ER G5/5 update

DCRP_18_05_04

Timeline

1.	**Approval of the last sections sent by technical experts**	**23/7-31/7**
2.	Approval of the consultation material, including the latest version of the G5 Issue 5, by the WG,	1/8-15/8
3.	Consultation process (15 Business days)	20/8 – 7/9
5.	WG to deliberate comments submitted	10/9-24/9
4.	Approval by the DCRP and GCRP to submit RTA	From 4/10
5.	Submit Report to authority (25 business day turn around by Ofgem)	5/10 -9/11
6.	Issuing the document as the industry standard.	13/11

Overview of major changes

- Planning and compatibility levels for individual harmonics have been revised, while keeping the planning and compatibility levels for voltage total harmonic distortion (THD) the same as G5 Issue 4 (G5/4). As a result for some harmonics these levels have increased. No planning level has decreased compared to G5 Issue 4.

- Defining voltage ranges for which the tables of planning and compatibility levels are applicable. These voltage levels have been adapted to align with typical voltages in use in the UK.

- The planning and compatibility levels are now extended to 5 kHz (the 100th harmonic). The measurement of harmonics above 2.5 kHz is at the discretion of the NO facilitating the connection. It is also recommended to consider the assessment of these harmonics at the discretion of the NO.

- Revising limit for voltage notches in terms of the notch depth and duration.

- Clearly defining interharmonics and revising interharmonic limits in accordance with IEC 61000-34-30, IEC 61000-4-7 and IEC 61000-2-2.

Overview of major changes (cont.)

- Stage 1 & 2 have been completely revised. They are designed as a linear processes such that assessments are applied in stages and substages. If a substage is passed, then the connectee can connect; if the substage is failed, then the next substage of assessment is undertaken. They are design to allow self-assessment initially, and then connection based on equipment size and then equipment size and fault level and then assessment by DNOs, in this order.

- Stage 3 has been completely revised. In it the harmonic limits are based on the apportionment of the harmonic headroom. This is a major difference between G5 Issue 5 and Issue 4.

- A new section has been added to Issue 5 that sets criteria for the connection of resonant plant, such as power factor correction capacitors to LV and voltages up to 11 kV. This ensures that the network background harmonic levels are not amplified excessively by equipment such as power factor correction capacitors and cable capacitance.

- Requirement for the compliance has been included in Issue 5 to ensure consistency.

- G5 Issue 4 did not provide any guidance on the concurrent connections, when two or more connectees apply to connect to the network in the vicinity of each other in a short time window. G5 Issue 5 sets the connection process for such cases.