

**Greece-Italy TSOs methodology for an allocation process of cross zonal capacity for the exchange of balancing capacity or sharing of reserves based on economic efficiency analysis in accordance with Article 42 of the Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing**

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18<sup>th</sup> December 2019

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**Greece Italy** Transmission System Operators taking into account the following:

### Whereas

1. This document is the methodology by the **Greece Italy** Transmission System Operators (hereafter referred to as “TSOs”) of the **Greece Italy** Capacity Calculation Region (hereafter referred to as “**Greece Italy**”). The document provides a methodology for an allocation process of cross zonal capacity for the exchange of balancing capacity or sharing of reserves based on economic efficiency analysis (hereafter referred to as “**EE CZCA proposal**”) in accordance with Article 42 of Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing (hereafter referred to as “**EBGL**”).
2. The EE CZCA proposal takes into account the general principles and goals set in the EBGL, the Regulation (EC) 2017/1485 establishing a guideline on electricity transmission system operation (hereafter referred to as the “**SOGL**”), Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (hereafter referred to as the “**CACM**”) as well as Regulation (EC) No 714/2009 of the European Parliament of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity (hereafter referred to as the “**Electricity Regulation**”) as well as 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 of the Council (hereafter referred to as the “**Transparency Regulation**”).
3. The EE CZCA proposal takes into account the general principles, goals and other methodologies set out in the EBGL. The goal of the EBGL is the integration of balancing markets while contributing to operational security. To facilitate this goal, while contributing to operational security, it is necessary to integrate balancing markets and promoting the possibilities for exchanges of balancing services while contributing to operational security.
4. Article 42 of the EBGL constitutes the legal basis for this proposal:

*“1. By two years after entry into force of this Regulation, all TSOs of a capacity calculation region may develop a proposal for a methodology for the allocation of cross-zonal capacity based on an economic efficiency analysis. Such methodology shall apply for the exchange of balancing capacity or sharing of reserves with a contracting period of more than one day and where the contracting is done more than one week in advance of the provision of the balancing capacity. The methodology shall include:*

*(a) the rules and principles for allocating cross-zonal capacity based on an economic efficiency analysis;*

*(b) a detailed description of how to determine the forecasted market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves, and an assessment of the market value of cross-zonal capacity for the exchange of energy;*

*(c) a detailed description of the pricing method, firmness regime and the sharing of congestion income for the cross-zonal capacity that has been allocated based on an economic efficiency analysis;*

*(d) the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves pursuant to paragraph 2.*

*2. The allocation of cross-zonal capacity based on an economic efficiency analysis shall be limited to 5 % of the available capacity for the exchange of energy of the previous relevant calendar year between the respective bidding zones or, in case of new interconnectors, 10 % of the total installed technical capacity of those new interconnectors. This volume limitation may not apply for bidding zone borders connected through DC interconnectors until the co-optimized or market-based allocation processes are harmonized at Union level pursuant to Article 38(3).*

*3. The methodology for the allocation of cross-zonal capacity based on an economic efficiency analysis shall be based on a comparison of the forecasted market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves, and the forecasted market value of cross-zonal capacity for the exchange of energy.*

*4. The pricing method, the firmness regime and the sharing of congestion income for the cross-zonal capacity that has been allocated for the exchange of balancing capacity or sharing of reserves based on an economic efficiency analysis shall ensure equal treatment with the cross-zonal capacity allocated for the exchange of energy.*

5. TSOs referred to in paragraph 1 shall develop a proposal for a list of each individual allocation of cross-zonal capacity based on an economic efficiency analysis. Such list shall include:

(a) the specification of the bidding zone border;

(b) the volume of allocated cross-zonal capacity;

(c) the period during which the cross-zonal capacity would be allocated for the exchange of balancing capacity or sharing of reserves;

(d) the economic analysis justifying the efficiency of such allocation.

6. TSOs referred to in paragraph 1 shall reassess the value of the allocated cross-zonal capacity in the process of the procurement of balancing capacity and release the allocated cross-zonal capacity which is no longer beneficial for the exchange of balancing capacity or sharing of reserves.”

5. The EE CZCA proposal generally contributes to achieving the objectives stated in Article 3 of the EBGL. In particular, this EE CZCA proposal serves the following objectives of the EBGL:

(a) The EE CZCA proposal answers the requirements set out in Article 42 of the EBGL;

(b) The EE CZCA proposal serves the objective of fostering effective competition, non-discrimination and transparency in balancing markets as stated in Article 3(1)(a) of the EBGL by defining the principles necessary for establishing a balancing capacity cooperation, using allocation process based on economic efficiency analysis, and how to notify it as described in articles 3 and 4 of this EE CZCA proposal;

(c) The EE CZCA proposal facilitates the objective for the integration of the balancing markets and for promoting the possibilities for the exchanges of balancing services while using market-based mechanisms and contributing to operational security as stated in Article 3(1)(c) and Article 3(2)(d) of the EBGL by means of defining the rules for the procurement of the balancing capacity, through the allocation of cross-zonal capacity for the balancing capacity market, together with and at the same time as the allocation of cross zonal capacity of the day ahead energy market, as detailed in articles 5, 6, 7, and 8 of this EE CZCA proposal;

(d) The EE CZCA proposal ensures that the development of the day-ahead market is not compromised in accordance with Article 3(2)(e) of the EBGL as it is specified in articles 5 and 13 of this EE CZCA proposal, the CZC allocated to the exchange of balancing capacity or sharing of reserves that is not used, shall be released for the exchange of balancing energy processes with shorter timeframes;

(e) The EE CZCA proposal ensures that the procurement of balancing services is done in a fair, objective, transparent way and uses the market-based mechanisms as stated in Article 3(1)(e) of the EBGL. This EE CZCA proposal states in articles 9, 10, 11, 12 and in articles 13 and 14 how the market value and volume as well as the offered volumes and prices are determined;

(f) The EE CZCA proposal aims at respecting 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 EBGL by establishing the maximum limitations to be applied by the balancing capacity cooperation as is defined in articles 8 of this EE CZCA proposal;

(g) The EE CZCA proposal takes into consideration agreed European standards in accordance with Article 3(2)(h) this methodology based on the single day-ahead market time unit defined within the CACM Regulation and uses the optimization resolution from the MCO function, as specified in articles 3, 6, 7, and 9-13 of this EE CZCA proposal;

(h) In conclusion, the EE CZCA proposal meets the objectives of the EBGL.

## Abbreviations

The list of abbreviations used in this EE CZCA proposal is the following:

- aFRR: frequency restoration reserve with automatic activation
- BSP: balancing service provider
- CACM: Commission Regulation (EU) 1222/2015 establishing a guideline on capacity allocation and congestion management
- CET: Central European Time
- CMOL: common merit order list
- CZC: cross zonal capacity
- CZCA: cross zonal capacity allocation
- DC: direct current
- EBGL: guideline on electricity balancing
- EE: economic efficiency
- ENTSO-E: European Network of Transmission System Operators for Electricity
- FRR: frequency restoration reserve
- GCT: gate close time
- MB: market-based
- MCO: market coupling operator
- MTU: market time unit
- NRA: national regulatory authority
- RR: replacement reserve
- SDAC: single day-ahead coupling
- SOGL: guideline on system operation
- TSO: transmission system operator within Greece Italy

**SUBMIT THE FOLLOWING EE CZCA PROPOSAL TO GREECE ITALY REGULATORY AUTHORITIES:**

## Article 1 Subject matter and scope

1. The **Greece Italy** TSOs lay down in this EE CZCA proposal a methodology to allocate cross zonal capacity for the exchange of balancing capacity or sharing of reserves, which is based on the forecasted market values of cross zonal capacity for the exchange of energy and for the exchange of balancing capacity or sharing of reserves.
2. The scope of the EE CZCA proposal does not extend to the assignment of roles and responsibilities to specific parties. Also, the governance framework for specific roles or responsibilities and TSO-TSO settlement rules are out of scope of the EE CZCA proposal.
3. Latest 24 months after the date of approval of this EE CZCA methodology, two or more TSOs by their voluntary initiative or at the request of their relevant regulatory authorities, in accordance with Article 38(1) of the EBGL, can implement this EE CZCA methodology.
4. In case a balancing capacity cooperation is established, all TSOs exchanging balancing capacity or sharing of reserves within this balancing capacity cooperation shall regularly assess whether the cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves is still needed for that purpose.
5. The implementation of the allocation of CZC applying the allocation process based on an economic efficiency analysis is a voluntary initiative by two or more TSOs or at the request of their relevant regulatory authorities in accordance with Article 38(1) of the EBGL and is therefore not mandatory.
6. The implementation of the allocation of CZC applying the allocation process based on an economic efficiency analysis by two or more TSOs shall be subject to TSO notification pursuant to Article 150 of the SOGL.
7. The proposal for the implementation of the allocation of CZC applying the allocation process based on an economic efficiency analysis shall include the bidding zone borders, the volume of allocated CZC, the market timeframe, the duration of application and the detailed description of the methodology to be applied.
8. All TSOs within a balancing capacity cooperation implementing the EE CZCA proposal shall establish common and harmonized rules and processes for the exchange and procurement of balancing capacity pursuant to Article 33 of the EBGL, and respecting the requirements set out in Article 32 of the EBGL.
9. According to Article 38(4) of the EBGL, CZC allocated for the exchange of balancing capacity or sharing of reserves shall be used exclusively for the product where it was reserved for, being aFRR, mFRR, or RR. The reliability margin calculated pursuant to CACM shall be used for operating and exchanging frequency containment reserves, except on Direct Current ('DC') interconnectors for which CZC for operating and exchanging frequency containment reserves may also be allocated in accordance with Article 38(1) of the EBGL.
10. The proposal for a list of standard products for balancing capacity for FRR and RR pursuant to Article 25(2) of the EBGL is out of the scope for this EE CZCA proposal and will be treated in a separate document.

## Article 2 Definitions

1. For the purposes of this EE CZCA proposal, the terms used shall have the meaning given to them in Article 2 of the Electricity Regulation, Article 2 of the Transparency Regulation, Article 2 of the CACM, Article 3 of the SOGL and Article 2 of the EBGL.
2. The following definitions shall also apply:
  - (a) 'Cross-zonal capacity allocation optimization function' means the role to operate the algorithm applied for the allocation of CZC for the exchange of balancing capacity or sharing of reserves within the balancing capacity cooperation in which balancing capacity is exchanged or reserves are shared.
  - (b) 'Capacity procurement optimization function' means the role to operate the algorithm applied for the optimization of the procurement of balancing capacity within balancing capacity cooperation in which balancing capacity is exchanged.

- (c) 'Balancing capacity cooperation' means two or more TSOs that apply the exchange of balancing capacity or sharing of reserves in a geographical area divided into two or more bidding zones.
  - (d) 'Sharing of reserves' means a mechanism in which more than one TSO takes the same balancing capacity, being FRR or RR, into account to fulfil their respective reserve requirements resulting from their reserve dimensioning processes.
  - (e) 'Allocation process based on economic efficiency analysis': methodology to allocate CZC for the exchange of balancing capacity or sharing of reserves that is based on a comparison of the forecasted market value of CZC for the exchange of balancing capacity or sharing of reserves, and the forecasted market value of CZC for the exchange of energy.
  - (f) 'Allocation of cross zonal capacity' means CZC that is allocated for the exchange of balancing capacity or sharing of reserves and thus withdrawn from day-ahead market.
  - (g) 'Use of cross zonal capacity' means allocated CZC used for the exchange of balancing capacity or sharing of reserves, either for the exchange of balancing capacity in terms of dimensioning and compliance or for physical use of CZC for the actual transfer of balancing energy.
  - (h) 'Release of cross zonal capacity' means CZC allocated for the exchange of balancing capacity or sharing of reserves that is no longer needed and is released as soon as possible and returned in the subsequent capacity allocation timeframes.
  - (i) 'Market value of cross zonal capacity for the exchange of energy in SDAC' means the change in the economic surplus of the SDAC (the sum of the producer surplus, consumer surplus and congestion income) resulting from the incremental increase of the CZC allocated for the exchange of energy.
  - (j) 'Market value of cross zonal capacity for the exchange of balancing capacity or sharing of reserves' means the change in the economic surplus of the balancing capacity market (the sum of consumer surplus and if applicable producer surplus and congestion income) resulting from the incremental increase of the CZC allocated for the exchange of balancing capacity or sharing of reserves.
3. In this EE CZCA proposal, unless the context requires otherwise:
- (a) the singular indicates the plural and vice versa;
  - (b) the table of contents and headings are inserted for convenience only and do not affect the interpretation of this EE CZCA proposal;
  - (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;
  - (d) any reference to an Article without an indication of the document shall mean a reference to this EE CZCA proposal.

### **Article 3 Principles of balancing capacity cooperation**

1. Each balancing capacity cooperation within CCR Greece Italy implementing this EE CZCA proposal shall use standard balancing capacity products pursuant to Article 25(2) of the EBGL.
2. Each balancing capacity cooperation within CCR Greece Italy implementing this EE CZCA proposal shall use separate standard upward and downward balancing capacity products pursuant to Article 32(3) of the EBGL.
3. The Greece Italy TSOs that want to establish a balancing capacity cooperation in accordance with this EE CZCA methodology, shall publish on the ENTSO-E website the expected costs and benefits of such a balancing capacity cooperation.

4. For each balancing capacity cooperation within CCR Greece Italy, the relevant regulatory authorities could approve an exemption to separate procurement of upward and downward balancing capacity pursuant to Article 5(4)(f) of the EBGL.
5. If an exemption is approved according to Article 3(3) of this EE CZCA proposal, the CZCA optimization function will still allocate CZC for the exchange of balancing capacity or sharing of reserves for each direction (upward for downward bids) separately.
6. In case of a TSO applying central dispatching model, the TSO-BSP pricing rules of standard balancing capacity products procured within balancing capacity cooperation are defined by the TSO in the terms and conditions related to BSPs and shall include conversion rules of integrated scheduling process bids into standard balancing capacity products defined pursuant to Article 27 of the EBGL.
7. For each balancing capacity cooperation within CCR Greece Italy implementing this EE CZCA proposal, the minimum contracting period of standard balancing capacity bids shall be a multiple of the day-ahead MTU and contracting period should be more than one day.
8. For each balancing capacity cooperation within CCR Greece Italy implementing this EE CZCA proposal, the minimum validity period of standard balancing capacity bids shall be equal or a multiple of the day-ahead MTU.
9. For each balancing capacity cooperation within CCR Greece Italy implementing this EE CZCA proposal, the TSO-BSP pricing rules shall be:
  - (a) defined in terms and condition related to balancing service providers pursuant to Article 18 of the EBGL,
  - (b) pursuant to Article 32(2) of the EBGL,
  - (c) harmonized within each balancing capacity cooperation.
10. The TSOs shall regularly assess whether the CZC allocated for the exchange of balancing capacity or sharing of reserves is still needed for that purpose. The TSOs shall perform this assessment at least once per year.
11. In case the allocated CZC for the exchange of balancing capacity or sharing of reserves is no longer needed for that purpose, it shall be returned in subsequent capacity allocation timeframes.
12. The CZC allocated for the exchange of balancing capacity or sharing of reserves that has 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 pursuant to Article 38.9 of the EBGL. Released CZC may be used by all TSOs which are using respective balancing platforms exchanging balancing energy with shorter activation times or operating imbalance netting.
13. All Greece Italy TSOs shall strive to establish only one balancing capacity cooperation for exchange of balancing capacity or sharing of reserves respectively for FRR or RR.
14. Two or more TSOs may establish a balancing capacity cooperation if they directly share a bidding zone border or indirectly share a bidding border through a TSO which is also a member of the balancing capacity cooperation.
15. Each balancing capacity cooperation shall include fallback procedures in the implementation methodology of the balancing capacity cooperation, commonly agreed by all TSOs of the balancing capacity cooperation.

#### **Article 4 Notification process for the use of the allocation process based on economic efficiency analysis**

1. Each balancing capacity cooperation within CCR Greece Italy implementing this EE CZCA proposal shall inform all European TSOs and stakeholders through an announcement on the ENTSO-E website. This information will be shared at least thirty days before the first gate opening time of the balancing capacity cooperation and will include a detailed description of the balancing capacity cooperation specifications: the bidding zone borders, the market timeframe, the duration of application or the allocation of CZC and time for entering into operation.



2. Each balancing capacity cooperation within CCR Greece Italy implementing this EE CZCA proposal shall inform the relevant NRAs of the applied forecast technique to determine the forecasted market value of CZC for the exchange of energy or the forecasted market value of CZC for the exchange of balancing capacity or sharing of reserves.
3. Each balancing capacity cooperation within CCR Greece Italy implementing this EE CZCA proposal shall share the applied CZCA optimization function with all CCR Greece Italy TSOs for transparency purposes.

### **Article 5 Process of allocation based on economic efficiency analysis**

The allocation process based on economic efficiency analysis pursuant to Article 42 of the EBGL is based on a comparison of the forecasted market value of cross zonal capacity for the exchange of balancing capacity or sharing of reserves and the forecasted market value of cross zonal capacity for the exchange of energy. The CZCA optimization is performed before the procurement of balancing capacity bids and before the SDAC.

### **Article 6 Timeframe of the allocation process based on economic efficiency analysis**

1. The allocation process based on economic efficiency analysis to allocate the last available value of CZC for the exchange of balancing capacity or sharing of reserves shall include the following consecutive timings for each balancing capacity cooperation within Greece Italy implementing this EE CZCA:
  - a. Notification to the BSPs of available CZC for the exchange of balancing capacity or sharing of reserves shall be done not later than one hour before the TSO-BSP GCT of standard upward balancing capacity bids and of standard downward balancing capacity bids.
  - b. The TSO-BSP GCT of standard upward balancing capacity bids and of standard downward balancing capacity bids shall be equal within each balancing capacity cooperation and organized before week-ahead of the SDAC.
  - c. Notification to the BSPs of selected standard upward balancing capacity bids or downward balancing capacity bids by TSOs shall be done before the GOT of the SDAC.
2. The allocation process based on economic efficiency analysis to allocate CZC for the exchange of balancing capacity or for sharing of reserves shall include the following steps:
  - a. The TSOs shall forecast the market value of CZC for the exchange of balancing capacity and for sharing of reserves and the market value of CZC for the exchange of energy.
  - b. TSOs of the balancing capacity cooperation shall perform the CZCA optimization function and determine the allocation of CZC for the exchange of balancing capacity or sharing of reserves.
  - c. The TSOs performing the CZCA optimization function shall send the allocated CZC values for the exchange of balancing capacity or sharing of reserves to all TSOs of the balancing capacity cooperation.
  - d. The BSPs submit the standard upward and standard downward balancing capacity bids to their connecting TSO before TSO-BSP GCT.
  - e. The TSOs of the balancing capacity cooperation shall establish the CMOL of balancing capacity bids using the procurement optimization function, respecting the allocated CZC for the exchange of balancing capacity or sharing of reserves. The procurement optimization function minimizes the overall balancing capacity procurement costs pursuant to Article 58(3) of the EBGL.
  - f. TSOs of the balancing capacity cooperation shall mark the allocated cross zonal capacity for the exchange of balancing capacity or sharing of reserves as already allocated CZC for the CZC calculation process.
  - g. The remaining CZC is allocated at the next CZC allocation process for the exchange of energy.

## **Article 7 Process to define the maximum volume of allocated cross zonal capacity for the exchange of balancing capacity or sharing of reserves**

1. The process to define the maximum volume of allocated CZC for the exchange of balancing capacity and/ or sharing of reserves shall comply with Article 42(2) of EBGL). The maximum volume (upper limit) of CZC allocated for the exchange of balancing capacity or sharing of reserves based on an economic efficiency analysis shall be limited to 5 % of the available capacity for the exchange of energy of the previous relevant calendar year between the respective bidding zones or, in case of new interconnectors, 10 % of the total installed technical capacity of those new interconnectors.
2. The 5 % of available capacity for the exchange of energy of the previous calendar year between the respective bidding zones means the maximum capacity of allocated capacity for the exchange of energy resulted from the final capacity calculation process D-1 of the previous calendar year.
3. New interconnectors are those interconnectors that went operational for the exchange of energy after 18.12.2019 and that were not taken into account in the calculation of art. 8.2; once an interconnector is taken into account in the calculation of available capacity for the exchange of energy of the previous calendar year between the respective bidding zones, it is no more considered a new interconnector. 10 % of the installed capacity means 10 % of the active power capacity of the interconnector capable to be transferred continuously within the designed safe security margins of the interconnector.
4. The volume limitation defined in the first paragraph of this Article may not apply for bidding zone borders connected through DC interconnectors until the co-optimized or market-based allocation processes are harmonized at Union level pursuant to Article 38(3) of the EBGL.
5. The maximum volume of allocated CZC for the exchange of balancing capacity or sharing of reserves shall respect the rules for exchange of FRR and RR within a synchronous area in accordance with Articles 167, 168, 169 and 170 of the SOGL.
6. **Greece Italy** TSOs and NRAs of each balancing capacity cooperation may commonly apply additional limits for the maximum volume of allocated CZC for the exchange of balancing capacity or sharing of reserves within their own balancing capacity cooperation.

## **Article 8 Determination of the forecasted market value of cross zonal capacity for the exchange of energy**

1. When calculating the forecasted market value of CZC in day-ahead market timeframe it shall be calculated in accordance with Methodology pursuant to Article 37(2) of the CACM based on the total welfare surplus of the SDAC consisting of consumer surplus, producer surplus and congestion income
2. The forecasted market value of CZC for the exchange of energy between bidding zones shall be defined per MTU and shall be calculated in accordance with Article 39(5) of the EBGL.
3. The forecasted market value of CZC for the exchange of energy between bidding zones shall be based on submitted SDAC bids of selected reference day(s) with the option to include adjustment factors and the forward electricity market value to improve the forecast of the market value. These bids will be used to build the forecasted supply curve and the forecasted consumers curve.
4. By default, the following reference periods shall be chosen:
  - a. The previous working day whenever CZC is allocated for a working day;
  - b. The previous weekend day whenever CZC is allocated for a weekend day; and
  - c. The previous Sunday or bank holiday whenever CZC is allocated for a bank holiday.
5. The TSOs shall monitor the efficiency of the forecasting methodology, including a comparison of the forecasted and actual market values of the CZC for the energy and take appropriate actions, where needed. In case this analysis shows

that different references periods are more suitable on a specific border, the TSOs shall choose the more accurate reference period, or a combination of them.

### **Article 9 Determination of the forecasted market value of cross zonal capacity for the exchange of balancing capacity or sharing of reserves**

1. The forecasted market value of CZC for the exchange of balancing capacity or sharing of reserves between bidding zones shall be defined per BTU and shall be calculated in accordance with Article 39(5) of the EBGL.
2. The forecasted market value of CZC for the exchange of balancing capacity or sharing of reserves between bidding zones shall be based on standard upward balancing capacity bids and of standard downward balancing capacity bids of selected reference day(s) with the option to include adjustment factors to improve the forecast of the market value.
3. In case of sharing of reserves between the bidding zones of the balancing capacity cooperation also the avoided costs for procuring balancing capacity will be taken into account.
4. By default, the following reference periods shall be chosen:
  - a. The previous working day whenever CZC is allocated for a working day;
  - b. The previous weekend day whenever CZC is allocated for a weekend day; and
  - c. The previous Sunday or bank holiday whenever CZC is allocated for a bank holiday.
5. The TSOs shall monitor the efficiency of the forecasting methodology, including a comparison of the forecasted and actual market values of the CZC for the balancing capacity or sharing of reserves and take appropriate actions, where needed. In case this analysis shows that different references periods are more suitable on a specific border, the TSOs shall choose the more accurate reference period, or a combination of them.
6. In addition, the TSOs of the balancing capacity cooperation may decide to take into account the expected value of CZC allocated for the exchange of balancing capacity or sharing of reserves regarding the cross-border activation of balancing energy. If TSOs decide to use this option, they shall do so in a transparent way and regularly monitor its efficiency.

### **Article 10 Determination of the allocated volume of cross zonal capacity for the exchange of balancing capacity or sharing of reserves**

1. The allocation of CZC for the exchange of balancing capacity or sharing of reserves is determined before the selection of standard balancing capacity bids by the procurement optimization function.
2. The objective for the allocation of CZC between SDAC and the exchange of balancing capacity or sharing of reserves shall be the maximization of the total economic surplus for the sum of the exchange of energy and the exchange of balancing capacity or sharing of reserves per contracting period.
3. The optimization resolution for the allocation of CZC for the exchange of balancing capacity or sharing of reserves equals the optimization resolution of the optimization function of the SDAC. Standard upward balancing capacity bids and standard downward balancing capacity bids with a granularity larger than the MTU are considered as block bids in the optimization.
4. Each marginal volume of CZC shall be allocated to the exchange of energy in case the marginal economic surplus of CZC for the exchange of balancing capacity or sharing of reserves is lower or equal to the marginal economic surplus of CZC for the exchange of energy.
5. Netting of CZC allocated to the exchange of balancing capacity or sharing of reserves is not possible between:
  - (a) standard upward and downward balancing capacity bids;
  - (b) standard balancing capacity bids of different balancing products;

(c) standard balancing capacity bids and exchange of energy bids.

6. **Greece Italy** TSOs and **Greece Italy** NRAs of each balancing capacity cooperation may commonly apply additional thresholds and/or margins to reduce CZC allocation for the exchange of balancing capacity or sharing of reserves between bidding zones.

### **Article 11 Pricing of cross zonal capacity**

1. Each balancing capacity cooperation allocating CZC for the exchange of balancing capacity or sharing of reserves applying the allocation process based on economic efficiency analysis shall calculate the CZC price for the volume of CZC that is allocated for the exchange of balancing capacity or sharing of reserves.
2. The CZC price defined in art. 11(1) for the exchange of balancing capacity or sharing of reserves applying the allocation process based on economic efficiency analysis shall be 0 EUR/MW within an uncongested area.
3. The CZC price resulting from the allocation of CZC for the exchange of balancing capacity or sharing of reserves applying the allocation process based on economic efficiency analysis shall correspond for each direction to the difference between the marginal prices of the standard product balancing capacity in each direction on each side of the border.

### **Article 12 Firmness regime of cross zonal capacity**

1. The allocated CZC for the exchange of balancing capacity or sharing of reserves shall be firm after the selection of standard upward balancing capacity bids or standard downward balancing capacity bids by the capacity procurement optimization function pursuant to Article 33(3) of the EBGL. The details for the costs of ensuring firmness in case of curtailment of firm CZC will be defined once two or more TSOs of the Greece Italy Capacity Calculation Region will establish a balancing capacity cooperation.
2. According to Article 38(9) of the EBGL, when CZC allocated for the exchange of balancing capacity or sharing of reserves has not been used for the associated exchange of balancing energy, it shall proceed pursuant to article 3(11) of this EE CZCA proposal.
3. The transmission constraints subject to article 10 of this EE CZCA proposal shall be firm as soon as these are submitted to the balancing capacity procurement optimization function.
4. The costs of ensuring firmness or in the case of curtailment of firm CZC in the event of force majeure or emergency situations, in accordance with paragraph 3 of this article, the costs associated with mitigating the effects of curtailment shall be borne by the relevant TSOs. These costs include the additional costs from the procurement of balancing capacity due to the non-availability of the balancing capacity given the curtailment of CZC. The Greece Italy TSOs may set a commonly agreed cost compensation cap.
5. TSOs shall not increase the reliability margin calculated pursuant to Article 21 of CACM due to the exchange of balancing capacity and or sharing of reserves for frequency restoration reserves and replacement reserves.

### **Article 13 Sharing of congestion income from cross zonal capacity**

1. The sharing of congestion income distribution will follow what is established by the Congestion income distribution methodology document, written in accordance with Article 73 of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management.
2. Congestion income shall be calculated per MTU and based on the energy bids accepted by the SDAC optimization function and on the upward balancing capacity bids or downward balancing capacity bids submitted and accepted by the capacity procurement optimization function pursuant to Article 33(3) of the EBGL.

## Article 14 Publication

1. **Greece Italy** TSOs of each balancing capacity cooperation shall publish the EE CZCA proposal without undue delay after concerned NRAs have approved this proposal or a decision has been taken by the Agency for the Cooperation of Energy Regulators in accordance with Article 5(7), Article 6(1) and Article 6(2) of the EBGL.
2. Each TSO that is part of a balancing capacity cooperation shall publish information on offered volumes as well as offered prices of procured balancing capacity, anonymized where necessary, no later than one hour after the results of the procurement have been notified to the bidders, pursuant to Article 12(3)(e) of the EBGL.
3. Each TSO that is part of a balancing capacity cooperation shall publish information in accordance with Article 12(3)(h) of the EBGL on the allocation of CZC for the exchange of balancing capacity or sharing of reserves pursuant to Article 38(1)(c) of the EBGL as defined in article 6(1)(a) and 6(1)(b) of this EE CZCA proposal at the latest 24 hours after the allocation and no later than 6 hours before the use of the allocated CZC.
4. Each TSO that is part of a balancing capacity cooperation shall inform on the use of allocated CZC for the exchange of balancing capacity or sharing of reserves pursuant to Article 38 of the EBGL at the latest one week after the use of allocated CZC, pursuant to Article 12(3)(i) of the EBGL.
5. Each TSO that is part of a balancing capacity cooperation shall publish the approved methodologies at least one month before its application pursuant to Article 12(3)(j) of the EBGL.
6. Subject to approval pursuant to Article 18 of the EBGL, a TSO may withhold the publication of information on offered prices and volumes of balancing capacity or balancing energy bids if justified for reasons of market abuse concerns 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 pursuant to Article 12(5) of the EBGL.
7. **Greece Italy** TSOs of a balancing capacity cooperation applying the allocation process based on economic efficiency analysis shall publish the efficiency of the forecasted market value for the exchange of balancing capacity or sharing of reserves and the efficiency of the forecasted market value for the exchange of energy.

## Article 15 Language

The reference language for this EE CZCA proposal shall be English. For the avoidance of doubt, where TSOs need to translate this EE CZCA proposal into their national language(s), in the event of inconsistencies between the English version published by TSOs in accordance with Article 7 of the EBGL and any version in another language, the relevant TSOs shall be obliged to dispel any inconsistencies by providing a revised translation of this EE CZCA proposal to their relevant national regulatory authorities.