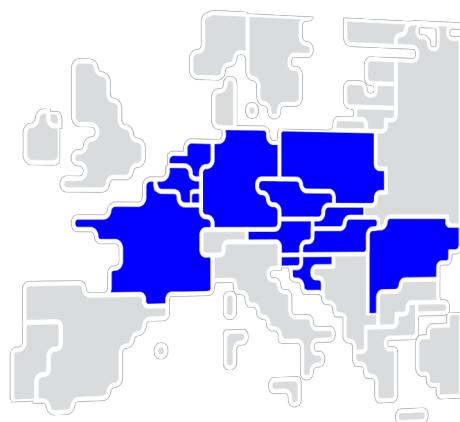


# Common methodology for redispatching and countertrading cost sharing for the Core CCR in accordance with Article 74 of Commission Regulation (EU) 2015/1222 of 24 July 2015

22 February 2019



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ALL TSOS OF THE CORE REGION TAKING INTO ACCOUNT THE FOLLOWING,

**Whereas**

1. This document is the common methodology developed by the Transmission System Operators of the Core Capacity Calculation Region (hereafter referred to as "Core TSOs") for a common methodology for redispatching and countertrading cost sharing (hereafter referred to as the "Cost Sharing Methodology") in accordance with Article 74 of Commission Regulation (EU) 2015/1222 establishing a guideline on Capacity Allocation and Congestion Management (hereafter referred to as the 'CACM guideline').
2. This methodology takes into account the principles from Core TSOs' day-ahead and intraday common capacity calculation methodologies (hereinafter referred to as the 'Core DA and ID CC Methodologies') in accordance with article 20 and 21 of the CACM guideline.
3. This methodology takes into account the principles from Core TSOs' methodology for the coordinated redispatching and countertrading (hereinafter referred to as the 'Core RD and CT Methodology') in accordance with article 35(1) of the CACM guideline.
4. This methodology is strongly interlinked with the methodologies pursuant to Articles 75(1) and 76(1) of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (hereafter referred to as 'SO guideline'), as well as the provisions of articles 74 – 78 of SO guideline.

**TITLE 1:**  
**GENERAL PROVISIONS**

**Article 1 Subject, Matter and Scope**

1. This Cost Sharing Methodology is the common methodology of all Core TSOs in accordance with article 74 CACM guideline.

**Article 2 Compliance with the Objectives of Article 3 of the CACM Guideline**

1. The Cost Sharing Methodology contributes to the achievement of the objectives of article 3 of the CACM guideline. In particular this Cost Sharing Methodology:
  - a. establishes a common process for the redispatching and countertrading cost sharing by defining a set of harmonised rules for congestion management and as such serves the objective of promoting effective competition in the generation, trading and supply of electricity in accordance with article 3(a) of the CACM guideline;
  - b. provides the best possible compromise which has been achieved by ensuring fair and non-discriminatory treatment in accordance with article 3(e) of CACM guideline;
  - c. contributes to the objective of ensuring and enhancing the transparency and reliability of information in accordance with article 3(f) of CACM guideline;
  - d. applies a polluter-pays principle in order to contribute to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union in accordance with article 3(g) of CACM guideline.

## Article 3 Definitions

1. For the purpose of this methodology, terms used in this document shall have the meaning of the definitions included in article 2 of the CACM guideline, in the Core DA and ID CC Methodologies and in article 3 of the SO guideline.
2. In this Cost Sharing Methodology, the following abbreviations are used:
  - a. 'BZ-shares' are the bidding zone shares;
  - b. 'CACM guideline' is the Capacity Allocation and Congestion Management guideline (Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management);
  - c. 'CGM' is the common grid model as defined in article 2(2) of the CACM guideline;
  - d. 'Core CCR' is the Core capacity calculation region according to the decision of the Agency for the Cooperation of Energy Regulators of 17 November 2016 No. 06/2016;
  - e. Core RD and CT Methodology is the methodology designed by Core TSOs under article 35(1) of the CACM guideline;
  - f. 'Core DA and ID CC Methodologies' are the methodologies designed by Core TSOs under article 20 and 21 of CACM guideline;
  - g. 'CSA' is the coordinated operational security analysis in accordance with the methodology developed pursuant to article 75 of the SO guideline;
  - h. 'FCA guideline' is the Forward Capacity Allocation guideline (Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation);
  - i. 'LTA' are the long-term allocated capacities;
  - j. 'PST' is a phase-shifting transformer;
  - k. 'RSC' is the regional security coordinator as defined in article 3.2.(89) of the SO guideline
  - l. 'RD and CT' means redispatch and countertrading;
  - m. 'SO guideline' is the System Operation guideline (Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation);
  - n. 'XBRNE' are Cross-Border Relevant Network Elements as defined in the Core RD and CT Methodology.
3. In addition, the following definitions shall apply:
  - a. 'Loop flows' means the physical flow on a line where the source and sink are located in the same bidding zone and the line or even part of the tie-line is located in a different bidding zone;
  - b. 'Import/Export flows' means the physical flow on a line where the source and sink are located in different bidding zones that are adjacent to each other;
  - c. 'Transit flows' means the physical flow on a line where the source and sink are located in different bidding zones that are not adjacent to each other;
  - d. 'Internal flows' means the physical flow on a line where the source and sink and the complete line are located in the same bidding zone;
  - e. 'PST flow' means the physical flow on a network element (e.g. a line), which is caused by a PST with a tap position not in neutral position. PST flows are cyclic flows, with the sink and source at the same network element (the PST);
  - f. "Uncoordinated Remedial Action" as defined in methodology pursuant to articles 76(1) and 75 of SO guideline;
  - g. 'Burdening flow' means a flow identified in the direction that is aggravating a constraint on a network element;
  - h. 'Relieving flow' means a flow identified in the direction that is relieving a constraint on a network element;

- i. 'Total flow' means the sum of relieving and burdening flows as result of a flow decomposition on a single network element and is equal to the total flow of a load flow calculation on the same network element;
  - j. 'Thermal limit' means the current limit in terms of thermal rating including the transitory admissible overloads according to article 25(1)(c) of the SO guideline;
  - k. 'Threshold' means a share of flows from one flow type (e.g. Loop flows, Internal flows) lower than a certain value which is not to be penalized on the same level as the share of flows above this value.
4. In this methodology, unless the context requires otherwise:
- a. the singular indicates the plural and vice versa;
  - b. references to one gender include all other genders;
  - c. any reference to legislation, regulations, directives, orders, instruments, codes or any other enactment shall include any modification, extension or re-enactment of it then in force;
  - d. any reference to another agreement or document, or any deed or other instrument is to be construed as a reference to that other agreement, or document, deed or other instrument as amended, varied, supplemented, substituted or novated from time to time.

## TITLE 2: ELIGIBLE COSTS FOR COST SHARING

### Article 4 Eligible Costs

1. This Cost Sharing Methodology covers costs and revenues incurred by Core TSOs from using redispatching and countertrading, including measures identified as actions of cross-border relevance as defined in the Core RD and CT Methodology. These are used to guarantee the firmness of cross-zonal capacity in accordance with article 74(4)b of CACM guideline and to ensure security of supply, taking into account the exceptions pursuant to paragraph 3 of Article 4 of this methodology. The eligible costs and revenues:
  - a. shall be auditable and transparent;
  - b. shall occur from activations as a result of the process in accordance with the methodology pursuant to article 76(1) of SO guideline. These costs and revenues shall be:
    - i. in case of countertrading, the incurred costs to solve congestions, consisting out of costs and revenues for activated countertrading resources as described in the article 6 of Core RD and CT Methodology;
    - ii. in case of redispatching, the incurred costs to solve congestions, consisting of costs and revenues for upward and downward regulated energy, provided individually for each upward or downward activation as described in the article 11 of Core RD and CT Methodology.
  - c. shall include only the costs and revenues realized by the activation of redispatching and countertrading measures as defined in the Core RD and CT Methodology. Capacity costs are not eligible for cost sharing in accordance with article 11(3) of the Core RD and CT Methodology.
2. The total costs resulting from the eligible costs defined in paragraph 1 of this Article are determined as the netted sum of both, the countertrading costs defined in paragraph 1(b)(i) and the redispatching costs defined in paragraph 1(b)(ii).

3. Some costs related to activation of CT and RD measures are not eligible for cost sharing. Costs non-eligible for cost sharing are the costs incurred by the activation of remedial actions related to:
  - a. uncoordinated LTA as not in line with the methodology pursuant article 10(1) FCA guideline (if applicable);
  - b. emergency requests. In particular, but not limited to this situation, a TSO can face a critical situation, without being able to solve it by itself. This TSO can ask neighbouring Core TSOs for their support. Such request can lead to overloads on internal or external network elements, which need to be relieved via CT and RD measures. Costs related to implement the request are paid by the TSO that initiated the request;
  - c. other reasons than violation of thermal limits following N or N-1 situations as defined in the methodology pursuant to article 75(1) SO guideline;
  - d. Uncoordinated Remedial Actions by Core TSO that lead to overload on some network elements.
4. Other costs related to activation of CT and RD measures not eligible for cost sharing are the costs incurred by:
  - a. the activation of uncoordinated CT and RD measures;
  - b. the activation of remedial actions decided during the capacity calculation process defined in the Core DA and ID CC Methodologies (if applicable). In particular, but not limited to this situation, during (day-ahead or intraday) capacity calculation, a TSO can decide to transparently include CT and RD measures that it has at its disposal (in its own grid or through an agreement with another TSO(s)) to enlarge the capacity domain.
5. Those costs not eligible for cost sharing shall be borne by:
  - a. Core TSOs that have implemented these measures for those costs described in the paragraphs 3(c), 4(a) and 4(b) of this Article;
  - b. Core TSOs that have requested the activation of emergency requests or uncoordinated LTA in the paragraphs 3(a) and 3(b) of this Article;
  - c. Core TSOs that applied Uncoordinated Remedial Actions leading to the activation of countertrading and redispatching measures according to paragraph 3(d) of this Article.
6. The optimisation realised under the scope of the methodology pursuant to article 76(1) of the SO guideline solves congestions on network elements which can either be XBRNE or non-XBRNE. The costs eligible for cost sharing as considered in this methodology are defined as the costs mapped to the XBRNE pursuant to Article 9. The costs mapped to non-XBRNE shall be borne by Core TSOs in which control area the network element is located.
7. Total costs for cost sharing shall be determined on bidding zone level. These costs per bidding zone shall be allocated to the responsible Core TSOs, active in the respective bidding zone.

## TITLE 3:

### COST SHARING PRINCIPLES

#### **Article 5 Deviation between Recommendations and Real-Time Operation**

1. Recommendations are provided by RSCs acting on behalf of Core TSOs according to the methodologies pursuant to Articles 76(1) of the SO guideline.

2. Costs related to uncoordinated RD and CT actions implemented close to real-time operation, between the last intraday CSA and real time shall be defined in the methodology of Article 76(1) of SO guideline.
3. Costs related to remedial actions implemented by TSO(s) deviating from the recommendation of RSCs defined in accordance with the methodology pursuant to Article 76(1) of the SO guideline shall be defined in that SO methodology.

## Article 6 Cost Sharing Key Calculation

1. During the process according to methodology pursuant to article 76(1) of the SO guideline, congestions on several network elements over several hours in different bidding zones of the Core CCR should be solved by one dedicated set of remedial actions. The total costs for this set of remedial actions shall be allocated to bidding zones according to a cost sharing key calculated pursuant to paragraph 2 of this Article.
2. The calculation of the cost sharing key, which leads to the final costs per bidding zone, consists of four main parts, each of which is composed by several steps. During
  - i. flow decomposition, the flow on the congested network elements, for which remedial actions have been activated, shall be decomposed into flow shares of different flow types (Article 7);
  - ii. transformation, the flow shares shall be transformed into bidding zone shares (Article 8);
  - iii. mapping, the costs of optimized remedial actions shall be assigned to all the congested network elements for which these remedial actions have been activated (Article 9);
  - iv. multiplication, the outcome of the mapping and the transformation steps shall be combined and aggregated to a final cost per Core bidding zone (Article 10).

## Article 7 Flow Decomposition

1. The flow decomposition calculation shall identify for each congested XBRNE, for which remedial actions have been activated, the following flow types:
  - i. Loop flows;
  - ii. Internal flows;
  - iii. Import/Export flows;
  - iv. Transit flows;
  - v. PST flows.
2. The flow decomposition results shall be transparent and reproducible. The sum of the individual flow types shall be equal to the total flow on a network element.
3. The assignment of the flows to the bidding zones referred to in paragraphs 6 and 7 shall be performed without presuming of the applied cost allocation principles defined in Article 8 (7) (a) of this methodology.
4. Flow decomposition shall be performed on each congested XBRNE, either in base case or in a contingency case, and for each hour separately. In case the XBRNE list contains a network element with different contingencies causing overloads, the flow decomposition shall be performed on the contingency creating the overload which is the most difficult to relieve.
5. To identify the different flow types contributing to the overloads (or relieving them) and its bidding zone of origin, the flow decomposition calculation shall consider the bidding zone configuration of the European Internal Energy Market.

6. In case of Import/Export flows and Transit flows, 50% of these flow types is assigned to the bidding zone in which its source is located, and 50% of these flow types is assigned to the bidding zone in which its sink is located.
7. PST flows, Loop flows and Internal flows are assigned fully to the bidding zone of their origin.
8. The result of a flow decomposition is a flow share for each flow type per bidding zone in [MW].
9. A distinction may be made between flows resulting from coordinated and un-coordinated actions.
10. A RA which is assigned to a neighbouring or adjacent CCR or third country and activated in a coordinated way, in accordance with the methodologies pursuant to articles 78 and 76 of SO guideline, is recognized as flows (in line with article 7 paragraph 1) of external influence for the cost-sharing purposes in Core CCR.

## Article 8 Transformation

1. The results of the flow decomposition (flow shares) shall be further processed in order to obtain the bidding zone shares (BZ-shares) per XBRNE.
2. TSOs are allowed to use PSTs to limit loop flows through their network. If used to reduce loop flows, PST owners should not be penalized up to that amount.
3. The transformation of the flow shares into BZ-shares shall be performed pursuant to paragraphs 4 to 8 of this Article, consisting out of:
  - i. Netting
  - ii. Application of threshold(s)
  - iii. Prioritisation
  - iv. Calculation of BZ-shares
  - v. Treatment of non-Core BZ-shares
4. Netting:
  - a. The flow shares for each flow type shall be either relieving or burdening with respect to the direction of the total flow on a XBRNE. The relieving and burdening flows shall be netted in order to obtain only burdening flow shares for each flow type on a single XBRNE. The result of the netting is the set of netted flow shares for each flow type per bidding zone in [MW] on a XBRNE.
5. Application of threshold:
  - a. Application of the threshold(s) per flow type may split individual flow types into two sub-types.
6. Prioritisation:
  - a. In order to apply the causation principle for cost sharing, all netted flow shares per bidding zone on a XBRNE exceeding the thermal limit shall be penalized. This is achieved by sorting the netted flow types of paragraph 4 according to their priority (hierarchical stacking), taking also into consideration any division of flow shares into sub-types pursuant to paragraph 5.
7. Calculation of BZ-shares:
  - a. The netted flow shares above the thermal limit per XBRNE resulting pursuant to paragraph 6 shall be used to determine the BZ-shares per XBRNE, according to the cost allocation principles. The cost allocation principles are the rules to assign the cost shares to bidding zones.
  - b. BZ-shares are given in [%] and the sum of all BZ-shares for each single XBRNE shall be equal to 100%.
8. Treatment of non-Core BZ-shares:

- a. BZ-shares of non-Core bidding zones shall be re-allocated to the bidding zones of the Core region. The BZ-shares of non-Core bidding zones are therefore added to BZ-shares of Core bidding zones.
- b. The costs caused by flows of external influence as defined in article 7 paragraph 10 shall be handled between Core TSOs according to article 8 paragraph 8(a).
- c. Once the harmonization between CCRs comes into force, these costs caused by flows of external influence as defined in article 7 paragraph 10 shall be assigned fully or partly to the neighbouring or adjacent CCR or third country in which the coordinated RA has been activated.

## Article 9 Mapping

1. The remedial action optimisation realised under the scope of the methodology pursuant to article 76(1) SO guideline solves congestions on network elements which can be XBRNE or non-XBRNE.
2. The cost of applied remedial actions shall be mapped to the congested elements of the Core bidding zones relieved by the remedial action optimisation.
3. Mapping shall be performed on XBRNE and non-XBRNE in an hourly resolution.
4. Core TSOs shall take into account in the mapping process:
  - a. the final costs resulting from remedial actions activated as an output of the remedial action optimization according to the methodology pursuant of article 76(1);
  - b. the CGM used in the relevant CSA;
  - c. the outputs of the relevant CSA regarding congested elements.
5. The results of the mapping shall be hourly costs allocated to XBRNEs and non-XBRNEs in [€].

## Article 10 Multiplication

1. Determine bidding zone costs per network element:
  - a. To obtain the costs in [€] for each network element per bidding zone and hour, the costs mapped to each network element shall be multiplied with the respective BZ-shares per network element;
  - b. For XBRNEs, the BZ-shares shall be the outcomes of transformation (as defined in Article 8);
  - c. For non-XBRNEs, the bidding zone in which the non-XBRNE is located shall receive the full costs mapped to the element (100% of that bidding zone).
2. Aggregation of costs on bidding zone level:
  - a. To obtain the final costs per bidding zone, the costs per bidding zone and hour are summed-up for all hours and congested network elements, for which remedial actions have been activated . The result shall be one value per Core bidding zone in [€].

## TITLE 4: MONITORING AND IMPLEMENTATION

### **Article 11 Monitoring of the Costs Incurred**

1. For activation of a remedial actions with cross-border relevance, a dataset shall be stored in a central database. The dataset shall be made available to all national regulatory authorities of the Core CCR and all Core TSOs. The following process steps shall be documented in a central database for each activation of a remedial action. The dataset is described as follows:
  - a. The corresponding security violation, which includes:
    - i. The overloaded element (XBRNE and non-XBRNE);
    - ii. The amount of overload (in absolute and relative value);
    - iii. The reason of activation.
  - b. The resources selected by the optimization performed in accordance with the methodology defined pursuant to article 76(1) of SO guideline;
  - c. The resources implemented following the CSA performed in accordance with the methodology defined pursuant to article 76(1) of SO guideline;
  - d. The costs/revenues of the selected resources given as an input to the optimization performed in accordance with the methodology defined pursuant to article 76(1) of SO guideline;
  - e. The final costs/revenues of the activated resources used for settlement;
  - f. The CGM used for the decision of activation of the remedial action, i.e. the CGM that shows the overload(s);
  - g. The CGM resulting from the considered CSA that contains the implementation of the remedial action, i.e. the CGM that shows the potential effectiveness of the remedial action;
  - h. The CGM containing the remedial actions implemented, i.e. the CGM that shows the actual effectiveness of the remedial action;
  - i. The results from the transformation step, including the cost shares per XBRNE per bidding zone;
  - j. The results from the mapping step, including the costs assigned to each network element.
2. Upon request from a Core TSO, Core TSOs shall provide copies of the credit or debit notes between market parties and TSOs. In case of confidentiality issues, the responsible TSO undertakes its best effort to provide the information in an alternative manner.

### **Article 12 Regular Reporting to National Regulatory Authorities**

1. A quarterly report based on the documentation described in Article 10 shall be submitted to all national regulatory authorities of Core CCR. The quarterly report shall:
  - a. List all activations of remedial actions including the addressed security violation, the activated resources and the associated costs/revenues;
  - b. Provide an overview of the total costs/revenues per bidding zone for remedial actions within the quarter according to the applied cost sharing arrangements;
  - c. Provide an overview of the total costs/revenues per bidding zone since the implementation of this methodology;

- d. Provide an overview of the costs allocated to the bidding zones outside the Core CCR and the sharing among Core TSOs;
- e. Information on the correction rounds applied during the considered timeframe.
- f. Provide an assessment of the proper functioning of the general cost sharing process described in this methodology with a special focus on:
  - i. Deadlines regarding the delivery of data and information;
  - ii. Deadlines regarding the settlement process;
  - iii. Quality of cost estimations.

## Article 13 Annual Review

1. Based on the documented data according to Article 11, an annual review of the following aspects shall be performed in order to identify possible improvements:
  - a. effectiveness of the activated remedial actions in terms of volume and cost;
  - b. appropriateness and fairness of the implemented cost sharing concept;
  - c. effectiveness of the implemented cost sharing concept in terms of:
    - i. Reasonable financial planning;
    - ii. Correct incentives for managing congestions;
    - iii. proper investment decisions related to reducing the cost to mitigate congestions in the electrical network.

## Article 14 Implementation

1. Core TSOs shall publish this Cost Sharing Methodology without undue delay after its approval in accordance with article 9(10), articles 9(11) or 9(12) of the CACM guideline.
2. This Cost Sharing Methodology shall be amended by Core TSOs no later than 12 months after its approval, or as soon as the details that require clarification are available, whichever happens earlier. This amendment shall also contain a detailed time plan for implementation in accordance with Article 9(13) of the CACM guideline.
3. The implementation of the Cost Sharing Methodology is subject to:
  - a. Regulatory approval of this Cost Sharing Methodology in accordance with Article 9 of CACM guideline;
  - b. Regulatory approval of the Core RD and CT Methodology pursuant to Article 35(1) of CACM guideline in accordance with Article 9 of CACM guideline;
  - c. Regulatory approval of common coordinated capacity calculation methodology required by Articles 20 and 21 of CACM guideline in accordance with Article 9 of CACM guideline;
  - d. Regulatory approval of the coordinated security analysis methodology pursuant to Article 75(1) of SO guideline, its implementation, the regulatory approval of the methodology for regional operational security coordination pursuant to Article 76(1) of SO guideline and its implementation;
  - e. Development, testing and implementation of the IT tools, systems and procedures required to support the Cost Sharing Methodology.

## **Article 15 Settlement of Costs**

1. Core TSOs shall prepare an agreement for the settlement of costs resulting from the application of the cost sharing principles defined in this methodology. This agreement shall be effective at the latest by the day of implementation of the Cost Sharing Methodology.

## **TITLE 5: MISCELLANEOUS**

## **Article 16 Language**

The reference language for this Cost Sharing Methodology shall be English. For the avoidance of doubt, where Core TSOs need to translate this Cost Sharing Methodology into their national language(s), in the event of inconsistencies between the English version published by Core TSOs in accordance with article 9(14) of the CACM guideline and any version in another language the relevant Core TSOs shall, in accordance with national legislation, provide the relevant national regulatory authorities with an updated translation of the Cost Sharing Methodology.