Public

Grid Code Modification Proposal Form

GC0103:

The introduction of harmonised Applicable Electrical Standards in GB to ensure compliance with the EU Connection Codes

Overview: This modification seeks to set out within the Grid Code the compliance obligations in the EU Connection Codes as they relate to Electrical Standards.

Modification process & timetable

1. **Proposal Form** — 31 August 2017
2. **Workgroup Consultation** — TBC
3. **Workgroup Report** — TBC
4. **Code Administrator Consultation** — TBC
5. **Draft Final Modification Report** — TBC
6. **Final Modification Report** — TBC
7. **Implementation** — TBC

Status summary: The Proposer has raised a modification and is seeking a decision from the Panel on the governance route to be taken.

This modification is expected to have a: Medium impact
Transmission Owners (including OFTOs and Interconnectors), Distribution Network Operators, potential CATO parties, Transmission System Users System Operator and Generators

Modification drivers: Efficiency and standardising connection arrangements (within Busbar protection zones) between Generators and Transmission Owners across the Transmission Owner areas.

Proposer's recommendation of governance route	Urgent modification to proceed under a timetable agreed by the Authority (with an Authority decision)	
Who can I talk to about the change?	**Proposer:** Garth Graham, SSE Garth.graham@sse.com Phone: 01738 456000	**Code Administrator Contact:** Claire Goult Claire.goult@nationalenergyso.com Phone: 07938 737807

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Contents

What is the defect you are trying to resolve?

Currently, there are three versions of electrical standards within Great Britian (GB), and this is set to grow in the future with the introduction of Competitive Appointed Transmission Owners (CATOs.) These differences and inconsistencies cause difficulty for Users as it takes time and effort to check connection designs against each (different) set which leads to higher costs to consumers.

Why change?

Electrical standards contain the technical specifications, policies and procedures that must be complied with by Users connected to or seeking to connect to the electrical system. Currently, there are three versions of electrical standards (one for each of the onshore Transmission Owners[1]) within GB that apply, depending on where, geographically, a User's project is connecting to the National Electricity Transmission System (NETS) and this number (of versions) is set to grow in the future with the introduction of CATOs[2].

Differences and inconsistencies in the three current versions of the electrical standards within GB cause issues for Users, in turn leading to additional costs and inefficiency that may impact investment confidence and gives rise to higher cost to consumers. Users also feel that there is a lack of transparency in the justification for the regional variations and the governance of the change process is inefficient and unclear.

The Requirement for Generators (RfG), Demand Connection Code (DCC) and High Voltage Direct Current (HVDC) Network Codes were drafted to facilitate greater connection of renewable generation; improve security of supply; and enhance competition to reduce costs for end consumers, across European Union (EU) Member States. These three codes set harmonised technical standards for the connection of new equipment for generators, demand and HVDC systems (including DC-Connected Power Park Modules respectively).

The differences in the three current versions of the electrical standards, combined with the implementation of the three EU Network Codes means there is now a need for a single harmonised GB electrical standards to ensure the obligations within those EU Network Codes are met.

[1] NGET in England & Wales, SPT in Southern Scotland and SSEN-T in Northern Scotland.
[2] Onshore electricity transmission early competition: first project | Ofgem

What is the Proposer's solution?

This modification was raised in 2017 to seek to set out within the Grid Code the compliance obligations in the EU Connection Codes as they relate to Electrical Standards. It would be applied to new connections to GB electrical systems. When raised it was agnostic as to which one of the three current regional versions of the electrical standards should be is adopted GB-wide. Given that the obligations in the EU Network Codes apply to 'New' projects only (and not to 'Exiting' projects) it is proposed that the single harmonised electrical standards introduced by this proposal would be known as the 'Applicable Electrical Standards' (this will also avoid confusion with the 'Relevant Electrical Standards', as defined in the Grid Code, which will continue to apply to 'Existing' projects) and would not be more stringent than the requirements in the EU Network Codes/Guidelines. It would be applied to all 'New' connections to the GB electrical system depending on whether they are generation, demand or HDVC. It is proposed that a GCDP Workgroup be set up to review the current electrical standards and the potential solutions. The 'Applicable Electrical Standards' would be incorporated into the Grid Code and any subsequent changes to them would, for the avoidance of doubt, be subject to public consultation and the National Regulatory Authority (NRA) (Ofgem) approval. Following the creation of the 'Applicable Electrical Standards' the Grid Code and Distribution Code would need to be amended appropriately to achieve consistent application across the Transmission and the Distribution systems.

Draft legal text

Legal text will be drafted as part of the Workgroup stage of the modification.

What is the impact of this change?

Proposer's assessment against Grid Code Objectives	
Relevant Objective	**Identified impact**
(i) To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity;	**Positive** The proposed solution will allow the System Operator/ Distribution Network Operators to efficiently apply the EU Network Code/Guidelines requirements to the Users of the system through the National Industry Codes.

(ii) Facilitating effective competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being made available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity);	**Positive** The proposed solution will assist the Users of the Transmission and the Distribution system during the connection process. A single harmonised set of electrical standards will also help enable competition in the construction of connection assets as, at the moment, it is not clear what standard CATO's should use. A common set of standards will also provide a level playing field between generators in different parts of GB compared to the current situation in which a generator in, say, Carlisle has different connection requirements and standards to one in , say, Glasgow and yet another set for one located in, say, Inverness.
(iii) Subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in the national electricity transmission system operator area taken as a whole;	**Positive** The creation of a harmonised set of standards would ensure that changes to standards are managed in a controlled, open and transparent manner and ensure that where a clear action to improve a standard is discovered, it can be applied across the country at the same time.
(iv) To efficiently discharge the obligations imposed upon the licensee by this license* and to comply with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency; and	**Positive** The EU Connection Codes derive from the Third Energy Package legislation which is focused on delivering security of supply; supporting the connection of new

	renewable plant; and increasing competition to lower end customer costs. This proposal ensures harmonised rules for grid connection for power-generating modules, demand and HVDC assets are set out in order to provide a clear legal framework for grid connections, facilitate Union-wide trade in electricity, ensure system security, facilitate the integration of renewable electricity sources, increase competition and allow more efficient use of the network and resources, for the benefit of consumers. Furthermore, this modification ensures Gb compliance with EU legislation in a timely manner and does so in a way that is not more stringent than EU law permits.
(v) To promote efficiency in the implementation and administration of the Grid Code arrangements	**Positive** Applying harmonised rules for grid connection for power-generating modules, demand and HVDC assets reduces the administrative costs and burden for Users (in being able to seek connection on the basis of a uniform approach) and the System Operator (when assessing compliance) in the administration of the Grid Code arrangements.

** See Electricity System Operator Licence*

When will this change take place?

Implementation date:

Within 10 Business Days of an Authority Decision.

Date decision required by

TBC

Implementation approach

No system changes are required to implement this proposal.

Interactions

☐CUSC	☐BSC	☐STC	☐SQSS
☐European Network Codes	☐ EBR Article 18 T&Cs[1]	☐Other modifications	☐Other

None identified.

Acronyms, key terms and reference material

Acronym / key term	Meaning
BSC	Balancing and Settlement Code
CATO	Competitive Appointed Transmission Owner
CUSC	Connection and Use of System Code
DC	Direct Current
DCC	Demand Connection Code
EBR	Electricity Balancing Regulation
EU	European Union
GB	Great Britain
GC	Grid Code
GCDP	Grid Code Development Panel
HVDC	High Voltage Direct Current

NETS	National Electricity Transmission System
NRA	National Regulatory Authority
OFTO	Offshore Transmission Owner
RfG	Requirements for Generators
STC	System Operator Transmission Owner Code
SQSS	Security and Quality of Supply Standards
T&Cs	Terms and Conditions