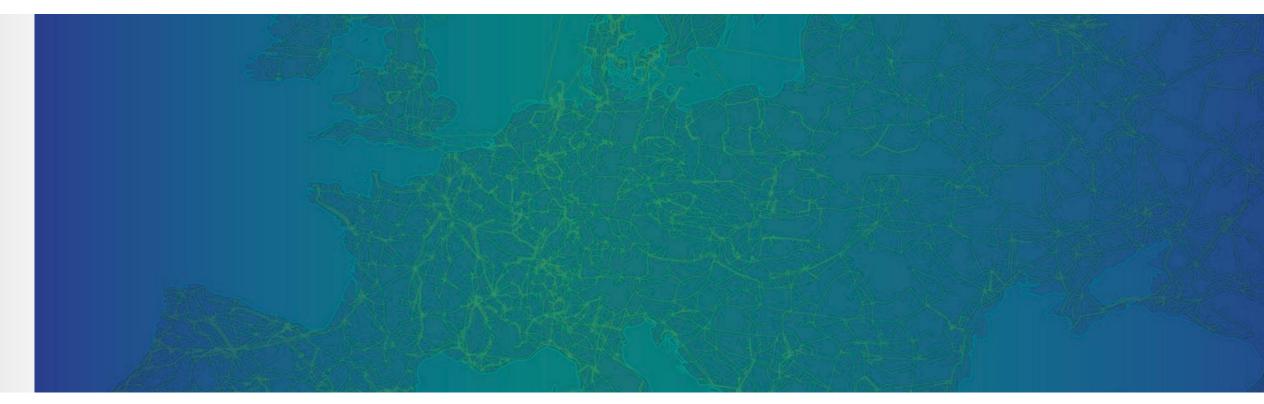
Interlinkage EB GL – SO GL – reserves prequalification

EnC Workshop, 20th Sep 2023



Cherry Yuen



SO GL stipulates the technical (non-market) requirements for reserves for electricity balancing and its interlinkage with EB GL goes in various depths and dimensions concerning reserves prequalification.

Content:

- Technical requirements on reserves properties
- IT-related technical requirements for data exchange
- Procedural requirements & prequalification in practice



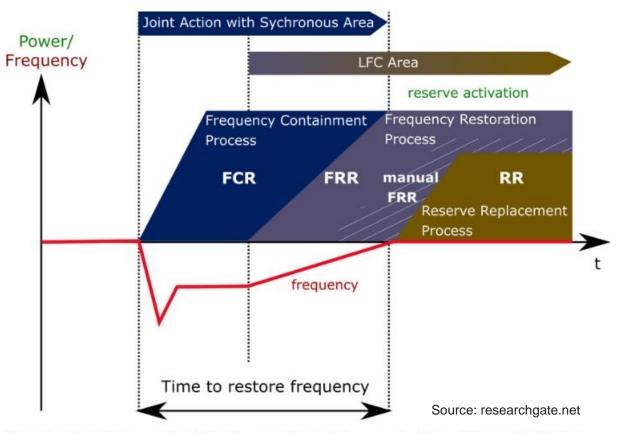
Technical requirements on properties of reserves

A dedicated section (Part 4, Title V) on LFC&R (Load-Frequency Control and Reserves): to be applied for <u>TSOs connected within the same synchronous area.</u>

Each LFC area/block needs to balance the generation and demand, imbalances are offset via the use of different reserves, the frequency qualify of each area/block is quantified and published annually.

Major technical requirements cover frequency quality and management, different types of reserves including their dimensioning and prequalification processes.

The minimum technical requirements (e.g. activation time, range, etc.) are stipulated in the SO GL, while common additional properties (activation frequency range, LER* activation requirements for CESA**) for FCR can be defined based on the needs of the individual synchronous areas and be part of the Synchronous Area Operational Agreement***.



Hierarchy of Load-Frequency-Control (under assumption that Frequency Containment Reserve (FCR) is fully replaced by Frequency Restoration Reserve (FRR). FRR is commonly divided into automatic frequency restoration reserve (aFRR) and manual FRR.

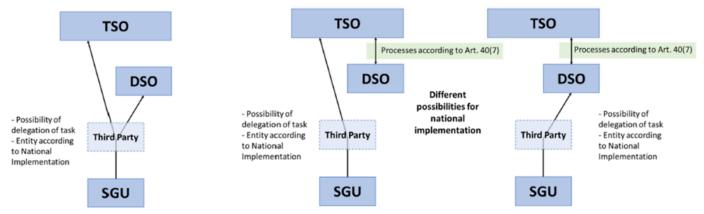


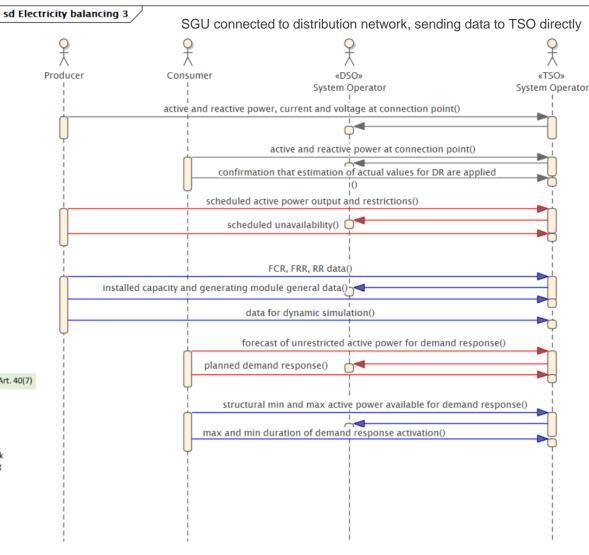
IT-related technical requirements for data exchange – example 1

A dedicated section (Part 2, Title II) on data exchange which governs data exchange of the technical processes stipulated in SO GL; this includes the KORRR methodology detailing the requirements for TSO-TSO, TSO-DSO and TSO-SGU* data exchange.

TSOs shall agree on the minimum requirements for availability, reliability and redundancy of the technical infrastructure on measurements and communication infrastructure, etc. in the SAOA (Part 4 Title III).

The KORRR methodology foresees the possibility of three scenarios for data exchange with reserves providers which are connected to the distribution grid:

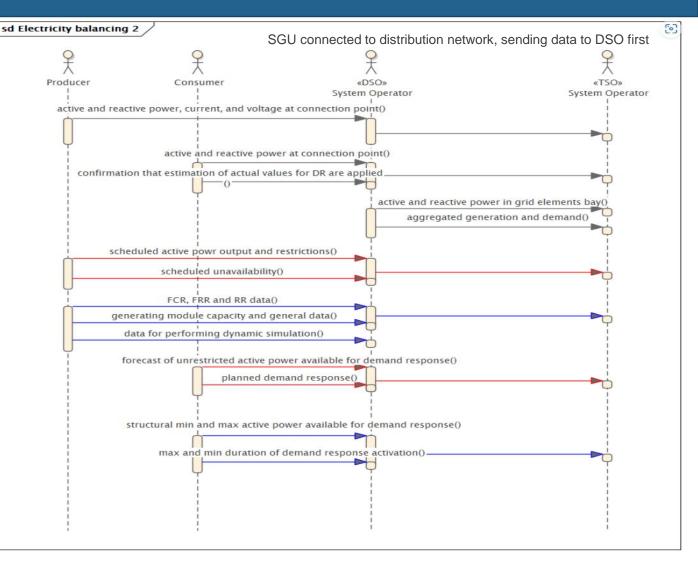




IT-related technical requirements for data exchange – example 2

In case the chosen scenario requires data exchange with DSOs, there are provisions on requirements for DSOs with service providers which are connected to the distribution grid.

TSOs shall cooperate and coordinate with DSOs (and SGUs) to specify and ensure the availability, reliability and redundancy of the tools, means and facilities for the provision of balancing or ancillary services (Part 2 Title I).





Procedural requirements & prequalification in practice

Application process for all reserves follows the same timeline: 6w-4w-3m

Prequalification re-assessed at least every 5 years for any types of reserves (more frequent in case of update of requirements or equipment)

Key points in common: non-discriminatory, market-based, transparent

Examples of how some CESA* TSOs do this (available in English):

- German TSOs
- Tennet (NL)
- <u>HOPS (HR)</u>
- <u>RTE (FR)</u>
- Swissgrid (CH, non-EU TSO, SAFA contractual party)

