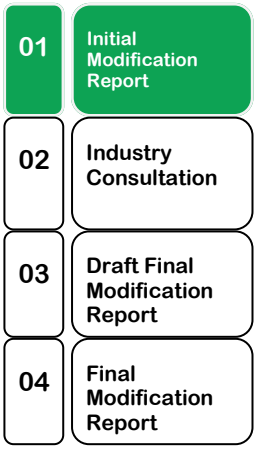
STC Initial Modification Report	At what stage is this document in the process?

CM070: 'Consequential STC Updates following implementation of RfG and HVDC into the GB Grid Code'



Purpose of Modification: This proposal seeks to modify the STC to ensure consistency with the GB Grid Code following implementation of the European Connection Network Codes (RfG, HVDC and DCC).

The Proposer recommends that this modification should:

- proceed to Consultation

This modification will be raised on **22 March 2019** and will be presented by the Proposer to the Panel on **1 April 2019.** The Panel will consider the Proposer's recommendation and determine the appropriate route.

High Impact: In order to satisfy the requirements of EU law following the introduction of the European Third Energy Package, The GB Grid Code was updated in 2018 to reflect the requirements of the European Connection Network Codes (RfG, HVDC and DCC). Since the STC makes numerous references to the Grid Code Connection Conditions there is a need to update the STC in respect of these consequential Grid Code changes.

There is a high impact to Transmission Licensees in particular Offshore Transmission Licensees who are caught by the following criteria.

Transmission Licensees who own an AC Transmission System and that AC Transmission System was first connected to the Transmission System on or after 27 April 2019 and the purchase contracts for the main plant and apparatus had concluded on or after 17 May 2018 or:-

Transmission Licensees, who own a Transmission System comprising an HVDC System and that HVDC System was first connected to the Transmission System on

	or after 8 September 2019 and the purchase contracts for the Main Plant and Apparatus forming part of that HVDC Transmission System had concluded on or after 28 September 2018. This modification is particularly relevant for Offshore Transmission Licensee's which are developed under the Generator Build approach and once transferred are required to satisfy the applicable requirements of the STC. It is vital that as part of this process there is a seamless transfer between the requirements in the Grid Code and those in the STC at the point in time that the Transmission Assets are transferred from the Generator to the Offshore Transmission Licensee.
	**Medium Impact**:- Not applicable
	**Low Impact** There will no impact to existing Transmission Licensees unless they wish to install new HVDC equipment or undertake substantial modifications to their Offshore Transmission Networks.

Contents

Any questions?

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Timetable

The Code Administrator recommends the following timetable:	
Modification Proposal issued to the STC Panel	22 March 2019
Panel Agree that CM070 should procedure using the Self- Governance route	1 April 2019
Issue Industry Consultation for 20 Workings Days	15 April 2019
Industry Consultation closes	16 May 2019
Issue Draft Self-Governance Modification Report to industry and the Authority for 5 Working Days	21 May 2019

Draft Final Modification Report issued to the STC Panel	21 May 2019
Panel Self-Governance vote	29 May 2019
Appeal Window commences for 15 Working Days	7 June 2019
Appeal Window closes	28 June 2019
Implementation	15 July 2019

Proposer Details

Details of Proposer: (Organisation Name)	National Grid
Capacity in which the STC Modification Proposal is being proposed: (i.e. STC Party, Party Representative or person or persons having a relevant interest as may be designated in writing for this purpose by the Authority	STC Party
Details of Proposer's Representative: Name: Organisation: Telephone Number: Email Address:	Antony Johnson National Grid (NGET) 01926 655466 Antony.Johnson@nationalgrid.com
Details of Representative's Alternate: Name: Organisation: Telephone Number: Email Address:	Rob Wilson National Grid (NGET) 01926 653398 Robert.Wilson2@nationalgrid.com
Attachments (Yes): Yes **If Yes, Title and No. of pages of each Attachment: Extracts from STC Legal text**	

Impact on Core Industry Documentation.

BSC	
Grid Code	
CUSC	
Other	

This Modification does not have any further impact on core Industry documentation. The Grid Code has already been updated to reflect these changes.

1 Summary

Defect

The GB Grid Code was updated in 2018 following implementation of the EU Connection Network Codes (RfG (Requirements for Generators), HVDC (HVDC Code) and DCC (Demand Connection Code)). These Codes resulted from the introduction of the European Energy Third Package which have been encapsulated into European law which takes precedence over GB law.

As a result of this EU Directive, the GB Grid Code has been updated to ensure consistency with the European Connection Network Codes which has resulted in several new sections in addition to numerous updates to other sections of the code.

The STC refers to certain parts of the Grid Code and as a consequence of these European Connection Network Codes, there is a requirement to update the STC to ensure consistency with the updated Grid Code.

What

As part of the European Connection Network Codes (RfG, HVDC and DCC), three new sections of the GB Grid Code have been introduced, these being the European Connection Conditions (ECC's), the European Compliance Processes (ECP's) and Demand Response Services Code (DRSC).

As the EU Connection Network Codes only apply to new plant then the existing sections of the GB Grid Code (ie the Connection Conditions (CC's) and Compliance Processes(CP's)) have been retained. The Demand Response Services Code (DRSC) is a new section of the Grid Code and has been introduced as part of the Demand Connection Code (DCC) relating to the provision of demand response providers so its application as part of this proposed STC modification is more limited.

The important element is that the STC makes several references to the Grid Code Connection Conditions and hence these sections need to be updated to now include the ECC's.

In addition, Section K of the STC places requirements on Offshore Transmission Licensees, many of these requirements are direct copies of the requirements in the Grid Code. As such, there is a requirement to ensure consistency with the updated Grid

Code, which is particularly important where an Offshore Transmission Network has been developed under the Generator Build arrangements and then transitions to the Offshore Transmission Licensee arrangements.

In addition, the HVDC Code places requirements on new HVDC Systems, so where a Transmission Licensee in future builds, designs and owns an HVDC System, then they would be required to satisfy the requirements of the HVDC Code.

Why

For existing Transmission Licensee's, the implications of these European Network Codes are limited. However, for future connections, in particular Offshore Transmission Systems and HVDC Systems which comprise of primary plant procured in 2018 and connected to the system in 2019, there would be a requirement for the applicable requirements of the Grid Code (which includes the requirements introduced as part of the European Connection Network Codes) to be satisfied. In particular, failure to comply with these requirements, particularly in respect of new HVDC Systems would effectively be non-compliant with the EU Codes and hence in breach of European law. .

How

It is proposed that the most eloquent solution to this issue is to update the STC to reference the new sections of the Grid Code, in particular the European Connection Conditions (ECC's). In addition, there will also be a requirement to update section K of the STC which relates to Offshore Transmission Licensee's.

To minimise future updates, it is proposed to refer back to the relevant clauses of the Grid Code so that whenever the Grid Code is changed in future, there is minimal impact to the STC.

2 Governance

Justification for Self-Governance Procedures

The proposer believes the modification should follow the self-governance procedure as the modification is unlikely to discriminate between different STC Parties and is unlikely to have a material effect on:

i) Existing or future electricity customers;

ii) Competition in the generation, distribution, or supply of electricity or any commercial activities connected with the generation, distribution or supply of electricity,

iii) The operation of the National Electricity Transmission System

iv) Matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies

v) The STC Panel's governance procedures or the STC Panel's modification procedures

Requested Next Steps

This modification should: proceed to Industry Consultation.

3 Why change

The European Energy Third Package was introduced as a directive to promote cross border trade in Gas and Electricity. As a consequence of this, ENTSO-E (The European Network Transmission System Operators – Electricity) under the direction of the European Commission, have developed a set of Codes to facilitate the objectives of this directive. All of these codes were subject to a consultation phase and assessment by ACER (the European Regulators) ahead of the comitology stage which is effectively the process which by the Code is translated into European law.

Figure 1 shows the process of implementing the Codes into European law and Figure 2 shows the codes which have been developed.

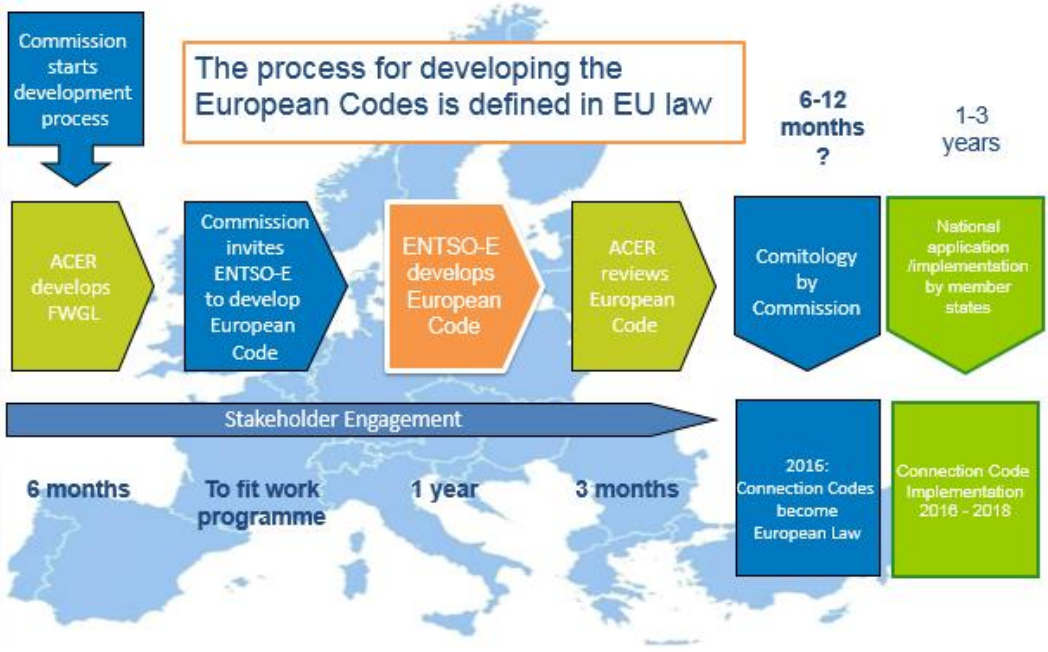

Figure 1 – European Network Code Development Process

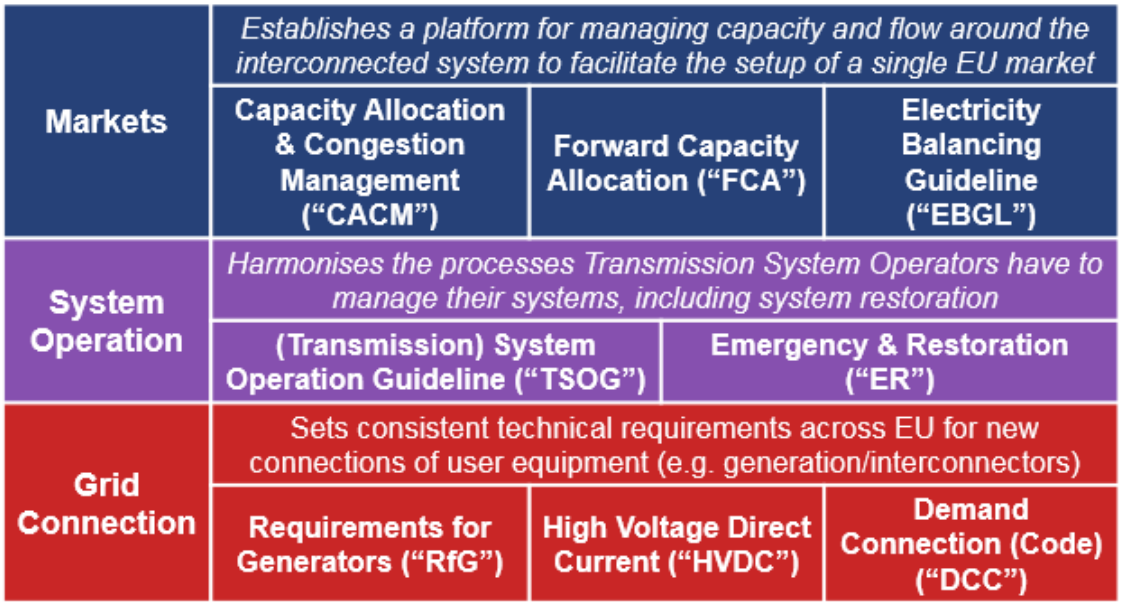

Figure 2 – An overview of the European Network Codes

The Connection Network Codes (RfG, HVDC and DCC) were approved into European law in 2016 and subsequently implemented into the GB Grid Code in 2018. The dates for which these requirements became binding are as follows and are summarised below on a per code basis.

RfG – Applicable to any Generator whose Main Plant and Apparatus connects to the System on or after 27 April 2019 and who had concluded purchase contracts for its Main Plant and Apparatus on or after 17th May 2018.

HVDC - Applicable to any HVDC System or DC Connected Power Park Module whose Main Plant and Apparatus connects to the System on or after 8 September 2019 and who had concluded purchase contracts or its Main Plant and Apparatus on or after 28th September 2018.

DCC - Applicable to any Demand owner whose Main Plant and Apparatus connects to the System on or after 18 August 2019 and who had concluded purchase contracts or its Main Plant and Apparatus on or after 18th August 2018.

To facilitate these changes and reflect the connection dates, the Grid Code had been updated to define two classes of User, these being a GB Code User who are effectively User's caught by the existing GB Grid Code arrangements and EU Code User's who will be caught by the EU Codes. The consequence of this is that GB Code User's will still need to comply with the requirements of the Connection Conditions and Compliance Processes and EU Code User's will need to comply with the requirements of the European Connection Conditions and European Compliance Processes. Other sections of the Grid Code (eg the Planning Code, Operating Codes and Balancing Codes etc) will continue to apply, being universally applicable to both GB Code User's and EU Code User's except were stated otherwise within the body of these codes.

So far as Transmission Licensee's are concerned, the impacts mainly affect Offshore Transmission Licensees and Transmission Licensees owning HVDC Systems. Transmission Licensees are not defined as User's under the Grid Code. The STC does however place obligations on Transmission Licensees (notably Section D Part One clause 2.2.6 amongst others) to satisfy specific requirements of the Grid Code including

the Connection Conditions. There is therefore a requirement to update the STC to also include references to the ECC's as well as the CC's.

Table 1 below lists the relevant clauses of the STC which refer back to the Grid Code Connection Conditions and where reference to the European Connection Conditions will need to be added.

STC Clause referring to Grid Code Connection Conditions
Section D Part One 2.2.6, 2.2.7.1, 2.2.8.3
Section D Part Two 15.6
Section G General Provisions – 2.2.1.2, 2.2.2
Corresponding changes to Glossary and Definitions

Table 1

In addition, Section K places obligations on Offshore Transmission Licensee's on the Technical, Design and Operational criteria and performance requirements for Offshore Transmission Systems. Since the majority of future Offshore Transmission Systems are expected to be designed and built under the Generator Build arrangements, it is imperative that the requirements in the Grid Code are consistent with those in the STC otherwise on the date of transfer there would be a disjoint.

Although the EU Connection Network Codes do not recognise the concept of the GB Offshore Transmission Regime, they do contain requirements for Offshore Generators, HVDC Systems and DC Connected Power Park Modules which would need to be factored into the requirements incumbent on Offshore Transmission Licensees. That said, the specific requirements applicable to HVDC Systems are very relevant as failure to satisfy the applicable Grid Code requirements would be in breach of the HVDC Code and hence European law.

In an attempt to keep this modification as straight forward as possible and as shown in the legal text, the proposal is to update the STC so that the references in future refer to both the Connection Conditions (CC's) and European Connection Conditions (ECC's). There is no reference to the Compliance Processes (CP's) in the STC and hence there is no need for an update to make reference to the European Compliance Processes (ECP's).

The STC Procedures have been checked and a number of them will require changing as detailed in PMO110.

There are no specific time constraints associated with this modification

4 Code Specific Matters

Technical Skillsets

Understanding of EU Connection Network Codes (RfG, HVDC and DCC), a thorough understanding of the GB Grid Code and the linkages between the Grid Code and STC.

Reference Documents

RfG available from the following link.

https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0631&from=EN

HVDC available from the following link.

https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1447&from=EN

DCC available from the following link.

https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1388&from=EN

5 Solution

In summary, the solution simply proposes to update the STC so that any references to the Grid Code Connection Conditions also make reference to the European Connection Conditions and other Grid Code clauses where these have changed as a result of the EU Connection Network Codes. In addition, Section K of the STC will need to be updated again to ensure consistency with the Grid Code, particularly in respect of HVDC Systems. Section K has been separated into two parts so as to clearly define the obligations applicable to existing Transmission Licensees and future Transmission Licensees.

As part of this process two new definitions have been introduced, namely Type 1 Transmission Owners and Type 2 Transmission Owners. A Type 1 Transmission Owner is defined as "A Transmission Owner who owns a Transmission System and that Transmission System was first connected to the System before 27 April 2019 and the purchase contracts for its Plant and Apparatus forming that Transmission System had been concluded before 17th May 2018" and a Type 2 Transmission Owner which is defined as "A Transmission Owner who owns a Transmission System and that Transmission System was first connected to the System on or after 27 April 2019 and the purchase contracts forming the major part of its Plant and Apparatus forming that Transmission System had been concluded on or after 17th May 2018. As a consequence of this, the opportunity has been taken to redefine the definition of Transmission Owner to "an Onshore Transmission Owner or an Offshore Transmission Owner which could include a Type 1 Transmission Owner or Type 2 Transmission Owner".

Taking Section D, Part One, Section 2.2.6 clause 2.2.6.1 it is proposed to amend the text as follows:- "the minimum technical, design and operational criteria and performance requirements set out or referred to in Connection Conditions 6.1, 6.2, 6.3 and 6.4 as applicable to Type 1 Transmission Owners or European Connection Conditions 6.1, 6.2, 6.3 and 6.4 as applicable to Type 2 Transmission Owners and in Planning Code 6.2 and/or 6.3; or…."

The term applicable refers to the point if the Transmission Owners Plant and Apparatus was procured or connected to the System in line with the connection dates as applicable to an EU Code User rather than a GB Code User, as this is the determining

factor as to whether the Transmission Licensees Plant and Apparatus is caught by the requirements of the Connection Conditions or European Connection Conditions.

6 Impacts & Other Considerations

The Grid Code changes that have been implemented as result of the EU Connection Codes (RfG, HVDC and DCC) will result in impacts to Transmission Owner's who procure new plant and apparatus, in particular those who install HVDC Systems and future Offshore Transmission Networks.

These requirements have been subject to the Grid Code Governance process, however as a consequence of the obligations in the STC which require Transmission Licensee's to satisfy the requirements of the Connection Conditions, there is a requirement for the STC to be updated to include the European Connection Conditions which will have an impact on Transmission Licensees.

This change will also have an impact on future Offshore Generators who are caught by the requirements of RfG who will be connecting to Offshore Transmission Licensees assets where it is important to have compatible requirements between Offshore Generators and Offshore Transmission Owners.

Does this modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

No.

Consumer Impacts

None

7 Relevant Objectives

Relevant Objective	Identified impact
(a) efficient discharge of the obligations imposed upon transmission licensees by transmission licences and the Act	Positive – necessary as a result of the EU Connection Network Codes
(b) development, maintenance and operation of an efficient, economical and coordinated system of electricity transmission	Positive – The EU Connection Codes aim to promote cross border trade which is seen as positive for Transmission Owners
(c) facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating	Positive - The EU Connection Codes

such competition in the distribution of electricity	aim to promote cross border trade which is seen as positive for Transmission Owners
(d) protection of the security and quality of supply and safe operation of the national electricity transmission system insofar as it relates to interactions between transmission licensees	Positive – Particularly for Offshore Transmission Licensees where there is a interaction with Offshore Generators caught by RfG.
(e) promotion of good industry practice and efficiency in the implementation and administration of the arrangements described in the STC.	Neutral
(f) facilitation of access to the national electricity transmission system for generation not yet connected to the national electricity transmission system or distribution system;	Positive – This provides clarity to Transmission Owners and Generators alike.
(g) compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency.	Positive – Required as a result of the EU Connection Network Codes.

These changes are necessary to ensure consistency with the EU Connection Network Codes which is part of a suite of documents seeking to promote cross border trade in Electricity.

8 Implementation

As the Connection Code amendments have already been implemented into the GB Grid Code, these changes need to be implemented into the STC as soon as possible. This is important for i) the need for Transmission Licensees owning new HVDC Systems to comply with the requirements of the HVDC Code and ii) to ensure there are no issues with the transfer process where an Offshore Transmission System has been designed, constructed and commissioned under the Generator Build Arrangements and then subsequently transferred to an appointed Offshore Transmission Licensee.

9 Legal Text

The accompanying legal text is shown in Annex 1. In summary, Section D Part One 2.2.6, 2.2.7.1, 2.2.8.3, Section D Part Two clause 15.6 and Section G General Provisions – clause 2.2.1.2 and 2.2.2 have been updated to include the new references to the Grid Code. In addition, consequential changes have been made to Section J – Interpretation and Definitions to ensure consistency with the Glossary and Definitions in the Grid Code.

10 Recommendations

Proposer's Recommendation to Panel

Panel is asked to:

- Agree that Self Governance procedures should apply
- Issue this modification directly to Consultation

Annex1: Legal text

