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Alasdair MacMillan

Electricity Connections

Ofgem

London

E14 4PU

National Energy System Operator

Faraday House

Gallows Hill

Warwick

CV34 6DA

matthew.magill@nationalenergyso.com

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Connections end-to-end review

Dear Alasdair,

Thank you for the opportunity to respond to your consultation on the connections end-to-end review of the regulatory framework.

Who we are

NESO lies at the heart of the energy system as an independent, public corporation responsible for planning Great Britain's electricity and gas networks, operating the electricity system and creating insights and recommendations for the future whole energy system.

At the forefront of our efforts is delivering value for consumers. We work with government, regulators and our customers to create an integrated future-proof system that works for people, communities, businesses and industry, where everyone has access to clean, reliable and affordable energy.

NESO's primary duty is to promote three objectives: enabling the government to deliver net zero, promoting efficient, coordinated and economical systems for electricity and gas and the economy and efficiency of energy businesses and ensuring security of supply for current and future consumers. NESO will take a whole system approach, looking across natural gas, electricity and other forms of energy and will engage participants in all parts of the energy ecosystem to deliver the plans, markets and operations of the energy system of today and the future.

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NESO and the Connections Queue in Great Britain

With the connections queue exceeding 730 GW across Great Britain's transmission and distribution networks, it's evident that connecting the necessary generation and demand assets takes too long, with some projects not seeing connection dates until the late 2030s.

In our Clean Power 2030 advice to the Government, we emphasised the need for the industry to adopt new approaches, including reforming connection processes to deliver a queue consisting of ready-to-connect projects, which align with clean power goals and future strategic plans, such as the upcoming Strategic Spatial Energy Plan (SSEP). Streamlining these processes can drive economic growth by tapping into homegrown resources for electricity generation.

This requires a real sense of urgency. While we recognise the immense challenge, the opportunities and benefits of a more agile connections process are significant.

In the work we are doing on connections reform, NESO is focusing on two main areas: accountability and flexibility, to ensure projects progress as needed and align with the technology mix Great Britain requires. Listening to what our customers have been telling us we are mindful that the process of making an informed connections application is not simple or user-friendly.

With this at the forefront of our mind, we've recently launched Connections 360, an online tool that provides a comprehensive visualisation of the Transmission Entry Capacity (TEC) register, ensuring a more transparent connections process.

In December 2024, we published our final code and methodology documents to reform the connections process for Ofgem approval. The methodology documents include the (i) Gate 2 Criteria Methodology, (ii) Connections Network Design Methodology (CNDM) and (iii) Project Designation Methodology. This marks a shift from the current ‘first come, first served’ approach and is a critical step identified in the Clean Power 2030 report.

We believe in a future where everyone has access to reliable, clean and affordable energy - timely connections delivered efficiently by a well-developed and thoroughly straightforward process is essential to deliver this future. We therefore welcome Ofgem’s consultation now on an end-to-end review of the connections process.

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Our key points

- We agree that there is a need for transparent, accurate and timely data to inform connection applications. We support Ofgem's vision of a single digital view across connections, rather than a different approach across each sector. We currently support the publishing of combined transmission and distribution queue[1] data through the Energy Networks Association (ENA) each month and are happy to continue doing so to provide visibility of queue data. We will continue to develop our connections 360 portal further in response to support with connections reform, the government's clean power 2030 targets and stakeholder feedback.
- We agree with the need for high standards of service across the customer journey from pre-application to energisation. Whilst we believe that connections reform introduces a new process to address the concerns outlined, we think that reviewing existing licence arrangements would also be beneficial.
- We recognise the need for high-quality, clear and accurate connection offers and associated documentation, and the desire to offer ambitious and achievable connection dates, whether driven through strengthened licence conditions or minimum standards. We believe that the work we are doing on reforming the connections process, alongside our recommendations for Clean Power 2030 go towards meeting these aims.

We look forward to engaging with you further. Should you require further information on any of the points raised in our response please contact Jo Greenan, Senior Connections Strategy Lead at joanne.greenan@nationalenergyso.com.

Yours sincerely

Matthew Magill

Director of Engineering & Customer Solutions

[1] https://www.energynetworks.org/industry/connecting-to-the-networks/connections-data

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Appendix 1 Consultation Question Responses

Theme 1 - Visibility and accuracy of connections data and network capacity

Question 1a. Do you agree with the issues we have set out under Theme 1 - Visibility and accuracy of connections data and network capacity? Are there any other issues under this theme that we should consider or be aware of?

We agree with the issues outlined regarding the visibility and accuracy of connections data and network capacity and the opportunities for improvement.

We agree that system outcomes are improved if project developers have better information to help them develop projects aligned with the government clean power 2030 targets and network capabilities. We note that there are already many requirements on network companies in this area.

Question 1b. Do you agree with proposal 1a (new regulatory requirement on single digital view tools)? Do you have any views on how this should be implemented?

NESO's Connections 360 application has been developed collaboratively with the network companies (predominantly Transmission Owners) to provide data transparency and customer self-serve, enabling the improved quality of connection applications. This digital tool will facilitate a reduction in duplicate/speculative applications and will drive offers more aligned with requested dates. We'd like to evolve this tool to give developers (and the public) more information about electricity network infrastructure and network capacity to further assist in the connections process. This could potentially include distribution connections. We agree that the direction of travel should continue to be towards a single portal covering all network areas across both transmission and distribution and we welcome further engagement in this space.

Question 1c. Do you agree with proposal 1b (new regulatory requirement on the creation of guidance / standards for data visualisation tools)? Do you have any views on how this should be implemented?

We agree with proposal 1b. While we support the direction of travel towards providing more data for developers, any regulatory requirement would need to be carefully created to avoid perverse outcomes, creating barriers to development and mindful of existing obligations. In addition, networks need to avoid duplicating efforts in developing data solutions during ongoing reforms.

Notably, to help achieve the creation of guidance/ standards for data visualisation, the issues outlined within question 1a (data accuracy and visibility) would need to be addressed.

Question 1d. Do you agree with proposal 1c (new regulatory requirement to provide connections data)? Do you have any views on how this should be implemented?

We agree with the proposal to introduce a regulatory requirement to publicise and report on connections data in a standardised format. We would welcome the opportunity to support the approach and implementation of this new regulatory requirement.

Question 1e. What are your views on the completeness and discoverability of connections data that would be useful to you? Are the existing resources clear and transparent?

Existing resources, particularly those around a combined transmission and distribution queue, require improvement. Connections reform should help in this regard as substantial additional data will be published once connections reform is implemented (please refer to NESO's Connections Network Design Methodology for further information) and we will continue to consider greater transparency of data publication.

Question 1f. Is there additional connections data that would be of use but legal barriers prevent it from being published? If so, do you consider that there are solutions that would enable this data to be made available, for example by aggregating it to appropriate levels / anonymising it etc.

Legal barriers can sometimes prevent the publication of connection queue data, in particular where the data is considered to be commercially sensitive. We would be keen to engage further with Ofgem and industry to understand what additional information would be valuable, and as suggested, whether there is a way to publish it to still ensure data is appropriately protected.

Question 1g. Is there anything else regarding Theme 1 – Visibility and accuracy of connections data and network capacity that you consider we have missed?

Nothing further to add.

Theme 2 - Improved standards of service across the customer journey (not including "minor connections")

Question 2a. Do you agree with the issues we have set out under Theme 2 - Improved standards of service across the customer journey (not including "minor connections")? Are there any other issues under this theme that we should consider or be aware of?

While we acknowledge that there are some inefficiencies in the current process/interface between transmission and distribution, there have been many opportunities identified through the connections reform process to improve this. This includes making sure that developers are not disadvantaged by having an extra process step when going through DNOs for a transmission connection application by imposing a reasonable endeavours clause on DNOs to submit developer projects into the next available application window as stated in our proposed changes to CUSC section 17.6.6(a) and section 17.6.6(b).

We also agree that the Third Party Works process should be fit-for-purpose under enduring connections reform. There should be defined and appropriate processes in place between NESO, TOs, DNOs, and customers to ensure that transmission customers are not disadvantaged in their queue position when being assessed by DNOs under Third Party Works processes.

Question 2b. Do you have any views on proposal 2a (general principles-based licence condition and supporting guidance around standards of service throughout the entire customer journey)? Do you have any views on how this could be implemented?

We think regulations need to be fit for purpose and since there is existing detailed framework as set out in the CUSC that outlines the standards of service, we are unsure how principles-based licence conditions would enhance these standards, but we welcome further discussion on this point.

Question 2c. Do you have any views on proposal 2b (new prescriptive condition(s) around standards of service)? Do you have any proposals for any specific areas of the connections customer journey that should be subject to such a requirement?

Ofgem should consider whether it is worth including a DNO licence condition to respond to Third Party Works applications from transmission customers in a timely manner. There is currently a licence condition on DNOs in terms of timelines to provide offers for distribution connection applications, however this does not include timeline obligations to respond to Third Party Works requests from transmission customers.

Question 2d. Do you consider that any of the existing standards of service requirements set out in the regulatory framework for provision of specific products / services should be revised or removed? Do you consider that there is any duplication or overlap of regulatory requirements across the regulatory framework that needs addressed?

Given that connections reform is still to be approved, and therefore processes implemented, it is too early to understand the full impact reform may have on the connections process. We suggest that connections reform needs to be introduced before we look to change any of the proposed standards of service.

Question 2e. Is there anything else regarding Theme 2 – Improved standards of service across the customer journey (not including "minor connections") that you consider we have missed?

Nothing further to add.

Theme 3 - Requirement on networks to meet connection dates in connection agreements

Question 3a. Do you agree with the issues we have set out under Theme 3 - Requirement on networks to meet connection dates in connection agreements? Are there any other issues under this theme that we should consider or be aware of?

Nothing further to add.

Question 3b. Do you have any views on proposal 3a (strengthened principles-based licence condition around meeting connections dates)? Do you have any views on specific wording that would achieve the intended outcome?

We agree that it is important that connection dates are met as we believe this is essential to deliver a future where everyone has access to reliable, clean and affordable energy and we are aware of customers' concerns in this area. We would welcome exploring if obligations across the sector should be harmonised.

For NESO, the wording used in the licence is to "use best endeavours", which we believe is already a substantial legal requirement and we would not support strengthening it further.

Question 3c. Do you have any views on proposal 3b (minimum standards / SLAs around meeting connections dates)? Do you have any views on specific standards that could be introduced and how they would work in practice?

We already have a licence requirement to use best endeavours and give the best dates we can for developers. Introducing SLAs around meeting connection dates may result in perverse incentives where network companies give later dates to ensure SLAs are met as we note that connection dates can and do change due to many reasons outside the control of networks, such reasons can be procurement challenges; obtaining outages; unplanned unavailability or developer changes

However, NESO feel that there could be a need for a SLA around sharing timely information as soon as the Networks are aware of changes to a developers' connection date and should include all the clarity that is needed.

Question 3d. Do you have any views on proposal 3c (a financial instrument designed to offer recourse to connecting customers who face detriment due to delays)? Do you have any views on how this should be implemented?

We are concerned that implementing a financial instrument could create perverse incentives. Any financial instrument would need to be carefully calibrated to ensure it appropriately delivers the desired outcomes and that it does so in a cost-efficient manner.

Question 3e. Is there anything else regarding Theme 3 - Requirement on networks to meet connection dates in connection agreements that you consider we have missed?

We note that there are sometimes competing challenges when operating the network between allowing system access to enable connections but also ensuring system security is maintained and minimising operational costs. For example, sometimes enabling an outage would risk system security and/or increase operational costs significantly. We are working closely with TOs to enhance the planning and coordination of the electricity system. There are potential further benefits that could be derived by working with TOs to achieve a more long-term strategic approach to planning system access across multiple years.

Theme 4 - Quality of connection offers and associated documentation

Question 4a. Do you agree with the issues we have set out under Theme 4 - Quality of connection offers and associated documentation? Are there any other issues under this theme that we should consider or be aware of?

Nothing further to add.

Question 4b. Do you have any views on proposal 4a (principles-based licence condition on the completeness / quality of the offer and supporting documentation)? Do you have any views on specific wording that would achieve the intended outcome?

We think regulations need to be fit for purpose and since there are existing obligations in CUSC that outlines the standards of service, we are unsure how principles-based licence conditions would enhance these standards but we welcome further discussion on this point.

Question 4c. Do you have any views on proposal 4b (minimum standards / SLAs on the completeness / quality of the offer and supporting documentation)? Do you have any views on specific standards that could be introduced and how they would work in practice?

We note that the CUSC sets out in detail the contents of connection offers and the required supporting documentation for transmission connected parties. We also have an open industry governance process so developers can propose changes if required. However we also note that the same does not exist for distribution companies, resulting in different approaches across DNOs (which DNOs are looking to improve through the ENA). Therefore the focus should be on improving and harmonising the distribution experience including the review of licence conditions across the sector.

Question 4d. What do you consider would constitute a 'high quality offer'?

As part of Connections Reform, some customers may receive gate 1 and others gate 2 offers. The level of information in each offer will vary (ie gate 2 will be more detailed) and as such, specifics as to what constitutes a high quality offer may be unhelpful. Rather we consider that a high level definition could be useful such as one that gives the developer the information needed to connect to the system, safely, efficiently and economically, without imposing risks onto the end consumer. This information should also be right first time.

It is important to highlight that should there be a proposal for additional information, it will likely lead to increased costs for the network which should be balanced against how necessary/useful that information is to the connectee.

For transmission connections, the transmission owner designs the customers' connection and creates a Transmission Owner Construction Offer (TOCO) to contract directly with us for the works needed to connect the customer. This means the TOCO is the major document that contains all the information that will impact the connection date and cost. Ensuring the Final TOCO is right first time would help ensure a high-quality offer is made to customers.

Question 4e. Is there anything else regarding Theme 4 - Quality of connection offers and associated documentation that you consider we have missed?

Nothing further to add.

Theme 5 – Ambition of connection offers

Question 5a. Do you agree with the issues we have set out under Theme 5 - Ambition of connection offers? Are there any other issues under this theme that we should consider or be aware of?

Connections reform introduces a new process that is designed to give developers efficient dates that will be a substantial improvement to those available through the current process. Timely connections delivered efficiently by a well-developed and straightforward process is essential to deliver a future where everyone has access to reliable, clean and affordable energy. Therefore, additional change should not be brought in until the impact of connections reform becomes clear.

Question 5b. Do you have any views on proposal 5a (strengthened principles-based licence condition around offering earliest achievable connection dates)? Do you have any views on specific wording that would achieve the intended outcome?

NESO believes that it is important to offer efficient connections dates in order to ensure a future where everyone has access to reliable, clean and affordable energy. Any licence conditions in this space need to be fully considered, proportionate and suitably flexible to accommodate the many factors that impact on the connections process.

Question 5c. Is there anything else regarding Theme 5 - Ambition of connection offers that you consider we have missed?

Nothing further to add.

Theme 6 – Minor connections

Question 6a – Do you agree with the issues we have identified? Are there any other issues under this theme that we should consider? Please provide data and evidence to support your views if possible.

Nothing further to add.

Question 6b – What are your views on our proposals designed to address these issues? Are there other proposals you consider would achieve the intended outcomes?

Nothing further to add.

Question 6c – Do you have views on how poor performance could be addressed under these proposals to ensure the smallest scale customers are protected and LCT roll out is supported?

Nothing further to add.

Theme 7 - Provisions and guidance for determinations

Question 7a. Do you agree with the issues we have set out under Theme 7 - Provisions and guidance for determinations? Are there any other issues under this theme that we should consider or be aware of?

As the list of issues in the consultation is based on Ofgem's experience of stakeholders' feedback on the process for determining disputes, it would be reasonable to agree that these are issues that need to be addressed when looking at ways to improve the provisions and guidance for determinations.

Question 7b. Do you have any views on proposal 7a (Ofgem to review the guidance for connection determinations)?

We agree that it would be appropriate to review the guidance for connection determinations, which was last amended in 2017.

Since then, the UK energy industry has gone through significant changes. The connections queue in 2025 is vastly different compared to what it was at the time of the last review. NESO has been established as an independent organisation, and there is increasing demand for infrastructure to deliver net zero ambitions. The current guidance should be reviewed and amended where required to ensure that it reflects the new, strategic approach to connections, compared to the "first-come, first-served" model.

Question 7c. Is there anything else regarding Theme 7 - Provisions and guidance for determinations?

The impact of projects engaged in prolonged disputes on the connections queue could also be considered when looking at a review of the guidance. Ofgem could also consider whether there should be set timelines within which decisions have to be made to ensure connections aren't unnecessarily held up, to avoid prolonged disputes for impacted projects.

RIIO T3 – Electricity Transmission Network Incentivisation

Question 8a - What are your thoughts on each of the three ideas we have presented? In your response, please identify positives and negatives you see in each of the proposals, and if you have a favoured option and why that is.

We have already submitted this answer due to earlier deadline of 13th January.

We acknowledge that each proposal has its own set of advantages and disadvantages, as identified in the consultation document.

A Post Price Control Performance Review offers the benefit of evaluating a range of measures to provide a more comprehensive view of performance. However, conducting this review at the end of the period, may not be the most opportune time to implement any corrective actions that could enhance the overall connections process. Given the interconnected nature of the connection process, a review of this kind could be designed with a customer-centric focus to prioritise service excellence, reliability, and transparent communication. It would be important to ensure that survey feedback is fully representative of all stakeholder views, and to avoid short-term focus on achieving positive survey scores at the expense of longer-term needs.

The proposed Connections Timeframe incentive, evolving from the existing ODI-F Timely Connections has the advantage of being developed from a tested mechanism with known benefits and drawbacks. It also focuses on a key element of the timeliness of the end-to-end process, which is of importance to customers.

In the recommended TMO4+ reformed connections process, we have proposed a gated process with an annual application window, with applications being assessed for competency at Gate 1 and an indicative connection date and point provided. This date could be subject to change depending on readiness at Gate 2, and the date could move forward or backwards. Whilst the TMO4+ reforms are also the subject of consultation, it is important that any Connections Timeframe incentive designed for the next price control period, should align with the finalised reforms, to ensure a joined-up approach which works coherently.

Lastly, whilst we can see that there would be benefits of a SuperGrid Transformer Capacity mechanism which is measurable and incentivises the delivery of a capacity-rich network, to support more timely future connections, we also recognise that this may not always be the most optimal solution for consumers. Whilst SGT capacity is to be welcomed it should be assessed against the alternative options including market options and local demand management.

All three proposals have benefits and disadvantages, and the overall blend of incentive tools, or preferred incentive mechanism will need to be carefully designed to deliver the collaborative, timely, and clear connections processes enabling the infrastructure necessary for Clean Power 2030 and beyond.

Question 8b - With reference to our Future Considerations, do you have any further ideas on how TOs could be incentivised through a financial penalty and reward model, to deliver faster connections times, a more effective overall connections process in RIIO-ET3 and drive behaviours that have a positive long-term impact on the network

We have already submitted this answer due to earlier deadline of 13th January.

We welcome Ofgem's focus on exploring options to improve connection times and improve the overall efficiency and effectiveness of the connections process through financial penalty and reward mechanisms in the RIIO-T3 price control.

We recognise the challenges faced by customers looking to connect as well as the difficulties posed by the unprecedented rise in connection applications and customers in the process in recent times. A well-designed framework can help address issues with connection queue times to help improve the pace of infrastructure delivery, tackling critical barriers in the drive to net zero, and the Clean Power 2030 mission.

A financial reward and penalty model should reflect the complexities of the network and recognise the interdependencies across the energy system. It should be carefully designed so as not to create misaligned priorities or perverse incentives or become a block to the collaborative approaches needed to address these issues.

Any mechanism which is put in place for the RIIO-3 price control period should also be adaptable and flexible enough to ensure alignment with the first Strategic Spatial Energy Plan, which will deliver a more coordinated and long-term approach to network planning, and which will follow on from the Government's Clean Action Plan. The incentive, or blend of incentives decided on, should also align with the overall objectives of connections reform, enabling earlier connection dates, on a first ready first connected basis, ensure efficient and coordinated planning to deliver the greatest value for consumers. The incentive(s) chosen should also facilitate competition and innovation.