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Grid Code Modification Proposal Form

GC0173:
Consistency of Technical and Compliance Requirements between GB and European Users

Overview: This modification is designed to ensure alignment between the Grid Code Connection Conditions and European Connection Conditions and interactions with the Compliance Processes and European Compliance Processes in addition to a data clarification in the Planning Code in respect of thermal storage technologies.

Modification process & timetable

1. **Proposal Form**
   22 May 2024
2. **Workgroup Consultation**
   10 February 2025 – 03 March 2025
3. **Workgroup Report**
   16 July 2025
4. **Code Administrator Consultation**
   30 July 2025 – 30 August 2025
5. **Draft Final Modification Report**
   17 September 2025
6. **Final Modification Report**
   07 October 2025
7. **Implementation**
   10 business days following decision

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

The ESO, Grid Code Users, Transmission Licensees

Modification drivers: Efficiency, Governance and Transparency

Proposer's recommendation of governance route	Standard Governance modification with assessment by a Workgroup	
Who can I talk to about the change?	**Proposer:** Antony Johnson Antony.Johnson@nationalgrideso.com 07966 734856	**Code Administrator Contact:** Lizzie Timmins Elizabeth.timmins@nationalgrideso.com

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What is the issue?

This modification is designed to ensure alignment between the Grid Code Connection Conditions and European Connection Conditions, in addition to interactions with the Compliance Processes and European Compliance Processes. This modification aims to ensure consistency with the EU Connection Codes (namely Requirements for Generators (RfG), Demand Connection Code (DCC) and HVDC Network Code (HVDC) and Engineering Recommendation G99.

As part of this modification, it is also proposed to remove some of the data currently requested in respect of thermal storage technologies.

Why change?

As currently drafted, there are inconsistencies between the requirements in the Connection Conditions as applicable to GB Code Users and European Connection Conditions as applicable to EU Code Users.

In addition, the Compliance Processes and European Compliance Processes that detail how Users are required to demonstrate their ability to satisfy the requirements of the Connection Conditions and European Connection Conditions will also be reviewed to ensure consistency with the proposed changes in addition to ensuring consistency with G99.

The opportunity will be taken to clarify some known material issues in the Grid Code, for example, the removal of storage data (such as thermal storage information) which has no impact on the Total System and therefore is not considered necessary.

What is the proposer's solution?

The Proposers Solution will cover the following high level issues:-

a. Propose to remove thermal storage technologies in PC.A.3.4.1 e.g., Latent Heat Storage, Thermochemical Storage and Sensible Heat Storage.
b. CC/ECC3.3.2 – Change GB Generator and EU Generator to Embedded Medium Power Station not subject to a Bilateral Agreement.
c. Updates to Frequency Sensitive Relays provided for in CC/ECC.6.3.13.
d. CC.6.3.12 prohibits the use of rate of change of frequency relays which was not carried over into the ECC's when RfG was implemented.
e. Clarification required between CC/ECC.8.1 - CC.8.1 defines Ancillary Services requirements in terms of Large and Medium Power Stations and ECC.8.1 defines the requirements in terms of Type C and Type D Power Generating Modules.
f. Amend ECC.8.1 (c) as it is contradicting ECC.8.1 (a) for directly connected Medium Power Stations.
g. Clarification for Embedded Medium Power Stations (BEGAs) defining the requirement for an MSA other than in respect of Embedded Small Power Stations (See also Grid Code Modification GC0171).
h. ECP.A.6.4 and ECP.A.6.2 - correct ECC References.
i. ECP.A.6.8.1 Reword to improve clarity.
j. Fault Ride Through: The Grid code specifies the simulation requirements in ECP.A.3.5 which includes unbalanced as well as

balanced Supergrid voltage faults. This is missing from G99 where it only asks Users to provide unbalanced fault simulations.

k. Voltage Control Testing: +-4% step injection test is missing from G99.

No changes are proposed to the Balancing Codes as a result of this modification and therefore there is expected to be no impact on the Terms and Conditions relating to Balancing Service Providers which fall under Article 18 of the Electricity Balancing Regulation ((EBR – EU Regulation 2017/2195).

Draft legal text

The Legal text will be developed as part of the Workgroup.

The high level sections of the Grid Code legal text that need to be changed are included in the "Proposers Solution" above.

What is the impact of this change?

Proposer's assessment against Grid Code Objectives	
Relevant Objective	**Identified impact**
(a) To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity	**Positive** By clarifying the Grid Code as indicated in the Proposers solution, it will improve clarity. This is marginally seen as positive.
(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);	**Positive** By clarifying the Grid Code as indicated in the Proposers solution, it will improve clarity. This is marginally seen as positive.
(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;	**Positive** By clarifying the Grid Code as indicated in the Proposers solution, it will improve clarity. This is marginally seen as positive.
(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	**Positive** As the ESO is responsible for Administration of the Grid Code, improving clarity is a key objective and therefore we see this modification positive in

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	respect of this Grid Code objective.
(e) To promote efficiency in the implementation and administration of the Grid Code arrangements	**Positive** As the ESO is responsible for Administration of the Grid Code, improving clarity is a key objective and therefore we see this modification positive in respect of this Grid Code objective.

Proposer's assessment of the impact of the modification on the stakeholder / consumer benefit categories	
Stakeholder / consumer benefit categories	**Identified impact**
Improved safety and reliability of the system	**Positive** This modification will improve clarity and ensure consistency between GB Code Users (i.e., pre European Connection Network Codes) and EU Code Users (i.e., post European Connection Network Codes). Whilst not having a direct impact on improved safety and reliability of the System, it will improve clarity which we overall see as positive.
Lower bills than would otherwise be the case	**Neutral** There will be no impact to lower Bills as a result of this modification.
Benefits for society as a whole	**Positive** The Grid Code is a complex document running to many pages. Any change which improves clarity to Stakeholders and User's is only seen as positive.
Reduced environmental damage	**Neutral** There will be no impact to environmental damage as a result of this modification.
Improved quality of service	**Positive** The Grid Code is a complex document running to many pages. Any change which improves clarity to Stakeholders and User's and hence the quality of service they receive is only seen as positive.

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When will this change take place?

Implementation date
10 business days after an Authority decision.

Date decision required by
There is no specific back stop date required for this modification. We aim to submit the final modification report to Ofgem in Q4 2025.

Implementation approach
As this modification is proposed to ensure consistency between the Connection Conditions and European Connection Conditions in addition to any wider consistency issues arising from these updates, there are not expected to be any changes to wider systems or processes, although some consideration may need to be given to Mandatory Ancillary Services Agreements in CC.8.1 and ECC 8.1.

As this modification has some overlap with Engineering Recommendation G99, it is proposed this workgroup should be considered as a combined Grid Code / Distribution Code Workgroup.

Proposer's justification for governance route
Governance route: Standard Governance modification with assessment by a Workgroup.

In view of the similarities in expertise required between GC0169 and GC0173, it is proposed to have one Workgroup covering both modifications.

Interactions

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

Distribution Code and G99

Acronyms, key terms and reference material

Acronym / key term	Meaning
BSC	Balancing and Settlement Code
CUSC	Connection and Use of System Code
DCC	Demand Connection Code Network Code (Commission Regulation (EU) 2016/1388)
EBR	Electricity Balancing Regulation
HVDC	High Voltage DC Network Code (Commission Regulation (EU) 2016/1447)
GC	Grid Code

[1] If your modification amends any of the clauses mapped out in Annex GR.B of the Governance Rules section of the Grid Code, it will change the Terms & Conditions relating to Balancing Service Providers. The modification will need to follow the process set out in Article 18 of the Electricity Balancing Regulation (EBR – EU Regulation 2017/2195). All Grid Code modifications must be consulted on for 1 month in the Code Administrator Consultation phase, unless they are Urgent modifications which have no impact on EBR Article 18 T&Cs. N.B. This will also satisfy the requirements of the NCER process.

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G99	Engineering Recommendation G99 - Requirements for the connection of generation equipment in parallel with public distribution networks on or after 27 April 2019
RfG	Requirements for Generators Network Code (Commission Regulation (EU) 2016/631)
SHETL	Scottish Hydro-Electric Transmission Limited
SHET	Scottish Hydro-Electric Transmission
STC	System Operator Transmission Owner Code
SQSS	Security and Quality of Supply Standards
T&Cs	Terms and Conditions