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# **Determination of LFC blocks for the Synchronous Area Continental Europe**

in amended version of 11 February 2022

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### Whereas

- (1) To comply with Article 141(2) 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 amending Regulations (EU) 2015/1222, (EU) 2016/1719, (EU) 2017/2195 and (EU) 2017/1485 in order to align them with Regulation (EU) 2019/943 (“SO GL”), the Transmission System Operators of Synchronous Area Continental Europe (the “CE TSOs”) jointly developed “All TSOs proposal for the determination of LFC blocks for the Synchronous Area Continental Europe” of 15/07/2018 (the “LFC blocks determination”).
- (2) The Load-Frequency Control blocks (the “LFC blocks”) determination was approved by all regulatory authorities of Continental Europe pursuant to Article 6(3)(g) of SO GL. It determines not only LFC block configuration but also LFC areas and monitoring areas within each LFC block.
- (3) This document is the amended LFC blocks determination in respect of LFC area configuration within the German-Danish-Luxemburgish LFC block, cf. Article 7(4) of SO GL.
- (4) The amendment implies the current Denmark West (“DKW”) monitoring area being separated from the TenneT TSO GmbH LFC area and becoming an LFC area of its own, but will still be a part of the German-Danish-Luxemburgish LFC block.
- (5) The LFC-block determination generally contributes towards determining the common load-frequency control processes and control structures required by Article 4(1)(a)(c) of SO GL. In particular, the LFC blocks determination specifies the LFC blocks, LFC areas and Monitoring areas in Continental Europe, organized in order to improve the performance of the LFC control and the efficiency of the reserves dimensioning process, while it is consistent with the existing bidding zones. The structure contributes to system security and a common control process and structures, and therefore to the achievement of the objectives of Article 4 of SO GL. This new determination maintains these benefits and further introduces a minor adjustment, which increases transparency on the DE-DK1 border.
- (6) In conclusion, the new determination of the LFC blocks contributes to the general objectives of the SO GL to the benefit of all market participants and electricity end consumers.
- (7) Furthermore, it contributes to the general objectives of the Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing (“EB GL”), as it will allow DKW to directly participate on the European platform for imbalance netting process (according to Article 22 of EB GL) and the European platform for the exchange of balancing energy from frequency restoration reserves with manual (according to Article 20 of EB GL) and with automatic activation (according to Article 21 of EB GL), which is to the benefit of all market participants and electricity end consumers, as it will reduce energy costs, increases competition between market participants and increases the security of supply.
- (8) In accordance with section 5(2)(g) of the LFC Block Operational Agreement for the German-Danish-Luxembourgish LFC Block as required by Article 119(1)(e) of SO GL, Energinet is responsible for the frequency restoration control error (the “FRCE”) process in West Denmark

as also described in the Agreement on Grid and System Operation between TenneT and Energinet and therefore already acts as it would be an independent LFC area, without any impact on other LFC blocks. Jointly all CE TSOs shall in accordance with the LFC Block Operational Agreement fulfil the obligations of an LFC Block in accordance with Article 141(5) of SO GL thus ensuring that no other LFC Blocks are impacted by imbalances in West Denmark or the entire German-Danish-Luxembourgish LFC Block regardless of the status of West Denmark.

### **Article 1**

#### **Subject matter and scope**

1. The determination of LFC blocks as specified in this document shall be considered as the a methodology developed in accordance with Article 7(4) of SO GL to amend the LFC Blocks determination, established to comply with Article 141(2) of SO GL.
2. For the LFC blocks encompassing the LFC areas of third country TSOs, the fulfilment of the obligations set out in SO GL towards these LFC blocks shall be subject to the content of an agreement concluded by all CE TSOs with the third country TSOs in accordance with Article 13 of SO GL.

### **Article 2**

#### **Definitions and interpretation**

1. For the purpose of this proposal, terms used in this document shall have the meaning of the definitions included in Article 3 of SO GL.
2. In this LFC blocks determination, unless the context requires otherwise:
  - a) the singular indicates the plural and vice versa;
  - b) the table of contents and headings are inserted for convenience only and do not affect the interpretation of this LFC blocks determination 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 then in force.

### **Article 3**

#### **Synchronous Area Continental Europe LFC blocks, LFC areas and monitoring area**

The synchronous area Continental Europe shall consist of the LFC blocks, LFC areas and monitoring area set out in Table 1. LFC blocks encompassing the LFC areas of third country TSOs shall be subject to re-determination after the entry into force of the agreement mentioned in Article 1(2) above.

## Determination of LFC blocks for the Synchronous Area Continental Europe

| Country         | TSO (full company name)   | TSO (short name) | Monitoring Area | LFC AREA  | LFC Block                   |
|-----------------|---|------------------|-----------------|-----------|-----------------------------|
| Austria         | Austrian Power Grid AG  | APG              | APG             | APG       | APG                         |
|                 | Vorarlberger Übertragungsnetz GmbH  | VUEN             |                 |           |                             |
| Belgium         | Elia System Operator SA   | Elia             | ELIA            | ELIA      | ELIA                        |
| Bulgaria        | Elektroenergien Sistemen Operator EAD   | ESO              | ESO             | ESO       | ESO                         |
| Czech Republic  | ČEPS a.s.   | ČEPS             | CEPS            | CEPS      | CEPS                        |
| Germany         | TransnetBW GmbH   | TransnetBW       | TNG             | TNG       | TNG+TTG+AMP+50HZT+DKW+CREOS |
|                 | TenneT TSO GmbH   | TenneT GER       | TTG             | TTG       | TNG+TTG+AMP+50HZT+DKW+CREOS |
|                 | Amprion GmbH  | Amprion          | AMP             | AMP+CREOS | TNG+TTG+AMP+50HZT+DKW+CREOS |
|                 | 50Hertz Transmission GmbH   | 50Hertz          | 50HZT           | 50HZT     | TNG+TTG+AMP+50HZT+DKW+CREOS |
| Denmark West    | Energinet   | Energinet        | DKW             | DKW       | TNG+TTG+AMP+50HZT+DKW+CREOS |
| Spain           | Red Eléctrica de España: S.A.U.   | REE              | REE             | REE       | REE                         |
| France          | Réseau de Transport d'Electricité   | RTE              | RTE             | RTE       | RTE                         |
| Greece          | Independent Power Transmission Operator S.A.  | IPTO             | IPTO            | IPTO      | IPTO                        |
| Croatia         | HOPS d.o.o.   | HOPS             | HOPS            | HOPS      | SHB                         |
| Hungary         | MAVIR Magyar Villamosenergia-ipari Átviteli Rendszerirányító Zártkörűen Működő Részvénytársaság | MAVIR ZRt.       | MAVIR           | MAVIR     | MAVIR                       |
| Italy           | Terna - Rete Elettrica Nazionale SpA  | Terna            | TERNA           | TERNA     | TERNA                       |
| Luxembourg      | CREOS Luxembourg S.A.   | CREOS            | CREOS           | AMP+CREOS | TNG+TTG+AMP+50HZT+DKW+CREOS |
| Netherlands     | TenneT TSO B.V.   | TenneT NL        | TTB             | TTB       | TTB                         |
| Poland          | PSE S.A.  | PSE S.A.         | PSE             | PSE       | PSE                         |
| Portugal        | Rede Eléctrica Nacional, S.A.   | REN              | REN             | REN       | REN                         |
| Romania         | C.N. Transelectrica S.A.  | Transelectrica   | TEL             | TEL       | TEL                         |
| Slovenia        | ELES, d.o.o.  | ELES             | ELES            | ELES      | SHB                         |
| Slovak Republic | Slovenska elektrizacna prenosova sustava, a.s.  | SEPS             | SEPS            | SEPS      | SEPS                        |

- SHB: Control Block Slovenia, Croatia and Bosnia/Herzegovina

**Table 1: List of Monitoring Areas, LFC Areas and LFC Blocks.**

Each monitoring area, LFC area and LFC block shall be physically demarcated by accounting points for interconnectors to other monitoring areas, LFC areas and LFC blocks respectively, and therefore each network element is part of only one monitoring area, LFC area and LFC block.

Interconnectors between two monitoring areas, LFC areas or LFC blocks shall be considered as two network elements (each network element shall be delimited from the substation to the accounting point of each of the monitoring area, LFC area or LFC block).

#### **Article 4**

##### **Publication and implementation of the LFC blocks determination proposal**

1. The CE TSOs shall publish the LFC blocks determination without undue delay after all regulatory authorities of the synchronous area Continental Europe have approved it.
2. The CE TSOs shall implement the LFC blocks determination proposal no later than two months after the regulatory authorities of the synchronous area Continental Europe have approved it in accordance with Article 6(3) of SO GL.

#### **Article 5**

##### **Language**

The reference language for this LFC blocks determination shall be English. For the avoidance of doubt, where TSOs need to translate this LFC blocks determination into their national language(s), in the event of inconsistencies between the English version published by TSOs in accordance with Article 8 of SO GL 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 blocks determination..