

## GC0048-T EU Connection Codes – RfG Technical Group

### TERMS OF REFERENCE

*[These are standard terms of reference as agreed by the Grid Code Review Panel that can be applied to all Modification Workgroups. These terms of reference are a starting point and can be changed / adapted depending on the requirement of the Workgroup]*

#### Governance

1. The GC0048 RfG Technical Workgroup was established by the Grid Code Review Panel (GCRP) at the January 2016 GCRP meeting following the presentation of pp16/10.
2. Workgroup members shall work in accordance with these terms of reference and shall be responsible for progressing Modification Proposal(s) in accordance with the timetable set by the Chair.

#### Scope

The role of this sub-group to GC0048 is to progress the GB application / implementation of the EU Connection Code Requirements for Generators, specifically the following technical requirements:

##### **Fault Ride Through**

- Active power recovery
- Fast fault current injection

##### **Voltage and Reactive Power**

- Voltage stability - automatic disconnection
- Provision of active power over a range of system voltage changes
- Angular stability
- Voltage ranges
- Reactive power (inc settings; max capacity/below max capacity)
- SPGM voltage control
- SPGM excitation control system (inc AVR)
- PPM - reactive power control modes (voltage/reactive/power factor)

The scope of the Workgroup shall not include:

- Frequency Response requirements (managed by GC0087)
- RoCoF withstand capability
- HVDC Title III – requirements for DC connected Power Park Modules

#### Responsibilities of the Workgroup

3. The Workgroup must evaluate the proposal to modify the Grid Code to consider whether it better facilitates achievement of the Applicable Grid Code Objectives. These can be summarised as follows:
  - (i) *To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity;*
  - (ii) *To facilitate competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being*

*made available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity);*

*(iii) Subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in the national*

*(iv) To efficiently discharge the obligations imposed upon the licensee by this license and to comply with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency. In conducting its business, the Workgroup will at all times endeavour to operate in a manner that is consistent with the Code Administration Code of Practice principles.*

4. When appointed as a Workgroup member, each member shall confirm that they will be available to attend Workgroup meetings and to carry out work to be undertaken outside meetings as necessary including reviewing any documentation produced by or on behalf of the Workgroup.
5. Workgroup members shall inform the secretary if they do not wish to continue as a member of the Workgroup.

## Workgroup Membership

6. NGET will appoint a chair who shall act impartially and independently. NGET will also provide a technical secretary resource for the Workgroup who will handle administrative arrangements such as venue, agenda, and recording actions and meeting notes.
7. The chair and the secretary may appoint alternates to attend a meeting in their place.
8. [The party raising the issue will automatically be considered a Workgroup member. The party is entitled to appoint a representative to be a member of the Workgroup for the purposes of that Modification.]
9. The Workgroup shall comprise of at least [number decided by Chair] members who have volunteered to join the Workgroup and have relevant experience and/or expertise in the areas forming the subject matter of the Modification Proposal to be considered by the Workgroup. The Workgroup shall include, but is not limited to

Name	Role	Representing
	Chair	
	Technical Secretary	
	National Grid Representative	National Grid
	Industry Representative	
	Authority Representative	
	Observer	

10. NGET shall ensure, as far as possible, that an appropriate cross-section of experience, interests and expertise is able to be represented on the Workgroup.
11. The GCRP may at any time replace or remove any Workgroup member if, in the Workgroup Chair's opinion, such a member is unwilling or unable for whatever reason to fulfil that function and/or is deliberately and persistently disrupting or frustrating the work of the Workgroup.

## Workgroup Meetings

12. The frequency of Workgroup meetings shall be defined as necessary by the Workgroup Chair to meet the scope and objectives of the work being undertaken at that time and to achieve the timetable set by the Chair.
13. The Workgroup will have a dedicated section on the National Grid website to enable information such as minutes, papers and presentations to be available to a wider audience.
14. The Workgroup will meet in person, but may decide to hold meetings by teleconference with agreement of the Chair and a majority of the membership.
15. An agenda and any supporting material for the meeting will be issued to Workgroup members as required to allow Workgroup members to consider these items prior to the meeting.
16. Actions from the Workgroup meetings will be circulated to the members [day agreed at the end of the meeting] after the meeting to ensure sufficient time is provided for completing the actions.

## Deliverables

17. The Workgroup will provide updates and a Workgroup Report to the Grid Code Review Panel at the [Date of GCRP] meeting which will:
  - Detail the findings of the Group;
  - Draft, prioritise and recommend changes to the Grid Code and associated documents in order to implement the findings of the Group; and
  - Highlight any consequential changes which are or may be required,

## Timescales and Reporting to the Grid Code Panel

18. The Workgroup Chair shall report to the GCRP and provide updates to the GCRP as appropriate and on conclusion will present a Workgroup Report and / or Interim Workgroup Reports as appropriate to the GCRP.
19. This Workgroup will hold a first meeting in [month, year]. A plan will be produced at this meeting to fulfil the scope with an objective of reporting back to the [month, year] GCRP meeting.
20. If for any reason the Workgroup is in existence for more than one year, the Workgroup shall provide an update, including but not limited to; current progress, reasons for any delays, next steps and likely conclusion dates to the GCRP.