

Proposal Determination of ramping restrictions for active power output of all TSOs of the LFC Block block TNG+TTG+AMP+50HZT+ENDKW+CREOS concerning ramping restrictions for active power output in accordance with Article 137(3) and Article 137(4) of Commission Regulation (EU) 2017/1485 establishing a guideline on electricity transmission system operation

~~27.05.2019~~ 30.08.2024

based on the amendment proposal of 30.08.2024 by 50Hertz Transmission GmbH (50HZT), Amprion GmbH (AMP), Creos Luxembourg S. A. (CREOS), Energinet (EN), TenneT TSO GmbH (TTG), TransnetBW GmbH (TNG), ~~taking into account the following~~

20.12.2024

Whereas

- (1) This document is a common proposal determination of ramping restrictions for active power output (hereafter referred to as “ramping determination”) developed by all Transmission System Operators of Danish-German-Luxembourgish Load-Frequency-Control Block block (hereafter referred to as “TSOs”) ~~regarding the ramping restrictions for active power output~~ in accordance with Article 137(3) and Article 137(4) of Commission Regulation (EU) 2017/1485 establishing a guideline on electricity transmission system operation as amended by Commission Implementing Regulation (EU) 2021/280 of 22 February 2021 (hereafter referred to as “SOGL”).
- (2) Article 6(3)(e)(i) of SOGL requires the approval by all regulatory authorities of the concerned region of the proposal by all TSOs of an LFC block concerning “[...] *ramping restrictions for active power output in accordance with Article 137(3) and (4)*”.
- (3) Article 137(3) of SOGL gives the right to all connecting TSOs of an HVDC interconnector “[...] *to determine in the LFC block operational agreement common restrictions for the active power output of that HVDC interconnector to limit its influence on the fulfilment of the FRCE target parameter of the connected LFC blocks by agreeing on ramping periods and/or maximum ramping rates for this HVDC interconnector. Those common restrictions shall not apply for imbalance netting, frequency coupling as well as cross-border activation of FRR and RR over HVDC interconnectors.*”
- (4) Article 137(3) of SOGL states: “*All TSOs of a synchronous area shall coordinate these measures within the synchronous area.*”
- (5) Article 137(4) of SOGL gives all TSOs of an LFC block the right “[...] *to determine in the LFC block operational agreement the following measures to support the fulfilment of the FRCE target parameter of the LFC block and to alleviate deterministic frequency deviations, taking into account the technological restrictions of power generating*

modules and demand units”.

- (6) This ~~proposal~~ ramping determination fulfils the requirements of the SOGL by defining the maximum gradient for the HVDC interconnectors in ~~Article 3(1) Article 3(2) and (3).~~
- (7) The TSOs do not propose to introduce ramping restrictions in accordance with Article 137(4) of SOGL.
- (8) The coordination between the TSOs of the synchronous area required by Article 137(3) of SOGL is part of the synchronous area operational agreement.
- (9) This ~~ramping determination proposal~~ fulfils the objectives of Article 4(1) of SOGL as follows:
 - (a) The ~~ramping determination proposal~~ determines ~~establishes~~ common operational security requirements and principles for the ramping restrictions in the ~~DE-LU-DK Danish-German-Luxembourgish LFC BBlockblock.~~
 - (b) The ~~ramping determination proposal~~ respects the responsibility assigned to the TSOs for system security by the national legislation.
 - (c) The transparency is ensured by definition of the ramping restrictions of the ramping determination ~~of the proposal.~~
 - (d) The ~~proposal~~ for ramping restrictions for HVDC interconnectors ~~does not introduce limitations to the market, as it allows a trade of 1200 MW/h from Nordie to Continental Europe and vice versa, while not impacting operational security in one of the synchronous areas aims at limiting the influence on the fulfilment of the Frequency Restoration Control Error (FRCE) target parameter of the of Danish-German-Luxembourgish Load-Frequency-Control Blockblock and the connected LFC blocks of the synchronous areas Nordic and Great Britain, by definition of defining ramping periods and/or maximum ramping rates for this~~ the concerned HVDC interconnectors.
 - (e) The common ramping restrictions of this proposal are not applicable for imbalance netting, frequency coupling as well as cross-border activation of FRR and RR over HVDC interconnectors. This ramping determination proposal is only applicable for changes of active power output of HVDC interconnectors between the Danish-German-Luxembourgish LFC Blockblock and the synchronous areas Nordic and Great Britain, based on market results from day-ahead and intraday trading of schedule energy at (wholesale) electricity markets.
 - (f) The ~~ramping determination proposal~~ promotes the coordination of system operation since ~~this proposal~~ it is based on a joint proposal of all TSOs of the DE-LU-DK Danish-German-Luxembourgish LFC BBlockblock as part of the LFC block operational agreement in accordance with Article 119 of SOGL. The coordination on the synchronous area level is part of the synchronous area operational agreement, as well as bilateral agreements between the HVDC connecting TSOs.
 - (g) According to a Article 137 (3) of SOGL, the ramping determination proposal shall only refer only to HVDC interconnectors between synchronous areas. HVDC interconnectors between the TSOs of the Danish-German-Luxembourgish LFC Blockblock and other LFC Blocksblocks of the synchronous area Ceontinental Europe are not affected.

SUBMIT THE FOLLOWING PROPOSAL TO THE REGULATORY AUTHORITIES

OF DENMARK, GERMANY AND LUXEMBOURG:

Article 1

Subject matter, scope and responsibility structure

- (1) This ~~ramping determination proposal~~ is based on the LFC block and LFC area structure defined by ~~the “All TSOs’ proposal for the determination of LFC blocks for the Synchronous Area Continental Europe”~~ Determination of LFC blocks for the Synchronous Area Continental Europe 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~~ and approved by the regulatory authorities ~~the SOGL~~.
- (1) ~~In accordance with (1), the proposal applies only for the part of Denmark which is synchronously connected to the synchronous area CE.~~
- (2) This ~~ramping determination proposal~~ defines the ramping restrictions in accordance with Article 137(3) of SOGL and Article 137(4) of SOGL in the ~~DE-LU-DK-Danish-German-Luxembourgish~~ LFC Bblock.

Article 2

Definitions and interpretation

- (1) For the purpose of the ~~ramping determination proposal~~, the terms used shall have the meaning given to them in Article 3 of SOGL.
- (2) ‘DE area’ means the monitoring areas 50HZT, AMP, CREOS, TNG and TTG.
- (3) ‘DKW area’ or ‘DK1’ means the ~~monitoring-Western LFC area of EN~~ which is synchronously interconnected with the synchronous area ~~CE-Continental Europe~~.
- (4) ‘DKE area’ or ‘DK2’ means the Eastern LFC area of EN, which is part of the synchronous area Nordic.
- (5) ‘DE-LU-DK LFC block’ means the Danish-German-Luxembourgish LFC Bblock comprising the DE area and the DKW area.
- ~~‘Nordic’ means the monitoring areas of the Nordic synchronous area, which are connected to the DE-LU-DK LFC block.~~
- ~~‘GB’ means the synchronous area Great Britain, which is connected to the DE-LU-DK LFC block.~~
- (6) ‘MTU’ means 'market time unit' and refers to the shortest time interval for which the market price is established.
- (7) ‘Price area-NO2’ means the price area bidding zone NO2 in Norway, to which the HVDC interconnectors of DE-LU-DK LFC block are connected to.

Article 3

Ramping Restrictions for Active Power Output of HVDC Interconnectors in a ~~accordance with Article 137(3)~~

- (1) ~~The gradient of active power output of each HVDC interconnector to the synchronous area Nordic shall not exceed ± 30 MW/min.~~
- (2) ~~The following conditions apply to DK1-NO, DK1-SE3 and DK1-DK2 HVDC lines:~~

- (a) ~~The condition of 30 MW/min with a maximum ramping of 600 MW/h limitation as a combined limitation on DK1-NO and DK1-SE3 HVDC lines.~~
- (b) ~~The conditions of 30MW/min with a maximum ramping of 600 MW/h limitation on the DK1-DK2 HVDC line.~~
- (1) The scheduled exchange shall be realized with a ramping period beginning exactly 5 minutes before the MTU shift and ending exactly 5 minutes after the MTU shift.
- (2) The gradient of active power output of each HVDC interconnector between the DE-LU-DK LFC block and the synchronous area Nordic shall be:
- (a) In general not exceed ± 30 MW/min, while:
- (b) Aa combined maximum ramping restriction for the price area-NO2 of 60 MW/min applies to the sum of exchanges on all HVDC interconnectors that connect NO2 with the DE-LU-DK LFC block. The combined maximum ramping restriction rate hence applies to DE-NO2 and DK1-NO2 HVDC lines, and while:
- (c) The maximum ramping restriction rate of 30 MW/min shall apply as a combined limitation to 50HZT-DK2 HVDC lines.
- (3) The gradient of active power output of each HVDC interconnector between the DE-LU-DK LFC block and the synchronous area Great Britain shall be:
- (a) In general not exceed ± 100 MW/min, while:
- (b) If the change from one MTU to the next exceeds 1,000 MW for the HVDC interconnector between the DE-LU-DK LFC block and the synchronous area Great Britain, the ramping period for this interconnector shall be increased symmetrically around the -MTU shift to allow for the full change.
- (3)(4) The ramping restrictions shall support the fulfilment of the FRCE target parameter of the DE-LU-DK LFC block defined in the synchronous area operational agreement in accordance with Article 128(1) of SOGL and Article 128(2) of SOGL.
- (4)(5) The ramping restrictions of the DKW area shall support the fulfilment of the FRCE target parameter of the DKW area defined in accordance with Article 128(4) of SOGL and shall not decrease the FRCE quality of the DE area.

Article 4 Implementation Timescale

The TSOs shall implement the ramping determination proposal with the entry into force of the LFC block operational agreement in accordance with the deadlines defined by Article 119(2) of SOGL at the same time as the introduction of 15 min MTU in intraday trading of schedule energy at (wholesale) electricity markets in the synchronous area Nordic. Until the date of the forementioned introduction of the 15 min MTU the ramping determination as previously approved by the relevant national regulatory authority remains applicable.

Article 5 Language

The reference language for this ramping determination proposal shall be English. For the avoidance of doubt, where TSOs need to translate the ramping determination proposal into their national language(s), in the event of inconsistencies between the English proposal proposed by TSOs in accordance with Article 6 of the SOGL and any version in another language, the relevant

TSOs shall be obliged to dispel any inconsistencies by providing a revised translation of the ramping determination proposal to their relevant national regulatory authorities.