

Workgroup Consultation Response Proforma**GC0147: Last resort disconnection of Embedded Generation – enduring solution**

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 to grid.code@nationalgrideso.com by **5pm** on **27 November 2020**. Please note that any responses received after the deadline or sent to a different email address may not receive due consideration by the Workgroup.

If you have any queries on the content of this consultation, please contact **Nisar Ahmed**, Nisar.Ahmed@nationalgrideso.com or grid.code@nationalgrideso.com

Respondent details	Please enter your details
Respondent name:	Alan Creighton
Company name:	Northern Powergrid
Email address:	alan.creighton@northernpowergrid.com
Phone number:	07850 015515

For reference the Applicable Grid Code Objectives are:

- a) *To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity*
- b) *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);*
- c) *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;*
- d) *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*
- e) *To promote efficiency in the implementation and administration of the Grid Code arrangements*

Please express your views regarding the Workgroup Consultation in the right-hand side of the table below, including your rationale.

Standard Workgroup Consultation questions		
1	Do you believe that the GC0147 Original Proposal better facilitates the Applicable Grid Code Objectives?	Yes. This proposal better facilitates Grid Code objective (c) because it will give NGENSO the clear ability to instruct DNOs to reduce the Active Power from embedded generation in an emergency situation.
2	Do you support the proposed implementation approach?	Yes. It is important to ensure that a replacement for GC0143 is in place before the summer of 2021.
3	Do you have any other comments?	No.
4	Do you wish to raise a Workgroup Consultation Alternative Request for the Workgroup to consider?	No.
Specific GC0147 Workgroup Consultation questions		
5	How can it be ensured that all reasonable commercial alternatives have been pursued first before emergency instructions are used as a last resort?	NGESO would be best placed to provide the reassurance required by stakeholders. At various stakeholder presentations Northern Powergrid representatives have seen tables of actions that NGENSO would take in these circumstances with embedded generation control being the last measure to implement.
6	Are there any further alternatives to emergency disconnection that have not been considered?	<p>NGESO would be best placed to respond, but there is distinct possibility that the use of the ODFM product and the future use of Dynamic Containment provide sufficient commercial services such that this 'last resort' facility may never be used. However it does seem reasonable to put these arrangements in place to cover for such an eventuality.</p> <p>We also note that these revised arrangements enable the output of an embedded power station to be reduced by agreement with a Generator, where time permits, in addition to disconnection / de-energisation, which could reduce the impact on customers in some situations.</p>
7	In terms of possible safety implications of	The connection agreements offered by Northern Powergrid do not offer a guarantee of continuous

	disconnection, are there any specific risks in relation to this solution? What is the additional risk?	electricity supply and it is for customers to determine the resilience of their connection arrangement and have appropriate business continuity plans in place to deal with the consequences of an interruption to their electricity supply from whatever cause. Therefore, we are of the view that disconnection / de-energisation of an embedded power station should not give rise to any material safety implications.
8	How should embedded generators that are not participants in the balancing mechanism be compensated for emergency control actions including disconnection? Is it your opinion that they should be compensated?	Northern Powergrid does not consider that compensation for disconnection / de-energisation is appropriate for emergency instructions of this type. There is no current mechanism and no available finance for compensation of this type from DNOs. Northern Powergrid will however support any future discussions for a compensation arrangement and the source of finance as required together with any associated industry Code changes.
9	What mechanism could compensation be achieved by?	Please see our response to question 8.
10	Would modifications to any other GB Codes be required? [for example, imbalance and cash-out arrangements in the BSC, arrangements with DNOs, suppliers or embedded generators in the CUSC and DCUSA)	Please see our response to question 8.
11	Is compensation a requirement of the Clean Energy Package legislation? Please expand where possible on why or why not.	Northern Powergrid does not consider that the Clean Energy Package legislation applies to emergency instructions of this type.
Form/Implementation of instructions		
12	What form should an instruction take? (eg % or MW; registered capacity or active	Given the potential short timescale to implement such instructions, we believe that it is appropriate to include two means of implementing embedded generation control as proposed; one based on registered capacity and a second based on an

	power output)	<p>informed understanding of active power output.</p> <p>A default option, based on registered capacity is necessary for ultimate compliance with the Grid Code, however, to avoid disconnecting / de-energising customers unnecessarily, and if time allows, it is important to have the option to focus on those embedded generation control actions that will improve the overall system situation and minimise the implications for customers; this would allow any default actions to be amended accordingly based on the prevailing circumstances.</p> <p>Northern Powergrid therefore believes that the instruction should be in the form of the MW active power output reduction which needs to be achieved, whilst leaving the Network Operator to establish the best way of implementing this in the time available.</p> <p>The current wording in the proposed legal text addresses this issue by allowing a default position of embedded generation control based on registered capacity but requiring embedded generation control based on active power output to be used where practicable.</p>
13	What priority order should generators reasonably be disconnected in? Have a link in the report to the guidance note on priority order.	<p>Northern Powergrid believes that the order of disconnection / de-energisation needs to focus on those actions that will improve the situation, i.e. prioritise generation plant that does not contribute to system inertia, e.g. non-synchronous generation. We believe that the table included in the proposed OC6B.6.1 should be included within the Grid Code legal text so that it is readily available for those implementing the instructions.</p>
14	What arrangements are necessary for restoration?	<p>Embedded generators that are subject to disconnection / de-energisation without notice normally require a site visit and specific site actions to ensure they can be re-energised in an appropriate manner. It is therefore important that once the issue on the overall system is resolved and NGENSO give permission to the DNOs for re-energisation to commence, the customer is given control of the timing of this process. Any requirement for the customer to notify the DNO or NGENSO when they are generating exists now and will continue to apply in future.</p>

15	How much of the detail of how an instruction should be implemented needs to be codified rather than in a guidance document?	<p>Northern Powergrid believes that the detail of the implementation of the instruction needs to be flexible to allow the relevant Control Centres to take the most appropriate steps based on the prevailing conditions and the information that they have available at the time.</p> <p>However, we think it is important that the priority order of embedded generation control is included in the Grid Code, rather than being in a guidance note, and are of the view that this would be the default means of implementation unless other factors are relevant for a particular incident.</p>
Legal Text		
16	Do you agree with the proposed Grid Code legal text? Please provide the rationale for your response and any specific comments.	<p>We have a significant number of comments on the proposed legal text and have in most cases suggested alternative text that provides clarity on the application of emended generation control. We also note that there remain some inappropriate clauses in OC6.B relating to OC6 that should be removed. Our comments on proposed legal text and our suggested changes to the legal text is included in marked up pdf consultation documents which forms an integral part of this consultation response.</p> <p>In addition to the parts of the Grid Code included in the WG Consultation, the opportunity should be taken to remove the text in BC2.9.3.3 (f) which was added by GC0143, but is not applicable after 25 October 2020. We note that the proposed drafting of OC6.B does not allow NGENSO to issue emergency instructions to disconnect specific power stations (only to issue instructions to a Network Operator to implement embedded generation control – where the Network Operators has an option whether to implement this either by embedded generation disconnection or by ‘fast deloading’. To retain this element of GC0143, there may be merit in revising BC2.9.3.3 (e) to read:</p> <p>an instruction to disconnect an item of Plant or Apparatus from the System. For the avoidance of doubt, this includes the disconnection of Embedded Power Station(s) connected to the Network Operator’s System.</p>

		<p>Further changes to BC2.9.3.3 may be required to clarify that disconnection via BC2.9.3.3 is only applicable when OC6.B is not applicable e.g. when there is an emergency issue associated with an embedded generator other than one associated with its export.</p> <p>We are mindful of the limited time between the WG Consultation closing and the Code Administrators Consultation being issued, but it is important that the issues raised with the legal text and suggestions offered are properly considered before the Code Administrator's Consultation is issued. Northern Powergrid is willing to work with the Proposer to develop the legal text.</p>
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