

Operational Agreements for Ireland and Northern Ireland Synchronous Area

Schedule 3: LFC Area Operational Agreement

16 December 2019

Final version 1.0

Notice

This document provided by EirGrid and SONI is the final version of the LFC Area Operational Agreement following

- the consultation¹ period from 15/7/2019 until 14/8/2019

The methodologies in this LFC area operational agreement did not require regulatory approval.

¹ <https://consultations.entsoe.eu/entso-e-general/consultation-for-revised-ie-ni-saoa-lfboa/>

Disclaimer

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Introduction

This LFC Area Operational Agreement document applies to the area of Ireland (IE) and Northern Ireland (NI) and contains the Agreement required by Article 120 of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (hereafter referred to as “SOGL”).

This LFC Area Operational Agreement is implemented in IE and NI taking into account:

Whereas

1. This proposal was jointly developed by EirGrid and System Operator Northern Ireland (hereafter referred to as “SONI”) regarding a LFC Area Operational Agreement document for IE/NI.
2. This LFC Area Operational Agreement recognises the general principles and goals established in SOGL as well as Commission Regulation (EU) 2015/1222 establishing a guideline on capacity allocation and congestion management (hereafter referred to as “CACM”), 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”). SOGL aims to safeguard operational security, frequency quality and the efficient use of the interconnected system and resources.
3. SOGL, Part IV, entitled Load Frequency Control & Reserves recognises that relatively small synchronous areas such as in IE/NI require operational flexibility when compared with larger synchronous areas such as continental Europe as well as specific time varying influence of network connectivity and technology in the energy mix in determining how system operators’ processes and reserve services meet the system quality criteria. This flexibility is achieved through the development of agreements and methodologies.
4. The methodologies contained in this LFC Area Operational Agreement 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.
5. In conclusion, the methodologies contained in this LFC Area Operational Agreement 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.

TITLE 1
General Provisions

Article 1 Subject matter and scope

1. This LFC Area Operational Agreement for Ireland and Northern Ireland contains:
 - a. Title 2: Those requirements referenced in SOGL Articles 120.
2. Any modification of any part of this agreement does not require public consultation nor approval by the regulatory authorities of Ireland and Northern Ireland.

Article 2 Definitions and interpretation

1. For the purposes of this proposal, the terms used shall have the meaning of the definitions included in Article 3 of SOGL, Article 2 of CACM and the other items of legislation referenced therein.
2. EirGrid and SONI may use existing definitions, terminology and understandings to deliver the requirements of the SOGL within this LFC Area Operational Agreement as detailed in Table 1.

Terminology used in the System Operations Guideline (SOGL)	Interpretation based on terms normally used by EirGrid and SONI
FCR – Frequency Containment Reserve	Shall include Primary Operating Reserve (POR) and Secondary Operating Reserve (SOR) as defined in the EirGrid ² and SONI ³ Grid Codes.
FRR – Frequency Restoration Reserve	At present includes Tertiary Operating Reserve 1 (TOR1) and Tertiary Operating Reserve 2 (TOR2) as defined in the EirGrid and SONI Grid Codes. With ongoing implementation of Network Codes, in particular Electricity Balancing, future refinements are possible to ensure alignment with Network Codes.
FRR – Frequency Restoration Reserve	At present includes Tertiary Operating Reserve 1 (TOR1) and Tertiary Operating Reserve 2 (TOR2) as defined in the EirGrid and SONI Grid Codes. With ongoing implementation of Network Codes, in particular Electricity Balancing, future refinements are possible to

² [EirGrid Grid Code](#)

³ [SONI Grid Code](#)

	ensure alignment with Network Codes.
mFRR – Manual Frequency Restoration Reserves	Means FRR with manual activation.
RR – Replacement Reserve	At present includes Replacement Reserve (RR) as defined in the EirGrid and SONI Grid Codes. With ongoing implementation of Network Codes, in particular Electricity Balancing, future refinements are possible to ensure alignment with Network Codes.
Reserve providing unit	Any provider that has the technical capability to provide reserves, FCR (POR, SOR), FRR (TOR1, TOR2) and RR, having met the applicable Network Code requirements including the additional properties specified in article 4 of the SAOA and having successfully completed the required performance tests.
Demand Unit	A subset of Demand Units which are defined as Demand Side Units in the EirGrid and SONI Grid Codes and in the ESBN and NIEN Distribution Codes. The definition of a Demand Side Unit is; An Individual Demand Site or Aggregated Demand Site with a Demand Side Unit MW Capacity of at least 4 MW. The Demand Side Unit shall be subject to Central Dispatch. With the implementation of the Demand Connection Code and the HVDC Connection Code future refinements are possible.

Table 1 Definitions

TITLE 2

LFC area operational agreement in accordance with SOGL Article 120

1. EirGrid and SONI shall continuously monitor the FRCE of the LFC area. The FRCE for the LFC area shall be the frequency deviation.
2. EirGrid and SONI shall implement and operate a FRP for the LFC area:
 - a. The FRP shall ensure that FRR is scheduled in the IE/NI synchronous area.
 - b. Power system optimization software shall be used in order to optimize FRR:
 - i. Whilst respecting the rules described in the Operational Constraints Update;
 - ii. Based on the availability declarations, technical parameters and commercial offers submitted by market participants in respect of their generating units and demand side units; and
 - iii. Sharing of FRR with synchronous area GB shall be considered.

- c. Process Activation Structure for mFRR shall include the following:
 - i. A frequency restoration process activated by instructions issued by EirGrid and SONI which will use mFRR to ensure compliance with the FRCE target parameters.
3. EirGrid and SONI shall endeavour to fulfil the FRCE target parameters of the LFC area as defined in SOGL Article 128.
4. EirGrid and SONI shall implement the following processes referred to in SOGL Article 140(2).
 - a. A reserve replacement process:
 - i. The RRP shall ensure that RR is scheduled in the IE/NI synchronous area to ensure that operating security standards are maintained, subject to the availability declarations and technical parameters of market participants in respect of their generating units and demand side units.
 - ii. Process Activation Structure for replacement reserves shall include a reserve replacement process activated by instructions issued by EirGrid and SONI which will use RR to replace the activated FCR and mFRR.
 - b. A time control process.
5. Both TSOs of the IE/NI LFC area shall provide the LFC block monitor with the LFC area measurements necessary for collecting frequency quality evaluation data for the LFC block.
6. At any time in all-island operation either EirGrid or SONI will be designated as the lead monitoring TSO. The lead monitoring TSO shall be responsible for the implementation and operation of the frequency restoration process.
7. EirGrid and SONI shall ensure that the frequency restoration process of the IE/NI LFC area enables control of the active power interchange of each monitoring area to a value determined as secure based on a real-time operational security analysis.
8. EirGrid and SONI shall:
 - a. Ensure a sufficient quality and availability of the FRCE; and
 - b. Take action in case of FRCE unavailability.

TITLE 3

Final Provisions

Article 3 Timescale for implementation

1. The LFC Area Operational Agreement will enter into force on the date the Agreement is signed.

Article 4 Language

The reference language for this LFC Area Operational Agreement shall be English.