

SSEN Transmission's response to Ofgem's views on Early Competition in onshore electricity transmission networks

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Executive Summary

The Three Tests

The GB transmission network is on the brink the biggest transmission undertaking the UK has ever seen. SSEN Transmission's network in the north of Scotland is the gateway to a renewable future in the UK. Without policy support and certainty, GB will not achieve Net Zero.

Whilst Ofgem has a duty¹ of promoting effective competition where appropriate, pursuing competition in its current proposed framework in the electricity transmission network is not beneficial. Instead, it would be detrimental for the long-term planning, operation, and maintenance of the network, and is at odds with Ofgem's principal statutory objective under the Electricity Act to protect the interests of existing and future consumers. Due to the essential role electricity transmission plays in meeting Net Zero and in keeping the lights on, we believe there are three "red line" tests which must be satisfied prior to the introduction of any further competitive process to the regulated regime:

Test 1	Accelerate, not delay, the delivery of the UK's legally binding Net Zero emissions reduction targets , by facilitating delivery of the right investment at the right time, and providing certainty for investors and stakeholders in the GB market. This also includes facilitating the delivery of 40GW of offshore wind by 2030 and the recently announced 78% emission reduction target by 2035.
Test 2	Maintain security of supply , along with the high reliability standards, integration, and performance of GB's transmission networks. New entrants must be subject to the same rules, responsibilities and obligations of incumbent Transmission Owners (TOs).
Test 3	Provide demonstrable net benefits, lifetime cost savings, and must avoid consumer detriment by undertaking a long-term view to plan, maintain, coordinate, and operate the transmission network, and be supported by, consumers, communities and the environment, industry, and electricity generators.

To date, none of the competitive models presented by Ofgem, BEIS or the NGESO have satisfied these tests, including the ESO's Early Competition Plan (ECP). We therefore believe that significantly more work is required prior to the introduction of legislative change which would have a profound impact on the future of the GB energy system. Below we make six main points which demonstrate that Ofgem's proposals fail the above tests. In order to comply with its principal objective to protect the interests of existing and future consumers Ofgem must address these in advance of proceeding.

Delaying Net Zero and increasing costs (Fails Test 1 and Test 3)

Early competition can extend the delivery of transmission infrastructure by at least 18 months, and rather than reducing costs for consumers, can increase costs by extending

¹ Section 3A, Electricity Act 1989

constraint payments. It has not been demonstrated how delays and consumer detriment will be avoided.

Our initial analysis of NGESO's proposed ECP demonstrates it will likely extend the delivery of transmission infrastructure by at least 18 months compared with the RII counterfactual. This is due to the multiple stages of the tender process and preliminary works being undertaken post tender.

Achieving Net Zero targets requires the connection of significant renewable generation and associated timely investment in onshore transmission infrastructure to transport renewable energy from areas of high generation to locations of demand. Our modelling of the requirements to meet Net Zero targets indicates that connected generation in our network area alone will need to increase to between 13.6GW and 15.7GW by 31 March 2026 and up to 23.1GW connected by 2030. Such a momentous challenge cannot afford delay.

There is also a real risk that increased constraint costs due to delays will outweigh any unproven short-term cost savings competition could introduce. NGESO estimated, after NOA 2020/21 reinforcements are delivered, that consumers could still face paying up to £2.5bn in constraint payments a year because essential transmission reinforcements will not be delivered quickly enough to support increasing levels of renewable generation². This risk could be further exacerbated by the introduction of early competition.

Introducing new policies that cause delays to reinforcements resulting in increased costs for consumers is at odds with other Ofgem policy initiatives, such as setting late project delivery charges on TOs for large onshore transmission investment (LOTI) projects. It is inconsistent to seek to disincentivise delays from one source (ie TO Reinforcements) whilst introducing delays through the implementation of these proposals. Consumers will ultimately bear the detriment of such delays.

We note that the implementation plan and timeline, as set out by NGESO, is already delayed³.

Increasing uncertainty and creating further barriers to Net Zero (Fails Test 1)

Early competition will create uncertainty and therefore investment and delivery bottle necks. Developers and the supply chain will not have a clear route to market or a defined pipeline of projects, thus delaying meeting UK's Net Zero targets, particularly the 2030 targets⁴. It has not been demonstrated how Ofgem, BEIS and NGESO will mitigate uncertainty.

Early competition and the consequent uncertainty of the preferred bidder solution will impact generation developers' ability to attract project financing, and as a result prevent or delay Net Zero projects. Investors require certainty on connection time, returns, oversight of risks, and track records of Competitively Appointed Transmission Owners (CATOs). Uncertainty will also introduce higher risk margins for developers, which developers may

² <https://www.thetimes.co.uk/article/new-wind-farms-threaten-2-5bn-constraints-bill-for-consumers-chzwcfs2n>

³ <https://www.nationalgrideso.com/document/191251/download>, p.7

⁴ <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035>

factor into a Contract for Difference (CfD) bid, ultimately resulting in higher costs for consumers.

The supply chain is experiencing increased global demand as nations around the world establish its own targets to increase renewable capacity. The journey to 2050 requires a scale of development not seen within GB since the mid-1960s⁵. The limited supply chain requires a certain and centralised strategy so it can provide the scale that GB requires to meet Net Zero at pace.

We have heard from potential bidders and the supply chain⁶ that a certain, predictable framework, and defined pipeline of projects is required to enable infrastructure providers to negotiate early with global suppliers and contractors to provide competitive costs. TOs are currently able to start procurement negotiations early to ensure assets are procured in time to meet key dates. Early engagement allows for contractors and supply chain to collaborate on the best solutions for consumers. This includes an approach that encourages freedom to challenge traditional thinking, exploration of new designs, methods, materials, and identifying drivers for eliminating risk, efficiency savings, and safety improvements. The proposed ECP prevents certainty and early negotiation to take place, and the NGESO has failed to provide any proposal to reduce this uncertainty.

The supply chain for transmission assets, including manufacturers, is limited and needs clear investment signals from GB companies, Government and regulatory policy. Only a handful of manufacturers and suppliers worldwide can produce the transmission and high voltage equipment that will be required in coming years. Innovation has been identified as one of the benefits of these early competition proposals. However, without a clear pipeline of potential opportunities and clear Government and regulatory policy, there is a risk that the investment required for the innovation and expertise that is necessary to deliver GB Net Zero targets by 2030 (and beyond) will not be readily available in GB, or will be at an increased cost as investors manage the uncertainty through demanding higher returns⁷.

The above issues caused by uncertainty will be exacerbated if Ofgem proceed with its initial view that the 'high value', 'new', and 'separable' criteria won't apply to early competition. This proposal to remove competition criteria is a significant departure from existing processes and assessments. An initial CBA is not an appropriate way to determine projects eligible for early competition, and introduces further uncertainty for all stakeholders in the industry. We are particularly concerned with these proposals.

Creating a race to the bottom (Fails Test 2 and Test 3)

The current regime maintains competitive pressure by embedding competitive tendering within project development without sacrificing the benefits of a natural monopoly. Within the current regime, SSEN Transmission upholds exceptional ethical and sustainable

⁵https://www.hvdccentre.com/wp-content/uploads/2021/07/Offshore_Co-Ordination_Supply_Report_v2.0.pdf

⁶ During NGESO's 2019/20 webinars and Morgan Sindall's consultation response to Ofgem

⁷ <https://utilityweek.co.uk/cc-c-chief-points-to-lack-of-scrutiny-on-net-zero-policy/>

standards and codes of conducts. It has not been demonstrated how the ECP will maintain these for GB consumers.

To ensure the necessary investment⁸ to meet Net Zero is made at the lowest cost to consumers, TOs already undertake competitive tenders in accordance with legal requirements set out in the Utilities Contracts Regulations 2016⁹. Previous ITPR development has acknowledged the competitive tendering process within its construction projects, and noted that there might be a limit to the scope of costs which are not exposed to competition under a traditional price control approach¹⁰. In developing our own procurement strategy for the RIIO-T2 period, SSEN Transmission undertook stakeholder engagement across the supply chain and with potential providers of network and non-network solutions. We designed a multi-element approach that applies best practice over a whole programme of work to ensure the most competitive price. Furthermore, the RIIO price control is internationally recognised as a model of best practice in driving down costs. RIIO-T2 is the most stretching price control since privatisation, with the lowest cost of capital to date, an ambitious ongoing efficiency challenge and stretching consumer commitments.

Given the competitive pressures that are already embedded in the current regulatory regime, the claims of marginal value of the ECP have not been demonstrated and are further undermined when such emphasis focusses solely on short-term cost savings which will only encourage a ‘race to the bottom’.

Priority on unproven, short-term cost reduction can encourage short-term decision making in design and delivery, where solutions will be built to meet individual contract durations, rather than the enduring network need. Therefore, future consumers bear additional costs due to lack of future proofing network designs.

This short term focus will also result in detrimental impacts on the communities we serve in the north of Scotland. In the current regime, TOs are well placed, and well trusted network bodies that are highly accountable to their stakeholders, including environmental and statutory bodies, to not only ensure cost efficiency, but also that our business practices are of high quality and standard through sustainability commitments¹¹ and accreditations. We have long standing relationships with local communities and stakeholders in the north of Scotland and wider GB energy industry which have been built over decades to effectively and efficiently deliver projects whilst ensuring they are acceptable to the environment and local communities.

Of note, as a regulated monopoly, we maintain a Responsible Procurement Charter¹, which sets out key principles and international best practice to ensure our business is conducted

⁸ Maxine Frerk makes the point in her paper “Investing for Net Zero in the face of uncertainty: Real options and robust decision-making” that Net Zero may require unavoidable additional costs, but it is a price worth paying. According to the 6th Carbon Budget, on average, an additional £15bn of capital infrastructure investment per year is required to meet 2050 Net Zero targets (<https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf>). As well, Lawrence Slade, Chief executive of the Global Infrastructure Investor Association, has suggested this could be as much as £40-50bn per annum through the 2020’s (<https://utilityweek.co.uk/legislate-and-regulate-for-net-zero-investment/>)

⁹ <https://www.procurementportal.com/regulations/utilities-contracts-regulations-2016>

¹⁰ https://www.ofgem.gov.uk/sites/default/files/docs/ng_response_appendix_2_frontier_economics_rpt-cato_cba-08_01_16_-_final.pdf

¹¹ https://www.sse.com/media/1kynkfr4/responsible-procurement-charter_0818.pdf

ethically, sustainably, within the law, and requires the same from our supply chain. This includes but is not limited to being:

- a **Living Wage** accredited employer since 2013 (including applying Living Wage across its supply chain, where applicable);
- accredited as a **Living Hours** employer;
- the only FTSE 100 company with the **Fair Tax Mark** independent accreditation; and
- a signatory to the **UN Global Compact (UNGC)**, the world's largest corporate sustainability initiative, committed to applying the UNGC's ten principles focused on the environment, human rights, labour and anti-corruption.

Looking back on our journey so far to Net Zero, throughout RIIO-T1 we have¹²:

- More than doubled the amount of renewable generation connected to our network from 3.4GW to 6.7GW displacing an estimated 38MtCO₂e from generation connected to our network.
- Become the world's first electricity network company to receive Science Based Target Initiative accreditation for our carbon reduction targets which are in line with a 1.5°C global warming pathway.
- Developed an industry-leading and award-winning Biodiversity Net Gain (BNG) approach to improve the environmental impact of our projects.
- Worked with our local communities including £0.5m contributed from the community resilience fund. Alongside SSEN Distribution, we provided much needed Covid-19 support to over 115 communities across the north of Scotland.
- Achieved leadership in Ofgem's Environmental Discretionary Reward scheme for the last three years and have been recognised by Ofgem for our RIIO-T2 sustainability initiatives through the consumer value proposition.

These positive initiatives, focusing on reducing carbon, protecting nature, supporting communities and social benefits, would inevitably be placed at risk under the current competition proposals which will lead to a myopic focus on short-term cost.

Disproportionate focus on cost reduction will also dilute adherence to industry standards and codes. NGESO's Pathfinder process to date is inconsistent with TOs obligations under industry code requirements. For example, incumbent TOs are being asked to hold capacity for Pathfinder projects, without having an associated application. Concerns regarding the risks of challenge associated with this approach being inconsistent with code requirements (amongst a raft of other unintended consequences) have been highlighted to NGESO and Ofgem. Pathfinder is also impacting connecting customer relationships that have negative impacts on other commitments TOs have undertaken within the price control (e.g. Quality Connections

¹² https://www.ssen-transmission.co.uk/media/5701/final-elas-sustainability-report-2020_21.pdf

Incentive). This has led to the very recent Open Letter from Ofgem regarding the disapplication of certain code requirements¹³.

Creating a fragmented network (Fails Test 1, Test 2 and Test 3)

The proposed ECP puts coordination at risk and directly contradicts efforts by the Offshore Transmission Network Review (OTNR). The OTNR was established to resolve fragmentation concerns and to develop a regime that takes a coordinated approach for the future, essential to meet to Net Zero. It has not been demonstrated that early competition can achieve coordination; nor has it been demonstrated how the problems currently felt in the offshore regime will be avoided in the future onshore.

It is widely recognised that competition has a limited role in natural monopolies¹⁴. Consideration of any role competition will play must outweigh the negative impacts of splitting a natural monopoly, most notably increased costs to consumers. Proposals for competition so far ignore the benefits accruing to companies and consumers due to the interconnectedness of developing, maintaining, and operating the GB transmission network, and the benefits that natural monopolies offer as service providers. The benefits being put at risk include, but are not limited, to:

- **Cost savings through co-ordinating a portfolio of works:** As TOs have oversight of works within our regions we work with NGESO to coordinate the development of transmission network efficiently for the long-term in the best interests of GB consumers. We avoid fragmentation and short-term solutions by implementing synergies across our portfolio of load and non-load related works. Regarding connections specifically, we find efficiencies to enable multiple connections and coordinate offers with wider works, where possible. We deliver up front, as well as long-term efficiencies across our portfolio and invest strategically to avoid repeated disruption or duplication of works to a community and environment. Conversely, to ensure a level playing field, competition must limit the scope of projects so it can only address one network issue at one point in time, in one area of the network. The competition framework does not consider co-ordination of works, the longevity and need to future proof costs and network need. Competition and coordination are likely to be incompatible in delivering Net Zero on time.
- **Economies of scale and scope in operational expenditure:** The layering of operation and maintenance costs as the network fragments could result in any short-term construction or financing benefit being lost in operational inefficiency over the medium to long-term, particularly where there is post-award contract change control mechanisms proposed – i.e. the outturn cost could be significantly higher than the original successful bid cost.
- **No integration costs:** Under the ECP there is a risk of high integration costs where new assets interface with the existing network. Ultimately, the costs for these risks will sit

¹³<https://www.ofgem.gov.uk/publications/direction-relieve-national-grid-electricity-transmission-plc-and-national-grid-electricity-system-operator-limited-obligation-comply-section-d-part-2-so-code-pathfinder-connections>

¹⁴ Joe Perkins, ex Chief Economist at Ofgem giving oral evidence on 29 June 2021 to the Industry and Regulators Committee on its inquiry on Ofgem and Net Zero. Transcript: <https://committees.parliament.uk/oralevidence/2493/pdf/>

outside the cost evaluation of the early competition proposals. It is also not clear where the obligations for these costs will sit, and how complex integration between will be.

- **Adapting to changing needs:** Competitive tendering via early competition will ‘lock in’ a solution at one point in time, thereby failing respond to changing network needs and the ever-evolving needs of local stakeholders and network users (which a “totex” price control allows for). This risks sub-optimal, fragmented network solutions that does not consider the wider network.
- **Obligations and standards that protect GB consumers and society:** TOs are subject to safety, security of supply, competitive procurement, customer service, sustainability, and financial risk obligations. Following NGESO’s key guiding principle of a “level playing field” for all bidders, there should be no dilution of the current obligations, regulations and standards for new entrants otherwise the network will be built and maintained at different standards. We welcome evidence of where these requirements have been set for potential third party entrants, and that they will accept such additional obligations and liabilities without impacting costs levied upon consumers.

Overall, the impact of piecemeal development and management of the network has not been accounted for. No assessment has been undertaken to consider how the above will be addressed in practice.

We also note that European models (i.e. Ireland) are moving towards more coordination to better integrate long-term infrastructure, coordinate public acceptance over multiple projects, and facilitate future proofing of technology¹⁵. Through the early competition framework, GB is attempting to do the opposite. GB’s direction of travel puts the renewable future of the UK and Net Zero targets at risk.

An inadequate Impact Assessment (Fails Test 3)

The Impact Assessment (IA) being relied on to make such a fundamental policy shift is not representative nor balanced. The assumptions and comparators are unsuitable, the sample (of two projects) to calculate savings is wholly unrepresentative and costs of early competition are not considered and calculated adequately. We ask Ofgem how they consider that using such analysis meets the Precautionary Principle when developing regulatory policy.

First, the comparators used in the IA to estimate benefits must be sufficiently applicable to GB transmission; they are not and therefore benefits cannot and should not be applied across directly.

The assumptions Ofgem has used to estimate cost savings that early competition could introduce is not representative of our experience and understanding. Ofgem’s estimates, that early competition could reduce capex costs by 22%-44%, are based on only two projects in North America. There are significant differences in legal and regulatory frameworks underpinning transmission between the two jurisdictions. The examples also do not represent the GB sector, which is in a period of rapid evolution. Furthermore, the Hartburg-

¹⁵ <https://www.gov.ie/en/consultation/d5fb5-consultation-to-inform-a-grid-development-policy-for-offshore-wind-in-ireland/>

Sabine project has not yet been energised, so the quoted cost savings remain mere estimates at this stage.

In international examples where competition has been introduced on the transmission network, it has not always introduced benefits to consumers. The Imperial Valley project, as cited by NGENO, was ultimately cancelled and not delivered¹⁶, and the East-West Tie project in Ontario Canada was competed to reduce costs and drive economic efficiencies¹⁷, however the earliest in service date was delayed and outturn project costs were significantly higher than the winning bid estimate. It is unclear in the ECP proposals who would bear such additional development and constraint costs were they to materialise upon imposition of competition in GB policy.

The OFTO regime examples also provide limited opportunity for comparison. Financing savings are largely attributable to OFTOs being shielded from risks (i.e. there is a guaranteed revenue stream, guards against inflation, and the impact of lower availability of service on revenue was reduced) in combination with, and enabling, a lower tax incidence through a highly geared structure. Consumer protection requirements under TO licencing would not permit the same arrangements for TOs.

Second, whilst there may be benefits to competition, equally there are significant costs. However, the draft IA does not adequately consider and monetise the costs of the proposed early competition framework on users of the network and the network itself. We do not think that monetising risks is spurious – it is essential to have a balanced view of the challenges and costs a new and untested regime could introduce. We caution overly optimistic expectations without robust comparative data and evidence, for example dynamic benefits, such increased innovation and introduction of new products, services and technology, which currently there are limited examples.

It is essential to monetise costs related to potential delay or failures or project, delay of Net Zero targets and impact on security of supply. These risks should be included, at the very least, as sensitivities given the value and importance of these attributes to GB economy and society. Excluding these factors results in a misleading portrayal of net benefits for consumers. In particular, consumers have indicated they are willing to pay more, to ensure higher reliability¹⁸. Electricity is becoming even more central to GB consumers' daily lives, as our dependence increases with electrification of transport and heat. Keeping the lights on is essential for a productive and thriving economy in GB. As such, any analysis of the benefits of competition generally or specifically (where related to projects) must at a minimum acknowledge, reflect, and plan on potential risks and adverse impacts on the operability and performance of the wider network.

Any assessment of early competition proposals must include detailed analysis of the potential wider impact and cost of failure. Comprehensive analysis on the practicalities and impact of piecemeal development and management of the network, to mitigate and address failures, is crucial. We continue to be concerned about the absence of such fundamental evaluation by

¹⁶ <https://www.wecc.org/Reliability/2016-APR-IID.pdf>

¹⁷ [Competition In Electricity Transmission: Two Canadian Experiments - Energy Regulation Quarterly](#)

¹⁸ <https://www.ssen-transmission.co.uk/media/3455/consumers-willingness-to-pay-final-0107.pdf>

Ofgem and BEIS in addressing these very real and critical issues of network fragmentation and how to address network need, should a third-party solution fail, or a tender exercise be unsuccessful. Competitive benefits should be considered alongside potential significant costs of transferring liabilities and maintaining reliability and security on the network.

Other variables to be considered include:

- Costs to natural environment (i.e. if third parties *do not* invest into the natural environment in the same manner as SSEN Transmission and other TOs);
- Loss of investment in local communities (e.g. third parties operate contracts to generate profit, however SSEN Transmission invest in facilities and amenities within the local communities we serve such as into schools and parks (eg Shetland LOTI);
- Carbon costs from the implementation of the solution;
- Time value of resources spent setting up the framework for the wider Ofgem/ESO engagement with competition since beginning the ITPR project;
- Increased intergenerational consumer costs due to piecemeal development and loss of future proofing; and,
- Layering of O&M teams (and costs) for each separately owned piece of a future fragmented network, etc.

Unresolved practical implications (Fails Test 1, Test 2, and Test 3)

Ofgem has been progressing the introduction of competition in the transmission market for a decade, yet we remain deeply concerned that in that time it has not set out clearly how it will address the real practical concerns of its implementation that will affect current and future consumers. We ask both Ofgem and BEIS to respond directly on all the points set out in our Appendix A.

Effective design and implementation considerations are essential for the success of policy goals¹⁹. The transmission network is complex in design, nonlinear, and has multiple interdependencies. Without full and thorough consideration of practical challenges, there is a major risk of a gap forming between policy aspiration and implementation; a common source of policy failure.

SSEN Transmission has identified over 50 issues throughout the early competition framework²⁰. As part of our response, we have collated evidence based practical issues that have not been considered during the development of the early competition framework. As we have seen from the Pathfinder “Learning by Doing” approach, severe implementation issues arise when the practicality of the network is not considered during policy development.

¹⁹ <https://www.tandfonline.com/doi/pdf/10.1080/25741292.2018.1540378?needAccess=true>

²⁰ Please also view SSEN Transmission’s response to the ESO’s Phase 3 Consultation: <https://www.nationalgrideso.com/document/190366/download>

Some practical issues we have identified include, but are not limited to: security and liabilities for increased interface physically and relating to cyber; fault response capability and timeliness; and management of statutory stakeholders and local communities.

Responses to Chapter 3 – ESO’s Early Competition Plan

1. **Do you agree that the continued development of the arrangements to allow early competition in electricity transmission represents good value for money for consumers?**

First, we ask that Ofgem define “value for money” and whether it is distinguishing value from a narrow definition of short-term cost savings versus whole life cost savings. We support the Consumer Value Proposition (CVP) approach that value extends beyond short-term cost savings to long-term cost savings, and other services energy consumers value including security of supply, environmental improvements, limited disruption, service improvements (including communication and trust), community support, local supply chain opportunities, etc.

Secondly, and as noted within our Executive Summary above, the unresolved practical implications must be considered in more detail in order to produce a full and thorough Impact Assessment. Failure to do so will leave stakeholders unable to assess and respond meaningfully to Ofgem’s question. The IA as drafted is wholly unrepresentative and unbalanced, and the costs of early competition are not considered and calculated adequately. A credible IA must monetise the loss of benefits that natural monopolies provide, as well as quantifying the risk to Net Zero targets due to the delays introducing competition would cause in the delivery of new critical infrastructure. This must then be assessed against the proposed (and evidenced) benefits of a new approach.

We support Ofgem and BEIS in striving to provide wider value for money for consumers and long-term cost savings. However, robust and substantiated evidence that early competition will deliver value has simply not been provided. Cost savings has been hypothesised under economic theory but not proven in practice. Not only has there been little evidence to support the proposition that early competition will deliver value, some of the analysis which has been provided has instead demonstrated the opposite. Any policy that can result in consumer detriment and delay to Net Zero must be cautioned.

SSEN Transmission has reiterated its position throughout the development of NGESO’s Early Competition Plan - any policy that does not meet **all** three tests set out below should not be adopted. Therefore, even if short-term (or indeed long-term) cost savings are proven, delays to Net Zero and risk to security of supply must be “red lines”. The three tests which must all be satisfied prior to the introduction of any further competitive process to the regulated regime are repeated below for completeness but we refer the reader to our Executive Summary:

1. **Accelerate, not delay, the delivery of the UK’s legally binding Net Zero emissions reduction targets**, by facilitating delivery of the right investment at the right time, and providing certainty for investors and stakeholders in the GB market. This also includes facilitating the delivery of 40GW of offshore wind by 2030 and the recently announced 78% emission reduction target by 2035.
2. **Maintain security of supply**, along with the high reliability standards, integration, and performance of GB’s transmission networks. New entrants must be subject to the same rules, responsibilities and obligations of incumbent Transmission Owners (TOs).

3. **Provide demonstrable net benefits and lifetime cost savings and must avoid consumer detriment**, by undertaking a long-term view to plan, maintain, coordinate and operate the transmission network, and be supported by, consumers, communities and the environment, industry and electricity generators.

The policy objective of introducing competition stems from the hypothesis that more competition brings more benefits and better value to consumers by reducing upfront costs, encouraging innovation to drive efficiency, and delivering more choice (e.g. design and solution options) to customers – all of which are positive economic traits.

However, the transmission market is fundamentally different to other goods and services markets. As a natural monopoly, SSEN Transmission and other incumbent TOs have the ability to provide benefits that cannot be achieved through competition, i.e. the supply services to an entire market at a lower cost than two or more firms.

“It [Government] can perhaps run competitions and auctions to bring forward more competitive provision of network infrastructure, but fundamentally it is a natural monopoly. The scope for competition is relatively small. [...] I would love to be wrong, certainly as an economist, but the scope is probably fairly limited.”²¹

- Joe Perkins, Ofgem ex- Chief Economist

The RIIO price controls are effective in driving down short-term and long-term costs, and in delivering wider value such as increasing reliability and innovation, and incentivising service areas that consumers and stakeholders value most. It is internationally recognised²² as a model of best practice by holding network companies to account financially and reputationally to ensure they deliver upon their respective commitments to customers and stakeholders. This has resulted in RIIO-T2 being the most stretching price control since privatisation, with the lowest cost of capital to date, an ambitious ongoing efficiency challenge and stretching consumer and stakeholder commitments (e.g. our industry leading sustainability ambitions²³).

In our view, competition may result in the loss of the cost savings and wider value for money that natural monopolies provide. This includes:

- **Loss of strategic coordination and planning efficiencies:** Incumbent TOs are able to implement synergies across a portfolio of load and non-load related works, as well as operational expenditure to find efficiencies for optimum solutions and management. We are also able to benefit from economies of scope and scale by bundling projects to obtain volume discounts and efficiency in delivery programmes.
- **Community and environmental impact:** SSEN Transmission’s network area includes challenging locations to deliver large-scale transmission projects that require significant experience and knowledge in mitigating risks relating to topography, sensitive environments, and the logistics of transporting assets. As above, incumbent TOs can find efficiencies and can plan projects with local communities, planning authorities, and statutory consultees in a collaborative and coordinated manner, without repeatedly disrupting a region and the community.

²¹ <https://committees.parliament.uk/oralevidence/2493/pdf/>

²² <https://info.aee.net/hubfs/RIIO%20Case%20Study%20Final%20.pdf>

²³ As recognised by Ofgem’s CVP award in RIIO-T2 and strong track record of leadership in RIIO-T1’s Environmental Discretionary Reward.

Example 1 : Rothienorman substation

This example demonstrates the wider environmental benefits that SSEN Transmission, as a natural monopoly offers its communities, that is above and beyond our regulated cost remit, to ensure we leave a construction site better than when we arrived. SSEN Transmission is a long-term provider of utility services, and therefore has the long-term benefits of the community in mind. It is not clear how third parties (who have limited assets for limited amounts of the time on the network) would provide these benefits to consumers and communities.

SSEN Transmission's substation at Rothienorman was energised at the end of August 2021. The Rothienorman project consists of a new substation and overhead line upgrades, forming part of our reinforcement and improvement of the transmission network in the North East and East Coast of Scotland. Facilitating the connection of new renewable generation to the grid, playing a key role in delivering a network for Net Zero.

In the wrong hands, a project like this has potential for adverse effects on the environment and wildlife of the area. At SSEN Transmission, above and beyond any legal requirements expected of us, where possible, we aim to leave a site in a better situation environmentally and ecologically, than before we started. To achieve this, a lot of work goes on to ensure all measures are in place to avoid disruption to the local communities, wildlife and scenery, with some creative solutions having to be implemented.

SSEN Transmission undertake early pre-construction surveys to minimise ecological damages and monitor wildlife nearby and change how we work on site to minimise noise disturbances. We also create new habitats. So far, we have planted over 1000 trees onsite, created insect, bird and bat boxes, and improved wetlands to name a few. On this particular site, SSEN Transmission has created long-term benefit by increasing biodiversity by 60%.

- **Supply chain impact:** Certainty of delivery is required to effectively negotiate the most efficient supply and costs with the supply chain, for the benefit of GB consumers. The increase in renewable generation and the associated construction to reinforce the energy network is already putting a strain on supply chains and manufacturers of transmission assets globally, in particular HVDC cables and high-voltage transformers. The supply chain for transmission assets is limited; only a handful of manufacturers and suppliers worldwide can produce the high technical specifications and bear the expense in developing and manufacturing high voltage transmission equipment. Introducing an additional competitive element into this mix is unlikely to generate additional capacity or innovation. More likely it will create delays, further uncertainty, and , as a result, cost increases at a point when we should be focusing on delivering the UK's legally binding emissions reduction targets in already challenging timescales.

In our experience, and that of our customers in the ESO's Pathfinder projects, there have been delays to the processes and implementation of these projects arising from the unintended consequences of a 'Learning By Doing' approach. Because the Pathfinder process has not been specific and time bound in its scope and evaluation processes, competition applicants have flooded the pre application Connection Customer Engagement process. Some customers applied for connection offers, whilst others did not, causing some participants requiring transmission licences to develop their solutions, as well as scope creep.

Delay and challenge of implementation has been a result of introducing new complex processes into an already heavily regulated industry with significant interdependencies. One lesson from Pathfinder is the need for careful design and thorough impact assessment upfront. If replicated through competitive tendering for significantly higher value and complex transmission assets where the materiality of need and consumer impacts are far greater than Pathfinder, there is the potential to cause considerable disruption and delay to delivery of Net Zero targets, in addition to costs.

Responses to Chapter 4 –Identifying which projects are suitable for Early Competition

1. **Do stakeholders have any views on how a very early competition could be accommodated within the network planning process without having a detrimental impact on the planning of the rest of the network, or whether there are any specific network situations where a very early competition could be run for a solution without it having a detrimental impact on the planning of the wider network?**

We do not think that very early competition is suitable. Very early competition would introduce significant uncertainty and would be difficult to propose suitable solutions without more informative scoping of the network need. The network information and processes required to run a very early competition has not been identified.

2. **Do you agree with our assessment of the ESO's proposed process for defining the technical scope of a tender under an early competition?**

We do not think the proposed process for defining the technical scope is workable. Running an 'initial competition CBA' for any indicative solution from the NOA is impractical and uneconomic. In the current momentous challenge we collectively face in delivering the investments to meet Net Zero, the proposed approach is arguably impossible without admitting defeat now on the 2035 and 2050 targets. We are also concerned that, given the wide ranging and evolving nature of projects potentially in scope for early competition, the impact of delay (as set out in our covering letter) for projects that revert to RIIO delivery has not been considered by Ofgem.

In relation to the competition CBA itself, we also have major concerns if it considers only constraint costs and cost of delivery. We have seen that CBA analysis demonstrate that it can be cheaper for the ESO to pay generators constraint payments as opposed to reinforcing the network. **However, this outcome will not enable solutions required for Net Zero.** Such an approach would fail test 1 as set out in our Executive Summary. Ofgem's early competition Cost benefit analysis is centred around capital and constraint costs with little consideration given to Net Zero benefits, nor any other socio-economic benefits, despite Green Book guidance recommending this repeatedly²⁴. The assessment of network solutions remains heavily focussed on cost efficiency, which while vital, must also be balanced with and set in the context of wider government, societal and environmental objectives.

We do not think it is feasible nor realistic - and arguably impossible for NGESO and its systems to run to consider all combinations of proposed solutions through the NOA and Interested Persons Process to a thorough high standard. For each combination and each of the four FES scenarios, four NPVs will be calculated. The more combinations there are, the number of runs required (and potentially re-runs) would be exponential. Considering the outcome from the Stability Pathfinder²⁵, where the volume of submissions surpassed 1500 eligible solutions from

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938046/The_Green_Book_2020.pdf

²⁵ <https://www.nationalgrideso.com/document/192731/download>

29 providers, it is unlikely that an initial CBA is able to account for the variety of solutions, given there is no value criterion. In this particular instance, this has also resulted in a delay in signing contracts and providing solutions by nearly 12 months.

The results of CBA analysis also depends on assumptions, sensitivities and weightings which take time to justify and agree. In our experience, determining the methodology for CBAs takes time to tailor for different locations and network needs. We welcome clarity on the proposed CBA Methodology. We note that with our recent Argyll and Skye LOTI projects, the CBA methodology considered local FES scenarios. SSEN Transmission gathered insight from stakeholder engagement that is more detailed and better reflects the likely development of the region and generation, to better expose potential hidden costs for consumers. We query whether only four FES scenarios is appropriate, and suggest that any local FES should be taken into account in any assessment of benefit.

Deliverability of proposed options is also an extremely important factor. The ESO has no insight into how feasible and deliverable high-level proposed solutions are at this early stage. Bidders have an incentive to overpromise on their solution or technology, and it would be difficult to determine which suggestions through the Interested Persons Process should be taken forward. With the potential for contractual and regulatory re-opener mechanisms to deal with post-award unforeseen scope changed and costs, there is a perverse incentive upon bidders to bid low to win and then seek to recover their additional costs, despite having a cap in place – this is not delivering better outcomes for the consumer. TO proposals take significant time and cost to develop and are subject to intensive engagement, pre-construction engagement and preparatory works to ensure deliverability. It is unclear how the Interest Persons Process and the ESO will consider third party solutions on an equitable basis, instead they are simply passing substantial risk to the consumer.

Lastly, we continue to request a clearer definition of *‘non-network solutions’* and *‘network drivers’*, as these have not yet been defined. We note that any non-network solutions may impact the current network and power flows. Similarly, to Pathfinders, incumbent TOs may be required to undertake a role in assessing solutions in the Interest Persons Process.

3. Do you agree with our assessment of the ESO’s proposed criteria for early competition? Specifically, do you have any views on whether:

- **there is a need for a ‘high value’ criterion?**
- **‘new’ and ‘separable’ are necessary or appropriate as specific criteria for identifying projects for early competition?**

We agree with tNGESO that there must be criteria for early competition and would be extremely concerned if the criteria of ‘high value’, ‘new’, and ‘separable’ were removed. Removal of any criteria removes certainty from any network planning from incumbent TOs. This proposal suggests that all responsibilities around development to address network need will be tendered for early competition.

As we stated in our response to NGESO’s Phase 3 Competition, whilst we recognise its intent for encouraging all solutions that may provide benefit to the network, this approach is not proportionate, and detracts from key responsibilities of asset owners, which is to deliver

solutions quickly and efficiently. It also contradicts Ofgem's policy precedent of reducing regulatory burden²⁶, and fails Test 1 as set out in our Executive Summary.

We query Ofgem's rationale for changing in direction from its initial view set out in the ITPR, and what additional evidence has demonstrated the benefit of removing competition criteria. We strongly agree with the extensive work undertaken during ITPR, that *"confining the use of tendering onshore to assets that are new, separable and high value means that we will be applying it where the potential benefits from tendering such as cost savings and innovation outweigh the potential administrative and interface costs"*²⁷.

Without any criteria, all solutions for network needs could be subject to early competition. This will undoubtedly increase uncertainty in the pipeline of projects, making the framework for infrastructure development unpredictable for all parties including the supply chain, and those who want to connect to the network. Competing all possible network solutions will delay early negotiation with the supply chain and introduce additional uncertainty as to the route to market for developers, impacting developer risk margins and ability to raise financing – costs which all end up back with the consumer. Under the NGESO's Early Competition Plan, the reinforcement solution, the party responsible for delivery, and costs are not known for approximately four years after the start of the tendering process. Delays to connecting renewable generation can also result in delayed returns for developers, making investments in renewable generation less certain.

We re-iterate that criteria and thresholds help reduce regulatory burden (e.g. CBA, and other analysis) of assessing a myriad of projects. Particularly for small projects, competing is unlikely to be efficient for consumers, as a procurement process can be costly and require a significant and wide range of expertise and resource.

Lastly, we think that NGESO's criteria of "certain" is arbitrary. NOA acknowledges the uncertainty of network scenarios by revisiting and re-iterating its recommendations on a yearly basis. Trying to establish some certainty through solutions appearing in at least two FES scenarios fundamentally contradicts the purpose of NOA. It is also unclear whether the tendered solutions that are taken forward post final CBA will be re-run on a yearly basis to ensure they continue to be the right solution for the network and consumers.

²⁶ Paragraph 7.32, https://www.ofgem.gov.uk/system/files/docs/2020/07/draft_determinations_-_core_document_redacted.pdf

²⁷ Paragraph 3.3, <https://www.ofgem.gov.uk/publications/integrated-transmission-planning-and-regulation-itpr-project-final-conclusions>,

Responses to Chapter 5 –Roles and Responsibilities within Early Competition

1. Do you have any material concerns about the ESO's expertise, incentives, or independence, should they be appointed to carry-out the Procurement Body role for early competitions?

We disagree with Ofgem's view that the *"ESO is well positioned to understand the interaction between an individual project subject to tender and the wider planning, development and operation of the network"*. The ESO is not an asset owner, and therefore does not have experience developing, constructing, or managing assets. Nor has it undertaken any role in scoping procurement processes for transmission assets, evaluating, or running these processes in line with existing legislative requirements.

We have no strong views on the proposal of the ESO as the Procurement Body. However, we ask Ofgem and BEIS to confirm that the Procurement Body will be bound by the regulations set out in the Utilities Contracts Regulations (UCR) 2016, or any new equivalent, to ensure transparency, equal treatment of participants and to reinforce consumer protections.

We continue to urge that any new legislation that replaces the UCR 2016 must provide the same assurance. These regulations ensure fair and transparent processes in the execution of works, the supply of products or the provision of services to Utilities, protecting UK consumers and bidders into any such process. The UCR 2016 mandates checks and balances throughout the procurement process and ex-post challenge is available to all parties. Any legislation that replaces UCR 2016 must be introduced ahead of the implementation of any form of competition in onshore transmission. It is imperative that all entities (including the Procurement Body), operating in the energy sector are held to the same obligations, and undertake a fair and transparent process in the procurement of works, products or services.

The Procurement Body will have to undertake information gathering to set out tender information and documents, including having to physically inspect network infrastructure and other locations. Therefore, access authorisations and interface agreements must be in place to set out risks and liabilities, to protect asset owners and consumers from any potential damage or risk that may arise from site visits. Whilst these agreements may appear to be a checkbox exercise, and an easy barrier to overcome, they may also take significant amounts of time to negotiate and will have an impact on the proposed Early Competition Plan timeline. We request Ofgem, BEIS and NGESO to carefully consider how these liabilities and activities align with the proposed role of the Procurement Body, and any potential contractors operating under its instruction.

For example, SSEN Transmission recently established a transmission interface agreement with an OFTO. There are generic template provisions set out within the System Operator Transmission Owner Code (STC), however these were adapted and tailored to suit the specific requirements for the Beatrice Transmission Interface Agreement (TIA). To tailor this process and negotiate individual TIA provisions for different parts of the network requires significant

resource and effort from various expert teams, such as System Planning, Legal, Operations and Commercial Policy. While these are licenced activities, they are not yet commonplace. In addition, TOs (and CATOs) would have to consider individual site access arrangements to maintain an acceptable level of physical and cyber security. Asset owners cannot provide unsupervised access to contractors, third parties, or even its own uncertified employees. Ofgem must consider the resource and practical requirements that will likely be required in terms of escorted access and site authorisation processes. These would be an additional cost which would need to be quantified by the TOs with appropriate cost recovery mechanisms agreed with Ofgem. Reciprocal arrangements may be needed between all parties in a future fragmented network scenario.

Data breach or cyber hacking may occur if information relating to critical national infrastructure is mishandled and could have significant impacts on the security and resilience of the system if data standards are not met. We continue to raise our concerns on how the Procurement Body intends to ensure that the data provided by the network planning body and bidders will be assured, quality controlled, updated, managed, and secured throughout lengthy open procurement processes and beyond. Information that would need to be shared is highly sensitive and could have significant impacts on the security of the system, if data standards are not met and access tightly restricted, with appropriate measures mandated and enforced against potential bidders. Highly sensitive information could include system studies, intellectual property, as well as landowner and customers' personal information. Proper data governance is essential and a legal obligation in line with GDPR²⁸ is required. This is especially true if NGESO needs to later refer back to data provided that turned out to be incorrect. Further, in this situation, we welcome that the ESO set out what course of action will be taken against parties liable and what action will be taken to protect parties affected.

We continue to have material concerns on other roles proposed by NGESO and Ofgem. It is essential that the Contract Counterparty retains the same authority as the Licence Counterparty, to ensure that any contract obligations and penalties for network and non-network solutions are equal. Please see our response to the below question. The Contract Counterparty must ensure there is a level playing field and hold third party bidders to the same standards as that of TOs, to protect the interests of all parties, including consumers, and the overall reliability and stability of the transmission network.

2. Do you agree with Ofgem's proposed roles?

We strongly disagree with the view that Ofgem should have no direct role in approving contracts. We continue to think that the role of Approver, Licence Provider and Licence Counterparty should be undertaken by Ofgem in order to pass Tests 2 and 3 set out in our Executive Summary.

It is essential that the Contract Counterparty retains the same authority and obligation as the Licence Counterparty, to ensure that any contract obligations and penalties for network and non-network solutions are equal. The Contract Counterparty must ensure there is a level

²⁸ <https://gdpr-info.eu/>

playing field and hold third party bidders to the same standards as that of TOs, to protect the interests of all parties, including consumers, and the overall reliability and stability of the transmission network.

We continue to ask for clarity on what enforcement mechanisms the ESO proposes will be undertaken where a procurement process fails or a third-party solution is not delivered, is partially delivered, or fails. Contractual arrangements will need complex and careful drafting to ensure that risks and liabilities are appropriately apportioned and understood by participants ahead of any competitive process. We continue to call for the ESO to provide comfort and be able to evidence to TOs, the transmission system users and consumers that they will be able to operate the network under the existing compliance regimes, unaffected by third-party solutions. It is in the interest of consumers and the network, that any third-party bidders should be held to the same high standard as incumbent TOs.

Example 2– 132kV Fault on SSEN Transmission

This example demonstrates the complexity and coordinated approach required to address a fault on our network, and how TOs are best placed to do this for faults within and out with our control, where we have access to all assets and equipment.

In 2018, the SSEN Transmission network suffered a fault on the 132kV Fort Augustus to Quoich circuit, due to a landslide²⁹ The extent of the damage was severe. The landslide destroyed a pylon, cutting the electricity supply to 23,000 customers in Skye and the Western Isles, as well as destroying telephone cables.

This example demonstrates a failure outside of the control of the incumbent TO and our ability to mobilise our resources quickly to in the interests of consumers to resolve issues. SSEN Transmission was able to execute a complex restoration plan involving a combination of on-island embedded generation stations, rerouting of the network and through the use of temporary mobile generation sets. This included sending power from the Western Isles via a subsea cable to help restore customers on the north of Skye. At the same time, because TOs operate across a wide portfolio giving us the ability to coordinate across the networks (in terms of operational teams on standby which we can quickly mobilise, and redundancy built into our network due to our adherence to SQSS Standards) we were able to restore all customers the same evening.

SSEN Transmission teams are experienced, well prepared and organised for this type of work, as a result of a wide range of assets in a diverse landscape. Fragmenting the network will result in layering of operational teams and costs as well as reduce the opportunity for this specific experience to be gained

We invite the ESO and Ofgem to evidence its assessment of a third party capabilities to take a coordinated view to get supply back quickly, efficiently, and effectively to customers, and clarity as to how the impacts of third-party failures in asset stewardship and quick and efficient return to service will affect the TO performance mechanisms already agreed through the RIIO-T2 regulatory price control.

²⁹ [Invergarry Landslip: Aerial footage, 12 November 2018 on Vimeo](#)

These types of incidents may impact the TO's Energy Not Supplied (ENS) performance, resulting in a potential 1.9% penalty against base revenue. It can also affect customer satisfaction scores and engagement incentives.

In the event that this assurance cannot be provided, the ESO must ensure robust contractual mechanisms for enforcement of industry requirements and for recovery of foreseeable consequential TO costs, ultimately borne by consumers. We invite Ofgem and NGESO to set out what specific powers NGESO considers would be required to ensure third party bidders delivering non-network solutions are held to account against contract breaches, non-delivery, or wider system impacts. This is essential and in the interest of network users and consumers, as any solution (network or non-network) has the potential to disrupt the reliable and stable operation of the transmission network. An isolated incident can have unforeseen and far-reaching consequences for the entire transmission system.

As contracts only apply to non-network solutions, we request that Ofgem provide further definition on what "non-network solutions" consists of. It is unclear if non-network solutions also include non-network assets, for example synchronous condensers, and constraint management, or storage.

3. Who should undertake the network planning body role? What role should TOs play in network planning?

Network Planning should be undertaken by TOs given our relevant experience/expertise to identify the optimum approach for GB consumers. TOs play an essential role in network planning, however we raise our concerns around liabilities should TOs participate in the network planning aspect of early competition.

We are concerned with the expansion of the ESO's role to undertake increased network planning responsibilities. Planning cannot be done in isolation from design, development, and delivery considerations. These areas of expertise already sit with the TO, and duplication within the ESO is not necessarily efficient. Any change in roles and responsibilities will require careful consider, including upskilling and further capacity building which may be timely and costly.

TOs remain central to network planning and delivery under the RIIO framework, and we urge Ofgem and BEIS to consider the benefits TOs offer as service providers. Incumbent TOs are able to provide additional value to network development and management, as it collects practical, real world knowledge, such as location factors and safe transportation of assets. This "non-system related" information comes from years of managing the network, understanding the geography and topology of the asset locations, and brings significant value when designing, developing, and constructing the network, that cannot be captured in the Electricity Ten Year Statement (ETYS). This knowledge helps to ensure TOs deliver well-considered and value-engineered solutions for consumers that are effective and economical.

Contextual information is essential for delivery, particularly in the north of Scotland. Inherent knowledge of the challenging locations and topography, sensitive environments, transmission

local environmental/consenting constraints, and logistics of transporting assets through these areas need to be considered when delivering solutions. This non-system related information has not been considered by the ESO in its proposal. These considerations must be undertaken when considering the network planning body role, in order to pass all three Tests as set out in our Executive Summary.

The knowledge and expertise that SSEN Transmission has built up allows effective constraint and risk information to be considered early on in project development. This allows key influencing factors to be understood, controlled and mitigated in such a way that streamlines and de-risks the consenting process. This, coupled with the long-term relationships and understanding of expectations developed over many years with consenting bodies, statutory authorities, NGO's, elected officials and community groups, places TOs in a unique position to determine the most effective route to successfully balance what are often competing priorities.

Example 3: Noise impacts and landscaping

This example demonstrates TO's benefit of co-ordinated planning and delivery of solutions for network need that considers future development, and wider considerations relating to environment and stakeholders.

SSEN Transmission will scope its projects to ensure it leaves enough capacity for nearby upcoming projects. An example of this is noise management. SSEN Transmission carefully designs the layout and individual specifications for large substations, to ensure that noise capacity limits are carefully modelled and coordinated between projects entering the site. Taking a coordinated approach for the wider site is critical to ensure value for money, as the most efficient solution may be to provide mitigation on an asset not connected with a connection entering the site. Conversely, a poorly designed extension could use up all available capacity, sterilising the ability for future expansion.

Both network and non-network solutions could trigger works further down the network. Unless thoroughly coordinated, competing solutions could become constraints in their own right and hamper other works on the network. Incumbent TOs do not seek to resolve network issues in isolation. SSEN Transmission is always forward looking, considering works across its portfolio to better plan and coordinate the next job.

Should network information be required from the TO, time, cost and resource expectations should be set out, as it is not certain TOs have this capacity on top of their current statutory and regulatory responsibilities in developing, operating and maintaining the network. Relevant parties responsible for providing up to date information on the network (e.g. for impact studies) should be adequately compensated. There should also be clear position set out as regards reliance and liabilities which could manifest for those undertaking impact studies, and providing other network information, should information change over time. For example, network impact studies only provide a "snapshot in time", as these studies are being undertaken against a 'live' network background. Impact studies may become quickly out of the date and not be reflective of the current network status.

It remains unclear what a “due diligence approach” consists of when providing up to date information to the Procurement Body. The extent which TOs and other bidders are required to continually update information being provided (and how the additional cost of doing so factored into the overall benefits case) has not been developed further by the ESO. We continue to welcome further clarification from the ESO as to how it intends to mitigate this risk throughout the procurement process.

4. What are your views on the proposed conflict mitigation arrangements for TO roles? What might be an appropriate level of challenge from the ESO on solutions put forward by TOs as part of their network planning role?

We do not agree with the proposed approach to conflict mitigation. We raise the following concerns relating to the proposed conflict mitigation arrangements:

- Ringfencing is based on a perception rather than a proven conflict and therefore not for the benefit of consumers.
- It is unclear whether ringfencing will apply to new CATOs.
- Incumbent TOs cannot finance ringfenced teams outside of the price control; and,
- It is unclear how the ringfencing teams function in practice and their remit.

The ESO’s proposal for conflict mitigation strives only to meet the “level playing field” criteria, to appease third party perception of an unfair advantage, ignoring legitimate TO concerns, and does not fully consider its effects on consumers. We support the principle of a level playing field, however it should be done so in the best interests of consumers rather than for a group of potential participants in a competitive process, who have their own financial gain as motivation. The ESO’s current proposal will result in a suboptimal solution for consumers and discourages whole system thinking and co-ordination, and fails Test 3 as set out in our Executive Summary.

The ESO has provided no evidence that ring fencing will benefit consumers, which is the key aim of early competition. The impacts of this proposal on the development and maintenance of the network has not been thoroughly explored. We are yet to see evidence that exceeds this to justify taking an alternative approach is more beneficial for network operation and consumers.

We also ask Ofgem to clarify whether a new CATO licensee would require to ringfence future bid teams. Once a third-party bidder wins a CATO licence under the proposed early competition model, we would expect it to meet all of the same obligations as are currently expected for TOs.

Ringfencing bidding teams and the costs is not only impractical, but also not financially viable for TOs. TOs cannot partake in income generation activities outside their licenced area or licenced activities, and therefore cannot raise finances to fund a ring-fenced bid team, should it not be funded by the price control. Unlicensed, third party bidders can shift and re-organise their spending and finances freely to sustain operations, unlike TOs who are bound by their

licence conditions and strict price control deliverables. When considered practically, this proposal may put TOs at a stark disadvantage in terms of financing its bid team.

As a regulated business, it is unclear what tasks the ring-fenced bidding teams would undertake when there are no bids to be prepared. It is not in the interests of consumers for us to retain staff without work to do whilst waiting to prepare a bid. NGESO's proposals do not address this issue.

We welcome further clarity of what the bid teams consist of, that NGESO and Ofgem proposes to be ringfenced. A clear remit of responsibilities is required. Currently, teams that prepare network options consist of system planning engineers, project development staff, procurement specialists, project managers, legal advisors, control room staff, environmental specialist, regulatory and commercial staff, etc. Therefore, in practice, a bid team could be very large. It should be highlighted that regulated networks would still require a system planning function as current to perform coordinated GB MITS analysis.

TOs will always prioritise its licenced activities compared to any ring-fenced competitive opportunities. This scenario will result in a loss of real benefits for consumers, if incumbents existing knowledge and expertise do not take part in competitions.

NGESO also has a limited role in challenging solutions put forward by TOs. NGESO is not an asset owner. It does not have experience in developing network, nor costing solutions. The ESO's role in challenging solutions will need to be confined to areas where the ESO has knowledge and oversight, for example network access. We also note there is a significant skills shortage for roles such as system planners, control room engineers, etc. and would welcome further evidence from Ofgem and BEIS on how it intends fill these gaps to ensure to ensure this role can be filled sustainably and effectively.

5. Do you agree with our views on the TO counterfactual approach?

We do not agree with Ofgem's views on the TO counterfactual approach. Whilst we recognise there are challenges in this process, we think the principle is worth pursuing, and in the best interest of consumers, as it provides some protection and a contingency option should the competition process fail. Failure of the competition process could result in significant constraints costs to consumers, and could also be detrimental to network maintenance. This would fail Tests 2 and 3, which we set out in our Executive Summary.

Again, we reiterate that Ofgem's rationale for introducing early competition is to ensure the best outcome for consumers. It should not be forcing an artificial framework to function if it does not prioritise the interests of consumers.

Given that the ESO has not formally consulted on the TO counterfactual approach, we do not think the process has been transparent nor tested widely across stakeholder groups. We do not think the ESO has dedicated sufficient and proportionate effort and resource to explore this option, which is a view that the ESO Networks Stakeholder Group (ENSG) reflects³⁰. We

³⁰ <https://www.nationalgrideso.com/document/191251/download>, p.14.

note that in its Final Early Competition Plan, the ESO suggests Ofgem will consult further with stakeholders on the role of the TO. Ofgem have not done so, and instead have consulted on its decision on the counterfactual.

Responses to Chapter 6 – Tender process and commercial mode

1. Do you have any material concerns with the commercial model proposed by the ESO?

Transmission Revenue Stream (TRS)

We continue to have material concerns at proposals to adopt a Transmission Revenue Stream (TRS) for successful bidders. This approach has significant flaws that can lead to biased assessments of the true costs to consumers over a consistent asset life period. We believe this needs to be fully explored against alternative models. We would welcome engaging further on this point.

We note the ESO and Ofgem have provided no quantitative or qualitative examples to demonstrate the overall benefit for consumers of this approach. We understand and appreciate this might be the most suitable option for potential bidders, but the net benefit compared to e.g. the RAV model has not been set out in detail. The lack of any robust analysis to evaluate different models is a serious flaw in the consultation and requires significant work to ensure a level playing field.

We also consider the RAV model to be more suited to developing a network that has an ever-changing set of requirements and risk profiles (as is the case in GB electricity transmission). In its Phase 3 Competition, the ESO stated that “*the RAV based regulated model would be unnecessarily complex and costly to implement*”. We welcome justification and evidence on this assertion. We are also unclear as to why the ESO and Ofgem have not considered other models of remuneration such as a fixed investment period and bid cost of capital to mitigate strange incentive properties and biased decisions on different solutions.

We have serious concerns related to loss of long termism and whole system commitment to local areas and communities if the TRS model is used. Incumbent TOs do not design networks to be decommissioned, therefore we have an interest in ensuring our assets are developed and maintained for the long term. In practice, a CATO could deliver a solution for network need that lasts 10 years. With the key driver as cost minimisation, it has no responsibility or incentive to ensure its solution does not affect the long-term well-being of the network, communities, or environment.

Post Preliminary Works Cost Assessment (PPWCA)

We fundamentally disagree with the Post Preliminary Works Cost Assessment (PPWCA) process. We continue to raise our concerns on preliminary works being undertaken after preferred bidder (PB) is selected. Findings of preliminary works could significantly impact not only the value, but scope and programme timeline of a project works. The preliminary works plays a major role in determining the deliverability of the solution, and in fact the solution itself. It is nearly impossible to issue a specific and high-quality contract or licence to the PB if preliminary works have not been undertaken. We note that clear and accurate licences and contracts are imperative to protect consumers and hold solution deliverers to account.

It is also not clear how changes due to preliminary works could affect the final rankings of bids submitted, and we continue ask for clarity in this scenario. Indeed, such clarity of assessment is an essential and legally required element in procurement processes, under current legislation. Any inconsistency in approach or scope creep would not be compliant with the current UCR 2016 requirements. There is a significant risk for legal challenge for those parties who would be involved in the proposing and acceptance of any substantial changes after the preferred bidder is accepted. Moreover, it is unfair to unsuccessful bidders, should the successful bidder be permitted to change its proposals after more detailed works are undertaken. Legal challenge in situations where contractual change mechanisms or re-openers are used or where significant findings in preliminary works change scope and value of projects remains a particular concern, as a failure to comply could have dire consequences for the network (procurements having to be re-run; contract awards being ruled ineffective and void; and legal challenges and process meaning nothing can move forward until determine. These all mean delay, wasted time and costs, and potential supply interruptions) and leave the TOs exposed (without derogations) to liabilities for system failures. Fundamentally this would also have detrimental impact on Net Zero.

Re-openers

Introducing re-openers for costs post tender process overly complicates the competition process and increases regulatory burden. In an already heavily regulated industry, re-openers within the early competition framework suggests the competition will not alleviate regulatory burden. The boundaries of re-openers must be carefully considered. Furthermore, re-openers may also change the final rankings of bids which is likely to be inconsistent with current legislative requirement unless the specific circumstances and bounds within which such change can happen (post award but pre-commencement of works) are set out clearly in the invitation to tender, evaluation criteria and award process. We note that there is potential for the PB to increase costs after the event unchallenged. In comparison to the current RIIO framework, TOs do not benefit from re-openers on a project by project basis.

The current RIIO framework maintains competitive pressure on incumbent TOs throughout development of a project, up to final contract award through various cost assessment iterations with Ofgem. The proposed early competition model reduces competitive pressure after PB selection, and allows preferred bidders to increase costs absent any further tendering process.

Overall Cap

Whilst the principle of an overall cap to limit the cumulative cost change seems sensible, we do not think it will be effective in practice. The cap may help more accurate estimates, however the methodology of setting the cap is arbitrary, and does not reflect any potential challenges the preliminary works may introduce. It is unclear how to define a cap when there is potential for material scope change after PB stage, and potential re-openers. We think in practice, a cap is a poor means to control costs. It will not effectively or accurately cover risks borne by PB. Bidders will likely over-estimate risk pot, a cost which will ultimately be borne by consumers. Until detailed investigation is undertaken, bidders are undertaking significant risk at

consumers' expense. In comparison to the existing RII model, costs are capped by virtue of allowances and benchmarking during cost assessments. We welcome evidence of where this construct has been applied and worked well in practice.

It is unclear how to determine whether the cap is acceptable to consumers, whilst providing some protection to bidders. We note it will be important to determine how the overall cap will interact with the performance bond. The overall cap should be set relative to the performance bond and consider the sunk cost of an unsuccessful competition.

Performance Bond

We agree with the principle of the performance bond, however its application and effect are not as simple or straightforward as proposed. Ofgem and BEIS must carefully consider the interactions between commercial mechanisms. Specifically, how to set performance bonds and overall cap at PB stage, and how the level at which these financial mechanisms are set will impact and compare to the costs of a failed competition process. The outcome of these elements will drive commercial decision-making. As well, a performance bond will not protect the consumer from the net cost of a delayed project or escalating costs. This is particularly acute if a delivery entity were to fail and another party had to take on the responsibility to finish the project. Typically, the higher a performance bond value, the higher the price a tender will bid to give them sufficient protections in the event the performance bond was called upon. The risk of the project will also increase a performance bond. These costs are all additional for consumers, and higher than the current RII model.

The level at which the bond is set will impact PB behaviour, the strength of protection of consumers and effectiveness of the bond itself. Performance bonds tend to be extremely expensive and heavily negotiated. Performance bonds require bidders to tie up cash, which it may factor into its bid and ultimately drive up costs. It is unclear how effective of a safety net performances bonds will be, and whether there would be any cost savings to consumers. Performance bonds may also put off some bidders from competing, as it may not be asset backed or hold collateral.

2. Do you have any material concerns with the tender process proposed by the ESO?

In the proposed Early Competition Plan, final confirmation of the needs case and preferred solution cannot be determined until after the preliminary works have been undertaken, which is approximately four years after the pre-qualification stage. Under the price control framework, there is a shorter period (approximately two years) of uncertainty before confirming the needs case and preferred solution. It is evident that the tender process proposed by the ESO will delay solutions to address network need. This is a major issue and not in keeping with the three tests as outlined within our Executive Summary.

ITT Stage 1

We do not think ITT Stage 1 will add significant value in narrowing down potential solutions. For example, NGESO is not necessarily going to know whether a solution is optimal at ITT Stage 1. Conceptual designs will be high level and have a low degree of accuracy at this point. It is

also unclear whether the Procurement Body will be able to make adequate assessment of deliverability issues so early in the process.

It is also not clear whether third party bidders will be able to present meaningful solutions, as network information, studies, and preliminary works will not have been undertaken, and tender documentation will be high level and technology agnostic. It is not possible to estimate an Earliest In Service Date if detailed designs have not been undertaken.

ITT Stage 1 tender submissions will likely be heavily caveated with circumstances that are unlikely to be realistic. For example, bid submissions may caveat that bidders can provide a solution, given:

- the bidder has unlimited access to the required working areas;
- that the programme is undertaken without the need for the full suite of checks;
- Reviews or approvals needed by the Employer will not be delayed or that the Employer will work to the timescales set by the bidder;
- All designs will be accepted following first submissions and there will be no revisions;
- All requested outages to undertake the works will be made available;
- assumptions that all equipment can be procured without significant lead times;
- That no interfaces with other contractors working on the system will be required;
- Availability of resources such as the Network Management Centre and Senior Authorised Persons will continually be available to allow works to be undertaken
- standard risks such as weather and ground conditions will be accepted by the employer.
- Route options or site selection will be optimal from a network perspective, without considering consent-ability and stakeholder requirements

These caveats are unlikely to materialise in practice. The solutions submitted will be highly optimistic and will provide limited actual value in determining solutions that should progress to ITT Stage 2. We request further details on relative scoring and transparent evaluation proposals.

The ESO's inexperience in managing this evaluation process is also of concern. Learning from experience from the Stability Pathfinders, NGENSO were overwhelmed with over 1500 solutions, causing the process to be delayed against a shortening timeframe for delivery of a solution to meet a network need. We consider it necessary for the ESO to further develop its thinking in terms of this phase taking into account the unintended consequences of Pathfinder caused by a lack of clarity on many elements. This learning should be set out for stakeholders along with any proposed mitigations ahead of any implementation of ECP proposals.

Preferred Bidder Stage

We do not agree that preliminary works should be undertaken after the PB is selected.

NGESO's Early Competition Plan proposal does not adequately consider the planning process and statutory stakeholders. To make an informed and accurate bid, bidders must engage early and consult with local communities and consenting bodies. Traditionally, this has been undertaken as part of preliminary works, as part of optioneering. Without preliminary works,

there is no certainty on the scope of the solution, nor deliverability, therefore an accurate estimate of cost and timeframe is unlikely.

It is not clear that the early competition framework has considered the impact of a myriad of bidders approaching consenting authorities, landowners and local communities, nor the potential strain on capacity and stakeholder engagement fatigue that may arise. It is our experience that consenting bodies and key stakeholders will be unlikely to entertain enquiries from multiple bidders and therefore bidders will be unable to understand risks and opportunities at the time of tender.

Currently, incumbent TOs have agreed standards of engagement across our portfolio of works with local authorities and other consenting bodies. This includes pre-agreed principles for our portfolio, methodologies for assessments, consenting applications, etc. to ensure consistent, high quality work is undertaken, but also to streamline activities as necessary to help manage resource and time of statutory consultees (all of which is ultimately paid for by GB consumers and tax payers). We are able to prioritise programmes that have earlier EISDs. Meaningful engagement with these stakeholders is critical to ensure the deliverability of solutions that address network need. Should the PB change materially after preliminary works, its solution may also need to be re-consented, which will further delay addressing the network need. There will also be no ability to manage priority workflows across the wider portfolio as applications will be owned by separate commercial organisations.

Multiple bidders approaching statutory stakeholders will introduce inefficiencies and overwhelm the planning and consenting process. We suggest the ESO and Ofgem undertake further engagement with statutory bodies to better understand their processes and the capacity, within the content of the proposed early competition framework.

Please also see our response in the previous chapter.

Example 4– Argyll 275kV Strategy

This example demonstrates how preliminary works could uncover issues that require significant reassessment of the scope and programme timeline of projects.

SSEN Transmission is currently developing a scheme to increase generation capacity in Argyll which will accommodate increasing renewable generation, as well as address known asset condition requirements. A section of this scheme requires the construction of new 275kV overhead line from Creag Dubh to connect into the existing 275kV overhead line at Dalmally. Initial routeing had the overhead line routed adjacent to Dalmally for the connection, however on presentation of this proposal during a Public Consultation in the area, there were significant objections raised. The significance of the objections received from both the public, the Community Council and other stakeholders indicated proceeding with this route could result in a Public Local Inquiry, resulting in either significant delays of 1 to 4 years to the connection date or the rejection of the required consent for this route. SSEN Transmission was able to take these objections into account and prepare a revised proposal which routed the overhead line, addressing the concerns raised during initial consultations and providing a viable project to progress.

It is unclear how undertaking preliminary works post PB will ensure an efficient, deliverable and consent-able solution for the network that is fully understood and declared transparently at the point of tender evaluation.

Competition Failure

Any of the three failures identified by NGESO could have lasting and far reaching consequences for the network, consumers, Net Zero, and incumbent TOs. We do not think that the OFTO 'provider of last resort' model is necessarily the best comparison and suitable for extension to onshore assets.

We welcome additional evidence from Ofgem as to the benefit of the supplier of last resort model, and how much it will cost consumers. It is unclear what liability cover is offered to impacted TOs, who would still have regulatory obligations to address the system need and could face penalties as a result of an early competition failure. The ESO has not provided us with confidence that TOs are protected should it take over an asset built by a third party, as no proposals on derogations have been included as part of the early competition proposals.

There are significant liabilities issues that have not been addressed by the ESO in its proposed model. Further analysis is required to evaluate the risks and potential material issues it could cause in a given scenario. Any attempt to have an incumbent TO as a provider of last resort would require significant protections in place and assurances otherwise this is an open-ended risk that TOs would not be able to accept without breaching obligations under the Companies Act, their Licence, or both.

CATOs at minimum must be held to the same design, installation, and delivery standards. Any asset manager can cut corners and use manufacturers with lower specifications. TO stewardship of the network addresses long term considerations, beyond immediate network need. Incumbent TOs are not focussed on the cheapest and quickest build, but rather the best value network option that provides longevity and reliability in the assets we build, but also the relationships we maintain with local communities.

More importantly, Ofgem must account for the delay in providing a solution to network need as a result of a competition failure. Delay in solutions being delivered on time will result in high constraint costs borne by consumers, and potentially missing Net Zero targets. Failure of competition must be monetised in Ofgem's IA.

Connecting customers

A critical point of clarification required is how it is intended that third-party transmission asset owners will be required to facilitate economic and efficient customer connections and how any such process will interact with the existing coordinated approach and regulatory framework to network connection.

Similarly, the proposed tender process does not consider how the early competition will flex to facilitate further renewable generation, and how it impacts connecting customers. The

network is live and changes with each new connection. Planning this requires assessment of connection applications in process. In RIIO-T1, for example we made over 600 offers for connection to our network. These customer driven requests are iterative as customer requirements change and the most economic and efficient connection solution is determined. They also impact wider network reinforcement. The ESO has not provided any proposals to deal with this ever-evolving network background.

The need, scope and size of network reinforcement and connection construction and its costs are influenced by a variety factors and myriad of considerations. Onshore solutions to enable generation capacity can be varied from case to case. Currently, incumbent TOs can be flexible with its connection process, and can consider how to enable desired connection times by generators by prioritising certain reinforcement projects, whilst also ensuring it is cost effective for both generators and consumers. Incumbent TOs are also able to review the needs case during the pre-construction phase, throughout project development, allowing us to take account of any background changes and enable the best solutions for consumers.

Often, new connection requests have impacts on wider parts of the network, and may require reinforcements elsewhere in the network. Currently, SSEN Transmission and other incumbent TOs also have an oversight of a portfolio of works within a given region, which allows us to find efficiencies to enable multiple connections and amend connection offers. This allows connection process improvements to be openly discussed, developed and implemented quickly and consistently across our portfolio. It's not clear how the early competition tendering process will deliver equivalent benefits and enable Net Zero as efficiently.

Appendix A – Unresolved Issues

We ask Ofgem and BEIS to set out how they will address the issues identified in the table below and which we have raised for this consultation, and the ESO's Early Competition consultation process.

#	Category	Issue
1	Liabilities - During the process	Who is liable to maintain the network during the competition? If competition is delayed, prolonged or fails, who is liable to address system need in the meantime? As an incumbent TO, we are uncomfortable undertaking this liability and cannot guarantee high standards across our network, as this liability is not within our control.
2	Liabilities - Failed process	Where do liabilities lie if a third party, non-network or network solution, or competition process fails? What is the process to determine liabilities? Oftentimes sources of failure are not clear. TOs must be able to operate the network under the existing compliance regimes, unaffected by non-network solutions.
3	Liabilities - Connections and Net Zero	If reinforcement is delayed, who will be liable for providing generators with connections? Incumbent TOs are liable and have price control incentives to ensure connections are offered on time. Reinforcement works further away may impact those who are wanting to connect.
4	Liabilities - Construction liabilities	How have Construction Design Management (CDM) liabilities been considered within the early competition framework?
5	Liabilities - Non-standard interface connections	Has competition considered the impact of increased non-standard interface connections on the GB network? How might it impact reliability and security?
6	Liabilities - Asset standards	How will the high standards of assets on the current network be maintained? What role will incumbent TOs play in feasibility studies that determine assets that will be connected to incumbent TOs' network?

7	Liabilities - Joint ventures	<p>Where do liabilities lie under joint ventures?</p> <p>The competition framework may enable some situations where one party is responsible for obtaining planning consents, and another is responsible for delivery. Who is liable should the solution fail? The party who put together the solution and consent, or the party who delivered the consented scheme? How will liability be attributed where is unclear if the scheme design were questionable, or if the implantation was not competent?</p>
8	Operations, Reliability and Security - Black Start	<p>How will the introduction of CATOs impact Black Start Strategy?</p> <p>New Black Start corridors with incumbent TO only assets may be required. In event of GB / Scotland wide blackout, ESO currently hands over system operation role to TOs to restore network to a point it is ready to synchronise with neighbouring power islands. Multiple CATOs within a network would inevitably slow down this process and increase restoration risk. CATOs would need to invest in black start capable control room sites / communications if they were to gain control of black start valuable assets, significantly increasing their costs. These are costs already built in to existing TO operations.</p>
9	Operations, Reliability and Security - Security of supply standards	<p>How will mitigation of loss of supply events meet current high consistency and standards?</p> <p>How will third parties evidence capability of reducing, mitigating, and responding to loss of supply events? How quickly can CATOs react and dispatch operational staff? What evidence is provided that it has capability and capacity?</p>
10	Operations, Reliability and Security - Co-ordination of fault restoration	<p>How does the early competition model consider fault management and how will additional CATOs impact these processes?</p> <p>As the system is developing, it is becoming more complex. Fault management and normal operation are becoming more challenging. CATOs and incumbent TOs must coordinate fault data to provide to the ESO. What is the cumulative impact on the security of supply if many small CATOs join the network? How will interfaces be managed in the event of a fault?</p>
11	Operations, Reliability and Security - Shared interfaces and costs	<p>How will shared interfaces (e.g. at substation sites) and use of shared facilities between operators be treated and costed?</p> <p>Physical controls may be duplicated to ensure security, how will this impact costs to consumers? How will Ofgem and BEIS balance security vs cost efficiency?</p>

12	Operations, Reliability and Security - Increased interface risk	How will licence conditions take into account of additional interfaces and interdependencies that are out with the control of incumbent TOs? How will the consumer be fairly protected?
13	Operations, Reliability and Security - Need beyond original scope	Who will be responsible for identified additional network need beyond original competition scope? Oftentimes new reinforcements require additional work to enable additional load. Who would undertake these additional works? Will these additional works be assumed by the incumbent TO, CATO, or will another competition be required?
14	Operations, Reliability and Security - Communication standards	How will the early competition framework ensure CATOs are experienced to manage assets in challenging geographic locations, to a high standard? SSEN Transmission use fibre optic communications to enable IP connection of SCADA equipment, monitoring of asset equipment, etc. This enables us to have secure communications to manage assets in remote areas with poor weather.
15	Operations, Reliability and Security - Spares and warehouses	How/when/where will CATOs store spares and build warehouses? How will this impact reliability and maintenance, as well as timelines and planning consents? TOs are experienced and developed many robust processes to ensure supply is restored safely and quickly.
16	Operations, Reliability and Security - Faults	When restoring faults, should other work be identified and outages required, who will be responsible?
17	Operations, Reliability and Security - Access agreements	How has the early competition framework considered access agreements, inherent risks, and potential impacts on asset management, security, resilience and reliability? Personnel may operate at different standards, have different controls, etc. What is the impact of increased inherent security and reliability risks due to additional interfaces on the network? Increased access (albeit supervised) to asset owners' sites reduces Cyber Security efforts which are becoming more important as technological solutions advance. Entry or access to any live assets requires an authorised and trained SAP, written authorisation, an assessment of competency and create inherent risks to security during construction and operation.
18	Operations, Reliability and Security - Co-	How does the early competition framework consider protection and control systems to be coordinated? When there are interfaces with other parties, one party will end up with a non-standard arrangement. What might the

	ordination of protection and control	impact be if there are several nonstandard arrangements on the network? Wide area intertrips and network management schemes are infinitely more difficult, complex, and expensive, as well as less reliable across network boundaries.
19	Operations, Reliability and Security - System controls	How does the early competition framework consider interaction and need to amend operating control changes to better facilitate active control assets? As more and more active control assets join the network, these assets often counteract one another to override shortcomings, as it is configured to react to certain criteria.
20	Whole System - Cross-portfolio solution	How will early competition provide cross-portfolio benefit? Currently, incumbent TOs' system planning can look across our portfolio and identify impacts of additional generation and how far across the network reinforcement is required. Introduction of CATOs would enable us to do so, and benefits will be lost. How is this beneficial for consumers?
21	Whole System - Long term solutions	How will the early competition framework incentivise network solutions which are fit for the future be introduced when it looks at discreet parts of the network during a snapshot in time? This approach results in sub-optimal solutions and triggers works elsewhere on the network (e.g. Pathfinders) or reduces the opportunity to future proof assets. The competition framework risks long-term health of the network if CATOs may only own one single network asset/non-network solution for a shorter period of network need? Will third parties consider longevity of its solutions or consider sufficient redundancy to guarantee reliability for the long term? If the network need is extended beyond the TRS period, how will the original competition have encouraged longevity of assets and reliability of the whole network? Will the early competition framework introduce further risk onto the network by allowing a short term solution? How might it impact existing connected assets? Would the network have been more resilient under the current framework of building long term assets?
22	Whole System - whole life costs	How will the competition framework consider whole life costs? For example in the Connections Pathfinder, the individual cost of each connection may be marginally cheaper, but there could be a lot of whole system inefficiencies, resulting in triggering works elsewhere in the network
23	Whole system - Ring fencing	How will ring-fencing bid teams provide long term, whole system benefit for consumers vs the current oversight incumbent TOs have?

		TOs have an overarching view of their network and ongoing portfolio, allowing it to find efficiencies and synergies for load and non-load related works on its network. Ringfencing excludes inherent knowledge and advantage TOs have.
24	Liabilities - interface points and costs	<p>How will interfaces between CATOs and TOs be managed?</p> <p>What contractual agreements are required? How will interfaces impact management of the network (e.g. switching)? In order to ensure reliability, the introduction of CATOs for physical assets may result in doubling certain equipment. For example, to ensure protection of its own network and assets, substations may need to be expanded as each party would require its own circuit breakers and isolation devices. Whilst we have interface agreements with SPEN, SSE Renewables, and others, this interface adds complexity and delays. How does the early competition framework measure the impact and delay of additional interfaces?</p>
25	Stakeholder engagement - Strategic approach	<p>What standards will be applied to stakeholder engagement for statutory consultees and local communities?</p> <p>How will engagement with local communities/authorities, statutory consultees be managed? Do statutory consultees have capacity to manage myriad of engagement with various third parties? How will BEIS/Ofgem ensure standards of service and commitments are maintained? How has landowner and other stakeholder fatigue been considered in the early competition plan framework? For example, any inspections require access to landowners and third party land. TOs can group and efficiently manage stakeholders across its portfolios, however it's not clear how efficiently CATOs will be able to manage common stakeholders.</p>
26	Stakeholder engagement - Impacts on statutory stakeholders and local communities	<p>How will the impact of competition on local communities and statutory consultees be carefully considered and mitigated?</p> <p>SSEN Transmission has a longstanding and trusting relationship with stakeholders and are able to provide a bigger picture of network needs in a local community and area. How will the competition framework consider longer term sustainability and needs to reduce disruption for communities and environments?</p>
27	Stakeholder engagement - Customers and consumers	<p>Will CATOs and other third parties who deliver network and non-network solution have customers? How will its customers be determined? How will these parties be customer driven? How will you measure CATO impact on customers? If CATOs have no customers, what is the incentive to ensure customer values are being prioritised? How will incumbent TOs make commitments to its customers where CATOs have influence over certain parts of the network?</p>

28	Regulation - Stakeholder accountability	<p>How will Ofgem and BEIS and the third party clearly communicate its separation on projects from the incumbent TO and take responsibility for doing so? How will the third party be held to account financially and reputationally if/when there are faults?</p> <p>Will third parties be held to the same stakeholder engagement incentives? Given the importance of stakeholder engagement and transparency we would expect Ofgem/BEIS and the third party to be proactive in stakeholder engagement. Should there be faults, there must be clear public communication, ownership, and differentiation from incumbent TO.</p>
29	Procurement Process - material changes	<p>How will material changes be managed after preferred bidder is selected, due to findings of preliminary works?</p> <p>How will this impact EISD dates and solution delivery? Who is liable for system need in the meantime? What are the impacts under UCR (or its equivalent) regulated tenders? Will this open parties up to the risk of procurement challenge? As an incumbent TO, we are uncomfortable undertaking this liability and cannot guarantee high standards across our network (e.g. commitments to connecting customers), as this liability is out with our control.</p>
30	Supply Chain - Timely procurement	<p>Who will procure and provide early negotiation of the necessary assets ahead of award of contracts to ensure on time delivery, when there is no certainty of who will build and own the asset?</p> <p>TOs undertake early negotiation with contractors to ensure assets are acquired in time to meet key dates, and discuss deliverability of project and potential challenges. It is unclear how the early competition framework will deliver this benefit.</p>
31	Supply Chain - Providing certainty	<p>How will the early competition plan provide certainty and a pipeline of works for the supply chain? How will the supply chain plan for its workforce and equipment?</p>
32	Project Development - Ground works	<p>Who will undertake early ground works or has the decision been taken that this benefit is worth sacrificing?</p> <p>In areas of high sensitivity, particularly in the north of Scotland, early ground investigations is beneficial to inform early design works, accurate costs, and mitigate potential planning issues and result in longer term cost savings for consumers and protects the natural environment. How will competition provide this benefit or allocate appropriate liabilities?</p>
33	Cyber Security and Data - Standards	<p>What cyber security and data standards will be set for third parties?</p> <p>Will CATOs and non-network solution providers be regulated as Operators of Essential Services (OES) under the NIS Regulations 2018 and GDPR? How will data be assured, quality controlled, updated, managed, and secured by CATOs? How would the existing networks be protected from smaller network elements which could be 'embedded' into larger network infrastructure? Cyber attacks on CATO network and non-network solutions could impact the wider network, potentially</p>

		causing network service interruptions, including up to blackout level, and may have significant impacts on consumers and connecting customers (e.g. high constraint costs and limiting renewable generation).
34	Cyber Security and Data - Increased interface risk	How has the competition framework considered additional risk of cyber attacks and spread, due to increased interfaces (eg shared protection equipment) between CATOs, incumbent TOs, and third parties? What are the impacts on the connected incumbent network?
35	Cyber Security and Data - Resource of Competent Authority	How will multiple new OES impact resource and capacity of Competent Authority? Information that is being shared is highly sensitive and could have significant impacts on the security of the system, if data security standards aren't met. Highly sensitive information could include system studies, intellectual property, as well as land owner and customer personal information. Information that may impact national security include operational data such as protection and control, real time asset data, etc.
36	Outage planning - NAP	Will CATOs be subject to the Network Access Policy (NAP)? Incumbent TOs are able, and required to via the NAP, to find efficiencies by grouping and coordinating works to reduce outages (e.g. coordinating OHL and circuit works). How will the early competition framework encourage this benefit? Costs of outages can be significant.
37	Outage planning - Reducing constraint costs	How will CATOs be incentivised to the standards expected of TOs in outage planning? If CATOs have no customers, it has no incentive to inform its outage planning with what is optimal for customers. Incumbent TOs undertake main works in summer whenever possible, to reduce potential impacts. CATOs without obligations matching TOs could force TOs to take outages at suboptimal times for affected customers and also increase system constraint costs. How will this lack of stakeholder focus impact outage planning, constraint costs and other key services valued by consumers?
38	Outage planning - NGESO planning	How will NGESO plan outages with increased CATOs? How does it intend to plan outages to coordinate delivery of solutions? How will NGESO decide what outages take precedence? Asset maintenance policies and risk are developed individually by TOs, making it difficult to align outages.
39	Outage planning - Delivery	As outage planning becomes more complex with additional players, how will this impact delivery dates of key infrastructure projects and constraint costs?

40	Outage planning - Liabilities for cancellation	Who will be liable if outages are cancelled/changed and TOs or third parties have plan work on the back of outages of other TOs/third parties? This may impact asset maintenance and ultimately reliability of the network.
41	Role of the TO - Network data	How will the requirement for the TO to provide network information for competition be managed and costed? How often will incumbent TOs have to provide network information for competition? How will this impact our capacity and day to day responsibilities? How will this be paid for under the price control? Who assumes liability if the information changes and becomes inaccurate?
42	Regulation - Overall standards	How will Ofgem/BEIS/ESO ensure there is no dilution of the obligations and standards expected by new entrants? This includes for safety, security of supply, competitive procurement, customer service and financial ring fence protections. TOs have sustainability ambitions which we have committed to stakeholders such as Fair Tax Mark, environmental commitments including reducing a companies' own greenhouse gas emissions, etc.
43	Regulation - RIIO framework	Why has Ofgem and BEIS deemed the RIIO framework incapable of achieving the three benefits they identify of competition? BEIS identifies three key benefits of competition - lowering the costs of the provision of the service or good, foster innovation, broaden the available pool of investment funds for these services and assets. Why can these benefits not be incentivised through the current framework?
44	Regulation - Route of appeal and challenge	What is the challenge/appeal route for the different stages of the early competition framework? It is unclear what liability cover this process will offer the Procurement Body, impacted TOs who still need to address system need and could face penalties as a result of an early competition failure. Impact of delays of stage gate approvals must be clarified.
45	Regulation - STC and codes	How will third parties be accountable to STCs and other codes? Which standards and codes applies to whom? How will this be determined to ensure a level playing field?
46	Regulation - Contingencies for failure of solution	What contingency plans exist on how a TO would be remunerated under its current licence, should a third party solution fail? This could have adverse implications for our continued operation of the network. There is inherent risk for TOs to take

		responsibility for a third party asset. How will TOs be compensated for this risk if a "CATO of last resort" is introduced? A full review of all STCPs, associated incentives and license obligations would be required to accommodate CATOs.
47	Regulation - Treatment of established CATO	How are third party bidders treated after they win a CATO licence? How will Ofgem/BEIS ensure a level playing field with ring-fencing CATO bid teams? Will a new CATO licensee require to ring fence its bid teams after it wins a contract? Will new CATOs become incumbent TOs? We expect the same requirements for these CATOs as is being proposed for incumbent TOs.
48	Commercial Model - extension of need	If the network need is extended beyond the TRS period, how will this need be addressed? Would it be re-tendered? How can you determine its value vs a longer-term incumbent TO solution?
49	Commercial model - success criteria	How will early competition vs the current model be compared and success determined given different funding models? TRS and RAV funding models encourage different types of bids for different periods and thus provide different total costs.
50	Commercial model - Ring fencing	How will ringfenced teams of the incumbent TO be funded and governed if not through the price control?
51	Commercial model - Ring fencing	How will obstacles for incumbent TOs to meet existing legal and regulatory obligations be removed to make ringfencing possible?
52	Commercial model - Cap and performance bond	How will Ofgem determine strength of cap and performance bond? What are the impacts to consumers and network need if either are too strong or not strong enough?
53	Costs - CBA & delays	How will delayed network solutions impact constraint costs, developers, consumers, Net Zero and the network? How will this be accounted for in the CBA?
54	Costs - CBA & socio-economic values	How will CBAs undertaken in the early competition consider socio-economic values (including environment) that have been identified by the Green Book as good practice in making infrastructure decisions?
55	Other - Definitions	What is the definition of a non-network solution?