and Storage Policy Team
Department of Business Energy and Industrial Strategy
3rd Floor Spur
1 Victoria Street
London
SW1H 0ET

By email: clustersequencingconsultation@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: Carbon Capture Usage and Storage – Market Engagement on Cluster Sequencing

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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 CCUS and Hydrogen

Uniper is investigating the feasibility of CCUS, hydrogen fuel switching, and other decarbonisation options for the UK fleet. In addition, 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. Our views in summary:

- Government should avoid interfering with negotiated commercial arrangements and select the capture projects included in successful Cluster Plans and those with existing commercial agreements with the parties in the Cluster Plans.
- The proposed approach is not clear and government must provide more clarity before calling for Cluster Plans in April.
- The evaluation criteria must ensure the delivery of cost effective, operational clusters, with the learnings to transfer to other clusters.

Consultation questions on the overall process:

1. Do respondents agree with the two-phase approach, with provisional sequencing happening first at the cluster level, and then final selection at the individual project level?

The proposed approach is not clear and government must provide more clarity before calling for Cluster Plans in April.

For example: where capture projects are included in Cluster Plans, and are assessed as part of those plans and then selected with that cluster, are they then required to resubmit their plans or to submit further information for Phase-2? To what extent is a capture project's successful performance in the Phase-1 evaluation and its existing commercial agreements with successful Phase-1 cluster partners taken into account when assessing it in Phase-2? What level of detail is expected in Cluster Plans? What level of detail is expected in Phase-2 capture project applications?

We are concerned about the proposal for final selection at individual project level. The proposed process calls for and assesses whole clusters in Phase-1, not just the transport and storage element(s). Government should avoid interfering with negotiated commercial arrangements and the presumption should be that it will select the capture projects included in successful Cluster Plans. The commercial partnerships that underpin Cluster Plans take months to put together and usually follow years of partners exploring options: it is unlikely that government is going to find better options that have not already been considered – and if parties have not been able to successfully negotiate in the years before the launch of this selection process, it is not clear that government can make this happen as part of the selection process.

There is a risk of undermining investor confidence if government cuts across commercial arrangements and investments that have been made in accordance with ISCF processes. The ISCF has been successful in bringing multinational organisations, many of which are direct competitors, together to work collaboratively to help the government achieve its goal of Net Zero by 2050. The proposed process could undermine the commercial arrangements and significant



investments that have already been made, with ISCF support, to develop clusters. For example, a capture project not selected in the Phase 2 Final Project Selection process could exit that ISCF project.

2. Do you have any comments on the indicative timeline? Specifically, does the 10-week window give enough time for industry to gather and submit information for Phase-1 (further information on application information is included within Section 3)?

We don't have any comments.

3. Do you have any concerns about the proposed overlay of Phase-2 (Final Project Selection) and Phase-1 (Provisional Cluster Sequencing)?

We do have concerns. The proposed process announces the two successful clusters from Phase-1 at the same time as requiring the submission of capture proposals for Phase-2. If multiple clusters have been deemed eligible, the capture projects associated with the majority of them will undertake what could be a considerable amount of work to prepare an application only to find that they are not eligible to submit their application, as the cluster with which it is associated has not been successful.

It is not currently possible to assess the scale of this risk, as government has not yet provided any information about the level of detail that will be required for a Phase-2 application.

4. Do you agree that the process should focus on identifying clusters for Track-1?

Yes. Focusing on identifying clusters for Track-1 will allow the most developed clusters to press on and give less developed clusters more time to develop plans ahead of a future process for Track-2.

5. Does the commitment to bring forward details of a process to select clusters for Track-2 mitigate the risks associated with not naming the second Track in 2021?

Yes. A clear process, including timings, for the selection of Track-2 clusters will help industry prepare.

6. What should the allocation process for Track-2 clusters look like? What factors will it be important for government to consider?

As for Track-1, government should avoid interfering with negotiated commercial arrangements and the presumption should be that it will select clusters on the basis of existing agreements between cluster parties.

Consultation questions on entry into Phase-1:

7. Do you have any comments on the proposed eligibility criteria?

No. We are content with the proposed eligibility criteria.

8. Do you have any comments on the proposed requirement that an applicant has to meet the definition of a CCUS cluster to enter the process? Do you have any comments on the proposal to relax this requirement when considering Track-2 cluster?

We support the proposal to relax the requirement for Track-2 clusters to include transport and storage operators. Not all capture plant will be located somewhere it makes sense to connect to via pipe, and the use of alternative solutions, such as shipping, can help support the decarbonisation of clusters that are not near pipe infrastructure and would enable future provision of carbon storage services to non-UK capture plant.

9. We are suggesting that the T&SCo take on the role of Cluster Lead. Are there any challenges associated with T&SCo being an effective Lead for the cluster?

Clusters should determine their own commercial relationships and select their own Cluster Lead.

The choice of lead entity is irrelevant in terms of meeting the eligibility criteria or evaluation criteria.

10. We state that there should be a level of commitment from a capture project for it to be included on the Cluster Plan. Is an MoU an appropriate and achievable form of commitment?

An MoU is an appropriate and achievable form of commitment for capture projects that are included on the Cluster Plan.

Whether a capture project has an MoU or other negotiated agreement in place with one or more of the parties in a Cluster Plan should also be part of the deliverability assessment criteria in Phase-2.

11. What should government be doing to facilitate remote sites and shipping and when should government be doing this?

In this selection process, Government should favour storage sites that will have facility – or have the potential to have facility in the future – to accept shipped CO₂. This will support the decarbonisation of UK clusters that are not near pipe infrastructure and would also enable future carbon storage services to non-UK capture plant. This should be part of the evaluation criteria in Phase-1, where it is likely to impact the assessment of cost considerations, economic benefits, and learning and innovation.

Consultation questions on Phase-1 cluster sequencing process:

12. Do you have any comments on the proposed evaluation criteria?

The deliverability criteria should require all parties to the Cluster Plan to have MoU, or at least equivalent negotiated commercial agreements, in place. This should also extend to capture projects in Phase-2. The deliverability criteria should recognise, in both Phase-1 and Phase-2, where capture projects have contributed to funding through the ISCF within a Cluster Plan.



The deliverability criteria assesses all elements of the Cluster Plan, including whether “each part of the cluster is equally developed with plans in place to manage and minimise timing mismatches”. This should also be taken into account in the separate assessment of capture projects in Phase-2.

The deliverability criteria assesses indicative finance plans for each part of the chain. The assessment of these needs to take account of the fact that BEIS has not yet published any business models for capture projects – in particular, the hydrogen business model is not due to be published for consultation until Q2 2021. This will affect the amount of detail capture projects are able to provide about their financial operating models.

Government should ensure that it publishes the hydrogen business model consultation as soon as possible, and well in advance of the Phase-2 application deadline, to ensure that hydrogen CCUS projects are not disadvantaged. Equally, evaluation should not disadvantage hydrogen production where decarbonisation potential comes from other industries and sectors rather than the project itself.

13. Do you agree with weighting ranges proposed for the evaluation criteria?

We agree that deliverability should be weighted more heavily than other evaluation criteria, with the maturity of negotiated commercial arrangements taken into account as part of this criteria.

After this, cost considerations – and, in particular, the levelised cost of abatement – should be the second most heavily weighted criteria: it is critical that clusters and projects represent value for money.

Learning and innovation should be the third most heavily weighted criteria, so that maximum value can be derived from the first clusters to inform and support the development of future clusters.

Meeting these criteria will ensure the delivery of cost effective, operational clusters, with the learnings to transfer to other clusters.

14. Do you have any comments on the proposal to consider portfolio factors when selecting the Track 1 clusters? In particular, do you have any comments on the potential portfolio factors that the Government should have regard to?

Portfolio considerations should include the long-term potential for emissions reductions, the potential for carbon stores to have facility for shipped CO₂, and the strategic value of capture projects. In particular, hydrogen CCUS projects should not be disadvantaged by the relative lack of development of the hydrogen market and business model in the UK.

Questions on Phase-2 final project allocation:

15. Do you agree with the proposed approach for allocating the first power CCUS contract(s)?



We agree with the need for bilateral negotiations at this time, but the cluster and capture project selection process must be arms-length, robust and, importantly, transparent to ensure fair competition.

As stated above, the deliverability of projects, including the existence of negotiated commercial agreements, should be a priority for assessment. For this reason, the maturity of projects, and their dispatchability (capability to provide dispatchable generation capacity) are critical.

As for the cluster as a whole, project cost, followed by learning and proof of concept are the next most important criteria for assessment.

Government should publish more information about the Phase-2 selection process, including how criteria will be weighted and what is expected from applicants, by the time it calls for Cluster Plans in April, at the latest. Government should also provide clarity on the proposed DPAs as that will be a key criteria for advancing a project into a cluster in either phase 1 or phase 2. Investment and timescales are considerable for developing a credible power CCUS project.

Government should also provide more information on the process where capture projects in a Cluster Plan are not selected to go forward in to Phase 2 but could subsequently be advanced as their project matures. This could mean that Government would have a reserve of capture projects potentially avoiding the need for a full reversal of the tracks process.

16. Do you agree with the proposed approach allocating the first industrial carbon capture contracts?

As above

17. If a developer has prepared a capture project bid and then the cluster it was planning to connect to is not sequenced onto Track-1, could it be feasible for the project to submit a revised bid to connect to a different cluster (i.e., one that was sequenced onto Track-1)?

It may be feasible, but that project would not have the negotiated commercial relationships or an MoU with the T&S operator(s) for a different cluster. There may be reasons for a capture project not to have these relationships, which may include previous failed negotiations.

Government should avoid interfering with negotiated commercial arrangements.

18. Do you have any comments on the proposal to swap out a Track 1 cluster, to begin negotiations with a reserve list cluster instead? In particular, do you have any views on the feasibility of a reserve list cluster replacing one of the Track 1 clusters?

This may be feasible but is likely to mean considerable lost time unless the reserve list cluster has been supported by another means, such as ISCF funding, to progress with project design and FEED. It is not clear what process government would follow to select a reserve list cluster to replace a Track-1 cluster, and government should provide more detail on this.



Government should provide more clarity about the relationship between this selection process and other funding mechanisms, such as the ISCF. The ISCF has been successful in bringing multinational organisations, many of which are direct competitors, together to work collaboratively to help the government achieve its goal of Net Zero by 2050. The proposed cluster sequencing process should build on the support already provided by the ISCF to enable the development of commercial arrangements and significant private investment in Cluster Plans – or, at the very least, should ensure it does not cut across it. If the ISCF and the cluster sequencing process are not aligned, the cluster sequencing process could have unintended consequences for ISCF deployment funded projects.