

An aerial photograph of rolling green hills, likely a vineyard, with several bright yellow energy beams or light trails streaking across the landscape from the bottom left towards the top right. The hills are covered in dense green vegetation, and the beams create a strong sense of movement and energy.

# Electricity System Restoration Standard

GC0156

January 2023

# Overview

- Following the closure of the GC0156 Workgroup Consultation, a review of the detailed comments in the legal text and supporting documents has been undertaken and responses prepared in the legal text
- Issues that need discussion are in highlighted yellow text and the review sessions in early February will be used for that purpose
- We are also in the process of preparing a response to all the comments received as part of the consultation questions and any elements from this work that did not make it into the detailed comments in the legal text will be addressed.
- This presentation is a high level overview of the issues identified in the legal text that will need further discussion during the legal review session in February

# 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 Control System – High Level Functional Requirements
  
- \* Updates will be required to the RES to include the new Standard on the Distribution Restoration Zone Control System
- \* High level comments arising from the Workgroup Consultation which have an impact on the Legal Text will need to be input into the solution

# Summary

- Overall there are several areas that require discussion and the legal review sessions will be used for that purpose.
- Of those issues identified the main issues with the drafting are
  - Collective classification of Anchor and Restoration Service Providers – G&D
  - Treatment of GB Restoration Service Providers and Restoration Service Providers – G&D
  - Protection and Governor settings in CC/ECC
  - Safe Rejection of Emergency Instructions – OC9/BC2
  - Suggested comments raised on OC9.4.7.4(b) did not make sense
- Major issues on the Distribution Restoration Zone Control System High Level Functional Requirements
- Comments on the consultation itself largely revolve around issues of retrospectivity, obligations of Critical Tools and Facilities / Assurance especially when site supplies are restored and visibility of DNO networks
- Implementation

# GC0156 – Glossary and Definitions

- Treatment of Anchor and Top Up as collective terms
- Treatment of Critical Tools and Facilities for Virtual Lead Parties – This stems from GC0148
- Terms and consistency used for Distribution Restoration Zone Control System
- Conflict between GB Restoration Service Provider and Restoration Service Provider
- Comments received over using Restoration Service Provider as an alternative to Anchor Restoration Service Provider and Top Up Restoration Service Provider.
- Definition of Target Frequency

# GC0156 – Planning Code

- Data submission for hot and cold units
- PC.A.5.7.2 – Text deleted referencing OC2
- Updates to Week 28 proforma
- Block Loading Capability frequency range changed to align with G&D
- Introduction of Annual Data Reporting requirements through PC.A.5.7.3

# GC0156 – Connection Conditions / European Connection Conditions

- Scope – Includes BM Participants including VLPs – Note the overlapping issue with GC0148
- Some text to be deleted and rephrasing agreed by Workgroup
- Conflicts between Control Schemes and settings and Governor settings and changing settings.
- Revised drafting for Offshore Reactive Capability necessary for Restoration
- Offshore DC Converter processing times
- Technical Requirements for Restoration Service Providers
- Amalgamation of Anchor and Top Up Services
- Changes to visibility of Network Operators System for the purposes of Restoration
- CC/ECC.7.11 – Mix up over the use of 120 hours instead of 72 hour resilience time
- LFDD Setting changes during a Restoration
  
- 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. We just need to check with the workgroup that they are happy with the revised wording
- OC2
- Minor comments – There have been a few text changes – generally of a minor nature and just need to check that the workgroup are happy with the changes introduced.

# GC0156 – Operating Code 5

- Definition of Anchor Restoration Service Providers and Top Up Restoration Service Providers other than just Restoration Service Providers as this is clearer
- OC.5.7.1(b)(ii) – suggested amendments did not make sense
- Issues between Generating Unit Tests and Station Tests
- A few areas where we have to agree to disagree and some points of clarification
- A few areas where the text has changed and we need to agree this with the workgroup

# GC0156 – Operating Code 9

- Safe Rejection of Emergency Instructions
- OC9.4.7.4(b) suggested amendments do not make sense
- A few amended text changes requiring discussion
- Appendix 2 of Diagram to be updated

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

- BC2 - No material substantive changes other than minor detail and referencing and safe rejection of Emergency Instructions
- BC4 – No changes
- DRC
  - Implementation
  - Changes / discussion around some of revised / retained wording required

# GC0156 – Other Related Documents

Document	High Level Comments
System Defence Plan	Minor points of clarification / VLPs /discussion
System Restoration Plan	Minor points of clarification / VLPs / discussion Definition of Restoration Service Provider and GB Restoration Service Provider
Test Plan	Minor points of clarification / VLPs / discussion
Control Telephony Standard	Minor comments
Communications Standard	Minor comments – some input within ESO required
Distribution Restoration Zone Control System – Functional Specification	Major overhaul and rewrite required

# GC0156 – Next Steps

- Arrange time table to discuss legal text and associated documents based on availability
- Incorporate high level comments from Consultation Document where they have not already been provided
- Consider implementation
- Consider show stoppers, Alternatives and the Distribution Restoration Zone Control System High Level Functional Specification
- Others?