

# EU Network Codes

## Energy Networks Association

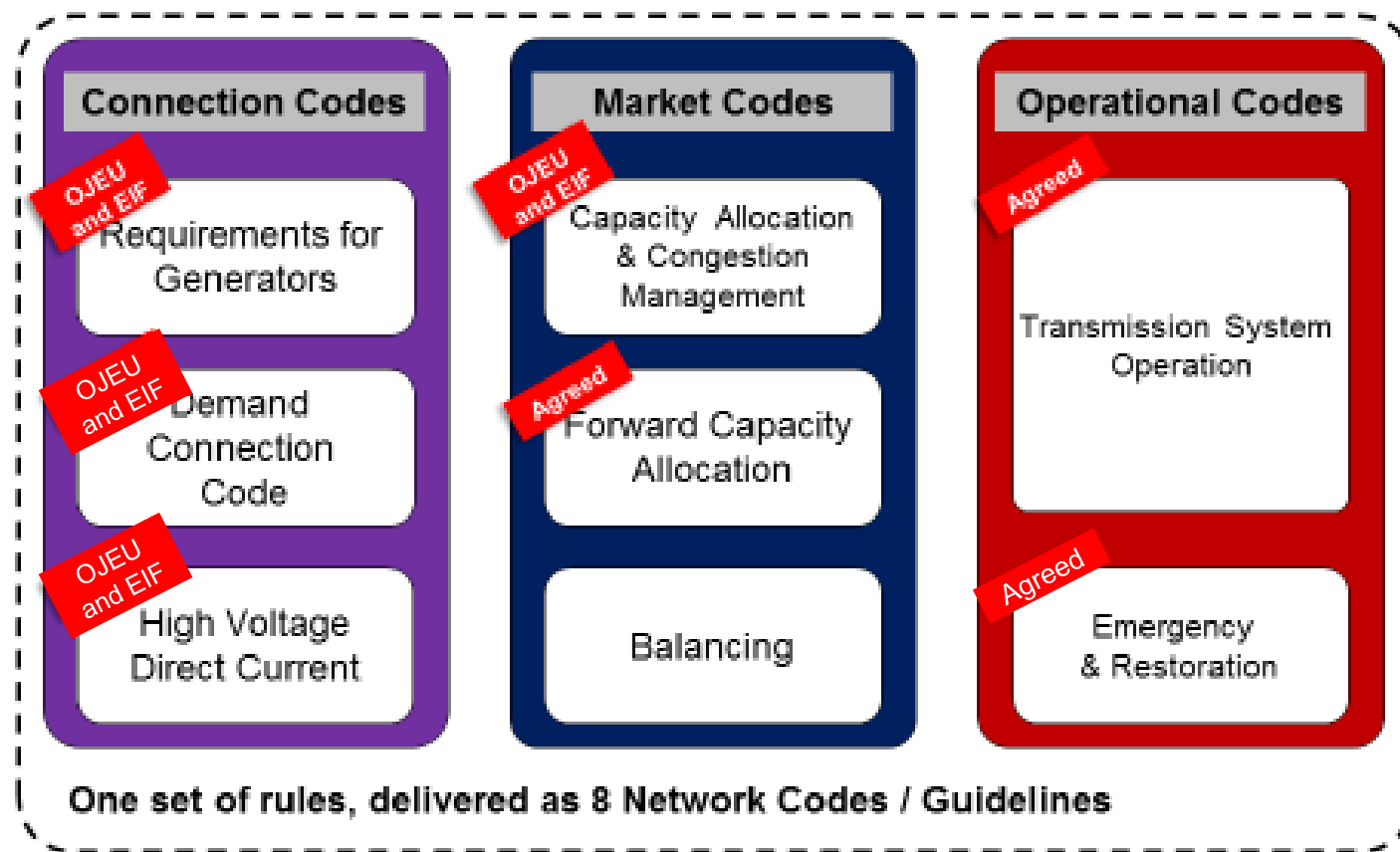
DCRP Issues and  
Update

9 March 2017

- Progress to date:
  - Status of EU Codes
  - Progress in GB
- GB Joint Working Groups
  - GC0048 – Connexion Codes – RfG progress & Banding Update
  - GC0091 – DCC
  - GC0095 – TSOG
  - GLDPM
  - Emergency and Restoration Code
- DCRP documents drafting approach
- Issues for endorsement including imminent consultations

Joint European Stakeholder Group

## European Network Codes



# Progress in GB (relevant to DCRP)

- RfG most advanced of the connexion codes – compliance required by 6 May 2019
- DCC published became law 6 September - compliance required 16 August 2019
- HVDC has zero or very little effect on distribution-connected parties
- Market codes similarly expected to have little technical effect on d-connected parties – although the impact of Project TERRE remains to be assessed (see separate agendum)
- Generator and Load Data Provision Methodology has been created under the auspices of CACM – NG have concluded, by consultation, that there is no current impact on GB arrangements
- TSOG comes into effect immediately (around Jun 2017 probably), although most provisions are delayed by 12 months to 18 month for national development.
- Emergency and Restoration agreed 24 October, entry into law also expected mid 2017

- Banding (see subsequent slide)
- Reactive Range and voltage control parameters – following development of GB parameters by NG was jointly consulted upon in December 2016
  - Comments are mainly supportive and introduce no fundamental issues
- Fault Ride Through parameters
  - New requirement for generators <50MW; applies right down to 1MW
  - For consultation in in early 2017 and to be harmonized with fast fault current injection development
  - Consultation will include draft legal text extracted from draft ER G99
  - NG might require fast fault current injection (FFCI) (for non-synchronous generation) to apply down to 1MW too.
  - GC0048 is waiting further modelling on FFCI from NG
- System management (eg reconnexion after fault) – not started

- No clarity on how mass market compliance using Equipment Certificates will work.
- Initial discussions with UKAS not yet provided a clear view of who has which responsibilities here
- Meeting with UKAS 9/12 suggest that there is a need for EU specification of the level of compliance assurance required.
- ENA & AMPS have written to BEIS re this.
- BEIS has helpfully suggested that the Measurement Instrument Directive is a valid comparator in that it allows self-certification by manufacturers.
- GC0048 need to pick this up to ensure all GB manufacturer stakeholders are included appropriately
- Augmenting the current G59 (G99) and G83(G98) testing requirements might be an appropriate stop-gap approach until EU standards become available

- The debate on fault ride through has suggested that the Type B/C boundary could usefully be set at 10MW.
- This is driven by the ability of gas turbine driven synchronous generators in the size range above 10MW to ride through fault voltage dips of down to 0.1pu, whereas smaller reciprocating engine synchronous machines cannot economically achieve better than 0.3pu.
- This has suggested splitting B and C at 10MW and having less onerous fault ride through requirements for Type B.
- It is expected that NG will make a report to the authority recommending this split.

- DCC published in the EU Journal on 17/8/2016; comes into law on 6/9/2019.
- Like the RfG, most of the provisions become effective 17/8/2019
- Thinking re GB accommodation at an earlier stage than that with RfG
- Much of the DCC defines requirements for DNOs connecting to the transmission system
- DSR
  - The GB DSR landscape is complex and more extensive than the DCC envisages; current work is focussed on compliance, not providing a seamless approach for customers, who could potentially be contracting multiple DSR services to multiple parties (NGET, DSOs & suppliers).
  - Drafting needs careful scrutiny to ensure it does not go further than the DCC requires and stifles technical and commercial innovation.
  - NG are putting technical requirements in the G Code; could be a simple model for parallel D Code changes.
  - DSR could fit nicely in a new DPC9



# GC0095 Transmission System Operations Guidelines

- TSOG now expected to be published around June 2017.
- NG are assembling a list of all entry into force (EIF) articles and providing a complete commentary on compliance for Ofgem – not thought to be any new issues.
- Will need scrutiny to check for effects on D connected parties (none expected).
- D Code EIF sent out for consultation 13/01/17, closed 03/02/17. Three supportive comments received. Panel Secretary to create a report to the Authority to implement the changes (see separate agenda).

- NG require standing data or the “observability area”. This is mainly DNOs’ network data, but will encompass some D connected parties installations – but mainly at subtransmission voltage (ie 132kV in E&W; 33kV in Scotland).
- Current view is that this is as is, ie no new requirements.
- Art 75 requires all TSOs to jointly define the criteria for observability area (18 months after EIF) – this might affect GB Grid Code definitions and scope – but not possible to call in advance of the thinking starting
- Discussions on real time data have yet to start. Again currently it is not expected to be any significant change from the status quo: NG has flexibility to specify what it requires and any change from the status quo will need a standard GB cost benefit analysis.

- Generation and Load Data Provision Methodology.
- Via consultation in December, NG have concluded that this has currently no implications and no change in GB.
- Art 76 of TSOG (Regional Operational Security Analysis) might change this position, but the analysis will only be developed 15 months after EIF, and not possible to forecast any effect in advance of that thinking starting.

- General approach is compatible with GB arrangements.
- But potentially significant work to ensure that all the emergency plans envisaged are created/updated etc. NG to lead on this in due course. MK's view that this will be significant work for NG (and by implication DNOs) has not been denied.
- Scope is not clear – and NG are currently working on some more exposition of how this applies to GB connected parties. This might be contentious if it draws in smaller players than currently.
- Communication with all SGUs involved in restoration or defence plans needs to include voice facility.
- Such facilities might be required for all existing and new Type C and D generators. This could be an issue if Type C is 10MW and above.
- Likely that two workstreams will emerge – one dealing with the operational aspects, and one dealing with the market suspension aspects under the BSC.
- NG considering whether to include the operational aspects in GC0095 or in a new WG.
- Might be a number of consequential D Code changes in DOC6.

- Following consultation in November/December 2017 it was agreed to maintain the current approach
- Overarching Drafting Principles:
  - Unless advised otherwise Brexit has no effect on EU NC implementation
  - Clarity and simplicity for the end user
  - Clear preservation of connexion requirements for pre-existing users as connexion codes do not apply to them, although all other EU NCs do apply
  - Minimization of initial cost to implement EU NCs
  - Ease of future updates
  - GB governance arrangements to be used for implementation and future updating
  - From a technical perspective regional differences and Small/Medium/Large will have no relevance going forward
  - Onus on Code Administrators, Panels, and the Authority to ensure compliance with EU law

- The DCRP is invited to endorse:
  - The approach being taken to legal drafting:
    - G98/G99 to replace G83 and G59
    - Reliance on CENELEC standards
    - Development of GB compliance/testing arrangements if necessary as a stop gap until international standards are in place
    - Type C and Type D to be referred to the Grid Code
  - Reports to the Authority on GC0048 topics posts working group review of the consultation responses
  - GC0048 WG progressing to consultations on:
    - Fault ride through
    - Frequency response
    - Fast fault current injection