

METHODOLOGY FOR A HARMONISED ALLOCATION PROCESS OF CROSS-ZONAL CAPACITY FOR THE EXCHANGE OF BALANCING CAPACITY OR SHARING OF RESERVES PER TIMEFRAME

All TSOs proposal to harmonise the methodology for the allocation processes of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves per timeframe in accordance with Article 38(3) of the Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing

16 December 2022

DISCLAIMER

This document is released on behalf of the all transmission system operators (“TSOs”) for the purposes of the approval of the proposal for methodology for a harmonised allocation process of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves per timeframe (hereafter referred to as “methodology for a harmonised allocation process per timeframe”) in accordance with Article 38(3) of the Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing (“EB Regulation”).

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Whereas

- (1) This document sets out the methodology for a harmonised allocation process of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves per timeframe (hereafter referred to as “methodology for a harmonised allocation process per timeframe”) in accordance with Article 38(3) of Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing (hereafter referred to as “EB Regulation”).
- (2) The methodology for a harmonised allocation process per timeframe takes into account the general principles and goals set in the
 - a. Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (hereafter referred to as “Regulation (EU) 2019/943”)
 - b. EB Regulation;
 - c. the Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (hereafter referred to as the “SO Regulation”);
 - d. Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (hereafter referred to as the “CACM Regulation”); and
 - e. as well as Commission Regulation (EC) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets; and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and the Council (hereafter referred to as the “Transparency Regulation”).
- (3) This methodology for a harmonised allocation process per timeframe includes the co-optimised allocation process pursuant to Article 40 and the market-based allocation process pursuant to Article 41 of the EB Regulation and consisting of cross-border procurement processes taking place one day ahead of the provision of the balancing capacity pursuant to Article 6(9) of Regulation (EU) 2019/943.

- (4) This methodology for a harmonised allocation process per timeframe serves the objectives stated in Article 3 of the EB Regulation. In particular:
- a. The methodology for a harmonised allocation process per timeframe fosters effective competition in case of cross-border balancing capacity markets, non-discrimination and transparency pursuant to Article 3(1)(a) of the EB Regulation by defining the principles of the harmonised allocation process per timeframe and how to notify all relevant stakeholders in case of applications as described in Articles 4 and 5 of this methodology for a harmonised allocation process per timeframe;
 - b. The methodology for a harmonised allocation process per timeframe facilitates the integration of balancing capacity markets, enables the exchanges of balancing services based on market-based mechanisms and ensures operational security as stated in Article 3(1)(c) and Article 3(2)(d) of the EB Regulation. This is ensured by defining harmonised rules for the cross-border procurement of balancing capacity, through the allocation of cross-zonal capacity for the balancing capacity market taking into account the impact of the allocation of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves on the day-ahead energy market;
 - c. The methodology for a harmonised allocation process per timeframe does not compromise the development of the day-ahead market in accordance with Article 3(2)(e) of the EB Regulation as it specifies in Articles 7 to 11 how the co-optimised allocation process shall be effectively integrated in the single day-ahead coupling (hereafter referred to as “SDAC”) process;
 - d. The methodology for a harmonised allocation process per timeframe ensures that the procurement of balancing services is performed in a fair, non-discriminatory, objective, transparent way and uses the market-based mechanisms as stated in Article 3(1)(e) of the EB Regulation. Therefore, Articles 9, 10, 11, 17, 18 and 19 of this methodology for a harmonised allocation process per timeframe set harmonised requirements on how the market value of cross-zonal capacity and volume, as well as the offered volumes and prices of bids from Standard Balancing Capacity Products (“SBCP”) in both directions are determined;
 - e. The methodology for a harmonised allocation process per timeframe respects the responsibility assigned to the relevant TSOs in order to ensure system security, including as required by national legislation, in accordance with Article 3(2)(f) of the EB Regulation by taking into account the maximum limitations for the application of a harmonised allocation process per timeframe as is defined in Articles 8 and 16 of this methodology for a harmonised allocation process per timeframe following the provisions of SO Regulation and EB Regulation;
 - f. The methodology for a harmonised allocation process per timeframe considers agreed European standards in accordance with Article 3(2)(h) of EB Regulation such as the single day-ahead market time unit defined within the CACM Regulation and the optimisation resolution from the market coupling operator function (hereafter referred to as “MCO function”), as specified in Articles 3, 5, 7, 8 and 9 of this methodology for a harmonised allocation process per timeframe;

- g. The methodology for a harmonised allocation process per timeframe enhances the efficiency of balancing as well as the efficiency of European balancing markets in a cross-border setting in accordance with Article 3(1)(b) of the EB Regulation by establishing a harmonised process for the allocation of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves which aims to optimise the total economic surplus of both, SDAC and balancing capacity procurement, leading to a more economically efficient procurement of balancing capacities in the day-ahead timeframe;
- h. The methodology for a harmonised allocation process per timeframe contributes to the efficient long-term operation and development of the electricity transmission system and electricity sector in the European Union while facilitating the efficient and consistent functioning of day-ahead, intraday and balancing capacity markets in accordance with Article 3(1)(d) of the EB Regulation by aiming at more efficient use of available day-ahead cross-zonal capacities. This will be provided by taking into account the economic surplus of SDAC and balancing capacity procurement at a day-ahead timeframe, as specified in Articles 7, 8 and 9 of this methodology for a harmonised allocation process per timeframe;
- i. The methodology for a harmonised allocation process per timeframe does not negatively impact the objectives in accordance with Article 3(1)(f) and (g) and (2)(a), (b), (c) and (g) of the EB Regulation.

In conclusion, the methodology for a harmonised allocation process per timeframe contributes to the general objectives of the EB Regulation to the benefit of all market participants and electricity end consumers.

- (5) Each application of this methodology for a harmonised allocation process per timeframe shall be compliant with Title 1, Title 5, and Title 6 of this methodology for a harmonised allocation process per timeframe. Each application pursuant to Article 38(1) of EB Regulation applying the methodology for a harmonised allocation process per timeframe shall choose one allocation process for each SBCP per direction it intends to exchange or share according to the provisions in either Title 2, Title 3, or Title 4.
- (6) From an overall social welfare and efficiency principle in line with the Electricity Directive and Regulation, as well as EB Regulation, and for the avoidance of unnecessary costs for those TSOs already being operational with a balancing capacity platform at the regional level before the Methodology is adopted, the Methodology shall aim at facilitating continuous operations, and minimise amendments to such balancing capacity platforms for an exchange of balancing capacity or sharing of reserves already being operational between two or more TSOs in a region.
- (7) Article 38(3) of the EB Regulation requires all TSOs to develop the methodology for a harmonised allocation process per timeframe. The TSOs who are responsible for the development of the proposal and its submission are the following: APG - Austrian Power Grid AG, VÜEN-Vorarlberger Übertragungsnetz GmbH, Baltic Cable AB, Elia - Elia Transmission Belgium S.A., ESO – Electroenergien Sistemen Operator EAD, HOPS - Croatian Transmission System Operator Ltd, ČEPS - ČEPS, a.s., Energinet - Energinet, Elering - Elering AS, Fingrid - Fingrid OyJ, Kraftnät Åland Ab, RTE - Réseau de Transport d'Electricité, S.A, Amprion - Amprion GmbH, TransnetBW -TransnetBW GmbH, TenneT GER - TenneT TSO GmbH, 50Hertz - 50Hertz Transmission GmbH, IPTO - Independent Power Transmission Op-erator S.A., MAVIR ZRt. - MAVIR Magyar Villamosenergia-ipari Átviteli Rendszerirányító Zártkörűen Működő Részvénytársaság ZRt., EirGrid - EirGrid plc, Terna - Terna SpA, Augstsprieguma tīkls - AS Augstsprieguma tīkls, LITGRID - LITGRID AB, CREOS Luxembourg -

CREOS Luxembourg S.A., TenneT TSO - TenneT TSO B.V., PSE – Polskie Sieci Elektroenergetyczne S.A., REN - Rede Eléctrica Nacional, S.A., Tranelectrica - C.N. Tranelectrica S.A., SEPS - Slovenská elektrizačná prenosová sústava, a.s., Statnett - Statnett SF, ELES - ELES,d.o.o, REE - Red Eléctrica de España S.A.U, Svenska Kraftnät - Affärsverket Svenska Kraftnät, SONI System Operator for Northern Ireland Ltd.

TITLE 1

General provisions

Article 1

Subject matter and scope

1. This methodology for a harmonised allocation process per timeframe specifies how to allocate cross-zonal capacity for the exchange of balancing capacity or sharing of reserves,
 - a. for the market timeframe of the co-optimised allocation process, which is based on the actual market values of cross-zonal capacity for the exchange of energy and for the exchange of balancing capacity or sharing of reserves in accordance with Article 40 of the EB Regulation;
 - b. for the market timeframes of the market-based allocation process, which are based on the forecasted market value of cross-zonal capacity for the exchange of energy and the actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves (hereinafter referred to as “market-based allocation”) in accordance with Article 41 of the EB Regulation; and
 - c. for the market timeframe of the market-based allocation process, which is based on the actual market value of cross-zonal capacity for the exchange of energy and the forecasted market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves (hereinafter referred to as “inverted market-based allocation”) in accordance with Article 41 of the EB Regulation.
2. The inverted market-based allocation shall be defined in Title 3 of this methodology for a harmonised allocation process per timeframe by All TSOs via an amendment of Title 3 of this methodology in case one or more TSOs inform All TSOs of the intention to apply the inverted-market based allocation. All TSOs shall take into account where possible the experiences gained from the market-based allocation to determine the requirements of the inverted market-based allocation.
3. The proposal for the application of a cross-zonal capacity allocation process as part of this methodology for a harmonised allocation process per timeframe may be developed by one or more TSO(s) at their own initiative or at the request of their relevant national regulatory authorities in accordance with Article 38(1) of the EB Regulation.
4. One or more TSO(s) being part of an application to allocate cross-zonal capacity according to Article 33(4)(b) which intend to exchange balancing capacity or share reserves shall use a common and harmonised set of rules and processes for the cross-border procurement of balancing capacity in

accordance with Article 33 of the EB Regulation and respecting the requirements set out in Article 32 of the EB Regulation.

5. A TSO applying a central dispatching model and applying one of the harmonised allocation processes per timeframe shall convert, as far as possible, the integrated scheduling process bids into standard balancing capacity product bids, pursuant to Article 27(3) of the EB Regulation. In this case, each reference to the standard balancing capacity bids in this methodology for a harmonised allocation process per timeframe shall be understood for this TSO as a reference to the integrated scheduling process bids converted into standard balancing capacity bids.

Article 2

Definitions

1. For the purposes of this methodology for a harmonised allocation process per timeframe, the terms used shall have the meaning given to them in Article 2 of the EB Regulation, Article 2 of the Transparency Regulation, Article 2 of the CACM Regulation and Article 3 of the SO Regulation, Regulation (EC) 943/2019, Commission Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council (hereafter referred to as "Transparency Regulation") and Directive 944/2019.
2. The following definitions shall also apply:
 - a. 'Application' means the application by one or more TSOs of one cross-zonal capacity allocation process for the exchange of balancing capacity and/or sharing of reserves of a certain SBCP in a certain direction. The application shall be subject to an approved proposal for the application according to Article 38(1) of EB Regulation;
 - b. 'Balancing capacity platform' means a platform on which one cross-zonal capacity optimisation function is installed with interfaces towards all other relevant processes to optimise the allocation of cross-zonal capacity for at least one application for an exchange of balancing or sharing of reserves;
 - c. 'Cross-zonal capacity allocation optimisation function' means the functionality that determines for each application and for each SBCP in each direction the allocation of cross-zonal capacity for the exchange of energy and for the exchange of balancing capacity or sharing of reserves. For the market timeframes of the co-optimised allocation process and the market-based allocation, the cross-zonal capacity allocation optimisation function shall determine the clearing prices and volumes of balancing capacity of each SBCP per bidding zone;
 - d. 'Economic surplus from the exchange of balancing capacity or sharing of reserves' is equal to the sum of (i) the TSOs' surplus for the exchange of balancing capacity or sharing of reserves, (ii) the balancing service providers' surplus for the exchange of balancing capacity or sharing of reserves, and (iii) the congestion income for the relevant time period;
 - e. 'Inverted market-based allocation' means the process of market-based allocation in which the actual market value of cross-zonal capacity for the exchange of energy is compared to

- the forecasted market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves;
- f. ‘Forecast error’ is the deviation of the forecasted market value of cross-zonal capacity from the actual market value of cross-zonal capacity in percent per day-ahead market time unit for the exchange of energy when applying the market-based allocation. A positive deviation of the forecast error means a forecasted market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves is larger than the actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves;
 - a. ‘TSO BC demand’ means the balancing capacity volume per SBCP per direction to be procured for its own purposes resulting from the TSO’s dimensioning process within the scope of the methodology pursuant to Article 33(1) of the EB Regulation and taken into account sharing of reserves agreements outside an application, and defined per control area and bidding zone in accordance with Article 32(1) of the EB Regulation;
 - b. ‘TSO BC volume sensitive demand’ means a part of the TSO BC demand per SBCP per direction defined by the respective TSO to be volume sensitive for the purpose of reserve sharing using an application, bid indivisibility, and substitution of reserves for cost minimisation and volume shortage; and
 - c. ‘TSO procurement volume’ means the balancing capacity volume to be procured by the respective TSO in its own area determined by the cross-zonal capacity allocation optimisation function.
3. In this methodology for a harmonised allocation process per timeframe, unless the context clearly indicates otherwise:
- a. the singular also includes 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 methodology for a harmonised allocation process per timeframe;
 - c. any reference to legislation, regulations, directives, orders, instruments, codes or any other enactment shall include any modification, extension or re-enactment of it when in force; and
 - d. any reference to an Article without an indication of the document shall mean a reference to this methodology for a harmonised allocation process per timeframe.

Article 3

Economic Surplus

1. The economic surplus of a balancing capacity market as defined in Article 2(2)(c) of this methodology for a harmonised allocation process per timeframe shall be the sum of the surplus of balancing service providers, the surplus for TSOs for the exchange of balancing capacity and the surplus from congestion income calculated by the cross-zonal capacity allocation optimisation function.

2. The surplus for balancing service providers shall be the difference between the calculated clearing price and the price of the selected bid multiplied by the selected capacity volume of TSO BC demand. In the case of pay-as-bid pricing, this surplus is 0.
3. The surplus for TSOs for the exchange of balancing capacity shall be the difference between the maximum possible clearing price and the calculated clearing price multiplied by the volume of TSOs' BC demand for the exchange of balancing capacity. In the case of pay-as-bid pricing, the surplus for TSOs shall be the difference between the maximum possible clearing prices and the calculated bid prices multiplied by the calculated volumes of the respective bids. Where sharing of reserves is applied, the full TSO BC demand, without a possible reduction due to sharing of reserves, shall be considered. For sharing of reserves and in the case of pay-as-bid pricing for the exchange of reserves, the calculated congestion income as defined in paragraph (4) needs to be subtracted from the TSO surplus.
4. The surplus from congestion income shall be the calculated price of cross-zonal capacity as determined by Article 21 of this methodology for a harmonised allocation process per timeframe multiplied by the allocated volume of cross-zonal capacity.

Article 4

General principles on allocating cross-zonal capacity for the exchange of balancing capacity or sharing of reserves

1. The contracting period of bids of SBCP in each direction for all market timeframes exchanged with an application of this methodology for a harmonised allocation process per timeframe shall be equal to or a multiple of the day-ahead market time unit and not more than one (1) day.
2. Where the market timeframes of the co-optimised allocation process and inverted market-based allocation of this methodology for a harmonised allocation process per timeframe is applied for the allocation of cross-zonal capacity for the exchange of balancing capacity and if relevant in combination with sharing of reserves, the settlement of the bids of all SBCPs shall be only in the direction from TSO to the balancing service providers (hereafter referred to as "BSPs") and shall be based on cross-zonal marginal pricing (pay-as-cleared).
3. For the timeframe of market-based allocation, the settlement of bids of all SBCPs shall be only in the direction from TSO to BSPs and shall be based on cross-zonal marginal pricing (pay-as-cleared) or pay-as-bid.
4. The maximum price of each bid of SBCP in both directions shall be equal to the maximum day-ahead market bid price for SDAC, both following Article 41(1) of Commission Regulation (EU) 2015/1222 of 24 July 2015. The pricing scheme shall be the same for each TSO of an application using an allocation process as defined in this methodology for a harmonised allocation process per timeframe.
5. For each process mentioned in Article 1(1) of this methodology for a harmonised allocation process per timeframe and each SBCP in any direction per timeframe, one single gate closure time for BSPs submitting bids of SBCP in each direction to their respective connecting TSOs or a delegated TSO shall be applied by TSOs applying this methodology for a harmonised allocation process per timeframe, taking into account time zone differences, such that one gate closure time applies to all

- BSPs connected to a TSO applying this methodology for a harmonised allocation process per timeframe.
6. A TSO applying a central dispatching model and applying one of the harmonised allocation processes per timeframe may set an earlier GCT for integrated scheduling process bids to allow for the conversion process.
 7. Cross-zonal capacities allocated by the cross-zonal capacity allocation optimisation function per timeframe for the exchange of balancing capacity or sharing of reserves from a harmonised allocation process per timeframe shall be provided by the TSOs applying the relevant allocation process to the balancing platforms exclusively for the product they were allocated for.
 8. Cross-zonal capacities allocated by the cross-zonal capacity allocation optimisation function for the exchange of balancing capacity or sharing of reserves from a harmonised allocation process per timeframe shall be provided by each TSO of the application as an input to the respective balancing platform pursuant to Articles 19 to 21 of the EB Regulation, exclusively for the SBCP in the direction they were allocated for. In case the cross-zonal capacity allocation optimisation function supports this interface, the cross-zonal capacity allocated by the cross-zonal capacity allocation optimisation function for the exchange of balancing capacity or sharing of reserves from a harmonised allocation process per timeframe may be provided by the cross-zonal capacity allocation optimisation function directly to the respective balancing platform.
 9. The cross-zonal capacities allocated for the exchange of balancing capacity or sharing of reserves that have not been used for the associated exchange of balancing energy shall be released for the exchange of balancing energy with shorter activation times or for operating the imbalance netting process in accordance with Article 38(9) of the EB Regulation.
 10. The process of releasing allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves shall be coordinated between the balancing energy platforms pursuant to Articles 19 to 21 of the EB Regulation.
 11. In case cross-zonal capacity is allocated in the same cross-zonal capacity direction for two or more SBCPs of opposite activation directions, the TSOs per application can choose to allocate only the volume of the maximum of allocated volumes of the cross-zonal capacity of a particular SBCP in a certain direction per market time unit, in order to prevent even higher volumes of cross-zonal capacity allocated with no actual usage. This allocated cross-zonal capacity shall be treated as a common allocation to both directions by all consecutive processes. In case the TSO does not activate the respective volume of standard balancing energy related to the allocated volume of cross-zonal capacity for the lower-quality product at a particular balancing platform, the cross-zonal capacity shall be released only to the same TSO to be used for balancing energy related for the higher-quality product. Each TSO shall provide a half-yearly assessment to be shared with all TSOs of the reduced volume of allocated cross-zonal capacity and the actual use of cross-zonal capacity exceeding the volume of allocated cross-zonal capacity.

In the sense of this paragraph corresponding, aFRR shall be considered as the SBCP of the highest quality, mFRR shall be considered as the SBCP of the next lower quality and RR shall be considered as the SBCP of the lowest quality.

12. Each TSO shall not put a price on its TSO BC demand for the purpose of the exchange of balancing capacity or sharing of reserves applying this methodology for a harmonised allocation process per timeframe.
13. Each TSO may link its TSO BC demand across the different products for the purpose of substitution of reserves for volume shortage and cost minimisation by applying this methodology for a harmonised allocation process per timeframe.
14. BSPs may submit cross-product linked bids of SBCPs in case a TSO is engaging with two or more SBCP products. In those cases, the capacity procurement optimisation functions shall match the cross-product linked bids per balancing capacity market according to multilateral linking, such that the bids of SBCPs are selected in the specific balancing capacity market where they minimise the overall procurement costs of all TSOs jointly pursuant to Article 58(3)(a) of EB Regulation.
15. For each application using an allocation process as defined in this methodology for a harmonised allocation process per timeframe where the TSO BC demand for an SBCP exceeds the available amount of bids in all bidding zones of the application for the relevant SBCP, while taking into account the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves, a fallback procedure shall apply. Such a fallback procedure shall be described by the applicant TSOs in the proposal pursuant to Article 33(1) of the EB Regulation. If a TSO BC demand for an SBCP per bidding zone exceeds the available amount of locally submitted bids in the bidding zone for the respective SBCP, but the fallback procedure is not required, the cross-zonal capacity allocation process shall be performed. In order to calculate the change of economic surplus from the exchange of balancing capacity or sharing of reserves in such a case, the price equal to the maximum bid price of SBCP according to Article 4(5) shall be used as a fictional clearing price in case of insufficient local bids.

Article 5

Notification process for applying cross-zonal capacity allocation for the exchange of balancing capacity or sharing of reserves

1. Each TSO intending to apply any timeframe of this methodology for a harmonised allocation process per timeframe shall notify TSOs of the same synchronous area three (3) months prior to entering into operation in accordance with Article 150 of the SO Regulation and inform all stakeholders and all TSOs through an announcement on the ENTSO-E website, at least three (3) months prior to entering into operation.

The announcement to be published on the ENTSO-E website shall include:

- a. the TSOs applying this methodology for a harmonised allocation process per relevant timeframe;
- b. the expected date to enter into operation for the exchange of balancing capacity and/or sharing of reserves pursuant to Article 33(1) of the EB Regulation with the harmonised allocation process per timeframe;
- c. the detailed description of the specifications, including the applied timeframe, in accordance with EB Regulation Article 38(2);

- d. the maximum volume of allocated cross-zonal capacity for exchange of balancing capacity as defined pursuant to Article 6; and
 - e. the type and direction of the SBCP which will be exchanged or shared.
 2. In case two or more TSOs start building a balancing capacity platform for their application for the exchange of balancing capacity or sharing of reserves according to Article 25(3) of this methodology for a harmonised allocation process per timeframe, these TSOs shall notify all TSOs of the respective capacity calculation region (hereafter referred to as the “CCR”) without undue delay in order for all TSOs of the respective CCR to start implementing the required interfaces.

Article 6

Organisation of the co-operation of application TSOs

1. TSOs, which want to jointly allocate cross-zonal capacity to support the cross-border procurement of balancing capacity for one or more SBCPs and applying a market-based allocation shall jointly establish their own balancing capacity platform and build an infrastructure for operating their joint cross-zonal capacity allocation optimisation function respecting the requirements defined by all TSOs according to Article 25(1)(a) and 25(3)(a).
2. Only in case there are interdependencies between different applications, either due to flow-based as part of the CCR or in case a TSO engages in two or more applications and this TSO optimises the procurement of its different SBCPs as part of the substitution of reserves, these applications shall use the same balancing capacity platform pursuant to paragraph (1).
3. The allocated cross-zonal capacity and the selected balancing capacity bids as the output of any cross-zonal capacity allocation optimisation function for all timeframes is the input to each TSO or set of TSOs for the procurement of balancing capacity as part of an application. Accordingly, each TSO or set of TSOs accept(s) locally the SBCP from the BSPs using their function for procuring balancing capacity. Each local function for procuring balancing capacity shall accept the respective balancing capacity bids by respecting the output of the cross-zonal capacity allocation optimisation function.
4. All application TSOs of a particular balancing capacity platform and irrespectively of the applied timeframe may agree:
 - a. to apply for at least one SBCP in one direction;
 - b. to apply one cross-zonal capacity allocation optimisation function for one SBCP in two directions;
 - c. to cooperate for a combination of SBCPs in the same direction; or
 - d. to cooperate for a combination of SBCPs in two directions.

TITLE 2

Methodology for the co-optimised allocation process

Article 7

The market timeframes of the co-optimised allocation process

1. The co-optimised allocation process for allocating cross-zonal capacity for the exchange of balancing capacity and sharing of reserves shall comply with the following consecutive timings:
 - a. The BSP-TSO gate closure time for the submission of all bids of SBCP in both directions and the TSO BC demand shall be equal to the single day-ahead coupling gate closure time pursuant to Article 47(2) of the CACM Regulation;
 - b. For TSOs applying a central dispatching model and applying the co-optimised allocation, the gate closure time for the submission of the integrated scheduling process bids that are converted to the bids of SBCP in both directions shall be defined in the national terms and conditions pursuant to Articles 24(5) and 24(6) of the EB Regulation; and
 - c. Notification by TSOs to BSPs of accepted bids from SBCPs shall be made no later than fifteen (15) minutes after the publication of SDAC results.
2. The co-optimised allocation process for allocating cross-zonal capacity for the exchange of balancing capacity and for sharing of reserves shall include the following consecutive steps:
 - a. bids of SBCP in a positive and/or negative direction, bids of SBCP in a positive and/or negative direction linked to bids of SBCP of different quality in a positive and/or negative direction respectively, bids of SBCP in positive and or negative direction cross-product linked to day-ahead market bids, and the TSO BC demand shall be submitted by TSOs to the cross-zonal capacity allocation optimisation function operated by the Market-Coupling Operator (“MCO”) in the required format. Cross-product linked bids between SBCP shall in any case be understood as multilateral cross-product linking of bids. Cross-product linked bids between SBCP and day-ahead market bids shall, in any case, be understood as unilateral cross-product linking of bids from SBCP bids to the day-ahead market in case the price of an SBCP is above the clearing price of the respective balancing capacity market and never in opposite direction.
 - b. For TSOs applying a central dispatching model and applying the co-optimised allocation, BSPs may submit only integrated scheduling process bids (instead of bids of SBCP in either direction), which shall be converted, as far as possible, into bids of SBCP in the corresponding direction by the respective TSO in accordance with Article 27 of the EB Regulation. These converted bids shall be submitted by TSOs in accordance with paragraph (a).
 - c. After the gate closure time pursuant to paragraph 1(a), the cross-zonal capacity allocation optimisation function shall convert the bids into a merit order list per bidding zone for the exchange of balancing capacity or sharing of reserves per product, per direction and per bidding zone:
 - i. the common merit order lists for the respective bids of SBCP of positive and or negative direction;
 - ii. cross-product linking codes between SBCP and between SBCP and day-ahead market bids, if any;

- iii. the TSOs' BC demand for the respective bids of SBCP of positive and or negative direction;
 - iv. the TSOs' volume-sensitive BC demand;
 - v. the lower limit for the reduced TSO BC demand dependent on the available cross-zonal capacities, based on sharing of reserves agreement of two or more TSOs to be applied with the co-optimised allocation process;
 - vi. the minimum local reserve requirements, if any;
 - vii. additional cross-zonal capacity allocation limitations in accordance with Article 7, if any;
 - viii. the TSOs' minimum and maximum procurement volumes of balancing capacity per product per direction according to Article 167 of SO Regulation; and
 - ix. the TSO's maximum volume of balancing capacity to be exchanged with each participating TSO within the application of the co-optimised allocation timeframe.
- d. The deadline for sending the data of Article 7(2)(c) equals the deadline for sending the aggregated supply and demand curves of the day-ahead market bids.
 - e. The cross-zonal capacity allocation optimisation function shall determine the cross-zonal capacity allocated to the exchange of balancing capacity and/or sharing of reserves by maximising the social welfare of the day-ahead market and the balancing capacity market combined and shall decide on the placement of cross-product linked bids between SBCP and day-ahead market bids.
 - f. The cross-zonal capacity allocation optimisation function shall determine for each bidding zone the procurement volumes and marginal clearing prices of each SBCP per direction.
 - g. The MCO shall send the allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves and the procurement volumes and the relevant marginal clearing prices of the balancing capacity markets to each TSO applying the co-optimised allocation process.
 - h. TSOs applying the co-optimised allocation process shall send the allocated volumes of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves to all relevant CCRs and all relevant TSOs for the purpose of:
 - i. the intra-day capacity calculation;
 - ii. capacity calculation in the balancing timeframe; and
 - iii. Regional Operational Security Coordination.
 - i. TSOs of each application shall procure the SBCPs from the BSPs without any discrepancies to the outputs of the cross-zonal capacity allocation optimisation function pursuant to Article 33(3) of the EB Regulation. TSOs applying a central dispatching model and applying co-optimised cross-zonal allocation shall convert as far as possible the outputs of the cross-zonal capacity allocation optimisation function to the outputs of the integrated scheduling process and procure bids according to these results.

- j. TSOs of each application shall notify the balancing platforms about the allocated cross-zonal capacity volumes of each bidding zone border, for each SBCP in each direction, pursuant to Article 4(7);
- k. TSOs of each application shall notify the respective balancing energy platforms, pursuant to Articles 19, 20 and 21 of the EB Regulation, about the volumes of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves on each bidding zone border, for each SBCP and direction, pursuant to Article 4(8);
- l. TSOs of each application shall send to the relevant process of day-ahead congestion income, the balancing capacity market prices per bidding zone and the allocated cross-zonal capacity volumes for each SBCP in each direction per bidding zone border; and
- m. If after the procurement process of balancing capacity, the cross-zonal capacity that was previously allocated to the exchange of balancing capacity or sharing of reserves is not needed, the not needed cross-zonal capacity shall be released without undue delay for its use in the intraday market timeframe.

Article 8

The process to define the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves for the co-optimised allocation process

1. In accordance with the requirements laid down in Article 40(1)(d) of the EB Regulation, the process to define the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves for the cross-zonal capacity allocation optimisation function shall be as follows:
 - a. by default, the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves for the cross-zonal capacity allocation optimisation function shall be equal to the available cross-zonal capacity; or
 - b. TSOs jointly applying one cross-zonal capacity allocation process may propose to apply additional limits for the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves. These additional limits shall be justified with respect to the objectives set out in Article 3 of the EB Regulation and Article 3 of the Electricity Regulation and, in particular, ensure effective competition, non-discrimination and transparency in balancing capacity markets.
2. The exchange of balancing capacity or sharing of reserves as determined by the cross-zonal capacity allocation optimisation function shall, in addition to the limits defined in accordance with Article 8(1), be limited also by the provisions for the exchange of FRR and RR in Article 157(2)(g), Article 167 and Article 169 of the SO Regulation.

Article 9

Determination of the actual market value of cross-zonal capacity for the exchange of energy in SDAC for the co-optimised allocation process

1. The actual market value of cross-zonal capacity for the exchange of energy shall be:

- a. equal to the change of economic surplus based on the change of cross-zonal capacity provided to the SDAC;
 - b. defined per day-ahead market time unit; and
 - c. calculated based on the actual bids for the exchange of energy submitted to the SDAC.
2. In accordance with Article 9(1)(a), the actual market value of cross-zonal capacity for the exchange of energy between all bidding zones of the SDAC shall be calculated based on the change of economic surplus for the entire SDAC depending on the availability of cross-zonal capacity.

Article 10

Determination of the actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves in the co-optimised allocation process

1. The actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves between all bidding zones where the co-optimised allocation process is applied shall be:
 - a. equal to the change of economic surplus from the exchange of balancing capacity or sharing of reserves;
 - b. defined per the day-ahead market time unit;
 - c. calculated per SBCP and per direction, separately; and
 - d. calculated as one combined market value of cross-zonal capacity for balancing capacity in case sharing of reserves is applied in combination with the exchange of balancing capacity and calculated based on the bids of SBCP in both directions submitted to the capacity procurement optimisation function pursuant to Article 33(3) of the EB Regulation.
2. In accordance with Article 10(1)(a), the actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves between all the active bidding zones where co-optimised cross-zonal allocation is applied shall be calculated based on the change of economic surplus from the exchange of balancing capacity or sharing of reserves, resulting from the change of available cross-zonal capacities allocated for the exchange of balancing capacity or sharing of reserves.
3. TSOs may procure a higher amount of SBCP in the corresponding direction than their TSO BC demand to include the capacity from an indivisible bid if this decreases the overall procurement costs.
4. For a TSO applying the central dispatching model and using integrated scheduling process bids for the exchange of balancing services or sharing of reserves for the timeframe of the co-optimised allocation according to Article 27 of the EB Regulation, the bids submitted by the TSO after the application of conversion rules will be used to determine the market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves for the timeframe of the co-optimised allocation.

Article 11

Determination of the allocated volume of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves for the co-optimised allocation process

1. The allocation of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves is determined simultaneously with the cross-zonal capacity allocation for the exchange of energy by the cross-zonal capacity allocation optimisation function.
2. The objective of the cross-zonal capacity allocation optimisation function shall be the maximisation of the sum of economic surplus for SDAC and the economic surplus from the exchange of balancing capacity or sharing of reserves per trading day.
3. The time resolution for the allocation of cross-zonal capacity for the exchange of balancing capacity and sharing of reserves shall be equal to the day-ahead market time unit.
4. Each marginal volume of cross-zonal capacity shall be allocated to the exchange of energy in case the market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves pursuant to Article 10 is lower or equal to the market value of cross-zonal capacity for the exchange of energy pursuant to Article 9.
5. Netting of cross-zonal capacity allocated to the exchange of balancing capacity or sharing of reserves shall not be possible between:
 - a. bids of SBCP in the positive and/or negative directions;
 - b. SBCP bids from different products;
 - c. an SBCP bid and a day-ahead market bid; and
 - d. bidding zone border directions in case of sharing of reserves.
6. In case two TSOs exchange balancing capacity and perform sharing of reserves with the same SBCP in the same direction, netting of cross-zonal capacity shall be possible. The allocated cross-zonal capacity shall however at least correspond to the difference between the original TSO BC demand (before sharing of reserves) and the actually procured volume in the LFC Area of the TSO that is importing sharing of reserves.
7. For applying the co-optimised allocation process, the cross-zonal capacity allocation optimisation function requires the additional inputs listed under Article 7(2)(c).
8. When applying the co-optimised allocation process, the MCO shall send the following additional outputs to each respective application:
 - a. allocated volumes of cross-zonal capacity for the exchange of the relevant SBCP per bidding zone border in each direction;
 - b. allocated volumes of cross-zonal capacity for sharing of reserves per SBCP and bidding zone border in each direction; and
 - c. marginal clearing prices and volumes of balancing capacity markets per bidding zone.

TITLE 3

Methodology for the inverted market-based allocation

Article 12

Governance Structure of inverted market-based allocation

1. The inverted market-based allocation shall be performed by the MCO using the cross-zonal capacity allocation optimisation function of the co-optimised allocation process.

TITLE 4

Methodology for the market-based allocation process

Article 13

The market timeframes of the market-based allocation

1. Each market-based allocation process to allocate cross-zonal capacity for the exchange of balancing capacity or sharing of reserves shall include the following timings for each application:
 - a. For TSOs of an application of this methodology for a harmonised allocation process per timeframe applying a central dispatching model, the gate closure time for BSPs to submit the integrated scheduling process bids that are converted to the bids of SBCP in both directions shall be defined in the national terms and conditions pursuant to Articles 24(5) and 24(6) of the EB Regulation;
 - b. Each cross-zonal capacity allocation optimisation function shall send the allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves, the procurement volumes and clearing prices of the balancing capacity markets to the relevant application TSOs applying market-based allocation without undue delay;
 - c. Each cross-zonal capacity allocation optimisation function shall send the allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves to the day-ahead capacity calculation process per CCR without undue delay;
 - d. Each TSO of an application shall notify its connected BSPs about their accepted bids of SBCP in a positive and/or negative direction at the latest one (1) hour before the gate closure time of the SDAC; and
 - e. Notification to all market participants of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves shall be done at the same point in time as described in Article 13(1)(d).
2. Each market-based allocation process for the allocation of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves shall include the following steps:
 - a. The entity operating the forecast process to forecast the day-ahead market of the respective balancing capacity platform shall prepare the forecasted bidding curves of the day-ahead market and the cross-zonal capacity allocation limitations for balancing capacity according to Article 17(5)(d) and shall submit these to the cross-zonal capacity allocation optimisation function.

- b. BSPs shall send the bids of SBCP in both directions to their connecting TSO(s) or a delegated TSO.
- c. For TSOs applying a central dispatching model BSPs may submit only integrated scheduling process bids (instead of bids of SBCP in a positive and/or negative direction), which shall be converted, as far as possible, into bids of SBCP in the corresponding direction by the respective TSO, in accordance with Article 27 of the EB Regulation. These converted bids shall be submitted by TSOs in accordance with paragraph (e).
- d. Each cross-zonal capacity allocation optimisation function of the respective balancing capacity platform shall be operated by an application TSO connected to the respective balancing capacity platform. This TSO shall convert all the bids of SBCP per direction into merit order lists per product, per direction and per bidding zone.
- e. Each TSO applying the market-based allocation process shall send to its respective cross-zonal capacity allocation optimisation function the following data per product, per direction and per bidding zone:
 - i. the pseudonymised bids and cross-product linking information between the different SBCPs;
 - ii. the TSOs' BC demand;
 - iii. the TSOs' volume-sensitive BC demand;
 - iv. the minimum local reserve requirements per LFC Block and/or LFC Area;
 - v. the TSOs' minimum and maximum procurement volumes of balancing capacity per product per direction according to Article 167 of SO Regulation;
 - vi. the TSO's maximum volume of balancing capacity to be exchanged with each TSO within the application;
 - vii. cross-zonal capacity allocation limitations for the exchange of balancing capacity or sharing of reserves for the timeframes of market-based allocation in accordance with Article 16;
 - viii. additional cross-zonal capacity allocation limitations provided by individual TSOs, if any; and
 - ix. the flow-based parameters, if flow-based is applied in one or more bidding zones of the application, or NTC-related parameters if NTC is applied in one or more bidding zones of the application.
- f. Each cross-zonal capacity allocation optimisation function shall determine for each relevant bidding zone border the cross-zonal capacity allocated to the exchange of balancing capacity and/or sharing of reserves of each product in each direction of each application.
- g. Each cross-zonal capacity allocation optimisation function shall determine for all the relevant TSOs of the respective application(s) and for each SBCP in both directions the volumes of balancing capacity to be procured by the respective TSOs of the application(s) and in case of cross-zonal marginal pricing the clearing prices per bidding zone of the balancing capacity

- markets, and in case of pay-as bid, all respective prices for each volume of procured balancing capacity per bidding zone.
- h. The entity operating the respective cross-zonal capacity allocation optimisation function shall send the information of Article 13(2)(f) and Article 13(2)(g) to each application TSO connected to the respective balancing capacity platform.
 - i. Each cross-zonal capacity allocation optimisation function shall send the allocated volumes of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves to all relevant CCRs and all relevant TSOs.
 - j. TSOs of each application shall procure the balancing capacity bids from the BSPs according to the outputs of the respective cross-zonal capacity allocation optimisation function pursuant to Article 13(2)(g). TSOs applying a central dispatching model and applying market-based cross-zonal allocation shall convert as far as possible the outputs of the cross-zonal capacity allocation optimisation function to the outputs of integrated scheduling.
 - k. TSOs of each application shall notify the balancing platforms about the volumes of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves of each bidding zone border, for each balancing capacity product and per direction pursuant to Article 4(7).
 - l. TSOs of each application shall notify the respective balancing energy platforms, pursuant to Articles 19, 20 and 21 of the EB Regulation, about the volumes of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves on each bidding zone border, for each balancing capacity product and direction pursuant to Article 4(8).
 - m. TSOs of each application shall add the congestion rent resulting from the allocation of cross-zonal capacity to the exchange of balancing capacity or sharing of reserves to the relevant day-ahead congestion income and shall send the determined cross-border balancing capacity market prices per bidding zone and the respective allocated cross-zonal capacity volumes for the exchange of balancing capacity or sharing of reserves of each balancing capacity product in each direction per bidding zone border to the relevant follow-up processes.
 - n. The day-ahead market forecast validation process operated by RCCs shall submit the validation outcome to the entity operating the forecast process, to all application TSOs of the respective balancing capacity platform and to all TSOs of the concerned CCR(s). In case an application consists of one single TSO, this TSO shall operate the day-ahead market forecast validation process.
 - o. RCCs may provide recommendations for improving the accuracy of the algorithm of the forecast process.
3. Any allocation of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves shall be based on all data submitted to the respective cross-zonal capacity allocation optimisation function according to Article 13(2)(e).
 4. If after the procurement process of balancing capacity, the cross-zonal capacity that was previously allocated to the exchange of balancing capacity or sharing of reserves is not needed, the not needed cross-zonal capacity shall be released without undue delay for its use in the Intraday Market timeframe.

Article 14

Governance of the implementation of market-based allocation

1. All TSOs shall be responsible for:
 - a. the preparation of the general set of requirements for cross-zonal capacity allocation optimisation function software to be used by balancing capacity platforms. This shall include the capacity procurement optimisation function as well as the function as part of the cross-zonal capacity allocation optimisation function that optimises the day-ahead market to determine the forecasted market value of cross-zonal capacity for the exchange of energy;
 - b. the preparation of requirements for the forecast processes and requirements for the forecast validation processes; and
 - c. the preparation of a change request process for cross-zonal capacity allocation optimisation function software and a change request process for the forecast processes; and
 - d. amending existing methodologies where this is required.
2. All application TSOs of all the different balancing capacity platforms that apply the market-based allocation have the following responsibilities:
 - a. All application TSOs that plan to become part of an application shall be jointly responsible for building cross-zonal capacity allocation optimisation function software including the capacity procurement optimisation function and the function as part of the cross-zonal capacity allocation optimisation function that optimises the day-ahead market by respecting the set of requirements following paragraph 1(a); and
 - b. All application TSOs of all balancing capacity platforms are responsible for amending the algorithm of the cross-zonal capacity allocation optimisation function following a change request procedure in case potential changes have been decided by All TSOs. All application TSOs of all balancing capacity platforms shall perform a validation on the cross-zonal capacity allocation optimisation function algorithm in order to detect any potential systematic errors after the algorithm has changed.
3. All application TSOs of a certain balancing capacity platform shall be responsible for:
 - a. the technical implementation of cross-zonal capacity allocation optimisation function software including the capacity procurement optimisation function and the function as part of the cross-zonal capacity allocation optimisation function that optimises the day-ahead market on a joint infrastructure including the interfaces of this infrastructure. The application TSOs of the respective balancing capacity platform shall determine the entity operating the respective cross-zonal capacity allocation optimisation function. The application TSOs of the respective balancing capacity platform shall determine the rules for selecting the entity operating the cross-zonal capacity allocation optimisation function including the determination of the maximum period for which the entity operating the cross-zonal capacity allocation optimisation function is selected or rules for exemptions;
 - b. the technical development and the technical implementation of the forecast process. The application TSOs per balancing capacity platform shall be responsible for determining the roles and responsibilities of the forecast process by taking into account Article 17 of this

methodology for a harmonised allocation process per timeframe. The application TSOs per balancing capacity platform shall determine the entity operating the respective forecast process. The application TSOs of the respective balancing capacity platform shall determine the rules for selecting the entity operating the forecast process including the determination of the maximum period for which the entity operating the forecast process is selected or rules for exemptions;

- c. the technical development and the technical implementation of the forecast method to be applied in the forecast process;
- d. the technical development and the technical implementation of the forecast validation process to be operated by an RCC. The application TSOs of each balancing capacity platform shall be responsible for selecting an RCC and instructing the role and tasks between the cooperation between the RCC operating the forecast validation process and the TSOs of the respective balancing capacity platform. All application TSOs per balancing capacity platform shall be responsible for the technical provision of the RCC's access to the cross-zonal capacity allocation optimisation function including the capacity procurement optimisation function and the function as part of the cross-zonal capacity allocation optimisation function that optimises the day-ahead market for the forecast validation; and
- e. the technical development and the technical implementation of a change request process for the cross-zonal capacity allocation optimisation function software and the forecast process.

Article 15

Governance of the operation of each balancing capacity platform applying the market-based allocation process

1. All application TSOs per balancing capacity platform shall be responsible for:
 - a. operating their market-based allocation process for all applications connected to the respective balancing capacity platform. All application TSOs of a balancing capacity platform may delegate the task of operating the cross-zonal capacity optimisation function to one TSO or another entity and shall make sure that this entity has access to the relevant inputs in due time and provide the cross-zonal capacity allocation optimisation function output to the capacity procurement functions of all the connected application TSOs of the respective balancing capacity platform in due time; and
 - b. operating the forecast process. All application TSOs of a balancing capacity platform may delegate the task of operating the forecast process to one TSO or another entity. All application TSOs shall make sure that this entity has access to the relevant inputs and provide the forecast output to the cross-zonal capacity allocation optimisation function in due time.
2. All application TSOs as part of a scheduling area shall be responsible for operating a capacity procurement function per product and per direction connected to the respective balancing capacity platform. These application TSOs part of one scheduling area can delegate the task of operating the capacity procurement function to another TSO of the scheduling area.
3. Each RCC selected for operating the respective forecast validation process shall be responsible for conducting the forecast validation process and providing the outcome of the forecast validation to all the

application TSOs of the corresponding balancing capacity platform and the entity operating the respective forecast process. All application TSOs per balancing capacity platform shall be responsible for providing the required input to the respective forecast validation process in due time.

Article 16

The process to define the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves for the timeframes of market-based allocation

1. In accordance with Article 41(1)(d) of the EB Regulation, the process to define the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves for the timeframe of market-based allocation shall be as follows:
 - a. for bidding zone borders separating two LFC Blocks, the maximum volume of cross-zonal capacity allocated for the exchange of balancing capacity shall be ten (10) percent of cross-zonal capacity calculated for the day-ahead timeframe in accordance with the capacity calculation methodologies developed pursuant to Article 20(2) of the CACM Regulation;
 - b. in case the allocation of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves is performed on bidding zone borders within an LFC Block or bidding zone borders of one single TSO, no volume limitation shall be applied based on the exemption rule pursuant to Article 41(2) of EB Regulation;
 - c. to resolve a situation where the limit for the maximum volume of cross-zonal capacity allocated for the exchange of balancing capacity for the timeframes of market-based allocation in accordance with paragraph 1(a) is not sufficient to satisfy TSO BC demand in a bidding zone, the percentage limit pursuant to paragraph 1(a) on the relevant critical network elements for the relevant day-ahead market time units may be increased based on the exemption rule pursuant to Article 41(2) of EB Regulation. The limit for the maximum volume of cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves for the timeframes of market-based allocation shall only be increased to the point until the TSO BC demand is satisfied and maximum up to 20% of the calculated cross-zonal capacity calculated for day-ahead market timeframe. If this maximum limit is still not sufficient to satisfy a TSO BC demand, a fallback procedure pursuant to Article 4(15) of this methodology for a harmonised allocation process per timeframe shall be initiated. TSOs shall notify all the regulatory authorities about each increase of the limit for the maximum volume of cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves for the timeframes of market-based allocation above the threshold set in paragraph 1(a) of this article. This notification shall include at least the final volume percentage and value in MW of cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves for the timeframes of market-based allocation and the reasons for the shortage of balancing capacity bids in the importing bidding zone. The annual impact of such increases shall be reported pursuant to Article 24(8)(b) of this methodology for a harmonised allocation process per timeframe;
 - d. Such increase of the default limit shall be reported to stakeholders and all regulatory authorities at least two weeks in advance of application. This process can be performed repeatedly until the

- maximum limit of twenty (20)% is reached. The applied default limits shall be published in accordance with Article 24(8)(b) of this methodology for a harmonised allocation process per timeframe; and
- e. If cross-zonal capacity allocation limitations for the exchange of balancing capacity or sharing of reserves are provided within the forecast process pursuant to Article 17(5)(d) of this methodology for a harmonised allocation process per timeframe, the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity and sharing of reserves is reduced by these limitations.
2. The maximum volume limitations of allocated cross-zonal capacity for the exchange of balancing capacity and/or sharing of reserves shall be organised in accordance with Article 38(5) of EB Regulation and include the cumulative allocation of all balancing capacity products per direction of all applications per balancing capacity platform.
 3. The maximum volume shall be set by the minimum resulting from paragraph (1) and by applying the rules for the exchange of frequency restoration reserve (FRR) and replacement reserve (RR) in accordance with Article 157(2)(g), Article 165(3)(g), Article 167, Article 169 and Article 170 of the SO Regulation.
 4. In case flow-based is applied, the volume of cumulative allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves on a certain bidding zone border for all standard balancing capacity products per direction jointly shall not exceed the available cross-zonal capacity volume based on available transmission capacity extraction of the particular bidding zone border.

Article 17

Determination of the forecasted market value of cross-zonal capacity for the exchange of energy for the timeframes of market-based allocation

1. The forecasted market value of cross-zonal capacity for the exchange of energy shall be calculated for each day-ahead market time unit, where the cross-zonal capacity is calculated in accordance with the Capacity Calculation Methodology per relevant CCR, following Article 20(2) of the CACM Regulation.
2. The forecasted market value of cross-zonal capacity for the exchange of energy shall be determined by the calculation of the expected day-ahead market welfare by the cross-zonal capacity allocation optimisation function using forecasted day-ahead market bidding curves for the corresponding day-ahead market time units in the relevant bidding zones provided by each entity operating a forecast process.
3. To monitor the efficiency of determining the forecasted market value for the exchange of energy, two processes shall be applied:
 - a. the forecast process to forecast the day-ahead market; and
 - b. the forecast validation process to validate the accuracy of the forecast of the day-ahead market.
4. Each entity operating a forecast process to forecast the day-ahead market shall aim to provide the most accurate forecast of the bidding curve per bidding zone for each market time unit.
5. Each forecast process shall include the following forecast steps:
 - a. selection of the relevant bidding zones per application;
 - b. input provision by the application TSOs of the respective balancing capacity platform for the forecast process;

- c. forecast the day-ahead market bidding curves per bidding zone of the application by applying a forecast method agreed upon by the application TSOs of the respective balancing capacity platform to determine the best-fitting forecast of the day-ahead market bidding curves for each market time unit for each bidding zone;
 - d. provision of cross-zonal capacity allocation limitations for the exchange of balancing capacity or sharing of reserves for each market time unit per bidding zone border and direction. These limitations can be applied by reducing the maximum volume of allocated cross-zonal capacity for balancing capacity or by reducing the welfare maximising volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves. The cross-zonal capacity allocation limitation for balancing capacity is defined as the value by which the maximum volume of allocated cross-zonal capacity or the allocated cross-zonal capacity is reduced. According to the following two principles the volume limitations are included in the day-ahead market forecast process by each entity operating a forecast process:
 - i. provision of mandatory cross-zonal capacity allocation limitations for the exchange of balancing capacity or sharing of reserves for each market time unit per bidding zone border and direction. These limitations shall apply when the average forecast error of the forecast validation period is positive. The rules to determine the cross-zonal capacity allocation limitation shall be defined by the application TSOs per balancing capacity platform. A mandatory cross-zonal capacity allocation limitation shall be applied without undue delay after the provision of the forecast error of the last forecast validation period until the end of the current forecast validation period; and
 - ii. provision of additional cross-zonal capacity allocation limitations for the exchange of balancing capacity or sharing of reserves for each market time unit per bidding zone border and direction.
6. RCCs conducting a forecast validation and the respective forecast algorithm validation processes shall provide to the application TSOs of the respective balancing capacity platform, all TSOs of the respective CCR(s) and the entity operating the forecast process:
 - a. the forecast error;
 - b. recommendations for improving the day-ahead market forecast method; and
 - c. analysis of the algorithm of the forecast function.
7. Each entity operating a forecast process of the market-based allocation shall monitor, demonstrate and publish on the ENTSO-E website the efficiency of the forecast on at least a quarterly basis, including a comparison of the forecasted and actual market values of cross-zonal capacity for the exchange of energy and take appropriate measures, where needed. Input from the forecast validation process provided by the RCC shall be adequately acknowledged.
8. Each RCC conducting a day-ahead forecast validation process shall determine together with the relevant application TSOs and all the TSOs of the relevant CCR the length of the forecast validation period depending on the regional specificities. Each RCC shall trigger this determination of the length of the forecast validation period at the latest when the implementation step according to Article 25(4)(d) is initiated. In case no agreement can be found one (1) month after an RCC triggers this determination of the length of the forecast validation period, the applied forecast validation period shall be twenty-eight (28) days until an agreement will be found. The application TSOs of each balancing capacity platform

shall provide the relevant forecasted market values per marginal cross-zonal capacity for the exchange of energy, the balancing capacity bids and TSO BC demand and in case possible actual DAM bidding curves as well as available cross-zonal capacity and existing cross-zonal capacity limitations of the period to be validated by an RCC in the cross-zonal capacity allocation optimisation function of the respective balancing capacity platform. All application TSOs of a balancing capacity platform shall provide dedicated access to the cross-zonal capacity allocation optimisation function of the respective balancing capacity platform with the required user rights to the RCC performing the DAM forecast validation process. RCCs' user rights shall be sufficient to determine the forecast error when applying the actual DAM bidding curves to the function as part of the cross-zonal capacity allocation optimisation function that optimises the day-ahead market to determine the forecasted market value of cross-zonal capacity for the exchange of energy.

Article 18

Determination of the actual market value of cross-zonal capacity for the exchange of balancing capacity and sharing of reserves for the timeframes of market-based allocation

1. The actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves between all bidding zones where the market-based allocation process is applied shall be:
 - a. the change of economic surplus per MW of cross-zonal capacity in case allocated for the exchange of balancing capacity or sharing of reserves;
 - b. defined per day-ahead market time unit;
 - c. calculated per product and per direction, separately;
 - d. calculated based on bids for SBCP in both directions; and
 - e. calculated based on TSOs' BC demand.
2. In accordance with Article 18(1)(a), the actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves between bidding zones where the timeframes of market-based allocation are applied shall be calculated based on the change of economic surplus from the exchange of balancing capacity or sharing of reserves, resulting from the change of available cross-zonal capacities allocated for the exchange of balancing capacity or sharing of reserves.
3. For a TSO applying the central dispatching model and using integrated scheduling process bids for the exchange of balancing services or sharing of reserves for the timeframes of market-based allocation according to Article 27 of the EB Regulation, the bids submitted by the TSO after the application of conversion rules will be used to determine the market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves for the timeframes of market-based allocation.
4. TSO BC volume sensitive demand for a standard balancing capacity product may lead to higher reserved volumes of this standard balancing capacity product than the announced TSO BC demand for this SBCP:
 - a. if an indivisible bid shall be procured. The procurement of a higher volume of balancing capacity than the submitted TSO BC demand shall only be allowed if the overall procurement costs of the higher volume are lower than the overall procurement costs for the submitted TSO BC demand of the respective SBCP; or
 - b. if the TSO may experience volume shortages of an SBCP with lower quality; or

- c. if the procurement costs of an SBCP with lower quality may result in higher overall procurement costs compared to a higher volume procured of the higher quality SBCP for the purpose of substitution of reserves for cost minimisation.

In the sense of this paragraph corresponding to technical requirements, aFRR shall be considered as the SBCP of the highest quality, mFRR shall be considered as the SBCP of the next lower quality and RR shall be considered as the SBCP of the lowest quality.

5. The actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves shall be calculated taking into account TSO BC volume sensitive demand, if relevant.

Article 19

Determination of the allocated volume of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves for the timeframes of market-based allocation

1. The determination of the volumes of cross-zonal capacity to be allocated for the exchange of balancing capacity or sharing of reserves for the timeframes of market-based allocation shall be performed by the respective cross-zonal capacity allocation optimisation functions using all inputs received from the respective application TSOs as listed in Article 13(2)(e).
2. The cross-zonal capacity allocation optimisation function shall allocate cross-zonal capacity to maximise social welfare resulting from the sum of the expected economic surplus for SDAC and the economic surplus from the exchange of balancing capacity or sharing of reserves for the timeframes of market-based allocation per trading day.
3. The cross-zonal capacity allocation optimisation function shall include the capacity procurement optimisation function of all the applications as part of the respective balancing capacity platform, respecting its requirements pursuant to Article 58(3) of EB Regulation.
4. For each application entirely or part of a CCR applying flow-based, the respective cross-zonal capacity allocation optimisation function shall take into account all bidding zone borders of the CCR to determine the forecasted market value of cross-zonal capacity for the exchange of energy.
5. The outputs from the cross-zonal capacity allocation optimisation function, per SBCP and for each day-ahead market time unit are defined in Article 13(2)(f) and Article 13(2)(g).
6. The optimisation resolution of the allocation of cross-zonal capacity for the exchange of balancing capacity and sharing of reserves for the timeframes of market-based allocation shall be equal to the optimisation resolution of the optimisation function of the SDAC.
7. Each marginal volume of cross-zonal capacity shall be allocated to the exchange of balancing capacity and sharing of reserves for the timeframes of market-based allocation in case the actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves for the timeframes of market-based allocation is higher than the forecasted market value of cross-zonal capacity for the exchange of energy, within the limitations of Article 16 of this methodology for a harmonised allocation process per timeframe.
8. Each marginal volume of cross-zonal capacity shall be allocated to the higher quality product in case the actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves of a certain balancing capacity product is equal or higher to the actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves of another balancing capacity product exchanged on the same border.

9. Netting of cross-zonal capacity allocated to the exchange of balancing capacity or sharing of reserves shall not be possible between:
 - a. bids of SBCP in the positive and/or negative direction;
 - b. SBCP bids from different products;
 - c. an SBCP bid and a day-ahead market bid; and
 - d. bidding zone border directions in case of sharing of reserves.
10. In case two TSOs exchange balancing capacity and perform sharing of reserves with the same SBCP in the same direction, netting of cross-zonal capacity shall be possible. The allocated cross-zonal capacity shall however at least correspond to the difference between the original TSO BC demand (before sharing of reserves) and the actually procured volume of balancing capacity in the LFC Area of the respective TSO that is importing the sharing of reserves.

TITLE 5

Provisions on cross-zonal capacity

Article 20

Firmness regime for the allocation of cross-zonal capacity

1. The allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves must be firm:
 - a. in the co-optimised allocation and the inverted market-based allocation process when SDAC results are published; and
 - b. in market-based allocation after the optimisation by the cross-zonal capacity allocation optimisation function.
2. In the event of force majeure or emergency situations, curtailment of cross-zonal capacities which were allocated using a cross-zonal capacity allocation optimisation function shall be proportionally distributed between the affected cross-zonal capacities allocated for the exchange of energy and for the exchange of balancing capacity or sharing of reserves in accordance with Articles 40(3) and 41(4) of the EB Regulation. TSOs can deviate from this principle by proposing a more cost-efficient, non-discriminatory solution in the proposal pursuant to Article 33(1) of the EB Regulation.
3. Costs of ensuring firmness of cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves shall include follow-up costs, which are caused by the curtailment of firm cross-zonal capacity in the event of force majeure or emergency situations. These costs also include the additional costs from the procurement of balancing capacity due to the non-availability of the balancing capacity, given the curtailment of cross-zonal capacity.
4. The costs of ensuring firmness shall be shared in accordance with the regional methodologies developed in accordance with Article 74 of the CACM Regulation and Article 76 of the SO Regulation for cases which are within the scope of these methodologies.

5. Any costs of ensuring firmness that are outside the scope of the methodologies referred to in paragraph 4, shall be borne by the TSO requesting the curtailment.

Article 21

Pricing of cross-zonal capacity

1. TSOs allocating cross-zonal capacity for the exchange of balancing capacity or sharing of reserves by applying this methodology for a harmonised allocation process per timeframe shall calculate the cross-zonal capacity price for the volume of cross-zonal capacity that is allocated for the exchange of balancing capacity or sharing of reserves. This price shall be calculated separately for each applied market time unit, balancing capacity product, i.e., balancing capacity product in the positive or negative direction, in accordance with Article 38(5) of the EB Regulation.
2. For the market-based allocation process and the co-optimised allocation process, the prices in EUR per MW (hereafter referred to as the 'EUR/MW') of cross-zonal capacity allocated to the exchange of balancing capacity per day-ahead market time unit in each direction shall be equivalent to the difference in the marginal clearing prices of the SBCP of the two bidding zones belonging to the bidding zone border.
3. As an exemption to paragraph (2), in case pay-as-bid is applied for the market-based allocation, the prices in EUR/MW of cross-zonal capacity allocated to the exchange of balancing capacity per day-ahead market time unit in each direction shall be equivalent to the expected difference in the marginal clearing prices of the exchange of energy.
4. For the inverted market-based allocation, the prices in EUR/MW of cross-zonal capacity allocated to the exchange of balancing capacity per day-ahead market time unit in each direction shall be equivalent to the expected difference in the marginal clearing prices of the SBCP of the two bidding zones belonging to the bidding zone border.
5. For sharing of reserves, the prices in EUR/MW of cross-zonal capacity allocated to sharing of reserves per day-ahead market time unit in each direction shall be equivalent to the actual difference in the marginal clearing prices of the exchange of energy for the inverted market-based allocation and the co-optimised allocation and shall be equivalent to the expected difference in the marginal clearing prices of the exchange of energy for the market-based allocation.
6. As an exemption to paragraph (5), in case the direction of allocation of cross-zonal capacity for sharing of reserves is in the same direction as the exchange of balancing capacity for the same SBCP, the price of cross-zonal capacity for the volume of cross-zonal capacity allocated to sharing of reserves up to the maximum volume of cross-zonal capacity allocated to the exchange of balancing capacity shall be equal to the actual difference in marginal clearing prices of the SBCP in bidding zones.

Article 22

Sharing of congestion income from cross-zonal capacity

1. The congestion income coming from any application using an allocation process as defined in this methodology for a harmonised allocation process per timeframe will be considered as day-ahead congestion income and as such shall be shared in accordance with the methodology of Article 73 of the CACM Regulation and in accordance with Article 40(3) and Article 41(4) of the EB Regulation.
2. On a monthly basis, TSOs of an application applying the market-based allocation in accordance with Article 38(1) of the EB Regulation, or the entity to whom the task is delegated, shall compare the monthly congestion income calculated in accordance with paragraph 1 with the congestion income which could have been generated for the amount of cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves if allocated to the single day-ahead coupling instead. The respective TSOs of the application shall inform all TSOs and regulatory authorities of the relevant CCR(s) and ACER of the outcome of this assessment.
3. If the comparison pursuant to paragraph 2 shows a deficit on a monthly basis of generated congestion income following the allocation of cross-zonal capacities for the exchange of balancing capacity and sharing of reserves, the TSOs of an application applying the market-based allocation in accordance with Article 38(1) of the EB Regulation shall pay compensation to the single day-ahead coupling to cover such deficit. The costs of such compensation shall be split among the TSOs of the respective application in accordance with the distribution of shares of overall decreased procurement costs per TSO from the application of the market-based allocation in the relevant month. The compensation to the single day-ahead coupling should be shared among all TSOs of the relevant CCR(s) in accordance with the shares of decreased congestion income pursuant to the comparison in accordance with paragraph 2.

TITLE 6

Final provisions

Article 23

Fallback Procedures

1. Application TSOs and NEMOs shall determine fallback procedures in case of the cross-zonal capacity allocation process is based on the co-optimised allocation process or the inverted market-based allocation cannot be conducted fully or partially in due time.
2. Application TSOs per platform shall determine fallback procedures in case of the cross-zonal capacity allocation process based on market-based allocation cannot be conducted fully or partially in due time.
3. Fallback procedures shall be determined at least for the following situations:
 - a. input data to the cross-zonal capacity allocation optimisation function is not provided in due time or provided in a format which cannot be processed;
 - b. input data to the SDAC is not provided in due time;

- c. output data of the cross-zonal capacity allocation optimisation function is not provided in due time for the consecutive processes; and
- d. output data of one or more capacity procurement functions is not provided in due time.

Article 24

Publication of Information

1. TSOs of each application of this methodology for a harmonised allocation process per timeframe shall publish information on offered volumes as well as offered prices of procured balancing capacity, anonymised where necessary, as soon as possible but no later than one (1) hour after the results of the procurement have been notified to the bidders, pursuant to Article 12(3)(h) and Article 12(3)(i) of the EB Regulation.
2. TSOs of each application of this methodology for a harmonised allocation process per timeframe shall publish information in accordance with Article 12(3)(h) of the EB Regulation on the allocation of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves pursuant to Article 38(1)(a) of the EB Regulation, as defined in Article 5(1)(a) without undue delay and no later than six (6) hours before the use of the allocated cross-zonal capacity, including the:
 - a. date and time when the decision on allocation was made;
 - b. period of the allocation;
 - c. volumes allocated; and
 - d. market values of cross-zonal capacity used as a basis for the allocation process, in accordance with Article 39 of the EB Regulation.
3. TSOs of each application of this methodology for a harmonised allocation process per timeframe shall publish on the use of the allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves pursuant to Article 38 of the EB Regulation without undue delay and at the latest one (1) week after the use of allocated cross-zonal capacity, pursuant to Article 12(3)(i) of the EB Regulation, including the:
 - a. volume of allocated and used cross-zonal capacity per market time unit and bidding zone border;
 - b. volume of released cross-zonal capacity for subsequent timeframes per market time unit; and
 - c. estimated realised costs and benefits of the allocation process.
4. Each TSO intending to apply this methodology for a harmonised allocation process per timeframe shall publish the approved methodology in accordance with Article 38(1) and Article 12(3)(j) of the EB Regulation at least three (3) months before its application.
5. Each TSO intending to apply this methodology for a harmonised allocation process per timeframe shall publish the description of the requirements of any algorithm developed and amendments to it referred to in Article 58 of the EB Regulation at least one (1) month before their application pursuant to Article 12(3)(k) of the EB Regulation. The document shall be publicly available on the TSOs' webpage.
6. The TSO operating the day-ahead market forecast processes shall publish each application of the timeframes market-based allocation of this methodology for a harmonised allocation process per timeframe:

- a. the forecasted market value of cross-zonal capacity for the exchange of energy at the latest one (1) day after the allocation of cross-zonal capacity;
 - b. the efficiency of the forecasted market value of cross-zonal capacity for the exchange of energy to the respective regulatory authorities and market participants to analyse the forecast efficiency; and
 - c. all relevant and required information on the transparency website of ENTSO-E according to article 12(5) of the EB Regulation.
7. Each TSO applying the timeframes of inverted market-based allocation of the methodology for a harmonised allocation process per timeframe shall publish:
 - a. the forecasted market value of cross-zonal capacity for the exchange of balancing capacity at the latest one (1) day after the allocation of cross-zonal capacity;
 - b. the efficiency of the forecasted market value of cross-zonal capacity for the exchange of balancing capacity to their respective regulatory authorities and market participants to analyse the forecast efficiency; and
 - c. all relevant and required information on the transparency website of ENTSO-E according to article 12(5) of the EB Regulation.
8. Each forecast process shall monitor the efficiency of the forecast methodology and shall, by three (3) months after the application of the timeframes of market-based allocation of this methodology for a harmonised allocation process per timeframe and subsequently at least once a year, submit a report to the relevant regulatory authorities. For the timeframes of inverted market-based allocation, each TSO applying the inverted market-based allocation shall monitor the efficiency. Each report shall include at least:
 - a. a comparison of the forecasted and actual market values of cross-zonal capacity for the exchange of energy or the exchange of balancing capacity;
 - b. assessment of occurred increases of the limits for the maximum volume of cross-zonal capacity allocated for the exchange of balancing capacity, including statistics on the number of incidents, increased volumes and percentages, reasons for the incidents and an analysis of the economic surplus effects on the SDAC;
 - c. assessment of impacts on the economic surplus of the SDAC and economic surplus from the exchange of balancing capacity from the application of the market-based or inverted market-based allocation process and the specific impact following an increase of a default limit for the maximum volume of cross-zonal capacity allocated for the exchange of balancing capacity; and
 - d. where necessary, proposals to improve the accuracy of the forecasted market values of cross-zonal capacity, including a different limit for the maximum volume of cross-zonal capacity.
9. Subject to the approval of relevant regulatory authorities, pursuant to Article 18 of the EB Regulation, a TSO may withhold the publication of information on offered prices and volumes of balancing capacity bids, if justified for concerns of market abuse and if not detrimental to the effective functioning of the electricity markets. A TSO shall report such withholdings at least once a year to the relevant regulatory authority, in accordance with Article 59 of Directive (EU) 2019/944 of the European Parliament and of

Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast) and pursuant to Article 12(4) of the EB Regulation.

Article 25

Implementation timeline

1. At the latest twelve (12) months after approval of this methodology for a harmonised allocation process per timeframe by the European Union Agency for the Cooperation of Energy Regulators in accordance with Article 5(2) of Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators (hereafter referred to as the ‘ACER Regulation’), all TSOs shall finalise the following deliverables for the implementation of the market-based allocation according to Title 4 of this methodology for a harmonised allocation process per timeframe:
 - a. development of business requirements, functional requirements and non-functional requirements which serve as a basis for procuring any cross-zonal capacity allocation optimisation function for market-based allocation;
 - b. development of business requirements, functional requirements and non-functional requirements which serve as a basis for procuring the day-ahead market forecast validation process;
 - c. development of business requirements, functional requirements and non-functional requirements which serve as a basis for procuring the forecast process to forecast the day-ahead market;
 - d. submission of an amendment of a manual of procedures as well as detailed data descriptions which will serve as the basis for fulfilling the publication requirements pursuant to Article 24 of this methodology for a harmonised allocation process per timeframe;
 - e. establishment of an implementation framework covering the deliverables of Article 25(1)(a), 25(1)(b), and 25(1)(c) of this methodology for a harmonised allocation process per timeframe; and
 - f. submission of an amendment of the congestion income distribution methodology pursuant to Article 73 of CACM Regulation.

2. At the latest twelve (12) months after a written request by one or more TSO(s) of a respective CCR, all TSOs of the relevant CCR shall submit amendments of all relevant methodologies according to FCA, CACM, EB and SO Regulation of this CCR including clearly defined implementation deadlines where each implementation deadline shall not exceed forty-two (42) months after the written request, for the implementation of a market-based allocation according to Title 4 of this methodology for a harmonised allocation process per timeframe. The submission of relevant methodologies as stated above comprises at least the:
 - a. submission of an amendment of the day-ahead capacity calculation methodology of the relevant CCR pursuant to Article 20 of CACM Regulation;
 - b. submission of an amendment of the intra-day capacity calculation methodology of the relevant CCR pursuant to Article 20 of CACM Regulation;
 - c. submission of an amendment of the balancing timeframe capacity calculation methodology of the relevant CCR pursuant to Article 37(3) of EB Regulation;

- d. submission of an amendment of the regional operational security coordination calculation methodology of the relevant CCR pursuant to Article 76 of SO Regulation; and
 - e. submission of an amendment of the re-dispatching and countertrading cost-sharing methodology pursuant to Article 74 of CACM Regulation, if relevant.
3. At the latest twenty-four (24) months after approval of this methodology for a harmonised allocation process per timeframe by the European Union Agency for the Cooperation of Energy Regulators in accordance with Article 5(2) of ACER Regulation, all TSOs which intend to apply the market-based allocation process shall take the following steps for the technical implementation of the market-based allocation according to Title 4 of this methodology for a harmonised allocation process per timeframe:
 - a. implementation of a cross-zonal capacity allocation optimisation function for market-based allocation based on the requirements of paragraph (1)(a) to be concluded with a Factory Acceptance Test and ready to be installed and tested on-site at the entities responsible for operating a cross-zonal capacity allocation optimisation function; and
 - b. implementation of the requirements set forth in the amended manual of procedures as well as in the amended detailed data descriptions pursuant to paragraph (1)(d).
4. The soonest twenty-four (24) months after approval of this methodology for a harmonised allocation process per timeframe by the European Union Agency for the Cooperation of Energy Regulators in accordance with Article 5(2) of ACER Regulation, one or more TSO(s) who voluntarily intend to apply a market-based allocation process according to Title 4 of this methodology for a harmonised allocation process per timeframe shall complete the following steps before application of the market-based allocation:
 - a. requesting the relevant RCC(s) for the procurement of a day-ahead market forecast validation process based on the requirements of paragraph (1)(b) to be concluded with a Factory Acceptance Test and ready to be installed and tested on-site at the final RCC(s) responsible for operating the forecast validation process for all the relevant applications of the market-based allocation process;
 - b. establishment of a forecast process to forecast the day-ahead market based on the requirements of paragraph (1)(c) to be concluded with a Factory Acceptance Test and ready to be installed and tested on-site at the final TSO(s) responsible for operating the forecast process for all the relevant applications of the market-based allocation process;
 - c. installing the cross-zonal capacity allocation optimisation function for the market-based allocation process into the processes of said TSO(s), as procured and concluded with a Factory Acceptance Test according to paragraph (2)(a), concluding with a Site Acceptance Test on-site at the final TSO(s) responsible for operating the cross-zonal capacity allocation optimisation function for the market-based allocation process for all the relevant applications of the market-based allocation process;
 - d. installing a day-ahead market forecast validation process into the processes of said TSO(s), as procured and concluded with a Factory Acceptance Test according to paragraph (4)(a), concluding with a Site Acceptance Test on-site at the RCCs operating the day-ahead forecast validation process for all the relevant applications of the market-based allocation process; and

- e. installing a forecast process to forecast the day-ahead market into the processes of TSO(s) as procured and concluded with a Factory Acceptance Test according to paragraph (3)(b) concluding with a Site Acceptance Test on-site at the TSO(s) operating the forecast process to forecast the day-ahead market for all the relevant applications of the market-based allocation process.
5. For existing applications of the market-based allocation pursuant to a methodology of Article 41(1) of the EB Regulation, in which two or more TSOs that have in place an approved methodology pursuant to Article 38(1) of the EB Regulation before the implementation of the timeframes of market-based allocation of this methodology for a harmonised allocation process per timeframe, which intend to continue their application, all rules of the timeframes of market-based allocation defined in this methodology shall be applied at the latest eighteen (18) months after successful implementation of paragraph (2).
6. The allocation of cross-zonal capacity for the exchange of balancing capacity and/or sharing of reserves by existing applications according to paragraph (4) shall be an input as already allocated cross-zonal capacity for the relevant cross-zonal capacity allocation optimisation function of market-based allocation of this methodology for a harmonised allocation process per timeframe.
7. In case two or more TSOs start building a platform for the exchange of balancing capacity or sharing of reserves according to paragraph 3 of this article, these TSOs shall inform the respective CCR in written form. The CCR shall implement the required interfaces by nine (9) months after the written notification.

Article 26

Categorisation of costs and detailed principles for sharing the common and regional costs for market-based allocation

1. The costs of building the cross-zonal capacity allocation optimisation function software, technically developing and implementing, amending and operating a balancing capacity platform shall be broken down into:
 - a. common costs resulting from coordinated activities of all application TSOs of all balancing capacity platforms;
 - b. common costs resulting from coordinated activities of all application TSOs of a balancing capacity platform; and
 - c. costs resulting from coordinated activities of TSOs of an application of a balancing capacity platform.
2. Common costs resulting from coordinated activities of all application TSOs of all balancing capacity platforms shall include costs resulting in proposals related to:
 - a. building the cross-zonal capacity allocation optimisation function software or new functionalities in the cross-zonal capacity allocation optimisation function software which have an impact on the intended exchange of balancing capacity and sharing of reserves;
 - b. commissioning of joint studies for the benefit of all member TSOs; and
 - c. costs required for external support to the project and the project management office.

3. Common costs resulting from coordinated activities of all application TSOs of a balancing capacity platform shall include costs resulting from proposals related to:
 - a. common costs for technically developing and implementing or amending a balancing capacity platform:
 - i. implementation of a balancing capacity platform or new functionalities of an existing balancing capacity platform which have an impact on the intended exchange of balancing capacity;
 - ii. Technical development and implementation of the cross-zonal capacity allocation optimisation function which has an impact on the intended exchange of balancing capacity and sharing of reserves;
 - iii. implementation of the forecast process or new functionalities in the forecast process which have an impact on the intended exchange of balancing capacity and sharing of reserves;
 - iv. implementation of the forecast validation or new functionalities in the forecast validation which have an impact on the intended exchange of balancing capacity and sharing of reserves;
 - v. costs associated with the technical implementation and amendment of the forecast validation process or new functionalities in the forecast validation which have an impact on the intended exchange of balancing capacity and sharing of reserves; and
 - vi. costs required for external support to the project and the project management office.
 - b. common costs for operating a balancing capacity platform:
 - i. costs related to the operation of the cross-zonal capacity allocation optimisation function of a balancing capacity platform by all application TSOs of the respective balancing capacity platform;
 - ii. costs related to the operation of the forecast process by all application TSOs of the respective balancing capacity platform; and
 - iii. costs related to the operation of the forecast validation by all application TSOs of the respective balancing capacity platform.
4. Common costs resulting from coordinated activities of all application TSOs of the respective balancing capacity platform shall include costs resulting from proposals related to establishing and amending the application.
5. The common costs resulting from the Steering Committee decisions in accordance with paragraph 2 shall be shared among the countries of all application TSOs in accordance with the following principles set out by Article 23 of the EB Regulation:
 - a. one-eighths (1/8) of common costs shall be divided equally between each Member State and the third country;
 - b. five-eighths (5/8) of common costs shall be divided proportionally to the consumption of each Member State and the third country; and
 - c. two-eighths (2/8) of common costs shall be divided equally between the participating TSOs.

6. The common costs for technically developing and implementing or amending a balancing capacity platform in accordance with paragraph 3(a) shall be shared among the countries of the application TSOs of the respective balancing capacity platform in accordance with the following principles set out by Article 23 of the EB Regulation:
 - a. one-eighths (1/8) of common costs shall be divided equally between each Member State of the respective balancing capacity platform;
 - b. five-eighths (5/8) of common costs shall be divided proportionally to the consumption of each Member State of the respective balancing capacity platform; and
 - c. two-eighths (2/8) of common costs shall be divided equally between the application TSOs of the respective balancing capacity platform.
7. The common costs for operating the respective balancing capacity platform in accordance with paragraph 3(b) shall be shared in accordance with the following principles set out by Article 23 of the EB Regulation:
 - a. one-eighths (1/8) of common costs shall be divided equally between each Member State of the respective balancing capacity platform;
 - b. five-eighths (5/8) of common costs shall be divided proportionally to the consumption of each Member State of the respective balancing capacity platform; and
 - c. two-eighths (2/8) of common costs shall be divided equally between the application TSOs of the respective balancing capacity platform.
8. Regional costs shall be shared among all application TSOs or all relevant balancing capacity platforms as part of the region in accordance with the following principles set out by Article 23 of the EB Regulation:
 - a. one-eighths (1/8) of common costs shall be divided equally between each Member State of the application;
 - b. five-eighths (5/8) of common costs shall be divided proportionally to the consumption of each Member State of the application; and
 - c. two-eighths (2/8) of common costs shall be divided equally between the TSOs of an application.
9. The national costs shall be the costs for using the respective balancing capacity platform, which consist of the costs of development, implementation, operation and maintenance of technical infrastructure and procedures.
10. Each application TSO connected to a balancing capacity platform shall bear its own national costs and is solely responsible (i.e., no joint and several liability) for the due payment of all the costs related to the technical infrastructure necessary for the successful usage of the respective balancing capacity platform.
11. In case of several application TSOs are active in a Member State, the Member State's share of the costs shall be distributed among those application TSOs proportionally to the consumption in the application TSOs' monitoring areas.
12. If a TSO wants to join a balancing capacity platform and was not part of the implementation of the respective balancing capacity platform, the following historical costs shall be remunerated following Article 23(3) in combination with Article 23(4) of the EB Regulation as:

- a. historical implementation costs of the cross-zonal capacity allocation optimisation function;
- b. historical implementation costs of the forecast process;
- c. historical implementation costs of forecast validation;
- d. historical implementation costs of the respective balancing capacity platform; and
- e. historical implementation costs of the application.

Article 27

Publication

All TSOs shall publish the methodology for a harmonised allocation process per timeframe without undue delay after a decision has been adopted by the ACER in accordance with Article 5(2) of Regulation (EU) 2019/942 of the European Parliament and of Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators (recast).

Article 28

Language

The reference language for this methodology for a harmonised allocation process per timeframe shall be English. For the avoidance of doubt, where TSOs need to translate this methodology for a harmonised allocation process per timeframe into their national language(s), in the event of inconsistencies between the English version published by TSOs in accordance with Article 7 of EB 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 methodology for a harmonised allocation process per timeframe.