

Early Competition Plan

Appendix 1 – Industry Codes

April 2021



Contents

1 Industry Codes 3

2 Connection and Use of System Code (“CUSC”)..... 4

3 Grid Code..... 5

4 System Operator-Transmission Owner Code (“STC”)..... 7

5 Other Codes, Standards and Considerations13

1 Industry Codes

This appendix starts to consider the potential changes to industry codes which could be required as a result of our proposals.

It is important to note that this annex is based upon a high-level review of the codes and is based on our current model proposals. Any future code change will require more detailed analysis against the model to be implemented and the code background at that point in time. Therefore, whilst we would appreciate your views on this annex please note that content remains subject to future refinement and change.

In addition, in undertaking a high-level review of the codes a set of high-level assumptions were made as follows:

- That where any form of licence or licence amendment is required it will be in place from the point of tender award e.g. for all network solutions and for all relevant non-network solutions
- That where a contract is required (potentially in addition to a licence or licence amendment) it will be in place from the point of tender award e.g. for all non-network solutions
- That where a party is not already acceded to the relevant codes at the point of tender award they will need to do so in parallel or shortly afterwards i.e. through the relevant code connection and accession processes
- That offshore concepts related to Generator Build (such as Offshore Transmission System User Assets) will not be required for early competition i.e. in most cases the successful bidder will have the relevant licence and/or contract in place and will have acceded to the correct codes from the point of tender award. Deliverability and delivery of the plan.

2 Connection and Use of System Code (“CUSC”)

This sub-section sets out initial views on the potential impacts on the CUSC.

In undertaking a high-level review of the CUSC some assumptions were made as follows:

- That non-network solutions will need to be a CUSC Party in respect of connection and/or use of the Transmission System
- That CUSC obligations will remain mostly unchanged for CUSC Parties, even those providing non-network solutions
- That non-network solutions will be provided via a commercial contract, which may be a Commercial Services Agreement
- That there will be no new category of CUSC Party required in respect of the provision of non-network solutions
- That Network solutions will instead be provided with a Transmission Licence and will accede to the System Operator-Transmission Owner Code (STC)
- That CUSC Party obligations remain in place even where a commercial service is being provided for early competition e.g. User Commitment will still be required, if necessary, to facilitate a connection to provide the service.

We have set our initial views on potential changes to the CUSC based on the above assumptions in below.

Table 1: Initial views on potential changes to the CUSC

Code Section	Potential Impact
Section 11	Potential changes to definitions of Onshore Transmission Licencee, Transmission Interface Point and Transmission Licence(s) to include references to Competitively Appointed Transmission Owners (CATOs).
Section 14	Potential changes to charging arrangements as a result of CATOs e.g. in respect of the costs of network solutions being used in the calculation of (and recovered through) TNUoS, or in respect of the costs of non-network solutions being used in the calculation of (and recovered through) BSUoS.
Schedule 2 (Exhibit 3 and Exhibit 3A) Construction Agreement and Offshore Construction Agreement	Potential changes to the standard terms related to time, cost and scope for any required provisions in relation to a connection being dependent upon onshore works which are to be undertaken by a CATO.

In addition, in exploring greater alignment between the connections process and tender process (as discussed in our chapter on the end-to-end process) further impacts may be identified in respect of the connection and modification elements of the CUSC.

We therefore think that there will be minimal change required for the CUSC. The reason is that non-network solutions will simply become an existing party category and any rights and obligations related specifically to early competition will be included within their contract. There will however be minimal changes as a result of the existence of CATOs e.g. to code definitions.

3 Grid Code

This sub-section sets out initial views on the potential impacts on the Grid Code.

In undertaking a high-level review of the Grid Code some assumptions were made as follows.

- That non-network solutions will need to be a Grid Code Party in respect of connection and/or use of the Transmission System and will continue to become one via accession to the CUSC
- That Grid Code obligations will remain mostly unchanged for Grid Code Parties, even those providing non-network solutions
- That there is no new category of Grid Code Party required in respect of the provision of non-network solutions
- That we do not believe the Grid Code fundamentals are being changed by early competition
- That main differences will be that some of the parties bound by the Grid Code may be providing non-network solutions for early competition under a contract in future and that there may be new Transmission Licencees (i.e. CATOs) in future.

We have set our initial views on potential changes to the Grid Code based on the above assumptions in below.

Table 2: Initial views on potential changes to the Grid Code

Code Section	Potential Impact
Glossary and Definitions	As there are currently many references to the incumbent Transmission Owners (TOs) and their onshore systems there will be changes to definitions to include references to CATOs. For example, Onshore Transmission Licencee, Relevant E&W Transmission Licencee, Relevant Scottish Transmission Licencee, E&W Transmission System, Scottish Transmission System, Small Power Station, Medium Power Station and Large Power Station. In addition, the concept of an offshore transmission system to an onshore transmission interface exists but not an onshore transmission system to onshore transmission system interface so there will need to be further changes in respect of the introduction of an onshore Interface point i.e. a TO to CATO interface. For example, Interface Point, Interface Point Capacity and Interface Point Target Voltage / Power Factor.
Planning Code PC7	Potential change to 'Access Periods' and 'Transmission Interface Circuits' as a result of CATOs.
Planning Code Appendices C and E	Potential change to include clarity on technical design criteria as a result of CATOs.
Connection Conditions Appendix 1	Potential change to include pro-forma Site Responsibility Schedules in respect of connecting to CATOs.
Connection Conditions A5.5	Potential change in relation to scheme settings as a result of CATOs.
Operating Code OC8	Potential change to expand safety co-ordination requirements to include CATOs.
Operation Code OC9	Potential change to expand contingency planning requirements to include CATOs.

Code Section	Potential Impact
Balancing Code BC2	Potential changes to expand post-gate closure process requirement to include CATOs.
General Conditions Annex and GCA.1.3	Potential change to include clarity on technical standards as a result of CATOs.
Governance Rules	As Panel Members include an Onshore Transmission Licencee representative there will be questions on code governance as a result of the introduction of CATOs. For example, will a CATO representative be part of the onshore category or will they require a separate panel seat in a similar manner to Offshore Transmission Owners (OFTOs)?

We therefore think that there will be minimal to moderate change required for the Grid Code. The reason is that non-network solutions will simply become an existing party category and any rights and obligations related specifically to early competition will be included within their contract. There will however be several changes as a result of the existence of CATOs e.g. to code definitions and to provide clarity in respect of applicable design standards.

4 System Operator-Transmission Owner Code (“STC”)

This sub-section sets out initial views on the potential impacts on the STC.

In undertaking a high-level review of the STC some assumptions were made as follows.

- That network solutions will need to be an STC Party as becoming a Transmission Licencee
- That STC obligations will remain mostly unchanged for TOs and OFTOs
- That Early Competition will only apply ‘onshore’ and as such CATOs will become an Onshore Transmission Licencee
- That not all rights and obligations related to Onshore Transmission Licensees will however be appropriate for CATOs so the rights and obligations of CATOs and TOs may in some cases diverge and STC will need to make such distinction
- That the concept of Embedded Transmission (and associated concepts) will not be relevant to early competition
- That many of the STC rights and obligations expected to apply to CATOs will be applied in proportion to the size and criticality of their current and future Transmission System e.g. processes related to new connections will apply but will likely be rarely utilised by the ESO.

Below we set our initial views on potential changes to the STC based on the above assumptions.

Table 3: Initial views on potential changes to the STC

Code Section	Potential Impact
Section B3.2 Governance	There will be questions on the party entry process in relation to CATOs. In the event a Transmission Licence is granted in parallel to the conclusion of the tender process then CATOs will need to accede to STC (including associated STC derived agreements) in parallel and a party entry process will need to be created which aligns with the tender process.
Section B6 Governance	There will be questions on code governance in relation to CATOs. At present, up to two people are appointed per onshore TO with 1 vote per onshore TO. In addition, up to two people for OFTOs are appointed collectively via election with 1 cumulative vote. Alternates are also either appointed for onshore TOs or elected for OFTOs.
Section C3.3 (Part 1) Transmission Services and Operations	Clarity will be required in respect of Site Responsibility Schedules and this is likely linked to the above CATO Party Entry Process. A TO-CATO Site Responsibility Schedule will be required.
Section C3.3 and C3,7 (Part 3) Transmission Services and Operations	Clarity will be required in respect of Transmission Interface Agreements and this is likely linked to the above CATO Party Entry Process. A TO-CATO Transmission Interface Agreement will be required.
Section D2.1.2 and D2.1.3 (Part 1) Planning Coordination	Clarity will be required in respect of Transmission Investment Plans and whether CATOs have obligations the same as or similar to TOs or OFTOs.
Section D2.2.6 (Part 1) Planning Coordination	Clarity will be required in respect of Planning Assumptions in respect of provision to CATOs.

Code Section	Potential Impact
Section D2.3 (Part 1) Planning Coordination	Clarity will be required in respect of Transmission Investment Plan Coordination in respect of CATOs
Section D2 and D3.3 (Part 2) Planning Coordination	Clarity will be required in respect of process for CATOs in respect of Construction Applications and Construction Planning Assumptions.
Section D4.13 (Part 2) Planning Coordination	Additional content will be required in respect of new investment policy for CATOs. (At present a cap of 20% additional expenditure for new connections is stated for OFTOs.)
Section D7.1 (Part 2) Planning Coordination	Clarity will be required in respect of Reasonable Charges for CATOs.
Section D8 (Part 2) Planning Coordination	Clarity will be required in respect of CATO Construction Securities. (As present arrangements exist for OFTOs in relation the value and acceptable forms of securities.)
Section D17 (Part 2) Planning Coordination	Clarity will be required in respect of Disconnection in the context of CATOs.
Section E2 and E3 plus Appendix 10 Billing and Payment	TO Charges and NGENSO Charges will need to be updated in respect of CATOs e.g. the addition of provisions in relation to CATO of Last Resort Charges on a comparable basis to OFTO arrangements.
Section F Communications and Data	There may potentially be changes to data exchange in respect of tender process facilitation.
Section G General Provisions	There may potentially be changes to some general provisions as a result of early competition.
Section H Disputes	The scope of dispute resolution processes may need to be extended in respect of any new processes.
Section J Interpretations and Definitions	Multiple definitions will need to be added or amendment in respect of the introduction of CATOs and the associated policy and process. For example: <ul style="list-style-type: none"> - Concepts such as Commissioning Programme and TI Commissioning Programme will need to be updated to reflect that CATOs will be involved in commissioning and compliance activities. - Concepts such as the Default Planning Boundary will need to be reviewed in relation to CATOs. - Concepts such as the Interface Point, Interface Point Capacity and Transmission Interface Agreement will need to be updated as a result of a TO-CATO interface - this facilitates Site Responsibility Schedules, Transmission Interface Agreements and Transmission Interface Site Specifications. - Consents such as Party Category and Onshore Transmission Owner will need to be updated to reflect that CATOs will accede to code and become a form of onshore TO. A new definition of a CATO will therefore also need to be introduced.

Code Section	Potential Impact
	In addition, other new concepts will likely need to be introduced such as CATO Construction Securities, CATO Compensation Payments, Forecast CATO construction Cost, CATO Construction Completion Date, CATO Construction Secured Amount and CATO Tender Regulations. It is likely all can be substantially based on the current definitions for OFTOs except where a policy difference e.g. new investments.
Section K Technical, Design and Operational Criteria and Performance Requirements (Off shore Transmission)	Whilst no changes are required to Section K as it relates to any OFTO to TO interfaces there is likely a requirement for new comparable 'Section L' (for example) in respect of future CATO to TO interfaces.

In addition, in exploring greater alignment between the connections process and tender process (as discussed in our chapter on the end-to-end process) further impacts may be identified in respect of the connection and modification elements of the STC.

We therefore think that there will be moderate to high change required for the STC. The reason is that network solutions will become CATOs and as such there will be several changes as a result of the existence of CATOs e.g. to code definitions and to provide clarity on their obligations. In addition, there may also be changes as a result of the implementation of early competition whether in relation to network solutions or non-network solutions i.e. process facilitation.

The STC schedules will also need to be updated, such as in relation to the creation of a CATO construction Agreement, as will the majority of System Operator-Transmission Owner Code Procedures ("STCPs"). In addition to the above and based on the same above assumptions we have also set our initial views on potential impact on STCPs below.

Table 4: Initial views on potential impact on STCPs

Reference	Title	Initial Position
STCP01-1	Operational Switching	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP02-1	Alarm and Event Management	Expect to apply in full noting minor amendments to introduce CATOs would be required and noting some elements are specific to OFTOs.
STCP03-1	Post Event Analysis and Reporting	Expect to apply in full noting minor amendments to introduce CATOs would be required.
SCTP04-1	Real Time Data Change Management	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP04-2	Real Time Data Link Management	Expect to apply in full noting minor amendments to introduce CATOs would be required. Further consideration would be required in respect of creating or amending appendices.
STCP04-3	Real Time Data Provision	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP04-4	Provision of Asset Operational Information	Expect to apply in full noting minor amendments to introduce CATOs would be required. Further consideration would be required in respect of creating or amending appendices.

Reference	Title	Initial Position
STCP04-5	Operational Telephone	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP04-6	Offshore Datalink Functional Specification for Telecontrol Communication Interface	Expect does not apply but potential a comparable STCP (e.g. STCP05-7) could be required for CATOs..
STCP06-1	Black Start	Expect to apply in part i.e. in respect of any onshore transmission system owned by a CATO which is designated as to be part of a Local Joint Restorator Plan.
STCP06-2	Desynchronised Island Management	Further consideration is required on whether this would or could be applicable to CATOs.
STCP06-3	System Incident Management	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP06-4	Contingency Arrangements	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP08-1	Protection Testing	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP08-2	Circuit Live Trip and DAR Tests	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP08-3	Operation Tests and System Tests	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP08-4	User Tests	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP09-1	Safety Co-ordination Between Parties	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP09-2	Site, Public and Environmental Safety	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP10-1	Asset Nomenclature	Expect to apply in full noting minor amendments to introduce CATOs would be required. Further consideration is required in respect of nomenclature for CATOs.
STCP11-1	Outage Planning	Expect to apply in full noting minor amendments to introduce CATOs would be required and noting some elements are specific to OFTOs.
STCP11-2	Outage Data Exchange	Expect to apply in full noting minor amendments to introduce CATOs would be required and noting some elements are specific to OFTOs.
STCP11-3	TO Outage Change Costing	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP11-4	Enhanced Service Provision	Further consideration is required in respect of approach for CATOs.
STCP12-1	Data Exchange Mechanism	Expect to apply in full noting minor amendments to introduce CATOs would be required and noting some elements are specific to OFTOs. An

Reference	Title	Initial Position
		equivalent to Appendix C would likely need to be created for CATOs.
STCP13-1	Invoicing and Payment	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP13-2	SIF and LARF Methodology	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP14-1	Data Exchange for Charge Setting	Expect to apply in full noting minor amendments to introduce CATOs would be required and noting some elements are specific to incumbent TOs and others to OFTOs.
STCP14-2	Data Exchange for Charging Consultations	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP14-3	Customer Charging Enquiries	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP16-1	Investment Planning	Expect to apply in full noting minor amendments to introduce CATOs would be required. Potential for changes in respect of incumbent TOs and process facilitation.
STCP17-1	Feasibility Study	Expect to apply in full noting minor amendments to introduce CATOs would be required. Potential for changes in respect of incumbent TOs and process facilitation.
STCP18-1	Connection and Modification Application	Expect to apply in full noting minor amendments to introduce CATOs would be required and noting some elements are specific to OFTOs.
STCP18-2	Use of System Application	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP18-3	TEC Changes	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP18-4	Request for a Statement of Works	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP18-6	Variations to Agreements	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP19-2	Construction Process and Scheme Closure	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP19-3	Operational Notification and Compliance Testing including Compliance Checklist	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP19-4	Commissioning and Decommissioning	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP19-5	Off shore Transmission System Compliance Process and Testing	Expect to apply in full noting minor amendments to introduce CATOs would be required. A new comparable STCP (e.g. STCP19-5B) would likely be required in respect of the CATO interface with the existing onshore Transmission System.

Reference	Title	Initial Position
STCP19-6	Application Fee and Refresh Template	Expect to apply in full noting minor amendments to introduce CATOs would be required.
SCTP20-1	Electricity Ten Year Statement	Expect to apply in full noting minor amendments to introduce CATOs would be required. Potential for changes in respect of incumbent TOs and process facilitation.
STCP21-1	Network Options Assessment	Expect to apply in full noting minor amendments to introduce CATOs would be required. Potential for changes in respect of incumbent TOs and process facilitation.
STCP21-2	NARMS Data Exchange Guidance and Data Exchange Forms	Do not expect to apply to CATOs.
STCP22-1	Production of Models for GB System Planning	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP23-1	Off shore Party Entry Process	Does not apply to CATOs. A new comparable STCF (e.g. STCP23-2) would likely be required in respect of the CATO Party Entry Process.
STCP24-1	Revenue Forecast Information Provision	A new comparable STCP (e.g. STCP19-5B) would likely be required in respect of the CATO interface with the existing onshore Transmission System.
STCP25-1	Significant Code Review Process	N/A - applies to code governance
STCP25-2	Send Back Process	N/A - applies to code governance.
STCP25-3	Fast Track Self Governance Process	N/A - applies to code governance
STCP26-1	Active Network Management	Expect to apply in full noting minor amendments to introduce CATOs would be required.
STCP27-1	System Performance Monitoring	Expect to apply in full noting minor amendments to introduce CATOs would be required.

In addition to the potentially new STCPs detailed above there may also be a need for a new STCP28-1 (for example) in respect of the early competition facilitation process i.e. the role of the ESO and incumbent TOs in respect of network need identification, tender process, data exchange, etc.

5 Other Codes, Standards and Considerations

This sub-section sets out initial views on the potential impacts on the other codes and standards, as well as other considerations.

- Stakeholders have suggested that CATOs will need to be appropriately integrated into the existing Network Access Policy arrangements. We agree and envisage this will need to be undertaken as part of the Preferred Bidder stage (or shortly thereafter) in the event the successful bidder is a CATO. Expectations in relation to this will need to be clarified prior to the tender process
- With regard to the System and Quality of Supply Standards (SQSS), our current understanding is that CATOs will (in accordance with their licence) comply with SQSS and will be incorporated into SQSS as an onshore Transmission Owner rather than an OFTO. Therefore, at a minimum, changes will be required to introduce the concept of a CATO (as an onshore Transmission Owner) into SQSS e.g. in a handful of cases there are references to specific TOs or geographic standards which will need to be adapted in respect of CATOs. However, further consideration is also required in respect of the potential impact of non-network solutions on network compliance and how such standards consider and interact with non-network solutions which could be contributing to or interacting with SQSS compliance for Transmission Owners, including OFTOs and CATOs. This could result in further changes being required to SQSS in future
- With regard to the Distribution Code, our current understanding is that there will be minimal changes although this remains to be discussed and validated with the code administrator for this code. For example, some of the above elements which likely need further consideration in respect of Grid Code will also need to be considered for Distribution Code such as in respect of large, medium and small power stations
- With regard to the Balancing and Settlement Code, our current understanding is that there will be minimal (if any) changes although this remains to be discussed and validated with the code administrator for this code
- With regard to the Distribution Connection and Use of System Agreement, our current understanding is that there will be minimal (if any) changes although this remains to be discussed and validated with the code administrator for this code
- Further consideration will be required once the outcomes of both the Energy Codes Review and the Engineering Standards Review are known, as these projects could change the baseline upon which the industry code and standard impacts related to early competition are considered in any future implementation period.



Faraday House, Warwick Technology Park,
Gallows Hill, Warwick, CV346DA

nationalgrideso.com

nationalgridESO