DCRP_16_04_04

EU Network Codes

Energy Networks Association

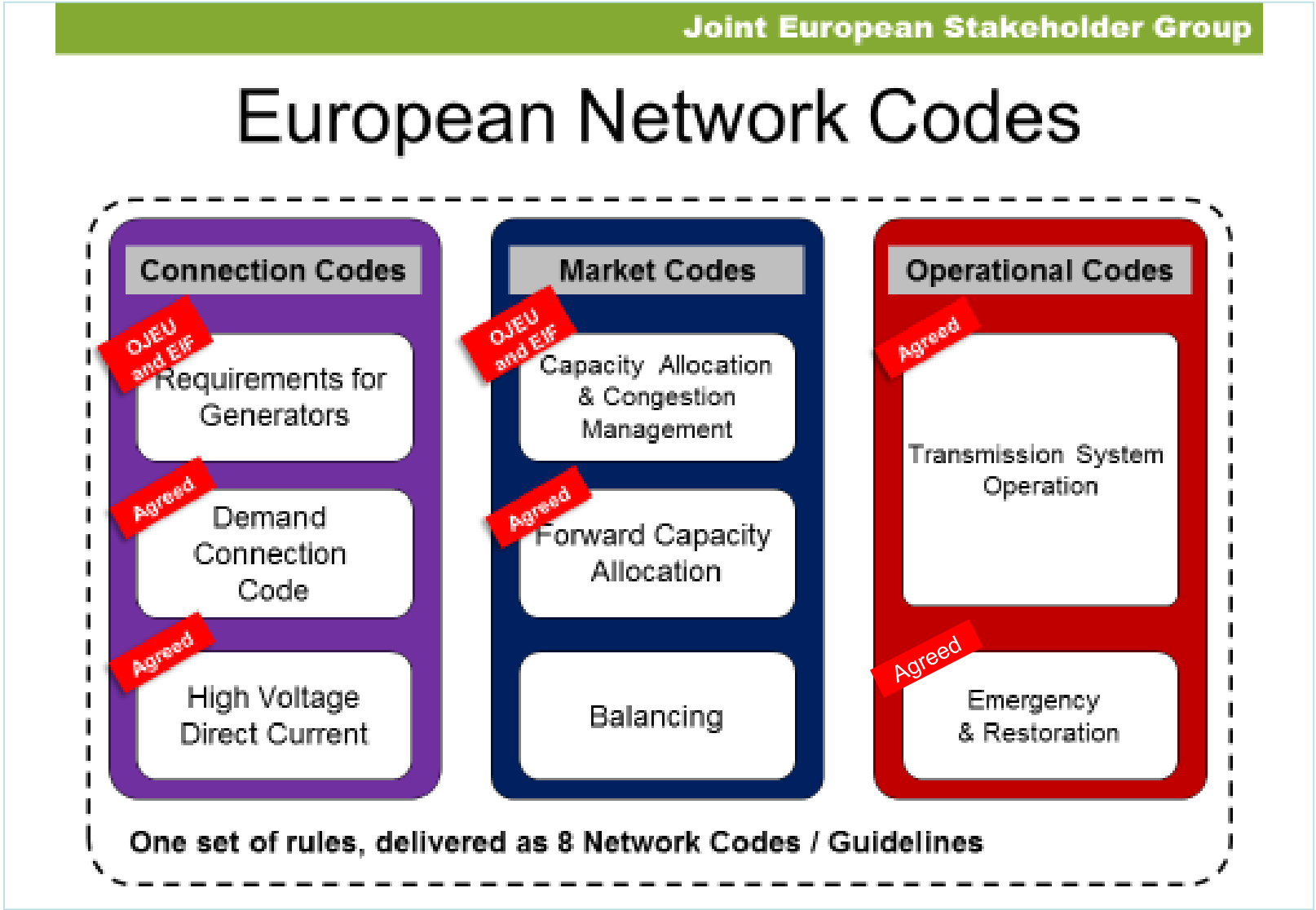
DCRP Issues and Update

8 December 2016

Agenda

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

Status of EU 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
- Generator and Load Data Provision Methodology has been created under the auspices of CACM - NG is expected to consult on the GB implications imminently
- TSOG comes into effect immediately (around new year probably), although most provisions are delayed by 12 months to 18 month for national development.
- Emergency and Restoration agreed 24 October, entry into law expected mid 2017
- National Grid has been discussing with Code Administrators and Stakeholders the possibility of a different implementation approach, putting EU requirements into an European Implementation Document.

Drafting considerations and approach

- An alternative implementation approach – the European Interface Document
  - Proposed by NG as a possible approach
  - Being briefed to stakeholders via JESG and to Panels by Code Administrators

- Existing 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

Drafting considerations and 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

GC0048 - RfG

- Banding (see subsequent slide)
- Frequency, Reactive Range and voltage control parameters – following development of GB parameters by NG, will be ready for consultation before Christmas 2016
  - Frequency has change to upper frequency withstand requirements – operation above 51.5Hz is required for 15 minutes, as opposed to 90 seconds currently.
  - Reactive range and voltage control unlikely to be a change from the status quo for embedded Type B.
- 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 (for non-synchronous generation) to apply down to 1MW too.
- System management (eg reconnexion after fault) – not started
- Compliance – early discussions with the UK Accreditation Service have been held; way forward not yet completely clear

Banding Update

- 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.

GC0091 DCC

- 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
- 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 and 18 months
- There are a couple of places where the D Code should be updated to ensure compliance with the TSOG on entry into force – these are the subject of a separate DCRP paper on the issues.
- Next GC0095 meeting (14/12) should start the discussions on data requirements.

GLDPM

- Generation and Load Data Provision Methodology
- NG consultation on applicability in detail in GB expected end of November 2016
- 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 – currently awaiting NG consultation

Issues for endorsement

- The DCRP is invited to endorse:
  - a consultation on early consequential changes to the D Code to accommodate the TSOG becoming law around new year (as per separate paper)
  - The historic approach being taken to legal drafting, pending any proposal arising from the current discussion on the European Implementation Document:
    - 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