



System Operation Guideline (SOGL) GB Implementation

Reserve Requirements -
Prequalification & Minimum
Technical Requirements

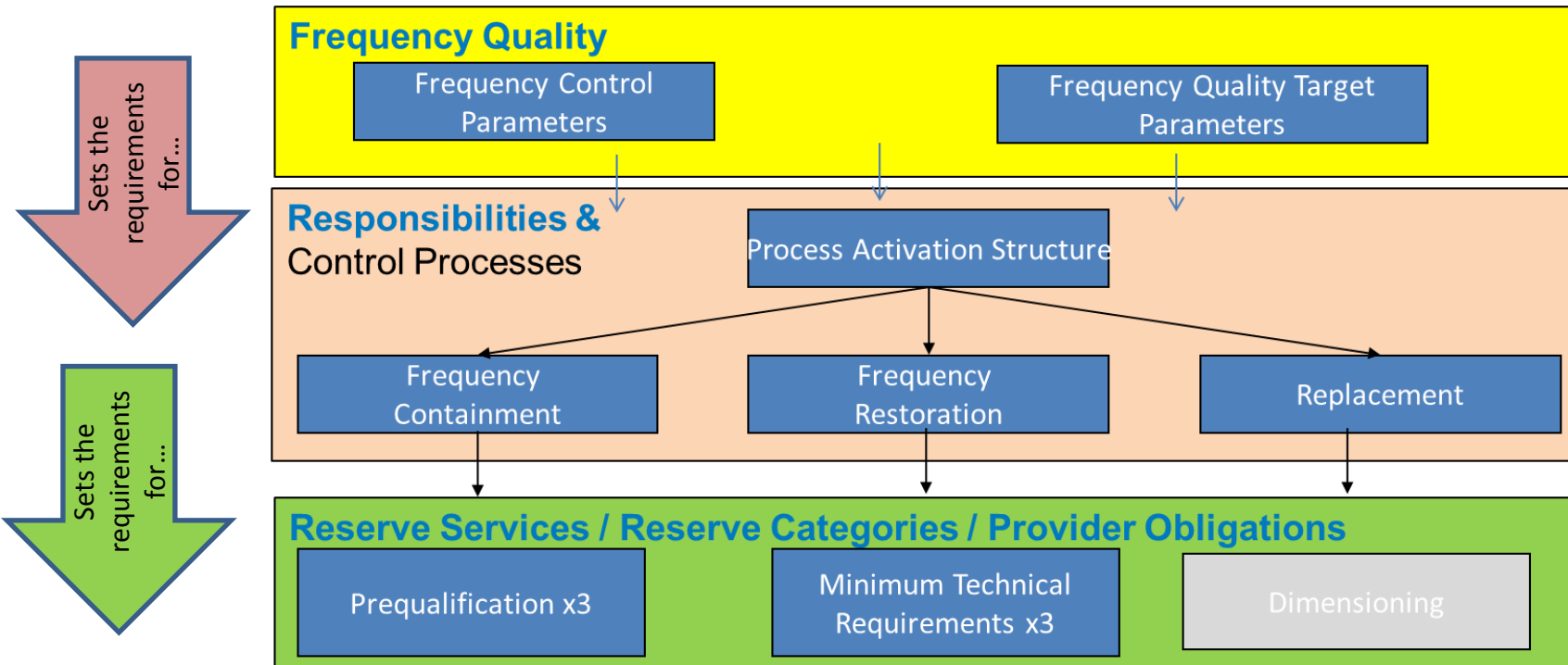
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Rob Wilson / David Bunney

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SOGL code structure for Part 4: Load Frequency Control and Reserves



High-level flow-through and linking of requirements in SOGL

- Frequency quality parameters and system conditions set the requirements for the process activation structure.
- The SO must design processes to meet security standards
- The process activation structure sets the need for reserve services
- SOGL defines that the SO must set appropriate requirements for services or reserve categories

Reserve Service Categories

SOGL recognises three categories of reserve:

Frequency containment reserve (FCR) – SOGL articles 153-156

- ‘frequency containment reserves’ means the active power reserves available to contain system frequency after the occurrence of an imbalance;

Frequency replacement reserve (FRR) – SOGL articles 157-159

- ‘frequency restoration reserves’ means the active power reserves available to restore system frequency to the nominal frequency and, for a synchronous area consisting of more than one LFC area, to restore power balance to the scheduled value;

Replacement reserves (RR) – SOGL articles 160-162

- ‘replacement reserves’ means the active power reserves available to restore or support the required level of FRR to be prepared for additional system imbalances, including generation reserves;

SOGL Articles	Frequency Containment Reserves	Frequency Replacement Reserves	Replacement Reserves
Dimensioning	153	157	160
Minimum Technical Requirements	154	158	161
Prequalification Process	155	159	162
Provision	156	-	-

Reserve Service Requirements

Reserve Services / Reserve Categories / Provider Obligations

Prequalification

Minimum Technical
Requirements

SO sets
Dimensioning

FCR Provision

Minimum Technical Requirements

Provide the framework under which common requirements or individual service technical requirements may be set. The system operator sets the technical requirements for reserve services according to the needs of the Process Activation Structure. Apart from the services meeting Annex-V for FCR there are no absolute hard-coded requirements in SOGL for services in a given reserve category and the SO has the discretion to set appropriate requirements for each service

Prequalification

This is the process of ensuring that a prospective provider's modules/units/groups can meet the prescribed technical requirements for a given reserve service. Prospective reserve providers for given services must ensure that their modules/units/groups satisfy the technical requirements of those services in order to be permitted to provide a given reserve service associated with a given reserve category;

Prequalification defined in SOGL is not necessarily the only requirement a service provider may need to meet; other existing GB requirements, EBGL or bilateral contractual terms are outside the scope of this process. For example: Connection and compliance obligations and commercial and market obligations are not part of the scope of the prequalification process;

NB Note that prequalification does not dictate whether a service is mandatory or not, and SOGL does not prevent such obligations being set out nationally

Interpretation of FCR Minimum Technical Requirements for Providers

(noting that similar provisions are made for FRR and RR)

RfG is referenced in a number of these clauses. Note in addition to the points below that settings in RfG have been chosen to be consistent with existing GB frameworks

Article 154.1, 154.4, 154.5, 154.7 – requirements for TSO not service providers. 154.1 refers to table 1 of annex V which defines which GB and cross border services are in which reserve category

Article 154.2 ‘TSOs...shall have the right to specify common additional properties of the FCR...’

NGET will not be setting any requirements in addition to existing GB frameworks

Article 154.3 ‘...TSO shall have the right to set out additional requirements for FCR providing groups...’

NGET will not be setting any requirements in addition to existing GB frameworks

Article 154.6 – refers to 154.1 and the additional requirements that may be set in 154.2-3.

NGET will not be setting any requirements in addition to existing GB frameworks

Article 154.8 – sets out requirements for data from providers but does not set time period or refresh rate so is incomplete.

Article 154.9-11 – meant to allow flexibility in application of para 8. Allows setting of time periods but also makes application optional, also sets out application to aggregated data. Typo in paras 10 & 11 refer to para 9 by mistake & should refer to para 8. Legal opinion sought and confirms. Previous draft of code referenced correctly.

Interpretation of FCR Prequalification

In summary:

- The prequalification process of each reserve service associated with each reserve category will need to be reviewed between now and September 2018.
- “Prequalification” can be a light-touch paper-based self-declaration of a capability to and commitment to provide a technical service to the required standards.
- “Prequalification” is not the only step necessary in many cases in order to become a reserve provider and have qualified modules/units/groups.

Conclusions: SOGL reserve provision in GB

- SOGL does not require any changes to current GB frameworks or service structures for reserve provision;
- NGET's view is that the GB reserve services and underlying technical requirements of these services (whether arising from GB regulation or contractual terms) are SOGL compliant and no change is required as part of SOGL application in GB.
- It is therefore the proposal of NGET that all existing active providers be deemed 'prequalified' under SOGL for those same services on 15th September 2018
- Any new service providers will be assessed according to the rules of prequalification thereafter.

Overall conclusion: GB reserve services, technical requirements of service providers and their 'prequalified' status remain unchanged at 15th September as SOGL reserve provision articles enter into force. No action is required and no transition period is necessary.

Detailed Breakdown of Articles

Article 154 : FCR Technical Minimum Requirements

<p>1. Each reserve connecting TSO shall ensure that the FCR fulfils the properties listed for its synchronous area in the Table of Annex V.</p>	<p>This defines which GB and cross border services are effectively in the FCR reserve category (if not FCR then FRR;RR or other)</p>
<p>2. All TSOs of a synchronous area shall have the right to specify, in the synchronous area operational agreement, common additional properties of the FCR required to ensure operational security in the synchronous area, by means of a set of technical parameters and within the ranges in Article 15(2)(d) of Regulation (EU) 2016/631 and Articles 27 and 28 of Regulation (EU) 2016/1388. Those common additional properties of FCR shall take into account the installed capacity, structure and pattern of consumption and generation of the synchronous area. The TSOs shall apply a transitional period for the introduction of additional properties, defined in consultation with the affected FCR providers.</p>	<p>SO has the option to specify common requirements in the Synchronous Area Agreement (SAOA).</p> <p>The SO <u>may choose not</u> to create common requirements and not put anything in the SAOA document leaving everything defined at a service level or under national regulation.</p> <p>The level of requirements may not be more onerous than the capabilities outlined in RfG and DCC.</p> <p>The technical requirements may be set at a lower threshold than this.</p> <p>No change in service definitions is sought and therefore not transition period is thought to be necessary when maintaining the GB service landscape unaltered.</p>
<p>3. The reserve connecting TSO shall have the right to set out additional requirements for FCR providing groups within the ranges in Article 15(2)(d) of Regulation (EU) 2016/631 and Articles 27 and 28 of Regulation (EU) 2016/1388 in order to ensure operational security. Those additional requirements shall be based on technical reasons such as the geographical distribution of the power generating modules or demand units belonging to an FCR providing group. The FCR provider shall ensure that the monitoring of the FCR activation of the FCR providing units within a reserve providing group is possible.</p>	<p>Same principle as for (2) above.</p> <p>The SO may set requirements for ‘group’ providers . The article leaves it open as to whether this is at as service level or group level or whether no such technical requirements are set at all.</p>
<p>4. The reserve connecting TSO shall have the right to exclude FCR providing groups from the provision of FCR in order to ensure operational security. This exclusion shall be based on technical reasons such as the geographical distribution of the power generating modules or demand units belonging to an FCR providing group.</p>	<p>This is an optional right for SOs to exclude aggregated groups of providers on technical security grounds.</p>

Article 154 : FCR Technical Minimum Requirements

<p>5. Each FCR providing unit and each FCR providing group shall have only one reserve connecting TSO.</p>	<p>Within GB with the Block Structure and a single SO it is not currently physically possible to violate this rule.</p>
<p>6. Each FCR providing unit and each FCR providing group shall comply with the properties required for FCR in the Table of Annex V and with any additional properties or requirements specified in accordance with paragraphs 2 and 3 and activate the agreed FCR by means of a proportional governor reacting to frequency deviations or alternatively based on a monotonic piecewise linear power-frequency characteristic in case of relay activated FCR. They shall be capable of activating FCR within the frequency ranges specified in Article 13(1) of Regulation (EU) 2016/631.</p>	<p>Service definitions which meet or better the requirements in Annex 5 are FCR if not they fall into a different category.</p> <p>As stated previously the SO does not intend to specify any ‘common additional requirements for FCR’ in the SAOA but rather rely on existing GB regulation and service contractual terms.</p> <p>All services are indeed dynamic or static in nature. The frequency ranges in RfG align with existing GB services</p>
<p>7. Each TSO of the CE synchronous area shall ensure...</p>	<p>Paragraph 7 does not apply to GB</p>
<p>8. Each reserve connecting TSO shall monitor its contribution to the FCP and its FCR activation with respect to its FCR obligation, including FCR providing units and FCR providing groups. Each FCR provider shall make available to the reserve connecting TSO, for each of its FCR providing units and FCR providing groups, at least the following information:</p> <ul style="list-style-type: none"> (a) time-stamped status indicating if FCR is on or off; (b) time-stamped active power data needed to verify FCR activation, including time-stamped instantaneous active power; (c) droop of the governor for type C and type D power generating modules as defined in Article 5 of Regulation (EU) 2016/631 acting as FCR providing units, or its equivalent parameter for FCR providing groups consisting of type A and/or type B power generating modules as defined in Article 5 of Regulation (EU) 2016/631, and/or demand units with demand response active power control as defined in Article 28 of Regulation (EU) 2016/1388. 	<p>This article setting out information provision requirements from reserve providers to the system operator. As with paragraph 2 this is optional and the nature of how and to what extent the obligations are applied to each FCR reserve service is flexible and discretionary for the SO according to the operational needs of the Frequency Containment Process.</p> <p>Paragraphs 9, 10 and 11 set the optional and flexible nature of the application of this requirement (in para. 8) and legal interpretation has been sought to clarify and validate the above interpretation. [see commentary on the next page]</p> <p>This optionality means that paragraph 8 like paragraph 2 is a discretionary authority for the SO to specify specific requirements to FCR services . These obligations may not exceed this level of obligation but may be much less. The SO may set obligations flexibly according to the needs of the system to ensure the FCP operates effectively. [see further commentary on the next page]</p>

Article 154 : FCR Technical Minimum Requirements

<p>9. Each FCR provider shall have the right to aggregate the respective data for more than one FCR providing unit if the maximum power of the aggregated units is below 1,5 MW and a clear verification of activation of FCR is possible.</p>	<p>The SO may not insist on provision of data under paragraph 8 at a for connection points with less than 1.5MW of attached reserves .</p>
<p>10. At the request of the reserve connecting TSO, the FCR provider shall make the information listed in paragraph 9 available in real-time, with a time resolution of at least 10 seconds.</p>	<p>These two paragraphs originally were directed at paragraph 8 but late changes in the paragraph ordering made by the EC legal translation team who did not also change the referencing within this paragraph created some confusion.</p>
<p>11. At the request of the reserve connecting TSO and where necessary for the verification of the activation of FCR, a FCR provider shall make available the data listed in paragraph 9 concerning technical installations that are part of the same FCR providing unit.</p>	<p>Legal counsel has been sought and it is an agreed legal interpretation across European TSOs is that these paragraphs apply equally to paragraph 8 as they do to paragraph 9 which was the original intention of the code drafting team and as originally understood by both ACER and the EC.</p> <p>This optionality means that paragraph 8 like paragraph 2 is a discretionary authority for the SO to specify specific requirements to FCR services . These service level requirement may not exceed this limits of obligation specified in para. 8 but may be set much lower. The SO may set obligations flexibly according to the needs of the power system to ensure the FCP operates effectively.</p>

FCR Prequalification process – article 155

<p>1. By 12 months after entry into force of this regulation, each TSO shall develop an FCR prequalification process and shall make publicly available the details of the FCR prequalification process.</p>	<p>The current prequalification process will be reviewed by sept 18 not many changes are expected</p>
<p>2. A potential FCR provider shall demonstrate to the reserve connecting TSO that it complies with the technical and the additional requirements set out in Article 154 by completing successfully the prequalification process of potential FCR providing units or FCR providing groups, described in paragraphs 3 to 6 of this Article.</p>	<p>All existing providers of services not changing under SOGL will be deemed “prequalified” on day-1 of SOGL effectiveness (15th Sept 2018).</p>
<p>3. A potential FCR provider shall submit a formal application to the reserve connecting TSO together with the required information of potential FCR providing units or FCR providing groups. Within 8 weeks from receipt of the application, the reserve connecting TSO shall confirm whether the application is complete. Where the reserve connecting TSO considers that the application is incomplete, the potential FCR provider shall submit the additional required information within 4 weeks from receipt of the request for additional information. Where the potential FCR provider does not supply the requested information within that deadline, the application shall be deemed withdrawn.</p>	<p>These steps and timescales for prequalification will form part of the reserve provider application process currently under review.</p> <p>Please be aware that prequalification is but one step a potential provider may need to go through under existing structures that are outside the scope of Prequalification but which remain compliance with the wider SOGL and EBGL frameworks.</p>
<p>4. Within 3 months from confirmation that the application is complete, the reserve connecting TSO shall evaluate the information provided and decide whether the potential FCR providing units or FCR providing groups meet the criteria for an FCR prequalification. The reserve connecting TSO shall notify its decision to the potential FCR provider.</p>	<p>These steps and timescales for prequalification will form part of the reserve provider application process currently under review.</p>

FCR Prequalification process – article 155

<p>5. Where the compliance with certain requirements of this Regulation has already been verified by the reserve connecting TSO, it will be recognized in the prequalification.</p>	<p>The implications and alignment of prequalification of reserve providing units in another country will be considered during the design of those common cross-border processes (e.g. TERRE or MARI).</p>
<p>6. The qualification of FCR providing units or FCR providing groups shall be re-assessed:</p> <ul style="list-style-type: none">(a) at least once every 5 years;(b) in case the technical or availability requirements or the equipment have changed; and(c) in case of modernization of the equipment related to FCR activation.	<p>These aspects will be included in the prequalification process post Sept 2018.</p>