

EU Network Codes



Energy Networks Association

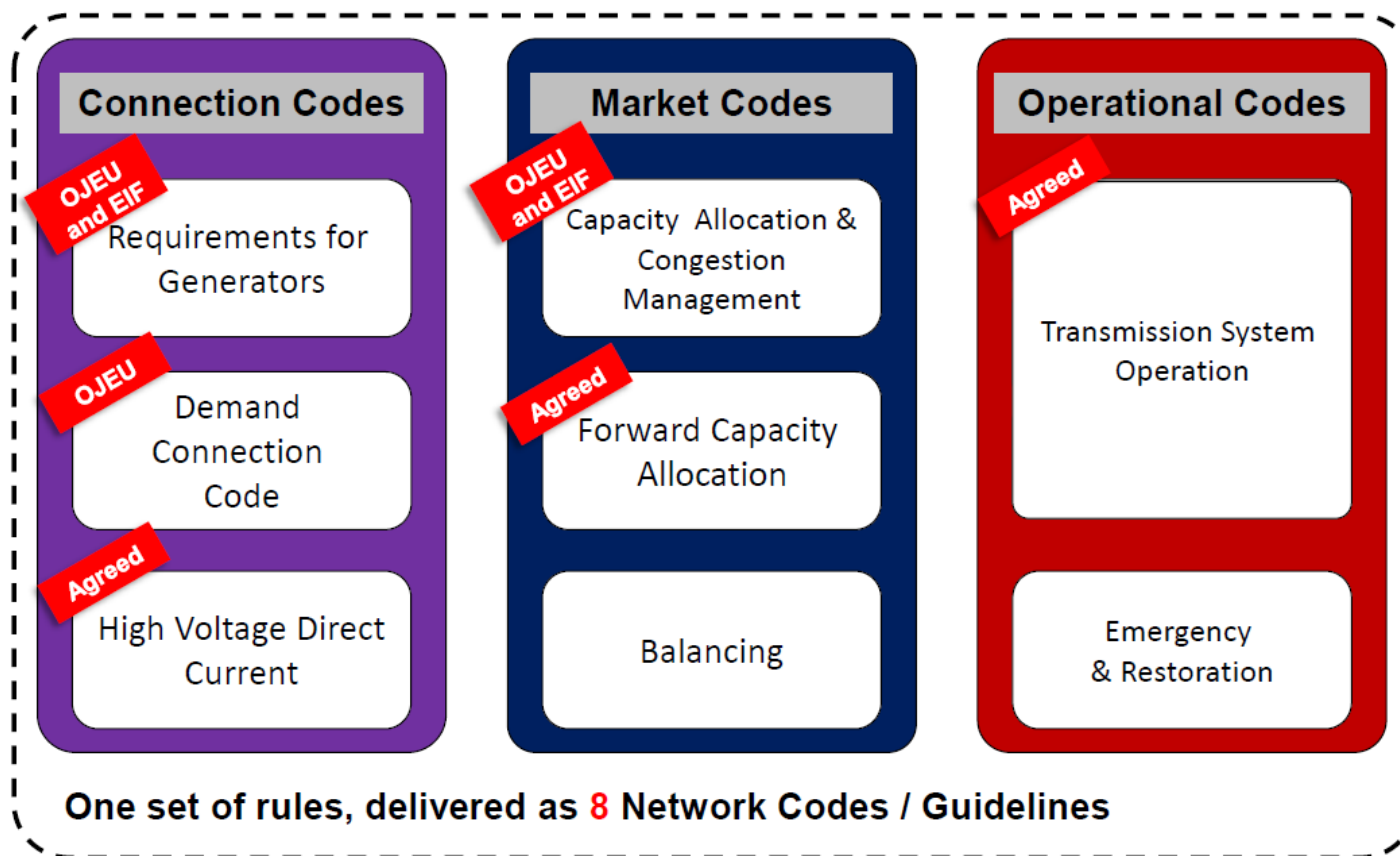
DCRP Issues and
Update

8 September 2016

- Progress to date:
 - Status of EU Codes
 - Progress in GB
- DCRP documents drafting approach
- GB Joint Working Groups
 - GC0048 – Connexion Codes
 - GC0091 – DCC
 - GC0095 – TSOG
 - GLDPM discussions
- Joint WG consultations
- Issues for endorsement

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 18 August; becomes law 6 September.
- HVDC has zero or very little effect on distribution-connected parties
- Market codes similarly expected to have little technical effect on d-connected parties
- Exception is the Generator and Load Data Provision Methodology that has been made under the auspices of CACM
- TSOG comes into effect immediately (around new year probably), although most provisions are delayed by 12 months for national development.
- Emergency and Restoration code still in pre-comitology drafts

- 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

- Implementation Approach
 - Existing relevant code frozen to apply to pre-existing connectees
 - EU NC requirements drafted into new documentation that will be accommodated in the existing GB technical code structure
 - Individual technical issues will be consulted in separate Modifications, including draft new legal text
 - Implementation of new legal text from several Modifications will be brought together in a single implementation Modification to the technical codes

- Preferred Legal Drafting Approach

Full GB text setting out the EU requirements

- Formed using existing GB frameworks as a starting point

Pros:

- Explains procedures and party obligations clearly
- Provides the most comprehensive approach
- Prevents GB users from having to refer to the EU Codes

Cons:

- This is GB 'interpretation' of EU law; careful use of defined terms needed – this can be managed through detailed code mapping and audit subject to full legal scrutiny and the consultation process
- Similar careful management needed for future code changes

- Alternatives (not preferred) – 1

The GB frameworks refer users to EU Code articles/ clauses, and are only used to set GB parameters

- Minimal GB text, referring users to the EU codes for details on their obligations and the procedural aspects of the EU requirements

Pros

- No issues over GB interpretations compliance risk
- Minimal effort for GB code administrators

Cons

- Users must refer to multiple codes to understand their obligations

- Alternative options (not preferred) – 2

The EU requirements are lifted and shifted into the GB frameworks verbatim, with GB parameters provided where specified

- Merges the EU and GB codes together, ensuring the integrity of the EU legislation remains intact

Pros

- No issues over GB interpretations compliance risk
- Reduced effort for GB code administrators (slightly more than previous option)

Cons

- Two sets of definitions to reconcile
- Users must refer both to GB and EU codes to understand the context and obligations
- Users likely to form different interpretations of the EU text

Where will the EU requirements sit in the GB Codes (Preferred implementation)? -

Grid Code

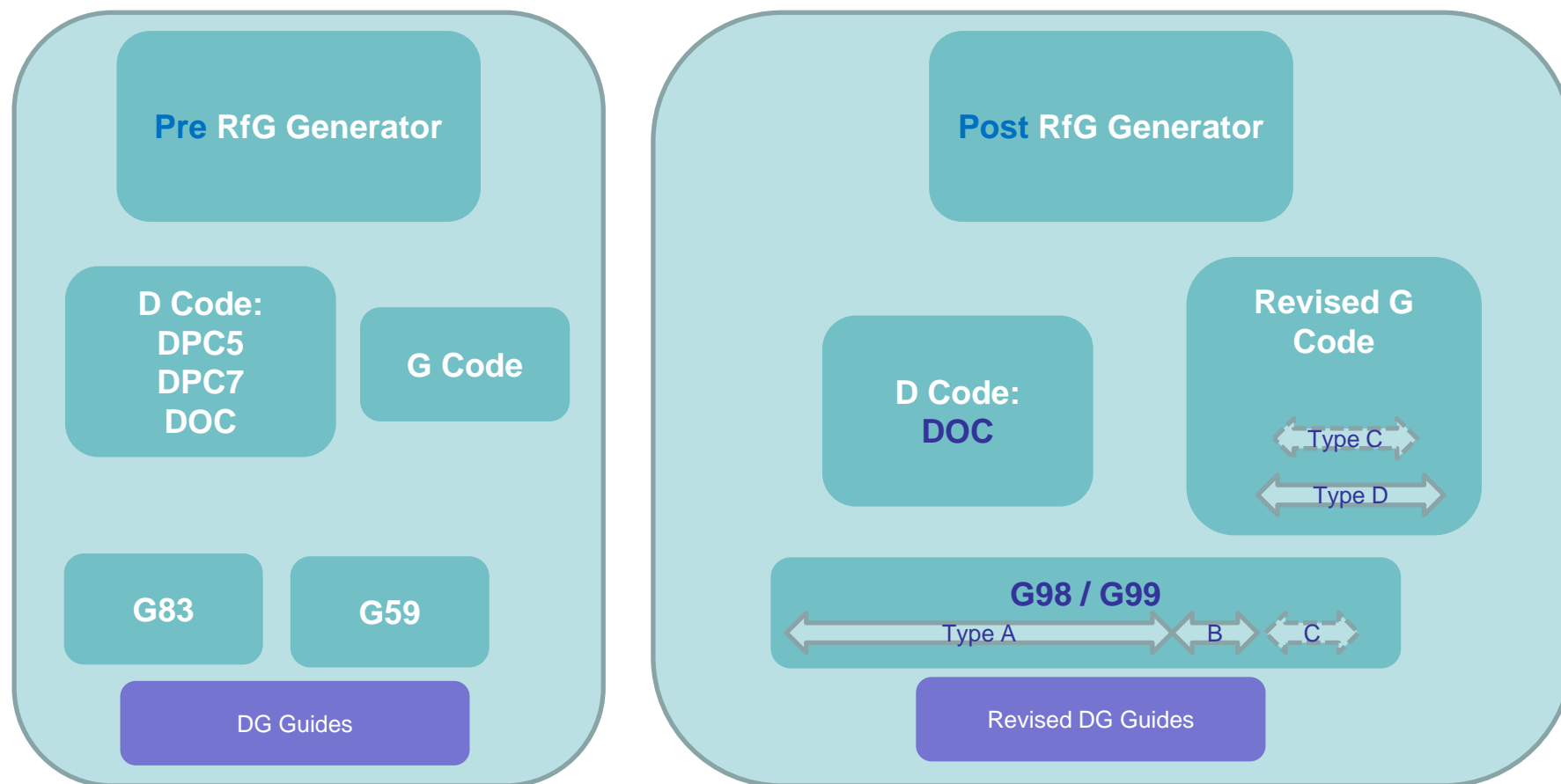
- Where a particular section of the Grid Code has an identified correlation to the EU Codes requirements (eg Connection Conditions), we form a direct copy of this section and re-specify for EU compliant users
- Considering the integration of other EU Codes, this approach maximizes the opportunity to reuse existing text in the Grid Code, whilst providing a model for how inappropriate text can be replaced wholesale
- This new section is then updated to:
 - Apply new EU requirements
 - Remove existing GB requirements superseded by EU equivalents or otherwise incompatible
- This approach is more logical following the Brexit decision, which may need quick revisions to EU legislation in future

Where will the EU requirements sit in the GB Codes (Preferred implementation)? –

Distribution Code

- Connexion conditions for generators to be included in replacements for G59 and G83, ie G99 and G98. Distribution Code amended to accommodate.
- Drafting of G99 and G98 to include full reference and deferral to relevant CENELEC standards (ie EN 50549)
- Current thinking is that requirements for Type C and D will be directed to the Grid Code (much as LEEMPS have been historically)
- An alternative option for future consideration is to place all the text that would be in G98 and G99 into the body of the D Code
- No decision on incorporation of the DCC has yet been taken
- Likely that TSOG and EN ER will be accommodated in DOCs, harmonizing with G Code

Proposed Structure of DNO documents



- G98 written to replace G83 – and draws very heavily on EN 50438
- G99 written to replace G59 – and expects to draw on TS 50549.
- TS50549 is due to be changed in an EN – in which case G99 could cite it in detail
- We expected that EN 50438 and TS50549 would be updated within 12 months and merged into a new three part EN 50549.
- A new EN for compliance testing is in preparation
- Latest information is that EN 50438 and TS 50549 are in a formal process that could take 27 months, although that is a standard approach with 8 months for drafting etc that could be considerably shortened. Similarly the EN on testing. All are being done concurrently.
- So completion date for RfG compliant ENs is further in the future than we had originally hoped.
- Proposal is to stay with current plans:
 - Use G98 in its current form citing EN 50438; update it when 50438 is updated (as part of new EN50549)
 - Use G99 in its current form, which does not cite TS50549, and update it when EN 50549 becomes available
 - Consider future structure of G98/99/D Code in the future, as other EU Codes make their presence felt.

- Banding (see subsequent slide)
- Fault Ride Through parameters
 - New requirement for generators <50MW; applies right down to 1MW
 - For consultation in September 2016
 - Consultation will include draft legal text extracted from draft ER G99
 - Expected to be issued post GCRP (21/9)
 - NG might require fast fault current injection (for non-synchronous generation) to apply down to 1MW too.
- Reactive Range and voltage control parameters – will be ready next – also Autumn 2016
 - Unlikely to be a change from the status quo for embedded Type B.
- System management (eg reconnexion after fault) – not started
- Compliance – not started

- NG seeking more cost information from generators – extension to consultation closed on 19/8
- Majority (16 of 21) of respondents favour 50MW B/C Boundary
- NG prefer 30MW
- Ofgem pushing for more cost/benefit information – particularly cost.
- DNO model of costs appears to be sufficient.
- Focus is on understanding the differences of costs and benefits between 30MW and 50MW for the B/C boundary

- DCC published in the EU Journal on 17/8; comes into law on 6/9.
- 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
- Significant requirements for demand side response (DSR) that is contracted to network operators – applying right down to domestic customer level
- No emerging consensus yet on the route to codifying DCC DSR requirements in GB

GC0095 Transmission System Operations Guidelines

- Likely to become law around new year 2017
- Introduction is immediate; however key issues such as data requirements and outage planning have separate introduction periods – generally 12 months
- Possible that some urgent G and D code changes will be needed to ensure legal compliance in 2017 on the coming into force of the TSOG. Such changes, if needed, are expected to be consequential, with substantive changes to be developed during 2017.

- Generation and Load Data Provision Methodology
- Does not have a formal WG
- GLDP methodology now has legal force under CACM
- GLDPM still required to be ratified by EU regulators
- GLDPM has broad overlap with TSOG for data requirements
- Does not include real time data, whereas TSOG does.
- GLDPM to be implemented no later than December 2017; one year implementation period
- If changes are required in GB, they will need to be codified during 2017
- Requires data specification to be completed around Jan/Feb 2017
- Latest view is that current GB data collection practices are both sufficient and compliant with GLDPM – but NG will update their view of this in the Autumn

- The DCRP is invited to endorse:
 - The approach being taken to legal drafting:
 - G98/G99 to replace G83 and G59
 - Reliance on CENELEC standards
 - Type C and Type D to be referred to the Grid Code
 - A report to the Authority on banding post GC0048 review of the consultation
 - GC0048 WG progressing to consultations on:
 - Fault ride through
 - Reactive power and voltage control
 - Frequency response
 - Fast fault current injection
 - GC0095 WG progressing a consultation on early consequential changes to Grid and D Codes to accommodate the TSOG becoming law around new year (if necessary)