











Grid Code Modification Proposal Form		At what stage is this document in the process?												
<h1>GC0127:</h1> <p>Mod Title: EU Code Emergency & Restoration: Requirements resulting from System Defence Plan</p>		<table border="1"> <tr> <td>01</td> <td>Proposal Form</td> </tr> <tr> <td>02</td> <td>Workgroup Consultation</td> </tr> <tr> <td>03</td> <td>Workgroup Report</td> </tr> <tr> <td>04</td> <td>Code Administrator Consultation</td> </tr> <tr> <td>05</td> <td>Draft Grid Code Modification Report</td> </tr> <tr> <td>06</td> <td>Final Grid Code Modification Report</td> </tr> </table>	01	Proposal Form	02	Workgroup Consultation	03	Workgroup Report	04	Code Administrator Consultation	05	Draft Grid Code Modification Report	06	Final Grid Code Modification Report
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<p>Purpose of Modification: This modification seeks to align the GB Grid Code with the European Emergency and Restoration code, specifically in relation to requirements on Grid Code parties set out in the System Defence Plan that need to be implemented by 18 December 2019.</p>														
	<p>The Proposer recommends that this modification should be:</p> <ul style="list-style-type: none"> assessed by a Workgroup <p>This modification was raised 15 April 2019 and will be presented by the Proposer to the Panel on 25 April 2019. The Panel will consider the Proposer's recommendation and determine the appropriate route.</p>													
	<p>High Impact: Electricity System Operator (ESO), Transmission Owners, Generators who have signed a CUSC Contract, HVDC System Owners, DC Converter Station Owners, Network Operators, Non-Embedded Customers and BM Parties.</p>													
	<p>Medium Impact: None.</p>													
	<p>Low Impact: None.</p>													

Guidance on the use of this Template: Please complete all sections unless specifically marked for the Code Administrator. Green italic text is provided as guidance and should be removed before submission. **Contact us:** *The Code Administrator is available to help and support the drafting of any modifications, including guidance on completion of this template and the wider modification process. If you require any advice on how to fill in this form please contact the Panel Secretary e-mail: grid.code@nationalgrid.com*

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Timetable		
The Code Administrator recommends the following timetable:		
Presented to Panel	25 April 2019	
Initial consideration by Workgroup	May 2019	
Workgroup Report presented to Panel	30 July 2019	
Code Administration Consultation Report issued to the Industry	August 2019	
Draft Final Modification Report presented to Panel	26 September 2019	
Modification Panel decision	26 September 2019	
Final Modification Report issued to the Authority	11 October 2019	
Expected Authority Decision	29 November 2019	
Decision implemented in Grid Code	18 December 2019	

Proposer Details

Details of Proposer: (Organisation Name)	Rachel Woodbridge-Stocks National Grid ESO
Capacity in which the Grid Code Modification Proposal is being proposed: (e.g. CUSC Party)	Electricity System Operator
Details of Proposer's Representative: Name: Organisation: Telephone Number: Email Address:	Rachel Woodbridge-Stocks National Grid ESO 07976708078 Rachel.WoodbridgeStocks@nationalgrideso.com
Details of Representative's Alternate: Name: Organisation: Telephone Number: Email Address:	Susan Mwape National Grid ESO 07976836946 Susan.Mwape@nationalgrideso.com
Attachments (Yes/No): No If Yes, Title and No. of pages of each Attachment:	

Impact on Core Industry Documentation.

Please mark the relevant boxes with an "x" and provide any supporting information

BSC	<input type="checkbox"/>
CUSC	<input type="checkbox"/>
STC	<input type="checkbox"/>
Other	<input type="checkbox"/>

(Please specify)

This is an optional section. You should select any Codes or state Industry Documents which may be affected by this Proposal and, where possible, how they will be affected.

1 Summary

Mandatory for the Proposer to complete Please provide a summary of the modification proposed – i.e. **what** is the identified defect/change in the existing code that needs to be rectified, **why** this change needs to be made, and **how**.

Defect

The [Emergency and Restoration Code \(E&R\)](#) requires the Electricity System Operator to create a [System Defence Plan \(SDP\)](#), which National Grid ESO produced and consulted on in September 2018. There are requirements on storage providers and SGUs in the SDP that are not currently in the Grid Code and so the two need to be aligned for transparency.

The SDP needs to be implemented by 18 December 2019 so this modification will need to be in the Grid Code by the same date.

What

This modification proposes to align E&R, the SDP and the Grid Code.

Why

This modification needs to progress to ensure the sections of the SDP that need to be implemented by 18 December 2019 meet those timescales.

How

In coordination with Article 15(3) of E&R, section 3.1.6 of the SDP specifies that:

Energy Storage systems taking energy are required to automatically switch to generating mode or where it is not capable of doing this must automatically disconnect before the activation of Low Frequency Demand Disconnection Scheme.

In coordination with Article 21(1b) of E&R, section 4.6.3 of the SDP specifies that:

The NETSO shall be entitled to request assistance for active power from SGUs which do not already provide a balancing service. Upon request from the NETSO any SGU shall make available all its active power, conforming to its technical constraints. The NETSO may only do this after it has activated all balancing energy bids available.

This is not currently in the Grid Code so it will be added.

2 Governance

Justification for Normal Procedures

Normal Governance procedures should apply as there will be a material impact on storage providers and SGUs.

There is no need for this modification to be treated as urgent as it does not need to be implemented until 18 December 2019 and the Normal Governance timescales will be able to achieve this.

Requested Next Steps

This modification should:

- be assessed by a Workgroup

It is recommended that a workgroup be formed to fully understand the consequences of these changes for SGUs and storage providers and to ensure that the technical solution is developed to allow minimum disruption for these parties.

3 Why Change?

This Proposal is one of a number of Proposals which seek to implement relevant provisions of a number of new EU Network Codes/Guidelines which have been introduced in order to enable progress towards a competitive and efficient internal market in electricity. The full set of EU network guidelines and codes are;

- Regulation 2015/1222- Capacity Allocation and Congestion Management (CACM) which entered into force 14 August 2015;
- Regulation 2016/1719 – Forward Capacity Allocation (FCA) which entered into force 17 October 2016;
- Regulation 2016/631- Requirements for Generators (RfG) which entered into force 17 May 2016;
- Regulation 2016/1388 – Demand Connection Code (DCC) which entered into force 7 September 2016;
- Regulation 2016/1447 – High Voltage Direct Current (HVDC) which entered into force 28 September 2016;
- Transmission System Operation Guideline (SOGL) - which entered into force 14 September 2017; and
- Regulation 2017/2196 - Emergency and Restoration (E&R) which entered into force 18 December 2017.

The Regulation establishing a Network Code on Emergency and Restoration entered into force on 18 December 2017. The Emergency and Restoration Network Code sets out rules relating to the management of the electricity transmission system in the emergency, blackout and restoration states. The main objective of the relevant rules is to bring the system back to the normal state as quickly and efficiently as possible.

4 Code Specific Matters

Mandatory for the Proposer to complete. Please provide any specialist information (that is Code-specific), such as technical skillsets required and any reference documents.

Technical Skillsets

Appreciation of the SDP and E&R.

Reference Documents

Emergency and Restoration Code:

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R2196&from=EN>

Emergency and Restoration consultation documents (including the System Defence Plan):

<https://www.nationalgrideso.com/codes/european-network-codes/meetings/emergency-and-restoration-consultation>

5 Solution

Storage providers

E&R Article 15(3):

Prior to the activation of the automatic low frequency demand disconnection scheme, each TSO and DSO identified pursuant to Article 11(4) shall foresee that energy storage units acting as load connected to its system:

(a) automatically switch to generation mode within the time limit and at an active power set-point established by the TSO in the system defence plan; or

(b) when the energy storage unit is not capable of switching within the time limit established by the TSO in the system defence plan, automatically disconnect the energy storage unit acting as load.

SDP clause 3.1.6:

Energy Storage systems taking energy are required to automatically switch to generating mode or where it is not capable of doing this must automatically disconnect before the activation of Low Frequency Demand Disconnection Scheme.

This requirement will be added to OC9 of the Grid Code.

Active Power Requirements on SGUs

E&R Article 21 (1b):

In case of absence of control area adequacy in the day-ahead or intraday timeframe, identified pursuant to paragraphs 1 and 2 of Article 107 of Regulation (EU) 2017/1485,

and prior to any potential suspension of market activities pursuant to Article 35, a TSO shall be entitled to request assistance for active power from any SGU connected in its LFC area, which does not already provide a balancing service to the TSO, and which, upon the TSO request, shall make available all its active power, conforming to its technical constraints.

Clause 4.6.3 of SDP:

The NETSO shall be entitled to request assistance for active power from SGUs which do not already provide a balancing service. Upon request from the NETSO any SGU shall make available all its active power, conforming to its technical constraints. The NETSO may only do this after it has activated all balancing energy bids available.

This will be incorporated into OC9 of the Grid Code.

6 Impacts & Other Considerations

Under the proposals for GC0096 (Storage) Owners of storage facilities will be treated as Generators. It is therefore suggested that Generators who own and/or operate storage equipment who are caught by the requirements of the GC0096 proposals would also be affected by this modification as their equipment would be treated as an SGU. In addition, BM parties (including Aggregators) who are caught by the requirements of the Grid Code, would also be considered to be within the scope of these proposals.

Does this modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

No.

Consumer Impacts

This change will facilitate the implementation of the EU Emergency and Restoration code which helps to facilitate a harmonised electricity system as part of the package of European Network Codes, and will help to deliver and facilitate a significant benefit to the end consumer by ensuring a coordinated security of supply across GB and Europe.

7 Relevant Objectives

Impact of the modification on the Applicable 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	Neutral

(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);	Neutral
(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 (The ability to request assistance from SGUs and incorporating storage into system defence will allow for additional system security)
(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 (Discharges the obligations of the Emergency and Restoration code into GB frameworks)
(e) To promote efficiency in the implementation and administration of the Grid Code arrangements	None

8 Implementation

The SDP must be implemented by 18 December 2019 (2 years after E&R entered into force), therefore this modification must also be implemented by 18 December 2019.

9 Technical Solution

To be developed in the Workgroup.

10 Recommendations

Proposer's Recommendation to Panel

Panel is asked to:

- Agree that Normal governance procedures should apply; and
- Refer this proposal to a Workgroup for assessment.