

## 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 9<sup>th</sup> November 2017** to [grid.code@nationalgrid.com](mailto: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](mailto:grid.code@nationalgrid.com) with subject clearly stating 'GC0102 Consultation Query'

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

## 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, better facilitates the Grid Code Objectives?	Given the legal necessity of implementing the RfG we agree that the GC0102 proposals better facilitate both the Grid and Distribution Code objectives. We would suggest however that going forward running GC0102 separately from GC0100 and GC0101 is not the most efficient approach and would suggest combining the three
2	Do you support the proposed implementation approach?	Yes – although as above we believe it would be more efficient to combine the three modifications now. We acknowledge the amount of work that has gone into GC0102 and the associated GC0100 and GC0101, and are pleased to see these are now progressing. Since these modifications are interlinked and cannot be considered in isolation, we believe there is no merit in continuing with the three separate mods. The legal text also needs to be considered as a whole, complete with all the changes to definitions, (e.g. worked in throughout the whole of the Grid Code and not just the Connection Conditions). On this basis we recommend that you suspend work in GC0100 and GC0101 and find a way to move the consideration of these issues into GC0102.
3	Do you have any other comments?	We note that work is ongoing in developing both G98 and G99, and there are a number of questions still to be answered. We would look to the ongoing work in this area to provide sufficient clarity on both the requirements for customers and network operators. We acknowledge, agreement in principle with regards to format and layout of the documents
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?	<p>We are aware of the significant discussions on how to best present the GB requirements to GB stakeholders, recognizing the differences in connection application process for different sizes of generating equipment, the different needs of stakeholders, and the influence of existing and emergent European Standards. In terms of the D Code, we would expect it to be limited in terms of technical content, with reference being made in the main to G98/G99 (G83/G59).</p> <p>We believe that Option 3, post recent discussions with stakeholders, is the best compromise. It has the benefit of being the simplest division of documents for new installations compared to existing, in that micro generation (i.e. less than 16A per phase) will refer only to G98 (G83 for existing) and all other generation will refer to G99 (G59 for existing).</p>
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?	We note the continued development of the structure of G99 and note that more interaction with stakeholders is planned to refine the approach. We believe that the current draft represents a good basis.
7	Do you agree with the current view of how the Grid and Distribution Codes (and G98 and G99) will be applied to installations where new PGMs are installed alongside existing pre-RfG equipment? (see page 11)	This is a very important practical point and we are pleased to see that some clear examples have been laid out in 6.1.5 of G99. 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.
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</i> section)	In principle yes, for smaller generators we believe that it should be presented as either (or both) a relaxation on the full EON/ION/FON process or as a formalization of something that happens anyway, but not codified.
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	Yes. Pending any decisions to change the fundamental approach in GB, the status quo should be maintained.

	proposed? (see section 4.1.2.2)	
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)	We acknowledge the approach in using an already well developed process for transmission connected plant, however further work is required with stakeholders to examine the requirements in more detail.
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 believed that National Grid would look to remove this categorisation in lieu of the changes proposed by the EU codes, subsequently removing any regional differences. There is concern that this may add unnecessary complexity going forward. Given the imminence of the compliance deadlines, we agree that it's now inappropriate to try and move away from the status quo. Nevertheless we support the removal of the terms Large and Small from the Distribution Code, noting that it is necessary to retain Medium classification to cater for LEEMPS applications.
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 have contributed to the drafting of this new specification and await stakeholder feedback.
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 understand how difficult it would be for Ofgem to approve an approach that applied the new GB documentation to storage, given it is explicitly excluded from the RfG. We believe the exclusion of storage is fundamentally wrong, but recognize that we have essentially no choice in law. We agree with the approach to include storage within G98 and G99 in terms of the connection process etc., excluding the RfG specific requirements.
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	We would suggest before committing <800W schemes to G99 further work is done to assess the inclusion of <800W schemes in G98 as opposed to G99. Since G98 deals solely with

	applied to PGMs <800W?	micro-generators this may be a more pragmatic approach. We acknowledge that the drafting specifically excludes the RfG provisions from applying to these technologies.
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 recognize that more can always be done to increase harmonization, 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.	We believe it is an absolute requirement that generating equipment should meet relevant PQ standards. Further work is required to ensure that manufacturers are aware of their obligations and that their equipment is compliant.
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 think there are significant efficiencies to be gained from manufacturers' type testing, and the use of equipment certificates in the future. We believe that the requirements in G98 and G99 form a good basis for continuing discussions with manufacturers to refine and improve processes. We would also want to see further clarity around the requirements for witness testing installations.
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 are continuing to work with other DNOs, the ENA and stakeholders to refine and improve the processes and drafting of G99.
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?	This is an area for further examination and where we would welcome feedback from other stakeholders.
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> )	We are only too aware what a significant body of documentation this process is producing, as it tries to make plain the existing and new requirements in a coherent form. We see the

		need for significant engagement and education for stakeholders over the coming months/years. We believe there is a place for a set of documents summarising key requirements. These need to be developed over time with key stakeholders.
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## 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)	No comments at this time
22	Do you have any views on the structure of the Grid Code drafting for System Management and Compliance? (Annex 1-5)	No comments at this time
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)	No comments at this time
24	Please make any other comments on the legal text drafting for the Distribution Code, G98 and G99 using the appropriate templates issued with this consultation.	No comments at this time