

National Grid Electricity Transmission's response to Ofgem's Electricity Transmission Network Planning Review Consultation

December 2021



This response represents the views of National Grid Electricity Transmission (NGET) only. As NGET we own the electricity transmission network in England and Wales. We are responsible for ensuring electricity is transported safely and efficiently from where it is produced, reaching homes and businesses safely, reliably, and efficiently. We facilitate the connection of supply and demand customers to the transmission system. We are investing to adapt and develop our transmission network to connect new sources of low carbon and green energy to homes and businesses.

Part 1: Executive Summary

We welcome the opportunity to respond to Ofgem's Electricity Transmission Network Planning Review (ETNPR) consultation. Electricity networks will play a critical role in the energy transition and it is important that the industry arrangements adapt and evolve to enable the required transformational changes across the whole energy economy to deliver net zero. We strongly agree that there is a requirement for:

- A holistic and co-ordinated central view of strategic electricity network infrastructure requirements, in the context of the broader energy system. We fully support the overarching aims and objectives of the ETNPR as defined in this consultation. In particular, we agree there is a requirement for: The proactive identification of strategic investments in the Electricity Transmission (ET) network that are key to delivering net zero.
- Optimisation of the design of the ET network together with other energy sectors and systems e.g., considering how renewable energy supply or hydrogen futures interact with ET.
- Holistic planning of strategic elements of onshore and offshore networks to support all stakeholders, in better understanding how these projects inter-relate, to support planning bodies and local communities in the planning and consenting process, and to surface opportunities for coordination and innovation.
- A regime which supports the introduction of early competition, where this has been demonstrated as being in the best interests of end consumers.

However, the proposals as outlined do not in our view enable these objectives to be met.

We have significant concerns that the role and contribution of incumbent Transmission Owners (TOs) has been underestimated and oversimplified in this consultation. This is both in terms of power system analysis and design, and in considering the physical characteristics and impacts of infrastructure, and any potential mitigations. The extent and complexity of the existing TO role must be adequately considered to ensure that the impacts of proposals are properly understood. The importance and extent of this role is clear in the support we provide to Electricity System Operator (ESO)-led activities today, for example in Holistic Network Design (HND) or Pathfinders.

At this stage, there is considerable further work required to clarify specific aspects of, and, in some areas, remove what appear to be contradictions in the proposals. There are also specific parts of these proposals that are clear, but which we believe will counter the outcomes that this review seeks to deliver, to the disbenefit of consumers.

Ofgem highlights in the consultation that further work is required across a range of topic areas, and we agree that they need much more detailed consideration. This needs to be done in a structured and collaborative way with cross-industry working group(s) to develop a more detailed view of both transitional and enduring proposals. It is important these areas are given more detailed consideration ahead of any decisions that might be taken on the enduring regime.

It is our view that the following sub-topics in particular need more detailed consideration:

- The scope of the Centralised Strategic Network Planning process (CSNP) and definition of Strategic Infrastructure (SI)
- The depth of the Central Network Planner (CNP) role and CSNP in the development of projects
- How the CSNP will facilitate project progression to meet net zero
- Transitional arrangements

The scope of the CSNP and definition of Strategic Infrastructure (SI)

The definition of SI and the scope of the CSNP outlined in the document is not truly strategic, and there are conflicting representations of the scope of SI through the document. The consultation does not acknowledge that there is a trade-off between the value of co-ordination via the CSNP vs. the additional time, complexity and cost incurred in delivering it for different types of projects.

The TOs are accountable for the end-to-end load-related plan today. This is developed considering a range of inputs including the requirement to connect our customers, compliance with the Security and Quality Supply Standard (SQSS), the economic recommendations of the ESO's Network Operations Assessment (NOA), interactions with the non-load related plan and deliverability (including system access) constraints. Our Whole System Licence Obligation also further emphasises the need for industry parties to consider a broader range of solutions as part of this process. The load-related plan requires frequent re-optimisation as there are changes in the supply and demand backgrounds.

The entirety of the load-related plan goes far beyond what is considered in the NOA process, with NOA helping to identify reinforcements that are justified on an economic basis to reduce the cost of operating the network in the long-term. We are concerned that this consultation seems to consider NOA as the entirety of the load-related plan and therefore underestimates the impact of what is being proposed.

The consultation proposes that "all load-related ET network developments are considered as part of a single strategic network planning function that includes complete oversight and coordination of all network needs and developments by a single independent body". The extent and complexity of transferring and aggregating this work into a new CSNP organisation, the capability build required, and the time to carry out this reform should not be underestimated and presents a significant risk to delivery of outputs critical for 2030 and beyond.

There is a trade-off between the benefits of co-ordination and certainty through the CSNP vs. the additional time, cost, resources, and complexity involved.

The CSNP should therefore focus on genuinely 'Strategic Infrastructure', which should be limited to where there is an expectation of a requirement for new, significant transmission infrastructure routes and where there are complex interactions with multiple stakeholders and/or other adjacent policy decisions (e.g., hydrogen). It is this scale of infrastructure development where the CSNP adds value, given the need for certainty of requirement, longer lead-times for delivery, complex consenting, and higher environmental and community impacts that may require mitigation. A robust and fully endorsed CSNP would be powerful in supporting these programmes of work.

For other, smaller projects, e.g., load-related customer connections, existing system upgrades, non-load related works, and critical works to ensure SQSS compliance and maintain security of supply, the balance tips. For these, value is derived from existing network owners being able to progress at pace and find the optimal solution, and/or for the plan to be flexed as required, when requirements locally change. As such we propose strongly that these should be non-SI and outside the scope of the CSNP.

The depth of the CNP role and CSNP in the development of projects

There is a lack of clarity in the document around the role of the CNP and others in 'specifying' the high-level design of the CSNP. We believe that the depth of the roles and responsibilities assigned to the CNP and delivery partners (including TOs), as well as other relevant organisations, need reshaping to ensure the development of a robust and comprehensive CSNP.

Today the TOs and other delivery organisations are accountable for proposing and developing reinforcement options. They use the knowledge of their own networks, including specific knowledge of how they behave and are operated, and their delivery experience to develop a robust set of options and supporting information including cost, programme and risk. They are also best able to assess high-level routing of options, potential mitigations, and the ability of different routing options to support current and future network needs. This expertise is unique to delivery organisations, including TOs, that own and operate transmission infrastructure.

The consultation states that the CNP will be accountable for developing the options and specifying the high-level design of the CSNP. We expect that TOs and other delivery organisations should be providing this detail as an input for assessment, and working in partnership to assess options where appropriate, rather than the CNP developing these options in isolation.

The role of the CNP should be as a co-ordinator of cross-industry insights, expertise and experience to challenge inputs and collaboratively build the CSNP using this information. It would help ensure innovation is embedded as early as possible in the process and would help determine where an early competition model could be applicable (e.g., where engagement identifies a range of potential infrastructure options to meet the system needs). An approach

where the CNP defines all options in isolation would require significant capability build, does not support the use of an early competition model (as the CSNP would go beyond the point at which an early competition model would be applied), and puts decarbonisation targets at risk and significantly limit the potential for innovation.

Further consideration should also be given to how the proposed changes in the front-end of the process impact the current accountabilities and legal obligations that impacted organisations have. Consideration must be given to the changes that are required to ensure an effective end-to-end process for transmission network planning, development, delivery and operation.

For example, today the TOs are also accountable for SQSS compliance and the consultation states that TOs will retain this despite significant changes proposed to the front-end process, which does not appear to be appropriate. NGET can only be accountable for compliance if it has a stronger and clearer role in the development of the CSNP, as we propose is a necessity.

Finally, further consideration must be given to enduring accountabilities once new assets are commissioned and in operation to ensure system security in the long-term and that consumers are not exposed to increased operational risk. This is critical to ensure the industry can effectively respond to adverse events while ownership of the network becomes potentially more fragmented, and accountabilities are potentially less clear.

How the CSNP will facilitate project progression to meet net zero

The CSNP will be an effective tool to provide investment certainty and help accelerate delivery if it has cross-industry buy-in and is endorsed by BEIS and Ofgem in particular. However, there is a risk that without further consideration for how the CSNP complements and streamlines the wider regulatory and planning processes, it becomes a duplicative burden and a blocker to delivering net zero.

Today, for projects that currently meet the RIIO-T2 Large Onshore Transmission Investment (LOTI) criteria, the TOs must develop both an Initial Needs Case (INC) and Final Needs Case (FNC). Each includes a detailed justification for the individual project, supported by a comprehensive cost-benefit analysis (performed by ESO) to test the economic case for investment. In parallel, the TOs are also progressing their activities to achieve planning consent. There is a risk that, when the FNC decision is made at the end of the consenting process, Ofgem could fundamentally disagree with the need for the project or some elements of it, despite having a consent in place.

However, the document does not provide any proposals for changes to these existing processes, or how the CSNP would interact and complement them, and as such it risks duplicated time and resource. Consideration must be given to the benefit of individual stages in the existing LOTI process once a CSNP has been established, to ensure the benefit is maximised and timely project progression is supported. Consideration should also be given to how the CSNP is endorsed or embedded in the National Policy Statements for energy infrastructure (NPS) for it to be fully effective as a strategic tool to support infrastructure development.

As a specific example, we believe that this streamlining could only be achieved with adequate and effective stakeholder engagement throughout CSNP development, to ensure the output is fully endorsed, legally robust, and has adequately considered the views of a broad range of stakeholders. As such, we are concerned that there is no obligation to consult as part of the development of a CSNP. While we note that the importance of collaboration is mentioned, the structure and extent of it is at the discretion of the CNP and we believe that a formal consultation process is required in order to allow other impacted parties to continue to be able to discharge their responsibilities and legal obligations.

How the CNP is regulated and incentivised to fulfil its obligations also needs detailed consideration, given the potential far-reaching consequences on other parties of substandard or late deliverables.

Transitional arrangements

We have significant concerns about the transitional arrangements as detailed in the consultation and in particular the ambition to embed them from 2022. Our concerns are heightened by the challenges and known delays to the HND publication.

The consultation proposed potentially using the NOA7 outcomes and/or HND as a transitional CSNP, and that further work will be required to determine the extent to which this could be the case. At this time, the latest position is that HND will be delayed by 6 months and will publish in summer 2022. There are ongoing discussions with regards to the implications for the NOA7 publication.

2022 is a critical year for putting the industry on the right path to meet Government targets to connect 40GW of offshore wind by 2030, and HND was proposed to be a critical part of that to meet some of the challenges identified

in this consultation. Given the challenges in developing the HND, we think introducing further changes or a new approach would only be a distraction from other critical activities.

We propose that 2022 is instead used to focus on two key streams of work:

- Delivery of robust and comprehensive HND and NOA7 outputs. We want ESO to focus on ensuring this meets the initial aims and objectives and to focus on alignment with NOA7 to ensure investment signals to support 2030 decarbonisation targets are clear. We note that the timescales for outputs from both processes are under discussion but that there will be a significant delay to HND publication.
- Establishing an effective working group(s) with a defined list of industry stakeholders to develop a robust, transparent, and detailed set of transitional and enduring proposals, including working through example fact patterns to determine how/if the proposals would work in practice and whether improvements could be made. These should be topic specific, where appropriate, to ensure the right Subject Matter Experts (SMEs) are able to support in the detail of specific areas and should go further than the current stakeholder engagement process that is outlined in the consultation.

NGET has been working to develop transformational tools and capabilities that we know would be of huge benefit to this process. We would welcome the option to share this with Ofgem and consider how this could support any transitional arrangements and play a role in the enduring regime.

Please find below our detailed response to the consultation questions you posed. We would be happy to answer any further questions or points of clarification that you might have.

Part 2: Response to Consultation Questions

Question 1: What are your views on our key objectives for future ET network planning arrangements that can deliver Net Zero at lowest cost to consumers?

We strongly agree that there is a requirement for a holistic and co-ordinated central view of strategic electricity network infrastructure requirements in the context of energy systems more broadly. We fully support the overarching aims and objectives of the ETNPR as defined in this consultation. We strongly agree there is a requirement for:

- A holistic and co-ordinated central view of strategic electricity network infrastructure requirements, in the context of the broader energy system. We fully support the overarching aims and objectives of the ETNPR as defined in this consultation. In particular, we agree there is a requirement for: The proactive identification of strategic investments in the Electricity Transmission (ET) network that are key to delivering net zero.
- Optimisation of the design of the ET network together with other energy sectors and systems e.g., considering how renewable energy supply or hydrogen futures interact with ET.
- Holistic planning of strategic elements of onshore and offshore networks to support all stakeholders, in better understanding how these projects inter-relate, to support planning bodies and local communities in the planning and consenting process, and to surface opportunities for coordination and innovation.
- A regime which supports the introduction of early competition, where this has been demonstrated as being in the best interests of end consumers.

This consultation raises concerns that we have highlighted in our executive summary about the ability of these proposals as outlined to meet these objectives.

We have significant concerns in particular that the role and contribution of incumbent TOs has been underestimated and oversimplified in this consultation. This is both in terms of power system analysis and design, and in spatial terms. The extent and complexity of the existing TO role must be adequately represented and considered to ensure that the impacts of proposals are adequately understood and represented. This is critical to allow a fair comparison of current and proposed future state models. The importance and extent of this role is clear today in how we support current ESO-led activities to help enable successful outcomes e.g. HND or Pathfinders.

At this stage, there is considerable further work required to clarify specific aspects of, and, in some areas, remove what appear to be contradictions in the proposals. There are also specific parts of these proposals that are clear, but which we believe will counter the outcomes that this review seeks to deliver, to the disbenefit of consumers.

In particular, we think further consideration needs to be given to the following topics to ensure the proposals deliver on the objectives:

- The scope of the CSNP and definition of Strategic Infrastructure
- The depth of the CNP role and CSNP in the development of projects
- How the CSNP will facilitate project progression to meet net zero
- Transitional arrangements

The detail of these topics, and other important topics that need further consideration, must be done working collaboratively with cross-industry experts to ensure the detail of the proposed regime is understood. This engagement must go further than the current arrangements detailed in the consultation. We propose that topic-specific working group(s) are established to do this, using industry SMEs to explore topics in detail and explore case studies and worked examples. This will be critical to ensuring the details of the transitional and enduring regimes deliver on the objectives described.

Question 2: Are there any other key workstreams that interact with this review that we need to align with?

There are many ongoing reviews and/or consultation activities across the industry at various stages of development that are highly interactive with this review and where there will be a need for alignment. A number of these are already highlighted in this consultation document and we agree that all of these must be considered.

We would like to further emphasise the need to align with, or as a minimum be cognisant of, the Offshore Transmission Network Review (OTNR) and HND in particular. This work is highlighted as being a potential transitional CSNP and lessons must be learnt from these programs of work, and should inform the design of the enduring regime, including roles and responsibilities and regulation and delivery incentives.

We would also emphasise the need for alignment with the RIIO framework; the Proposals for a Future System Operator (FSO) role; early and late model competition development and the National Policy Statement (NPS) review, in particular EN-5 on Electricity Networks.

Further consideration needs to be given to topics that were not highlighted in detail:

1. Whole System Obligations on licensees
2. The interaction of the ESO's Future Energy Scenarios (FES), Electricity Ten Year Statement (ETYS) and NOA with CSNP during transitional enduring arrangements
3. Existing industry capability and systems development

The Whole System Obligation requires all licensees to co-ordinate activities and effectively share data between companies to ensure delivery of holistic and co-ordinated whole system solutions. This complements the Duty under the act to 'coordinate'. It is essential that future industry approaches and processes are compatible with the Whole System Obligation included in industry licences.

Given the proposed introduction of the CSNP, greater consideration must be given to the role of the FES, ETYS and NOA processes moving forward. While there is some recognition of the interaction in this document, this thinking needs to go further. Ofgem must provide clarity to all stakeholders as to how key industry processes interact with the CSNP in the transitional and enduring arrangements to ensure the aim of providing certainty around investment is achieved. The NOA methodology is consulted on annually and immediate consideration should be given to how it may need to evolve in 2022 considering the outcome of this consultation.

We note that this consultation does not explore the broader industry code and framework changes that would be required to enable the effective delivery of any infrastructure projects or programmes that would form part of the CSNP by the TO or any other delivery body. These areas, including topics such as how to facilitate anticipatory investment (given the potential requirement for it is mentioned in this consultation), must be given much more detailed consideration to ensure the industry is set up for success.

NGET, and we expect other organisations in the industry, have developed tools and capabilities to enact their current role in network planning and to understand how their networks are likely to evolve to meet net zero. This development work would be invaluable in the development of the future CSNP and would recommend a further investigation of capabilities that have been developed by other industry parties to ensure effective learning and best utilisation of existing capabilities.

Question 3: Do you have any views on the scope of the review? Are there any key topics that we have missed?

As detailed in the consultation, the focus of the ETNPR is across four topics areas:

1. Strategic clustering of large projects and centralisation of planning
2. Analysis and decision-making methods for network planning against uncertainty
3. Breadth of solutions, covering whole system solutions and innovation
4. Roles and responsibilities in network planning, including the early development of solutions and designs.

If appropriate consideration is given to each of these topics and the detail of these is transparent that will help to ensure an adequate scope and robust consideration of the range of potential issues. The consultation notes that only topic 1 has been considered in detail and 2 and 4 at a high-level at this stage.

On this basis and based on the details included in the consultation document, it is difficult to assess the appropriateness of the scope of the review at this stage. This is a highly complex and interactive set of activities and the challenge of making these changes should not be underestimated. We recommend that a further stage of consultation and collaborative development is conducted to ensure that the current process is adequately captured and understood in order to ensure a robust ETNPR. This development should be done collaboratively with working group(s) established with industry SMEs and must go further than the engagement to date to be successful.

It is essential that with fundamental changes proposed to existing roles, accountabilities, and responsibilities that sufficient emphasis is placed on understanding the industry code and framework changes that are required to deliver the intended benefits. This must include Transmission, Distribution, Generation and Offshore Licences and Special Licence conditions to ensure the safe, resilient and reliable operation and development of the power system. It is critical that this is done from the outset to ensure the scope of change and timescales for implementation are robust.

Given the proposed changes to TO accountabilities as a result of ETNPR, as well as those proposed in the FSO consultation, one area for consideration should also be how to re-establish a level playing field across the industry. For NGET this is particularly acute in areas of exclusion from certain activities outside of the regulated Transmission

Services such as but not limited to provision of storage assets. This is also pertinent given the proposed introduction of onshore competition and the need for reform in the licencing regime to support it.

Question 4: Do you have any views on the success criteria? Are there any key areas that we have missed?

While we agree with most of the success criteria proposed at a high-level, we believe there are two specific areas that need further consideration:

- We urge caution in the use of criteria D2: “Simple to develop and implement”. While unnecessary complexity that doesn’t deliver benefit should be avoided, planning the electricity transmission system to deliver net zero is inherently complex with a wide-ranging set of complex technical considerations that must form part of it for it to be robust. We believe this will only get more complex over time and therefore do not believe that simplicity itself is a measure of success.
- We believe Ofgem needs to consider how the impacts of the CSNP on other industry (non-transmission) parties are considered as part of the cost-benefit analysis. While this review focuses on electricity transmission network planning, it rightly identifies the need to plan across the whole energy economy. Robust decisions about the contents of the CSNP can only be made if the broader costs and opportunities of those decisions across the industry are considered. This needs further consideration in the process and/or success criteria.

Further consideration should be given to how any proposed models for developing the CSNP are assessed against each of these criteria to ensure it is objective and transparent. We are concerned that while ‘NOA’ is assessed as a process against the CSNP, the broader load-related plan build by TOs is not. Therefore, this assessment does not adequately represent a comparison between the ‘as is’ and ‘future state’ processes required to understand the benefits of the proposed approach.

Nevertheless, we would welcome a further understanding of the scoring shown in the Appendix against each of the criteria as we do not agree with all the scoring applied (although we acknowledge it is currently tentative).

Question 5: What are your views on our enduring vision for Centralised Strategic Network Planning?

The consultation calls out three key areas as part of the enduring vision. We have provided comments on each of these specific elements below. We provide further detail on the proposed stages of the CSNP build (linked to the first area below) in our response to Question 7.

“Take a GB-wide holistic view to develop an optimised plan for necessary investment in the ET network to meet anticipated future needs of the changing energy system to meet the Net Zero targets. This will include (but not be limited to) identifying and specifying the high-level design of low regret SI.”

- We agree that there is benefit in identifying low-regret SI that will be critical for supporting the delivery of net zero. This gives investment certainty and supports delivery organisations in effectively progressing the required network reinforcements in a timely way.
- We do not agree that the CSNP should cover the entirety of the load-related plan. The load-related plan goes far beyond what is considered in the NOA process, with NOA helping to identify reinforcements that are justified on an economic basis to reduce the cost of operating the network in the long-term. We are concerned that the extent of the load-related plan is not accurately represented and therefore the impact of the proposed changes is not understood. The limitations of the existing NOA process are not represented here and must be considered when assessing the impact of these proposals.
- This consultation does not recognise that there is a trade-off between the benefits of co-ordination and certainty through the CSNP vs. the additional time, cost, resources, and complexity involved in the CSNP trying to include all load-related investments. For smaller projects, e.g., those which are related to one customer or are highly integrated into the existing network, the balance tips and the value is derived from existing network owners being able to progress at pace and find the optimal solution. This is required to enable other critical projects e.g., battery storage, to be connected at pace and for the plan to be flexed as required, when customer requirements locally change.
- We do not agree with the proposed definition of SI or that the CNP should be accountable for the planning of all works in a region. The CSNP should focus on genuinely ‘Strategic Infrastructure’, which should be limited to where there is an expectation of a requirement for new, significant transmission infrastructure routes and where there are complex interactions with multiple stakeholders and/or other adjacent policy decisions (e.g. hydrogen). The CSNP can then be focused on co-ordinating the need for strategic changes to onshore and/or offshore networks given the value of these types of projects to multiple customers and stakeholders.

- For other projects, which we propose should be non-SI e.g. load-related customer connections, existing system upgrades and non-load related works, and critical works to ensure SQSS compliance and maintain security of supply, a focused and stable CSNP will enable non-SI work to be optimised by network owners considering the SI requirements outlined in the CSNP.
- The proposal for the CSNP would take projects within its remit beyond the point at which an early competition model would be applied. We believe Ofgem should consider how the CSNP can be developed in such a way that an early competition model can still be applied, given it would be expected to often have a greater ability to deliver consumer value than a late competition model.
- Further consideration must be given to how innovative options are considered as part of the CSNP options development to ensure that potential consumer value is not lost by the CNP developing options in isolation. We acknowledge that careful consideration will have to be given to Intellectual Property to facilitate this.
- We do not believe it would be appropriate for the CNP to propose options that involve changes to existing assets. These options must come from the asset owner given their understanding of what is deliverable, how their assets behave and are operated, and to ensure any proposals are consistent with plans that may already be developed as part of BAU business plans. Failure to recognise this would impact on the ability of the asset owners to deliver a level of reliability, and so this must be given further consideration.

“Facilitate a move to strategic energy system planning so as to achieve Net Zero targets in the most efficient way. This would be achieved by proactively coordinating ET network planning with wider energy system planning (e.g. the planning of new sources of generation and demand).”

- The detail on this topic is somewhat limited in the consultation and needs much more detailed consideration so we can understand in more detail the effectiveness and likelihood of the CSNP to deliver this. However, focusing the CSNP in this area would likely deliver significant benefits by considering the dependencies between different energy systems and how these can be optimised to support decarbonisation and deliver consumer benefit. We do also recognise there could be potential commercial challenges in establishing the role of the CNP to affect the energy market. Consideration about the range of code and industry framework changes required to facilitate this ambition also needs further assessment.

“Will be led by a single, independent, expert body – a ‘central network planner’. The central network planner will still need strong support from the incumbent TOs and third parties to develop feasible and deliverable options.”

- We agree that there should be a single, independent expert body that enacts the role of the Central Network Planner. We provide further detail in Question 6 regarding our views on who could enact that role and how.
- We believe that the CNP needs to work in partnership with all stakeholders, including TOs, and that TOs and delivery organisations should be proposing the options for consideration by the CNP as part of CSNP development. This will help ensure that options are feasible and deliverable and will align accountabilities with where the capabilities are.
- The document proposes that Ofgem will work with ESO to support the development of the enduring regime. We do not believe this is appropriate, especially given the ongoing FSO consultation has not concluded. Regardless, the enduring regime and arrangements must be developed with a range of cross-industry inputs that go much beyond just considering the responses to this consultation. We believe working group(s) need to be established at pace to effectively shape the enduring and transitional arrangements, gathering insights from SMEs and using case studies to test the robustness and effectiveness of the detailed proposals. This must go further than the engagement that has taken place to date.

Question 6: Do you have any views on the proposed central network planner’s role, who that planner might be, and how it may perform this function?

Given the proposed critical role of the CNP in supporting industry to deliver net zero, careful consideration must be given to the level of industry change and risk introduced by changing industry roles when we are already on the critical path for delivery of 2030 targets in particular. We would advise that work is undertaken to determine what the sufficient level of change is to meet the proposed outcomes and solve the most immediate challenges while ensuring that Government decarbonisation targets are not put at risk. This is applicable regardless of who is appointed as the CNP.

The role of the CNP should be as a strategic co-ordinator of cross-industry insights, expertise and experience to collaboratively build the CSNP. With the CNP an independent industry body, they must leverage the inputs, expertise, experience and insights of a range of stakeholders and build the capability to effectively challenge and assess those inputs as part of the CSNP build.

In particular, the CNP will have to build its technical power systems and design to deliver the full range of technical analysis that is needed to ensure that the CNP is robust. We propose that the CNP should be developed collaboratively working with TOs and other relevant parties to undertake the power system analysis required to understand the implications of proposals. These parties should also contribute options for consideration and support in assessing these as part of an iterative design process.

The CNP will not have any accountability for consenting, project delivery or asset management. Experience and capability in these areas will be a critical input to CSNP development and delivery. This is most effectively incorporated by the CNP working in a structured and transparent way with all relevant stakeholders. There should be clear obligations and a structure around this engagement to ensure it is effective. The consultation does not go far enough in ensuring there are obligations and incentives on the CNP to do effective engagement.

We echo the view expressed in the consultation that no party currently has the capability to do this role and there is a requirement for significant capability build in any organisation that may be the CNP. There must be sufficient time given to do this capability build, and the timing of implementing any transitional or enduring solution must give due consideration to it.

It may also be worth considering whether the title of 'Central Network Planner' is sufficiently reflective of the role, or whether something else may be more appropriate e.g., 'Strategic Network Planner'.

Question 7: What are your views on the proposed stages and focus of the enduring CSNP model? If you can suggest alternative approaches to any of the stages, then please do so.

If the CSNP was truly strategic, with a revised definition of SI, we believe this could be an effective set of high-level process steps. They are not appropriate for the entirety of the load-related plan given this will include a significant number of small local customer connections or system upgrades that are heavily integrated in existing networks.

We provide our comments on the specific stages outlined below.

Stage 1 – Model Future Supply and Demand

We agree that the CNP should develop future supply and demand scenarios and that there should be consideration of the benefit of moving away from the current FES approach. We do believe that there is a role for development and consideration of multiple scenarios rather than being too narrow in the approach given the sensitivity of system need/requirements to assumptions regarding supply and demand patterns. By including more scenarios, sensitivities will be better understood to help establish what infrastructure is considered 'low-regret'. Probabilistic analytical methods could be an effective tool to understand the implications of a broader set of scenarios. We agree that this should be as transparent as possible, but there will need to be consideration given to how commercially sensitive assumptions (e.g. on generation projects progressing) are included and shared.

Stage 2 – Identifying System Needs & Stage 3 – Identifying System Options

The CSNP should therefore focus on genuinely 'Strategic Infrastructure', which should be limited to where there is an expectation of a requirement for new, significant transmission infrastructure routes where there are complex/multiple stakeholder interactions that would typically (but not exclusively) fall under the existing LOTI regime. The CSNP can then be focused on co-ordinating the need for, and interactions between, strategic changes to onshore and offshore networks given the importance of these types of projects to multiple customers and stakeholders.

We believe stages 2 (identify system need) and 3 (identify system options) should be a combined iterative stage which is undertaken in partnership with all relevant parties (including the incumbent TO and other delivery bodies as a minimum) to assess need, propose options and test their feasibility. This is necessary given the iterative nature of power system studies, need identification and options development and analysis. This is particularly important given the complexities when you move beyond considering just boundary capability requirements across the network (as is currently the scope of NOA), which the CSNP will have to deliver the proposed benefits.

We would like to highlight a few of these complexities here, as these will need further consideration in the detailed design of the enduring regime:

- Power system studies often require options to be proposed in the first instance and tested to help articulate need.
- Options will not always perform as expected and so there needs to be flexibility in any design process to adapt and optimise, and re-test need on that basis.
- Most types of analysis will require some decisions and assumptions to be made about the strategic network infrastructure and design to ensure that the model will run effectively. Again, this requires flexibility of process to refine options as you move forward.

The consultation document proposes that study work will be completed without considering options and a needs case presented for the next stage of the process. From our experience we know that this must be iterative and that identifying potential solutions will be important to help articulate the need case.

Options must be developed and proposed by TOs and other delivery bodies to ensure that the CSNP inputs are robust and given the expertise and accountability for delivery sits with these parties. The CNP should take the role of challenging and consolidating these inputs.

Instead of assigning all accountabilities for stages 2 and 3 to one party (CNP), we believe a better solution is a partnership approach working with 3rd parties to help derive the best overall options for consumers. We would support further discussions around the detail of this process moving forward using the working group(s) proposed to work through detailed case studies to refine and test the proposed process.

Stage 4 – Cost Benefit Analysis

We agree that the CNP should be accountable for the cost-benefit analysis, although further work is required to better define the CBA approach to ensure a robust outcome. While there is reference to inclusion of 'qualitative' factors, how these are included and weighted in the analysis requires more detailed thinking and explanation before we can provide detailed feedback.

This stage is also considered as the 'decision making' phase, where trade-offs are made and there may have to be judgements on the relative weighting between cost and other factors e.g. the extent of undergrounding to mitigate visual impacts. It is important there are clear decision-making criteria to ensure appropriate justification where a higher cost overall could mitigate other impacts (and vice versa, where we the assumption is that these impacts should not be mitigated).

There will again be benefit in using well-defined engagement processes to test the outcomes of the cost benefit analysis and ensure that there is a robust consideration of all elements to help inform the detail of the CSNP.

Stages 5-7 Development of CSNP through to detailed design

We agree broadly with these stages, but further work and detail is required to better understand 'what' is handed over in terms of detail to support project consenting and delivery and how and when any competitive process would be run. We also believe that there is a role for TOs and other delivery bodies in helping set the strategy and support decision making as part of the CSNP development and to be involved in any regulatory processes that will place obligations on the TOs or other delivery organisations.

We acknowledge that there is a trade-off between how frequently the CSNP is updated to ensure it remains a 'current best view' vs. providing stable investment signals over a longer period to support project development. The process by which decisions are made and communicated regarding the frequency of updates must be given more detailed consideration given the dependence on 3rd parties to ensure the process is successful.

Further work is required to consider what an appropriate change control process would be for any changes between CSNP update cycles. How this is applied and the extent to which the delivery body can make changes where there are unexpected engineering/environmental challenges or in response to consultation feedback on detailed proposals needs careful consideration to ensure CSNP does not become a blocker to delivery.

Question 8: What are your views on closer stakeholder co-working to break longer-term uncertainty deadlocks?

The proposed benefits of ETNPR can only be achieved with adequate and effective stakeholder engagement throughout, and we propose this needs to go further than what is outlined in this consultation. Extensive engagement must be at every stage of the process outlined.

There must be an obligation on the CNP to consult as part of the development of a CSNP. While we note that the importance of collaboration is mentioned, the structure and extent of it is at the discretion of the CNP. Transparency will be critical to building trust.

There must be engagement with a broad range of stakeholders to shape the enduring regime for ET network planning, to ensure that the end-to-end process is supported at a principle level. There must also be transparent, highly structured and well-defined obligations for engagement at all stages of CSNP development to ensure the output is fully endorsed, legally robust, and has adequately considered the views of a broad range of stakeholders.

The proposed model does not go far enough and could result in the CSNP being a blocker to meeting net zero targets if the time and resources used to establish the CSNP don't translate into any changes in the existing approvals/processes, and therefore work is duplicated to satisfy regulatory and planning processes.

Question 9: What are your views on allocating risks and accountability for various aspects of the CSNP, and for delivering the options finalised under CSNP? Do you have any suggestions to mitigate any of the risks?

It is critically important that the allocation of risks is given sufficient consideration to ensure risks are appropriately aligned and no parties are unfairly exposed to risks because of the proposed regime changes. This is essential to protect end consumers. We recommend that more detailed work is done in the next stage to enable a more comprehensive and detailed set of risks and mitigations to be established for the transitional and enduring regimes.

We do not believe that the current proposals achieve the right alignment between roles, responsibilities, and risks. This is linked to the requirement for further thinking around roles and responsibilities.

For example, today the TOs are also accountable for SQSS compliance and the consultation states that TOs will retain this despite significant changes proposed to the front-end process, which does not appear to be appropriate. NGET can only be accountable for compliance if it has a stronger and clearer role in the development of the CSNP, as we propose is a necessity.

We agree that the three risks highlighted in the document (summarised below) are all risks of the enduring regime:

- The Central Network Planner may not have the sufficient knowledge, skills and capabilities
- The CSNP output may be sub-optimal quality
- The role of the CNP for CSNP creates duplication across the CNP and TOs

We do not agree that the mitigations identified will go far enough against each of these risks highlighted and believe cross-industry working groups should be created that will, as a subset of their outputs, create and manage a risk register with identified mitigations. We would like to raise a few points, based on the content of the consultation:

- For the 1st risk (on skills and capabilities), we strongly believe that there must be obligations on the CNP to engage with stakeholders, and that this needs to be transparent and well-structured. To mitigate this risk, consideration has to be given to the timescales required to build capability, as part of the timing of the transition. How any skills are 'refreshed', given the CNP will not have any accountability for detailed design, consenting and delivery must also be considered in more detail.
- For the 2nd risk identified (on quality) it will be critical to ensure there is adequate incentivisation and obligations on the CNP to deliver a quality output, given the far-reaching consequences of this not being the case. We believe the risks and accountabilities on incumbent TOs need to be developed further to determine the extent to which they will be a risk mitigation. The mitigation also states that the TOs being accountable for delivery of their options is a mitigation for poor quality, but it is not clear how the CNP is incentivised to deliver robust options that they propose given that they will not have delivery obligations as an incentive.
- For the 3rd risk identified (duplication) there is no proposed mitigation, but a recognition that this will be the case but that the benefits will be outweighed by the costs. As the detail of the proposals are developed, this should constantly be re-tested to ensure the regime delivers value for consumers.

Given the proposed timescales for the transitional arrangements, we also expect there to be a comprehensive risk register developed at pace to manage any transition and ensure it supports, rather than compromises, the 2030 targets in particular (noting that we do not agree that with the timelines and scope of the transitional arrangements as detailed in this document).

Question 10: What are your views on the proposed Transitional arrangements?

We have significant concerns about the transitional arrangements as detailed in the consultation and in particular the ambition to embed them from 2022. Our concerns are heightened by the challenges and known delays to the HND publication.

The consultation proposed potentially using the NOA7 outcomes and/or HND as a transitional CSNP, and that further work will be required to determine the extent to which this could be the case. At this time, the latest position is that HND will publish in summer 2022. Given our experience on HND, we are not confident that producing another transitional CSNP output will be deliverable in the timescales required.

We therefore propose that 2022 is instead used to focus on two key streams of work:

- Delivery of robust and comprehensive HND and NOA7 outputs. We want ESO to focus on ensuring this meets the initial aims and objectives and to focus on alignment with NOA7 to ensure investment signals to support 2030 decarbonisation targets are clear. We note that the timescales for outputs from both processes are under discussion but that there will be a significant delay to HND publication.
- Establishing an effective working group(s) with a defined list of industry stakeholders to develop a robust, transparent, and detailed set of transitional and enduring proposals. These should be topic specific, where appropriate, to ensure the right SMEs are able to support in the detail of specific areas.

2022 is a critical year for putting the industry on the right path to meet Government targets to connect 40GW of offshore wind by 2030, and HND was proposed to be a critical part of that to meet some of the challenges identified in this consultation. We believe that introducing further changes or a new approach at this time would only be a distraction from other critical activities.

NGET has been working to develop transformational tools and capabilities that we know would be of huge benefit to this process. We would welcome the option to share this with Ofgem and consider how this could support any transitional arrangements and play a role in the enduring regime.

Question 11: Do you have any views on the next steps to implement CSNP?

We acknowledge that this consultation states that further work is required to consider other key topic areas in more detail and we agree that further work is required across these topics, and others, to enable robust decisions to be made about the enduring regime.

We agree that more work is required to understand the implications of these proposals in more detail and to consider whether any changes proposed through responses to this consultation should be applied. Further development must not be done in isolation between ESO and Ofgem, and effective working groups should be established to assess these topics in more detail. We would like to see topic specific working groups that consider the detail of these impacts and assess a range of case studies to test that the proposals will deliver the outcomes and benefits outlined in this consultation.

As stated in our response to the previous question, we do not agree with the scope or timing of the proposed transitional arrangements, particularly given the delays to the HND publication and challenges with NOA7 interactions. We believe the focus of ESO and Ofgem should be on ensuring that the HND and NOA7 deliver credible and clear outputs that can support the industry to meet 2030 targets and to give clarity to impacted communities on infrastructure requirements. This can be done within the existing regime and does not require any immediate changes.

Question 12: What are your thoughts on our initial view of the areas to be covered in the next phase of the review? Are there other areas that aren't included that you would like us to include?

We agree that the topics highlighted need further consideration during the next phase of this review. We believe further consideration needs to be given to the following areas within each topic discussed in the Appendix:

- Topic 2: Analysis and decision-making methods for load related network planning. Further consideration should be given to:
 - Transparency of the decision-making process and how different, and potentially conflicting requirements are balanced.
 - Clarity on roles and responsibilities throughout the decision-making process.
 - Data exchange mechanisms.
 - Input from all relevant stakeholders in the decision-making process.
 - How the process or outcomes are challenged and how challenges are resolved.
- Topic 3: Breadth of solutions, covering whole system solutions and innovation. Further consideration should be given to:
 - The future role of Pathfinders and any interaction with this process, including consistency in roles and responsibilities for network planning and compliance.
 - The incentives on all parties to effectively participate and propose solutions to the CNP.
 - Intellectual Property.

While some consideration has been given to roles and responsibilities, this needs a much more thorough review and worked case studies with a range of stakeholders to ensure the process is robust. There are other topics that need further consideration. These include, but are not limited to:

- Regulation of the CNP to ensure they are sufficiently incentivised to deliver a timely and quality output to the industry.
- The impact on other industry process and/or the other industry changes required to enable the benefits of the proposed changes under ETNPR.
- The change control process, once the CSNP is published. Given that there may be changes required either because of consultation activities or unexpected engineering/environmental challenges that impact cost/timescales/scope. These will potentially need to be managed between CSNP cycles. Further work is required to understand how this would work in practice and the extent to which the delivery body can make changes post-publication.

We note that throughout the Appendix the topics mention the role of ESO in a number of areas. We assume that this should be a reference to the CNP and/or FSO (proposed to be the CNP).