RfG user group 22 March 2012
Key issues proposed by participants

On 5 March 2012 all user group participants were requested to provide input for the first meeting's agenda:

"For this reason we request your input for setting up a structured agenda for this day. You are kindly requested to list the five main topics on the content of the code, and its related justification in the present FAQs and 'Motivation and Approach' paper, which you prefer to discuss. These five items should comprise main topics you submit during the present web-based consultation. Please describe these five topics in short key words, if relevant, please refer to the appropriate section of the code,…"

The received input is given below. Based on this input ENTSO-E proposed a draft agenda.

EUTurbines

1. Ensuring grid stability is a major objective when formulating the NC RfG. Inherent characteristics of existing and indispensable generation technologies have to be accepted. Requirements forcing a significant cost increase regarding investment and/or operation, or causing a reliability loss must allow alternative solutions outside the generator, based on a transparent risk assessment and/or CBA.

Examples: - Art 11 and 13: FRT stability times up to 250 ms are not achievable by all current technologies and generator sizes as mainly a matter of physics.

- Art 12, 2 b): underfrequency maximum power capability: expensive, dynamically limited and not testable compensation technologies might jeopardize grid stability more than alternative solutions

- Art 12, 3, fig. 6: Reactive power capability requires possibly oversized components

2. The purpose of generating units and the possible consequent limitations of capabilities regarding support of grid stability has to be taken into account.

Examples: - Art 9, 2: - industrial power plants with combined steam and electricity production are not capable to fulfill all frequency response requirements as currently defined due to their dual purpose

3. The NC RfG shall clearly describe the process and the limitations when national Grid Codes based on the NC are being developed, in order to avoid uncertainty about time of application, as

well as future and unexpected tightening of the requirements. It is necessary to involve stakeholders in this process and to align it with the development of design rules.

Examples: - Art. 3: application to new generators

- Art 6 in general,

- Art 10 table 5.1: HV ranges

4. The NC RfG shall avoid the interpretability of the requirements and provide clear definitions where necessary.

Examples: - Art 9, 2 c) Frequency response in LFSM mode as fast as technically feasible: this definition is not useful

- Art 9, 4 b): Frequency of additional torsional stress events has to be indicated for a design assessment

- Art. 9, 6 f): Simulation model requires clearer limitation of scope

- Art. 9, 5 a) Black start capability definition too wide and at the same time not using the generator frequency capability

- Art. 2, Definition of Maximum Capacity, Minimum Regulating Level and Droop relevant for other requirements in the NC , but are not clear

5. Fault Ride Through

Art 9,11, 13 still open to interpretation, an appendix defining the interpretation and the method of simulation should be added.

Euromot

GRID NC RfG_main topics proposal EURO

Eurelectric WG Thermal

- **Minimum requirements**: they NC should not deviate from the relevant FG and go beyond the original scope and feature too many requirements which have not be proven through a relevant CBA (see also point below on CBA and ancillary services)

- **Cost-benefit analysis:**
  - In case new requirements deviating significantly from existing standard and requirements
  - To make sure that costs are apportioned to real originator (i.e. CBA to look at the overall system and take into account grid, PGF, load)
  - Transparency (e.g. costs, technical solutions, assumptions, time frame) and involvement of stakeholders (in e.g. the filtering process)

- **Ancillary services**: The NC RfG defines several mandatory requirements that PGF units shall comply with. Widening these requirements to all generating units is beyond the scope of the NC RfG - the relevant FGs refer to "services contracted by TSOs from selected grid users" – and is likely to result in higher electricity prices – by increasing PGF investment and operational costs. In order to ensure an efficient and cost optimised power supply, the requirements with reference to ancillary services shall be defined only for PGF which qualify for it and be without prejudice to the creation of market places and mechanisms for contracting such services.

- **Derogation** regime for existing PGF (i.a. derogations should be published by ACER and be valid without exceptions for all other similar generating units in Europe (at least within the same synchronous area) to guarantee transparency and non-discrimination across the borders.

- **Appeals** in case of disagreements and conflicts between network operators and PGFs (need for an objective and independent authority).

EWEA

- Unclear definitions
- Lack of justification of requirements and missing CBA
- Excessive Q requirements

- Unclear FRT formulations
- Compliance must be more robust / pragmatic
- Offshore PPM requirements are not future-proof

VGB Powertech

1: Classification of Generating Units. (thresholds, role of the voltage criteria, position of the embebbded generation)

2: Values for requirements on frequency, voltage and robustness

3: Balance of obligations between TSOs and PGF and links with system operation codes

4: Respect of standards and safety requirements

5: Compliance. (simplification, self assessment)

We would like also to address the status of the document "Motivation & Approach". If it might be considered by the lawyers as a significant piece carrying out the spririt of the code, it should be included formally in the NC consultation. As now; this document is not in the consultation list in your the web site.

Eurelectric DSO

- Applicability to Generation Unit versus Facility throughout the code
- CBA and scope of requirements for generators connected to distribution grid
- Type Testing & Third Party Certification
- Initial Compliance Assessment and Monitoring for Generation Connected to Distribution Grid

COGEN Europe

2012_03_12 COGEN
Europe 5 priorities for

Geode

- Independent third party assessment of compliance for type testing
- The justification for the chosen bandings
- The need to specify fault ride through so far down into the system
- Removal of the need for EON, ION and FON for anything save Type D
- The appalling quality of the legal drafting and numbering
- Requirements for different size of Generator Units (i.e. Facilities) shall be set depending on size in combination with connection to transmission or distribution
- Differentiation in requirements depending of type of production including secondary consequences/aspects for radiation, environmental etc, e.g. for nuclear and hydro
- Regional and National peculiarities has to been taken into account, e.g. special climate or geographical
- Requirements on communication to GUs needs to be clarified. Is it meant that the Relevant Network Operator (DSOs) shall build and operate those communication systems (wire, fiber or wireless)?
- The part on Power Quality shall either be omitted or complemented with other things than voltage quality (current distortion, symmetry, etc) and referenced to existing standards

EUR

1. Nuclear Safety

2. Frequency and Voltage Ranges

3. The time frame for new plant design, how is that implemented?

4. Compliance, contradictions in test results.

5. How will the Code be implemented on a national level?