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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](mailto:box.connectionsreform@nationalenergyso.com)** by **5pm** on the closing date of **2<sup>nd</sup> December 2024**.

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

Respondent Details	
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<b>Which category best describes your organisation?</b>	<input type="checkbox"/> Consumer body <input type="checkbox"/> Demand <input type="checkbox"/> Distribution Network Operator <input checked="" type="checkbox"/> Generator <input type="checkbox"/> Industry body <input type="checkbox"/> Interconnector <input type="checkbox"/> Storage <input type="checkbox"/> Supplier <input type="checkbox"/> System Operator <input type="checkbox"/> Transmission Owner <input type="checkbox"/> Virtual Lead Party <input type="checkbox"/> Other
<b>Is this response confidential?</b>	<input type="checkbox"/> Yes – I do not wish for this response to be shared publicly; however, I understand it will be shared with Ofgem

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☒ No – I am happy for my response to be available publicly

## Section 1 – Policy

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

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**

- We commend CP30 for its ambition and the proposed initiatives to deliver a clean network and reduce the overwhelming number of connection applications. In particular, we appreciate efforts to expedite the involvement of speculative parties necessary to support the 2030 Clean Power Mission. However, we are concerned that these initiatives may adversely affect serious developers committed to delivering this mission. We urge that projects currently in the queue, specifically those that have met the Gate 2 criteria and are set to be completed by 2029, be exempted from these new measures. Failing to do so could undermine investor confidence and delay our progress toward achieving the 2030 targets. To meet these targets, it is essential to prioritize project delivery, focus on deploying solutions, and ensure that progress is not hindered.
- There is significant uncertainty with investors, hindering their ability to make the right investments to support these projects. Additionally, there is a limited supply chain to meet the growing demand. Numerous reforms, including the REMA initiative, have rendered the UK energy market unpredictable. Restoring policy stability is essential for boosting investor confidence and maintaining momentum. In this context, we question whether NESO can realistically review all existing projects within the proposed timeframe. To this date, there is no clear information shared by NESO on how to tackle this matter.
- All shovel-ready projects are significantly impacted and disadvantaged due to these reforms. Given the ongoing climate crisis, it is counterproductive to hinder project development, especially for initiatives with clear paths to market. There are concerns regarding how NESO evaluates "regional need" and whether this assessment aligns with actual development, land requirements, and planning consent. Additionally, has NESO assessed how this plan removes existing constraints within the network and provides economic benefits to the end consumer? This aspect has not been reviewed.

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- The connection reforms should prioritise projects that are ready to proceed; the current gated process already achieves this. The focus should be on expediting project delivery rather than introducing new barriers.

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 the 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**

Similar to point 1, we recognize the importance of this issue; however, we disagree with the proposed reforms. Instead of imposing measures that could hinder progress, the focus should be on incentivizing the expansion of renewable projects, especially those that are ready to build before 2030 and are currently facing penalties. NESO's goal of achieving 47.4 GW of solar capacity by 2030 raises significant concerns. The transmission and distribution (D/T) split of 90/10 could delay meaningful progress and put pressure on the supply chain. This target appears overly conservative and risks acting as a de facto limit on solar deployment in Great Britain. Such constraints could severely hinder the clean energy transition.

Solar energy, along with co-located Battery Energy Storage Systems (BESS), can be deployed quickly and is essential for meeting the CP30 targets. NESO must prioritize utilizing this potential and work to eliminate the barriers that hinder our progress, especially for projects slated for 2030 that can demonstrate this capability

NESO has significantly underestimated the role of solar energy in its Clean Power Mission recommendations. Incorrect assumptions are affecting the NGESE and CP30 projects. The regional distribution of solar energy in NESO scenarios does not align with land requirements, specifically regarding agricultural grades and high planning risks. This situation needs to be thoroughly reviewed with stakeholders to ensure timely project delivery. Furthermore, the co-location of Battery Energy Storage Systems (BESS) needs to be reassessed by NESO, as it is not currently defined as a standalone unit; instead, it serves an ancillary role to solar technology. Additionally, the assumptions used for BESS modelling have been incorrectly applied, which may result in market signals driving outcomes rather than the currently modelled worst-case scenarios. A similar argument can be put forward for onshore wind farms' regional

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breakdown without any emphasis being put on planning policy, which hasn't encouraged favour of these technologies until now, so there hasn't been a significant deployment in the past.

NESO's low solar capacity projections do not reflect actual deployment trends. While they predict 15.1 GW of solar capacity in 2023, our data shows it will be closer to 20 GW in 2024, including 11.5 GW from solar farms, 8.5 GW from rooftop installations, and 3 GW under construction. Additionally, 11 GW of solar farms have planning consent, with rooftop solar expected to add around 1 GW annually. NESO's conservative estimates risk capping solar potential, harming investment in British solar energy, and hindering progress toward CP30 goals.

Reforming grid connections is urgent, but it's essential that these changes do not penalize clean power generators based on their energy sources. The current process already prioritizes ready-to-connect projects, and additional barriers could delay these initiatives during a climate crisis. Any reform should promote, not discourage, clean energy projects with clear market pathways.

NESO's approach raises questions about its alignment with reforms such as REMA and SSEP. If the connection process determines project locations and timelines, what role do locational signals or market mechanisms play? Additionally, how will TNuOS be integrated, and how will regions that do not meet their capacity be compensated by other regions? This could lead to a less competitive decarbonization pathway, jeopardizing the achievement of CP30 targets. Furthermore, NESO's pathways do not clearly identify where capacity is most needed. For example, while London may require significant generation, developing it there is impractical. In contrast, northern Scotland has abundant resources but receives limited capacity allocation, leading to heavy congestion and constraint costs that will ultimately be borne by the end consumer. Battery Energy Storage Systems (BESS) play a crucial role in meeting demand when generation is scarce, yet this has not been adequately factored into the plans. These pathways should avoid dictating specific technological diversity or locations, as they are based on assumptions rather than clear requirements.

Project costs can vary significantly even among the same technology and location plays a big factor in this. Using uniform assumptions about costs can result in flawed policies that overlook cost-effective projects. This variability is present across all renewable technologies and is influenced by factors such as grid connection costs and resource availability.

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Limiting project pipelines does not ensure the selection of cost-efficient projects, as there is no consistent correlation between NESO's selection criteria and cost-effectiveness which doesn't align with policies of economic and efficient build.

Given this context, limiting capacity by technology or location based on Pathway predictions would be counterproductive. It is crucial to allow for the reasonable over-development of projects to maximise competition, reduce consumer costs, and ensure a successful transition to clean energy. Reforms should prioritise flexibility, competition, and rapid deployment to efficiently and cost-effectively achieve the CP30 targets.

The reform's strategic planning elements introduce significant legal risks. NESO's current method, in which the government directly selects capacity mixes, conflicts with the principles of independent regulation and could encounter domestic and international legal challenges. Incorporating strategic planning may delay the implementation of reforms, which would be counterproductive to reducing queue sizes and expediting clean energy projects.

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**

Based on our responses to points 1 and 2, we believe that no projects categorised as "ready to build" should be included in the proposed reformed connections queue unless they are sufficiently advanced and can demonstrate their readiness. We classify any projects expected to be completed before the backstop date of 2028 as needing to have made significant progress in land acquisition, obtaining planning permissions, and establishing a pathway to financial markets to ensure they can achieve the CP30 targets. Additionally, the current backstop of 2026 to which these reforms do not apply is incorrect, as many of those projects should also be in construction or at an advanced stage. If not, then QM management milestones should be applied apprehensively applied.

Our response aligns with CMP434, and we strongly advocate that these proposals do not impede the delivery of viable projects that have already shown the intent to build.

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Placing projects that exceed capacity at the back of the queue is counterproductive, stifling development and progress toward CP30.

NESO should ensure careful alignment with the project pipeline and planning processes. Industry data clearly outlines what can realistically be built and where over the next few years. To ensure efficient progress, projects with secured routes to market, such as Contracts for Difference (CfD) or private investment backing that can demonstrate financial investment decisions (FID), should be prioritised.

TMO4—Queue Management should provide confidence in any sufficiently advanced existing project and equip NESO with the necessary tools to monitor users' progress towards the CP30 or SSEP plan. Additionally, users will not be allowed to delay their timelines unless there are force majeure circumstances. NESO reserves the right to terminate users who do not accelerate their progress or provide other users with an opportunity to accelerate.

### 4. 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**

We recognize the importance of this reform to comply with CP30 and SSEP requirements. However, as mentioned in our response to point 3, this should not impact any pre-2030 projects that are already advanced in development and ready for construction.

The Queue Management and User Commitment methodology should effectively monitor the progress of all parties involved, allowing for termination if progress is not made. These proposals should only apply to new connections established after the 2030 connection date, as imposing them on projects that have significantly progressed before that time would be neither economical nor efficient.

Implementing this approach for existing, ready-to-build projects will further undermine investor confidence. The ongoing uncertainty will adversely affect our ability to achieve CP2030. As a result, investment decisions for onshore renewable generation and storage will face delays.

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While we firmly support our position, we do see the benefits of implementing these measures closer to 2030 to help drive the right market signals, identify any gaps, and ensure that they are being addressed.

## 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**

The variables presented in our perspective will not lead to an efficient CP30 plan. NESO has provided an overview of how these mechanisms will operate, but we lack a clear understanding of the specifics regarding how each region is designated by technology and location.

There is no guarantee that the proposed reform will resolve undersupply and oversupply issues. CP30 may fail to meet targets across regions, hindering supply and demand balance. This could result in inefficient design solutions requiring further reinforcements if alternatives are unavailable.

A pertinent example is the solar requirements in the UK. NESO continues to reference the aggregate figure of 736 GWp in the connection queue, suggesting it solely represents generation capacity, which exceeds our actual needs. However, this figure is misleading: storage (including hydrogen storage) accounts for 37%, demand for 6%, non-renewable sources for 4%, interconnectors for 4%, and nuclear for 2%. Consequently, renewable generation constitutes only 47% of the total—an essential detail that is frequently overlooked.

Moreover, demand projects must expand beyond transmission-related projects to include distribution. These projects should be based on megawatts (MWs) since they can significantly impact the network's design, especially for those with substantial data import requirements.



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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**

Based on the points we raised in items 1, 2, 5 and 9 below, we do not believe the proposed methodologies satisfy the requirements outlined in the CP30 plan. Our concerns remain consistent with those expressed in CMP434. The tight deadlines do not account for the current consultation timelines, and there is still a lack of clarity regarding numerous aspects of the reform.

We believe that any sufficiently advanced projects should be exempt from the Gate 2 requirements. We define these projects as those with connection dates on or before 2029, projects that have already obtained planning permission, and those with a clear route to market, such as a Contract for Difference (CFD) or a Final Investment Decision (FID) in place. This approach will help minimize delays in achieving our Clean Power 2030 target. Any reforms must ensure that they do not hinder the progress of viable projects that have already shown the intent to build.

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**

As mentioned in point 5, the lack of planning and development policies is a significant barrier that prevents regions from effectively balancing generation and demand across different technologies and locations. This inadequacy undermines efforts to achieve CP30.

According to the NESO plan, the substantial demand for solar technology in the south must include planning policies that can accelerate its deployment in that region, as well as thorough land assessments to ensure the technology can be implemented effectively. Without these measures in place, it is difficult to understand how NESO has developed a satisfactory plan to identify suitable areas for generation across various technologies. This plan does not seem to align with key variables, particularly issues of oversupply and undersupply, as well as the lack of necessary projects.



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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**

We do not agree with these proposals, particularly projects pre-2030 that should have already been developed and demonstrated, be ready to build, be exempt from this reform, and be allowed to accelerate. This will hinder benefits to the end consumer and can be managed under current TMO4+ regimes

Calculated attrition rates need to be applied as there is a risk here of a gap between other variables that will defer meeting CP30 and SSEP plans post 2030.

## Connections Network Design Methodology

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

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

To successfully achieve the Clean Power 2030 targets, sufficiently advanced projects should be exempt from the requirements of Gate 2. This exemption applies to projects with connection dates before 2030, those that have received planning permission, and projects that have secured a route to market, such as a Contract for Difference (CfD), a Final Investment Decision (FID), or a Power Purchase Agreement (PPA). It is essential to protect these projects from additional barriers, as they have already demonstrated clear intent and made significant progress toward deployment.

The Queue Management and User Commitment methodology should effectively monitor the progress of all parties involved, allowing for termination if no progress is made. These proposals should apply only to new connections established after the 2030 connection date, as imposing them on projects that have significantly progressed before that time would not be economical or efficient. Furthermore, there is still a need for clarity regarding how the regions have been categorized by location and technology.

There is also a risk of undersupply in key technologies identified in each region, which could lead to a shortfall in meeting the Clean Power 2030 plans. Any proposals related to connection reform must ensure that they do not hinder the delivery of viable

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projects that have already demonstrated a commitment to build and can provide evidence of this commitment. This principle should be consistently applied across both transmission and distribution parties to ensure that all relevant stakeholders are considered.

This approach will help accelerate progress and reduce the need for heavy infrastructure spending based on inaccurate forecasts and insufficient oversight of current network needs. For example, in distribution, a significant amount of new embedded generation is being recorded, necessitating new Super Grid Transformers (SGTs) at every node. This situation is driven by the Distribution Network Operators' (DNOs) inability to terminate or monitor the progress of their customers, allowing them to remain in the queue without any impact.

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

All existing projects capable of being accelerated and demonstrated should be exempt from the Gate 2 process, except for new applicants, as outlined in point 9.

### 11. Do you agree with the approach to reserving Connection Points and Capacity at Gate 1?

No, all existing projects that can demonstrate and accelerate should be allocated to their bay provided and exempt from Gate 2 requirements. There is an opportunity which hasn't been explored to review the bay design to assign various parties to utilise the full capacity of the bay.

Implementing this approach for existing, ready-to-build projects will further undermine investor confidence. The ongoing uncertainty will adversely affect our ability to achieve CP2030. As a result, investment decisions for onshore renewable generation and storage will face delays.

### 12. Do you agree with the approaches to reallocating capacity when 2030 pathway projects and 2035 pathway projects exit the queue?

Following points 9, 10, 11 and 12, unless it is a designated project for which we need more clarity from NESO, we do not agree to this approach.

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## 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?
- Gate 2 Readiness Criteria – Land (Chapter 4)
  - Gate 2 Readiness Criteria – Planning (Chapter 5)
  - Gate 2 Criteria Evidence assessment (Chapter 8)
  - Self-Declaration Templates (Chapter 9)

*Please insert your answer here for a).*

*We generally support this approach; however, there is disagreement on how to proceed after establishing the Red Line Boundary (RLB). Some believe that developers should have more flexibility in selecting project sites outside the Original RLB, especially if the confirmed point of connection from National Grid differs from the initial offer or if it is located far from the agreed site. Also to note ecological and biodiversity enhancements which require more land than operational site requirements.*

*Please insert your answer here for b).*

*We support the introduction of a robust planning submission program as a crucial measure to prevent speculative users. The Queue Management and User Commitment methodology should play a part in this under TMO4+ to allow monitoring users if NESO confirms the point of connection, including allowance for cable route and economic viability of this project.*

*Please insert your answer here for c).*

*Similar to points in a, we agree in general with the approach and this will be covered under Queue Management Milestones.*

*Please insert your answer here for d).*

*Similar to points in a, b and c, we agree in general with the approach and this will be covered under Queue Management Milestones to demonstrate planning and development requirements.*

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?

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*No, it should be applicable to all users is our view as the programme based on their planning regime should factor in the allowances for DCO requirements. All matters in relation to Force Majeure events should be assessed on a case by case basis.*

## 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?

The proposed reforms lack clear definitions, which is a major issue. For example, prioritizing "new technologies" is vague and concerns developers in the queue. Without a precise definition, viable projects nearing Gate 2 could be sidelined for loosely defined "new" technologies. This ambiguity could disrupt established projects, including reliable options like solar, wind and BESS technology particularly in pre-2030s.

The prioritization of "projects with long lead times that may be needed" is too vague to inspire confidence. This ambiguity leaves developers uncertain about which projects will be favoured, undermining the transparency and fairness of the process. Consequently, the proposals risk promoting speculative alternatives over reliable projects critical for achieving the Clean Power 2030 targets.

16. Do you agree with the proposed criteria for assessing Designated Projects?

Please see our response to question 15.

17. Do you agree with the indicative process NESO will follow for designating projects?

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We disagree with the indicative process NESO plans to use for project designation due to the lack of clear definitions for key prioritization criteria within the proposed reforms, as per notes in point 15.

## Additional Questions

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

In summary, the key issues we are seeing as an oversight are as follows, which will hinder confidence in serious parties and prevent the achievement of the CP30 ambitions.

1. Further erosion of investor confidence and ongoing uncertainty will negatively impact the ability to achieve CP2030. As a result, investment decisions for onshore renewable generation and storage will be put on hold until there is clarity on meeting regional quotas and making progress.
2. Developers may have to write off significant development expenses, materially impacting further investment.
3. NESO's recommendation to allocate 90% of solar generation within distribution networks—excluding transmission—appears disconnected from the practicalities of achieving the national CP2030 goals for photovoltaic (PV) generation. This approach could cancel most 'Ready to Connect' transmission projects, resulting in a shortage of 'Ready to Connect' projects within distribution zones. Not to mention, this doesn't achieve the CP30 plan and also introduces significant reinforcements and pressure in the supply chain to deliver long lead items.
4. Following point 3, The capacity of distribution networks may become a bottleneck, necessitating the curtailment of many connections before 2030.
5. Transmission connections facilitate the integration of the larger projects necessary for the CP30 initiative, and tertiary/grid park connections at the transmission level efficiently use existing infrastructure- Socialising costs and more savings to taxpayers.
6. Connecting fewer larger projects rather than a greater number of smaller ones alleviates pressure on the supply chain.
7. NESO needs to consider the advantages of co-located sites and evaluate each technology in isolation. Co-location offers substantial benefits by optimizing connections, reducing connection costs, and minimizing the need for additional network infrastructure.
8. No land or development intelligence is applied to the region requirements for each technology to determine whether these regions can deliver these projects

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and whether suitable land is available thus questioning the variables put in place to achieve CP30 and SSEP within allocated regions.