Early Competition Plan

Phase 2 consultation

July 2020

nationalgridESO

Welcome

Welcome to our first consultation on models for Early Competition. This consultation sets out our proposal for an end to end model aimed at delivering consumer value in the delivery of the investments required to futureproof the GB transmission network, and an opportunity to share your views.

Last year saw a major milestone in the UK's energy revolution as the Government passed laws to end its contribution to global warming by 2050. As the Electricity System Operator (ESO), we also set a target of having the capability to operate a zero-carbon network by 2025 and an ambition for competition everywhere. The development of an Early Competition Plan (ECP) embraces these ambitions, leading our industry towards a secure, sustainable and affordable energy future.

The ECP will set out how a model for early competition could be introduced, along with the roles and responsibilities and implementation timescales and costs.

In developing this model, we have engaged with, listened to and acted on your feedback. We have run several engagement events and the views you expressed have shaped how we have constructed the model. We would now like your views on the whole end to end model as set out in this document.

If you would like to share your views, please refer to the consultation section to find out how. Please also join us for a discussion at our webinars on 9 and 23 July. Information on these webinars, including a link to registration can be found here.

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Introduction

A key success criterion for the ESO is ‘competition everywhere’, which forms the basis for a central theme of our RIIO-2 business plan[1] – unlocking consumer value through competition. Our five-year strategy is to use competition to support the development of the network – ensuring it is always ready for the demands placed on it and can operate securely as we transition to a zero-carbon electricity system.

The ESO has already begun the process of introducing competition into electricity transmission through our NOA Pathfinders ('pathfinders')[2]. The pathfinders focus on seeking wider “whole system” solutions to transmission system needs that do not require a transmission licence.

There remains significant scope for extending competition by also allowing third parties to offer solutions across all network needs, regardless of whether they require a transmission licence. We are currently developing an Early Competition Plan (ECP) for the onshore transmission network in Great Britain to explore options to address this area. The ECP will supplement the late Competitively Appointed Transmission Owner (CATO) model thinking currently being developed by Ofgem. It will be developed with flexibility such that it can be implemented both pre and post CATO legislation. Following completion of the ECP Ofgem will decide whether early competition will be introduced.

Early competition refers to competition before the solution to a network ‘need’ has been decided. Based on information provided by the Transmission Owner’s (TOs)[3] Ofgem estimates the pipeline of potential projects that may be suitable to undergo competitive processes over the course of the RIIO-2 price control, has an estimated average value of over £1bn annually.

[1] NGESO (2019) RIIO-2 Final Business Plan. Available at: https://www.nationalgrideso.com/our-strategy/business-planning-riio/riio-2-final-business-plan
[2] NGESO (2019) Network Development Roadmap. Available at: https://www.nationalgrideso.com/research-publications/network-options-assessment-noa/network-development-roadmap
[3] Ofgem (2019) Update on the ESO’s Early Competition Plan. Available at: https://www.ofgem.gov.uk/publications-and-updates/update-electricity-system-operator-s-early-competition-plan

Stakeholder engagement

Key to a successful ECP is co-creation – engaging with stakeholders at every step of its development. Only through listening to our stakeholders can we develop proposals which are pragmatic, delivering value for consumers whilst remaining attractive for potential investors.

As shown in Figure 1, the delivery of the ECP is being undertaken in four phases:

- **Phase 1:** development of the ECP conceptual model (completed)
- **Phase 2:** initial consultation on emerging ECP model (ongoing and covered in this document)
- **Phase 3:** final consultation on emerging ECP model (November 2020), and
- **Phase 4:** submission of the ECP to Ofgem (February 2021).

Throughout Phase 1 and in developing the model for early competition presented here, we have sought stakeholder input through continual bi-lateral and multi-lateral engagement, including meetings, webinars and workshops. This input has shaped the proposals set out in this consultation.

Figure 1: Timeline for the ECP

Figure 2: Summary of attendance at May 2020 workshops

Summary of proposed early competition model

The proposed model set out in Figure 3 is based on the end-to-end process for a typical early competition project - from identifying the network need to decommissioning the chosen solution. In this consultation we are setting out some of the key dimensions of the early competition model:

- Suitability for early competition
- Roles and responsibilities
- Commercial model
- Risk allocation
- Tender process, and
- Post-tender award

For each of the key dimensions listed the consultation presents:

- The options considered for that dimension
- Summary of the stakeholder feedback
- Our current preferred approach, and
- Questions that we are seeking stakeholder feedback on.

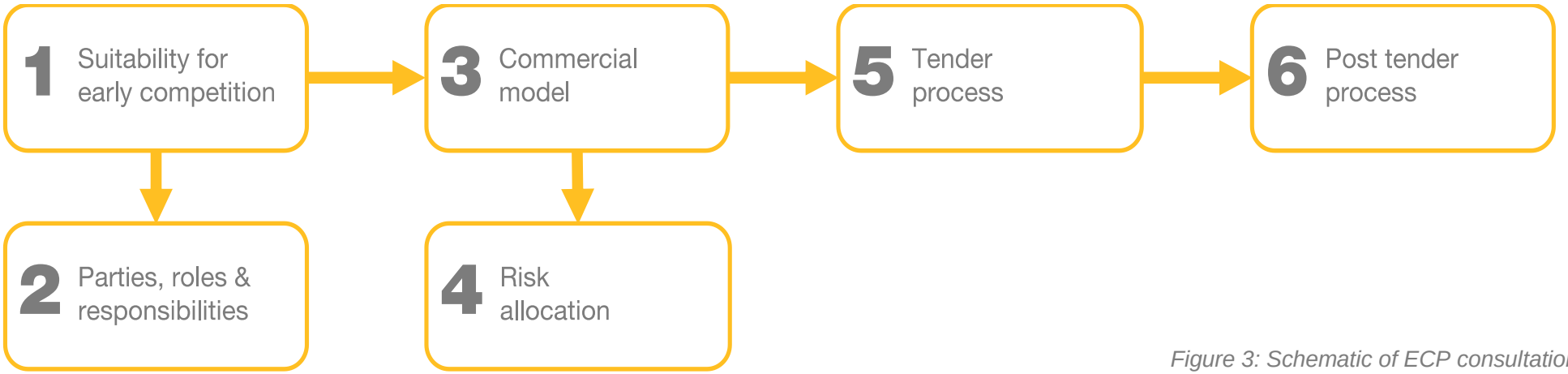

Figure 3: Schematic of ECP consultation

Figure 4 presents this end-to-end early competition model over time aligned to the current network planning process and typical Royal Institute of British Architects (RIBA) plan of work.

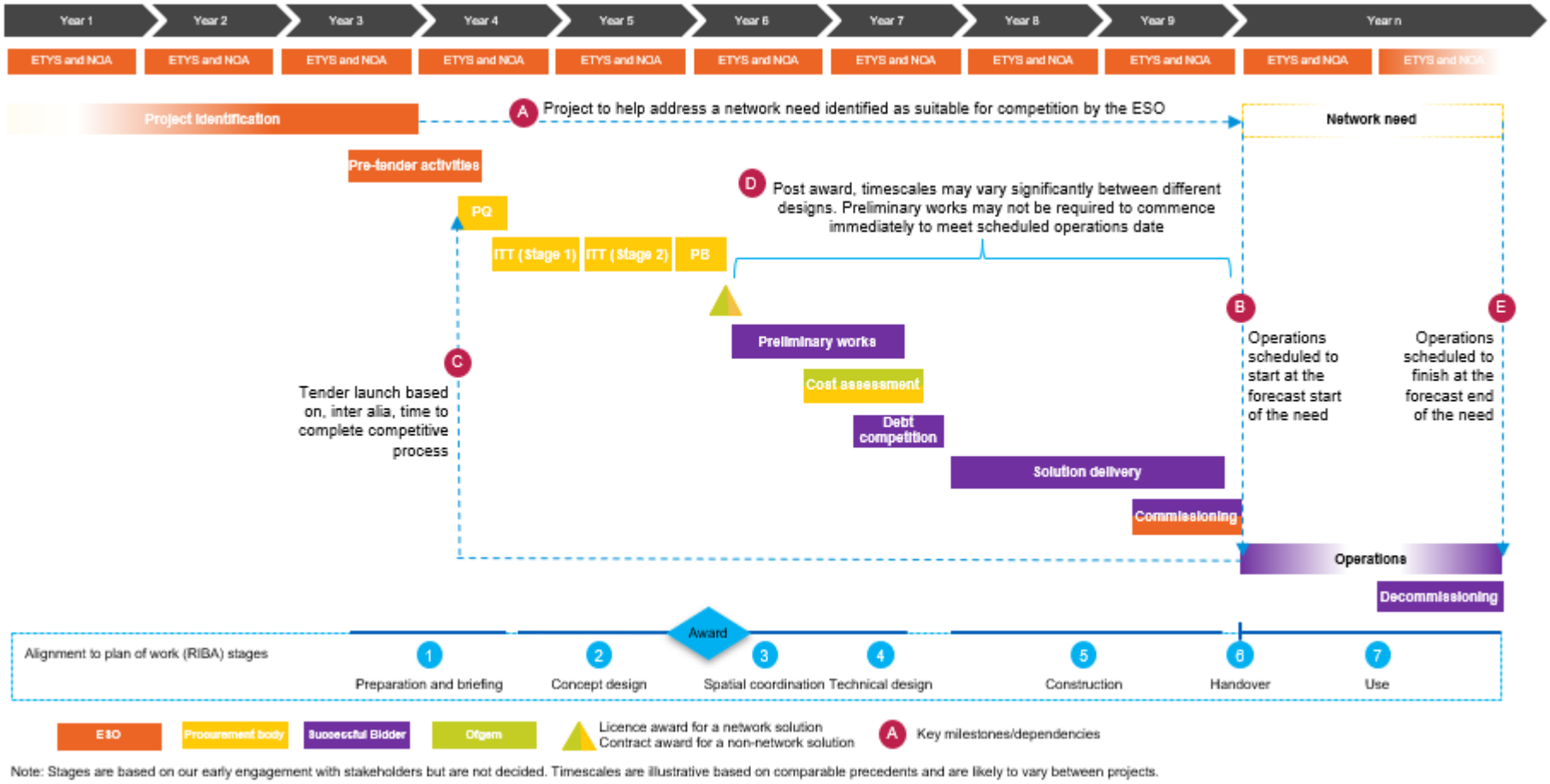

Figure 4: Whole life early competition model

Suitability for early competition

A well-defined and transparent process for identifying a pipeline of projects for early competition is vital in encouraging participation in this new sector.

In this consultation we focus on major network reinforcement projects identified through our Electricity Ten Year Statement (ETYS) and Network Options Assessment (NOA) processes. Following this consultation, we will consider how the ECP process might be applied to other network investment drivers, such as asset replacement or customer connections.

A key consideration is whether a project should be put out to tender at a 'very early' (before potential solutions are identified) or 'early' (after an indicative solution has been identified) stage of development.

The current preferred option is to launch the tender at the early stage as there is too much uncertainty about the network need at the very early stage. In order to capture the benefits of the very early model, we propose engaging with potential bidders very early, before an indicative solution is developed. This will help ensure as broad a range of possible options are considered when developing potential solutions.

In turn, this should reduce the risk of inadvertently excluding cost-effective solutions by unnecessarily narrowing down the network need. In addition, alternatives to the indicative solution will also be allowed at the bidding stage to maximise scope for market driven innovation.

As part of developing the indicative solution, an assessment would be made of the best time to launch a competition. This will be based on when it is required and typical lead times. We propose that the final decision on whether the network need is appropriate to compete would consider a range of criteria including ‘separability’, ‘new’, ‘certainty' and ‘compliance’ and a consumer-focused cost-benefit analysis of the likely costs versus potential benefits.

We envisage Ofgem would take the final decision whether a network need should be tendered based on the ESO's recommendation.

Parties, roles and responsibilities

For early competition to operate and be as open as possible, roles and responsibilities need to be well defined and sit with the party best placed to carry them out.

- **Parties**
  In addition to the ESO, other parties that will be central in delivering early competition include:

  - **Incumbent TOs** - the three onshore electricity transmission networks in Great Britain
  - **Ofgem** - manages the TO's licences and sets their regulated revenue streams through periodic price reviews, and
  - **The possibility of a third party** - other than Ofgem, the ESO or a TO. This could be an existing organisation or an independent third party set up specifically to undertake an early competition role.

- **Roles and responsibilities**
  We will be consulting on what role each of these parties should play in early competition in Phase 3, and whether there is a need for any additional parties in certain roles. In this consultation in developing the model, we have identified four key new roles that are required to enable early competition. We have also assumed that Ofgem would fulfil the role of providing and amending licences to facilitate competition. These new roles are:

  - **Procurement body** - designs and administers the procurement process
  - **Approver** - approves the recommended Preferred Bidder (PB) and key commercial terms
  - **Licence/contract counterparty** - manages and monitors licence and contractual obligations, and
  - **Payment counterparty** - manages financial transactions.

Following this consultation, we will begin exploring in more detail the roles and responsibilities of the key parties in early competition for consultation in Phase 3. One area already raised by stakeholders is what role the incumbent TOs will play in early competition.

Our preferred position is for the incumbent TO, to participate because of their potential to provide a solution that represents good consumer value. However, stakeholders have raised there is a potential conflict with the role the incumbent TOs currently play in

network planning, including across network need identification and indicative solution development. In our next consultation we will set out views on how these potential conflicts could be mitigated.

Commercial model

Consumer value is only achieved through the competitive tension of suitably qualified multiple parties seeking to provide a solution. It is also dependent on the commercial arrangements being attractive to developers, investors and lenders.

To achieve this, we have sought to create a bespoke model to reflect the characteristics of early competition:

- **Revenue**
  Our current preferred option is for bidders to submit a fixed payment stream based on their costs. This benefits from investor familiarity with the approach (e.g. with offshore transmission owners (OFTOs)) where bidders submit a Tender Revenue Stream (TRS) with predefined adjustment mechanisms.

  For consumers, value is only delivered when the project is commissioned. Our preferred option is that the TRS only begins after the solution is commissioned.

- **Revenue period**
  We considered the appropriate duration of these payments. Our current preferred option is to set the length of the revenue period equal to the forecast duration of the network need.

  This means designs with an asset life shorter than the length of a network need, and unable to commit to the necessary reinvestment, may become ineligible for a tender. It also means that solutions with an asset life longer than the need, and unable to take residual value risk, must bid a TRS based on recovering costs over a shortened period.

  The approach minimises the reinvestment risk to consumers and avoids pushing costs on to future consumers where the network need may no longer exist.

  We do recognise there may be circumstances in which the revenue period is shortened or lengthened:

- We are seeking stakeholder views on whether it would be appropriate to cap the length of the revenue period. This will ensure competitive financing is available. Based on RIIO-2 and other precedents, we propose 45 years as an appropriate cap.
- We are also consulting on a mechanism for extending the revenue period where there is asset life remaining at the end of the original term. Flexibility could provide significant value to the consumer where the network need remains beyond the original forecast, or where an alternative network need has arisen that the solution could address.

- **Revenue during preliminary works**
  Stakeholders raised concerns that it may be difficult for a successful bidder to carry costs incurred during the preliminary works period if revenue commences only after solution delivery.

  Encouraging bidders into the early competition process is key to driving consumer value. Our current preferred option is that some form of revenue is made available during the preliminary works period.

- **Costs**
  The level of the TRS will be calculated by reference to a bidder's submitted costs. There are two key considerations identified by stakeholders in designing the cost element of the commercial model:

  - **Fixing costs for consumer value** - to protect consumers from increasing costs, the successful bidder's costs need to be fixed as early as possible during the process.
  - **Cost uncertainty** - at the initial design stage of the early competition model there will be significant uncertainty in the costs submitted by bidders.

  We have sought to balance these two demands by breaking down costs into four broad categories, allowing different costs to be fixed at different points in the process. The four categories are:

  1) **Construction and operating costs** - our current preferred option is to ask for indicative amounts in the final bid. This cost category will however be subject to a cost assessment later in the process. This recognises the higher level of uncertainty in these costs at the bid stage as the detailed design would not be completed. Underlying costs would be fixed (subject to limited reopeners) after preliminary works are completed.

2) **Overheads and margins** - with only indicative values for underlying costs, we believe it is important for bidders to commit to construction and operating overheads and margins in their final bids. These costs are largely within the control of the bidders. This would provide some firm basis for each bid and help limit the risk to consumers of significant increases in costs later in the procurement process.
3) **Debt costs (fees and margins, etc)** - given the potential length of the preliminary works, we recognise in most cases it will not be possible to hold debt terms until the preliminary works are completed and costs are fully fixed. Our current preferred option is that indicative costs are used by bidders in their final bids, with a separate post preliminary works stage funding competition to fix final costs. We are consulting on whether the indicative values should be provided by the procurement body or each bidder, and how the risk of final costs being more or less than the indicative values should be allocated.
4) **Equity** - equity should be fully committed and priced in the final bid to ensure risks are adequately mitigated and/or allocated. This will help incentivise bidders to focus on financially structuring their bids.

- **Gearing**
  With debt costs fixed only after the preliminary works are completed, the amount of debt (or gearing) a project can sustain will also be uncertain at the time of final bids. As the level of gearing will directly impact the final TRS, it is important that assumed gearing levels give an accurate reflection of each bidders' proposal. We do not currently have a preferred option on what assumed level of gearing should be in final bids. We have set out some initial options in this consultation.

Tender Process

Our current view of the tender process is that it will follow a standard procurement format, familiar to investors and bidders, comprising Pre-Qualification (PQ), Invitation to Tender (ITT), and Preferred Bidder (PB) stages. To encourage as wide range of innovative bids as possible we are proposing to undertake pre-tender activities and a two-stage ITT process.

There will be a wide range of projects in the early competition model but ensuring consistency is key to reducing bidder costs and maximising consumer value. We are considering how to adapt the tender process and the evaluation criteria to different sized projects.

We are consulting on the high-level criteria discussed, the process and how to increase the attractiveness of the process to bidders whilst delivering value for consumers.

Post-tender award

Once the tender process concludes and a licence or contract (as appropriate[4]) has been granted/awarded, the successful bidder will deliver, own and operate the solution. Post-preliminary works there will in most cases be a debt competition and a cost assessment. At the end of the revenue period the successful bidder will decommission the solution if there is no extension to the revenue period.

To incentivise timely delivery of the solution, we are consulting on whether it would be appropriate to require the successful bidder to post a bid bond. This would be in place at least until solution delivery is underway and potentially until the commissioning date. Our current view is that the process for commissioning should be aligned with the provisions within the existing industry codes.

Our current position is that there will be a need for an availability-based operational incentive. We expect that it will need to be a strong incentive with the potential for both an upside reward and downside penalty, which may not be symmetrical i.e. there may be more potential for downside. Further to the availability incentive we believe incentives would also be needed for timely new connections and environmental impacts. We expect these to be similar to those being developed for incumbent TOs under RIIO-2.

As some solutions will be more costly to decommission than others and this may be a differentiator, we expect that bidders would be required to set out their indicative decommissioning costs as part of their bids. We also expect the successful bidder will be required to maintain a detailed decommissioning plan and post some form of operational decommissioning security at an appropriate time.

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[4] As a successful network solution will be performing the function of electricity transmission it will require a CATO licence, whereas a successful non-network solution will instead enter into a service delivery contract.

Early Competition Plan consultation

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Introduction

Early competition represents a significant opportunity for developers, investors and lenders. In collaboration with stakeholders through the engagement sessions, we have developed our initial views on an end-to-end model for early competition.

The emerging model set out in this document is designed around, what is expected to be, a typical project in terms of size and complexity that may be delivered through early competition[5]. Significantly smaller or larger projects, or those that are complex, may require changes to the process in terms of stages and timing.

This flexibility is discussed in section 5.2 but will be explored further in the Phase 3 consultation in November 2020, along with any modifications required to this model to work pre CATO legislation.

The structure of this consultation is set out in Figure 5, and covers the following areas:

- Suitability for early competition
- Roles and responsibilities
- Commercial model
- Risk allocation
- Tender process, and
- Post-tender award.

For some areas we set out a preferred position, whereas in others we are still considering a range of options. This reflects the current level of development and where we need to continue our conversation with stakeholders. We welcome your feedback on all aspects of the model and not just on the specific questions set out in the document.

[5] See appendix 3

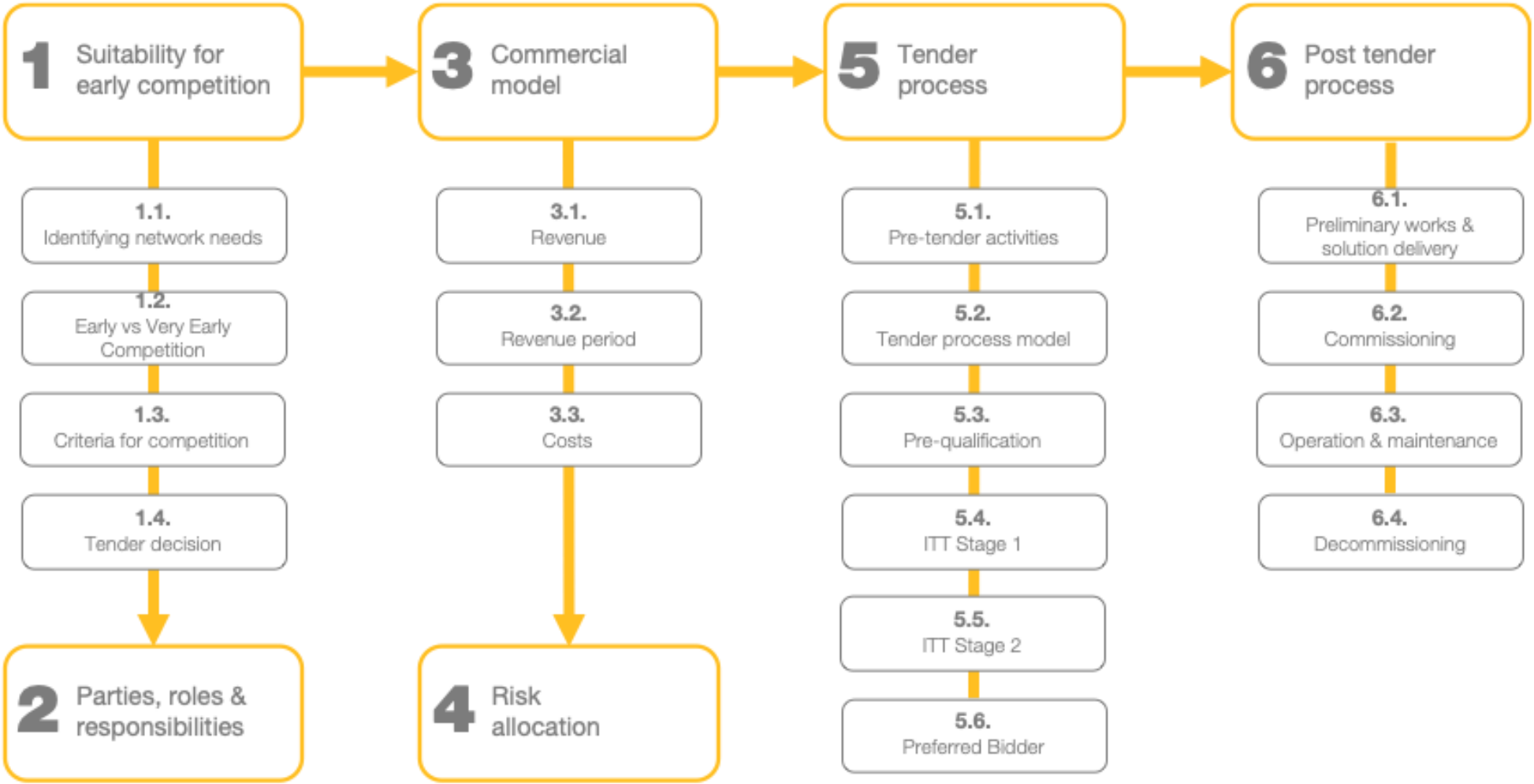


Figure 5: Schematic of the ECP consultation document

How to respond

This consultation will play an important role in helping us refine our thinking and direct subsequent work to finalise our proposals. Specific questions about the ECP on which we would welcome responses are in the main body of the consultation and Appendix 1. We invite you to provide written or verbal responses to this consultation.

- **Written responses -** to be submitted on or before **14 August 2020** to box.earlycompetiton@nationalgrideso.com. While we have set out a series of questions on which we would like responses, more general feedback on the model would be very welcome. Please can we ask:
  - For questions that have been identified with an asterisk (*) provide a statement confirming whether you agree or disagree with the response. This confirmation will allow us to clearly review your feedback as well as provide a clear message on the consultation.
  - For all questions provide explanations of your view on the specific question, and where possible provide examples or justification driving your views.
  - Clearly indicate for each question whether (a) you are happy for this response to be attributable to you, (b) you are happy for the response to be published anonymously, or (c) the response is private and intended only for the ESO to develop the early competition model. All responses will be made public unless otherwise specified.
  - Please also include in your response if you do not want the ESO to contact you about your response and whether you would be interested in participating in future workshops, bi-lateral discussions or working groups.
- **Verbal responses** - we will also be running a series of online discussions to present our thinking and respond to questions, with the first webinar on **9 July 2020** and a Q&A on **23 July 2020**. Further details of these can be found on our website or here.[6]

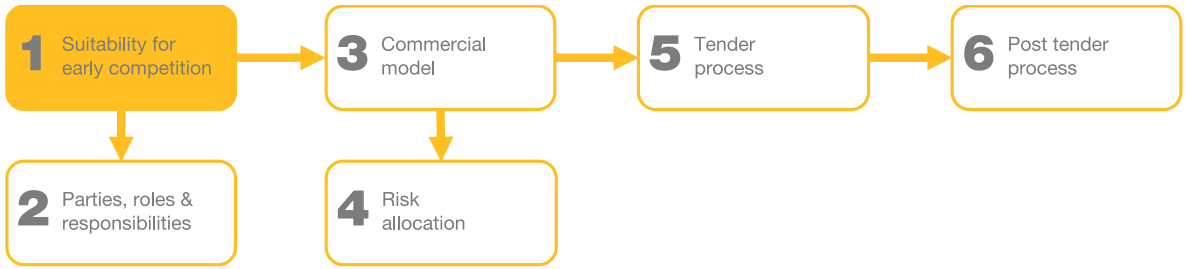
We look forward to hearing from you and working with you to further develop a more detailed model for early competition which unlocks the benefits of competition for consumers.

[6] NGESO (2020) National Grid ESO – Early Competition Webinar. Available at: https://www.eventbrite.co.uk/e/national-grid-eso-early-competition-july-consultation-tickets-110597875222

1 Suitability for early competition

For the regime to be a success there must be a transparent and robust process for identifying system requirements (referred to from here as 'network needs') that are suitable for early competition. This is important as it provides the pipeline of projects that is key to gaining the necessary buy-in from potential bidders in a competitive process.

This section considers the approach to need identification (section 1.1), the timing of running a tender (section 1.2), the criteria used to decide whether a project should be tendered at the early stage (section 1.3), and who should be the ultimate decision maker on whether to run a tender (section 1.4).



Stakeholders identified the items covered in this section as a challenging area with several key issues, including how the model would integrate with the Network Options Assessment (NOA) process (covered in Section 1.1), and ensuring that there is sufficient certainty of the need (covered in Section 1.4).

1.1 Identifying network needs

The need to invest in the network is driven by a range of factors as show in Figure 6. The ESO identifies major network reinforcements based on potential future energy needs, as set out in our annual Future Energy Scenarios (FES). These are shared with stakeholders through our ETYS and NOA documents. In this consultation, we focus on this process in terms of the route for identifying which network needs should be competed.

Once our proposed process is further developed, we will consider how it may need to be adapted to work with other drivers of network investment, which include:

- **High voltage and stability** - Due to the changing nature of the energy generation and demand patterns, our network planning is increasingly also focused on high voltage and network stability needs. These annual processes are currently being embedded in our planning processes and are already being competed through our pathfinding projects.

- **Customer connections** - Customer connections driven investment that affects major boundaries is already captured under our ETYS and NOA process. We also propose, subject to confirmation of our RIIO2 proposals, that by 2025, all connections wider works will be captured under ETYS and NOA and therefore potentially subject to early competition. We will work with relevant stakeholders to explore any concerns around the impact on the connections process.

- **Asset replacement** - Network investment can also be driven by the need to replace assets. This could be because of their age, or for example, to improve the visual impact of the network.

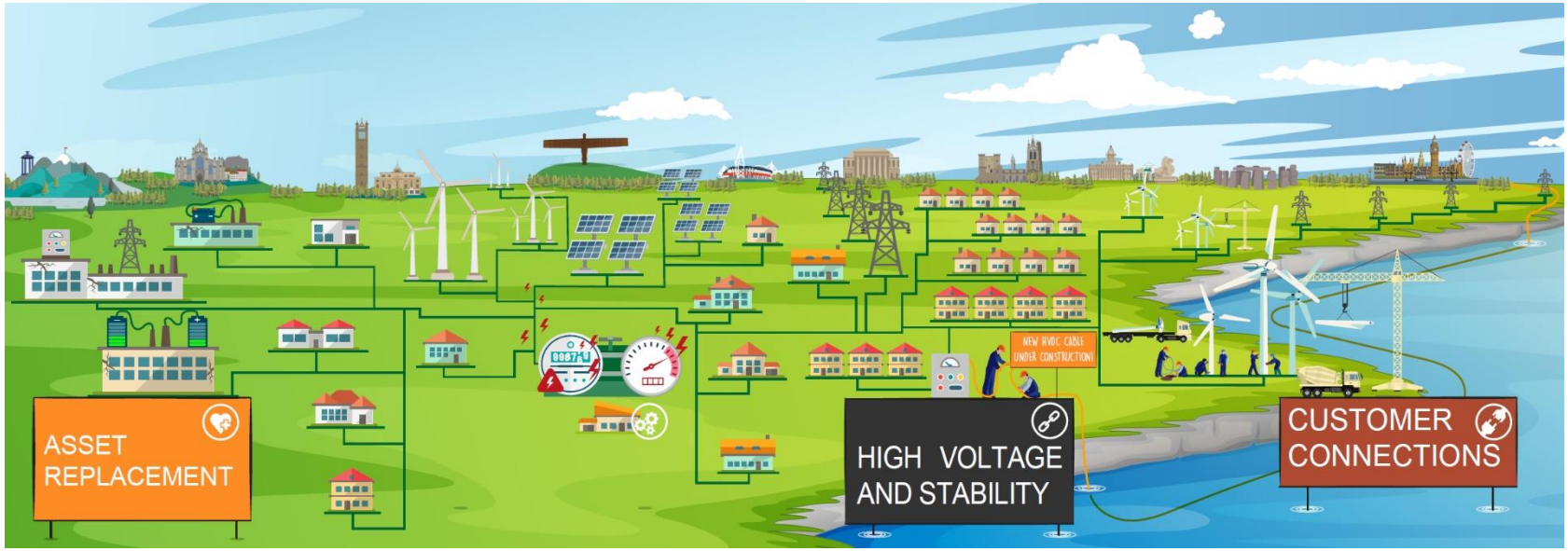


Figure 6: Three types of network needs: asset replacement, high voltage and stability, and customer connections

The network planning process

The current annual network planning process follows three main steps:

1. The Electricity Ten Year Statement (ETYS)[7] identifies future network reinforcement needs, modelling the impacts of the Future Energy Scenarios (FES) on the network. These are also set out in the System Requirements Form (SRF).
2. A range of potential solutions are developed to meet the requirements.
3. An economic assessment of these potential solutions is undertaken, and a recommendation made on the indicative solution to be developed further. These are published in the NOA.

This process is repeated annually with the network needs and solutions reconsidered each year.

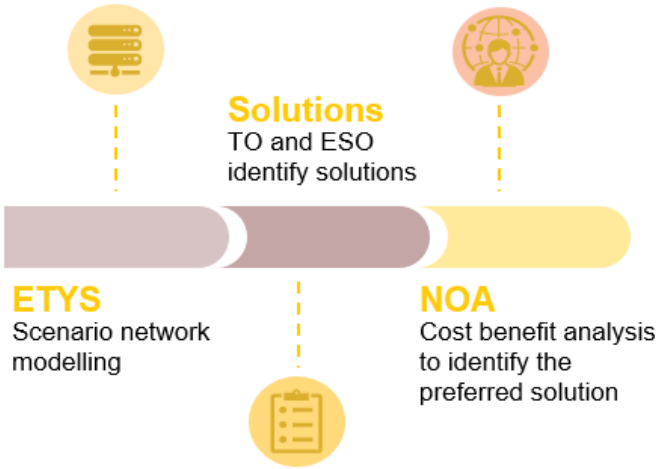


Figure 7: Network Planning Process

Questions

1. Do you agree with the types of drivers of network needs that should be within the scope of the ECP? *

[7] NGESO (2019) ETYS. Available at: https://www.nationalgrideso.com/research-publications/electricity-ten-year-statement-etys

1.2 Early vs very early competition

Within an early competition model there is scope for the tender to be launched at different points in the process. A tender can be launched either at the early stage (after an indicative solution is identified) or at a very early stage (before potential solutions are considered).

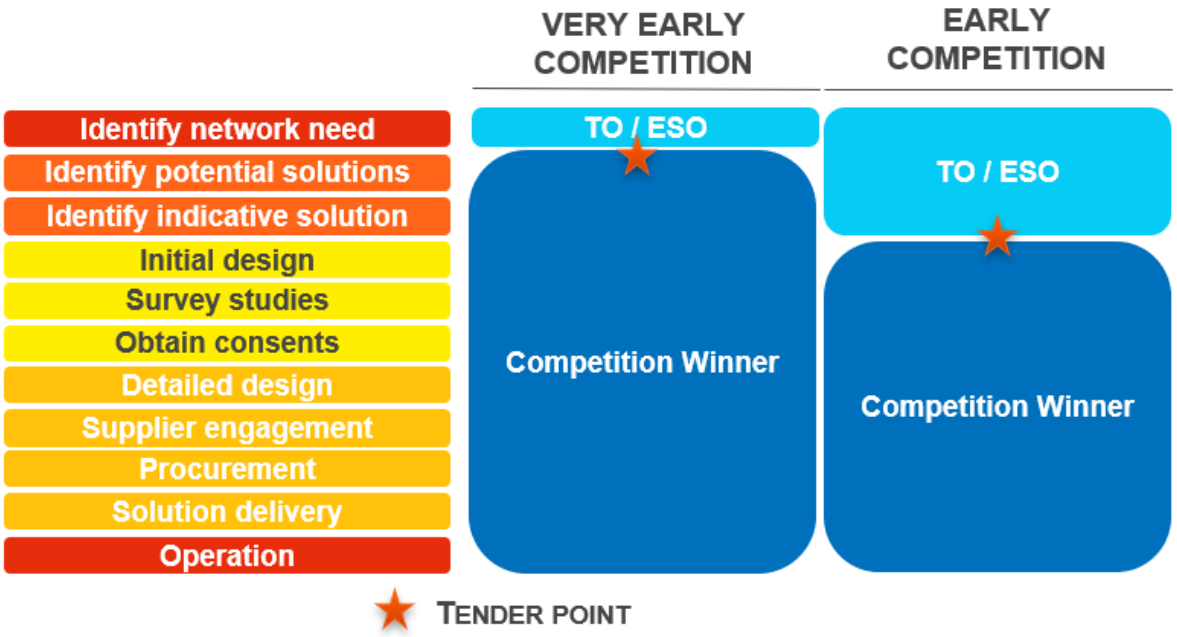


Figure 8: Early vs very early competition

Early competition

A tender process launched at an early stage would begin after the network planning cycle had been completed – this would be after the NOA process in Figure 8. As part of this, a range of possible indicative solutions to address all needs across the network will have been analysed to establish which combination of indicative solutions offers the best value to the network. One (or more) of these

indicative solutions would then be chosen to be competed. This would mean that the decision whether to tender would be informed by the indicative solution and its assessment under the NOA.

If a solution does not need to be progressed immediately the solution may be iterated in a number annual NOA cycles until a decision to tender is made. This means that different needs could result in significantly different timelines under the revised NOA process. Where a need is further away than the lead times for indicative solutions, it would run through the NOA process each year until an assessment needs to be made on whether the criteria for competition are met. It is possible over this time that the precise scope/timing of the need will be updated as well as the range of indicative solutions identified to meet it. In situations where the need identified and the lead time for credible indicative solutions allows, it may be appropriate to run an early competition without multiple NOA iterations. Each need and the potential indicative solutions would be considered on a case by case basis.

> The transmission system is split by boundaries that cross important power flow paths where there are limitations to capability or where we expect additional bulk power transfer will be needed.

The tendered network need would be specified in terms of technical requirements which are viewed by the ESO as relevant to the development of solutions (e.g. additional MW required and any voltage/stability needs). The indicative solution identified by the NOA analysis would also be issued for reference. Bidders would not be required to adhere to any of the features of the indicative solution.

Bidders would be permitted to put forward alternatives to the indicative solution, which could be a network (requiring a transmission licence) or non-network (not requiring a transmission licence) solution. These would need to meet and be assessed against the specified network need.

The potential benefits of early competition include:

- **More information to assess suitability** - the identification of options and the NOA assessment allows a much more considered view to be taken over whether the optimal criteria for competition are likely to be met, e.g. whether solutions exist that give a net benefit to consumers.
- **Knowing when a tender should be launched** - the identification of potential solutions gives important insights into the timings of delivering solutions and therefore the optimal time to run a competition. Identifying when the tender should be launched will be calculated based on, amongst other things, the earliest in-service date and time required for procurement.

- **Less complex evaluation** - In addition, there can be a relatively more straightforward evaluation of the bids as the specification of the network need will be more focussed at the early stage. This will help avoid an overly complex process and provide bidders with confidence in the integrity of the process.

Very early competition

Running the tender at the 'very early' stage would mean launching the competitive process just after completing the needs analysis. This is when the future system needs are first identified, and no solutions have been proposed. At this point, no assumptions have been made about what might be the most cost-effective combination of solutions to address the needs across the network.

This therefore gives more potential for bidders to propose innovative solutions that address several network needs. Under the early model, such solutions might be unintentionally ruled out because the initial solution development process didn't consider these options.

However, to run a competition, the system needs would have to be narrowed down in some form to allow a requirement to be specified. This requirement could potentially be specified on a broader basis than under the early model, as it would not need to be linked to any indicative solution. Without any initial solution analysis, however, it is difficult to assess how best to narrow down the need. It is also difficult to assess whether the need is suitable to be tendered because very little is known about it.

Under both a very early or early competition there will not be complete certainty in the need. The need may change leading to either cancellation or adjustment to the procurement, or a suboptimal solution (where the network need has changed leading to reduced alignment with the proposed solution). However, the risks of this occurring are greater at the very early stage as there will be less information on which to base an assessment and a longer time horizon over which the need could change.

Stakeholder feedback

During our webinars we sought stakeholders' views on the early versus very early tender options.

Several stakeholders expressed a concern that at the very early stage there is higher uncertainty associated with the network need, particularly around whether the network need will remain active/live. Therefore, launching a tender at this stage could discourage participation.

Some stakeholders felt, however, that engaging the market at a very early stage provides greater opportunity for a broad range of technologies, approaches and providers to consider whether they could potentially address the need. This in turn increases the opportunity for innovative proposals to be submitted as part of the formal procurement process.

We also heard in several webinars that stakeholders expect there to be a significant period of engagement prior to the tender launch. Stakeholders noted that taking part in formal tender processes introduces a high cost to their businesses, while participation in pre-tender market engagement exercises is relatively low cost. The use of a pre-tender market engagement phase could reduce the financial burden on potential tenderers and encourage greater levels of participation. This would enable market appetite for participating in an early competition to be explored and would also enable consortia formation.

Current preferred option

We propose to launch the formal tender process at the early stage, after identifying the indicative solution. We believe we can mitigate against the chance of innovative solutions being excluded inadvertently by seeking views from potential bidders to inform the indicative solution development.[8]

We propose to do this through market engagement based on our ETYS analysis of network needs. This would allow us to explore with stakeholders and potential bidders the range of solutions that may be available to meet the network needs. This would then inform the indicative solution development and, in turn, inform how the broader network needs are narrowed down to become the exact network need that is tendered.

We envisage that this process would be run by the ESO given it is unlikely potential bidders would be willing to share their information with the incumbent TOs. This process will also help to fulfil Ofgem recently proposed modification to the ESO's licence (C27), requiring options from interested third parties to be included in NOA.

Bidders are involved in indicative solution development at the very early stage through engagement.
Tender is launched at the early tender point.
Bidders can submit bids which are different to the indicative solution reported in the NOA.

[8] Ofgem (2019) Statutory consultation to modify standard condition C27 of the electricity transmission licence. Available at: https://www.ofgem.gov.uk/publications-and-updates/statutory-consultation-modify-standard-condition-c27-electricity-transmission-licence-0

We expect that this will involve formal processes such as Expression of Interests (EOI) or Requests for Information (RFI) which would provide a structured and confidential route to gather information from the market. We will also explore further what additional engagement activity might be needed for the ESO to properly understand the options available.

This period of engagement would also help to inform what should go out to tender. It would help develop a better understanding of the level of market interest and any broader implications of competing the network need. During this period, we would also assess when would be the most appropriate time to launch a formal tender. This will be based on the timing of the emerging network need and the lead time required to develop the credible solutions identified. We would need to take an independent view of these lead times to ensure the process does not unduly favour certain indicative solutions.

The time between when the network need is first identified in the ETYS, and the point at which the tender is initiated, could be between 6 months to several years depending on when the network need is required. The indicative solution may evolve during that period in response to changing expectations of future network needs. This process is summarised in Figure 9 below showing the interaction of the different phases of network planning process with our proposals for early competition.

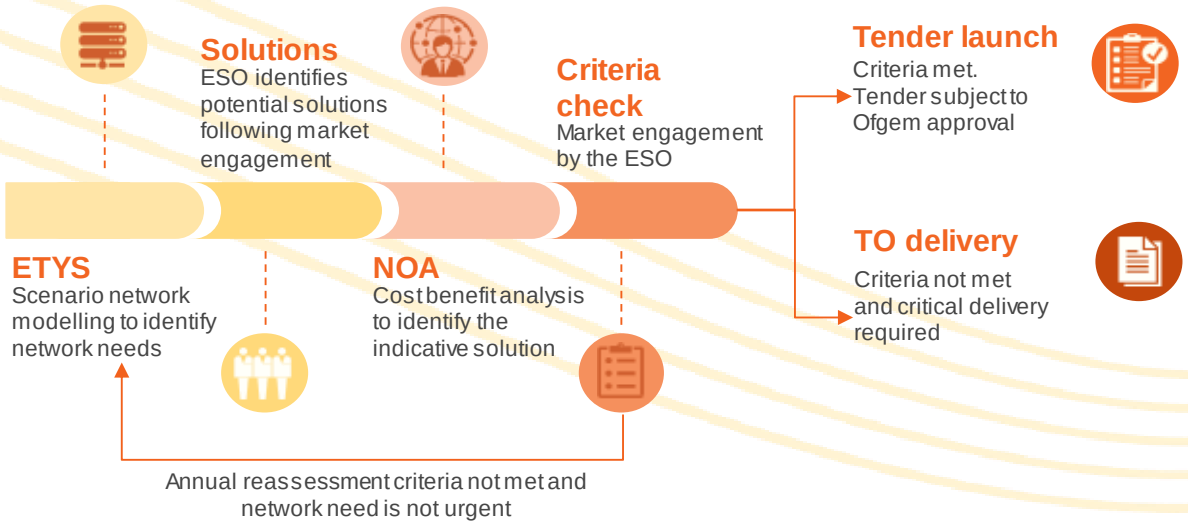


Figure 9: Project identification and current network planning processes

Areas in need of further development

Following this consultation, we will explore this process in more detail with stakeholders. We will consider any concerns stakeholders may have around sharing their intellectual property with the ESO, and how this can be mitigated. We also need to develop fair and transparent processes to ensure that all potential options are treated equally when determining how to narrow down the network need.

We will examine the interactions between the NOA process, the early development of solutions and the optimal timing of running an early competition in our next consultation.

We will also explore with stakeholders how best to structure the initial market engagement. For example, would they want the opportunity to feed into all network needs, or would they prefer the ESO undertake some initial filtering of needs to help stakeholders focus their time.

Questions

2. Do you think a tender launched ‘early’ (i.e. after an indicative solution has been identified) but informed by market engagement that begins ‘very early’ is a suitable process? *

1.3 Criteria for competition

This sub-section first considers the role of a project's estimated value in deciding whether to run an early competition and the stakeholder feedback received on this issue. It then sets out our preferred option on the criteria to be used for selecting projects suitable for early competition projects.

Project value

During the RIIO-2 Business Planning process Ofgem asked TOs to identify projects over £50m in value that could be suitable for early competition. As part of the ECP, Ofgem asked the ESO to consider the criteria to determine which types of system needs are better suited to early competitions. As part of this we were asked to assess the balance between the potential benefits of encouraging innovation and securing delivery at lowest cost. The value of projects eligible for early competition has clear implications for these impacts.

The ESO's pathfinders are already introducing competition for lower value transmission asset projects. Currently this is limited to comparing non-network solutions to the incumbent TO solution. Companies cannot bid to build and own assets that require a new transmission licence (as the necessary legislation does not exist).

Experiences from the California ISO, where projects below £50m have been tendered, suggest that there could be potential to achieve savings through competing smaller value projects.

Stakeholder feedback

In our webinars we sought views from potential bidders on the market appetite to compete for transmission projects of different size based on indicative value. The feedback from stakeholders so far has been:

- Firstly, 'The bigger the better'. Given the level of complexity and challenge involved there needs to be a big reward at the end. (>£50m, preferably larger).
- Secondly, small projects (<£50m) may provide a route for some companies to enter the market. This could enable companies to develop the experience and confidence of parts of the process such as consenting. For this to be of value, stakeholders told us there would need to be a steady pipeline of projects.

Current preferred option

A key element in deciding whether projects should be competed is the potential competitiveness of the market. We will also work with Ofgem and other relevant parties to understand any broader impacts. For example, frequent tenders of small projects (arising from a low project value threshold) could potentially introduce many small transmission owners. We need to consider what implications this may have for the operation of the network and the ability to effectively plan the development of the transmission system.

Phase 3 will reflect on the approach appropriate for very small projects and whether this potentially imposes a lower value limit. It will also explore the interactions with our pathfinder process for non-network solutions.

In determining whether to run an early competition for the network we propose to focus on an assessment of costs vs benefits of running a tender. This would consider whether the potential solutions are likely to deliver net benefits for consumers. As part of this there would be an examination of:

- **Costs** - constraint costs from any delays to solution delivery from running a competition, procurement costs and contract/licence management costs.
- **Benefits** - Innovation, efficiencies (capex and opex) and cost of capital[9].

In assessing these impacts, we think the following factors are relevant:

- **Market appetite**: whether the market engagement has identified enough interest that would warrant running a tender. This would be determined through initial market engagement, including RFI or EOI processes. Needs with more market appetite are more likely to generate benefits from competition.
- **Certainty of need**: projects with greater certainty of need would be better suited to competition to avoid the risk of system needs changing during the competition process. Greater certainty is important for bidders when committing time, effort and capital to the process. We are therefore considering whether a meaningful assessment of certainty could be developed through our NOA process. For example, indicative solutions with a need in only one FES scenario will have much more

[9] As more projects are tendered, we expect to gain better quality data on the benefits and costs.

uncertain needs, whereas indicative solutions needed in all four FES scenarios may have higher certainty and be better suited to early competition as there is a lower risk of an aborted process.

- **Whether solution would be new and separable**: this ensures that the potential solution can effectively be developed by a third party without unduly interfering with a TO's current assets. It also allows a clear delineation of responsibilities and ownership to be allocated between asset/solution providers. Stakeholders fed back that it is important that asset ownership can be clearly delineated and that solutions should not rely on the utilisation of an existing asset. Where the indicative solutions are not new and separable then it is unlikely that there will be benefits of running an early competition.

The evidence to support these assessments would be gathered from market engagement and analysis by the ESO.

Alternative options

Stakeholders fed back that different projects carry different levels of complexity and risks, but this should not be a reason not to compete. Greater complexity is likely to bring increased scope for innovation, so we have not included 'complexity' in the criteria set out above.

Another issue that was raised concerned potential compliance risk (e.g. with network codes) if an early competition were to be run. We think the more relevant question is who becomes responsible for compliance in areas such as SQSS when the TOs no longer have full control over the development of their networks once early competition introduced. We plan to explore this further in the next consultation.

Questions

3. Have we identified the appropriate criteria to determine whether to compete a project? *

1.4 Tender decision

Ofgem would retain the ultimate decision on whether to tender a project, and on the criteria used to determine whether to compete. However, they will require advice in doing so. We believe we have a clear role to play in this because of our current role in identifying network needs and advising on the economic benefit of different options.

Stakeholder feedback

In our webinars we asked whether there is merit in a panel being formed to help make the recommendation to Ofgem more robust. We received mixed views on this. Some stakeholders felt this would provide more confidence that the decision was independent and fair. However, others felt that it would be difficult to form a panel that was truly independent and potentially makes the process less transparent. They felt that the ESO ought to be able to make an independent decision. One stakeholder felt a panel would be bureaucratic and unnecessary.

Current preferred option

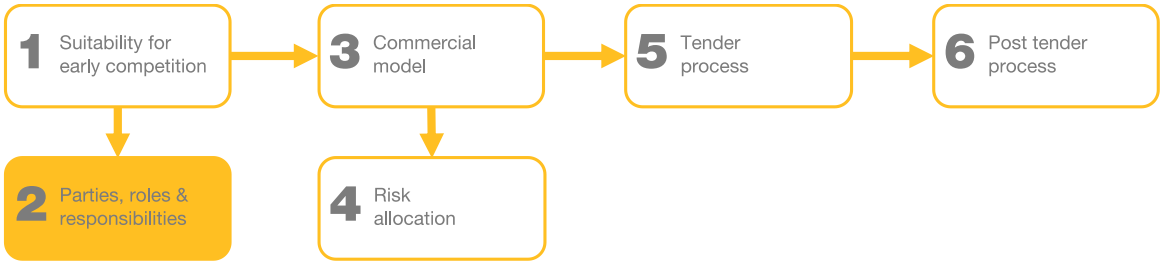
Our current preferred option is that the ESO makes the recommendation to Ofgem, based on a clear and transparent decision-making process with stakeholder views incorporated. Ofgem would be able to scrutinise and challenge the ESO's recommendations to form its final view.

Questions

4. Do you agree with the approach where the ESO makes recommendations to Ofgem on the projects/needs which are suitable for competition? *

2 Parties, roles and responsibilities

For early competition to operate and be as transparent as possible, roles and responsibilities need to be well defined and sit with the party best placed to carry them out.



This section considers which parties would be best able to facilitate early competition (section 2.1), including the role of the incumbent TO. We also consider at a high-level what roles and responsibilities are required to carry out early competition (section 2.2). We have considered these elements at a high level and are looking for stakeholder feedback on our current approach.

2.1 Parties

In developing the end-to-end model, we have considered which parties would be best able to facilitate and deliver early competition. We have identified Ofgem, the ESO and incumbent TOs as having important roles to play, as well as the possibility of third-party involvement (other than Ofgem, the ESO or a TO).

With regards to Ofgem, the ESO and third parties, we are looking for feedback on what roles they would be best placed to undertake in section 2.2. With stakeholders identifying the role of the TO as a key consideration for the early competition model, we address this first below.

Role of incumbent TOs

With their expertise and experience, and their access to their existing assets, TOs could offer competitive solutions that provide value for consumers. Therefore, our aim is to develop a process that enables fair and transparent competition in which incumbent TOs can participate.

Current preferred option

Our expectation at this stage is that the TOs would bid into the same procurement process and be subject to the same post-tender arrangements as other bidders. This would include receiving a revenue stream and adhering to any post-tender cost change mechanisms developed for the process. This would help to provide a level-playing field between the TO and other bidders.

Alternative Options

An alternative approach could be for the TOs to develop their solution as per existing network development processes alongside the competitive process. Bids from other parties would be compared against this indicative solution. If a competitive solution is available from a third party that offers better value, then that would become the successful bidder. If the TO solution is the cheapest, it would then be progressed through existing RIIO funding and scrutiny arrangements. Under this approach, however, it would be more challenging to ensure fair treatment between TOs and other bidders because of the different frameworks underpinning their bids. It would also remove the ability of the TO to tailor their bids.

Stakeholder feedback

TOs had mixed views on how they should participate in competitions. Some felt they should compete as bidders, whereas others felt they should develop solutions through the existing network development processes and funding arrangements.

Some stakeholders felt that the TOs should not continue to undertake their network planning role if they were also to participate in the competition as it would create an unlevel playing field and conflicts of interest. Other stakeholders felt that removing TO involvement would be challenging and suggested ring-fencing within the TO to address these issues. TOs highlighted that they would need to retain sufficient involvement to fulfil their licence obligations. TOs had mixed views on whether ring-fencing certain functions was an efficient process.

Areas that require further exploration

Incumbent TO role in the network planning and tender process

Following this consultation, we will explore with stakeholders ways in which any conflicts of interest can be mitigated. This will involve considering the merits of ringfencing the function within the TO and the merits of transferring roles and responsibilities to the ESO. For the avoidance of doubt, within this document the ESO is not proposing changes in the network planning process to the roles of the TO or ESO.

TO of last resort

We do not anticipate that TOs (or any other party) would be required to progress a backstop solution alongside the winning bid. Stakeholders in our Phase 1 engagement felt that this would be unnecessary provided the tender process is robust. We are, however, exploring the circumstances in which a TO of last resort might be required and how this could work. We will discuss this with stakeholders and provide a view in our Phase 3 consultation.

Questions

5. Do you agree that the incumbent TO's should participate in competitions through the same process as other bidders, and what mitigations may be needed to allow this?

2.2 Roles and responsibilities

We have identified four new key roles in early competition. They are a procurement body, approver, Licence provider and counterparty (Licence, contractual and payment). These roles relate to different stages of the early competition model as set out in Figure 10. We are applying these roles to both network solutions and non-network solutions. This consultation sets out the responsibilities of each of these roles and the parties we believe could fulfil this role. We welcome your views on the roles set out and which parties are best placed to undertake which roles.

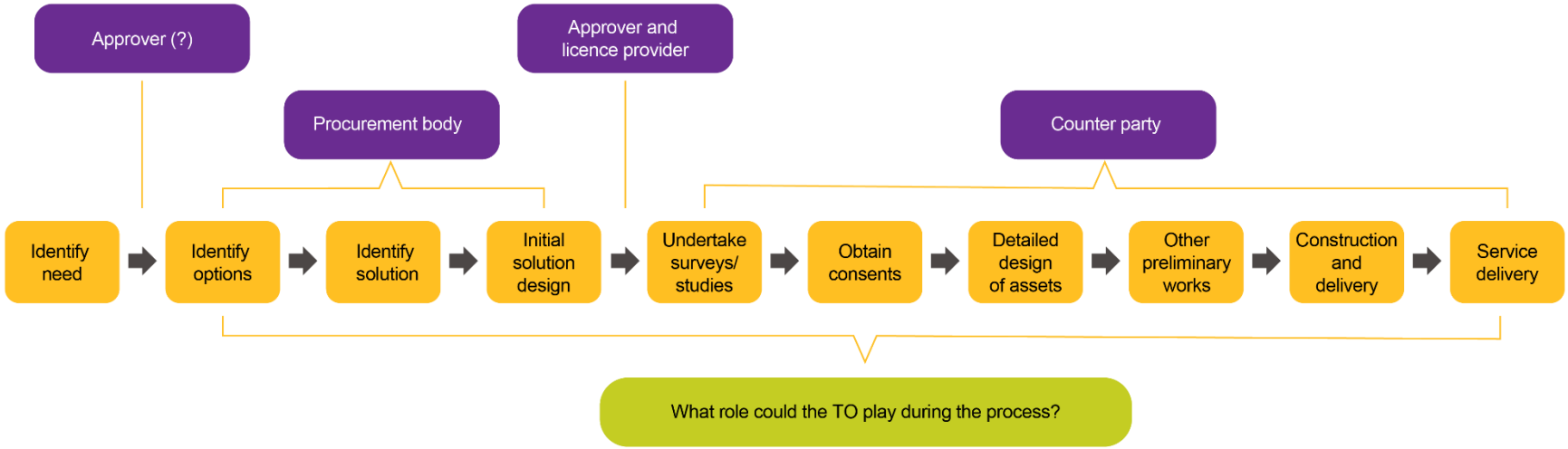


Figure 10: Early competition process and key roles

Procurement body

This entity will design and administer the procurement process. Responsibilities include (but are not limited to):

- Design of the procurement structure and process
- Development of the tender documents
- Development of the contractual documents and any ancillary documents, and
- Management of the procurement process.

It will cover both network and non-network solutions. At present we believe this role could be fulfilled by the ESO, Ofgem or a third party.

Licence provider

The licence provider is the entity which issues the licence, if applicable.

- Under current legislation (Electricity Act 1989) the power to issue licences sits with Ofgem.
- We do not envisage any another party would be more appropriate to undertake this role.

Our preferred option is that this role would continue to sit with Ofgem.

Approver

The approver is the entity which makes the formal decision to conclude a stage of the early competition:

- **Confirming the need to be tendered** - As set out in section 1, a decision by the approver will be required to launch the tender process for the identified need. This role could sit with Ofgem, the ESO or an independent third party but Ofgem's legal duties make it best placed to undertake this role.
- **Selecting the Preferred Bidder (PB) and approving the contractual documents (if a non-network solution)** -The point of award would take place between initial solution design and undertaking surveys as show in Figure 10. The approver will also monitor the procurement process and provide final approval of the process itself. We believe that Ofgem, the ESO or a third party could carry out this role.

We also note that this role could be shared across two separate entities. We will consider this further in our next consultation.

Counterparty

This role comprises legal entities who are the signatories to the contract or parties to a Licence alongside the procurement body. It covers all stages from the point of Licence/contract award to service delivery. We have split the role by transaction, as follows:

- **Licence counterparty** - this is the entity which will manage and monitor any obligations placed on any successful bidder that is issued or has a transmission licence to perform the function of electricity transmission (network).
- **Contract counterparty** - this is the entity which will manage and monitor any obligations placed on any winning bidder who will hold a contract for any solution not performing the function of electricity transmission (non-network). (It is worth noting that a non-network solution may have or require some other form of Licence other than a Transmission Licence, such as a Generation Licence, and so would also need to enter into a contract with the contract counterparty for the winning solution.)
- **Payment counterparty** - this entity will manage financial transactions between the winning bidder and the other counterparties. We are assuming these arrangements will be in line with current provisions for network charging, as described in section 6.3.

Where a licence is issued, following on from our earlier assumption that Ofgem is the licence provider, Ofgem would also fulfil the role of licence counterparty. Regarding the contract counterparty and payments counterparty, we believe the ESO or a third party could carry out these roles.

Questions

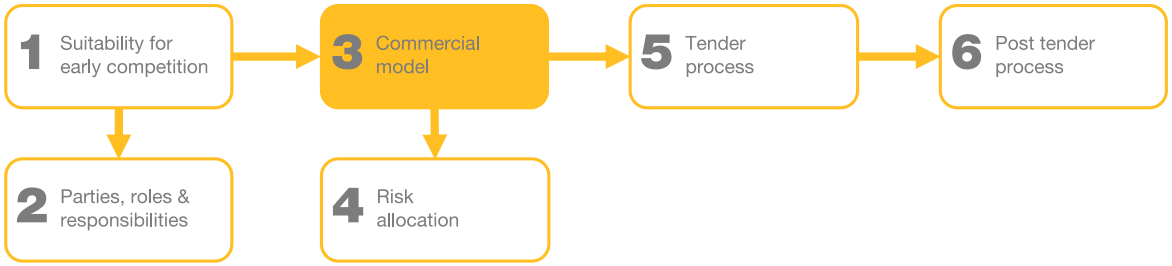
6. Which parties do you think would be best placed to fulfil each new role identified in the early competition model and why?

In our next consultation we will set out more detail on each of the area discussed above. We will also provide more information on the cost and implications of different options.

3 Commercial model

This section considers the appropriate commercial model for early competition. In developing the commercial model, we are looking to encourage as wide a range of bidders into the competition as possible. This will drive innovation and cost competition to deliver value to consumers.

We are focusing on three key areas: how revenue should be set for a successful bidder (section 3.1); the appropriate length of the revenue period that the successful bidder is awarded (section 3.2); and how costs used to calculate revenue should be determined (section 3.3).



3.1 Revenue

The mechanism by which the successful bidder recovers their costs will be critical in providing a basis for raising finance and in incentivising bidders to design, construct, and operate the successful solution appropriately.

Experience in the energy sector and the broader infrastructure market suggests several possible revenue models are available. These broadly fall into two categories: market based and payment based.

A fully market based (merchant) revenue model would require the successful bidder to earn revenues by charging suppliers and generators fees for using their solution on a volumetric or availability basis. A cap and floor mechanism could be applied to limit the successful bidder exposure to volatility in the market revenues, as in the case of, for example, the GB interconnector regime.

While a market based model offers some value to consumers, it would require a fundamental restructuring of the current revenue arrangements. The costs associated with adopting this model could erode a significant portion of the value of early competition.

Under a payment based revenue model, the successful bidder receives regular payments from a credit worthy payment counterparty. The payments could also be on a volumetric or availability basis, but crucially the payment is not linked to a market price, meaning less potential revenue volatility for the solution provider and less complexity in the early competition model.

Stakeholder feedback

Stakeholders held a variety of views on the most appropriate revenue model but agreed that the revenue model should be selected based on maximising consumer benefit. Some stakeholders stated that for non-network solutions an opportunity for earning revenue from other sources should be available under any revenue model.

Overall feedback seemed to be in favour of an indexed TRS as applied in the OFTO sector. Stakeholders noted that a TRS would be more flexible and less complex and therefore more suitable for early competition than a regulated asset model. They also noted that a TRS model could be more attractive to investors. This is because it is more prevalent, and the structure is well known to the investors. It also could result in more innovative and competitive financing structures.

Stakeholders noted the importance of clear mechanisms under a TRS model such as in relation to income adjusting events and to the pass-through of certain costs. The balance between fixed and variable bid elements must also be appropriately calibrated to attract investors. Stakeholders also highlighted that clarity in the revenue model would reduce financing costs.

Current preferred option

Our current preferred option is for a fixed payment, payable from commissioning until the end of the revenue period, and subject to inflation. The fixed amount would be bid by each bidder based on their costs and adjusted for any permitted changes throughout the duration of the licence or contract.

This is comparable to the OFTO or private public partnerships (PPP) revenue models, where bidders bid in a TRS or Unitary Charge (UC) during procurement. The use of a fixed payment in OFTO and PPP projects means the mechanism is well understood by the market. This should assist bidders in putting together their bids and will provide a level of certainty for lenders.

Under the OFTO and PPP models, the asset owner is incentivised to make the asset available through adjustments to the fixed payment for availability. It is our current preferred option that similar availability incentives are adopted in the early competition revenue model.

Alternative options

An alternative payment based revenue model is the fully regulated asset value (or RAV) model where bidders are competing for a price control framework which is linked in some way to their bids. The price control could potentially run for the entire solution life with operational, replacement capex and financing costs being periodically reviewed for efficiency.

Performance incentives could also be periodically reviewed in line with consumer preferences and the project may be required to submit ongoing business plans. It would also be able to appeal regulatory decisions.

The regulatory model (or variants of the regulatory model) has only been applied to single projects in a limited number of cases e.g. Thames Tideway. This is deemed appropriate only for very large complex and bespoke projects and may not be appropriate for a large pipeline of early competition projects.

The regulatory model may be considered in specific large projects with significant uncertainties. This is where it is not value for money for these risks to be borne by the market in a fixed price approach. Our later consultation will consider flexible procurement in more detail, but we welcome any early views from stakeholders on this area.

Areas that require further exploration

We are also considering whether it may be appropriate to consider paying for some or all the preliminary works as costs are incurred. This is given an expectation that financial close for third party debt (FC) will only be achievable once preliminary works are completed. This could assist bidders with limited financial resources during this period.

Alternative mechanisms for preliminary works may include:

- Fixed payments **–** an amount either specified in the bid documents, or proposed by each bidder, which is released in stage payments during the preliminary works period
- Flexible/variable payments **–** an assessment made of actual costs incurred during the preliminary works period with some form of incentive mechanism, or
- Combination **–** a fixed amount supplemented by a mechanism to accommodate unexpected costs.

Questions

7. Do you agree with a TRS type revenue model as the default model?* In what circumstances (if any) do you think a regulated model may be more appropriate?
8. Do you think that revenue during the preliminary works period would help encourage participation in early competition?* If so, what mechanism would be most appropriate?

3.2 Revenue period

In calculating the fixed payment amount to be bid into a tender, bidders will need to consider both the whole life costs (other than if any of the costs are remunerated separately such as preliminary works costs) and the period over which they are able to recover these costs i.e. the duration of the licence/contract and the associated revenue period.

We consider there to be broadly three options in setting the revenue period duration:

- In line with the network need - forecasts will establish when the network need is expected to start and end. The revenue period could end at the point the network need is forecast to end
- In line with the asset life - each solution will have a useful technical asset life before major reinvestment is required. The revenue period could be set to match the useful technical asset life of the successful solution, or
- In line with precedents - lenders and investors have most experience in financing assets of this nature over a construction plus 20-25 year period (e.g. PPP and OFTOs). The revenue period could be set to a similar time period to tap into the same finance market where significant liquidity and price competition may be expected.

Stakeholder feedback

Some stakeholders stated that a network need dependent revenue duration would be most suitable, while some others noted that any other requirements should be covered by the commercial arrangements. Stakeholders stated that a revenue duration shorter than the network need duration would lead to unnecessary complexity in early competition.

Stakeholders also noted that the revenue duration will interact with potential finance option availability as being either too long or too short could be restrictive. They noted that beyond 20 years may be challenging for banks, 25 years may be achievable for bonds and longer-term arrangements may be achievable via institutional investors. They also noted that long-term risk and investor confidence will be important to any new regime.

Most stakeholders felt longer revenue periods would be preferable albeit some stakeholders felt that early recovery of capital investment within that revenue period might be preferable. We heard comparisons to the duration available in the capacity market and offshore regimes. It was also noted by a stakeholder that 40-45 years would be an appropriate revenue period.

We also heard that longer revenue periods could have downsides, such as locking-in old technology, and that some form of periodic review would be appropriate, such as every five years or so.

Some stakeholders noted that at the end of the revenue period assets should not be transferred to the incumbent TO. We heard that this would allow them to explore other opportunities at the end of the revenue period. We also heard the commercial arrangements should set out up front what should happen at the end of the revenue period and that there are two options at the end of the revenue period if technical asset life remained against an ongoing network need. These options were to retender for the additional period or to extend the revenue period with appropriate changes to revenue e.g. cost-plus mechanism.

Current preferred option

Our current preferred option is to set the revenue period equal to the forecast length of the network need. We believe that this will provide consumers with the best value, as they are not paying for services beyond the period for which they are required. It also makes the evaluation of alternative solutions potentially easier in the tender process.

Below we consider how adopting this approach would work with alternative asset lives and in securing funding:

- **Revenue period is longer than technical asset life**
  - For a solution whose asset life is shorter than the network need, the bidder would need to plan on substantial reinvestment at some point during the licence/contract in order to meet the requirements of the tender.
  - Funders are unlikely to commit upfront to funding such reinvestment given the timeframe involved and the uncertainty over costs against a fixed payment stream.
  - If the bidder is unable to provide evidence that the required service can be provided for the life of the licence/contract (reflecting the network need), this could mean the solution cannot be considered as part of that tender process.

- **Revenue period is shorter than technical asset life**
  - For a solution whose asset life extends beyond the end of the network need there are a number of possible scenarios depending on the nature of the solution.
  - For a solution that is fully integrated in the network there is unlikely to be an alternative use for that asset. It will be difficult to extract the asset from within the network and there will be limited applications for its reuse. Bidders with such a solution will look to recover their full costs within the life of the licence/contract.

- For bidders with a solution that is potentially separable from the network such that the asset can be repurposed, the approach may be varied. These bidders will need to decide what risk they are willing to take on the commercial residual value (RV) and therefore what costs they need to recover over the life of the licence/contract. The greater the RV risk the bidders are willing to take, the more competitive their tender price will likely be. This would also need to be considered in respect of end of contract/licence provisions e.g. in respect of treatment of decommissioning as per Section 6.4.
- An alternative approach is to request that bidders fully amortise their solution within the life of the licence/contract.

- **Revenue period is longer than precedents**
  - Where the network need extends beyond a period of circa 20-25 years attracting finance may become more difficult, particularly in the bank market.
  - It may become necessary for bidders to look at alternative forms of finance, such as public or private bonds. The early competition model would need to be sufficiently flexible to accommodate such alternative arrangements, for example allowing time for obtaining a credit rating following cost assessment.
  - As was noted in our engagement, a long revenue period may also lead to issues with locking-in old technology.

- **Revenue period is shorter than precedents**
  - Where the network need is shorter than a typical OFTO or PPP project, funding should remain available but may be somewhat more expensive as upfront fees are amortised over a shorter period.

The above suggests that it may be appropriate to limit the maximum length of the revenue period to ensure there is always some solution with a technical asset life beyond the length of the licence/contract on offer and that financing is always available. In setting the maximum length, consideration would also need to be given to potential future developments in technology.

It is therefore our current preferred option to set a maximum length for the revenue period, whatever the length of the network need. An appropriate maximum length for the revenue period may be 45 years. This is consistent with RIIO-2 and a few other precedents.

Alternative options

The other two options, where the revenue period is potentially set for a duration longer or shorter than the network need, may not offer the same value to consumers.

If the revenue period is shorter than the network need then the consumer is at risk of having to retender for a further solution at a later date. Alternatively, if the revenue period is longer than the network need then future consumers will be paying for a solution which is of no benefit to themselves.

In addition, setting the revenue period equal to the asset life of each solution is likely to make evaluation of alternative solutions very difficult. This is because the Net Present Value (NPV) of each solution will be strongly affected by the time period over which revenues are discounted.

Areas that require further exploration

If the revenue period is not in line with the technical asset life, there is potential for the asset to have a useful life beyond the end of the licence/contract. Decommissioning the asset may not be appropriate in this instance (see Section 6.4).

In such instances, we are considering whether there may be a case for either:

- including in the licence/contract a mechanism for extending the revenue period for the fully depreciated asset, or
- providing for the handover of the asset to the incumbent TO.

Our current preferred option is to include a mechanism in the licence/contract for extending the duration. This may offer value to consumers where the network need has not gone away by the originally forecast date, or a new network need has arisen. In addition, an incumbent TO may be reluctant to adopt a third-party asset and the associated maintenance and performance risk.

Questions

9. Do you agree with the current preferred option of setting the duration of the revenue period to the length of the network need? *
10. Do you agree that the maximum length of the revenue period should be capped?* If so, at what length?
11. Do you agree with the current preferred option of including a mechanism for extending the revenue period?* How should such a mechanism work?

3.3 Costs

It is important that consumers are protected from cost uncertainty. We therefore believe it is appropriate for the successful bidder to commit to its costs as early as practicable in the procurement process.

Early competition presents some unique challenges in fixing costs, as preliminary works such as detailed design, ground condition investigations and consents may not be substantially completed until up to 2-3 years after the licence/contract is awarded to the successful bidder.

It is assumed that some solutions will have a higher degree of cost certainty and will be able to commit to a total revenue stream as part of their final bid submissions.

Stakeholder feedback

We heard a stakeholder advocate the concept of a cost cap for the construction costs, supported by a form of bid bond. They recommended the approaches used in the US are researched to inform thinking and development for early models of competition.

We heard that it is unlikely that debt finance will hold an offer for a period of longer than 6-12 months and that it is unlikely that the supply chain would hold prices for longer than 3-6 months.

We heard that debt funders might be less interested in the early competition model. We understood this view to be due to the additional uncertainty when compared to other forms of electricity transmission competition. This is especially the case if the debt competition is not undertaken at the appropriate time when most of the other risks are not already retired.

Current preferred option

In considering when it is appropriate for the successful bidder to commit to costs, we identified three key points in the early competition model:

- The final bid submitted by a bidder
- Preliminary works completion (i.e. after detailed design and consents, etc), and
- Construction completion.

We also identified four different categories of costs to consider:

- Underlying construction and operating costs (i.e. input costs – labour and materials, etc)
- Overheads/margins (i.e. profit margin, risk allowance and project management, etc)
- Cost of equity, and
- Debt costs (i.e. margins and fees)[10].

Table 1 below sets out our current preferred option, showing what is requested of bidders in their final bid and when costs in each category are expected to be fixed.

	Final bid	Post preliminary work	Post construction completion
Post-prelims cost assessment with debt competition			
1. Underlying costs	I	X	
2. Overheads/margins	X		
3. Equity cost	X		
4. Debt cost	A	X (FC)	

Key:

I	stage at which bidder provides indicative cost
A	stage at which procuring authority provides an assumption
X	stage at which bidder is committed to a cost item
(FC)	financial close for any third party debt

Table 1: Post preliminary works cost assessment and debt competition

[10] Base rates can only be fixed at FC once all other costs are fixed.

- **Underlying costs** - without a detailed design, completed ground investigations or consents it is inappropriate to ask bidders to commit to underlying costs in their final bids. For example, as further design work is done, routes may change and solutions evolve. This would lead to changes in the quantities of labour and materials required for a proposed solution. Requiring bidders to provide committed costs for this cost category can lead to inclusion of significant risk premiums to cover the underlying uncertainties.

  Only indicative underlying costs will be requested in the final bids. The successful bidder would become committed to their underlying costs once preliminary works are completed.

  The method for finalising underlying costs once preliminary works are completed is an important issue. It must ensure consumers are not exposed to the risk of an uncapped increase in construction or operating costs. A robust cost assessment process will be required to ensure only permissible changes are included (see 'areas that require further exploration' at the end of this section).

- **Overheads/margins** - while we believe it is appropriate to delay cost commitment for underlying costs, we also consider it important that some element of cost certainty is obtained on construction and operating costs before the PB is appointed. Our proposed option is to request committed overheads and margins in the final bid. This may include profit margins, specific risk allowances and project management charges for example. These can reasonably be expected not to depend on the outcome of the preliminary works.

- **Equity cost** - ensuring the solutions proposed by bidders are financeable is a critical part of the early competition model. The model therefore seeks to encourage each bidder to engage early on with potential lenders and investors in order to understand the financing costs and address important areas of risk.

  Our proposed option with respect to equity is to require each bidder to provide letters of commitment, including the Internal Rate of Return (IRR) required by investors, sufficient to cover the equity requirements of the initial design. This would demonstrate the robustness of the solution and ensure appropriate consideration is given to financial risk mitigation and allocation.

- **Debt cost** - to lock in costs for the consumer as early as possible (and thereby reduce risk), we believe it is appropriate to reach FC on any third-party debt as soon as possible within the process. With underlying costs only confirmed once consents are in place and detailed design work has been completed this point will be after the preliminary works phase.

Given the potential length of the preliminary works, we do not believe it would be appropriate to require any debt funding to be fully committed in the final bid. For debt costs our current preferred option is therefore for indicative amounts to be used in the final bids. Then, once the preliminary works are completed, and costs are fixed, a debt funding competition would be run to establish actual margins and fees.

We do not currently have a position as to whether the indicative amounts in the final bids should be set by the bidders or by the procurement body. Further thought also needs to be given as to how the risk should be allocated if actual debt costs, established at FC, are more or less than the assumptions made in the final bid.

Not requiring committed debt with the final bid gives rise to a question on the level of gearing bidders should assume in their final bid to calculate the indicative TRS. We do not have a current preferred option on this but have set out below some considerations for consultation in 'areas requiring further exploration' below.

Our current preferred option set out above provides, we believe, the best balance between achieving:

1. A simple model that can be applied to a wide range of 'network needs', solutions and funding approaches
2. Sufficient data at the final bid stage to make a meaningful evaluation of the bids, and
3. Incentives for cost efficiency and timely completion throughout the process.

Alternative options

We considered several alternative options in formulating our views in this area. The current preferred option is a combination of two of the options (B and E) that we explored and as are further described below.

	Final bid	Post preliminary work	Post construction completion
A. Fixed bid			
1. Underlying costs	X		
2. Overheads/margins	X		
3. Equity cost	X		
4. Debt cost	X (FC)		

Table 2: Option A costs – Fixed bid

Option A – Fixed bid

Binding a bidder to all cost items included in their final bid gives the procurement body a high degree of cost certainty. There will still be some movement in debt costs as market rates move during the period between final bid submission and FC, but otherwise the outturn costs for the procurement body are well established by the bidding process. It would, however, be unrealistic to ask bidders to commit to all costs in their final bid. Pricing for all the outstanding risks would make bids poor value for money or would deter bidders.

	Final bid	Post preliminary work	Post construction completion
B. Post-prelims cost assessment			
1. Underlying costs	I	X	
2. Overheads/margins	X		
3. Equity cost	X		
4. Debt cost	X	(FC)	(FC)

Multiple entries against a cost item indicate potential options

Table 3: Option B costs – Post-prelims cost assessment

Option B – Post-prelims cost assessment

Given the level of uncertainty at the final bid stage it may be better value for customers if final construction/operating costs are only fully committed once many of these uncertainties are resolved.
For construction/operating costs, you may therefore only ask bidders to commit to overheads and margins in their final bids and provide indicative amounts for underlying costs. Any indicative amounts would then be reviewed and become committed once preliminary works are completed.

The delay in having final committed costs has potential implications for funders. Financial Close could not occur until costs are fixed and, depending on the length of the preliminary works, lenders may not be able to hold any funding commitments, margins and fees included in final bids.

C. Post-completion cost assessment	Final bid	Post preliminary work	Post construction completion
1. Underlying costs	I		X
2. Overheads/margins	X		
3. Equity cost	X		
4. Debt cost	X		(FC)

Table 4: Option C costs – Post-competition cost assessment

Option C – Post-completion cost assessment

It may be the case that even after the preliminary works are completed there remains significant uncertainty in how construction costs will outturn. Depending on the nature of the solution, certain elements of the design may only become clear once work is underway. In this instance, it may be appropriate to consider delaying final cost assessment until construction completion.

Only requiring committed costs at construction completion means the procurement body is taking cost risk for longer. It may also have a negative effect on some bidders looking to raise debt finance to fund construction. As in Option B, debt will only be available at Financial Close (once costs are fixed) and carrying costs up to completion may not be possible.

While a cost assessment at completion is common in the OFTO sector the model is very different. OFTOs are typically built by and for the sole benefit of an offshore windfarm and form a small part of overall project costs. Furthermore, whatever the outturn cost, the windfarm is largely guaranteed to recoup the cost of the OFTO through a combination of a lumpsum transfer and lower transmission charges. Neither of these factors apply here for early competition.

A post construction completion cost assessment in the cap and floor interconnector regime is relevant here. However, the costs subject to post construction assessment are expected to be limited to few specific cost items. Also, there is no precedence at this point for interconnector projects delivered through a project finance route.

	Final bid	Post preliminary work	Post construction completion
D. Construction competition			
1. Underlying costs	I	X	
2. Overheads/margins	I	X	
3. Equity cost	X		
4. Debt cost	I/A/X	X (FC)	X (FC)

Multiple entries against a cost item indicate potential options

Table 5: Option D costs – Construction competition

Option D – Construction competition

Depending on the level of confidence in the cost assessment process for Option B, it may be appropriate to consider a separate construction competition once preliminary works are completed. This would introduce competitive tension into the process of fixing construction/operating costs.

While this may help in ensuring competitive costs for delivering the chosen solution, it may have the effect of making the evaluation of solutions during the bid phase impossible. With no link between the indicative costs provided in the bids and the final fixed cost, there is an incentive on bidders to understate the indicative cost to ensure their solution is taken forward.

	Final bid	Post preliminary work	Post construction completion
E. Debt competition			
1. Underlying costs	I/X	X	X
2. Overheads/margins	X		
3. Equity cost	X		
4. Debt cost	A	X (FC)	X (FC)

Multiple entries against a cost item indicate potential options

Table 6: Option E costs – Debt competition

Option E – Debt competition

With Options B and C there is a significant delay between the final bid and the point at which costs are committed at FC. If the delay is more than around 3 months, bidders looking to raise project finance are unlikely to find lenders able to commit to margins, fees or availability of funds.

A potential solution may be to provide all bidders with debt assumptions to use in their final bid and fix the price of debt with a debt competition once the timeframe to FC becomes clear. If a debt competition is not possible, for example because it is a 'mega-project' then alternative debt structuring would be considered.

Both the assumptions provided to the bidders and the format of the debt competition would need to be carefully considered. The assumptions provided to bidders need to be realistic – consideration would need to be given to whether assumptions are different for different solutions. Equally, there needs to be confidence that there is sufficient potential market liquidity for a debt competition to result in competitive pricing.

	Final bid	Post preliminary work	Post construction completion
F. Financing competition			
1. Underlying costs	I/X	X	X
2. Overheads/margins	X		
3. Equity cost	A	X	X
4. Debt cost	A	X (FC)	X (FC)

Multiple entries against a cost item indicate potential options

Table 7: Option F costs – Financing competition

Option F – Financing competition

As with debt, equity funders may face difficulty in holding their pricing and commitment to provide funds if there is an extended period between the final bid and FC. This raises the possibility that a full financing competition may be necessary.

However, equity providers play an essential role in financial structuring of their solutions and ensuring the solution can attract debt financing. Without investors helping develop appropriate risk allocation and mitigation, there is significant risk of delay in achieving FC.

Areas that require further exploration

To deliver value for consumers under the current preferred option, it is essential that the cost assessment mechanism for updating the underlying costs, from indicative to fixed, is robust.

We do not currently have a preferred option with regard to the cost assessment mechanism and we have set out some of the potential options below. Each of these would potentially also have some type of cap and/or collar in respect of refining the balance of risk between the bidder and consumers.

- **Economic and efficient review** – at the point costs become committed, the procurement body/Ofgem would consider whether the costs being presented are those of an economic and efficient solution provider. In making such an assessment, they would be able to call on the indicative costs provided at bid and a comparison of the accompanying initial design against the detailed design. There is a potential concern, expressed by some through our stakeholder engagement, that such an assessment may be considered subjective
- **Cost containment** – rather than assess all underlying costs at the cost assessment point, it may be possible to determine some costs that can be fixed in the final bid and others that are indexed or benchmarked in an agreed manner. This could help avoid any perceived subjectivity, or
- **Pain/gain share** – any difference in cost at the cost assessment point from the indicative amount in the final bid could be shared between the consumer and the successful bidder. This would incentivise the bidder to:
    - try and accurately forecast costs in their final bid, and
    - minimise cost increases/find cost saving in their detailed design.

Following the cost assessment process, it may be appropriate to revisit the CBA to ensure that the network need remains as expected and the successful solution remains value for money before proceeding into the solution delivery phase.

Further areas for exploration given our current preferred option are how the level of gearing should be set in the final bid and how the risk of the actual level of gearing at FC being different from the final bid should be allocated.

Gearing is principally determined by the length (or tenor) of the debt and the cover ratio applied to the cost of debt service required by the lenders in each period. Both items would have formed part of the term sheet agreed with lenders, but with no committed debt funding in the final bid these amounts will need to be assumed values.

We do not have a preferred option with regards to the gearing assumption and we have set out some potential options below:

- **Procurement body assumption** – as with debt costs, the procurement body could set assumptions with regards to cover ratio and tenor for all bidders to use. These would be updated for actuals at FC and the cost/benefit passed to the consumer.

  However, this may favour some bidders over others, in particular where there are very different operating and maintenance costs associated with different solutions. For example, those with greater operating and maintenance costs may be expected to require a higher cover ratio to accommodate greater potential downside from a percentage increase in costs. Therefore a (lower) standard

cover ratio may benefit those with greater operating and maintenance costs and put at a disadvantage those with low levels of operating and maintenance costs.

- **Bidder assumption** – the procurement body could allow bidders to determine the level of gearing they deem appropriate for their solution. To help substantiate this, bidders may be asked for indicative letters of support from lenders to include details of anticipated cover ratio and tenor.

  Allowing bidders to select the level of gearing they use, and then passing any costs from actual gearing being lower than expected through a higher TRS, may produce perverse incentives to overstate the level of gearing available in their final bids. Equally however, bidders may not be comfortable taking the risk on gearing levels themselves, which could significantly erode investor returns and could deter bids.

- **Reviewed bidder assumption** – To allow different gearing assumptions across bidders, one option may be to request bidder assumptions but submit them to a review by the procurement body. The procurement body could assess values used by bidders, identifying and scrutinising anomalies.

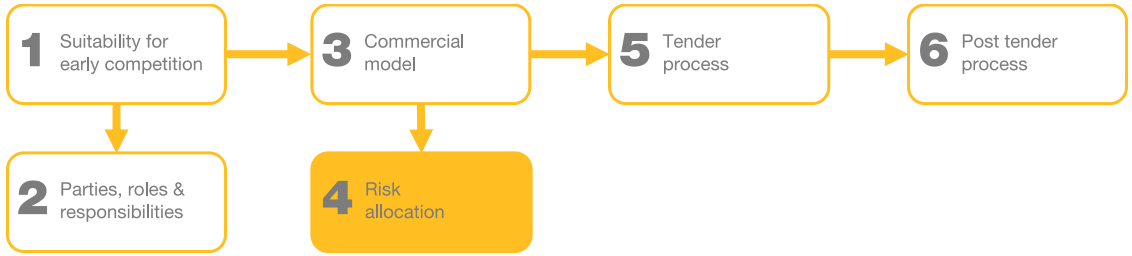
We also need to consider how the risk of the actual gearing being more or less than the assumed gearing is allocated.

Questions

12. What is the most appropriate cost assessment mechanism for fixing underlying costs after preliminary works are completed?
13. Will there be enough lender interest in a debt competition to drive competitive pricing? What other debt structuring options do you think would be appropriate?
14. How should the indicative debt costs and level of gearing used in final bids be determined? How should the risk of the actual amounts be allocated?

4 Risk allocation

This section considers the key risks which would need to be allocated under a licence or commercial contract and the party which is best able to manage those risks. We have considered risks across the whole early competition process and set out our current view of where risks should sit.



Stakeholder feedback

Stakeholders noted many potential risks to consider for early competition including the certainty of need, consenting, ground conditions, third party interfaces, construction, outages, connections, commodities, inflation and force majeure.

Some noted that risk allocation would need to be clear from the outset to ensure that risk is not unnecessarily priced into bids. It was also noted that risk should sit with the party best able to manage that risk. We heard that a specific reopener in the offshore regime is more restrictive than originally anticipated and highlighted the need to ensure clarity over reopeners and exceptional events.

It was also stated that we need to acknowledge that if the bidder is to carry all the risk then they will price that risk accordingly. Therefore, it will sometimes be better for the consumer to share some of the risk and that we need to acknowledge there will be a lot of risk outside of the control of the bidder.

The most common view was that bidders should not take on certain risks as follows:

- Change in law risks
- Cancelled tender process risks
- Need disappearance or change risks
- Force majeure risks
- Externally driven variation risks (at least in full) e.g. planning conditions.

There was also a view that bidders could manage some construction risks (such as cost increases) and that it could be appropriate for bidders to take on the land and consenting risks as this bidder risk appetite could be a differentiator in the tender process.

It was also a common view that bidders should take on asset reliability and availability risks and general construction and construction interface risks. We heard that interface risk would be greater for solutions that are more integrated into the existing transmission system.

As we continue to further develop the commercial model and early competition regime, we will need to further consider the likelihood and impact of each of the risks occurring and any others identified to define how the risk is treated and the allocation balance.

For example, which risks are high impact and low probability and should be addressed via a reopening mechanism and which could potentially be more directly borne by the bidder and priced into the revenue stream to manage. We expect that further consideration of risks will also be required prior to each tender round in respect of the allocation of any need or project specific risks.

Some stakeholders expressed concern about ongoing relationships with local communities and consenting authorities, including where there might be regional differences in approach. We heard that any third party working on the network should not damage the reputation of the incumbent TO through its working practices. Some stakeholders also noted that bidders should follow good industry practice and should not be able to transfer risks associated with a lack of prudence or due diligence to consumers.

Some stakeholders noted that there will be various land and consenting risks where some form of risk sharing might be appropriate. We heard that risk should be based on impact causality i.e. the party causing the impact takes the risk and where there is a shared cause it would become a shared risk.

There were a variety of views on risks around information provision, including information provided by the TO via the procurement body e.g. previous surveying information. Some stakeholders felt the bidder should not take any risk associated with such data whereas some felt bidders should undertake their own due diligence and take their own view on risks. We heard that in the US, if a project is cancelled, the bidder would be paid the agreed margin on their sunk costs, as well as those sunk costs.

Current preferred option

As a general principle, we expect that the greater the control the successful bidder has over certain risks, the less potential there is for pass-through of costs associated with that risk if it were to materialise.

It might also be the case that a minimum cost adjustment threshold is necessary prior to there being potential for a risk reopener – Ofgem has previously utilised a 10%-20% threshold in relation to Strategic Wider Works (SWW). Ofgem also has different thresholds for income adjusting events for other assets.

It is also expected that certain costs may be passed through in full without a minimum threshold such as licence fees. Furthermore, is it expected that certain changes will result in an adjustment to the TRS in full (positive or negative) without a minimum threshold, such as in respect of Corporation Tax.

We expect that any delay to programme and/or increase in cost due to a change in the network need would not be borne by the successful bidder due to it being entirely outside of their own control. Our expectation is that in the unlikely event the network need disappears entirely, and a decision is taken to cancel works (i.e. no TRS will commence) efficiently incurred sunk costs will be reimbursed to the successful bidder. Prior to such a decision being taken we expect that consideration will be given to whether the works can be amended or suspended. Further consideration is required as to whether a margin will be added to the sunk cost and how the allowable value for sunk costs to be recovered will be assessed.

Areas that require further exploration

The robustness of the cost assessment mechanism will be important in managing and allocating key risks. That is in what circumstances the cost assessment process could allow some of that risk to be transferred from the bidder to the consumer, or where it should remain with the bidder and so no adjustment to the tender revenue stream would be permissible. During the preliminary works, the relevant counterparty will continually monitor both the technical and cost elements of the successful project to understand any changes in the anticipated cost of the project and the ongoing risk to consumers.

Monitoring costs is also important to running a successful debt competition. Approximately 6-9 months prior to financial close, the developer will have to seek initial interest from debt providers to structure the finance. To achieve a reasonable cost of capital the debt providers will need high confidence in the project and its costs. Towards the completion of the preliminary work stage the successful bidder should have developed a high maturity of design and subsequently a higher level of cost certainty, say, P80.

Table 8 summarises the key risks identified in developing the end-to-end process to date and how we have initially allocated these risks between the bidder and consumers. Further work is required to ascertain the extent to which shared risks should be apportioned.

	Bidder	Shared[11]	Consumers	Explanatory note
Consents				Consenting will be undertaken as part of preliminary works before a final consented design is known and before final solution costs are fixed. From this point the bidder would be expected to maintain their price, including in relation to delivery of planning conditions.
Land Rights				Land rights will be obtained as part of preliminary works before final solution costs are fixed. From this point the bidder would be expected to maintain their price.
Design				Detailed design work will be undertaken during preliminary works before final construction costs are fixed. From this point the bidder would be expected to maintain their price.
Ground Conditions				Ground risk surveys will be undertaken during preliminary works before final construction costs are fixed. From this point the bidder would be expected to maintain their price.
Construction Cost				Subject to the final cost assessment mechanism, the construction costs will be refined during the preliminary works period. From this point the bidder would be expected to maintain their price.
Programme				Bidders are best placed to manage the programme risk as they have control over that process. There may be limited exceptions e.g. in respect of force majeure.
Contractor Performance				Bidders are responsible for selecting and vetting as well as managing sub-contractors.
Long-Term Asset Condition				Bidders are expected to maintain their assets to a satisfactory level.
Equity				The cost of equity is fixed at the time of the final bid.
Debt				A debt competition would be run once preliminary works are complete and the cost of debt and gearing would be fixed at that point. We are consulting on how indicative values for bids are set and the risk of these being different from actuals is allocated.

Table 8: Allocation of key risks

[11] The proportionate allocation of each risk between bidders and consumers is to be determined to ensure that for any transfer of risk there are consumer benefits.

	Bidder	Shared[12]	Consumers	Explanatory note
Commissioning				Bidders are best placed to manage risks associated with solution commissioning costs/timescales except in limited circumstances.
Decommissioning				Bidders are best placed to manage risks associated with solution decommissioning costs/timescales except in limited circumstance.
Change in Need				Except where stipulated otherwise e.g. if the tender requested such variability, consumers could take risk for need change or disappearance rather than the bidder, as it is entirely outside of the control of the bidder.
Bidder Default				PB may be asked to post security in the form of a bid bond to cover at least the preliminary works phase.
Force Majeure				Force majeure events, by their nature, are outside the control of both the bidder and the consumer. Consumers may achieve best value by capping the risk to the bidder that may get priced into bids e.g. a minimum materiality threshold.
Refinancing				Any refinancing gain to be shared between the bidder and the consumer with a refinancing gain share mechanism to be developed.
Change in Law				Change in law (where not reasonably foreseeable) is outside the control of both the bidder and the consumer. Consumers may achieve best value by capping the risk to the bidder that may get priced into the bid i.e. a minimum materiality threshold.
Network Charge Bad Debt				A fixed payment mechanism with availability deductions would protect the bidder from bad debt. Further thinking may be required on the allocation of this risk as a result of the ongoing Ofgem consultation on network charging referenced in Section 6.

Table 8: Allocation of key risks (continued)

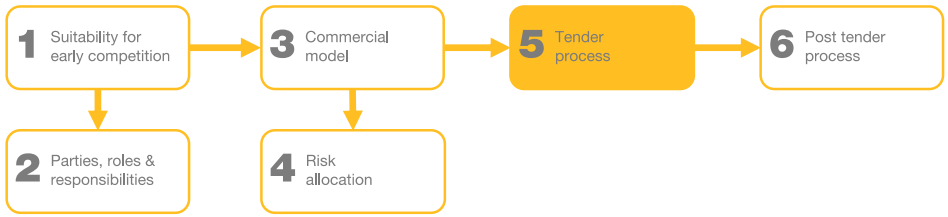
Questions

15. Are there any other key risk that should be addressed at this stage?
16. Do you consider the overall risk allocation between bidders and consumers appropriate? What are your views on risk allocation?

[12] The proportionate allocation of each risk between bidders and consumers is to be determined to ensure that for any transfer of risk there are consumer benefits.

5 Tender process

This section describes the stages of procurement from the first formal engagement with bidders to final steps where a contract and/or licence is awarded. Our thinking on the evaluation of costs were discussed as part of the commercial model (section 3.3) as it is linked to commitment of costs.



5.1 Pre-tender activities

A key area highlighted by stakeholders in our discussions so far relates to the pre-tender activities to support the procurement process and bidders.

Pre-tender activities are the step between the identification of needs and the commencement of the procurement process. It can contain a wide range of activities to help support formation of bidding consortia, understand the technical details of the needs/projects and more generally prepare for the procurement process. In addition, as set out earlier, we also believe it can help inform the exact network need that should be tendered and whether there is potential consumer value from doing so.

There is a cost associated with running pre-tender activities. However, stakeholder feedback so far is that generally it would significantly reduce bidder costs and stimulate the creation of a bidder market (especially in the initial phase of the early competition model). This in turn would deliver greater value for consumers.

Stakeholder feedback

Several stakeholders emphasised the importance of this stage, particularly for large projects that may require different companies to come together to form bidding consortium. This stage will also play an important role in helping to determine the specification of what is tendered for.

One stakeholder felt that this stage should involve some form of technical assurance for innovative solutions, potentially with some form of accreditation as a result. We believe it is beyond the scope of a competitive process to develop a generic accreditation scheme, and this is a matter best progressed through industry innovation schemes.

Current preferred option

- **Running project information and networking events** – These could be individual events being run to disseminate information on specific needs with opportunities for potential bidding partners to meet.
- **Sharing detailed technical information with the market** – The key challenge with this is data sharing restrictions. This is discussed further in section 5.2. This could also include responding to Q&As on technical information.
- **Proactively supporting consortia building** – This would focus specifically on supporting bidders build consortia. This could be through supply chain engagement and partnering sessions (consortium matching). We would welcome feedback from stakeholders on specific proposals for this.
- **Innovation workshops** – Comparable to networking events or consortia building, but with a specific focus on providing new technologies an opportunity to meet and engage with potential investors/developers.
- **TO liaison** – providing information from the TO and supporting potential bidders engage with TOs to support bid development.

Alternative options

- **Feasibility studies** – The ESO could undertake feasibility studies for proposed solutions. This may be resource consuming and create an unequal level playing field. We are exploring how best to support feasibility assessments linked to specific project requirements.

Questions

17. Do you have any views on the list of potential activities that could be undertaken to support bidders, the information that would be required and the potential value to consumers they could drive?

5.2 Tender process model

In developing our current preferred option for the tender process, we considered a range of precedents in the energy sector and elsewhere, including OFTOs, Thames Tideway, and PPP. These tender processes for competitions typically follow a standard format - pre-qualification (PQ), followed by invitation to tender (ITT), followed by a preferred bidder (PB) stage - but were not designed to evaluate projects at an early stage, before detailed design.

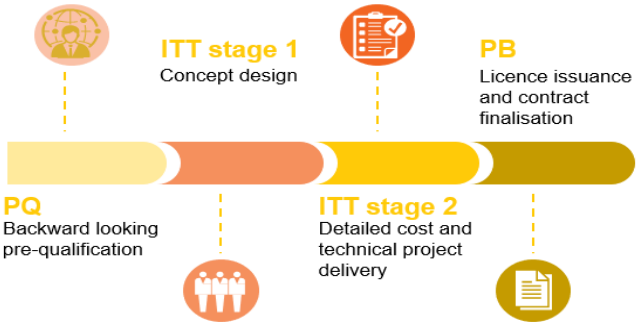


Figure 11: Tender process

Consumer value in early competition will be driven by a combination of innovation and cost. To ensure that we encourage bidders to submit a wide array of innovative solutions, but that the process is efficient and does not create unnecessary costs, we are proposing to have a two stage ITT:

- ITT stage 1 will focus on initial designs. It should encourage as many different bidders to submit solutions as possible, minimising bidder costs
- ITT stage 2 will focus on more detailed cost information and plans for the delivery of the solution for a limited number of bidders (3 to 5).

The detail of what each stage will assess, high level evaluation criteria and how consumer value will be calculated are discussed in more detail in the following sections.

We are anticipating that the entire procurement process from launch of tender, e.g. Official Journal of the European Union (OJEU) Notice or equivalent, to award could range between 12 and 24 months depending on the size and complexity of the project. We would expect that bidders would continue developing their designs throughout the procurement process. We are developing the current tender process based on the Utility Contract Regulations (UCR), while continuing to determine whether UCR is suitable. Early competition could require secondary legislation and bespoke regulations. This will be considered further in Phase 3 of the project.

Tender flexibility

One of the key challenges in developing a procurement process for early competition is the spectrum of potential network needs that could be tendered through it. This could range from a network need which could be addressed by a non-network solution worth <£50m to a multi-billion pound network asset. In each instance, the appropriate evaluation criteria, approach to cost evaluation, cost commitment, and pre-qualification requirements, etc. may vary.

We have initially considered three broad categories of project:

- Small (<£50m) - more easily delivered by single bidders and likely to be of interest for non-network solutions
- Medium to large (£50m-£1bn) - likely to be met by a range of solutions and bidders
- Mega-projects (>£1bn) - may only attract a small number of large companies and consortia.

The tender process has to be adaptable to different categories of project but must also aim for consistency wherever possible to enable bidders to become familiar with the process.

Stakeholder feedback

Feedback from stakeholders so far has highlighted that there is a need for the procurement process to be flexible to the characteristics of the need, but that standardisation and repeatability is key to encouraging more bidders into the process, reducing costs and fostering innovation.

Stakeholders discussed with us grouping needs into multiple distinct categories based on their expected scope/complexity/size. The procurement process would then focus on different areas for each category.

Stakeholders also fed back that they were in favour of 'passporting' pre-qualification for a certain period of time, similar to the current mechanism in the OFTO regime. In the early competition model this could reduce bidding costs and increase the competitiveness of the process.

In the new 'passporting' approach to Enhanced Pre-Qualification (EPQ) introduced by Ofgem for Tender Round (TR) 6, bidders will only need to obtain one EPQ award that will remain valid for the full TR6 tender round.

Stakeholders discussed that passporting should be category specific. For example, a bidder pre-qualified for a small project (<£50m) can bid into other competitions of this type of project but is not pre-qualified for a medium-large (£50m-£1bn) project.

Areas requiring further exploration

For the purposes of this consultation we focus on the 'medium to large' category. Areas that need further development for the other categories include:

- Small - these may require less extensive backward looking financial checks in some areas due to the small scale of the project. The certainty of costs may be higher than larger projects so more costs may be able to be fixed in the bidding stage
- Mega-projects - multi-billion pound projects need a greater focus than the medium to large category on a consortia's ability to build supply chains, experience raising finance and ability to manage large complex projects. As costs will be highly uncertain there will be a greater focus on technical plans to deliver the project.

We recognise that flexibility is a key challenge of the early competition procurement process. We welcome further thoughts from stakeholders on how to address the flexibility required for small and mega-projects.

Questions

18. What are your views on the challenge of flexing the procurement process to varying needs but maintaining standardisation?

Provision of information

To run a successful tender process, bidders will need to be provided with the right information at the right time. To produce an initial desktop technical proposal, bidders will require network related information currently created and used by the ESO and TOs. The information that we currently expect will need to be shared with tenderers is listed in Table 9.

Type	Description	Source
System Requirement Form Part A	Sets out required and expected boundary transfer capability needs over the next 10 years, indicating where reinforcement or management solutions are required.	ESO
ETYS models	Circuit information e.g. how nodes/substations are connected, electrical and physical properties and changes across ETYS study years.	ESO
Network Modelling	Software to model how proposal affects network capability.	Market
Study guidelines	Sets out assumptions to be used for network modelling.	ESO
Land	Current information is held by TOs on relevant land ownership, access rights and existing surveys.	TO
CBA tool	A tool that allows TOs to run their own indicative cost benefit analysis of options.	ESO

Table 9: Information expected to be shared with the bidders

Stakeholder feedback

Stakeholders confirmed that the list provides the required information to produce an initial desktop technical proposal, for both network and non-network solutions. They also confirmed that the System Requirement Form, ETYS models and network modelling software are critical to producing a technical proposal.

Current preferred option

Based on discussions within the ESO and with the TOs we believe the ETYS models contain sensitive information. As such we are currently unable to share these models with organisations that do not hold a licence and are not signed up to the System Operator – Transmission Owner Code (STC), which provides a mechanism for the control and use of sensitive network information

As the ETYS models are critical, our preferred option will be to only supply the ETYS models to bidders who are not licensed and/or signed up to the STC, once the bidder has signed an appropriate Non-Disclosure Agreement (NDA). This will be designed to provide an equivalent level of protection of the data to that afforded by a TO Licence and the STC. We also expect we will be able to supply the ETYS models in an encrypted format that preserves the functionality but protects the underlying data. We believe this provides a pragmatic solution and aligns well to the Energy Data Taskforces principals. The content of the NDA to support the release of ETYS models and the process for encrypting the models needs to be developed.

Land information was generally seen as important, with some stakeholders stating that it is a factor in selection of technology. Our current preference therefore is for all relevant information held by TOs on land in relevant areas to be made available.
Some concerns were raised by stakeholders, including TOs, about providing information on land. These included the accuracy of the information and how it would be kept up to date during a tender, and that TOs may have plans for land which is related to other projects. We believe that practical solutions to these concerns can be developed. We will start by considering and engaging on learnings from the current pathfinders, which include the same challenge.

As part of the last NOA process we provided a Cost Benefit Analysis (CBA) tool to the TOs to support development of potential solutions. Feedback from one TO is that the tool helps primarily to optimise resource where a wide range of network needs are being assessed.

Most stakeholders indicated that they would already have a CBA tool and would rely on their own analysis to develop a proposal. Most stakeholders did not see this as particularly important information, but the general feedback was that if it was provided to TOs it should be made available to potential bidders. Our current preferred option would be to provide this tool if it is continued to be supplied to TOs.

Areas requiring further exploration

A pre-submission review received some support from stakeholders as it is perceived to provide a good opportunity to address any obvious issues with a proposal. We have not come to a view on whether a pre-submission review should be offered to bidders. TOs expressed a preference to be involved in the process, with some stakeholders concerned that this could create an unfair advantage.

One TO also expressed concern that this could turn into “free consultancy”. The review would be based around the currently available Security and Quality of Supply Standard (SQSS) standards, so there is a question about the value it would deliver and how much additional resource would be required to support this activity.

Further work will be done to understand the potential costs and benefit of running a pre-submission review, and whether this could be done in a manner compliant with general procurement rules and the potential role of the TOs.

The successful bidder may require access to more detailed information held by the TO to develop a detailed technical solution. A mechanism to enable this may need to be developed if current processes are not adequate.

Questions

19. Do you agree that the proposed list of primary information relating to network information is adequate to identify and cost potential solutions for both network and non-network solutions? *

5.3 Pre-Qualification

The objective of the PQ is to ensure bidders admitted into the process would be acceptable to the procurement body should they become the successful bidder and be awarded a license or contract. The tests would be backward-looking and seeking to identify those who have the capabilities and capacity to deliver a solution.

Current preferred option

In advance of the PQ, a Periodic Indicative Notice (PIN), Contract Notice or equivalent shall be used as a means of calling for competition.

The PQ would then provide interested parties with the high-level capability gap to be addressed. Any indicative solutions developed as part of the network planning processes would also be made available.

The information would be restricted to non-sensitive network data at this stage. It should be sufficient to enable potential bidders to assess the size and complexity of the project and demonstrate they have the required capabilities.

There are several key criteria that we currently believe should be considered as part of the PQ stage which we have tested with stakeholders:

- **Legal standing** - ownership and incorporation of the company, details of any advisors, questions to satisfy financial regulations and, if relevant, structure of consortia.
- **Financial standing** - intended financing solution, proof of ability to raise financing for similar scale projects and audited financial accounts.
- **Sustainability** - environmental, decarbonisation and social impacts.
- **Technical capabilities** - experience delivering similar sized projects, building/managing supply chains.

As mentioned in section 5.2 our current thinking is that the ‘passporting’ feature of other procurement regimes (e.g. OFTOs) is an efficient step where there is a pipeline of projects.

We are also currently of the view that consortia would go through pre-qualification rather than individual members of the consortia. This is because some members of the consortia would be bringing different elements of the required capabilities and not all members may meet all of the requirements.

Areas requiring further exploration

The focus of the PQ may vary depending the size and complexity of the project:

- Small - legal, financial history (but less focus on ability to raise financing or financing solution), sustainability, capacity to deliver the solutions
- Medium to large - legal standing and proof of ability to raise comparable finance, sustainability and technical capabilities
- Mega-projects - legal standing, intended financing solution would be a key focus as there may not be comparable experience, technical capabilities will focus on ability to build and manage large complex supply chains, ability to undertake preliminary works for complex projects.

One of the challenges for this approach is how to ensure that small new entrants are not unduly excluded from the procurement process. Concerns about small new entrants with innovative designs being excluded at the PQ stage was raised by several stakeholders.

To help address this, we are also considering a two-stage pre-qualification process. The first will be done on a single company basis. The second stage of the PQ will contain the financial, legal and other considerations outlined above and would be undertaken at a consortia level.

This approach would aim to not unduly exclude any bidders with innovative solutions but who do not have the experience or financial standing to pass the PQ stage outlined above. Bidders passing the first stage of the PQ would gain some credibility and which would support them forming consortia for PQ stage 2. We will consider this approach in more detail during Phase 3 consultation.

An additional challenge is that consortia will change over time and how this process would be managed. We will also develop thinking on this for the Phase 3 consultation.

Questions

20. What are your views on our current thinking for the elements that potential bidders should demonstrate at PQ?

5.4 ITT (stage 1)

ITT (stage 1) is an initial tender stage for early competition which focuses entirely on the initial design. The primary aim of this stage is to narrow the number of bidders to 3 to 5 for stage 2 of the ITT.

Stakeholder feedback

Feedback from stakeholders was that at the initial design stage of the process cost certainty is low and placing too much weight on costs at this stage may hamper innovation. Stakeholders were of the view that until bidders believe they have a reasonable chance of winning the tender i.e. 1 in 5, they would not want to commit significant costs to project development.

Current preferred option

Our current view is that at this stage bidders will be asked to provide initial designs and high-level cost estimates. We recognise that there will be high levels of uncertainty surrounding these estimates.

The designs will be assessed on a largely qualitative basis. The key issue with a qualitative assessment is that there is greater risk of perceived or actual bias. Therefore, we are considering whether a panel of independent experts could improve objectivity and help demonstrate independence in the procurement process.

We are considering that the more qualitatively focused stage 1 (with some quantitative elements) would consider a range of evaluation criteria such as:

(a) Does the proposed solution meet the specified network requirements?

- As per the capacity, voltage and/or stability requirements specified by the ESO
- Feasibility study results (if appropriate)

(b) Does the solution pose additional risk to the overall network reliability? For example,

- Technology readiness
- Interface with existing network
- Any additional risk due to complexity of the solution
- Additional operational complexity due to frequency of unavailability

(c) Are the high-level construction proposals plausible? For example,

- Consenting precedents
- Construction timescales
- Ease of production, material availability
- Complexity of construction

(d) What are the environmental or social impacts of the proposed solutions? For example,

- Impact on decarbonisation
- Local environmental impact
- Impact on local communities

(e) What are the high-level estimated costs of the solution? For example,

- High-level price estimate based on whole life cost estimates
- Preliminary works costs
- Construction capex
- Repeat capex
- Opex

ITT (stage 1) is critical for down selecting the initial designs to the ones which offer the greatest value to customers. This will be based on whether the solutions meet the specified network requirements, and a valuation of the costs and the benefits based on given weightings to reflect priorities and level of certainty. We would expect that all three categories of projects would focus equally across these five assessment areas.

Areas for further consideration

As part of our Phase 3 consultation we intend to explore whether bidders would be able to submit partial solutions: either a partial duration or a solution partially meeting the need. We are exploring whether we could separate needs into 'lots' depending on timing and other technical characteristics of the needs. We are also considering acceptability of variant bids from the bidders.

Questions

21. Do you think that the range of criteria we are considering at ITT (stage 1) is appropriate and will drive value for consumers? *

5.5 ITT (stage 2)

The purpose of ITT (stage 2) is to select a Preferred Bidder from the 3 to 5 selected bidders as part of ITT (stage 1). This stage will assess bids based on a range of detailed commercial and technical elements.

Stage 1 will only ask companies for their initial designs and high-level cost estimates. Stage 2 will ask companies for detailed cost information (as specified in section 3.3 and strategies/plans for delivery), some of which will be committed and some indicative. We would expect that between stage 1 and 2 bidders would progress the cost estimates, technical and project delivery planning and, if required, their initial design.

Stakeholder feedback

Feedback from stakeholders is that they would expect a balanced weighting between the commercial offer and the technical and project delivery. More established companies benefit from a greater focus on the technical and project delivery element whereas new entrants may benefit from a more quantitatively focused commercial offer. The commercial offer will be evaluated based on the cost of the solution to consumers. The technical and project delivery element of the submission will have a quantitative evaluation scoring framework to be administered by the procurement body.

Current preferred option

Our current thinking is that the commercial offer would be largely quantitative, and the technical and project delivery would be more qualitative based on an assessment framework. The procurement body would administer this process. Bidders would be asked to provide the following:

- Initial design (updated from stage 1 as necessary);
- Cost information (as set out in section 3.3):
    - Whole life cost estimate (including decommissioning costs) for the proposed outline design (capex and opex)
    - Overheads, margins and cost of equity
    - Inflation
    - Assurance on costs submitted.

- Project delivery:
  - Identification of preliminary works to be undertaken
  - Scope and schedule for a Final Investment Decision (FID)
  - Incentive arrangement on the proposal for implementation of the design (based on a template for incentives as set out by the procurement body)
  - Supply chain procurement strategy
  - Plan for delivery of the solution
  - Satisfactory EPC and O&M contracts (or at least heads of terms) agreed with the prime contractors
  - Comments on the standard contract/licence and ancillary documents issued
  - Financing strategy
  - Plans for decommissioning.

As discussed in section 3.3 our current thinking on cost evaluation and commitment is to undertake a cost assessment following the detailed design and a debt funding competition immediately following that. To ensure that bidders are incentivised to submit realistic costs during the evaluation period a pain/gain share mechanism is required for any elements which will not be fixed at point of bid/award.

Areas for further consideration

The focus for the three categories of projects of the areas covered above could be:

- Small – Small projects are more likely to be delivered by a single organisation with a much more limited supply chain. There is likely to be a greater certainty of costs due to larger pool of benchmarks of small sized projects. ITT (stage 2) for small projects will be weighted towards the commercial offer.
- Medium to large – a balanced focus between the commercial offer and the technical and project delivery.
- Mega-projects – As discussed in section 5.2 the success of mega-projects will be highly dependent on the consortia's ability to manage the different members of the consortia, financers and supply chain. There is greater uncertainty on costs at this stage. Bidders approach and ability to manage complex planning and consenting requirements would be critical to drive value. ITT (stage 2) for mega-projects will be weighted towards the technical and project delivery.

A further area that we will explore in the Phase 3 consultation once we have firmed up the evaluation criteria is whether a Best and Final Offer (BAFO) stage is required. This will depend on the weighting of the evaluation criteria and bidding scenarios we are aiming to run. BAFO stages are typical in procurements when there is an effective 'tie' between two of the bidders. Both bidders are asked to provide a further bid to determine the preferred bidder.

Questions

22. Do you agree with our approach for evaluating bids at ITT (stage 2)? *
23. Do you agree with the criteria/features we have proposed to be within the evaluation? *

5.6 Preferred Bidder

The PB stage is when a single bidder has been selected as the PB but there are several steps which must be undertaken to finalise the contract and/or licence. The scope of activities at this stage will be driven by the relevant procurement rules.

Licence versus contract

Stakeholder feedback

Some stakeholders noted that a licence would be more straightforward for network solutions whereas a commercial contract would be suitable for non-network solutions. They felt that trying to cover all licensable elements via a commercial contract would be overly complex. One stakeholder felt non-licenced non-network solution providers would prefer a contract as this is something they are more familiar with and would remove a real or perceived overhead/risk associated with a licence.

There was a difference of opinion between stakeholders around the ability to manage conflict resolution. One stakeholder felt that dispute resolution could be more challenging with a commercial contract, whereas another felt the opposite. They thought a commercial contract would provide greater ability to ensure that providers deliver on their obligations as there are legally enforceable terms and conditions.

Some stakeholders noted that if comparing solutions to be delivered under licence or contract the assessment process for both would need to be consistent and transparent and others noted that there should be a level playing field across both options.

Current preferred option

We expect that generic commercial contract heads of terms (for non-network solutions) and generic electricity transmission licence heads of terms (for network solutions) will be developed further ahead of the next consultation. This will also include more detailed risk allocation and apportionment.

Where a licence is required for the preferred solution we expect that this will continue to be granted by Ofgem following their licence granting process. This activity would need to commence in parallel to the tender process so that licence grant could be aligned with tender award. This would also mitigate the risk of awarding to a party requiring a licence who subsequently is not granted a licence. The appropriate contract counterparty is addressed in section 2.2.

Areas that require further exploration

Should an incumbent TO participate in early competition directly (see section 2.1), further consideration is required as to what licence the TO would win. Whether it would be more appropriate for the TO to obtain a separate CATO licence or whether their existing licence could simply be amended to incorporate the required provisions.

Depending on whether the successful bidder requires a contract or licence each party will need to accede to the appropriate network codes. As a result, there are potentially different arrangements for different bidders, as set out in Appendix 4.

We envisage that due to their Transmission Licence and subsequent accession to the STC any CATO will substantially comply with similar operational processes to TOs and OFTOs. Whilst some areas are explored at a high-level in this section, further work will be required to identify exactly which areas of the STC will be applicable (potentially with amendments being required) to CATOs. For example, TOs are obligated to publish a Network Access Policy whereas OFTOs are not. As part of the Phase 3 consultation we will consider whether the current TO or OFTO arrangements (or variation to one or the other) are more suitable for a CATO for early competition.

With regard to non-network solutions we expect that comparable obligations will be put in place via their commercial contract, if not already in place via another form of licence if one exists. For example, a non-network solution provided by licensable generation will be a party to the Connection and Use of System Code (CUSC). As such their commissioning process will either be full or partly covered by the code, with only some (if any) provisions related to commissioning needing to be included within their commercial contract.

Whilst our aim would be to ensure a level playing field between network and non-network solutions, due to the above we might find that there could be necessary differences between the two. For example, considering the two examples above, a Network Access Policy might be more appropriate for a licenced CATO than it might be for a non-network solution provided by a licenced generator, whereas both will be required to undertake a form of commissioning process prior to the solution becoming operational.

This detailed mapping exercise is expected to be undertaken over Summer 2020 with further detail being consulted upon in our Phase 3 consultation.

Bid bond

As noted in section 3.3, one stakeholder advocated a bid bond to support a cost cap. They recommended the approaches used in the US are considered to inform our thinking and development of the early competition model. Elsewhere, we noted pushback from stakeholders on the notion of a bid bond.

Given the particular features of early competition, we are giving consideration to whether it may be appropriate to request a bidder to post a bid bond at the point they are made the successful bidder (for at least the period of the preliminary works). This is to ensure they are fully committed to proceed with construction following what may be an extended preliminary works period.

Under the emerging preferred option of a post-preliminary works debt competition and with consideration being given to providing some revenue during the preliminary works period, there may be little incentive on the successful bidder to accept what they may see as an adverse outcome of the cost assessment without an adequate bid bond being in place.

We do not yet have a particular value in mind but we are considering whether the current arrangements within the STC in respect of the offshore regime could be comparable i.e. 20% of the capital value of the construction works secured through one of the forms of security which are acceptable within the STC.

Questions

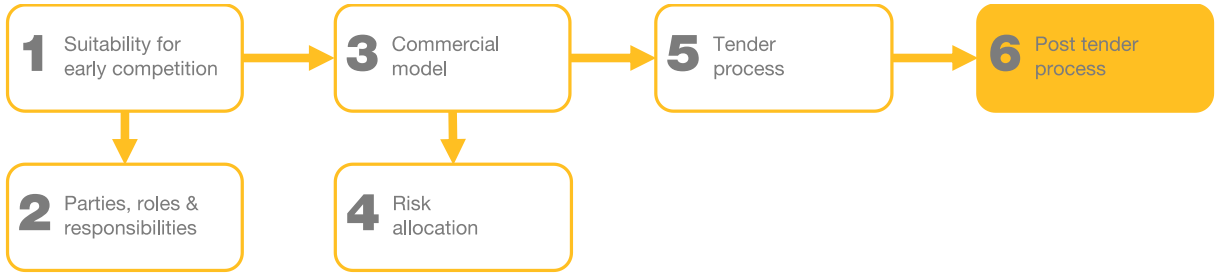
24. What are your views on our current thinking for the PB stage?
25. What is your view on the need for a bid bond and what do you think would be an appropriate value and time period?

6 Post tender award

Under an electricity transmission licence or a contract (as appropriate) the successful bidder will undertake the preliminary works followed by solution delivery/construction, commissioning, operations and maintenance, and decommissioning at the appropriate point in time.

We envisage the post tender award stage will have some similarity and alignment with the late competition model being developed by Ofgem. We expect to have further engagement with Ofgem in advance of our Phase 3 consultation.

Appendix 4 provides further information in relation to network and non-network solutions.



6.1 Preliminary works and solution delivery

Once a transmission licence or contract (as appropriate) has been awarded the successful bidder will commence the preliminary works for their solution. These works will be dependent upon the type of solution which was successful and what is required to facilitate its delivery. This is likely to include:

- **Consents** - Obtaining the required consents (e.g. a development consent application to the Planning Inspectorate, or a Section 37 application to the Scottish Government) to allow solution delivery to commence. This will be a significant undertaking for the successful bidder and will involve extensive preparatory activities, including robust stakeholder engagement and consultation.

- **Site Surveys** - Obtaining consents will require various site surveys to be undertaken e.g. in relation to any necessary Environmental Impact Assessments (EIA). Site surveys may be required to inform the detailed design process such as in respect of ground conditions.

- **Land Rights** - Obtaining consents will require the appropriate land rights to be in place. This will include access to land to undertake site surveys, rights over land to allow construction and operation, as well as any necessary wayleaves and/or easements. The successful bidder will therefore need to negotiate with landowners to obtain any required land rights.

- **Detailed Design** - The successful solution design will continue to evolve throughout the preliminary works process stage as the consent process is undertaken and further engagement with the supply chain occurs. The successful bidder will take their solution design to the stage at which it is sufficiently detailed to enable construction to commence.

- **Supply Chain Engagement and Procurement** - The successful bidder (whilst likely having undertaken some supply chain engagement at tender stage) will need to continue to engage with their supply chain and place the required contracts to deliver their solution. Depending on the supply chain and the delivery programme there might be a need to enter into some contracts prior to solution delivery commencement.

> The importance of stakeholder engagement and consultation in the consenting process cannot be overstated. The successful bidder will need to build and maintain good relationships with stakeholders prior to, throughout and after the conclusion of the consenting process.

- **Incumbent TO Engagement** - If the solution requires connecting to or relying on the transmission system, the successful bidder will need to engage the incumbent TOs (as well as the ESO) in relation to any expected future interfaces. This can include any co-ordinated stakeholder engagement related activities and/or any future system site or system interfaces. The successful bidder will also need to engage with any other relevant parties, such as the Distribution Network Operator/Distribution System Operator if the solution is to connect to, impact or use the distribution system, for example.

As a result of each of the above activities, there could be changes required to the design, costs and programme. For example, these could be in relation to any planning conditions placed on the successful bidder as part of consent being granted, or due to site surveys resulting in adjustments to a route corridor.

Once preliminary works have concluded, the successful bidder will need to complete a cost assessment process and a debt funding competition (as described in Section 3.3) to achieve financial close and commence solution delivery/construction.

Where physical construction is not required (e.g. if there are no new assets) for service delivery, this stage of the process will include any activities required to prepare the successful solution for commissioning. This may include, for example, utilisation of permitted development and changes to control systems where an existing asset is being adjusted to provide a service.

> We heard financial investors might be less interested in early competition if there was no return on investment available during preliminary works and construction.

Stakeholder feedback

Stakeholders generally supported revenue commencement upon completion/commissioning. We heard that (as in the late model) any solutions procured through the early model with a construction period longer than three or four years could potentially benefit from some form of payment prior to the commencement of the tender revenue stream.

Some stakeholders also stated preference for milestone-based payments for completion of key deliverables, especially for preliminary works. We heard that a combination between the fixed annual revenue stream and milestone payments might drive lower bids in the tender process.

There were mixed views from stakeholders on the extent to which bidders should be able to bid different payment arrangements.

Some stakeholders noted that some form of payment for preliminary works for smaller and/or newer market participants might help facilitate participation of innovative solutions. If no revenue is available until the solution is commissioned new entrants or smaller companies might be less likely to participate in the process.

Stakeholders noted that the party undertaking the design or preliminary works will be naturally incentivised to deliver to the required standards as the same party will undertake solution delivery.

Some stakeholders discussed whether there would potentially be merit in either penalties for late delivery and/or rewards for early completion of works and noted that the impact of late delivery could be significant e.g. through increased constraint costs and/or operational issues.

We heard that the financial and reputational incentives associated with timely, quality completion of works could be enough to drive performance (where no revenue is provided until successful commissioning) and they thought that no additional pre-operational incentives would be required.

Areas requiring further exploration

Preliminary works revenue
Our current position is to provide an option for some revenue to be paid in respect of the preliminary works in advance of the start of the tender revenue stream. Based on stakeholder feedback we believe this could reduce barriers to entry and improve competition. We are considering whether this should be a fixed value or proportion set by the procurement body as part of the tender process.

An alternative option would be to incorporate the entire allowable costs for the preliminary works into the eventual tender revenue stream. In this case preliminary works would be funded by the successful bidder with no revenue provided for those works until the solution has been commissioned.

TRS commencement
The successful bidder will be responsible for undertaking the necessary solution delivery works to ensure a timely and quality delivery of the solution. There will be periodic engagement and reporting throughout this period (e.g. with Ofgem and/or the ESO) but the onus will be on the successful bidder to satisfactorily manage their works programme.

Our current position is that the agreed tender revenue stream will commence upon commissioning of the works and the solution becoming operational. We believe this provides a strong incentive on the provider to complete the works in a timely fashion, but also to the required standards.

Further consideration is required in relation to what circumstances (if any) could allow the commencement of the tender revenue stream prior to the successful solution being fully commissioned. For example, this could include any delays due to force majeure. We will continue to explore this with stakeholders for inclusion in our Phase 3 consultation.

In reaching our current preferred position there are a handful of alternative options for TRS commencement we considered:

- Upon commissioning, but with some fixed annual payments throughout the solution delivery period
- Upon commissioning, but with some profiled payments throughout the solution delivery period
- Upon commissioning, but with some milestone payments throughout the solution delivery period
- Upon commissioning, but with a lump sum payment prior to the commencement of the solution delivery period.

We do not believe that payments throughout the solution delivery/construction period are generally necessary to facilitate the bidder obtaining competitive financing arrangements. Any payments during the solution delivery/construction period could undermine the strength of the incentive provided under our preferred option as consumers will be paying for a solution prior to it being available to meet the tendered network needs.

Where there is a long solution delivery programme (e.g. longer than 3-4 years) and/or high solution delivery costs there may be a need or consumer benefit in exploring the opportunity for some milestone payments (set by the procurement body, but maybe first discussed with bidders) during the solution delivery period. This would ensure a lack of cash flow to capital providers over a longer period of time does not reduce the attractiveness of the model. In this instance, some payments based on key milestones would be our preference as payments would be linked to measurable deliverables in the programme.

We expect this would be non-standard and as such any solution delivery period payment would be considered on a case-by-case basis as part of the preparatory work for each tender process.

An early completion incentive or bonus payment is not considered to be appropriate. This is because the tender preparation process will identify the completion date required for any given need with that completion date being the date which is believed to be in the best interest of consumers. Therefore, an earlier completion would not likely provide additional value to consumers.

Preliminary works and solution delivery change
Any post-tender award change will need to be made in a transparent manner and with an appropriate balance or risk allocation between the bidder and consumers (see Section 4 for further information). An area for further consideration is how post-tender change is addressed where changes to the design and/or costs are required (e.g. as a result of the consenting process) which materially alter the risk profile or cost of the solution. This may also have risks under the procurement rules. We will consider this further as part of the Phase 3 consultation.

Preliminary works and solution delivery incentives
As the party undertaking the preliminary works will also deliver the successful solution, we do not believe the early competition process needs to account for any interface or handover risk between the preliminary works and the solution delivery stage.

We also believe that explicit incentives are not required in relation to timely and quality delivery of the preliminary works and solution delivery works as it will be in the interest of the successful bidder to do this to allow them to successfully commission their solution and for the TRS to commence.

We set out below three possible options for the treatment of delayed TRS commencement:

- An explicit penalty for delayed completion e.g. linked to additional constraint costs
- A reduced tender revenue period i.e. to match the remaining need duration and revenue period, or
- A reprofiled tender revenue stream across the remaining need duration and revenue period.

We currently believe the third option to be the most appropriate for a delay for an unacceptable reason, however all three options require further consideration. With the third option, we would need to ensure that the incentive for timely completion is not eroded so any reprofiling would need to be done in a manner which has appropriate incentives and risk sharing for the successful bidder. For example, if there is a delay in commissioning for reasons which are not allowed under the commercial arrangements, the TRS reprofiling might also involve some re-sculpting which could exclude operating costs and return on equity for the period of delay.

Where there is delay to commissioning for an acceptable reason (e.g. a relief or a compensation event) further consideration of the treatment of the revenue duration will be required.

Preliminary works and solution delivery interface with incumbent TO
Some stakeholders noted the need to ensure the interface with the existing transmission system is well managed throughout design, consultation and operations. They raised a concern that the design and performance of the successful solution could adversely impact the incumbent TO in the performance of their own assets, and in relation to their own regulatory obligations and incentives.

We share this concern, but we think that for network solutions the existing provisions and processes in the STC will be enough (subject to modifications for early competition) to adequately set out the respective obligations. For successful solutions which don't require accession to the STC we think that existing provisions in the connection codes will adequately set out the obligations.

We believe the risk of any competitively appointed provider underperformance adversely affecting the performance of an incumbent TO (or the ESO) to be comparable to that which exists today between existing network licensees. For example, any successful solution being delivered under a transmission licence will need to be designed and operated in compliance with the SQSS and will be managed under licence and via the STC.

The code provisions will also be comparable where a non-network solution is being delivered by another licensee (e.g. generation licensees being required to comply with the Grid Code). Further consideration may be required where non-network solutions are being delivered by non-licensees under a commercial contract.

For these reasons, we do not foresee a need to introduce a specific incentive or obligation related to incumbent TO engagement. We believe the existing regulatory environment can sufficiently manage the risk related to the performance of one party adversely affecting the performance of another party with minor adaptations. However, we plan to continue to explore and consult on whether there are any specific exceptions where some action could be required. This may include, for example, where an outage on a CATO asset impacts a TO asset and whether this would or would not result in the TO being penalised under their energy not supplied incentive.

> As a general principle, we think that the underperformance of a competitively appointed provider should not adversely affect the performance of another network party (technically or commercially) except possibly where there has been a lack of co-ordination that has caused or contributed to that performance impact and where such co-ordination should have reasonably been expected.

Preliminary works and solution delivery stakeholder engagement
Some stakeholders also raised a concern that introducing early competition could adversely impact established TO practices and relationships with wider stakeholders (including local communities). For example, with the land and consenting related activities in the respective geographic areas of the incumbent TOs.

Whilst we note this concern, we do not believe a specific incentive is required for this issue. There is already a strong incentive for a successful bidder to undertake good quality stakeholder engagement throughout solution delivery as their tender revenue stream will commence only after successful commissioning. In addition, the presence of a bid bond and a post-preliminary works cost assessment process will likely further incentivise good stakeholder engagement practices, including co-ordination with the incumbent TOs.

If we receive feedback that a stakeholder engagement incentive is required for these stages of the process, we will further consider and if required explore an incentive. The current stakeholder engagement incentive proposals under development for RIIO-2 would likely be a suitable starting point for any stakeholder engagement incentive if one were to be developed for early competition.

Questions

26. Do you agree the tender revenue stream should not commence until successful commissioning and that no payments should be made to the successful bidder prior to this point, except potentially for preliminary works and/or where there is a particularly long solution delivery works programme?*
27. Do you have any views on incentives or penalties in relation to preliminary works and solution delivery, including the impact of commissioning delays on the tender revenue stream / revenue period?

6.2 Commissioning

The successful bidder will have to demonstrate that arrangements are in place to deliver the specified outputs before their solution is commissioned. This section covers our current proposals regarding the arrangements required for the commissioning process.

Current preferred option

Our current view is that the process for commissioning both network and non-network solutions should be aligned with and underpinned by the provisions outlined within existing industry codes. Modifications may be required to account for CATOs as a new type of transmission licensee.

Electricity transmission licensees are required to accede to the STC and therefore follow the relevant STC procedures in relation to commissioning processes. Our current thinking is that successful bidders without a CATO licence, but with another form of licence, would be required to accede to other relevant industry codes. Where applicable, any additional service compliance guidance would be included in their contract, depending on the type of system need and type of successful solution.

We anticipate that, as per the provisions established in the existing industry codes, the successful bidder would demonstrate compliance largely through a process of self-certification. As per the existing arrangements, the ESO may review the compliance related documentation and undertake witness testing or checks on the successful bidder's equipment to ensure compliance obligations have been met as part of the commissioning process. Affected TOs may also make reasonable requests to review compliance testing and witness testing of the successful bidder's equipment.

Aligning commissioning arrangements with the provisions within the existing electricity codes is currently our preferred option as:

- The existing provisions are established and generally accepted by market participants.
- Under the existing arrangements, incumbent TOs are familiar with their role and legal obligations when interfacing with other TOs or system users. We expect these roles and obligations would remain broadly the same under early competition.
- Alignment with existing provisions would ensure a level playing field between solutions delivered via early competition and those delivered through alternative channels.

Under certain circumstances, the ESO will stipulate additional or alternative compliance activities (as required) via the successful bidder's licence or contract. This would be in instances where the successful bidder is delivering a solution using innovative technologies not currently covered under existing industry codes or is meeting a system need that is not currently covered by the existing codes. For example, for our pathfinders we issued service compliance guidance notes to the successful bidders following a tender process requiring the service providers to submit compliance testing reports to the ESO before service commissioning.

Some stakeholders raised a concern that the role of the incumbent TOs in the commissioning of early competition solutions could lead to delays in the successful solution getting commissioned. It is our current view that the existing provisions and processes established in the industry codes can (subject to minor adaptations) adequately outline the role and obligations of the TOs in relation to the testing and commissioning of the successful solution.

Alternative options

An alternative option would be to develop bespoke acceptance criteria for each solution. However, our current view is that this option would introduce too much uncertainty for investors and unnecessary complexity for potential bidders.

Questions

28. Do you agree that the existing industry arrangements in respect of commissioning will be appropriate for early competition with minor adaptations?* What adaptations do you think would be required?

6.3 Operation and maintenance

Once the project has been successfully commissioned the tender revenue stream will commence. This will be the start of the operations and maintenance stage of the process. In relation to this stage of the process we consider the following topics:

- Incentives
- New investment
- Operational switching and outage management
- Charging and revenue.

Stakeholder feedback

Some of the stakeholder feedback which helped inform our current thinking on this stage of the process is summarised below.

Some stakeholders felt the 'availability based' or 'energy not supplied' incentive would vary depending on the solution. We were asked why a CATO should be penalised for unavailability if there was no loss of demand and we heard that any potential penalty for unavailability should be the same as the potential penalty faced by incumbent TOs for energy not supplied.

Stakeholders generally agreed that any incentives in place should be quantitative and reward tangible performance improvements above business-as-usual performance. Some stakeholders queried why incentives would be necessary and noted that they would increase the complexity in the process. We heard that some of the desired outcomes could be achieved through the tender evaluation criteria and there could be clear obligations on the performance expectations in a licence or contract.

Most stakeholders felt an availability incentive would be appropriate but there were mixed views on whether an ‘availability based’ incentive or an ‘energy not supplied’ incentive would be the most appropriate.

We heard that the operational incentive regime under the early model should be the same as the operational incentive regime under the late model, which in turn should be comparable to RIIO-2. That is in relation to incentives and penalties for (un)availability. The offshore regime availability incentive was noted as an example that generally works well; but with further consideration of the exceptional events and income adjusting events.

We heard that non-network solutions could potentially be providing other services, and this would need to be factored into any availability obligations or incentives.

There were also mixed views on the appropriateness of an additional reliability or asset health-based incentive with some stakeholders stating that asset reliability is not easily measurable and others stating that TOs already have asset health procedures in place.

Stakeholders seemed to generally feel that an incentive for innovation would not be required as once the solution (which may already be an innovative solution) is operational there would be limited scope for further innovation throughout the period of operation.

We heard that whatever approach is taken to new investment it needs to be clear from the outset so it can be considered as part of the original financing discussions and bid submission.

We will also continue to monitor the relevant RIIO-2 developments as we further develop our thinking on potential incentives for early competition.

What are the potential operational incentive arrangements?

We are considering the merits of potential incentives for the successful solution throughout the tender revenue stream period. These would normally apply to both network solutions and non-network solutions.

Availability

The availability of the successful solution to perform its function throughout its period of operation will be extremely important. In addition to a minimum availability threshold underpinning the arrangements, we believe a financial incentive related to availability for the successful solution will also be important in incentivising both good asset health management and minimisation of outages.

There are two options for an availability incentive structure:

- **Option 1 – energy not supplied**: within the existing onshore regime there is an availability incentive in place based upon energy not supplied i.e. a volume of energy to customers that is lost as a result of faults or failures on the network. Therefore, if an asset is unavailable there will be an adverse effect on incentive performance only if there is a volume of energy which is not supplied.

- **Option 2 – availability-based**: within the existing offshore regime there is a weighted availability incentive in place based upon the assets being available for use irrespective of whether they are being utilised. Therefore, if an asset is unavailable there will be an adverse effect on availability incentive performance. There are limited exceptions e.g. exceptional events being confirmed or due to a third party causing the outage.

Our current preference is Option 2, where an availability-based incentive like that in place for the offshore regime is developed. This ensures that there is an incentive in place to maximise asset availability, not only through asset maintenance but also through ensuring good asset health practices.

Whilst an availability-based incentive appears appropriate for radial and partially integrated network solutions, we note some stakeholder feedback that it may be less appropriate for fully integrated network solutions. There may also be changes required to an incentive structure for non-network solutions.

We will consider this further in the context of our pathfinders where we have also been considering availability-based incentives. We will also continue to explore whether this type of incentive is appropriate for non-network solutions and fully integrated network solutions.

In further developing an availability based incentive structure we will need to consider whether the incentive will be weighted and on what basis, the incentive value/penalty range and whether there will be any caps and/or collars.

For example, reward for availability (or penalty for unavailability) might carry more weight for a capability need in months where the capability requirement is expected to be higher to reflect the likelihood of higher constraint costs due to asset unavailability in such periods.

We will also consider whether the incentive applies to the performance of the solution as a whole or individual components within the whole solution, as well as whether financial security related to availability incentive performance is required towards the end of the revenue period.

> *'The OFTO will be subject to a capacity-weighted availability incentive which will allow it to gain bonuses or incur penalties based on asset availability. Importantly, the revenue stream will not be dependent on asset utilisation. The OFTO can gain up to 5 per cent of base revenue annually if availability is above the target of 98 per cent. The OFTO can incur a penalty of up to 10 per cent base revenue in any one year if availability drops below 98 per cent. The OFTO can accrue penalties up to a maximum of 50 per cent of a year's revenue but these penalties are paid over a period of up to five years. During that time, additional penalties can be incurred for future payment. However, the maximum annual penalty for unavailability remains at 10 per cent of revenue throughout the 25-year incentive*.'
>
> (**Ofgem Tender Round 6)**

Asset health

We do not believe a separate asset health incentive is required. This is due to our current proposals on the commercial model where the revenue period and depreciation period will be aligned as well as a robust availability incentive for the duration of the revenue period.

We expect there will be obligations on the successful bidder to have a suitable, economic asset health monitoring and maintenance regime in place. This will be required to ensure that the expected longevity of the technical asset life is maintained throughout the revenue period, even where this is longer than the depreciation and revenue period for those assets.

Innovation

We do not believe a specific incentive related to innovation is required as we expect that early competition will drive innovation across the whole life cycle of the solution. Innovation is expected to be built into the successful solution from the outset. As the TRS will be fixed there will be an incentive on the successful bidder to continue to innovate to further reduce their costs throughout the solution delivery, and operation and maintenance, stages. Such cost savings achieved through ongoing innovation would however not automatically be shared with consumers due to the expected TRS structure. We will therefore continue to consider whether some form of innovation gain share is reasonable and practicable for the TRS.

Due to the potential length of the tender revenue stream (i.e. up to 45 years) we are considering whether the opportunity to access some form of additional innovation funding throughout the operational period could be valuable to consumers. For example, on a comparable basis to RIIO-2 via a reformed network innovation allowance or via access to the innovation funding pot replacing the network innovation competition. In both cases however we would need to ensure the consumer would share any benefit created by access to innovation funding over and above the tender revenue stream. We would also need to consider how any arrangements could be put in place on a more enduring basis, rather than for the five-year period being considered for the RIIO-2 arrangements.

Environmental

Whilst many environmental factors will be considered as part of the tender process, we are also considering whether any specific environmental incentives are required for providers. Again, this is an area where some alignment with RIIO-2 might be possible. For example, in relation to a requirement for an environmental action plan and/or the requirement to publish an annual environmental report. In both cases solution providers could have a comparable obligation to incumbent TOs but proportionate to their potential environmental impacts. An environmental action plan could also be something which is considered as part of the tender evaluation stage, including the approach to the management of losses if required.

On losses, the potential need for a specific incentive within the early competition regime and/or the interaction with any TO incentive in this area will require further consideration.

Where the successful solution requires a leakage (e.g. SF6) incentive we see no reason at this point why such an incentive could not mostly mirror this type of incentive being developed under RIIO-2. We would however need to further consider and potentially adapt the resulting baseline, targets and reward/penalty for early competition.

We will need to ensure that any such incentive does not put bidders for either network solutions or non-network solutions at a competitive advantage or disadvantage and that the incentive regime is equitable.

Timely connections
There may be a requirement to invest in amending the successful solution to facilitate new connections. This will be more likely to occur for network solutions than for non-network solutions, but we believe that in theory it could apply to both categories.

Our current preference is to have a financial incentive in place which is comparable to RIIO-2 arrangements under development e.g. a penalty of up to 0.5% of annual base revenue for relevant process failures. This ensures that any new connections are considered in a timely manner and it provides a financial incentive on the satisfactory performance of the relevant obligations.

An alternative option would be to have this as a reputational incentive without financial implication. Considering precedence in the onshore regime and the importance of facilitating new connections (where required) it feels more appropriate to have a financial element to this incentive.

Stakeholder satisfaction
Whilst it is important that the successful bidder develops and maintains good relationships with relevant stakeholders throughout their period of operation, we do not foresee the need for a specific stakeholder satisfaction incentive. Other than relevant commercial and operational interactions with the ESO and TOs we expect that there will be limited other regular operational stakeholder interactions and as a result a survey based incentive will not have the required sample size to make it worthwhile. The licence, contract and codes (as appropriate) will be sufficient to drive effective management of stakeholder relationships.

What are the arrangements for new investment through the revenue period?

As well as general costs related to operation and maintenance, there is the potential for new capital investment being required on a periodic basis throughout the revenue period. The trigger for such new investment could be through facilitation of new connections or non-connection related changes on a third party network having a consequential impact on the successful solution.

Regarding the process for triggering such new investment we expect that any new licenced CATO will accede to the STC and the current connection and asset investment processes (with minor amendments required) between ESO and CATO would be applied. We expect that any non-network solution delivered under a contract with a commercial counterparty will require comparable obligations within their commercial contract.

As a result of the above, we need to consider how such new investment is facilitated and treated for the early competition regime. We considered five potential options that can facilitate new investment and what the successful bidder will be responsible for:

- **Option 1**: All relevant new capital investment except where the criteria for early competition on new investment are met
- **Option 2**: All relevant new capital investment except up to a cap per incidence, either on a pound value or percentage of asset value basis
- **Option 3**: All relevant new capital investment except up to a total cap for the revenue period, either on a pound value or percentage of asset value basis
- **Option 4**: All relevant new capital investment except up to a total cap per incidence and a total cap for the revenue period, either on a pound value or percentage of asset value basis
- **Option 5**: No new capital investment in the revenue period.

Our emerging view is that Option 1 above is the most appropriate option for new investment. This option is broadly comparable to the existing onshore regime whereby incumbent TOs are responsible for all new relevant transmission investment.

However, unlike the existing onshore regime, new investment cannot easily be allocated on a geographic basis and so it will need to be linked to both the assets themselves and the early competition criteria. That is relevant new investment will be undertaken by the successful bidder except where the new network need or new assets are to be separately competed where they meet the early

competition criteria. This will ensure timely new investment can be undertaken (where required) without the need to run a new competition on each occasion, but it also ensures that competition remains possible.

We note that there may be limitations within the successful bidders financing arrangements and lender covenants which could restrict new investments. A term in the licence or contract (as appropriate) may also be required in relation to this obligation and some form of reopener will be required to appropriately adjust the TRS. Further consideration will be required in respect of these points, including how the additional revenue would be determined.

Due to some of the limitations in implementing Option 1, we will also continue to explore Option 2 through Option 4. These options impose some form of cap on new investment over the revenue period and provide more certainty to both the successful bidder and consumers in relation to any additional revenue being allocated throughout the revenue term.

We have discounted Option 5 as it could lead to delays in new investment and it could result in competition being run where it would not be efficient to do so, for example in respect of facilitating a new connection where limited new investment was required.

What are the arrangements for operational switching and outage management?

It is expected that existing processes will be adapted to include network and non-network solutions. More specifically, we would expect that any CATOs would follow the relevant processes within the STC. As a non-network solution provider would not be a party to the STC further consideration is required on what appropriate elements of the STC and STCPs need to be incorporated into a commercial contract. For example, it might be the case that it is appropriate for a non-network solution to follow the same outage management processes in respect of any planned unavailability for their successful solution.

What are the arrangements for charging and revenue?

It is expected that existing processes will be adapted to include network solutions and non-network solutions.

We expect that any CATO will follow the relevant charge setting and revenue processes detailed within the STC. Minor amendments may be required to such processes to incorporate CATOs.

In addition, any process changes which are implemented due to the ongoing Ofgem consultation on cashflow timing related to Transmission Network Use of System (TNUoS) charges will need to be considered in relation to early competition.

Regarding non-network solutions, if these costs are recovered via Balancing Services Use of System (BSUoS) charges rather than TNUoS charges, we expect the processes related to charge setting and revenue recovery will instead be based upon the existing processes for balancing services. That is in accordance with the expected standard contract terms (via our self-billing procedures and standard payments terms) and CUSC Section 14.

Whilst in this instance the process for network solutions and non-network solutions will be different, we do not believe this will have a material impact on fairness or there being a level playing field within the procurement process. We plan to keep this process difference under review as we further develop our thinking for Phase 3. We will further consider if it might be more appropriate for costs in respect of early competition to be recovered via TNUoS charges i.e. for both network solutions and non-network solutions.

Questions

29. Do you agree with the proposed potential operational incentive regime for early competition?* Are there any topics omitted which you feel should be incentivised and why?*
30. Do you agree that with minor adaptations the existing industry codes/processes they can incorporate both network solutions and non-network solutions arising from early competition?* Are there any fundamental gaps or issues you foresee in relation to early competition?

6.4 Decommissioning

We think that clearly defined decommissioning arrangements are necessary to inform potential bidders of how decommissioning costs would feed into the tender evaluation process, and what their future obligations would be once the decision has been taken to decommission their solution. In setting decommissioning obligations, it is important that consumers are protected from cost uncertainties associated with decommissioning, including successful bidders not adequately fulfilling their eventual decommissioning obligations to the required standards.

Current preferred option

Our current preferred option is a procurement framework which evaluates bidder decommissioning plans and costs as part of the tender process. It would also require bidders to maintain such plans and hold decommissioning security once operational.

Under this framework, bidders would be required to provide a draft decommissioning plan as part of their tender bid in respect of their proposed solution and ensure that their bid price takes account of future decommissioning costs. These costs, along with others, would be updated according to the cost assessment mechanism as appropriate once preliminary works are completed (see section 3.3). The reason for including the cost of decommissioning as part of the bid cost is that this could provide an important differentiator when it comes to identifying the best value solution for consumers.

We expect the successful bidder would be required to provide appropriate security to the contract or licence counterparty (as appropriate), to protect future consumers from the risk (and associated cost) of the successful bidder not adequately fulfilling their decommissioning obligations to the required standards. Further consideration is required in relation to both the form and value of the security as well as the point at which it would be required albeit it would likely be towards the end of the operational period to avoid unnecessary expense which would ultimately be determinantal to consumers.

The procurement body (as set out in section 2) would review the draft plans as part of the tender evaluation criteria, ensuring that bidders have properly considered decommissioning costs and can deliver on their obligations. The procurement body would also carry out a further detailed review of draft decommissioning plans as part of the wider bid evaluation process, prior to the formal award and tender conclusion.

Following the conclusion of the tender process, the preferred bidder would further develop their decommissioning plan before submitting a final draft plan to the appropriate counterparty no later than six months prior to the start of solution delivery.

As per section 3.3 there remains a significant amount of cost uncertainty at the point that the preferred bidder is selected. The plan put forward at the tender stage would comprise indicative decommissioning costs, to be reassessed following the completion of the preliminary works. While decommissioning costs would be fixed following the post-preliminary works cost assessment, some form of cost pass-through mechanism or reopener would need to be in place to enable adjustments to the successful bidder's tender revenue stream should material additional costs arise due to, for example, an unforeseeable change in legislative requirements.

The successful bidder would keep the decommissioning plan up to date throughout the construction and operational period, including periodic review. At the stage that a decision is taken to decommission the solution, the responsibility for decommissioning will reside with the successful bidder. If ownership of the successful solution is transferred in future, we believe the responsibility for decommissioning and any associated security obligations will also need to be transferred.

Alternative options

Possible variations on the current preferred option include the following:

- The successful bidder could be funded separately for the costs of decommissioning via some form of economic and efficient pass-through mechanism. However, unlike our preferred option, we observe that this alternative does not allow for the price reveal of decommissioning costs as part of the tender process and removes competitive pressure from these costs.
- Instead of requiring bidders to consider decommissioning arrangements at the tender evaluation and preferred bidder stage, detailed engagement on and planning for decommissioning could be left until later in the process, to be agreed between the successful bidder and the appropriate counterparty as a licence or contract change. However, our current view is that decommissioning should be given adequate focus at the earlier stages of the process. Therefore, the bid proposal should consider how the solution would be decommissioned at the appropriate point in time in future. In addition, not considering decommissioning arrangements until later in the process risks consumers bearing certain costs of decommissioning that could have been addressed as part of the model design if considered at an earlier stage.
- Bidders could still be required to provide a draft decommissioning plan as part of their bid, but the successful bidder would not be required to provide security. We have heard from stakeholders that the requirement to provide security would push up costs. However, having no security would mean future consumers are not protected from the risk (and associated cost) of the successful bidder not adequately fulfilling their decommissioning obligations to the required standards.

Areas that require further exploration

Further consideration needs to be given as to whether it is necessary for decommissioning arrangements to be underpinned by legislation[13]. We will consider whether it is a proportionate requirement for all decommissioning plans to be underpinned by legislation, or whether only network solutions need this requirement. Our current view is that should the decommissioning obligations need to be underpinned by legislation, these legislative requirements would only then apply to transmission licensees as we feel that would be more proportionate. Therefore, for successful bidders delivering their solution under contract there would need to be comparable (but also remaining proportionate) obligations established under their contract.

Questions

31. Do you agree that decommissioning costs should be considered as part of the tender evaluation and that there should be an obligation on the successful bidder to develop a proportionate decommissioning plan and place a form of decommissioning security at an appropriate time?*

[13] One industry example where the requirement for a formal decommissioning plan is underpinned by legislation is in the current offshore regime, where the successful bidder's decommissioning obligations are established in the Energy Act 2004 (as amended) and through the Decommissioning Offshore Renewable Energy Installations Guidance.

Appendices

Appendix 1: Consolidated list of consultation questions

For questions that have been identified with an asterisk (*) provide a statement confirming whether you agree or disagree with the response. This confirmation will allow us to clearly review your feedback as well as provide a clear message on the consultation.

1. Do you agree with the types of drivers of network needs that should be within the scope of the ECP? *
2. Do you think a tender launched ‘early’ (i.e. after an indicative solution has been identified) but informed by market engagement that begins ‘very early’ is a suitable process? *
3. Have we identified the appropriate criteria to determine whether to compete a project? *
4. Do you agree with the approach where the ESO makes recommendations to Ofgem on the projects/needs which are suitable for competition? *
5. Do you agree that the incumbent TO's should participate in competitions through the same process as other bidders, and what mitigations may be needed to allow this?
6. Which parties do you think would be best placed to fulfil each new role identified in the early competition model and why?
7. Do you agree with a TRS type revenue model as the default model?* In what circumstances (if any) do you think a regulated model may be more appropriate?
8. Do you think that revenue during the preliminary works period would help encourage participation in early competition?* If so, what mechanism would be most appropriate?
9. Do you agree with the current preferred option of setting the duration of the revenue period to the length of the network need? *
10. Do you agree that the maximum length of the revenue period should be capped?* If so, at what length?
11. Do you agree with the current preferred option of including a mechanism for extending the revenue period?* How should such a mechanism work?
12. What is the most appropriate cost assessment mechanism for fixing underlying costs after preliminary works are completed?

13. Will there be enough lender interest in a debt competition to drive competitive pricing? What other debt structuring options do you think would be appropriate?
14. How should the indicative debt costs and level of gearing used in final bids be determined? How should the risk of the actual amounts be allocated?
15. Are there any other key risk that should be addressed at this stage?
16. Do you consider the overall risk allocation between bidders and consumers appropriate? What are your views on risk allocation?
17. Do you have any views on the list of potential activities that could be undertaken to support bidders, the information that would be required and the potential value to consumers they could drive?
18. What are your views on the challenge of flexing the procurement process to varying needs but maintaining standardisation?
19. Do you agree that the proposed list of primary information relating to network information is adequate to identify and cost potential solutions for both network and non-network solutions? *
20. What are your views on our current thinking for the elements that potential bidders should demonstrate at PQ?
21. Do you think that the range of criteria we are considering at ITT (stage 1) is appropriate and will drive value for consumers? *
22. Do you agree with our approach for evaluating bids at ITT (stage 2)? *
23. Do you agree with the criteria/features we have proposed to be within the evaluation? *
24. What are your views on our current thinking for the PB stage?
25. What is your view on the need for a bid bond and what do you think would be an appropriate value and time period?
26. Do you agree the tender revenue stream should not commence until successful commissioning and that no payments should be made to the successful bidder prior to this point, except potentially for preliminary works and/or where there is a particularly long solution delivery works programme?*
27. Do you have any views on incentives or penalties in relation to preliminary works and solution delivery, including the impact of commissioning delays on the tender revenue stream / revenue period?
28. Do you agree that the existing industry arrangements in respect of commissioning will be appropriate for early competition with minor adaptations?* What adaptations do you think would be required?

29. Do you agree with the proposed potential operational incentive regime for early competition?* Are there any topics omitted which you feel should be incentivised and why?*
30. Do you agree that with minor adaptations the existing industry codes/processes they can incorporate both network solutions and non-network solutions arising from early competition?* Are there any fundamental gaps or issues you foresee in relation to early competition?
31. Do you agree that decommissioning costs should be considered as part of the tender evaluation and that there should be an obligation on the successful bidder to develop a proportionate decommissioning plan and place a form of decommissioning security at an appropriate time?*

Appendix 2: Key transmission competition documents

Ofgem first introduced the concept of a CATO as part of the ITPR project in 2013-2015[14]. The introduction of competition has been explored further by Ofgem, the ENA and the ESO in the intervening years.

Integrated Transmission Planning and Regulation (ITPR) (2015)

Ofgem undertook a wide review of existing arrangements for planning and delivering onshore, offshore and cross-border electricity transmission networks in GB.

Ofgem made two key decisions as a part of this project which were to:

- Expand the role of the ESO in network planning – this gave the ESO additional responsibilities in planning the GB electricity transmission network in terms of analysing the costs and benefits through the NOA
- Extend the use of competitive tendering – to onshore transmission assets that are new, separable and high value.

Ofgem - Extending competition (2015)

Further to the ITPR project the policy area was developed further through the Extending Competition in Transmission consultation in 2015[15].

Ofgem set out its thinking in four key areas:

- Types of investments and how projects will be identified – projects worth £100m or more as savings will likely outweigh the costs
- How the tender process will work - development of the early and late CATO model. In the short to medium term Ofgem's preference was the late competition model
- How CATOs will be regulated – fixed revenue stream for 25 years to enable CATOs to take a long-term view of asset construction and management

[14] https://www.ofgem.gov.uk/electricity/transmission-networks/integrated-transmission-planning-and-regulation
[15] https://www.ofgem.gov.uk/sites/default/files/docs/2015/03/itpr_final_conclusions_decision_statement_publication_final.pdf

- Management of conflicts of interest – Incumbent TOs or associated business should be able to compete if conflict of interest or risks are appropriately addressed.

Ofgem – Extending competition (2016)

Following on from the initial proposals in the 2015 consultation Ofgem issued a further consultation in 2016[16]. Ofgem developed its thinking on the detailed arrangements to implement competitive tendering for new, separable and high value onshore electricity transmission assets setting out further details on two key areas:

- **How they will appoint CATOs** – this included further work on how tendering under the late CATO build tender model, including transfer of asset from the party responsible for preliminary works to the CATO
- **CATO regulated revenue, incentives and obligations** – an overview of Ofgem's approach to regulating CATOs including revenue structure, risk allocation, obligations and incentives.

Delays to implementation of the CATO regime arose from difficulties in legislative scheduling. In the intervening time Ofgem have continued to develop thinking on models of late competition and means to deliver this ahead of CATO legislation.

ENA (2017)

In 2017 the ENA held a series of Industry Working Group (IWG) workshops with interested parties of developers, investors and network providers[17]. The remit was to develop the details of a workable model for early competitive onshore transmission, to complement the Late Model. The ENA considered three key areas in relation to early competition:

[16] https://www.ofgem.gov.uk/publications-and-updates/extending-competition-electricity-transmission-tender-models-and-market-offering
[17] ENA (2017) Developing Early Models for introducing competition in onshore electricity transmission networks https://www.ofgem.gov.uk/system/files/docs/2017/04/ena_working_group_report_16_feb_2017.pdf

- **Roles and activities of different parties** – SO would identify the need, the TO/SO would identify options, the SO would identify the preferred solution, early competition tender point would be between the identification of the preferred solution and the initial solution design and the CATO would be responsible for all activities following initial solution design
- **The tender design parameters** – Key challenge to the early model is that the needs for transmission projects and the cost of transmission are highly uncertain. The tender process needs to have an appropriate balance of cost flexibility, and quantitative and qualitative elements with incentive mechanisms e.g. pain and gain sharing mechanisms
- **The commercial incentives for CATOs** – to manage cost uncertainties retendering would need to happen in response to a material increase in costs and for need uncertainties the CATO would be compensated for costs incurred or committed up to the point at which a cancellation notice was issued.

Ofgem - RIIO-2 Sector Specific Methodology (SSM) (2019)

Ofgem set out its expectation for the ESO to develop the ECP as part of the SSM and its expectations for the ESO to take a greater role in facilitating early competition.

In the May document, Ofgem also asked each Transmission Owner (TO) to identify all projects that meet an ‘early competition’ criteria – i.e. projects that are at least £50 million in value and which are contestable (i.e. there is potential for alternative solutions). These are the projects that the ECP focuses on. Ofgem also asked TOs to identify all projects that meet the ‘late competition’ criteria, which is projects greater than £100 million, new and separable.

Appendix 3: 2019/20 transmission projects

Table 10 sets out the transmission projects, identified through the NOA for the first time in 2019/20. Each project has an identifying code and Earliest In-Service Date (EISD). Some may be suitable for early competition.

Table 10:Transmission Projects identified through the NOA for the first time in 2019/20

Code	EISD	Project description
FLR3	2020	**Reconductor Fleet to Lovedean circuit** Replace the conductors in the Fleet to Lovedean circuits with higher-rated conductors to increase their thermal ratings.
HSP1	2020	**Power control device along Fourstones to Harker to Stella West** Installation of a power control device along the 275 kV overhead line route. This would improve the capability to control the power flows from north to south of the transmission network.
LNPC	2020	**Power control device along Lackenby to Norton** Installation of a power control device along the 400 kV circuit overhead line route. This would improve the capability to control the power flows across the east and west of the transmission network.
MRPC	2020	**Power control device along Penwortham to Kirkby** Installation of a power control device along the 275 kV circuit overhead line route. This would improve the capability to control the power flows across the east and west of the transmission network.
CS35	2023	**Commercial solution for Scotland and the north of England** This ESO-led commercial solution provides benefit across the Anglo-Scottish boundary and further south.
CS53	2023	**Commercial solution for East Anglia** This ESO-led commercial solution provides boundary benefit across the East Anglia Region.
MBHW	2023	**Bramley to Melksham circuits thermal uprating** Thermal upgrade of 400 kV circuits to allow them to operate at higher temperature and rating.
NTP1	2023	**Power control device along North Tilbury** Installation of a power control device along the 400 kV overhead line route. This would improve the capability to control the power flows east of the transmission network.
CS51	2024	**Commercial solution for East Anglia** This commercial solution provides boundary benefit across the East Anglia region.
CTP2	2024	**Alternative power control device along Creyke Beck to Thornton** Installation of an alternative power control device along the 400 kV overhead line route. This would improve the capability to control the power flows from north to south of the transmission network.

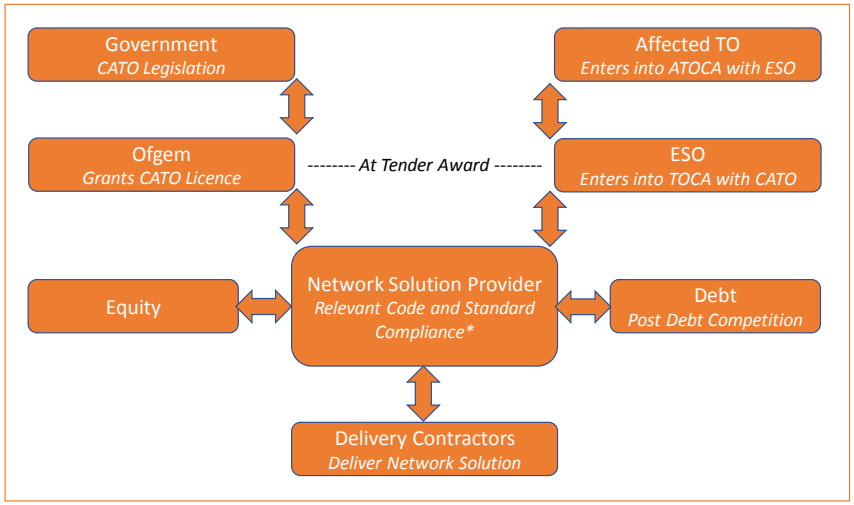
Code	EISD	Project description
NEP1	2024	**Power control device along Blyth to Tynemouth to Blyth to South Shields** Installation of an additional power control device along the 275 kV overhead line route. This would improve the capability to control the power flows from north to south of the transmission network.
OPN2	2027	**A new 400 kV double circuit between Osbaldwick and Poppleton and relevant 275 kV upgrades** Construction of a new 400 kV double circuit to facilitate power transfer requirements across the relevant boundaries. 275 kV circuit upgrades are required and substation works might be required to accommodate the new circuits.
SCD1	2028	**New offshore HVDC link between Suffolk and Kent Option 1** Construction of a new offshore 2 GW HVDC circuit.
CGNC	2031	**A new 400 kV double circuit between Creyke Beck and the South Humber** Construction of a new 400 kV double circuit to facilitate power transfer requirements across the relevant boundaries. Substation works is required to accommodate the new circuits.
E4L5	2031	**Eastern Scotland to England 3rd link: Peterhead to the South Humber offshore HVDC** Additional offshore 2 GW bipole HVDC link. The link will involve substation works, circuit upgrades and HVDC converter stations. The link will include a metallic earth return conductor to permit operation at reduced capacity with one pole disabled.
GWNC	2031	**A new 400 kV double circuit between South Humber and South Lincolnshire** Construction a new 400 kV double circuit to facilitate power transfer requirements across the relevant boundaries. Substation works are required to accommodate the new circuits.
SHNS	2031	**Upgrade substation in the South Humber area** Substation upgrade of the 400 kV South Humber substation equipment.

Appendix 4: Network and non-network solution relationship overview

To further illustrate the licence, contractual and code relationships in respect of network solutions and non-network solutions we have provided some simple illustrative diagrams as follows.

Network solutions

We expect the network solution provider to be granted a CATO licence by Ofgem (once relevant legislation is in place) at point of tender award and they would accede to the STC in parallel. The CATO would also enter into a Transmission Owner Construction Agreement with the ESO and this would also trigger further obligations under the STC, such as in relation to the CATO entering into a Transmission Interface Agreement with the incumbent TO, for example.



*Primarily,

SQSS and STC (including SRS, TISS, TIA, etc)

And as applicable,

CUSC, BSC, DCUSA, Grid Code and Distribution Code

TOCA – Transmission Owner Construction Agreement

ATOCA – Affected Transmission Owner Construction Agreement

SRS – Site Responsibility Schedule

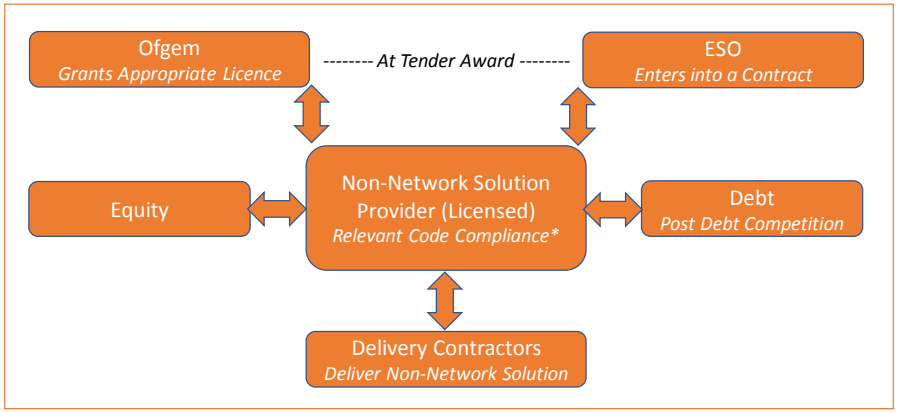
TISS – Transmission Interface Site Specification

TIA – Transmission Interface Agreement

With regard to an incumbent TO further consideration is required in relation to whether a CATO licence would be required if they successfully participated, or if the existing transmission licence would be amended to incorporate the relevant provisions.

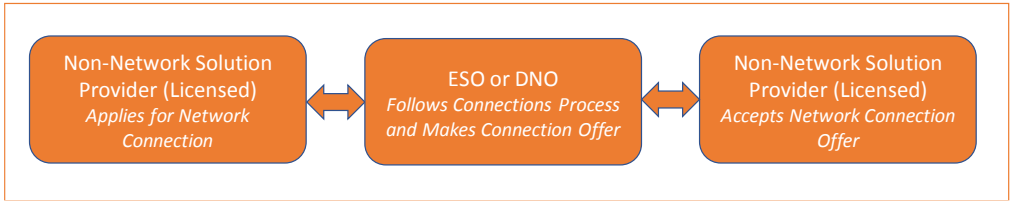
Non-network solution provider (licenced)

We expect a non-network solution that does not require a Transmission Licence may instead require another form of licence for a non-network solution e.g. a generation licence. They may therefore still need a licence from Ofgem, but they would not accede to the STC. They would instead need to accede to other relevant codes depending on their licence type, and in respect of the solution service they would enter into a contract with a contract counterparty e.g. the ESO. If they do not already have a right to connect to or use the relevant system, they will need to separately follow the connection process.



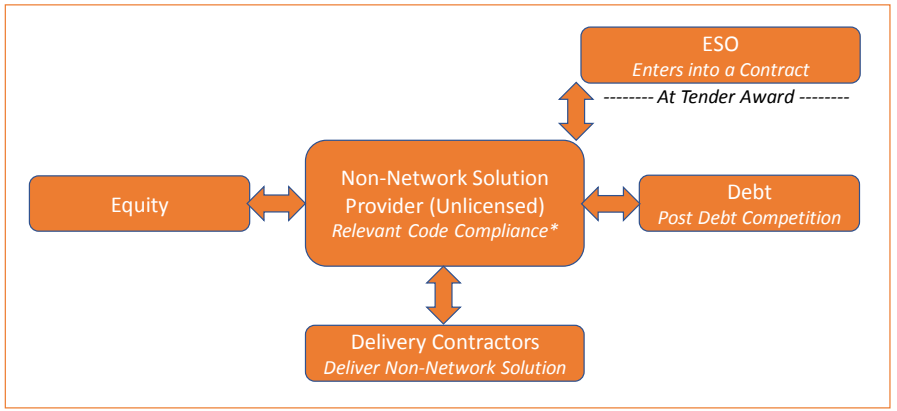
*For Example:

For a Tx Connected Generator CUSC, BSC and Grid Code
OR
For a small Dx Connected Generator DCUSA and Distribution Code
OR
For a Supplier CUSC, DCUSA, Grid Code, Distribution Code, BSC, MRA and REC
OR
For an Interconnector CUSC, BSC, Grid Code and Distribution Code



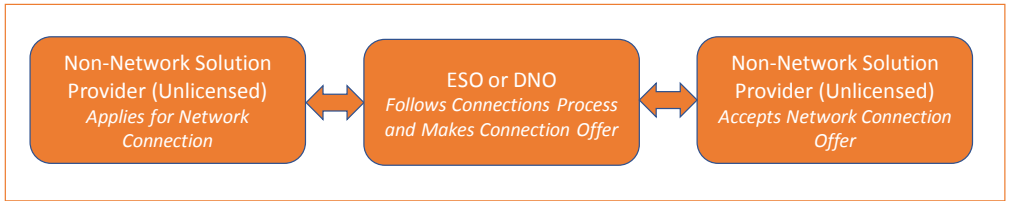
Non-network solution provider (unlicensed)

A non-network solution that does not require a Transmission Licence, or another form of licence, for a non-network solution will enter into a contract with a contract counterparty e.g. the ESO. If they do not already have a right to connect to or use the relevant system, they will likely also need to separately follow the connection process. This would require them to accede to the relevant connection codes.



*For Example:

For Directly Connected Demand, whilst not underpinned by a Licence, compliance with CUSC, Grid Code and BSC



Appendix 5: Glossary

BAFO	Best and Final Offer
CATO	Competitively Appointed Transmission Owner
CBA	Cost Benefit Analysis
CUSC	Connection and Use of System Code
ECP	Early Competition Plan
EIA	Environmental Impact Assessment
EISD	Earliest In Service Date
ESO	National Grid Electricity System Operator
ETYS	Electricity Ten Year Statement
FC	Financial Close for third party debt
GB	Great Britain
FES	Future Energy Scenarios
IRR	Internal Rate of Return
ITT	Invitation to Tender
ITPR	Integrated Transmission Planning and Regulation
NDA	Non-Disclosure Agreement
NOA	Network Options Assessment
NPV	Net Present Value
OFTO	Offshore Transmission Owners
Ofgem	Office of Gas and Electricity Markets
OJEU	Official Journal of the European Union
PB	Preferred Bidder
PFI	Project Finance Initiative
PIN	Periodic Indicative Notice
PPP	Public Private Partnerships
PQ	Pre-Qualification
RIBA	Royal Institute of British Architects
SB	Successful Bidder

- STC System Operator – Transmission Owner Code
- TOCA Transmission Owner Construction Agreement
- UC Unitary Charge
- RAV Regulatory Asset Value
- RIIO (Revenue = Incentives + Innovation + Outputs) is Ofgem's performance-based framework to set price controls
- RV Residual value
- TO Transmission Owners
- TRS Tender Revenue Stream
- UC Unitary Charge

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