

GC0102 EU Connection Codes GB Implementation – Mod 3

Industry parties are invited to respond to this consultation expressing their views and supplying the rationale for those views, particularly in respect of any specific questions detailed below.

Please send your responses by **5pm on Thursday 9th November 2017** to grid.code@nationalgrid.com. Please note that any responses received after the deadline or sent to a different email address may not receive due consideration by the Workgroup.

Any queries on the content of the consultation should be forwarded to grid.code@nationalgrid.com with subject clearly stating 'GC0102 Consultation Query'

Respondent:	<i>Alan Creighton</i> <i>alan.creighton@northernpowergrid.com</i>
Company Name:	<i>Northern Powergrid</i>
Please express your views regarding the Workgroup Consultation, including rationale. (Please include any issues, suggestions or queries)	<p><i>For reference, the Grid Code objectives are:</i></p> <ul style="list-style-type: none"> i. To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity 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) 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 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 v. To promote efficiency in the implementation and administration of the Grid Code arrangements

Standard Workgroup Consultation questions

Q	Question	Response
1	Do you believe that GC0102 Original Proposal, or any potential alternatives for change that you wish to suggest,	Given the legal necessity of implementing the RfG we agree that the GC0102 proposals better facilitate both the Grid and Distribution Code objectives. However,

	better facilitates the Grid Code Objectives?	running with three separate modifications may not be the best way to proceed given their interaction. For example the modification considering banding could have implications for GC0102. Combining the modifications may also make it easier for users to assess the proposed changes in their totality. There would be merit in reviewing the most efficient way forwards.
2	Do you support the proposed implementation approach?	Yes
3	Do you have any other comments?	No
4	Do you wish to raise a WG Consultation Alternative Request for the Workgroup to consider?	No

Specific GC0102 Consultation Questions

Q	Question	Response
5	Do you have any comments on the structure of the proposed relationship between the D Code, G59 and G83, and G98 and G99? In particular which of the three options in Section 3.2 of this consultation do you support and why?	We believe that on balance, Option Three, which emerged from recent stakeholder discussion, is the best solution if only because it relates more closely to the present document structure and should therefore be easier for stakeholders to follow.
6	Do you agree with the organization of G99 and how it applies to the different Types of generation? Do you have any alternative suggestions for structure?	The current structure of G99 does seem to be reasonably logical and clear although it may be possible to provide additional clarity by incorporating some of the structural diagrams from the GC0102 consultation and a diagram showing the relationship between Power Generating Facility, Power Generation Modules etc. Further descriptions of the scenarios where the GCode requirements apply to Medium may help, recognising that a Medium may comprise multiple Type A synchronous generators.
7	Do you agree with the current view of how the Grid and Distribution Codes	We agree with the interpretation as set out in the draft EREC G99 and that the examples are helpful. We

	(and G98 and G99) will be applied to installations where new PGMs are installed alongside existing pre-RfG equipment? (see page 11)	have provided some editorial comments on the table. It will be important to ensure that these examples are fully accepted as illustrative of the legal situation that will apply in such cases by all stakeholders, including Ofgem and BEIS, particularly as there are some situations where increased technical requirements may be applied to plant already connected.
8	Do you agree on the introduction of a Preliminary Operation Notification relating to the Compliance process for Transmission connected Type B and Type C PGMs? (See <i>Workgroup discussions section</i>)	We can see the benefits of recording formally the fact that a PGM is connected to the transmission system, and although we have yet to see a draft PON, we would not envisage this to be an onerous requirement.
9	Do you agree with the retaining of the current GB arrangements for automatic connection and reconnection and the logic for it? If not, what alternative should be proposed? (see section 4.1.2.2)	Yes, although we appreciate that there may be a requirement to review this position in the future. We have provided some editorial comment on the legal text e.g. that further clarity of the requirements may be helpful, for example, where there is a Embedded Medium Power Station that comprises multiple Type B PGMs.
10	Do you consider any parts of the proposed compliance, simulation or testing requirements for distribution-connected generators to be disproportionately onerous? (See section 5.2.5)	DNOs, via the ENA ,are working with small generators to develop the compliance processes which will be incorporated in the new EREC G98 and G99
11	Do you agree it is appropriate to drop the designation Large and Small from the Distribution Code as proposed in section 3.3.1 of this consultation? Do you believe it is appropriate to drop the designation Large, Medium and Small from the Grid Code?	We had understood that the intention was to remove the concept of Large, Medium and Small Power Stations from the Grid Code and Distribution Code, however we appreciate to complexities associated with doing this particularly as Large, Medium and Small are based on power station capacities, whilst Types A-D may based on the capacity of individual generating units. Retaining the concept of Large, Medium and Small for commercial and regulatory purposes whilst basing the technical requirements on Type A-D could be confusing for stakeholders, but given the extent of the potential changes and timescales involved we accept the current proposal
12	Do you have any comments on the draft requirements for fault recording equipment for distribution-connected Type C PGMs as drafted in Section 13.11 and Appendix C3 of G99?	We are still reviewing this internally and will provide feedback to the drafting team as soon as possible.

13	Do you agree that it is appropriate to include storage in G98 and G99, noting that as storage is explicitly excluded from the RfG, the technical requirements that arise solely from the RfG are not applied to storage in G09 and G99?	We currently apply the principles of EREC G83 and G59 when designing battery storage connections and believe it is appropriate to clarify that the scope of the new documents includes storage. Recognising that there are currently industry debates on the treatment of storage we think that it is reasonable to exclude the specific RfG requirements from applying to storage as set out in Appendix 5 pending further debate.
14	Do you agree that it is appropriate to include Type A PGMs <800W in capacity in G99, noting that those technical requirements that emanate from the RfG are not applied to PGMs <800W?	Yes, the use of a common set of documents simplifies the connection process for stakeholders and the proposals explicitly exclude the RfG requirements from applying to units <800W.
15	If you do not consider the proposed solution to sufficiently harmonise the connection requirements for new parties connecting to the transmission and distribution networks, how would you propose this to be addressed? (See <i>Workgroup discussions section</i>)	Whilst we recognise that more can always be done to increase harmonisation, the development of both the Grid and Distribution Code requirements has been done jointly, with stakeholders, and as far as is practicable the requirements are the same.
16	G98 and G99 include specific requirements for power quality, harmonic compliance etc. Do you believe it should be possible to use other international standards or requirements to achieve these ends such that these specific requirements can be dropped from these documents? An explanation of your views would be useful.	It is important that PGMs should comply with international power quality standards, but we are open as to the best way for compliance to be demonstrated.
17	Do you agree that the explanation of type testing, both full and partial, and the inclusion of equipment certificates, is sufficiently clear and unambiguous in G99 drafting? Please make any suggestions that could add clarity.	We agree that the concept of full and particle type testing but note that whilst reliance on compliance evidence information from manufactures is a pragmatic solution, this is not as robust as compliance been certified by independent test houses in the form of equipment certificates. We have provided some comment on the legal text that should improve clarity.
18	The application of new technical requirements to non-type tested generation connecting to distribution networks will give rise to new processes etc. Please comment on how comprehensive the coverage of this is in the current drafting of G99 and please suggest any improvements	We will continue to work with other DNOs, the ENA and stakeholders to refine and improve the connection processes and drafting of G99 in order to simplify and clarify the process as far as possible.
19	Do you have any views on how the data and information required and articulated within G99 can or should relate to the Distribution Data Registration Code in the Distribution Code?	We believe that the DDRC should detail the data that should be available the DNO, and are open to suggestion from stakeholders on the best vehicle for facilitating the data exchange as part of the connection and compliance process.

20	Do you believe that this modification helps to promote transparency across the Industry and if not which areas should be improved? (see <i>Workgroup discussions section</i>)	The changes proposed in this and the associated consultation will help to add transparency to the implementation of the RfG. Given the extent of the documentation, it's inevitable that areas will emerge where further clarification or explanation is required once the new documentation is implemented. We therefore envisage the need for regional and national dissemination and that further changes to the Grid Code and Distribution Code.
----	--	--

Legal drafting questions

Q	Question	Response
21	The Proposed draft Grid Code legal text contains a number of comments incorporating both internal and workgroup comments. Please feel free to provide further comment on the documents (Annex 1-5)	<p>ECC General</p> <p>It's unclear whether a Network Operator in respect to an existing Distribution Network connected to an Existing GSP should comply with the ECC requirements or CC requirements or both. The proposed definition of New User implies that it only relates to a 'new network operator'. ECC3.1 (d) suggest that the ECC apply to Network Operators who don't comply with the conditions set out in ECC3.6, yet ECC3.6 doesn't set out any criteria – rather it states the it applies to Network Operators Systems. Furthermore many of the obligations set out in ECC seem to relate to Network Operators rather than Network Operators Systems and do seem to duplicate those in the CC. We had assumed that a Network Operator would only need to comply with the ECC as part of the connection of a new Distribution System. New User is a newly defined term; we have seen a copy of the proposed definition (which isn't included in the consultation pack) but we're not convinced that this definition aligns with ECC3.1</p> <p>ECC6.2.3.6. This new text suggests that NGET and the DNO should agree the protection scheme and settings at the GSP. In accordance with the principles in RES, the details of the protection scheme forming part the busbar protection schemes should be agreed between the DNO and NGET; however the protection scheme for equipment outside the scope of the busbar protection scheme (e.g. on the outgoing feeders) should be established by the DNO alone provided that settings can be applied which properly co-ordinate and discriminate with NGETs protection.</p>

		<p>ECC6.2.3.7 As above the need to agree changes should not include changes to the protection scheme outside the busbar protection zone.</p> <p>ECC6.2.3.10 Further details are required in relation to the synchronisation obligation. The DNO has no means of 'synchronising' and can only prevent closure of circuit breakers where the parameters either side of an open point are outside pre-defined parameters.</p> <p>ECC6.5.6.1 As drafted NGET require 'visibility of the real time output and status of indications of User's Plant and Apparatus so they can control the operation of the System' which would include DNOs plant and equipment as a 'User'. Is this the intention?</p> <p>ECC6.5.6.3 At the moment DNOs don't provide operating metering signals - metering is provided by NGETs FMS. Is the intention for NGET not to specify any additional requirements in the DNOs BCA?</p> <p>ECC.A5.4.1 The details of the LFDD scheme is an example where clarification is required on whether a DNO should comply with ECC.A5.4.1 or CC.A.5.4.1. Is reconnection only permitted in accordance with the requirements of ECC6.2.3.10 or CC6.2.3.10?</p> <p>EDRC General</p> <p>As per the proposed draft ECC, it's unclear whether a Network Operator in respect to an existing Distribution Network connected to an Existing GSP should comply with the DRC requirements or EDRC requirements or both.</p>
22	Do you have any views on the structure of the Grid Code drafting for System Management and Compliance? (Annex 1-5)	
23	Are there are any areas in the Grid Code or Distribution Code drafting which you do not believe reflect the requirements of the RfG or HVDC Codes and, if so, why do you believe they are deficient? (Annex 1-9)	This assessment will be easier once the compliance mapping table is available.
24	Please make any other comments on the legal text drafting for the Distribution	We have provided comments embedded in copies of

	Code, G98 and G99 using the appropriate templates issued with this consultation.	the consultation documents.
--	--	-----------------------------