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Dear Sirs

Extending competition in electricity transmission: May 2016 Consultation

Please see below our response to the above mentioned Consultation.

Yours faithfully



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## Chapter 2

*Question 1: What are your views on our proposed arrangements for asset ownership and responsibilities? In particular can you provide examples of specific scenarios where it may be necessary for ownership transfer of existing physical assets to occur between network operators?*

There are well developed and understood industry policies for definition of ownership and responsibility between asset owners on the transmission system. These include schedules of responsibility that cover the landownership and easements, substation construction and ownership operational arrangements. Some are complex such as the new arrangements for generators connected to GIS substations where one party (the TO) owns the primary plant while the other owns the bulk of the secondary systems (protection, control, telecoms and metering (PCT&M)). These arrangements largely work as there is an incentive for mutual cooperation and no competition between the asset owners. The licence conditions for the new and existing TOs will require them to be economic and efficient but for more complex arrangements there may be a lack of willingness to cooperate that may be defensible, for example when managing requests for long outages on one TOs primary plant to facilitate changing another TOs protection. Where possible these more complex ownership arrangements should be avoided.

*Question 2: Do you agree with our proposed principles for packaging projects?*

For some of the existing SWW packages there is a large number of asset interface changes and specifically protection and control assets that are reconfigured as new assets are connected to them. For example, for new circuits into an existing substation using existing bays, the line entries may be reconfigured during a number of stages of work creating complex sequences of PCT&M works for the projects to remain efficient. The reconfiguration of the overhead lines between Melksham, Bridgwater, Hinkley Point and Seabank Substations as part of the Hinkley Point Connection scheme is an example. Will it be the responsibility of the SO (for RIIO-T2) to balance the efficiency of solutions against the need to make it fit the criteria for competition or will that be determined by the Regulator? The complexity of PCT&M works may not be apparent at the outset of projects and there are also issues of diversity of equipment on the system to consider ensuring system reliability. How will this assessment be made for the Late (RIIO-T1) projects?

Paragraph 2.33 suggests it is the SO's responsibility to evaluate the project for tender but doesn't describe to what degree SWW packages will be restructured to make them suitable for CATO. Who will determine if the loss of efficiency (and the potential impact on an existing TO that may also be a competitor in the new tender) will be offset by the anticipated commercial gains through tendering the works? Paragraph 2.39 bullet 2 suggests that scoping may be varied to make them suitable for tender but that may move them further from being efficient and make the use of existing interface definition practices difficult or impossible.

*Question 3: Do you consider the processes we have set out for determining which projects to tender are appropriate?*

Yes. Please see response to Question 2. An area of project scope definition that warrants further consideration is works required from other statutory undertakings. It is currently practice for TOs to engage directly with parties to do public road works, bridge strengthening, creation of new docks, diversion of pipelines, organise easements, etc. These works can have significant costs associated with them and is normally excluded from contractor's scope as there is little to be gained from contractors managing the delivery of these elements of work. Although diversion of DNO assets and coordination of works with DNOs are discussed elsewhere in the document, the undertaking of work by other statutory bodies appears not to have been covered.

*Question 4: Beyond the NOA and the connections process, what other routes should we be utilising to identify suitable projects for competition, e.g. for non-load projects?*

As is pointed out in the consultation document, the NOA is (mostly) for system reinforcement while the SWW packages are largely connections related. How these two project streams will be combined for CATOs in the RIIO-T2 period is not clear? In particular the interaction between non-load and connection activities, how those will be reviewed and how the needs cases will be adapted as the needs cases flex. It would seem that to be economic and efficient the reinforcement and connection development activities should be carried out by a single body. One option would be to have Connection Applications made to the TOs but that these then have to be taken to the SO for a ruling as to whether the TO or SO will develop and respond to the application. The main barrier to this approach would be the typical turnaround time for Connection Applications which is already problematic for large schemes. A pre-application phase could be introduced where Connectees apply to the SO first for a ruling on who should process the application based on its interactions with SWW or reinforcement projects.

Beyond the NOA and connections process efficiency gains would come from identifying works that have the following properties:

- scale: larger numbers of assets to be replaced under a programme will create efficiency.
- visibility: of programmes of work
- continuity: of programmes to create efficient use of resources.
- geography: projects delivered in one area by one CATO with a phased programme that best utilises available resources. This could also limit the competition for scarce resources although many of the construction resources are mobile on a national basis

It appears that for best coordination one body should have oversight of the process from the point at which reinforcement is identified or an application made. This appears to be partly covered in paragraph 2.55.

The value in developing projects to an appropriate level of detail with time allowed to iterate between early concepts and preferred solutions should be considered. The opportunities for significant savings to be made in projects are in the pre-tender activities, these opportunities diminishing as the scope is narrowed to a tenderable solution.

*Question 5: What do you consider should constitute 'early development works' for options ahead of their assessment in the NOA process, i.e. what works should be undertaken in order to ensure that the most appropriate tendered options are developed for submission at the initial tender checkpoint?*

Figure 2-1 in the TNEI / Poŷry report "Tender Specification under Late CATO Build Model", version 2 describes the current process well although it has always been a matter of concern that there is no reference back to the "Route Selection" phase (here it is assumed that this is the early option selection of any reinforcement project) to check that the solution has not drifted so far from the original concept that the original options need to be reconsidered. Current typical milestones do not allow for easy challenges at this level which should be ongoing.

Up to the detailed design stage the structure of the process shown in Figure 2-1 would constitute a reasonable definition of early development work. An extra milestone could be introduced to mark the point at which projects are separated into those that require a functional specification only and those that require more FEED work to be carried out. This may also help differentiate early on between projects suitable for the Late and Early build models.

It is assumed that where TO led options are referred to in par. 2.62 onwards this mostly refers to the incumbents at this time. Some of the new CATOs would find it difficult to divert resources to develop connections which are often speculative and may lead to a competitively tendered scenario that they may not be successful in. Considering the size of the proposed CATO projects it is likely that the bidders would usually be large contracting concerns rather than services providers who currently engaged by TOs to develop connection schemes.

## Chapter 3

### *Question 6: What are your views on the suggested process for carrying out the pre-tender roles?*

For the RIIO-T1 period the proposed scrutiny of connection projects by the SO (as proposed for RIIO-T2) has not been carried out. Where these projects have been developed around existing TO specifications and procedures alternative solutions may have been discarded and wider system options not explored.

We agree with previous respondents that the pre-tender works should be carried out by the SO in RIIO-T2, for connection and reinforcement works. As commented above, the efficiency of developing the overall network is dependent on all the information being available and this is best done by one organisation overseeing all works. The TO retaining this overall role may lead to inefficiencies due to the systems that will be required for managing conflicts of interest and the exchange of information between the TOs and SO.

### *Question 7: Regarding preliminary works and the tender specification:*

#### *(a) What are your views on the scope of the baseline tender specification?*

It may be worth distinguishing between those elements that would always be included and those that would depend on the project's specific requirements. The list appears to be highly detailed in some areas but omit important detail in some others.

1. Concept: although "conceptual project plan/programme" has been identified as a document produced in this suite, it is worth identifying explicitly a set of stage-by-stage diagrams that identify the main system outages and sequence of system works. This will help identify clashes with other works and is one of the reasons why the preliminary works for connection and reinforcement works is best delivered by one organisation.
2. Preliminary: "reporting on any supply chain limitations due to initial design choices" is identified as a consideration here but it is important to note that for large projects involving multiple substation interfaces and stages of work, protection and control procurement should be considered separately. Please see the response to Question 2 above.
3. Electrical studies / surveys: Although "System studies reports" have been identified as an element of these works, it is worth highlighting some detailed aspects of these studies that are sometimes overlooked and may have a significant impact on the cost and programme of the overall project. In addition to conventional loadflow studies and steady state fault level studies the following may be required:
  - a. Transient fault currents
  - b. Earthing studies where there is a potential impact on third party assets that require mitigation such as rail, petrochemical or major telecoms installations
  - c. Pollution monitoring to determine the insulation pollution class. Although there is good qualitative guidance on the selection of the insulation class, there may be cases where the recommendations are conservative. By carrying out a year of surveys it may be found that an AIS substation can be constructed where a GIS substation is indicated by high-level assessments, with a significant reduction in costs. This is relevant to many GB substations that are located in or near saline estuaries. The same would apply to overhead lines.
  - d. Other studies that can take long to deliver and are therefore best carried out pre-tender are TRV/reactive switching duty studies for large reactive or capacitive loads, insulation coordination studies and ferroresonance studies. These will depend on the details of the options considered and the configuration of the existing and modified networks.
4. Geotechnical: some of the surveys listed here appear to be too specialised and would only be included under limited circumstances. The peat slide risk assessment is an example of

this, while the raw data only is normally provided for ground investigations and the bidders left to make their own interpretations. The team developing the project may choose to commission an interpretive report if they feel there are specific risks that may need to be quantified but this usually remains confidential and is not issued with the tender.

5. Ecological: Ecology desk study reports are usually required. These consider the information that is already available already and helps define which surveys need to be undertaken. For offshore works marine ecology surveys are required.
6. Logistics: Most substation projects would require an abnormal and indivisible load route survey to be carried out as it is required for transformer delivery.
7. Offshore: Bathymetric surveys (like a seabed levels survey) are usually required. These may need to be more than just radar surveys as seabed make-up has to be determined. Physical sampling and testing could be required depending on the scale and type of project
8. Other: Third-party service record searches are crucial and should be included for all projects.

*(b) How likely is it that additional preliminary works will be required, and if so, what types of works are likely to be required?*

There may be scenarios where investigations are delayed until after the successful bidder has been identified due to its specificity. An example may be detailed ground investigations that may be left until detailed design of the project has started, allowing the exact survey requirements to be identified. In these cases the risk and programme implication of delaying the investigations should be factored into the overall project plan at an early stage (however see comments below).

*(c) What are your views on:*

*(i) The role of bidders in identifying the need for further information / additional preliminary works (eg additional independent surveys) to inform robust bid assumptions?*

It is unlikely that significant surveys will be possible during the period of a typical tender as the process for procuring the services, producing RAMS, arranging access and potential seasonal influences (affecting specie dormancy for ecological surveys and poor weather for geotechnical investigations as examples) will exceed the tender duration.

*(ii) The most efficient process for enabling this?*

Identify the key risks earlier in the process and carry out the necessary surveys through a single body (SO or TO) that already has frameworks with contractors who understand the industry and client specific needs is certainly an option. By doing this early in the project development cycle, some surveys may be carried out that may later be found to be redundant but compared to the overall cost of the project this is unlikely to be significant. Balancing risk of delaying surveys or leaving to the CATO contractor versus risk of undertaking inappropriate ones needs to be carefully considered on a project by project basis.

*Question 8: What are your views on the proposed arrangements for the data room and bidder clarifications?*

No comment.

*Question 9: What are your views on our proposals regarding the funding of preliminary works and tender support activities in RIIO-T1?*

Considering the maturity of the RIIO-T1 SWW projects these seems acceptable. As stated in 3.31 it will depend on robust challenges of projects and proposals and it is not clear how this will be managed. The general and cross boundary type challenges to be made by the SO are commented on above.

*Question 10: Do you have any initial views on risk allocation across the preliminary works party and the CATO?*

No comment.

## Chapter 4

*Question 11: Do you agree with our proposed requirements for incumbent TOs to mitigate potential conflicts of interest, where they are both bidding for and developing a project in RIIO-T1?*

Yes, it would be essential.

*Question 12: Is internal scrutiny of the arrangements the TO has in place to mitigate conflicts of interest sufficient, or would there be significant additional value in having an independent party scrutinise and audit the TO's arrangements?*

The cost of putting in place external scrutiny would have to be balanced against the programme and cost risk posed to CATO projects and, in some cases, the knock-on effect on major infrastructure projects, where a challenge concerning the fairness of the process has to be investigated, ruled on and possibly moved through various levels of challenge. There are several options to avoid the risk of challenges, two of which are:

1. Only scrutinise using external scrutineers for randomly selected projects. This has the disadvantage of possibly raising retrospective challenges by unsuccessful bidders to earlier projects if a TO is found not to have mitigated conflicts sufficiently.
2. Initial external scrutiny of a bidder during its first bid with random scrutiny subsequently.

A risk based approach can be used with prospective bidders asked to submit their mitigation measures pre-tender and external scrutiny being triggered where there is a significant risk.

*Question 13: Do you agree with our proposal to manage conflicts for other bidders?*

Yes. There should be no distinction between types of bidders as far as conflicts of interests are concerned. Many of the bidders will have members of their team who assist in the early development of projects by the SO or TOs as a professional service. The risk of conflicts of interest is therefore similar to that in a TO and perhaps higher as the non-regulated businesses will not be obliged to create separate business streams in the way expected of TOs.

