

Modification proposal:	<b>Distribution Code DCRP/19/05 Modifications to the Distribution Code and EREC G99 of the requirements for Fast Fault Current Injection</b>		
Decision:	The Authority <sup>1</sup> has decided to approve <sup>2</sup> this modification		
Target audience:	Distribution licensees, Distribution Code Review Panel, distribution network users and other interested parties		
Date of publication:	29 <sup>th</sup> October 2019	Implementation date:	14 <sup>th</sup> November 2019

## Background

Distribution Code modification GC0102/DCRP 'Implementation of the EU Network Code – Requirement for Generators'<sup>3</sup> was approved by us on 15 May 2018. This modification ensures that the GB Distribution Code is consistent with the relevant European Network Code (Requirement for Generators (RfG))<sup>4</sup>. For generators with an output above 16 A compliance with RfG was achieved by the creation of a new Annex 1 document Engineering Recommendation (EREC) G99.<sup>5</sup>

As stakeholders began considering EREC G99 in advance of it coming into force on 27 April 2019, some users expressed views that requirements for Fast Fault Current Injection (FFCI) were ambiguous and required clarification.

Fast Fault Current is a current delivered by a Power Park Module or High Voltage Direct Current (HVDC) System during and after a voltage deviation caused by an electrical fault. This current supports the identification of a fault by network protection systems and the system voltage retention and restoration during and after the fault.

Following identification of this issue, the Grid Code Review Panel and the Distribution Code Review Panel agreed to jointly review the issue and to look for a solution that would resolve the issues for both transmission and distribution connected generation. This was agreed at the Distribution Code Review Panel meeting on 5 April 2018 and the Grid Code Review Panel meeting of 26 April 2018. The Grid Code modification will be progressed under Grid Code Modification Proposal GC0111<sup>6</sup>.

## The modification proposal

Annex 1 documents implement Distribution Code requirements and therefore form part of the Distribution Code. EREC G99, is an Annex 1 document, therefore any changes are considered to be changes to the Distribution Code.

<sup>1</sup> References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work. This decision is made by or on behalf of GEMA.

<sup>2</sup> This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.

<sup>3</sup> <https://www.ofgem.gov.uk/publications-and-updates/distribution-code-gc0102dcrp-implementation-eu-network-code-requirement-generators>

<sup>4</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016R0631>

<sup>5</sup> [http://www.energynetworks.org/assets/files/electricity/engineering/distributed%20generation/ENA\\_EREC\\_G99\\_Issue%201\\_Amendment\\_4\\_\(2019\).pdf](http://www.energynetworks.org/assets/files/electricity/engineering/distributed%20generation/ENA_EREC_G99_Issue%201_Amendment_4_(2019).pdf)

<sup>6</sup> <https://www.nationalgrideso.com/codes/grid-code/modifications/gc0111-fast-fault-current-injection-specification-text>

Details of the specific proposed changes to EREC G99 can be found in the Final Modification Report (FMR) submitted by the Distribution Code Review Panel (DCRP) on June 2019.<sup>7</sup> This proposal seeks to clarify the FFCI requirements so that they are understood by all stakeholders.

The proposed changes will clarify requirements associated with FFCI. DCRP/19/05 proposes new wording and associated performance charts for the FFCI requirements applicable to Type B, C and D Power Park Modules. These requirements clarify the performance with regards to reactive power injection of distribution connected Type B, C and D Power Park Modules when a transmission system fault is present on the system.

This modification proposal was subject to a consultation between 12 April 2019 and 3 May 2019. Three responses to that consultation were received, which were supportive and all proposed minor editorial changes, which have been accepted.

### **Distribution Code Review Panel (DCRP)<sup>8</sup> comments and licensee recommendation**

At the DCRP meeting on 06 June 2019, the Panel agreed that the changes should be submitted to the Authority for approval. The DNOs recommended that the proposed modifications are made to EREC G99. The DCRP consider that objectives (a), (b), and (c) are better facilitated by the modification and that it has a neutral impact on objective (d).

### **Our decision**

We have considered the issues raised by the modification proposal and taken account of the FMR dated 20 June 2019. We have concluded that:

- implementation of the modification proposal will better facilitate the achievement of the applicable objectives of the Distribution Code;<sup>9</sup> and
- approving the modification is consistent with our principal objective and statutory duties.<sup>10</sup>

### **Reasons for our decision**

We consider this modification proposal will better facilitate Distribution Code objective (a) and has a neutral impact on the other applicable objectives.

#### ***(a) permit the development, maintenance, and operation of an efficient, co-ordinated, and economical system for the distribution of electricity.***

The proposed changes to EREC G99 reduce uncertainty and ambiguity in the Distribution Code by aligning and clarifying requirements associated with FFCI. FFCI supports the network under fault conditions, the proposed new wording and associated performance charts, makes the expected FFCI response of Type B, C and D Power Park Modules clear. This allows the Type B, C and D Power Park Modules to support the operation of the electricity system in a coordinated and efficient manner.

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<sup>7</sup> Distribution Code proposals, final reports and representations can be viewed at:

<http://www.dcode.org.uk/current-areas-of-work/> and <http://www.dcode.org.uk/consultations/>

<sup>8</sup> The DCRP is established in accordance with SLC 21 of the Electricity Distribution Licence.

<sup>9</sup> As set out in Standard Condition SLC 21.4 of the Electricity Distribution Licence available at:

<https://epr.ofgem.gov.uk/Content/Documents/Electricity%20Distribution%20Consolidated%20Standard%20Licence%20Conditions%20-%20Current%20Version.pdf>

<sup>10</sup> The Authority's statutory duties are wider than matters which the Panel and licensees must take into consideration and are largely provided for in statute, principally in this case the Electricity Act 1989.

For the reasons set out above, we consider that this modification proposal will better facilitate Distribution Code objective (a). We consider the modification has a neutral impact on all other Distribution Code objectives

### **Decision notice**

In accordance with SLC 21.11 of the Electricity Distribution Licence, the Authority hereby directs that DCRP/19/05 modifications to the Distribution Code and EREC G99 of the requirements for Fast Fault Current Injection be made.

**Martin Queen**  
**Principal Engineer**

Signed on behalf of the Authority and authorised for that purpose