

Note for the Grid Code Review Panel: Update on progress of GC0036 (ER G5)

Context

Grid Code modification GC0036 is currently open and is tasked with reviewing and revising ENA Engineering Recommendation G5. ER G5 is the harmonic voltage distortion standard and the limits contained within it are referenced in Grid Code (CC6.1.5).

The document is split into four sections:

- **General text** –definition and common material.
- **Stage 1**- connection at LV.
- **Stage 2**- connection <33 kV.
- **Stage 3**- connection >33 kV.

Current technical issues

The following is a summary of the outstanding issues to be resolved:

- Stage 3 –Concurrency. Under current standards if two connectees are connecting in close electrical proximity the second cannot complete their harmonic studies until the first has finished theirs. This could lead to a delay in the project. G5/5 is attempting to improve the situation however this requires method to allow the design of both parties to run in parallel and managing the resultant risk. There is not international method for this so requires a novel approach. One solution raised in the work group was for network owners to take responsibility for the building of harmonic mitigation. This was considered to be outside of the scope of the G5 WG.
- Stage 3 –Apportionment. Under current standard the amount of the harmonic headroom each customer can have is allocated on a first come first served basis. This approach does not help with the above concurrency issue and is potentially disadvantaging some customers. Alternatives are being considered and the consultation document may present more than one option for this.

Update

Since the last update on ER G5 working group, the work on stage 2 of the document has completed and is awaiting approval from the work group. Additionally stage 3 has made strong progress and will be presenting a first proposal to the work group at the next session. The proposal for the rest of the work is:

Current status

- **General text** –Agreed by working group.
- **Stage 1**- Final draft presented to Work group and awaiting approval.
- **Stage 2** –Final draft presented to Work group and awaiting approval.
- **Stage 3**- First draft presented to working group.

- Next working group meeting: October 2017

Final draft: Date to be published after October working group meeting

Webpage: <http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-code/Modifications/GC0036/>