

# Electricity System Restoration Standard

**GCDF**  
GC0156 Update

March 2023

# Overview

- To provide GCDF with an update of the progress of GC0156
- To cover the high level issues identified post workgroup consultation
- To briefly cover next steps and timeline

# Current Status

- The GC0156 Workgroup was convened in April 2022
- The Workgroup Consultation ran from 21 November 2022 – 30<sup>th</sup> December 2022 with a Consultation Webinar held on 7<sup>th</sup> December 2022
- A total of 17 Non Confidential Workgroup Responses were received
- Post Workgroup Consultation Meetings held on 17<sup>th</sup> January, 31 January and 21 February
- Legal Review sessions held on 2, 3, 6, 8 and 10<sup>th</sup> February
- Legal Review Session for the Distribution Code scheduled for 24<sup>th</sup> February
- Legal Text and supporting documents are being updated in respect of the legal review sessions
- The ESO has also prepared a document which responds to the comments received as part of the Workgroup Consultation
- One Alternative has been raised which removes retrospectivity and promotes contractual arrangements rather than mandatory requirements

# Grid Code Documents Reviewed

- Glossary and Definitions
- Planning Code
- Connection Conditions
- European Connection Conditions
- Operating Code 1
- Operating Code 2
- Operating Code 5
- Operating Code 9
- Balancing Code 2
- Balancing Code 4
- Data Registration Code

# Related Documents Reviewed

- System Defence Plan
- System Restoration Plan
- Test Plan
- Control Telephony Standard
- Communications Standard
- Distribution Restoration Zone Control System (undergoing substantial overhaul)

# GC0156 – Glossary and Definitions

- Treatment of Anchor and Top Up as collective terms to avoid multiple definitions
- Treatment of Critical Tools and Facilities for Virtual Lead Parties / implementation – This stems from GC0148 for which further work is required
- Terms and consistency used for Distribution Restoration Zone Control System or a Distribution Restoration Zone Controller
- Clarification and Consistency in the definitions of Local Joint Restoration Plans and Distribution Restoration Zone Plans.
- Clarification to Offshore Local Joint Restoration Plans
- Restoration Service Provider changed to Restoration Contractor
- The term “Restoration Service” has been deleted as it is not used

# GC0156 – Planning Code

- Clarity provided around data submission from when a Generator was last run (ie 12, 24, 36, 48 and 72 hours) rather than the terms “hot” and “cold”.
- PC.A.5.7.2 – Text deleted referencing OC2
- Introduction of Annual Data Reporting requirements through PC.A.5.7.3  
Corresponding table is to be added to DRC Schedule 16 (Black Start Information) on the annual Assurance Reporting Process.
- Introduction of Governor setting information under a Restoration Process to be provided under PC.A.5.7.4

# GC0156 – Connection Conditions / European Connection Conditions

- CC.3.1(f) new clause updated to specifically define the Grid Code obligations that apply for Restoration Contractors who are Non-CUSC Parties and part of a Distribution Restoration Zone
- Updates to Protection and Control wording for both Generators and Network Operators – minor word changes rather than fundamental updates
- CC.6.3.5 – Points of clarification added to Offshore Local Joint Restoration Plans and changes to Governor Settings moved to CC.6.3.7
- CC.6.3.7 – New text on Governor settings during a Restoration introduced to CC.6.3.7
- CC.6.4.5 – Title Changed to System Restoration and clarifications added to CC.6.4.5.2(b) in relation to visibility of Network Operators System's as part of an LJP or DRZP
- Minor amendments added to CC.7.10 (Critical Tools and Facilities)
- Clarifications added to CC.7.11 (Assurance) relating to data submission and the derogation process where a requirement cannot be met. References updated for CC.7.11.5 in relation to Assurance activities to be undertaken.
- Issues between the Connection Conditions and European Connection Conditions are broadly the same



# GC0156 – Operating Code 1 / Operating Code 2

- OC1
- OC1.7 text updated to reflect comments received and reworded as part of Workgroup discussions. Internal ESO discussions still to be held. The term peak “National Demand” is used.
- OC2
- Updated to include Restoration Contractors
- Specific clauses introduced to OC2.1.8 and OC2.3.1(f) but data required directly from Restoration Contractors who are part of a Local Joint Restoration Plan and Network Operators will provide the outage data in respect of Distribution Restoration Zone Plans including Restoration Contractors forming part of those plans.
- Initial consideration given to have a specific section in OC2 for Restoration but in view of the timeframes for submission of data, the requirements for Restoration Contractors has been integrated into the main text.

# GC0156 – Operating Code 5

- OC5.4.2 - Fault Ride Through requirements of GC0151 (and GC0155 when approved) to be switched off as part of a System Restoration
- OC5.7.2.1 / OC5.7.2.2. – Deadline Charge Tests and Remote Synch Tests moved from OC5.7.2.2 to OC5.7.2.1
- OC5.7.2.4 – Discussions around the difference between Top Up Restoration Contractors and CUSC Parties in respect of their obligations – Clarifications provided to legal text
- OC5.5.7.2.6 – Distribution Restoration Zone Control System tests to be moved into the Electrical Standard

# GC0156 – Operating Code 9

- OC9 - Legal text revised to clearly articulate the difference between Top Up Restoration Contractors as opposed to CUSC Parties – to confirm that as soon as an instruction is issued to an Anchor Restoration Contractor, an instruction will consecutively be issued to a Top Up Restoration Contractor at the same time so they are ready to provide the service they have agreed to supply when external site supplies are restored.
- Safe Rejection of Emergency Instructions included to reflect BC2.9.2.1
- OC9.4.7.4(b) – Updated in line with suggested comments to improve wording
- OC9.5 – Removal of the term De-Synchronised Island
- Diagram in Appendix 2 removed.

# GC0156 – Balancing Code 2 / 4 and Data Registration Code

- BC2 - No material substantive changes
- BC4 – No changes
- DRC
  - Implementation to reflect changes in PC.A.5.7.3
  - Schedule 16 updated to incorporate Distributed Restoration Zone Information
  - New schedule to be added to Schedule 16 to incorporate the System Restoration Assurance Framework for Distributed Restoration Zones
  - Progress to demonstrate compliance towards meeting the obligations of ESRS to be included

# GC0156 – Other Related Documents

Document	High Level Comments
System Defence Plan	Minor points of clarification
System Restoration Plan	Minor points of clarification / VLPs (GC0148) Definition of Restoration Service Provider and Restoration Contractor / Include Assurance, Compliance Testing Section to be included and updates to ensure consistency with Grid Code drafting
Test Plan	Minor points of clarification, remove duplication from System Test Plan
Control Telephony Standard	Minor comments – Largely around Mains independence and the new Table introduced through Appendix 1 – Overseas Control Points
Communications Standard	Minor comments – Mains independence
Distribution Restoration Zone Control System – Functional Specification	Major overhaul and rewrite required before Workgroup Review

# GC0156 – Next Steps

- Final amendments to be made to legal text and supporting documents in lieu of the last few comments received at the Workgroup Meeting held on 21 February and D Code Review session on 24<sup>th</sup> February
- A further session will be required on the Distribution Restoration Zone Control System – Relevant Electrical Standard
- Current Timeline
  - Workgroup Report / Legal Text and Supporting Documents issued – 3 March 2023
  - Papers to Grid Code Review Panel 22 March
  - Grid Code Review Panel 30<sup>th</sup> March
  - Note the solution includes an Alternative
- Consequential Modifications are being made to the Industry Codes to facilitate the ESRS (eg STC, CUSC, BSC and SQSS)