

Grid Code Review Panel
Relevant Electrical Standards
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Summary

For any directly connected User, the current Bilateral Connection Agreement refers to both the Relevant Electrical Standards (RES) and certain National Grid Technical Specifications (NGTS¹). This is either as a result of the RES not reflecting the latest status of the NGTS or the NGTS was not originally included within the RES.

This paper seeks to update the Panel on National Grid's plans to update the RES in line with the process set out in GC.11 which will minimise the references to NGTS¹ in future revisions of the Technical Appendices.

Users Impacted

All User's with a direct connection to the National Electricity Transmission System.

Medium

Directly connected Generators, Directly Connected Customers Distribution Network Operators, and Interconnectors.

Description & Background

Section CC.6.2.1.2 of the Grid Code refers to the technical specifications that applies to User's equipment located within National Grid's busbar protection zone at the Connection Point. In summary, the requirement defines that the equipment specifications that shall apply to User's Plant and Apparatus located within National Grid's busbar protection zone shall be defined in the Bilateral Agreement.

Historically, any equipment specifications that National Grid required of the User were specified through National Grid's Technical Specifications (NGTS¹) which were specified in the Bilateral Connection Agreement. The disadvantage of this approach being that National Grid's Technical Specifications were not subject to the Grid Code Governance process.

To address this concern, the key NGTS¹ were placed into one common document – referred to as the Relevant Electrical Standards (RES) and available on the National Grid website at:-

http://www.nationalgrid.com/NR/rdonlyres/EDA159FE-E9C9-4686-A16C-3B0390A08432/5528/RES_FinalIssue1090106.pdf

The advantage of this approach being that the RES would be subject to the full governance process of the Grid Code, but equally the standards would refer to the

¹ The Code Administrator will provide the paper reference following submission to National Grid.

technical specifications that National Grid require of User's plant without including other factors required specifically for National Grid such as maintenance and health and safety issues.

Following the publication of the RES, the Bilateral Connection Agreements were changed such that references to National Grid's Technical Specifications were replaced by references to the Relevant Electrical Standards (RES).

In order to keep the Bilateral Agreements in line with current requirements, National Grid has made reference to some of the NGTS's in the Bilateral Connection Agreements either where the current RES is out of date or where the NGTS was not originally specified in the RES in 2005 (for example Dynamic System Monitoring).

National Grid has recently undertaken an extensive internal review of the RES. These changes together with some additional minor amendments are due to be finalised over the next few months with the aim of publishing the changes to Panel Members by March 2014 in accordance with the requirements of GC.11.

The process for updating the RES is set out in GC.11. In order for NGET to update the RES, the proposed changes with a covering paper must be sent to Panel members. If no objections are raised within 20 Business days, the changes are deemed approved. If there are any objections, or the notifier requests it, the proposal is included in the agenda for the following Panel meeting. If there is a broad consensus at the Panel meeting in favour of the proposal, NGET will make the proposed changes. If there is not, a consultation of Authorised Electricity Operators is required which may be preceded by the establishment of a working group.

For connections in Scotland, the specifications would either reference the Scottish Electrical Standards or Relevant Electrical Standards which are governed by the same GC.11 process.

Proposed Solution

The proposed solution falls into two parts:-

- 1) Update the Relevant Electrical Standards so they are fully consistent with National Grid's Technical Specifications in accordance with GC.11. Proposals will be circulated by 5 February 2014, allowing 20 Business days before publication of the GCRP agenda for the March 2014 meeting. In addition, future updates to relevant NGTS' will be incorporated into the RES in accordance with GC.11.
- 2) Update the generic technical appendices (Appendix F) to remove unnecessary references to NGTS'.

Assessment against Grid Code Objectives

The proposed changes to the Grid Code better facilitate the following Grid Code Objectives:-

- (i) ***to permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity;***
Provides greater clarity to User's with a direct connection to the National Electricity Transmission System.

(ii) to facilitate 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);

Provides a level playing field to Users connected directly to the Transmission System and the technical specifications of the equipment they need to supply.

(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; and

Improved security is enhanced through a common set of specifications and standards.

(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.

Achieved through satisfying the latest and most up to date standards which are subject to the full governance process.

Impact & Assessment

Impact on the National Electricity Transmission System (NETS)

None

Impact on Greenhouse Gas Emissions

None

Impact on core industry documents

None

Impact on other industry documents

The Relevant Electrical Standards and future Bilateral Connection Agreements.

Supporting Documentation

Have you attached any supporting documentation Yes

If Yes, please provide the title of the attachment: Extract from GC11 of the Grid Code

Recommendation

The Grid Code Review Panel is invited to:

Note the issue for information only

APPENDIX 1 – EXTRACT FROM THE GENERAL CONDITIONS

GC.11 GOVERNANCE OF ELECTRICAL STANDARDS

GC.11.1 In relation to the **Electrical Standards** the following provisions shall apply.

- GC.11.2 (a) If a **User**, or in respect of (a) or (b) to the annex, **NGET**, or in respect of (c) or (d) to the annex, the **Relevant Transmission Licensee**, wishes to:-
- (i) raise a change to an **Electrical Standard**;
 - (ii) add a new standard to the list of **Electrical Standards**;
 - (iii) delete a standard from being an **Electrical Standard**,
- it shall activate the **Electrical Standards** procedure.
- (b) The **Electrical Standards** procedure is the notification to the secretary to the **Panel** of the wish to so change, add or delete an **Electrical Standard**. That notification must contain details of the proposal, including an explanation of why the proposal is being made.

GC.11.3 Ordinary Electrical Standards Procedure

- (a) Unless it is identified as an urgent **Electrical Standards** proposal (in which case GC.11.4 applies) or unless the notifier requests that it be tabled at the next **Panel** meeting, as soon as reasonably practicable following receipt of the notification, the **Panel** secretary shall forward the proposal, with a covering paper, to **Panel** members.
- (b) If no objections are raised within 20 Business Days of the date of the proposal, then it shall be deemed approved pursuant to the **Electrical Standards** procedure, and **NGET** shall make the change to the relevant **Electrical Standard** or the list of **Electrical Standards** contained in the Annex to this GC.11.
- (c) If there is an objection (or if the notifier had requested that it be tabled at the next **Panel** meeting rather than being dealt with in writing), then the proposal will be included in the agenda for the next following **Panel** meeting.
- (d) If there is broad consensus at the **Panel** meeting in favour of the proposal, **NGET** will make the change to the **Electrical Standard** or the list of **Electrical Standards** contained in the Annex to this GC.11.
- (e) If there is no such broad consensus, including where the Panel believes that further consultation is needed, **NGET** will establish a **Panel** working group if this was thought appropriate and in any event **NGET** shall undertake a consultation of **Authorised Electricity Operators** liable to be materially affected by the proposal.
- (f) Following such consultation, **NGET** will report back to **Panel** members, either in writing or at a **Panel** meeting. If there was broad consensus in the consultation, then **NGET** will make the change to the **Electrical Standard** or the list of **Electrical Standards** contained in the Annex to this GC.11.
- (g) Where following such consultation there is no broad consensus, the matter will be referred to the **Authority** who will decide whether the proposal should be implemented and will notify **NGET** of its decision. If the decision is to so implement the change, **NGET** will make the change to the **Electrical Standard** or the list of **Electrical Standards** contained in the Annex to this GC.11.
- (h) In all cases where a change is made to the list of **Electrical Standards**, **NGET** will publish and circulate a replacement page for the Annex to this GC covering that list and reflecting the change.

GC.11.4

Urgent Electrical Standards Procedure

- (a) If the notification is marked as an urgent **Electrical Standards** proposal, the **Panel** secretary will contact **Panel** members in writing to see whether a majority who are contactable agree that it is urgent and in that notification the secretary shall propose a timetable and procedure which shall be followed.
- (b) If such members do so agree, then the secretary will initiate the procedure accordingly, having first obtained the approval of the **Authority**.
- (c) If such members do not so agree, or if the **Authority** declines to approve the proposal being treated as an urgent one, the proposal will follow the ordinary **Electrical Standards** procedure as set out in GC.11.3 above.
- (d) If a proposal is implemented using the urgent **Electrical Standards** procedure, **NGET** will contact all **Panel** members after it is so implemented to check whether they wish to discuss further the implemented proposal to see whether an additional proposal should be considered to alter the implementation, such proposal following the ordinary **Electrical Standards** procedure.

ANNEX TO THE GENERAL CONDITIONS

The **Electrical Standards** are as follows:

- (a) **Electrical Standards** applicable in England and Wales

The Relevant Electrical Standards Document	Issue 1.0	09-Jan-2006
Control Telephony Electrical Standard	Issue 1.0	17-Sept-2007

- (b) The following specifications for electronic data communications facilities with reference to EDT and EDL facilities.

EDT Interface Specification	Issue 4
EDT Submitter Guidance Note	Dec-01
EDL Message Interface Specifications	Issue 4
EDL Interface Specification Guidance Note	Oct-01
EDL Instruction Interface Valid Reason Codes	Issue 2

- (c) Scottish **Electrical Standards** for **SPT's Transmission System**.

SPTTS 1	Requirements for the SP Transmission System and Connection Points to it.	Issue 1
SPTTS 2.1	Substations	Issue 1
SPTTS 2.2	Switchgear	Issue 1
SPTTS 2.3	Transformers and Reactors	Issue 1
SPTTS 2.5	Cables	Issue 1
SPTTS 2.6	Protection	Issue 1
SPTTS 2.7	Substation Control Systems	Issue 1
SPTTS 2.12	Substation Auxiliary Supplies	Issue 1

(d) Scottish **Electrical Standards** for **SHETL's Transmission System**.

1. NGTS 1: Rating and General Requirements for Plant, Equipment, Apparatus and Services for the National Grid System and Direct Connection to it. Issue 3 March 1999.
2. NGTS 2.1: Substations
Issue 2 May 1995
3. NGTS 3.1.1: Substation Interlocking Schemes.
Issue 1 October 1993.
4. NGTS 3.2.1: Circuit Breakers and Switches.
Issue 1 September 1992.
5. NGTS 3.2.2: Disconnectors and Earthing Switches.
Issue 1 March 1994.
6. NGTS 3.2.3: Metal-Oxide surge arresters for use on 132, 275 and 400kV systems.
Issue 2 May 1994.
7. NGTS 3.2.4: Current Transformers for protection and General use on the 132, 275 and 400kV systems.
Issue 1 September 1992.
8. NGTS 3.2.5: Voltage Transformers for use on the 132, 275 and 400 kV systems.
Issue 2 March 1994.
9. NGTS 3.2.6: Current and Voltage Measurement Transformers for Settlement Metering of 33, 66, 132, 275 and 400kV systems.
Issue 1 September 1992.
10. NGTS 3.2.7: Bushings for the Grid Systems.
Issue 1 September 1992.
11. NGTS 3.2.9: Post Insulators for Substations.
Issue 1 May 1996.
12. NGTS 2.6: Protection
Issue 2 June 1994.
13. NGTS 3.11.1: Capacitors and Capacitor Banks.
Issued 1 March 1993.