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Connections Reform

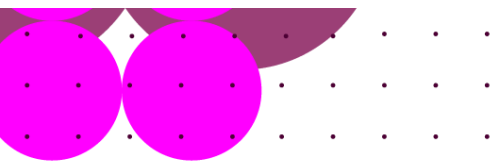
Consultation Response Proforma

Your feedback is important to this process. Please take this opportunity to provide any feedback that you may have. To aid your response, each question is linked back to the relevant document for ease of reference.

Please provide your feedback using this Proforma and sending an electronic copy to box.connectionsreform@nationalenergyso.com by 5pm on the closing date of 2nd December 2024.

We encourage early submission ahead of the deadline where possible to aid the processing of responses.

Respondent Details	
Name	Brett Ryan
Organisation	Hydrogen UK
Email Address	brett.ryan@hydrogen-uk.org
Phone Number	
Which category best describes your organisation?	<div><input type="checkbox"/> Consumer body</div> <div><input type="checkbox"/> Demand</div> <div><input type="checkbox"/> Distribution Network Operator</div> <div><input type="checkbox"/> Generator</div> <div><input checked="" type="checkbox"/> Industry body</div> <div><input type="checkbox"/> Interconnector</div> <div><input type="checkbox"/> Storage</div> <div><input type="checkbox"/> Supplier</div> <div><input type="checkbox"/> System Operator</div> <div><input type="checkbox"/> Transmission Owner</div> <div><input type="checkbox"/> Virtual Lead Party</div> <div><input type="checkbox"/> Other</div>



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This response seeks to reflect the collective views of Hydrogen UK members. As such, any view provided may not exhaustively represent the perspective of individual members and should be considered together with submissions made separately by members.

Section 1 – Policy

You can find the relevant information in the **Great Britain’s Connections Reform: Overview Document**

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1. Do you agree with our intention to align the connections process to Government’s Clean Power 2030 Action Plan?
You can find the relevant information in Section 2 – Context
Members are broadly supportive of the proposal to align the connections process to Government’s Clean Power 2030 Action Plan; however, it is noted that this plan is not yet published, and therefore the feedback provided in this response is based upon NESO’s CP30 advice to Government. HUK recommends that the connection process is simplified and co-ordinated with Government funding schemes. Question 18 presents more detailed considerations from members.

2. Do you agree with our proposal for overall design 2 (that the reformed connections queue should be limited to and prioritised to only include ready projects that align with Government’s Clean Power 2030 Action Plan, NESO Designated Projects, and directly connected demand projects outside the scope of Government Clean Power 2030 Action Plan)?
You can find the relevant information in Section 5 – Our overall preferred connections reform design
Members are broadly supportive of the proposal for Overall Design 2; however: <ul style="list-style-type: none">• key concerns with the ‘Strategic Alignment’ criteria and how it would be applied to hydrogen projects;• some members prefer Option 2, particularly those with projects already in the queue that are not explicitly linked to the CP30 plan. Question 18 presents more detailed considerations of the concerns and suggestions from HUK’s members.

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3. Do you think all 'ready' projects should be included in the reformed connections queue (overall design 3)? If so, how would you propose that we mitigate risks to consumers or developers of material misalignment to the SSEP?

You can find the relevant information in **Section 6 - Assessment of alternative design for connections reform**

Question 18 presents more detailed considerations of the concerns and suggestions from HUK's members.

4. Do you agree that the reformed connections queue should initially focus on the 2035 time horizon?

You can find the relevant information in **Section 4 - Key building blocks for aligning connections to strategic energy plans**

Question 18 presents more detailed considerations of the concerns and suggestions from HUK's members.

Implementation Questions

You can find the relevant information in the **Great Britain's Connections Reform: Overview Document**

5. Do NESO's preferred options against each of the variables discussed in the Overview Document best deliver efficient alignment to Government CP30 Plan?

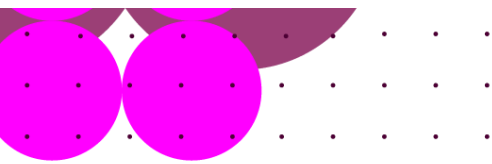
You can find the relevant information in **Section 5 - Our overall preferred connections reform design** and **Section 7 - Further variables and options to align connections reform with strategic energy planning**

Question 18 presents more detailed considerations of the concerns and suggestions from HUK's members.

6. Do the methodologies deliver our preferred options against each of the variables?

You can find the relevant information in **Section 3 - Overview of framework of codes and methodologies for connections reform**

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Question 18 presents more detailed considerations of the concerns and suggestions from HUK’s members.

7. Are there key policy areas that are not covered by our preferred options against each of the variables or that would not be delivered by the methodologies?

You can find the relevant information in **Section 5 – Our overall preferred connections reform design** and **Section 7 – Further variables and options to align connections reform with strategic energy planning**

Question 18 presents more detailed considerations of the concerns and suggestions from HUK’s members.

8. Do you agree with our approach to managing project attrition between 2025–2030, and 2031–2035, whilst ensuring that the SSEP can deliver maximum benefits to GB consumers?

You can find the relevant information at **Section 7 – Further variables and options to align connections reform with strategic energy planning**

No response

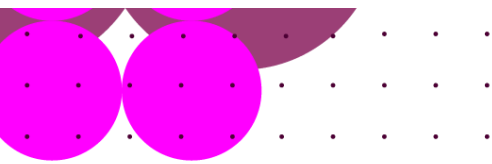
Connections Network Design Methodology

You can find the relevant information in the **Connections Network Design Methodology – Detailed Document**

9. Do you agree with the approach to applying the Gate 2 Readiness Criteria and the Gate 2 Strategic Alignment Criteria to the existing queue and future Gate 2 Tranches?

Question 18 presents more detailed considerations of the concerns and suggestions from HUK’s members.

10. Do you agree with the approach to managing advancement requests?



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No response

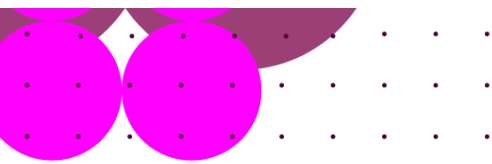
11. Do you agree with the approach to reserving Connection Points and Capacity at Gate 1?
Question 18 presents more detailed considerations of the concerns and suggestions from HUK's members.

12. Do you agree with the approaches to reallocating capacity when 2030 pathway projects and 2035 pathway projects exit the queue?
Question 18 presents more detailed considerations of the concerns and suggestions from HUK's members.

Gate 2 Criteria Methodology

You can find the relevant information in the [Gate 2 Criteria Methodology- Detailed Document](#)

13. Do you agree with the following elements of this Gate 2 Criteria Methodology?
a. Gate 2 Readiness Criteria – Land (Chapter 4)
b. Gate 2 Readiness Criteria – Planning (Chapter 5)
c. Gate 2 Criteria Evidence assessment (Chapter 8)



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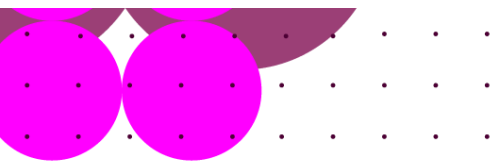
d. Self-Declaration Templates (Chapter 9)
Please insert your answer here for a).
Please insert your answer here for b).
Please insert your answer here for c).
Please insert your answer here for d).

14. Do you agree that the alternative route of meeting the Gate 2 Readiness Criteria should be only limited to projects that seek planning consent through the Development Consent Order route?
Question 18 presents more detailed considerations of the concerns and suggestions from HUK's members.

Project Designation Methodology

You can find the relevant information in the **Project Designation Methodology - Detailed Document**

15. Do you agree that the categories of projects that we have identified are the appropriate ones to potentially be designated?



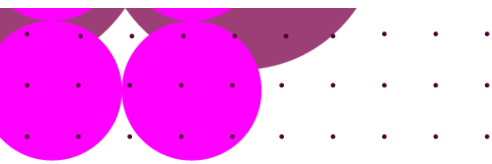
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No, HUK seeks clarification on the types of hydrogen projects (i.e. production and H2P) that might be considered to meet the criteria for ‘materially reduce system/ network constraints’ and how project developers would evidence this as part of a connection request.

16. Do you agree with the proposed criteria for assessing Designated Projects?
Question 18 presents more detailed considerations of the concerns and suggestions from HUK’s members.

17. Do you agree with the indicative process NESO will follow for designating projects?
Question 18 presents more detailed considerations of the concerns and suggestions from HUK’s members.

Additional Questions



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18. Do you have any other comments (including whether there was anything else you were expecting to be covered in these documents)?

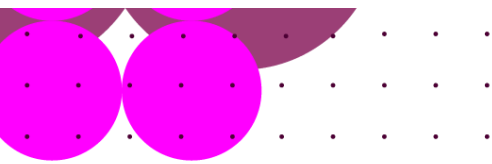
Key positions taken by Hydrogen UK

- HUK members broadly support Design 2, however:
 - key concerns with the 'Strategic Alignment' criteria and how it would be applied to hydrogen projects (see below);
 - some members prefer Option 2, particularly those with projects already in the queue that are not explicitly linked to the CP30 plan.
- HUK recommends that the connection process is **simplified** and **co-ordinated with Government funding schemes**. If a project is successful in receiving a Government subsidy, such as a LCHA, H2PBM or renewable CfD, then that should automatically meet the 'Strategic Alignment' criteria.
 - The vast majority, if not all, hydrogen projects will be reliant on a Government support contract to reach operation.
 - Utilising this automatic qualification avoids multiple potentially divergent or conflicting assessment processes.
 - HUK would like to propose that the process for entry into the NESO reformed queue be better aligned with the respective hydrogen funding rounds, including electrolytic hydrogen allocation rounds (HARs), the Cluster programme, the hydrogen transport and storage business models (HTBM and HSBM) and the future hydrogen to power (H2P) business model.
 - This should involve aligning the relevant Government funding application and NESO connection request processes to avoid the potential scenario of a project seeking Government funding requiring a firm connection date from NESO, but the project not being able to receive a connection date without sufficient progress through the Government funding process.
 - HUK notes that both HAR 1 and HAR 2 were oversubscribed by roughly a factor of 10. This shows the significant potential level of hydrogen production capacity in the UK, however, in its proposed form, NESO will deem such levels of hydrogen capacity as a situation of "oversupply" (were they all to apply for a connection request in the hope or expectation of being awarded a Government contract) and thus send a lot of hydrogen projects to either to back of the queue or send them to Gate 1. This poses a significant risk for projects already in the queue and those seeking to join in future, and could lead to a cooling in investor confidence in the hydrogen economy. While HUK sees merits in allowing entry to projects into the reformed queue on the basis of CP30, we would like to point out that there is a lot more project capacity for hydrogen than some scenarios of CP30 predict.
 - HUK seeks the flexibility for the hydrogen industry to exceed targets/ranges in the CP30 Plan as this can deliver system wide benefits, mitigating the risk of undersupply by other technologies and enabling wider decarbonisation.

Key concerns raised by Hydrogen UK

- Uncertainty over the definition of 'aligned with the pathways in the CP30 Plan' and how this will be applied to hydrogen projects.
 - HUK expects that most hydrogen projects seeking a grid connection will be assessed to fall within this Strategic Assessment criteria.
 - Hydrogen in the energy system is both generation and demand in terms of electricity connection; and therefore hydrogen projects must be considered across the full value chain, from production to distribution, storage and end use to ensure that supply and demand are aligned and physically linked.
 - However, NESO's Clean Power 2030 Report to Government was not explicit in the capacities of hydrogen production and infrastructure that are expected to be in operation in 2030 to support not only clean power, but wider decarbonisation of industry and mobility.
 - The data workbook that was published alongside NESO's Clean Power 2030 Report includes some production figures relevant to hydrogen.
 - Note: the figures for electrolytic hydrogen production capacity broadly aligns with HUK's own analysis of the trajectory for electrolytic capacity for projects coming through annual allocations of the HAR process
 - **HUK and its members seek further clarity on the range of hydrogen production capacity (with explicit breakdowns for production pathways), transport and storage infrastructure, and end use consumption that would be considered to be 'aligned with CP30'**
 - We understand that the CP30 Pathways were largely based on the Holistic Transition Pathway from FES 2024, and that NESO's advice is for the pathway for 2031-2035 to be based on the HT pathway.
 - It is important to remember that the power system in 2035 will look very different to the one in 2030, with NESO itself noting that there will be a significant increase in peak electricity demand by 2035.
 - The average cold spell peak demand in the HT pathway in 2035 is predicted to be 21% greater than in 2030, indicating a significantly larger role for low carbon flexible generation including hydrogen and Gas CCS
 - Both technologies rely on transport and storage infrastructure which have long lead times that are required to be built ahead of time.
 - HUK's members note that the hydrogen production and consumption figures for the HT pathway are conservative, and flexibility should be afforded to allow for more rapid deployment of hydrogen which will mitigate the risk of undersupply by other technologies and enable wider decarbonisation.
 - **HUK and its members strongly recommend that there is no 'cap' on the range of hydrogen production capacity considered to be 'aligned with CP30' as part of the Strategic Assessment.**
 - The requirement for low carbon hydrogen is set to increase rapidly from now to 2030, 2031 to 2035, and beyond, both in the electricity system and wider decarbonisation of industry and mobility.

- As shown in the modelling for CP30, the addition of hydrogen for flexible generation greatly reduces the pressure on the incredibly ambitious deployment rates for wind, solar, batteries, etc.
- The vast majority, if not all, hydrogen projects will be reliant on Government support to reach operation.
- Having a separate assessment by NESO to decide if these projects are 'aligned with CP30' when Government owns that plan introduces unnecessary additional effort and risk of misalignment.
- HUK also believes that any 'cap' on hydrogen's role in the energy system will disincentivise hydrogen production. It could also make NESO a unilateral voice on how much hydrogen can be produced and thus solely dictating the future course of the hydrogen economy in the UK.
- If there is to be a 'cap' on capacity for hydrogen projects considered to be aligned with the CP30 Plan (which HUK disagrees with) then HUK seeks clarity on how will this be tracked, monitored and reported so that industry has visibility of the capacity already allocated and therefore remaining?
- Uncertainty over criteria for 'designated projects'
 - "In general, NESO only envisages designating projects in exceptional circumstances, where those projects demonstrate that they meet the detailed criteria set out in this Project Designation Methodology".
 - HUK seeks clarification on the types of hydrogen projects (i.e. production and H2P) that might be considered to meet the criteria for 'materially reduce system/ network constraints' and how project developers would evidence this as part of a connection request.
- Uncertainty over the definition of 'transmission-connected demand project not in the scope of pathways within the CP30 plan'
 - Insignificant detail provided in the consultation documents regarding definition or criteria for assessing the benefit
 - HUK members are planning a number of large-scale projects that could satisfy this definition, with transmission connected electrolyzers producing hydrogen to decarbonise industry and mobility
 - Some of these projects could be located in areas where there is already significant curtailment, or where electricity grid is constrained, and therefore also deliver benefits that reduce system / network constraints.
 - There is a concern that the majority of NESO's focus is on power decarbonisation and it could come at the cost of the UK's progress in wider decarbonisation. Many industrial and mobility consumers have needs beyond electrification to achieve their decarbonisation goals and targets. Therefore, we believe that NESO should also give equal consideration to projects that can materially drive industrial decarbonisation and clean growth.
 - HUK and its members seek further clarification on:
 - the definition of projects that are likely to fall into this category;



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- *how they will be assessed;*
 - *how they will be accounted for in the overall capacity of hydrogen production projects approved via 'aligned with CP30 plan' and 'designated projects'.*
- *Uncertainty over the applicability of NESO's reforms to distribution connected projects*
 - *Many hydrogen production projects will be seeking their connections from the distribution network, but the consultation appears to suggest that distribution-connected demand is outside the scope of the reforms. However, it has been flagged to HUK that at least on DNO requires all demand projects above about 10MW require a transmission mod-app and therefore might benefit from being able to enter the reformed TMO4+ (Gate 2) process.*
- *Members have also flagged the following potential concerns:*
 - *Concern that hydrogen projects that are seeking distribution level connection are aggregated with other projects that results in a 'de-prioritisation' for issues that are outside of their control.*
 - *Planning: concern around the proposed ongoing 'Land' requirements to continue to meet Gate 2 Criteria (see Element 11 of CMP 434).*
 - *Land Readiness: an expectation for projects to have secured 20-year leases for land increases costs and subsequent risk of projects that are not guaranteed to reach delivery due to uncertainty with regards to receiving a grid connection and Government funding.*