

Connections Seminar 2023

Your questions answered

Updated 15/11/2023

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• Ofgem related questions

When is the Ofgem / DESNZ Action Plan for delivering these key changes expected to be published? Ofgem's open letter in May 2023 suggested 'later in the summer'

This will be published shortly, in the coming weeks.

What can Ofgem do to help the ESO implement reform initiatives faster. Code change process is too slow!

We have been providing regulatory clarifications where required. For example, we published such clarifications alongside our May open letter, and also published clarifications in August 2023 for battery storage.

While code governance reform is underway, following the recent Energy Act, we acknowledge that will take time to implement. Therefore, in the Connections Action Plan we will share information on how we will ensure that clear strategic direction is set on the changes required to improve connections processes. This will enable the right code modifications to be brought forward at pace and explore other routes that may need to be taken to enact reform.

Why delay to CMP376 queue management decision? It must have been implemented yesterday.

We acknowledge the interest in this modification as a clear, tangible step to improve the connections process. Owing to this interest, its legal complexity, and the significant number of alternatives to consider, we have carefully assessed all these options thoroughly as quickly as possible.

Note: CMP376 was approved on 13 November 2023.

Update from Ofgem re: CMP376 (QM) - Without this applying to existing apps (and DNO's applying ENA QM properly) the queue issues will remain.

Regarding DNOs, we have worked closely with the ENA and all DNOs to ensure that all parties are subject to queue management and that the DNOs are terminating contracts when they are demonstrably not progressing. There has been significant progress in this area, and we are getting regular updates from the ENA on the number of terminations through queue management.

- **TO related questions**

How is NGET improving communication so customers can discuss connection offers with engineers faster? Lack of communication is a real issue currently.

We understand that the challenge of connection volumes in the pipeline can cause frustration for customers. We are working to improve our communication across multiple channels to promote efficiency and alleviate customer concerns. Our [Research Assistant](#) has recently been updated with regional information to provide engineering insight into common customer questions. We are also running regular regional webinars which can be signed up for via the ESO customer portal and provide customers with a chance to understand the engineering works in a prospective region, and to ask any questions they may have.

How will we ensure that TOs are adequately resourced to enable connections on the timelines provided for? And adequately ambitious to accelerate?

As the TO for England and Wales, our ambition is to ensure the effective and efficient connection of low-carbon technologies at pace to deliver net zero, while driving value for end consumers. This is currently driving significant work within our organisation in terms of dedicated teams and engineering resources. Changes in the industry have brought challenges, notably a hugely oversubscribed pipeline of customers wanting to connect to the network, resulting in increasing timescales being offered for connections. There is a collaborative effort across industry to address the connections challenge, of which we have been supporting the ESO in the delivery of their five-point plan to accelerate connections and development of a new connections process. We have also been working closely with the ENA as part of their three-point plan to improve connections for distribution customers.

Further, as a rapidly expanding industry, we are scaling up recruitment to ensure we have the resources necessary to deliver net zero safely and effectively. We have doubled our intake of graduates in 2023 and will continue to do so in 2024. Find out more here: <https://www.nationalgrid.com/electricity-transmission/who-we-are/our-people>

We will continue to drive for and collaborate on connections reform to address the current connections issues and expand our resource base to deliver for our customers, and for net zero.

Grouped Questions

What are the plans to speed up the planning consent process for new transmission works, e.g. new overhead lines & Section 37?

With planning and consenting timescales for transmission infrastructure being so long what can practically be done to accelerate this?

Any thoughts on decoupling the non-attributable work from the connection contracts considering the anticipatory investment requirement for multiple projects?

As part of the [industry wide connections reform](#) taking place NGET's ambition is to move towards a strategic investment model for customer connections. This would involve de-coupling network design from customer applications and strategically investing in the network ahead of need.

All options to achieve this aim will be considered, and the best solution according to each project and the general network strategies will be chosen. This would include the delivery of reconductoring, and network reinforcement based on projected future demand, as well as any other major works. This will in turn mean that planning and consenting processes are not driven by customer demand, placing customer contracts behind those works. It would also mean NGET is able to effectively deliver the networks needed both for consumers and net zero.

ESO

• Connections Reform

Letter of Authority (LOA) was mentioned as a tactical solution. It still hasn't been implemented, why?

Following our review of the responses received to the consultation, in which there was strong support for the introduction of the Letter of Authority, either in full (as described in the consultation) or with a few additional considerations, we have now focused our efforts on developing the detailed policy design for this requirement. We are currently in the final stages of this and still look to implement this requirement ahead of connections reform.

Why doesn't the ESO stop taking new generation apps and instead just hold auctions for what is needed where?

Auctions were considered as part of our recent consultation on our initial recommendations for a reformed connections process. However, we initially recommended that it would not be the most appropriate course of action to move to an auction style arrangement for connections in future. In relation to stopping new generation applications, work is currently underway to determine how best to bridge the gap between the current process and the reformed connections process in future. While this could be an option to consider, there are many other options also to consider and further information will be shared in the coming weeks when we publish our final recommendations.

When multiple renewable energy projects are deemed ready under the new rules, how will you determine which are prioritized for connection agreements?

The Connections Reform Consultation has proposed criteria to determine which projects should be accelerated, which in summary is priority projects designated by Government or, projects that demonstrate significant additional consumer and/or wider economy / societal benefit (i.e. Pathfinders), or projects that meet a specific project milestone (our initial recommendation is those projects that have submitted their application for planning consents). We note that there could be a number of such priority projects competing for earlier connection dates and will determine this process in the implementation phase, in the event that this is taken forward as part of our final recommendations.

How will the ESO treat projects with generation and large demand (hydrogen)? Will it be another queue for transmission connected demand?

In our initial recommendations for a reformed connections process, generation and demand are proposed to follow the same process in needing to apply within an application window. This involves comparable arrangements to both capacity allocation (and in some cases reallocation) and our final recommendations will be published in the coming weeks.

Aren't we avoiding the real problem which is an unsuitable code and regulatory framework, and any of the actions spoken about here as just sticking plasters?

Connections Reform is seeking to make the connections process more effective, and we plan to amend the relevant areas of the codes that govern connections. We believe this can be achieved with a suite of targeted code changes. More broadly, a programme of work on Energy Code Reform is looking at wider reform of the code and regulatory framework and this could lead to benefits in future in relation to connections.

Any plan to review importance of projects to the economy as a whole, alongside shovel readiness? I.e. electrified public transport/hospitals over data centres?

Were DESNZ to consider how to progress projects that they deem to be of national importance, the ESO will work with them on any proposals. In addition, the Connections Reform Consultation has also proposed criteria to determine which projects should be accelerated, which in summary is priority projects designated by Government or, projects that demonstrate significant additional consumer and/or wider economy / societal benefit (i.e. Pathfinders), or projects that meet a specific project milestone. Our initial recommendation is for those projects that have submitted their application for planning consents.

How does the connections reform link into needed grid investment?

Connections Reform initial recommendations included moving applications to a batched assessment process with the expectation that more efficient grid investment decisions can be made based on a co-ordinated network design. However, there are also broader industry considerations, such as on the use of Anticipatory Investment, as it has been noted that construction ahead of need may be a way to cater for future capacity requirements. This could be incorporated into a co-ordinated network design process for connections.

Current queue is for any connection type (Housing developments/generation/industrial facilities), would it be wise to separate and prioritise?

We are considering options for how the queue could look in the future and have also outlined suggestions within the Connections Reform Consultation.

Has batch/gated qualification processing been considered similar to that of other countries in Europe?

Prior to making initial recommendations for a reformed connections process we considered how other System Operators approach their connections processes i.e. best practice and lessons learned. It is important to note that each System Operator will have their own set of unique challenges, however, an annex was published in our consultation that considered different case studies in other geographic regions and this informed our initial recommendations.

Nick Windsor's report was comprehensive and wide ranging. Are you adopting his recommendations including planning reform?

The Electricity Networks Commissioner report on Electricity Transmission Infrastructure Acceleration was published on 4th August 2023, including 43 recommendations.

We are currently working with DESNZ to support the publication of their action plan in response to the report by the end of the year. This will have specific actions for the ESO to deliver to help drive transmission acceleration, alongside actions for Government, Ofgem and other industry parties.

Should customers contract directly with TO's rather than going through the ESO (middleman)?

This was considered as part of our recent consultation, with the initial recommendation being that we do not make such changes, as the entity which project developers apply to was not identified as a significant underlying issue in relation to the case for change.

What is the ESO approach with regards the connection reform? What is the technical methodology that ESO favours for removing the applicants not blocking capacity?

The approach was to identify the issues via our case for change, then collaboratively create options for process improvement. We then consulted on those options and initial recommendations earlier in the year, and we plan to make final recommendations in the coming weeks. In relation to removing applicants blocking capacity, an ongoing modification (CMP376) is expected to allow us to remove projects not meeting their contracted milestones from the contracted background (via the termination of their connections contracts). We propose to build upon these arrangements within a reformed connections process.

Will there be a review of security payment dates where upgrade works that require planning permission to allow projects to connect?

User Commitment will be reviewed as part of Connections Reform to ensure that these security arrangements are aligned with a reformed connections process e.g. the frequency, timing and/or value of security requirements.

ESO

• Five-point plan and other initiatives

Why do much of the new measures being introduced, e.g. to reduce distribution connected BESS connection costs, only relate to new connections not existing ones?

To keep up with the pace of change, we need to reform how projects connect to the electricity transmission system to deliver benefits to consumers as soon as possible.

As of October 2023, there were over 500GW of projects contracted to connect to the transmission and distribution system. This figure is increasing by 25GW a month.

Once the CPA analysis is complete, will that be applied to all projects that are currently in the queue with dates that are post 2026? (Not under non-firm)

The new CPAs are being applied across the entire NGET's area for England and Wales. For projects contracted before 1st March 2022 and with a connection date of post 2026, the Transmission Reinforcements Works (TRW) review process is being used to apply the new CPAs and any spare capacity available will be made available to eligible projects across Transmission and Distribution networks. The new CPAs will also be applied to all projects awaiting a second step offer under the two-step process.

The new CPAs are being applied across the entire SPT and SSEN area in Scotland. For projects with a connection date of post 2026, the Transmission Reinforcements Works (TRW) review process is being used to apply the new CPAs and any spare capacity available will be made available to eligible projects across Transmission and Distribution networks.

Will Ofgem commit to a strict termination policy for projects that are not progressing or hitting milestones that are purely holding capacity?

Ofgem's decision will elaborate but we have worked closely with the WG to ensure the policy is robust and strict.

How will the TRW and CPA reforms be applied to existing distribution connections that currently require transmission reinforcement works?

Distribution connections that are being held back by transmission reinforcements works will be given the opportunity to be brought forwards under a non-firm basis via the GSP technical limits. In England and Wales, the new CPAs are being applied to both Transmission and Distribution projects as part of the Transmission Reinforcements Works (TRW) review process and will be subsequently applied to projects awaiting their second step offer. Distribution projects would also be considered when allocating any capacity released through the TRW review process, enabling distribution projects to receive a firm connection where possible.

Once the TRW review has been completed any DER customer as part of a wider DNO Project Progression that can be accelerated will be informed that their project is eligible and given the opportunity to sign a revised DNO agreement with the new dates.

Scottish TO applications-now that CPA review has been complete, is the intention that timelines will remain the same as NGET? i.e. March 2024 for revised offers

The intention is for two-step offers they will be sent by end of February 2024, with the inclusion of Distribution customers in the TWR process this will extend the time frame beyond February 24. Completion date is yet to be agreed.

Re QM, would the ESO terminate Sizewell C when they miss their next milestone? The policy needs to be consistent, even with large strategic projects delay.

The policy will be consistent – we will ensure conversations are taking place and any risk/blocker is identified.

Will milestones be applied to existing offers? If not, how will the existing queue be cleaned up?

If WACM 7 is approved, then yes, the QM milestones will be applied to existing offers.

Note: CMP376 (and WACM 7) was approved 13 November 2023

When will the ESO provides the visibility on the queue positions?

The ESO is working on providing more granular datasets and tools so industry parties can obtain more clarity on the transmission queue. Additional data and tools are expected to be available by the end of March 2023.

DNO/TO Interface: How is capacity freed up at T (whether App G or direct T) going to be reallocated - first ready, first connect regardless of T or D connected?

Expected to follow current principle of first come first served for both T & D

With a EOI non-firm connection being curtailed/non compensated, if in the balancing mechanism (through BEGA or BELLA), do they still remain non-compensated?

The non-firm connection will only be curtailed uncompensated for the system conditions identified in their BCA. This means that they can still bid into the BM as normal. This allows us to modify their output (compensated) for other reasons dependent on system conditions.

Will tranche two of the accelerated connections consider hybrid connections and offer the BESS to accelerate ahead of the renewable tech?

Likely, but no decision has yet been made as tranche two will start development soon.

Do proposals provide scope for applications from schemes in local/community energy balancing market where gen export wouldn't be seen by the T (or D) system?

The five-point plan is designed to reduce the connections queue for both Transmission and Distribution connected customers

Post CMP376, will there be a limit, or criteria to meet, for the number of Modapp permitted?

There is no limit but there is an exceptions process that needs to be met for an allowable Modapp to take place.

Are the assumptions for batteries in CPA only that it will respond to market prices (i.e. assumed merchant) rather than a flexible asset that can both ways?

The batteries in the CPA are modelled with the capability of bi-directional power flow, which is dictated by market prices.

When the ESO will publish the CPA assumptions?

A detailed CPA methodology document has been shared with TOs, and we aim to share the CPA approach document in November.

How is the Tec amnesty capacity being reallocated?

We are working with the released capacity with the TRW works.

How many projects and capacity that currently lies in the queue has been assessed as projects that won't move forward?

Currently, there are 232 projects accounting for c.45GW of capacity that are due to connect by the end of 2025. We have classified 144 of these projects potentially at high risk of not meeting their contractual connection date, accounting for c.29GW of capacity, and are therefore under further review.

In the CMP376 proposal, there are projects exempt from termination if their delays are uncontrollable. Who will make the final decision and what's next?

The ESO will make the decision as we are the policy holder. Everyone involved will be in discussion and there is an internal ESO escalation process also before a decision is made.

Are milestones going to be technology/capacity dependent? (National vs Council planning, BESS being easier to get land and planning secured than solar)

Milestones will be added to all agreements.

Following the recent ENA guidance for DNO's, how is the ESO treating BESS modelling? There has been indications of diversity factors but no confirmation.

Point 3 of the ESO's five-point plan and point three of the ENA's three-point both plans to look to improve BESS modelling. The CPA approach already assumes diversity in the sense that we don't assume everything is dispatched at the same time at full output. The ESO has been refining BESS modelling assumptions and this has fed into the Transmission Works Review process. In addition, the ENA has been updating its guidance. We have not revised our BESS modelling as a result of what the DNOs are doing regarding diversity assumptions.

Are we expecting another round of TEC Amnesty?

No.

Rhetoric is all about clearing the queue as if that is the main objective, focus should remain on getting renewable projects done and delivering net zero!

By removing customers from the queue, it allows those projects that are going to meet net zero to connect quicker.

When does the faster delivery five-point plan equivalent start? This needs to be coordinated like the process five-point plan

The five-point plan is being delivered as quickly as possible with some parts of the plan already completed. All parts of the plan should be either completed or in delivery by March 2024.

How do you handle withdrawal of offers during the proposed batched reassessment process? Re-study? We have seen snow-ball effect in markets like USA, creating long delays due to re-study

This could depend on whether an application has been withdrawn before the batched assessment starts, during it, or is simply not signed once the offer is made. However, we will need to work through the details. It is worth noting that the Construction Planning Assumptions will have an attrition rate built into them to account for less than 100% of applications being studied in any particular window going on to progress to connection. We do not foresee the need to re-study as a result (e.g. as per the international example provided) and we plan to manage terminations in a way which does not adversely impact other projects.

Co-location, assuming full utilisation of TEC achieved by 1 tech and initial milestones, what are the panels view on staged milestones for the 2nd tech later?

The panel has reviewed the consultation, and no comments were made. It agreed that there will be two appendix Qs for each Technology connection.

Can we add Procurement milestones within the Queue Management process?

No, the WG is now closed as the decision is with Ofgem.

Will application processing go back to the pre-Two Step offer process post March 2024? If yes, will this not be taking a backward step?

This is under discussion on how we approach a transition from current to Connections' reform. As soon as an approach can be shared with industry, we speak to industry.

When does the faster delivery five-point plan equivalent start? This needs to be coordinated like the process five-point plan.

We are working closely with the ESO on their five-point plan to ensure that we both enable delivery of accelerated connections where possible, and advocate for new measures to improve the connections landscape. We are delivering a variety of projects to achieve this, such as the first tranche of accelerated Battery and storage connections, and our work with the ESO and ENA to provide flexibility at distribution/transmission boundaries.

[Find out more about these projects here.](#)

For more information about our specific proposals for longer term approaches to reform connections please [visit our page.](#)

Do you anticipate those, subject to the BELLA process, being allowed to connect early under non-firm conditions as per those subject to the BEGA process?

ESO

This decision will form part of phase two of the Technical Limits development.

What's the timing for non-firm offers for BESS and what process is due to be followed to ensure that risk profile of the developer is aligned with NGET/ESO?

Tranche 1 offers expected to go out imminently. These offers are non-firm and can be curtailed uncompensated if BESS would exacerbate system conditions. This aligns the risk profile of the developer and NGET/ESO.

For non-firm connection offers it is important to quantify the non-firm stage in the connection contracts. Any thoughts on this?

The system conditions that the non-firm offers can be curtailed uncompensated will be listed in the BCA.

When could TO customers and DNO customers get the non-firm offer or is there any deadlines?

TO customers tranche 1 will receive the offers imminently, with further tranches to follow. DNO customers will be through the DNO.

For all non-firm connection contracts, how the ESO control room makes decision on who should be curtailed first if there were system constraints?

Non-firm contracts will be curtailed using a LIFO stack ordered by queue position.

For those generators with non-firm connection, if they equally contributed to a real time constraint, how the control room decide who should be curtailed first?

Non-firm contracts will be curtailed using a LIFO stack ordered by queue position.

How will the TO/DNO determine the queue position of those looking to connect earlier under non-firm conditions? What assumptions are used for the curtailment?

The queue position from a transmission perspective is determined by the date that the ESO countersigns the customer contracts. For directly connected projects onto the transmission network this will be when the customer's contract is countersigned by the ESO. For embedded customers who are subject to a project progression, this will be when the contract with the DNO is countersigned by the ESO. Curtailments are usually carried out in the reverse queue order or last in first out.

• Technical Limits

Can technical limits go up as well as down following CPA? And can reinforcement change for the better or worse as well?

Technical limits can go up if the Transmission Reinforcements Works (TRW) review process identifies any spare capacity that can be allocated to Distribution projects however it is unlikely that the CPA review will cause the limits to go down. Changes to limits may occur upon completion of reinforcement works or after re-calculation at the agreed yearly review of the limits.

The CPAs will unfortunately not improve the reinforcements for all projects. As the size of the queue keeps growing, the projects at the end of the queue are unlikely to benefit from the revised CPAs.

Will the technical limits being imposed be published publicly for those wishing to seek new connections in the future to work within?

The ENA is developing technical limits, while we are supporting. The ENA and DNOs run webinars where the impacts are explained. Each DNO will be able to share the Technical Limits available at their sites. Please speak to the relevant DNO to understand how they will be publishing these values.

I have an EV charging and Battery storage project. Is this applicable for the accelerated connection date under the Technical Limits solution?

The battery storage element of the storage project would be eligible for an accelerated connection date where the technical limit solution is available.

When will technical limits be reviewed and outcome provided following CPA/EOI/TWR March 2024 i.e. updated appendix G threshold?

The timescales have not yet been confirmed/agreed with the TOs and DNOs but is expected to be post March 2024.

I noticed the deadline for Technical Limits Phase 1a is November 2nd for UKPN. Is the GSP list for phase 1a on the website, and how will UKPN notify customers?

The ENA is developing technical limits, while we are supporting. The ENA and DNOs run webinars where the impacts are explained.

UKPN has released an expression of interest for all customers currently eligible for Phase 1a. This closed on the 10 November. Eligible customers were contacted directly and have been given the opportunity to respond. Once the limits are fully established, we will make these visible on our website. We anticipate new customers being able to have access to early non-firm access via Technical Limits, subject to the prevailing constraint at the specific GSP.

- **Policy & Change**

Have NGENSO and the PM considered how the already overburdened, under resourced and underfunded Planning System will cope with additional pressure?

The ESO's objective is to try and reduce the connections queue as best as possible. We will continue to work alongside other organisations to ensure that there are as little conflicts as possible between processes and continue to listen to our customers if any parts of the process are causing concern.

What is the ESO's plan for correcting any erroneous Final Sums Liability profiles and/or compensating Users for security already posted for incorrect amounts?

Code modification CMP417 ([LINK](#)) has been raised, which aims to improve the cost reflectivity that users currently on Final Sums Methodology have on a TO's spend profile. This will help reduce uncertainty for developers whereby the security amount is reflective of the transmission liabilities they actually impose. An interim solution in line with the Mod is also being looked at and awaiting sign off.

Regarding compensating users for security already posted for incorrect amounts, if customers are over secured, they will be refunded through the existing refunds process.

How would you ensure transparency of the new processes following any changes? Some specific examples of this would be helpful from a customer perspective.

Our standard practices for process and policy changes, are to write to industry, raise and update on our preplanned forums, i.e. monthly agora's, customer seminars. An example of this more recently is the two-step offer process, we held frequent webinars to discuss the approach and change in process ahead of the change and in the early days of implementation, and the five-point plan.

For more longer-term changes, for example - connections reform - we communicate in similar ways with the additional of industry consultation and publication of findings.

Is the ESO looking at security requirements and user commitment as many connection projects now seem over securitised (new substation with DNO and generation)?

The ESO has raised the code mod CMP417. The mod looks to extend the principle of CUSC Section 15 – User Commitment Methodology to all users. The mod particularly looks at the security and liabilities for transmission connected demand, distribution connected demand and DNO's whereby their construction agreement is not triggered by an embedded generator. For updates on the mod please see: [LINK](#)

When do you expect CMP417 to be concluded?

Based on the current timeline, the workgroup looks to submit the Final Mod Report to Ofgem by June 2024.

- **General**

ESO

Please explain how a project becomes shovel ready when clearly, they won't enter either the TSA/ BoP contract if grid connection states a 2030+ connection date.

We understand that many projects will not have progressed on aspects such as planning due to their late connection date. For Technical Limits, customers will not be prevented from participating on grounds such as planning. Customers will need to agree to an updated connection date and queue milestones which will be used to ensure all projects in the queue are progressing. One of these milestones is a date for when planning needs to be achieved.

Can NGET revisit the security charges as part of Project Progression process? These seem unreasonable given flexible connections consider BESS as an asset.

CUSC Section 15 – User Commitment Methodology and Final Sums (CUSC Schedule 2, Exhibit 3, Part 2) sets out the ways users' liability and security requirements are calculated. CUSC Section 15 includes generation projects connected at distribution. The ESO applies the applicable methodology depending on the type of connection and the network in which the user is connecting into. For User Commitment Methodology specifically, a user is liable for and required to secure against those works that fall into the CUSC Definition of 'Attributable' and Wider Reinforcement Works.

There is over three times the expected demand in the pipeline, and more is coming through. Is there a plan to deal with the huge amount of excess capacity?

As our analysis of connection rates of projects focused mainly on generation projects, the revised CPAs only consider attrition to generation projects connected at transmission and distribution levels. CPAs assumptions are constantly reviewed so in the future there may be an exercise to look at the credibility of demand connection.

Why can't multiple parties connect to one bay which can take more than the average MWs contracted if it is feasible? This will save TNUos costs and new subs?

Connecting multiple parties to a bay is an option that can be explored further; however, it carries commercial implications which parties would need to agree on. The SQSS will limit the amount of MWs that can be connected to a bay for network security purposes.

The modelling of TX connected BESS by DNOs needs consistency as is stopping connections. Is anyone looking at this centrally to give DNOs modelling parameters?

DNOs, TOs and the ESO are working together through the ENA to ensure a joined-up approach to BESS modelling. The ENA has a workstream that is looking at this that harmonises the approach to BESS and runs webinars where this is explained further.

The SCG's Battery Storage working group has been working to develop a consistent approach to modelling battery storage. The three tactical solutions published by the working group identify common guidelines to how battery storage should be assessed. Work is continuing in this work stream to identify better alignment in codes and to develop these solutions further.

A major blocker for HND projects is obtaining updated connection offers (agreement to vary). What is being done to progress this?

We have found that there have been various factors that have contributed to the timelines for issue of HND offer updates. These have been different factors for different projects. ESO has reviewed the HND1 process and is working with TOs and developers to review and implement a more streamlined offer update process. For example, The ESO is reaching out to developers soon in the process to seek DRC data and sharing this with TOs to inform design studies at an earlier stage than was the case in HND1.

First ready, first connected mean that we will fill up the grid with 'easier' technologies rather than a diverse mix, leading to a difficult balancing act?

An agreed set of principles to define "what first ready first connected" has not yet been established so it is difficult to state at this stage. However, the principle of the approach is that the credible projects which are ready to connect could be prioritised to make use of the network capacity rather than it being sterilised by projects which are not progressing. We would still expect a diverse mix of technologies in the long term but in the shorter term it could be that the technologies that are easier to deliver may be connecting first.

There is already a difference in connections and improvement timescale between Scotland/England. How will this be managed to avoid complexity for customers that work across both?

The ESO is working with all relevant transmission owners to improve the connection dates of projects throughout GB. Inherently there will be differences in connections across GB as each transmission owners' networks require a variety of transmission reinforcements.

Can we open HND2 up for competition with the TOs considering that existing TOs might be congested to deliver HND?

The delivery of HND recommended reinforcements is decided by Ofgem via their Asset Classification process and HND2 project would need to go through the same process ahead of knowing whether reinforcements are developer build or TO build. It is our current expectation that this model would not be finalised in time to have a positive impact on delivery of these projects.

Network Competition team response: Outputs from the network planning processes will identify network need and projects. The projects that are for onshore transmission will be assessed against the criteria for early competition (to be defined in the forthcoming Criteria Regulations). If Ofgem support the decision to compete a project, then this will be announced and go through the procurement process. Interested parties which includes existing TOs) can participate in the pre-tender activities and the competition itself which will include pre-qualification. At the conclusion of the process, the ESO will identify a preferred bidder, which, once this party has been awarded a licence by Ofgem, will become a Competitively Appointed Transmission Owner (CATO). More details of early competition can be found on our website. We expect Ofgem to consult on the final early competition process in late 2023/early 2024.

Will the formation of the FSO next year have any impact on the current connection initiatives?

The formation of the FSO, will not impact on the current connection initiatives. Through the legislation that gives power to the FSO, all of the current ESO responsibilities transfer across to the new public organisation and will be supplemented by other accountabilities.

How are transmission upgrade works prioritised and how transparent is this process onto date? And how does Ofgem see viability and confirmation?

Upgrade works should be delivered on time to achieve the most benefit i.e. enabling a customer connection as per the agreed date and also to provide system benefits e.g. reduction of constraint costs on the network.

Currently, transmission upgrade works are delivered according to customer demand. For example- if customer demand increases in a certain area, circuits may need to be uprated to accommodate the increased load. However, this strategy means that the connection of any customer projects is behind the works needed to uprate these circuits, causing longer connection timescales. As part of NGET's approach to industry reform, we are advocating for strategic approval of works where demand is expected to increase, meaning that upgrade works can take place ahead of customer need, creating strategic demand hubs and allowing projects to connect faster. Ofgem has previously approved this type of network investment for the ASTI schemes to deliver offshore wind power. Moving forward, we are liaising with Ofgem and other industry bodies to adopt this approach more widely.

Scottish TO's have just started studies.

My scheme is dependent on construction of a new substation. The expectation is to confirm security payments while upgrade works aren't related to project. Help!

The new substation should be classed as an attributable scheme to the customers project; therefore, a proportion will need to be secured by the customers as any other scheme would be that is before and up to the MITTS.

Does the customer portal include a compliance process?

Not at the moment but parts of the compliance process such as the issuing of operational notifications and UDFS submissions are in the feature backlog for future releases.

If the recent TNUoS 10-year projection is not intended as an investment signal, how should it be viewed?

We undertook to create the 10-year projection at the request of industry, a longer-term view of what TNUoS tariffs would look like beyond the five-year view that we produce each April was the ask.

There are multiple problems with trying to come up with numbers the further out you go and these issues are well covered in the report and the webinar that we held to discuss the report.

We accept that the numbers probably aren't accurate, but the 10-year projection does show things like directions of travel within the tariffs, the overall recovery numbers, the difference impacts between the north and south, and other things, albeit this is all based on the existing methodology which we know will change.

The majority of the feedback we have had from industry is that it has been a useful exercise to produce this 10-year projection, in the absence of anything else its better than nothing.

What was the reason for the SWS/Kintyre gen trip on 7 July? Are we anticipating more fault events like that in future? What's planned to manage network stability?

On the early hours of 7 July, there were some system disturbances that impacted several users on the Scottish network. On 8 November, the ESO provided an overview of these disturbances that occurred between June and July at the Operational Transparency Forum (OTF). This can be found on the ESO website and provides further context and lessons learnt.