

**Proposal from Fingrid for determination of LFC blocks
in accordance with Article 141(2) of the Commission
Regulation (EU) 2017/1485 of 2 August 2017
establishing a guideline on electricity transmission
system operation**

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DISCLAIMER

This document is prepared and released by Fingrid Oyj only, for the public consultation on the determination of LFC blocks in accordance with Article 141(2) of the Commission Regulation (EU) No 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation. This document has been prepared by Fingrid Oyj as its proposed common proposal of all TSOs in Nordic synchronous area in accordance with Article 141(2). This document refers to all TSOs in synchronous area but is issued by Fingrid only, as its proposal for an arrangement that could be agreed and proposed by all TSOs in the synchronous area.. This version of the determination of LFC blocks does not in any case represent a firm, binding or definitive position of all the Nordic synchronous area TSOs on the content.

All TSOs in Nordic synchronous area, taking into account the following,

Whereas

- (1) This document is a common proposal developed by all Transmission System Operators in Nordic synchronous area (hereafter referred to as “TSOs”) regarding the development of a proposal for the determination of load-frequency control (hereafter referred to as “LFC”) blocks in accordance with Article 141(2) of Commission Regulation (EU) 2017/1485 establishing a guideline on electricity transmission system operation (hereafter referred to as the “SO Regulation”). This proposal is hereafter referred to as “LFC Proposal”.
- (2) The LFC Proposal takes into account the general principles and goals set in the SO Regulation as well as 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 the SO Regulation is to safeguard operational security, frequency quality and the efficient use of the interconnected system and resources. It sets for this purpose also rules aiming at the establishment of a Union framework for load-frequency control and reserves and requests thus to define the LFC structure. The LFC structure shall define process responsibilities taking into account the definitions set in Article 3 of the SO Regulation, that a) a monitoring area corresponds to or is part of only one LFC area, b) a LFC area corresponds to or is part of only one LFC block, c) a LFC block corresponds to or is part of only one synchronous area, and d) each network element is part of only one monitoring area, only one LFC area and only one LFC block.
- (3) Article 3(12) of the SO Regulation defines LFC area as “a part of a synchronous area or an entire synchronous area, physically demarcated by points of measurement at interconnectors to other LFC areas, operated by one or more TSOs fulfilling the obligations of load-frequency control”. Article 3(18) of the SO Regulation defines LFC block as “a part of a synchronous area or an entire synchronous area, physically demarcated by points of measurement at interconnectors to other LFC blocks, consisting of one or more LFC areas, operated by one or more TSOs fulfilling the obligations of load-frequency control”. Article 3 (140) ‘load-frequency control structure’ means the basic structure considering all relevant aspects of load-frequency control in particular concerning respective responsibilities and obligations as well as types and purposes of active power reserves. Article 3(141) ‘process responsibility structure’ means the structure to determine responsibilities and obligations with respect to active power reserves based on the control structure of the synchronous area; Article 3(145) ‘monitoring area’ means a part of the synchronous area or the entire synchronous area, physically demarcated by points of measurement at interconnectors to other monitoring areas, operated by one or more TSOs fulfilling the obligations of a monitoring area;
- (4) The LFC proposal takes into account the load-frequency control structure of the synchronous area in accordance with Article 139 of the SO Regulation. The operation of LFC processes is based on operational areas, where every area has their individual responsibilities with respect to the LFC structure. The superior structure is the synchronous area in which frequency and time deviation are the same for the whole area. Currently the Nordic synchronous area consists of one LFC block and one LFC area. The LFC area consists several monitoring areas.
- (5) According to Article 6(6) of the SO Regulation, the expected impact of the LFC Proposal on the objectives of the SO Regulation has to be described. The proposed LFC structure generally

contributes to the achievement of the objectives of Article 4 of the SO Regulation. The main purpose of LFC Proposal is to determine the configuration for LFC blocks, LFC areas and monitoring areas aiming at common load-frequency control processes and control structure on a synchronous area level. These common control processes and structures are best achieved by having one LFC block and one LFC area within Nordic synchronous area.

- (6) In regard of the aim of the SO Regulation to ensure the conditions for maintaining a frequency quality level of all synchronous areas throughout the Union, the LFC Proposal helps relevant TSOs to specify the allocation of responsibilities on frequency containment and frequency restoration processes. The relevant TSOs shall appoint one TSO responsible for the implementation and operation of the frequency restoration process. Besides, these TSOs define for configuration set in LFC Proposal the frequency quality defining parameters and the frequency quality target parameters for monitoring the frequency quality level of Nordic synchronous area.
- (7) The LFC Proposal ensures and enhances the objective of the transparency and reliability of information on transmission system operation by specifying each bidding zone as monitoring area. This configuration ensures that TSOs will continuously calculate and monitor the real-time active power exchange between the bidding areas. The LFC Proposal ensures transparency for all Balance Service Providers in the Nordic synchronous area by establishing a common balancing market, common imbalance netting and application of market-based mechanisms in the widest possible extent.
- (8) The LFC Proposal contributes to the objective of the efficient operation and development of the electricity transmission system and electricity sector in the Union and facilitates the objective of the application of the principle of optimisation between the highest overall efficiency and lowest total cost for all parties involved. The LFC proposal allows sharing and exchange of FRR reserves to the widest possible extent, minimising the counter activation of FRR reserves and the activation the most efficient resources to balance the system.
- (9) The LFC Proposal ensures that the TSOs make use of the market-based mechanisms as far as possible to ensure network security and stability through a common balancing market ensuring application of market based mechanisms in the widest possible extent.
- (10) Finally, the LFC Proposal respects the responsibility assigned to the relevant TSO in order to ensure system security, including as required by national legislation. Each TSO in Nordic synchronous area has responsibility to monitor operational security on its own control area. This is a result of determination of monitoring area to cover a bidding zone. Furthermore, each TSO shall operate its control area with the sufficient upward and downward active power reserves, which may include shared or exchanged reserves, to face imbalances between demand and supply within its control area and agreed within the LFC area.
- (11) In conclusion, the LFC Proposal contributes to the general objectives of the SO Regulation to the benefit of all TSOs, all market participants and electricity end consumers in the Nordic synchronous area.

SUBMIT THE FOLLOWING LFC PROPOSAL TO ALL REGULATORY AUTHORITIES OF NORDIC SYNCHRONOUS AREA:

Article 1
Subject matter and scope

The LFC blocks determined in the LFC Proposal are the common proposal of TSOs in accordance with Article 141(2). The LFC Proposal applies solely to the Nordic synchronous area.

The LFC Proposal covers determination of monitoring area(s), LFC area(s), LFC block(s) for Nordic synchronous area and assigns each network element of Nordic synchronous area to a monitoring area, a LFC area and a LFC block.

Article 2
Definitions

1. For the purposes of the LFC Proposal, terms used in this document shall have the meaning of the definitions included in Article 3 of the SO Regulation and Article 2 of the Regulation (EC) 714/2009, Regulation (EU) No 543/2013 and Directive 2009/72/EC.
2. In the LFC Proposal, unless the context requires otherwise:
 - a) the singular indicates the plural and vice versa;
 - b) the headings are inserted for convenience only and do not affect the interpretation of the LFC Proposal; and
 - c) any reference to legislation, regulations, directive, order, instrument, code or any other enactment shall include any modification, extension or re-enactment of it when in force.

Article 3
Monitoring area(s)

A monitoring area corresponds to a bidding zone.

Article 4
LFC area(s)

A LFC area corresponds to the Nordic synchronous area.

Article 5
LFC block(s)

A LFC block corresponds to the Nordic synchronous area.

Article 6
Assignment of each network element

Each network element of the Nordic synchronous area belongs to a LFC area as defined in Article 4, a LFC block as defined in Article 5 and a monitoring area as defined in Article 3.

Article 7
Future development of LFC block(s)

By 12 months after the approval of the LFC Proposal by competent authorities, all TSOs in Nordic synchronous area shall jointly develop a report, subject to stakeholder involvement and consultation in accordance with Article 11 of the SO Regulation, assessing the future development of LFC structure. The report shall include the needed changes to the LFC structure with justification also taking into account the European platforms to be established for balancing purposes and a roadmap for implementation of such changes in the Nordic synchronous area.

Article 8
Publication of decision and implementation timeline of the proposal

1. The TSOs shall publish the LFC Proposal without undue delay after the competent NRAs have approved the LFC Proposal or a decision has been taken by the Agency for the Cooperation of Energy Regulators in accordance with Article 6 of the SO Regulation.
2. The TSOs shall implement the LFC Proposal in Nordic synchronous area immediately when Nordic synchronous area operational agreement concluded in accordance with Article 118 of the SO Regulation, LFC block operational agreement concluded in accordance with Article 119 of the SO Regulation and LFC area operational agreement concluded in accordance with Article 120 of the SO Regulation have entered into force.

Article 9
Language

The reference language for the LFC Proposal shall be English. For the avoidance of doubt, where TSOs need to translate the LFC Proposal into their national language(s), in the event of inconsistencies between the English version published by TSOs in accordance with Article 8(1) of the SO Regulation and any version in another language, the relevant TSOs shall, in accordance with national legislation, provide the relevant national regulatory authorities with an updated translation of the LFC Proposal.