GB Synchronous Area Operational Agreements

Revision History

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|  | **V0.1** | **05.04.2018** |  | **NGET proposal for public consultation** |
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| **Disclaimer**  This document, provided by NGET, is the draft for stakeholder consultation of the NGET proposal for the GB Synchronous Area Operational Agreements in accordance with Article 118 of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation. |

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**Introduction**

This Synchronous Area Operational Agreements (hereafter referred to as "SAOA") document applies to the Synchronous Area of Great Britain and contains methodology texts listed in Article 118 of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (hereafter referred to as “SOGL”).

This SAOA is implemented in GB taking into account:

**Whereas**

1. This document is a proposal developed by National Grid Electricity Transmission (hereafter referred to as “NGET”) regarding a SAOA for GB.
2. This proposal takes into account the general principles and goals set in Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation as well as 2015/1222 establishing a guideline on capacity allocation and congestion management (hereafter referred to as “Regulation 2015/1222”), and Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13  July 2009 on conditions for access to the network for cross-border exchanges in electricity (hereafter referred to as “Regulation (EC) No 714/2009”). The goal of SOGL is to safeguard operational security, frequency quality and the efficient use of the interconnected system and resources.
3. SOGL, Part IV, Load Frequency Control & Reserves section, recognises the need for a degree of flexibility to cater for physics of scale in different synchronous areas as well as specific time varying influence of network connectivity and technology in the energy mix in determining how system operators’ processes and the reserve provider services meet the system quality criteria. This flexibility is achieved through the development of agreements and methodologies.
4. According to Article 6 (6) of the SOGL, the expected impact of the GB SAOA proposal on the objectives of the SOGL has to be described. It is presented below. The SAOA proposal generally contributes to the achievement of the objectives of the SOGL. In particular this SAOA serves the objective of ensuring the conditions for maintaining a frequency quality level for the synchronous area GB; for determining common load-frequency control processes and control structures within GB; ensure conditions for maintaining operational security; the publication of GB methods and specific values in the common language of SOGL promotes transparency and reliability of information on transmission system operation, facilitating greater cross-border cooperation and the efficient operation of the electricity transmission system in the Union.
5. Furthermore, the methodologies contained in this SAOA proposal shall ensure application of the principles of proportionality and non-discrimination; transparency; optimisation between the highest overall efficiency and lowest total costs for all industry stakeholders and consumers; and use of market-based mechanisms as far as possible, to promote frequency quality and operational security.
6. In conclusion, the methodologies contained in this SAOA proposal shall contribute to the general objectives of the SOGL to the benefit of all TSOs, the Agency, regulatory authorities, market participants and the end consumers.

SUBMIT THE FOLLOWING SYNCHRONOUS AREA OPERATIONAL AGREEMENTS PROPOSAL TO THE GB REGULATORY AUTHORITY, OFGEM:

1. General Provisions
2. Subject matter and scope
3. This Synchronous Area Operational Agreement (SAOA) document for Great Britain contains:
   1. Title 2: Those Articles referenced from both 118 and 6(3). These are subject to OFGEM approval and public consultation from Article 11.
   2. Title 3: Those articles referenced in Article 118 but not found in Article 6 or 11. These articles are not subject to either OFGEM approval or public consultation.
4. Definitions and interpretation
5. For the purposes of this proposal, the terms used shall have the meaning of the definitions included in Article 3 of Regulation 2017/1485, Article 2 of Regulation 2015/1222 and the other items of legislation referenced therein.

1. Methodologies, Conditions and Values developed by NGET to satisfy the needs of the SOGL within SAOA for GB, which are subject to OFGEM regulatory authority approval
2. The dimensioning rules for FCR in accordance with SOGL Article 153
3. The NETS SQSS specifies the standards which are used to dimension the GB FCR requirements.
4. NGET shall determine the reserve capacity for FCR required for the GB synchronous area at least daily and refine this according to changes in system conditions, through to real time.
5. Additional properties of FCR in accordance with SOGL Article 154(2)
6. All technical properties for GB services are specific to those services and no common additional properties are defined here.
7. The frequency quality defining parameters and the frequency quality target parameters in accordance with SOGL Article 127
8. The Frequency Quality Defining Parameters and the Frequency Quality Target Parameters are as defined in SOGL Annex 1, table 1 and table 2.
9. For the GB and IE/NI synchronous areas, measures to ensure the recovery of energy reservoirs in accordance with SOGL Article 156(6)(b)
10. The definition of FCR products in GB are covered by the Grid Code and balancing services where applicable, (mandatory agreements and ancillary agreements).
11. The declared availability of FCR providing units and groups is managed by the FCR providers which reflect the requirement to recover energy reservoirs. Effectively this means that NGET takes into account the depletion of these reservoirs when procuring FCR.
12. When operating the FCP, NGET take into account depletion of these reservoirs to minimize risk in real time where applicable.
13. If applicable, for synchronous areas other than CE, limits for the exchange of FCR between the TSOs in accordance with SOGL Article 163(2)
14. This article is not applicable to GB since the LF Block Structure has a single LF Block and single LF Area within the Synchronous Area of GB.
15. The methodology to determine limits on the amount of sharing of FCR between synchronous areas defined in accordance with SOGL Article 174(2)
16. NGET looks at the overall requirements for FCR as defined by the dimensioning rules and subtracts the maximum amount of FCR sharing that could be accommodated from other synchronous areas, as determined below, to establish the minimum provision of reserve capacity of FCR in the GB synchronous area.
17. NGET determines the maximum amount of FCR sharing that could be accommodated from other synchronous areas by considering the following:
    1. The ability to transfer FCR between synchronous areas;
    2. To consider any loss of provision of FCR during a reference incident;
    3. Whether sharing of FCR can be accommodated by NGET under expected system conditions whilst complying with SQSS;
    4. When considering sharing arrangements which would reduce the cost of meeting GB FCR, NGET will look at the risk of the probability and impact of FCR short falls that could arise due to sharing.
18. The methodology to determine limits on the amount of exchange of FRR between synchronous areas defined in accordance with SOGL Article 176(1) and the methodology to determine limits on the amount of sharing of FRR between synchronous areas defined in accordance with SOGL Article 177(1)
19. NGET looks at the overall requirements for FRR as defined by the dimensioning rules and subtracts the maximum amount of FRR sharing and exchange that could be accommodated from other synchronous areas, as determined below, to establish the minimum provision of reserve capacity of FRR in the GB synchronous area.
20. NGET determines the maximum amount of FRR sharing and exchange that could be accommodated from other synchronous areas by considering the following:
21. The ability to transfer FRR between synchronous areas;
22. To consider any loss of provision of FRR during a reference incident;
23. Whether sharing and exchange of FRR can be accommodated by NGET under expected system conditions whilst complying with NETS SQSS;
24. When considering sharing arrangements which would reduce the cost of meeting GB FRR, NGET will look at the risk of the probability and impact of FRR short falls that could arise due to sharing.
25. The methodology to determine limits on the amount of exchange of RR between synchronous areas defined in accordance with SOGL Article 178(1) and the methodology to determine limits on the amount of sharing of RR between synchronous areas defined in accordance with SOGL Article 179(1).
26. NGET looks at the overall requirements for RR as defined by the dimensioning rules and subtracts the maximum amount of RR sharing and exchange that could be accommodated from other synchronous areas, as determined below, to establish the minimum provision of reserve capacity of RR in the GB synchronous area.
27. NGET determines the maximum amount of RR sharing and exchange that could be accommodated from other synchronous areas by considering the following:
28. The ability to transfer RR between synchronous areas;
29. To consider any loss of provision of RR during a reference incident;
30. Whether sharing and exchange of RR can be accommodated by NGET under expected system conditions whilst complying with NETS SQSS;
31. When considering sharing arrangements which would reduce the cost of meeting GB RR, NGET will look at the risk of the probability and impact of RR short falls that could arise due to sharing.
32. Methodologies, Conditions and Values developed by NEGT within SAOA for GB to meet the objectives of the SOGL but not requiring OFGEM approval

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| *Placeholder / Notice: The remaining methods from SOGL article 119 will be inserted in this section prior to completion of this document by September 2018.* |

1. Final Provisions
2. Timescale for implementation
3. The SAOA will enter into force 3 months after its approval by the GB National Regulatory Authority, OFGEM (not earlier than 14th June 2019) in line with SOGL article 118(2).
4. Language
5. The reference language for this SAOA shall be English.

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| Please note: The Article numbers in Title 4 are subject to change once the Articles in Title 3 are drafted and added to this document. |