SEE CCR TSOs proposal for Redispatching and Countertrading cost sharing methodology in accordance with Article 74 of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management

December 2019

ACER Decision on the Common methodology for redispatching and countertrading cost sharing for the SEE CCR: Annex I

Common methodology for redispatching and countertrading cost sharing for the SEE CCR

in accordance with Article 74 of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management

30 November 2020

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Whereas

(1) This document is ~~a~~the common ~~proposal developed by all Transmission System Operators of the SEE Capacity Calculation Region (hereafter referred to as "TSOs"),~~methodology for ~~Redispatching~~redispatching and ~~Countertrading~~countertrading cost sharing (hereafter referred to as ~~"Cost~~the 'cost sharing ~~proposal")~~methodology') for the SEE CCR in accordance with Article 74 of Commission ~~regulation~~Regulation (EU) 2015/1222 establishing a guideline on Capacity ~~allocation~~Allocation and ~~congestion management (hereafter referred to as the '~~Congestion Management ('CACM ~~Regulation.'').~~ Regulation').

~~1. According to Article 9 (9) of the CACM Regulation, a timeline for implementation of the proposed Cost Sharing Proposal has to be included. The timeline for monitoring and implementation is presented in Articles 11 and 14 of this document.~~

~~2. According to Article 9 (9) of the CACM Regulation, the expected impact of the Proposal on the objectives of the CACM Regulation has to be described. The impact is presented below (point 7 of the Whereas).~~

~~3. The TSOs aim at ensuring consistency with the redispatching and countertrading cost sharing methodologies of other Capacity Calculation Regions in which same bidding zones are concerned whilst acknowledging the specific characteristics of the interconnectors within the SEE Capacity Calculation Region.~~

~~4. This proposal takes into account the TSOs' proposal for a day-ahead and intraday capacity calculation methodology in accordance with Article 20 of the CACM Regulation and submitted to the NRAs.~~

~~5. This proposal takes into account the SEE CCR TSOs' proposal for the coordinated Redispatching and Countertrading methodology (hereinafter referred to as the "SEE CCR RD and CT Methodology") in accordance with Article 35 of the CACM Regulation and submitted to the NRAs of the SEE CCR for approval. The main aim of Countertrading and Redispatching methodology is to maximize cross border capacity over the SEE CCR, while ensuring the grid security.~~

(2) ~~The Cost Sharing Proposal~~This methodology needs to be consistent with the SEE day-ahead and intraday common capacity calculation methodologies in accordance with Articles 20 and 21 of the CACM Regulation, in particular regarding the assumptions being made on how the different types of flows are being calculated. This will ensure that the congestions forecasted and expected during capacity calculation are as close as possible to the congestions identified in regional operational security coordination and as well considered in this cost sharing methodology.

(3) This methodology takes into account the coordination process for cross-border relevant redispatching and countertrading actions (XRAs) as well as other remedial actions (hereinafter referred to as 'coordination process') as defined in the methodology pursuant to Article 35 of the CACM Regulation and the methodology pursuant to Article 76 of the Commission Regulation (EU) 2017/1485 establishing a guideline on electricity transmission system operation ('SO Regulation'). This coordination process involves: (i) common identification of cross-border relevant network elements (XNEs) and remedial actions, including redispatching and countertrading, (ii) common identification of all congested cross-border relevant network elements with associated contingencies (hereinafter referred to 'coordinated security analysis') and (iii) a single optimisation that determines the optimal activation of cross-border relevant remedial actions to solve all congested cross-border relevant network elements (hereinafter referred to as 'remedial action optimisation', i.e. 'RAO').

(4) The RAO, which is a part of the coordination process as defined in the methodology pursuant to Article 35 of the CACM Regulation and the methodology pursuant to Article 76 of the SO Regulation

should also determine the costs and revenues of activated cross-border relevant redispatching and countertrading actions that are used as inputs to this cost sharing methodology. These costs and revenues generally include the costs and revenues of activated cross-border relevant redispatching and countertrading actions. However, in case other costly remedial actions are also activated by the RAO, the costs and revenues of these remedial actions should also be included in the costs and revenues that are to be distributed in accordance with this methodology, in order to ensure full consistency in the sharing of costs and revenues of all costly remedial actions activated by the RAO.

(5) Article 16(13) of Regulation (EU) 2019/943 of the European Parliament and of the Council on the internal market for electricity ('Electricity Regulation') specifies that for the congestions between two bidding zones observed, the regulatory authorities shall analyse to what extent flows resulting from transactions internal to bidding zones contribute to such congestions and then allocate the costs based on the contribution to the congestions, to the transmission system operators of the bidding zones creating such flows. For the application of this principle (i.e. polluter-pays principle), the costs of cross-border relevant redispatching and countertrading actions first need to be distributed to individual congested cross-border relevant network elements and then the costs on these elements need to be shared by identifying the origins of physical flows that are contributing to the congestions on those network elements.

(6) In accordance with Article 16(13) of the Electricity Regulation, the physical flows resulting from electricity exchanges (i.e. transactions) internal to bidding zones (i.e. internal flows and loop flows) should be identified as the main contributors to the congestion and the TSOs of bidding zones in which those exchanges are settled should therefore bear the proportional part of the costs attributed to the congested network elements. In case of cross-zonal network elements, these flows are loop flows, whereas in case of internal network elements, these flows are internal flow and loop flows, the former being caused by electricity exchanges within a bidding zone where such network element is located and the latter being caused by electricity exchanges within other bidding zones. Since the network users causing internal flows are financing the investment and maintenance of such internal network element via network tariffs, whereas the network users causing loop flows are not, the loop flows beyond a 'legitimate' level (i.e. the level that could be expected without structural congestion in a bidding zone) should be identified as the primary contributor to the congestion on internal network elements, whereas internal flows should be penalised only for the remaining volume of congestion.

(7) While Article 16(13) of the Electricity Regulation defines a cost sharing solution for congestions between bidding zones, it does not specify the cost sharing solution for congestions that fall outside the scope of congestions between two bidding zones. Namely, Article 74(2) of the CACM Regulation requires the cost sharing methodology to determine cost sharing for all cross-border relevant redispatching and countertrading actions. Since the coordination process and RAO, in accordance with the methodology pursuant to Article 35 of the CACM Regulation and the methodology pursuant to Article 76 of the SO Regulation, apply cross-border relevant redispatching and countertrading actions to solve congestions on all cross-border relevant network elements (regardless of whether they are within the scope of congestion between two bidding zones or not), this cost sharing methodology must provide a cost sharing solution for all cross-border relevant network elements. For consistency, this methodology therefore applies the same polluter-pays principle as defined in Article 16(13) of the Electricity Regulation to all cross-border relevant network elements (regardless of whether they are within the scope of congestion between two bidding zones or not).

(8) Article 16(13) of the Electricity Regulation also specifies that physical flows resulting from transactions internal to bidding zones that are below the 'legitimate' level should not be considered as contributors to the congestion. This Article also specifies a process to define this 'legitimate' level. However, until this level is defined by TSOs and approved by regulatory authorities, this methodology applies a temporary solution based on expert opinions of the majority of the SEE TSOs. At the time of the adoption of this methodology, the majority of experts from the SEE TSOs were of the opinion that this level for all SEE bidding zones combined should be approximately 10% of the

maximum admissible flow on each cross-border relevant network element. This 'legitimate' level is, however, without prejudice to the analysis and approval of the final level as foreseen in Article 16(13) of the Electricity Regulation.

(9) Article 15(3) of the Electricity Regulation specifies that the costs of the remedial actions necessary to achieve the linear trajectory referred to in Article 15(2) of the same Regulation or make available cross-zonal capacity on critical network elements (in case of flow-based approach) concerned by the action plan shall be borne by the Member State or Member States implementing the action plan. This cost sharing methodology allocates all the costs attributed to a specific network element to the TSO(s) of bidding zones where such element is located, except for the costs that are caused by loop flows originating from other bidding zones. Remedial actions necessary to resolve congestion caused by these loop flows cannot be considered as remedial actions necessary to achieve the linear trajectory referred to in Article 15(2) of the Electricity Regulation. This is because the action plan and the related linear trajectory are designed to address the congestion identified within the bidding zone(s) of the concerned Member State in accordance with Articles 15(1) and (2) of the Electricity Regulation. The loop flows on the other hand arise from other bidding zones and the action plans are not designed to increase cross-zonal capacities to address these loop flows. This cost sharing methodology therefore ensures that the costs of remedial actions necessary to achieve the linear trajectory referred to in Article 15(2) of the Electricity Regulation on critical network elements concerned by the action plan are always borne by TSOs of Member States implementing such action plans, whereas costs of remedial actions necessary to address loop flows are always shared based on polluter-pays principle.

(2)(10) The cost sharing methodology contributes to ~~and does not in any way hinder~~ the achievement of the objectives of Article 3 of the CACM Regulation. In particular, this ~~Cost Sharing Proposal:~~ cost sharing methodology:

(a) ~~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~~ Facilitates the objectives of the Electricity Regulation, namely in maximising cross-zonal capacities and ensuring the minimum required capacities pursuant to Article 16(8) of the same Regulation and thereby promotes effective competition in the generation, trading and supply of electricity in accordance with Article 3(a) of the CACM Regulation~~;~~ and optimises the calculation and allocation of cross-zonal capacity in accordance with Article 3(d) of the CACM Regulation;

(b) ~~b. Contributes~~ Promotes the polluter-pays principle by which the costs of congestions are attributed to the ~~objective of ensuring~~ origins of flows that contribute to congestion and thereby ensures optimal use of ~~the~~ transmission infrastructure in accordance with Article 3~~-~~(b) of the CACM Regulation ~~by ensuring TSOs to solve physical congestion at the least cost by using last available inputs~~;

(c) Is an essential element required for RAO of the application of remedial actions within a capacity calculation regions to resolve congestions, which significantly improves the ensuring of operational security in accordance with Article 3(c) of the CACM Regulation;

(b)(d) Ensures fair and non-discriminatory treatment of TSOs in accordance with Article 3(e) the CACM Regulation as it attributes the costs of congestions to TSOs that are identified as the main origins of flows that contribute to congestion based on the ~~best possible forecast of transmission systems~~ legal principles established by the CACM Regulation and the Electricity Regulation. On the other hand, this methodology is deemed to have no direct effect on NEMOs, regulatory authorities, ACER and market ~~results at the time of each security analysis, updated in a timely manner, for the detection of Coordinated Redispatching and Countertrading needs~~ participants;

(e) ~~c. Contributes to the objective of ensuring and enhancing~~ Ensures and enhances the transparency and reliability of information in accordance with Article 3 ~~(f) of CACM Regulation by~~ (f) the

CACM Regulation as it clearly identifies contributions to congestions and ensures all the information necessary for cost sharing are archived and available to regulatory authorities;

(f) Applies a polluter-pays principle for sharing the congestion costs and this contributes 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 the CACM Regulation;

(g) Is deemed to have no direct effect on the objectives of Article 3(h), (i) of the CACM Regulation; and

(c)(h) Mitigates the problems related to loop flows and internal flows, which arise from inefficient bidding zone configuration, insufficient network investments and congestions internal to bidding zones and thereby helps to avoid discrimination between internal and cross-zonal exchanges. It therefore contributes to providing mechanismnon-discriminatory access to verify the needs, monitor, assess the impact and allow improvement of Countertradingcross-zonal capacity in the SEE CCR Region (accordance with Article 74 (53(j) of the CACM Regulation); .

TITLE 1
GENERAL PROVISIONS

Article 1

Subject matter and scoped. Contributes to the objective of respecting the need for a fair and orderly market and price formation by developing rules within this methodology that ensure a fair distribution of costs and benefits between the involved TSOs;

According to Article 74 (4) of CACM Regulation, the

6. This cost sharing methodology is the common methodology for redispatching and countertrading cost sharing methodology shall at least:

a. determine which costs incurred from using remedial actions are eligible for sharing between the TSOs in accordance with the capacity calculation methodology set out in Articles 20 and 21Article 74 of the CACM Regulation. This Cost Sharing Proposal provides this information in Article 3;

b. define whichIt covers the sharing of costs incurred from usingof cross-border relevant redispatching orand countertrading to guarantee actions activated pursuant to the coordination process as defined in the methodology pursuant to Article 35 of the CACM Regulation and the firmness of cross-zonal capacity are eligible for sharing between the TSOs. This Cost Sharing Proposal provides this information in Articles 5 and 6;

c. set rules for region-wide cost sharing. This Cost Sharing Proposal provides this information in Article 11;

1. Accordingmethodology pursuant to Article 74 (5)76 of CACMthe SO Regulation, . If this coordination process and its optimisation results in activation of other costly remedial actions, these costs shall also be included in the redispatching and countertrading total costs to be shared in accordance with this methodology.

7. This cost sharing methodology shall include:

a. a mechanism to verify the actual need for redispatching or countertrading between the TSOs. This Cost Sharing Proposal provides this element in Articles 11 and 13;

b. an ex post mechanism to monitor the use of remedial actions with costs. This Cost Sharing Proposal provides this element in Articles 10 and 11;

c. a mechanism to assess the impact of the remedial actions, based on operational security and economic criteria. This Cost Sharing Proposal provides this element in Articles 11 and 13;

d. a process allowing improvement of the remedial actions; This Cost Sharing Proposal provides this element in Article 13;

e. a process allowing monitoring of each capacity calculation region by the competent regulatory authorities. This Cost Sharing Proposal provides this element in Article 11;

8. According to Article 74 (6) of CACM Regulation, the redispatching and countertrading apply to all SEE TSOs. This cost sharing methodology shall also:

a. provide incentives to manage congestion, including remedial actions and incentives to invest effectively;

The apply to third country TSO(s), if such TSO(s) have signed an agreement with all SEE TSOs that they shall comply with this cost sharing arrangements defined in this

~~Cost Sharing Proposal ensure a fair distribution of costs between~~<ins>methodology, as well as</ins> the ~~TSOs, thus facilitating the use of countertrading and redispatching measures, among other available measures, in order~~<ins>methodology pursuant</ins> to ~~manage the congestions;~~

~~b. be consistent with the responsibilities and liabilities of the TSOs and ensure a fair distribution of costs and benefits between the TSOs;~~

~~costs~~ ~~The cost sharing arrangements defined in this Cost Sharing Proposal are sharing the between all TSOs based on a prioritization of different flows;~~

~~c. facilitate the efficient long-term development and operation of the pan-European interconnected system and the efficient operation of the pan-European electricity market;~~

1. ~~d. facilitate adherence to the general principles of congestion management as set out in~~ Article ~~16~~<ins>35</ins> of <ins>the CACM</ins> Regulation ~~(EC) No 714/2009.~~ <ins>and the methodology pursuant to</ins> Article ~~16~~<ins>76</ins> of<ins> the SO</ins> Regulation ~~(EC) No 714/2009 states that "The maximum capacity of the interconnections and/or the transmission networks affecting cross-border flows shall be made available to market participants, complying with safety standards of secure network operation". By allowing the application of the Countertrading and Redispatching methodology, the cost sharing arrangements defined in this Cost Sharing Proposal contribute to the maximization of the cross-border capacity over the SEE CCR, while ensuring the grid security. Article 16 of Regulation (EC) No 714/2009 states that "Any revenues resulting from the allocation of interconnection~~<ins>and accept all the rights and obligations stemming from them. In such case the reference to SEE TSO(s) and SEE CCR in this methodology</ins> shall ~~be used for guaranteeing the actual availability of the allocated capacity". The cost sharing arrangements defined in this Cost Sharing Proposal facilitate the allocation of the revenues resulting from the allocation of interconnection to the costs of countertrading and redispatching measures used to guarantee the allocated cross-border capacity;~~<ins>also include such third country TSO(s).</ins>

~~e. allow reasonable financial planning. The cost sharing arrangements defined in this Cost Sharing Proposal are based on elements known by all TSOs at the moment these arrangements are applied;~~

~~f. be compatible across the day-ahead and intraday market time frames. The cost sharing arrangements defined in this Cost Sharing Proposal can be applied in both day-ahead and intraday market time-frames;~~

~~g. comply with the principles of transparency and non-discrimination;~~

~~The cost sharing arrangements defined in this Cost Sharing Proposal are described in a transparent way and are agreed by all TSOs. Moreover, the cost sharing arrangements defined in this Cost Sharing Proposal are based on elements known by all TSOs at the moment these arrangements are applied;~~

~~**SUBMIT THE FOLLOWING REDISPATCHING AND COUNTERTRADING COST SHARING METHODOLOGY PROPOSAL TO ALL NATIONAL REGULATORY AUTHORITIES OF THE REGION:**~~

Article 2
Definitions

1.

1. 1. For the purpose of this proposal, methodology, the terms used in this document shall have the meaning of the definitions included in Article 2 of the CACM Regulation shall apply, Article 3 of the SO Regulation and Article 2 of the Electricity Regulation.

2. 2. In addition, the following definitions (and abbreviations) shall apply:

1. a) 'Remedial actions (RA)' means any measure applied by a TSO or several TSOs, manually or automatically, in order to maintain operational security;

1. b) 'Operational security analysis (OSA)' means the entire scope of the computer based, manual and automatic activities performed in order to assess the operational security of the transmission system and to evaluate the remedial actions needed to maintain operational security;

2. c) 'Regional Security Coordinator (RSC)' means the entity or entities, owned or controlled by TSOs, in one or more capacity calculation regions performing tasks related to TSO regional coordination;

3. d) 'Not Coordinated Action (NCA)' means any action (PST tap change, topological action, etc..) applied by a TSO without coordinating it with the other TSOs of the CCR;

4. e) Coordinated Redispatching and Countertrading Methodology is the methodology according to article 35 CACM Regulation;

5. f) 'Loop flows' means the 'allocated flow' means a 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;

6. g) '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;

(a) h) 'Transit flows' means the physical flow on a linenetwork element where the source and sink are located in different bidding zones that are not adjacent to each other;

7. i) 'Internal 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 the same bidding zone;

j) 'Uncoordinated Remedial Action (UCRA)' as defined in methodology pursuant to articles 76(1) and 75 of SO guideline;

(b) k) 'Burdening'agreed XRA' means an XRA which has agreed during the coordination among SEE TSOs and RSC(s);

(c) 'ordered XRA' is an agreed XRA that bindingly ordered after the end of CROSA;

(d) 'agreed but not ordered XRA' or 'ANORA' is an agreed XRA that has not been ordered after the end of CROSA;

8.　　　　'burdening flow' means a flow identified on a network element in the direction that is aggravating a constraint on a critical network element;

(b)(e) l) 'Relieving flow' means a flow identified in the direction that is relieving a constraint on a criticalthat network element;

9.　　　　m) 'Thermal limit''CGM' means the current limitcommon grid model as defined in termsArticle 2(2) of thermal rating including the transitory

(e)(f) admissible overloads accordingCACM Regulation and used within the methodology pursuant to article 25(1)(e)Article 35 of the CACM Regulation and the methodology pursuant to Article 76 of the SO guidelineRegulation;

10.　　　
11.　　　n) 'Threshold''common threshold' means a share of loop flows from one flow type (e.g. Loop flows, Internal flows) lower
12.　　　than a certain value wichall SEE bidding zones together, which is considered legitimate and shall not be identified as contribution to be penalized oncongestions with the same levelpriority as the share of flowsloop flow from all SEE bidding zones above

(d)(g) this value;.

o) 'LTA' are the long-term allocated capacities;
13.　　　
14.　　　p) 'source' means the LFC area from where the physical flow originates;
15.　　　
q) 'sink' means the LFC area from area where the physical flow is consumed;

r) 'cross-border relevant remedial action' or 'XRA' means a remedial action consisting of redispatching and countertrading identified as cross-border relevant and needs to be applied in a coordinated way;

(h) s) 'cross'SEE CCR' means the SEE capacity calculation region as established by the Determination of capacity calculation regions pursuant to Article 15 of the CACM Regulation;

(i) 'CROSA' or 'coordinated regional operational security assessment' means a process of an operational security analysis performed by RSC(s) in accordance with Article 78 of the SO Regulation;

(e)(j) 'cross-border relevant network element'element' or 'XNE''XNE' means a network element identified as cross-border relevant and on which operational security violations need to be managed in a coordinated way;

(f)(k) t) 'cross'cross-border relevant network element with contingency'contingency' or 'XNEC''XNEC' means an XNE associated with a contingency. For the purpose of the

CRCMthis methodology, the term XNEC also cover the case where a XNE is used in operational security analysis without a specified contingency;

(l) v) 'remedial action influence factor''eligible XNE' or 'eligible XNEC' means the XNE or XNEC, which is eligible for cost sharing in accordance with this cost sharing methodology;

(m) 'HVDC' means a High Voltage Direct Current network element;

(n) 'individual threshold' means a share of loop flow deviation on a XNEC resulting from the application of a remedial action or of a set of remedial actions, normalised by an individual bidding zone, which is considered legitimate and shall not be identified as contribution to congestion with the same priority as the loop flow above this value

(o) 'internal flow' means a physical flow on a network element where the source and sink and the complete network element are located in the same bidding zone;

(p) 'loop flow' means a physical flow on a network element where the source and sink are located in the same bidding zone and the network element or even part of the network element is located in a different bidding zone;

(q) 'maximum flow' or 'F_{max}' means a maximum admissible flow active power flow on XNE that corresponds to the current limit on XNE as applied in the RAO;

(r) 'PST' means a phase-shifting transformer;

(s) 'PST flow' means a physical flow on a network element, which is caused by a PST with a tap position not in neutral position. PST flow is a cyclic flow, with the sink and source located at the same network element (the PST);

(t) 'PSDF' means a phase-shifter distribution factor;

(u) 'RAO', means remedial action optimisation that determines optimal set of XRAs within each CROSA;

(v) 'relieving flow' means a flow identified on a network element in the direction that is relieving a constraint on that network element;

(g)(w) 'total flow' means the flow on an XNEC that can be calculated before the RAO, which is used to identify whether the XNEC is congested or not, or after RAO to verify that the XNEC is not congested anymore. The total flow is calculated in accordance with the methodology pursuant to Article 35 of the XNECCACM Regulation and the methodology pursuant to Article 76 of the SO Regulation;

(x) 3. 'volume of overload' means a share of the total flow on an XNEC that is exceeding the maximum flow of that XNEC; and

(y) 'XNE connecting TSO' means the TSO responsible for the control area where the XNE is located or connected. In these proposal, including its annexescase of an interconnector, the TSOs on both sides of the interconnector shall be considered as XNE connecting TSOs.

3. In this methodology, unless the context requires otherwise:

(a) a) the singular indicates the plural and vice versa;

(b) b) references to one gender include all other genders;

(c) ~~c)~~ any reference to legislation, regulations, ~~directive, order, instrument, code~~directives, orders, instruments, codes or any other enactment shall include any modification, extension or re-enactment of it then in force;

(d) ~~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.

ELIGIBLE COSTS FOR TITLE 2
THE SCOPE OF COST- SHARING AND INPUT DATA

Article 3
~~Cross-border relevance of congestions~~

~~The Cost Sharing Methodology covers costs and revenues incurred from using redispatching and countertrading measures of cross-border relevance (XNEs) to guarantee the firmness of cross-zonal capacity in accordance with article 74(4)b CACM Regulation and to ensure security of supply within SEE CCR, which have been activated by SEE CCR TSOs based on the SEE CCR RD and CT Methodology to solve congestions on critical network elements according to the SEE CCR RD and CT Methodology .~~

~~The cross-border relevant network elements ('XNEs') shall be all critical network elements ('CNEs') and other network elements of voltage level equal or above 150 kV, except for those elements for which all SEE CCR TSOs agree that they are not cross-border relevant and may therefore be excluded.~~

~~An XRA is a redispatching or countertrading action, which is identified as having the ability to address congestions on~~ **XRAs and XNECs** ~~in an effective and economically efficient way. SEE CCR TSOs and RSC shall select and activate XRAs in a coordinated way in accordance with the CRCM. An XRA can be a preventive or curative redispatching or countertrading action.~~**eligible for cost sharing**

~~SEE CCR TSOs and RSC shall establish and update at least on a monthly basis the list of XRAs. For this purpose, each SEE CCR TSO shall provide to the RSC the list of all available~~ This cost sharing methodology covers the sharing of costs and revenues of the cross-border relevant redispatching and countertrading actions ~~in its control area and the RSC shall establish whether they are cross-border relevant or not according to the criteria pursuant below.~~

~~In case of quantitative approach the cross-border relevance of redispatching and countertrading actions shall be assessed with the remedial action influence factor. The remedial action influence factor shall be calculated for at least each cross-border relevant network element and each contingency (i.e. each 'XNEC') as a simulated flow deviation on a XNEC resulting from the simulated application of a redispatching and countertrading action normalised by the permanent admissible load of the associated XNE.~~

~~In case of quantitative approach, at least those redispatching and countertrading actions for which the remedial action influence factors for at least one XNEC is higher than a threshold, defining a significant cross-border impact shall be considered as XRA. This threshold shall be equal to 5%.~~

~~In case of qualitative approach, TSOs, in coordination with RSCs, shall qualitatively assess and agree on the cross-border relevance of redispatching and countertrading actions. In case of a disagreement, the TSOs shall apply the quantitative assessment.~~

~~In case of quantitative approach, at least those redispatching and countertrading actions for which the remedial action influence factors for at least one XNEC is higher than a threshold, defining a significant cross-border impact shall be considered as XRA. This threshold shall be equal to 5%.~~

~~In case of qualitative and quantitative approach, TSOs, in coordination with RSCs, shall define for redispatching and countertrading actions that can be applied in different quantities, the quantity above which these redispatching and countertrading actions become cross-border relevant.~~

~~TSOs consider that the quantitative approach is more efficient, secure and transparent and will implement this method.~~

~~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 SEE CCR 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 SEE CCR 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 SEE CCR RD and CT Methodology. Capacity costs are not eligible for cost sharing in accordance with SEE CCR RD and CT Methodology;

The total costs resulting from the eligible costs defined this Article are that 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).

Eligible costs for cost-sharing arrangements of this proposal are only those of countertrading or redispatching measures implemented pursuant to the "SEE CCR RD and CT Methodology" to solve a constraint on a XNE where a XRA applies (with remedial influence factor > 5%)in accordance to Article 35 of CACM GL.

Costs noneligible for cost sharing are the costs incurred by the activation of remedial actions related to:

1. a. uncoordinated LTA as not in line with eligible for cost sharing in accordance with the methodology pursuant article 10(1) FCA guideline (if applicable);to Article 35 of the CACM Regulation and the methodology pursuant to Article 76 of the SO Regulation.

   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. Costs related to implement the request are paid by the TSO that initiated the request;

   c. other reasons than violation of limits following N or N-1 situationsaccordance with Article 74(4)(b) of the CACM Regulation, all cross-border relevant redispatching and countertrading actions activated pursuant to the coordination process as defined in the methodology pursuant to article 75(1) SO guideline;

   d. Uncoordinated Remedial Actions by SEE CCR TSO that lead to overload on some network elements with cross border relevance;

Other costs related to activationArticle 35 of CT and RD measures not eligible for cost sharing are the costs incurred by:

   a. the activation of uncoordinated CTthe CACM Regulation and RD measures;

Those costs not eligible for cost sharingthe methodology pursuant to Article 76 of the SO Regulation shall be borne by:

   a. SEE CCR TSOs that have implemented these measures for those costs described in considered as guaranteeing the paragraphs 3(c), 4(a) and 4(b)firmness of this Article;

2. b. SEE CCR TSOs that have requestedcross-zonal capacities calculated in accordance with the activationcapacity calculation methodology pursuant to Articles 20 and 21 of emergency requests or uncoordinated LTA in the paragraphs 3(a) CACM Regulation.

   The costs and 3(b)revenues of this Article;

   c. SEE CCR TSOs that applied Uncoordinated Remedial Actions leading to the activation of countertrading and redispatching measures according to paragraph 3(d) of this Article.

For XRAs identified pursuant to 3, all SEE CCR TSOs shall use all generation, load and network resources, which are able to modify power flows in the network.

For XRAs, the resources of cross-border relevant redispatching and countertrading shall be defined for two different services:

1.   increasing the control area balance or nodal injection (e.g. increasing generation or decreasing load);

1.   decreasing the control area balance or nodal injection (e.g. decreasing generation or increasing load).

TSOs may use the following resources of redispatching or countertrading for the purpose of XRAs:

1.   up and/or down regulation of conventional power plants;

1.   up and/or down regulation of loads (e.g. industry, boiler);

2.   up and/or down regulation of (pump) storage power plants;

3.   up and/or down regulation of battery storages or other storage technologies; and

4.   up and/or down regulation of renewable energy sources, such as wind energy, solar energy, biomass power plants etc.

Each SEE CCR TSO may redispatch all available generation units and loads in accordance with the appropriate mechanisms and agreements applicable to its control area.

When an XRA is identified pursuant to Article 3 as cross-border relevant also in another CCR, the concerned XRA connecting TSO shall provide this information to the RSCs and shall decide in which CCR it shall provide such XRA. This decision shall take account of the assumptions on remedial actions considered in capacity calculation methodologies establishedactivated pursuant to Articles 20 and 21 of the CACM Regulation.

Article 5

Exchange of information on the prices and costs of cross-border relevant remedial actions

1. SEE TSOs and RSC shall share all information required for calculation of the prices or costs of activation of XRAs.

1. In accordance with Article 35(5) of the CACM Regulation, the prices or costs of XRAs shall be based on:

    2. Prices in the relevant electricity markets for the relevant timeframe; or

    (a) The costs of XRAs calculated transparently on the basis of incurred costs.

2. Each TSO shall provide to the RSC the exact information on the prices or costs of activating costly XRAs available in its control area such that this information can be effectively used in the common regional coordination and optimisation of XRAs as well as for settlement of these costs.

3. In case TSOs provide to RSC the information on exact prices or costs of XRAs, these exact prices and costs shall be used both for the purpose of optimising activation of XRAs and for settlement of XRAs.

4. SEE CCR TSOs shall provide to RSC the information on the prices or costs of available costly XRA after the publication of the results of the day-ahead market. They shall also define the time window for the validity of these prices or costs.

5. In line with the requirements set by Article 35(5) of the CACM Regulation, the providers of resources for XRAs shall provide the information about prices or costs of XRAs requested by XRA connecting TSO sufficiently in advance of the deadline by which the XRA connecting TSO needs to submit this information to RSC.

6. If the information on exact prices or costs is not available to the TSO and TSOs are unable to require the information on exact prices or costs to be provided by resource providers, the TSO shall instead provide the best up-to-date estimation of the expected costs incurred per unit volume of activated XRA. SEE CCR TSOs will use for this purpose the actual prices or costs taken from the generator units and loads and other available information. In case TSOs provide to RSC the information on expected prices or costs of XRAs, these prices and costs shall be used for the purpose of optimising activation of XRAs, whereas for settlement of XRAs, the XRA connecting TSO shall provide the information on the realised prices or costs to RSC after the XRAs have been activated.

7. Any SEE CCR TSO or RSC on its behalf may request from any other SEE CCR TSO any underlying information used to establish expected or realised prices or costs of XRAs, including information pertaining to contracts and agreements with resource providers.

8. For the information on prices and costs of XRAs shared between SEE CCR TSOs, RSC and SEE regulatory authorities, the XRA connecting TSO shall define which part of information is commercially sensitive subject to the agreement on non-disclosure of commercially sensitive information.

9. When TSOs provide best up-to-date estimation of the expected costs incurred pursuant to paragraph 7 SEE CCR TSOs and the RSC shall implement a continuous monitoring and evaluation process to minimise the differences between the expected prices or costs of XRAs and realised prices or costs of XRAs for settlement. In this process, the SEE CCR TSOs and the RSC shall continuously monitor forecast errors of expected costs of XRAs, and SEE CCR TSOs shall use this monitoring as an input continuously to improve the associated forecasting methodology.

10. ~~When TSOs provide best up-to-date estimation of the expected costs incurred, XRA connecting TSOs shall proactively and timely report and justify any significant and/or systematic deviation between forecasted and incurred costs of a given XRA to other SEE CCR TSOs and the RSC in situations when such deviation represents more than 10 percent of the initially forecasted cost.~~

11. ~~Within eighteen months after the implementation of the CRCM, all SEE CCR TSOs shall develop a proposal for further harmonisation of the prices and costs of XRAs, and submit it by the same deadline to all SEE CCR regulatory authorities as a proposal for amendment of the CRCM in accordance with Article 9(13) of the CACM Regulation. The proposal shall at least include:~~

    3. ~~a report compiling all instances of deviations between forecasted and incurred costs, detailing, for each instance the difference in forecasted and incurred costs, as well as measures foreseen or implemented to remedy reasons for deviations. For each instance, the report shall highlight the effect of the deviation between forecasted and incurred costs on the XRA optimisation;~~

    (b) ~~an analysis of the feasibility for amendment of legal or regulatory framework by which TSOs could request from XRA resources a firm commitment on exact prices or costs of XRAs ahead of the coordination and optimisation of XRAs, and thereby remove the option of an up-to-date estimation . The analysis shall include the expected impact on XRA resource providers and on TSOs in comparison with the current approach.~~

~~Article 6~~

~~Confidentiality of information~~

1. ~~For the information on prices and costs of XRAs shared between SEE CCR TSOs, RSC and SEE CCR regulatory authorities, the XRA connecting TSO shall define which part of information is commercially sensitive. For such information, the XRA resource provider or the XRA connecting TSO may require that the party with which the information is to be shared sign an agreement on non-disclosure of commercially sensitive information.~~

1. ~~SEE CCR TSOs and the RSC, when handling commercially sensitive information during the application CRCM shall treat it as confidential and manage it in accordance with the procedure pursuant to Article 13 of the CACM Regulation.~~

2. ~~In particular, relevant TSOs and the RSC shall share information on the prices and costs of XRAs for purposes of XRA coordination only, including reporting and monitoring obligations defined within the methodology pursuant to Article 74(1)~~<u>as defined in the methodology pursuant to Article 35</u> of the CACM Regulation~~.~~

~~Article 7~~

~~Timeframes for coordination~~ and ~~application of cross-border relevant remedial actions~~

1. ~~The coordination of XRAs shall be performed in a single coordination procedure that optimises~~ the ~~activation of XRAs as well as other remedial actions not considered as XRAs in accordance with this~~ methodology ~~but still considered as cross-border relevant. This coordination shall enable the~~

SEE CCR TSOs with the support from RSCpursuant to relieve physical congestions in all market time units of the delivery day.

1. The coordination of XRAs shall be performed in the following timeframes:

    1. the day-ahead coordination procedure;

    2. the intraday coordination procedure; and

    3. the close to real-time coordination procedure (fast activation procedure).

4. The day-ahead and intraday coordination procedure is a regular coordination procedure. The close to real-time coordination procedure is called a "fast activation procedure" and aims to address physical congestions suddenly occurring close real-time. SEE CCR TSOs may apply the fast activation procedure for all market time units, when SEE CCR TSOs and the RSC cannot coordinate.

    2.3. The process for coordination of XRAs for the day-ahead coordination procedure for all market time units of the delivery day shall start immediately after the day-ahead coordinated operational security analysis referred to in Article 76(1)(a) of the SO Regulation is finalised and physical congestions on the XNECs have been identified by RSC and SEE CCR TSOs.shall be considered as eligible for cost sharing.

5. The process for coordination of XRAs for the intraday coordination procedure for the remaining market time units of the delivery day shall start immediately after the intraday coordinated regional operational security analysis referred to in Article 76(1)(a) of the SO Regulation is finalised and physical congestions on the XNECs have been identified by RSC and SEE CCR TSOs. The intraday coordination procedure may be repeated several times within the period between the day-ahead coordination procedure and real-time.

6. When XRAs recommended by RSC resulting from the coordination procedure may be ordered at a later stage subject to a later coordination procedure, the SEE CCR TSOs and RSC may decide in a coordinated way to postpone the planning and ordering of such XRAs until the finalisation of the next coordination procedure.

1. The day-ahead and intraday coordination procedure shall enable all SEE CCR TSOs to address physical congestions on XNECs, identified in accordance with the coordinated operational security analysis referred to in Article 76(1)(a) of the SO Regulation.

1. In all cases in which a physical congestion is detected, all involved parties (i.e. XRA requesting TSOs and RSC) shall contact and provide each other with all the information required to have a common view on the physical congestion to be solved.

2. In the day-ahead and intraday coordination procedure, the RSC in coordination with SEE CCR TSOs shall coordinate the use of all XRAs by performing a regional optimisation of XRAs with the objective to address all congestions on all XNECs with minimum estimated cost for the SEE CCR TSOs. This regional optimisation shall include also other remedial actions not considered as XRAs in accordance with this methodology, but still considered as cross-border relevant.

3. The XRA optimisation performed according to the methodology pursuant to Article 76(1) of the SO Regulation shall be based on the prices or costs provided by TSOs. For settlement, the exact or realised prices or costs of costly ordered XRAs shall be used. Possible capacity costs shall not be considered for the optimisation and the settlement of XRAs.

4. Subsequently, the RSC shall recommend to SEE CCR TSOs the activation of identified optimal XRAs. On the basis of RSC's recommendation, the relevant XRA connecting TSOs shall then plan XRAs and establish the list of planned XRAs. Based on the list of planned XRAs, the relevant TSOs shall order XRAs and establish the list of ordered XRAs.

5. When the RSC recommends the activation of XRAs, the XRA connecting TSO(s) shall, in accordance the relevant Union legislation, plan and activate the recommended remedial action provided that:

    1. it is expected to be available in the real time;

    2. and it is not leading to violation of operational security limits, taking into account the violations from not activating the XRAs.

12. When the RSC recommends the activation of XRAs, the XRA affected TSO(s) shall, in accordance with relevant Union legislation, agree on the recommended remedial action provided that it is not leading to violation of operational security limits, taking into account the violations from not activating the XRAs.

13. In case the XRA connecting TSO or the XRA affected TSO refuses the RSC's recommendation, the concerned TSO(s) shall, in accordance with relevant Union legislation, coordinate with the RSC(s) and other TSOs to identify, plan and activate alternative remedial actions.

6. The RSC shall compile all incurred costs of ordered remedial actions.

    4. The costs of XRAs shall be shared and settled according to theAll cross-border relevant network elements shall be eligible for cost sharing in accordance with this cost sharing methodology.

7. ~~In~~ accordance with Article 74(4)(a) of the CACM Regulation, the costs of redispatching and countertrading ~~cost sharing methodology pursuant to Article 74(1) of the CACM Regulation, and common provisions for regional operational security coordination pursuant to Article 76 of the SO Regulation.~~

8. ~~In the context of the optimisation pursuant to paragraph 3 above, the RSC shall coordinate with neighbouring RSCs of~~actions, as well as ~~other~~ ~~CCRs.~~

~~Article 9~~

~~Activation process for cross-border~~ remedial actions

~~The activation of XRAs within the day-ahead and intraday coordination procedure shall be performed in the following sequence:~~

9. ~~The RSC shall use the results of coordination and optimisation of XRAs and establish a list of recommended XRAs for each SEE CCR TSOs and submit these lists to them.~~

1. ~~Based on this list of recommended XRAs, each TSO shall establish a list of planned XRAs taking into account the time constraints for ordering and activation of these XRAs.~~

2. ~~From the list of planned XRAs, SEE CCR TSOs shall order XRAs at the latest possible time taking into account the activation time constraints of the resources and the timing of the next coordinated regional coordinated security assessment.~~

~~The SEE CCR TSOs shall provide the list of ordered XRAs to the RSC. In turn, the RSC shall establish the cross-border schedules resulting from the activation of these XRAs and provide this information to TSOs which shall update the cross-border schedules as defined in Article 112 of the SO Regulation;~~

~~The SEE CCR TSOs shall update in a coordinated manner the available cross-zonal capacities within the intraday or balancing timeframe to take into account the use of these capacities to facilitate cross-border schedules reflecting the activation of XRAs.~~

~~The RSC shall monitor occurrences of uncoordinated XRA activations in the semi-annual report.~~

~~When relevant, XRA connecting TSOs may launch an additional request for coordination and reconsideration of ordered XRAs.~~

~~The RSC shall monitor additional requests in the semi-annual report.~~

~~Once the XRAs have been ordered and activated by the concerned SEE CCR TSOs, these XRAs shall be included in the SEE CCR TSOs IGM(s) and CGM in accordance with the requirements of the SO Regulation. Therefore, ordered XRAs shall be~~ considered ~~for the next coordinated regional operational security assessment according to the methodologies pursuant to Article 75(1) and Article 76(1) of the SO Regulation.~~

~~The effect of planned and ordered XRAs which have been activated shall be taken into account in the individual grid models for the subsequent intraday~~ in the capacity calculation ~~processes.~~

~~Article 10~~

Fast activation process for sudden critical situations

The fast activation process is defined as a process to relieve physical congestion where the detection of the physical congestion occurs:

1.   between coordinated security analysis cycles and a fast activation of a XRAs is required because it cannot wait for the next coordinated security analysis; and

1.   After the last coordinated security analysis.

The fast activation process for coordinated redispatching and countertrading shall also be considered as a fallback where coordination through the RSC is no longer possible due to an insufficient time and in any case, the regular process could not be properly applied (e.g. missing data, tools failure).

In the fast activation process, the activation of preventive as well as curative XRAs can be applied.

In the fast activation process, each SEE CCR TSO may activate XRAs in direct coordination with XRA affected TSO(s) in accordance with the principles for coordination of XRAs described in the methodology pursuant to Article 75(1) of the SO Regulation.

Ex post, the TSO activating XRAs through fast activation process shall provide the RSC the relevant information on which the decision was based. The RSC shall monitor occurrences of fast activation processes and the information provided by relevant TSOs on those occurrences in the semi-annual report.

Article 11

Incurred costs

The XRA connecting TSOs shall provide all information on incurred costs of ordered XRAs to RSC and other SEE CCR TSOs as an input to the cost sharing methodology pursuant to Article 74(1) of the CACM Regulation.

The incurred costs shall relate to the relevant timeframe of ordered XRAs. The prices and volumes of ordered XRAs shall be disclosed transparently to all SEE CCR TSOs and the RSC. SEE CCR TSO shall not apply a mark-up on top of the costs charged for the delivery of XRAs by the relevant resources to the SEE CCR TSO. Each SEE CCR TSO shall be financially neutral as a result of the settlement of costs of XRAs

Cost-sharing methodology
Article 12

Flow decomposition methodology

The flow decomposition methodology will be used, detailed description of the methodology can be found in the explanatory note.

The flows of a CNE , when an cross relevant XRA is applied on the RD and CT methodology (remedial influence factor> 5%) are mainly:

1.   Loop flows

1.   Import/export flows and transit flows due to exchanges at borders not belonging to the CCR.

2.   Transit flows

3.   Internal flows

4.   PST flows

In addition to the above flows, the following flows attributes are defined:

1.   Burdening flow is a component of the physical flow on a specific line which flows in the same direction as the whole physical flow.

1.   Relieving flow is a component of the physical flow on a specific line which flows in the opposite direction as the whole physical flow.

In order not to discriminate between internal and external flows, the internal flows split additionally into a share that is being used in order to defined a minimum margin of the line for cross border exchanges and a share that is being used for the remaining capacity of the line accepted for internal trades.

Regarding import/export flows, a distinction is necessary between TSOs within the CCR and flows originating from TSOs outside the CCR, because costs of RAs could not be allocated with a causation principle to those TSOs.

Sources (exporters) or sinks (importers) are both referred to as origins of flows. Once all partial flows have been identified, they shall be used to define the sharing keys which shall be primarily be proportional to the aggravating impact of the flows caused by the bidding zones that TSO belongs to. Aggravating impact of flows caused by the bidding zone not belonging to a CCR would be socialized between the TSOs of the CCR.

The FLD method is able to correctly identify the contributions of the various flow types in the European transmission network, and:

1.   It obeys the commonly accepted proportional sharing principle
1.   It can be applied on any network model
2.   It is independent of slack bus location and GSK
3.   Its results are complaint with the physical properties of the network
4.   It identifies also relieving and burdening flows

Article 13
Causation principle

All costs that are eligible for cost sharing shall be borne according to the causation principle. In order to identify the causer(s) of congestions, the flow decomposition methodology shall be applied, which decomposes the total flow on congested network element into different flow types. For each flow type, also the source and the sink area are identified as a result of the decomposition on a bidding zone level, where a certain flow starts or ends.

~~Basis for the application of the causation principle is the flow decomposition methodology as described in the relevant explanatory note.~~

~~Only network elements which are cross-border relevant for the cost sharing with cross-border relevance will be considered where XRA cross border relevant remedial actions with influence factor more than 5% as mentioned in the RD and CT methodology.~~

~~**Mapping of costs to critical network elements**~~

~~3.~~5. ~~The costs of the redispatch and countertrading measures are~~ , shall not be eligible for cost sharing ~~are a necessary input for the causation principle.~~ , unless these actions have been confirmed to be activated within the common regional RAO process as defined in paragraph 3.

6. The eligible costs and revenues shall include only the costs and revenues of the cross-border relevant redispatching and countertrading actions that are determined as eligible for cost sharing in accordance with the methodology pursuant to Article 35 of the CACM Regulation and the methodology pursuant to Article 76 of the SO Regulation. In particular, any capacity and reservation costs shall not be eligible for cost sharing.

7. The eligible costs and revenues shall be auditable and transparent.

8. The total costs of cross-border relevant redispatching and countertrading actions eligible for cost sharing shall be determined as the netted sum of costs and revenues arising from the cross-border relevant redispatching and countertrading actions activated pursuant to the common regional RAO process as defined in the methodology pursuant to Article 35 of the CACM Regulation and the methodology pursuant to Article 76 of the SO Regulation.

Article 4
Input data for cost sharing

1. For the application of this cost sharing methodology, at least the following input data shall be used:

   (a) The volumes, costs and revenues of agreed cross-border relevant redispatching and countertrading actions eligible for cost sharing as defined in the methodology pursuant to Article 35 of the CACM Regulation and the methodology pursuant to Article 76(1) the SO Regulation as well as all their accompanying information. This includes the information about ordered XRAs and ANORAs after each CROSA;

   (b) The list of XNECs for which the cross-border relevant redispatching and countertrading actions have been applied in order to solve congestions on those XNECs as required in Article 5(1). This list shall include the information on XNE connecting TSO(s);

   (c) For each XNEC pursuant to (b): (i) the maximum flow (F_{max}), (ii) the flow before the RAO which was considered when identifying the congestion on the XNEC, (iii) the flow after the application of non-costly XRA (with and without PST actions), (iv) the flow after the application of non-costly XRAs without PST actions and agreed costly XRA and (v) the flow after the application of all XRAs;

   (a) The CGMs used for the identification of congestions in accordance with the coordination procedure as defined in the methodology pursuant to Article 35 of the CACM Regulation

and the methodology pursuant to Article 76(1) of the SO Regulation, as well as the net positions and scheduled HVDC exchanges that were assumed in these CGMs;

(b) For the cost sharing process, the following versions of CGM for the given CROSA shall be used:

    i. Input CGM for the CROSA before the RAO application shall be used for the flow decomposition and for the calculation of total flow on XNECs;

    ii. Input CGM for the CROSA with included non-costly agreed XRAs except PSTs shall be used for the calculation of PTDFs and PSDFs applied in mapping;

    iii. Input CGM for the CROSA with included costly ANORAs and non-costly agreed XRAs except PSTs shall be used for mapping as defined in Article 5(4)(e);

(c) The GSK used in the application of the SEE day-ahead and intraday capacity calculation methodology; and

(d) The sensitivity factors: PTDF describing the impact of each XRA to each XNEC, and PSDF describing the impact of PST tap position change to each XNEC.

1. The cost sharing methodology shall be executed independently for each CROSA. The inputs for the cost sharing of XRAs from a given CROSA, such as CGM, ANORAs and ordered XRAs, shall be determined exclusively from the data used and resulting from this CROSA. The costs and/or revenues for each CROSA shall be determined only for ordered XRAs resulting from that CROSA.

TITLE 3
COST SHARING PRINCIPLES

Article 5
Mapping of XRA costs to XNECs

1. All SEE TSOs shall distribute the costs and revenues of cross-border relevant redispatching and countertrading actions eligible for cost sharing as referred to in Article 4(1)(a) to each hour and each individual XNE eligible for cost sharing as referred to in Article 3(4) associated with a single reference contingency (or N-situation) that represents the worst contingency to be determined and agreed among SEE TSOs pursuant to governance rules in accordance with Article 9. Any reference to XNEC in the remainder of this cost sharing methodology shall be understood as referring to XNE with this single reference contingency (or N-situation) unless otherwise defined in paragraph 5.

2. The costs and revenues of each XRA eligible for costs sharing pursuant to paragraph 1 shall first be split into hourly costs using the following principles:

(a) The costs and revenues of an XRA, which are attributed clearly to a specific hour (such as activated redispatching energy), shall remain associated only to that hour;

(b) The costs and revenues of an XRA, which cannot be attributed clearly only to one specific hour, shall be split equally between the multiple hours to which these costs are attributed;

(c) The costs and revenues of an XRA, which have been attributed to hours in which there was no congestion in the SEE CCR, shall be set to zero; the costs and revenues of such XRA in other hours (considered in the same RAO) in which there was a congestion in the SEE CCR, shall be increased proportionally for the same amount; and

(d) The incurred costs of curative XRAs shall be considered when the associated contingency materializes, otherwise they shall be equal to zero. Further, curative XRAs shall be considered in paragraph 3 and 4(e)(ii) only when they are associated to the eligible XNECs.

3. Subsequently, the costs and revenues of all XRAs for a specific hour as determined pursuant to paragraph 2 shall be summed up and split between all XNECs eligible for cost sharing in accordance with the following formula (all variables are applicable for the specific hour h):

$$c_i = \frac{r_i}{\sum_i r_i} C^{all} \tag{1.1}$$

$$r_i = \sum_j \frac{\alpha_{i,j}}{\sum_i \alpha_{i,j}} C_j \tag{1.2}$$

$$r_i' = \sum_j \alpha_{i,j} C_j \tag{1.3}$$

and r_i' is calculated for each XNEC by solving the following optimisation:

$$\min_{\alpha,\beta} r_i' \tag{1.4}$$

$$0 \le \alpha_{i,j} \le 1 \tag{1.5}$$

$$0 \le \beta_{i,k} \le 1 \tag{1.6}$$

$$\sum_{j \in RDCT} \alpha_{i,j} V_j = 0 \tag{1.7}$$

$$\sum_j \alpha_{i,j} V_j PTDF_{i,j} + \sum_k \beta_{i,k} T_k PSDF_{i,k} = F_{limit,i} - F_{b,i}' \tag{1.8}$$

$$F_{limit,i} = \begin{cases} F_{max,i} & \text{if } 0 \le F_{a,i} \le F_{max,i} \le F_{b,i}' \\ -F_{max,i} & \text{if } F_{b,i}' \le -F_{max,i} \le F_{a,i} < 0 \\ F_{a,i} & \text{if } F_{max,i} \le |F_{a,i}| \le |F_{b,i}'| \\ F_{b,i}' & \text{if } F_{max,i} \le |F_{b,i}'| < |F_{a,i}| \end{cases} \tag{1.9}$$

Equation 1

with

c_i	Share of total costs of all XRAs attributed to XNEC i [€]
r_i	Relative weight of XNEC i in cost sharing [€]
C^{all}	Total costs or revenues of all ordered XRAs at a given CROSA, equal to $\sum_j C_j$ [€]
$\alpha_{i,j}$	Optimisation variable representing a fraction of optimal volume V_j of XRA j (consisting of redispatching or countertrading) determined by RAO which is needed to solve the congestion on XNEC i
r_i'	Least cost weight on XNEC i [€]
$\beta_{i,k}$	Optimisation variable representing a fraction of the T_k determined by RAO which is needed to solve the congestion on XNEC i
C_j	Total cost or revenue of applied XRA j [€]

V_j The optimal volume of ordered XRA j (consisting of redispatching or countertrading) determined by RAO at a given CROSA [MW]

T_k The optimal change of tap of ordered XRA k (consisting of PSTs), which is the difference between the tap of this XRA before the RAO and the optimal tap determined by RAO at a given CROSA

$PTDF_{i,j}$ Power transfer distribution factor describing the impact of a change of 1 MW of XRA j on the physical flow on XNEC i

$PSDF_{i,k}$ Phase shifting distribution factor describing the impact of a change of 1 tap position of PST k on the physical flow on XNEC i [MW]

$F'_{b,i}$ Adjusted total flow on XNEC i [MW]

$F_{max,i}$ Maximum flow on XNEC i [MW]

$F_{a,i}$ Total flow on XNEC i calculated after RAO, which includes the impact of all XRAs [MW]

4. The following additional rules shall apply for the calculation of variables in paragraph 3:

(a) If C^{all} is positive/negative and less than half of relative weights r_i of XNECs are lower/higher than 0, these weights shall be set to 0 before applying the Equation 1.1;

(b) If C^{all} is positive/negative and half or more of relative weights r_i of XNEC i are lower/higher than 0, the positive/negative value of the lowest/highest negative/positive weight shall be added to all weights of all XNECs before applying the Equation 1.1;

(c) If C^{all} is positive/negative and all relative weights r_i of XNEC i are 0, new weights shall be calculated and shall be equal to the absolute value of the right side of Equation 1.8;

(d) In case the absolute value of the right side of the Equation 1.8 is higher than the absolute value of the left side of this equation when all $\alpha_{i,j}$ and $\beta_{i,k}$ are set to 1, the right side of this equation shall be set equal to the left side of this equation when all $\alpha_{i,j}$ and $\beta_{i,k}$ are set to 1;

(e) Adjusted total flow on XNEC $F'_{b,i}$ shall be calculated as the lower among the two values:

     i. flow from the input CGM for a given CROSA; and

     ii. flow from the input CGM for a given CROSA, with included non-costly agreed XRAs except PSTs and costly ANORAs.

The rules (a) to (c) are also explained in the following table:

C^{all}	relative weights r_i	treatment of relative weights r_i
>0	Less than half are < 0	Set negative weights to zero before applying Equation 1.1
<0	Less than half are > 0	Set positive weights to zero before applying Equation 1.1
>0	Half or more are < 0	Opposite (i.e. positive) value of the lowest negative weight is added to all weights before applying Equation 1.1
<0	Half or more are > 0	Opposite (i.e. negative) value of the highest positive weight is added to all weights before applying Equation 1.1
Any	All are equal to 0	Weights are equal to the absolute value of right side of Equation 1.8, i.e.: $r_i = \left| F_{limit,i} - F'_{b,i} \right|$

5. The final costs attributed to XNECs for each hour shall be the sum of costs attributed to XNECs resulting from regional coordination process pursuant to this Article and possible additional costs attributed to XNECs in accordance with the cross-regional coordination process as defined in the methodology pursuant to Article 75 of the SO Regulation. In case cross-regional coordination process attributes additional costs to XNE which has zero costs resulting from regional

coordination process pursuant to this Article, the reference contingency as determined in paragraph 1 for such XNE shall be the contingency determined by cross-regional coordination process.

Article 6
Flow decomposition on XNECs

1. All SEE TSOs shall calculate at least for each XNEC with attributed costs pursuant to Article 5(5) and for each hour the following components of flows, which shall be used for cost sharing:

    (a) PST flow, representing the component of physical flow resulting from the effect of using all PSTs located within and outside the SEE CCR as determined within the CGM;

    (b) Allocated flow, representing the component of physical flow resulting from all cross-zonal exchanges within and outside the SEE CCR;

    (c) Loop flow from outside the SEE CCR, representing the component of physical flow resulting from internal exchanges within all bidding zones outside SEE CCR;

    (d) Loop flow for each bidding zone in the SEE CCR, representing the component of physical flow resulting from internal exchanges within each bidding zone within the SEE CCR; and

    (e) Internal flow, in case the eligible XNEC is an internal network element, representing the component of physical flow resulting from internal exchanges within the bidding zone where an XNE is located.

2. For the purpose of transparency and auditability, SEE TSOs may calculate different sub-components of the flow components pursuant to paragraph 1.

3. The first step of the flow decomposition shall be to perform the Alternating Current (AC) load flow calculation on a CGM, for the topology without any contingency (base case) and then separately for each contingency. The active power network losses shall be recorded per each network element (for base case and for each contingency) in the CGM. These losses shall be assigned to the sending end of each branch (omitting the virtual nodes representing the boundary points, in which case the losses shall be appointed to the real node at the receiving end), thus preparing the injections for further power flow decomposition, which is linearised from this point onwards.

4. The power flow decomposition is performed by calculating the:

    a) node-to-hub PTDF matrix, which is calculated with linearised approach, providing information of the sensitivity of active power flow over an XNEC, to the power exchange between each node containing nodal injections and arbitrarily selected hub node;

    b) nodal injections for allocated flows as defined in paragraph 6; and

    c) nodal injections for loop flows and internal flows as defined in paragraph 7

5. The PST flows are the flows that the PST is generating at the actual tap position at the two connection points of each PST. The PST flow pursuant to paragraph 1(a) on a single XNEC is calculated by summing up the contributions of individual PSTs on that same XNEC. The PST flow by a single PST is determined via phase shifter distribution factors (PSDF). The PSDF expresses the change of MW flow on a network element for the change of one tap of that PST. PSDF is calculated as the difference in physical flow on an XNEC, when changing the tap of this PST from currently applied tap to the next tap. Then the PST flow is calculated by multiplying all PSDF with the differences between the tap positions of phase shifting transformers contained in the CGM and their neutral tap position.

6. The nodal injections for allocated flows are calculated by multiplying the net positions contained within the CGM, with the factors contained within the GSK that is used in the application of day-ahead capacity calculation methodology and/or intraday capacity calculation methodology by the concerned SEE and non-SEE bidding zones. In the absence of such GSK for a certain bidding zone, the default GSK shall be used for such zone, where the factors are determined in proportion to generation in the generation nodes of that bidding zone. The allocated flow pursuant to paragraph 1(b) is then calculated by multiplying all the nodal injections for allocated flow from each bidding zone with node-to-hub PTDF factors and summarising the contributions from all such nodal injections for each XNEC.

7. The nodal injections used for the calculation of loop flows and internal flows are the nodal injections calculated pursuant to paragraph 3 reduced by nodal injections for allocated flows pursuant to paragraph 6. The loop flows and internal flows are then calculated by multiplying all the nodal injections for loop flows and internal flows with node-to-hub PTDF factors and summarising the contributions from all such nodal injections as follows:

    (a) for loop flows outside the SEE CCR, all contributions from non-SEE bidding zones are summarised for each XNEC;

    (b) for loop flows from each bidding zone in the SEE CCR, all contributions from a particular SEE bidding zone are summarised for each XNEC; and

    (c) for internal flow, which is calculated only when the concerned XNE is an internal network element, all contributions from a SEE bidding zone where the concerned XNE is located, are summarised for such XNEC.

8. The treatment of HVDC lines in flow decomposition shall follow the following principles:

    a) Modelling of HVDC network elements in flow decomposition shall be compatible with the virtual hub approach defined within the SEE day-ahead and intraday capacity calculation methodologies.

    b) Exchanges over HVDC network element located on the bidding zone borders may be decomposed only into allocated flows on such element and other network elements impacted by it. The flow decomposition shall identify the positive injections feeding into the sending node of each such HVDC network element and negative injections supplied by the receiving node of each such HVDC network element and then model and treat such injections as other nodal injections for allocated flows in accordance with the principles described in paragraph 6 above.

    c) Exchanges over HVDC network element located within a bidding zone may be decomposed only into internal flow on such network element as well as internal and loop flows on network elements impacted by it. The flow decomposition shall identify the positive injections feeding into the sending node of each such HVDC network element and negative injections supplied by the receiving node of each such HVDC network element and then model and treat these injections as other nodal injections for loop flows and internal flows in accordance with the principles described in paragraph 7 above.

9. The calculation of flow components shall be transparent and reproducible.

10. In case the flow obtained as the sum of all flow components is not equal to the flow on an XNEC obtained with the original AC load flow, all components shall be scaled proportionally such that the sum of all components become equal to the flow on the XNEC obtained with the original AC load flow.

11. Flow decomposition shall be performed on each eligible XNEC and for each hour separately.

12. To identify the different flow components contributing to the congestions (or relieving them) and their bidding zone of origin, the flow decomposition calculation shall consider the bidding zone configuration as defined pursuant to the CACM Regulation.

Article 7
Distribution of costs on XNECs to TSOs

1. All SEE TSOs shall use the flow components on each eligible XNEC to calculate the share of the total costs attributed to eligible XNEC that shall be attributed to each TSO from the SEE CCR. The calculations shall consist of the following steps:

   i.   Application of threshold(s) as described in paragraphs 2 to 5;

   ii. Identification of contributions to congestion as described in paragraph 6; and

   iii. Distribution of costs to bidding zones and TSOs as described in paragraphs 7 and 8.

2. First, all SEE TSOs shall split the burdening loop flow by each biding zone within the SEE CCR on each eligible XNEC in two parts: one part will define the burdening loop flow below the individual threshold and the other part the burdening loop flows above the individual threshold as defined in paragraph 4.

3. To calculate the individual threshold for burdening loop flows from each bidding zone within the SEE CCR on each eligible XNEC, all SEE TSOs shall first calculate a common threshold for burdening loop flows from all bidding zones within the SEE CCR on each eligible XNEC. This common threshold shall be equal to 10% of the F_{max}, for each eligible XNEC.

4. All SEE TSOs shall calculate an individual threshold for burdening loop flows for each bidding zone within the SEE CCR for each eligible XNEC, by dividing the common threshold as defined in paragraph 3 equally among all burdening loop flows from bidding zones within the SEE CCR. If any burdening loop flow from any bidding zone within the SEE CCR is below such calculated individual threshold, the individual threshold can be increased, such that the sum of all burdening loop flows (from all bidding zones within SEE CCR) below the individual threshold is equal to the common threshold as defined pursuant to paragraph 3.

5. The individual threshold pursuant to paragraph 4 is without prejudice to the determination of the level of loop flows that could be expected without structural congestion in a bidding zone and that is to be determined in accordance with Article 16(13) of the Electricity Regulation. Once this level is approved, it shall automatically replace the individual threshold as defined in paragraph 4.

6. In order to identify which flow components contribute to congestion and to which degree, all SEE TSOs shall calculate the volume of overload, which shall be equal to the total flow on the eligible XNEC before the RAO, reduced by the maximum flow on that XNEC. The contributions to the volume of overload shall be calculated as follows:

   (a) The burdening loop flows from bidding zones within the SEE CCR above the individual threshold calculated pursuant to paragraph 4 or 5 shall be identified as the first contributor to the volume of overload. If the volume of these burdening loop flows is higher than the volume of overload, the contribution of each burdening loop flow from bidding zone within the SEE CCR above the individual threshold shall be reduced proportionally such that the sum of contributions from burdening loop flows from bidding zones within the SEE CCR above the individual threshold is equal to the volume of overload. The burdening loop flow contributions to the volume of overload shall be attributed to bidding zones that are the origins of the respective burdening loop flow components.

(b) The burdening internal flow shall be considered as the second contributor to the volume of overload. The burdening internal flow contribution shall be equal to the volume of overload reduced by burdening loop flow contributions calculated pursuant to (a) and shall not be higher than the burdening internal flow.

(c) The rest of the contribution to the congestion shall be identified with the following flow components in the order of following priority:

   i. Burdening loop flow from outside the SEE CCR;

   ii. Burdening loop flows from bidding zones within the SEE CCR below the individual threshold;

   iii. Burdening allocated flow; and

   iv. Burdening PST flow.

(d) The contribution to the congestion pursuant to points (b) and (c) shall be attributed to the XNE connecting TSO. In case the concerned XNE of the XNEC is a network element connecting two SEE bidding zones, and XNE connecting TSOs have defined the same F_{max} for this element, the corresponding costs for such XNEC pursuant to points (b) and (c) shall be shared 50:50 between the two XNE connecting TSOs. In case the XNE connecting TSOs on both sides have defined a different F_{max} for the concerned XNE, the costs for such XNEC pursuant to point (b) and (c) shall be shared in accordance with the following formula:

$$S_{HI} = 0.5 \frac{\max(0, F_{total} - F_{max,HI})}{F_o}$$

$$S_{LO} = S_{HI} + \frac{\max\left(0, \min\left(F_{total}, F_{max,HI}\right) - F_{max,LO}\right)}{F_o}$$

Equation 2

with

The total costs (sum of costs eligible for cost sharing) will be split up per relevant critical network element. This is called: Mapping of cost per critical network element.
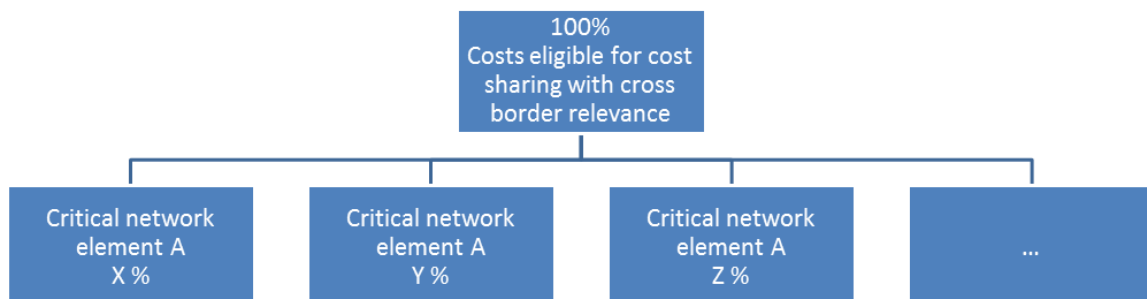
Mapping of costs per critical grid element

Figure 1

Flows on each critical network element shall be decomposed using the flow decomposition method. The decomposed flows per critical network element (result of the flow decomposition) will be assigned to the flows relevant for cost sharing. In addition, flows can also be split in order to give priority only to a certain share of a flow type (e.g. internal flows below a certain threshold).

Causation principles based on prioritization of flows

In case an overload above the technical admissible limit on a XNE based on the RD and CT methodology is detected, XRAs are identified to reduce the loading of this line. At certain point in time, those XRAs will have to be activated. The related costs of these RAs need to be covered by the causing TSOs.

The causers of those flows above the technical limits of the XNE have to share the cost of the RAs in proportion to their share of the MW above the limit.

In general, the costs of the activated RA can be distributed to causers of the different flows according to the following prioritization principle, by starting from the total loading of the XNE and going down to the technical limit:

1.   burdening loop flows

1.   If the XNE still is overloaded after the penalized loop flows, internal flows that hinder guaranteeing a minimum market exchange shall be penalized in second place to avoid a discrimination of bids outside the bidding zone . This could be realized by introducing a fixed percentage of the internal flow of the line (freeing up capacity on internal XNE for allowing external exchange). The fixed percentage of 20% of the limit of the internal line will be applied in order to increase the incentive of SEE CCR TSOs to solve efficiently the congestion, and where relevant to invest in the grid .

2.   In case the flow on a line still is above the technical limit after cutting loop flows and internal flows for guaranteeing a minimum exchange all other import/export and transit flows shall be penalized before penalizing the remaining internal flows.

Causers of flows above the technical limits of the CNE have to share the cost of the RAs in proportion to their share of the MW above the limit.
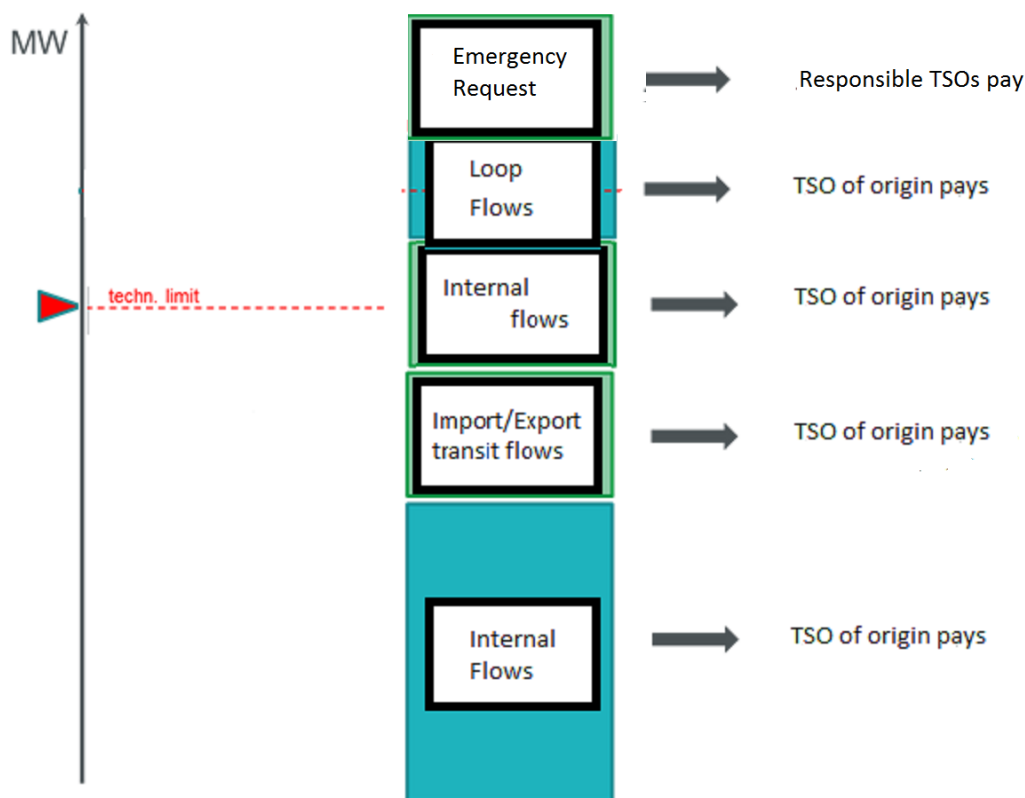
Figure 2 Causation principles based on prioritization of flows

In more detail, the proposed order of priority in cost sharing should be as follows:

1. There might be cases where a TSO faces a critical situation (e.g system adequacy challenges) without being able to solve it itself. With an emergency request the concerned TSO can ask neighboring TSOs for their support to increase import capacity. Such increase can lead to overloads on internal or external network elements, which need to be relieved by costly remedial actions. Emergency Requests should be on top. That is outside of normal coordinated process and may happen only in very rare cases. The responsible TSOs pay, i.e the requesters for such emergencies should cover the resulting costs. This case is exceptional and not covered by the generic cost sharing principles.

1. Loopflows (ACER recommentation) should also be on top, since it is an externality in zonal process.TSOs of origin pays, i.e the one where loopflows come from. In case the loopflows come from TSOs outside the SEE CCR the socialization principle shall apply.

2. If after considering the above the problem still remains, then some share of costs necessary to ensure a margin of internal flows should be applied, so an amount of flows should also be covered by Internal Flows. A minimum remaining available margin (RAM) in flow based approach is used in order to be guaranteed by TSOs on internal CNEs to allow for external exchanges by the market (different kind of solutions are possible to guarantee capacities on internal lines for external exchanges). A similar kind of margin of 20% of the limit of the internal line should be used at the current methodology, bearing in mind the application of CNTC methodology in SEE CCR. In order to achieve a minimum margin (needed to assure the external exchanges), costly RAs might be necessary. TSOs shall be individually responsible for making available a minimum margin by reducing the internal loading on the relevant CNE below the predefined threshold..

3. Import/Export flows and transit flows follow where the TSO of origin will pay. That means the contribution of each TSO will be identified again by using the FLD method. Again just like in the case with loopflows, in case transits come from TSOs outside the SEE CCR the socialization principle shall apply.

If after considering all these kinds is still unable to ensure security, then some share of costs necessary to ensure this should also be covered by Internal Flows.

Article 14
Principles for sharing keys calculation

1. Non-coordinated actions with RSC

In general all the TSOs within the SEE CCR commit themselves to coordinate between each other when planning and activating remedial actions in an enduring coordination process which goes from capacity calculation, through operational planning, till real time. It is therefore taken as a basic assumption, that TSOs shall act by respecting what was agreed in the previous phases of this coordination process and by following the coordination principles.

Thus, each TSO breaching the above mentioned coordination process shall bear responsibility for covering the possible additional costs which may arise.

Even close to real-time, cross-border relevant remedial action shall be coordinated (Article 74 (1) SO regulation). Each TSO shall abstain from unilateral or uncoordinated redispatching and countertrading measures of cross-border relevance (Article 35 (4) CACM regulation). The coordination for bilateral/multilateral restoring remedial actions is made between two or more affected TSOs in real time, with possible support of RSCs.

Following principles can be applied depending on TSO approach with the support of RSC :

1. Cost sharing principle in case of coordinated actions according to RSC advice.

In case of coordinated measures, the costs related to remedial actions will be shared according to cost sharing arrangements defined in RD and CT methodology.

2. Cost sharing principle in case of uncoordinated actions deviating from RSC advice.

If TSO decides unilaterally to execute costly remedial actions, without coordination with other TSOs it will cover the cost

2. Socialization principle

The FLD methodology allows to identify the causer of the congestion (the contribution of each TSO to the congested element), however, not all TSOs can be considered in the settlement process, but only the ones that are members of the SEE CCR. The cost related to the TSOs outside the SEE CCR has to be socialized.

Different principles for the socialization of such costs have been identified:

1. based on equal burden principle

1. based on number of consumers

2. proportional to congestion income/NTCs

Based on the fact that the RO-BG-GR connection is a single root connection with basically a very large of interconnections surround it, the loop flows impact is very high. SEE CCR TSOs consider that the

equal burden share represents a good and justified approach since it can be used in order to avoid conflicts among TSOs for a physical network distribution in which they are not responsible.

The external costs are shared equally between the SEE CCR TSOs.

1. Prioritization principle

The power flow decomposition methodologies allow to distinguish the kind of flow on the congested element: internal flow, loop flows, export/import flow and transit flow
The prioritization of flows aims at defining a prioritization approach for allocating the costs to the different types of flows.

Two different approaches have been identified to calculate the sharing keys in relation to the different kind of flows:

1. Proportional: different flow types are equally considered.
1. Prioritization: hierarchical approach, which use a strict order of the different flow types (e.g. loop and internal flows first, exchange flows afterwards) and punish them as a priority list.Different thresholds (TH) for different type of flows could be introduced. For instance, loop flow TH=10% means that only the loop flows that exceed the 10% of the capacity of the congested element are considered on the calculation of the sharing keys. For the SEE CCR in line with ACER and ENTSO-e recommendations, the prioritization is used with the TH=0 % for loop flows.
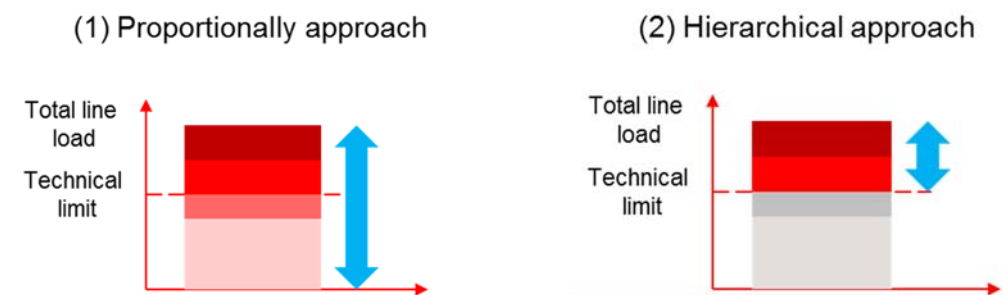
Figure 3

Article 15

S_{LO}	Share of the costs for XNE connecting TSO which defined a lower F_{max} [%]
S_{HI}	Share of the costs for XNE connecting TSO which defined a higher F_{max} [%]
$F_{max,LO}$	Lower F_{max} [MW]
$F_{max,HI}$	Higher F_{max} [MW]
F_{total}	Total flow on XNEC [MW]
F_o	Volume of overload on XNEC which is equal to $F_{total} - F_{max,LO}$ [MW]

7. The total costs attributed to XNEC as defined in Article 5(5) shall be split proportionally to the calculated contributions to congestion as defined in paragraph 6, where the burdening loop flow contributions are attributed to the concerned bidding zones and the remaining contributions to the XNE connecting TSO(s) pursuant to paragraph 6(d).

8. The costs attributed to a bidding zone shall be attributed to the TSO(s) of that bidding zone. In case a bidding zone consists of several TSOs, the costs for such bidding zone shall be split between the TSOs of such bidding zone in proportion to the annual consumption within the previous calendar year within the control area of each TSO. TSOs of such bidding zone may also agree on a different sharing key in which case they shall either inform the settlement entity of the agreed sharing key, or appoint a single TSO of such bidding zone which shall be a settlement counterparty for settlement of all the costs attributed to such bidding zone, including the costs directly attributed to the TSOs of such bidding zone.

TITLE 3
MONITORING AND IMPLEMENTATION

~~For every~~ Article 8
Settlement of costs

All SEE TSOs shall agree on the settlement of costs resulting from the application of the cost sharing principles defined in this methodology and define the entity that will perform the settlement of costs ('settlement entity'). For this purpose, they shall enter into agreement that shall become effective at the latest by the day of implementation of this cost sharing methodology.

Article 9
Rules concerning governance and decision making among SEE TSOs

1. All SEE TSOs shall cooperate for the implementation and operation of this cost sharing methodology. This cooperation shall be carried out through common bodies where each TSO shall have at least one representative. The members of the common bodies shall aim to make unanimous decisions. Where unanimity cannot be reached, qualified majority voting based on the voting principles established in accordance with Article 9(3) of the CACM Regulation shall apply.

2. All SEE TSOs shall establish a steering committee consisting of one representative from each SEE TSO. The steering committee shall make binding decisions on any matter or question related to the implementation and operation of this cost sharing methodology. The steering committee shall adopt rules governing its operation.

3. The steering committee shall also act as a body for settlement of disputes among SEE TSOs regarding the implementation and operation of this cost sharing methodology. The steering committee shall solve the problems and disputes regarding, but not limited to, the following issues:

    (a) Resolution of disputes on the interpretation of aspects of this methodology, which may not be clear;

    (b) Resolution of disputes on design choices required for implementation and operation of this methodology, which are not defined in this methodology; and

(c) Resolution of possible disputes in the application and operation of this methodology including the disputes related to the provisions ruling the day-to-day operation, but excluding the day-to-day operation itself.

Article 10
Monitoring of costs sharing

1. For the activation and cost sharing of ~~a remedial action, regardless if~~cross-border relevant redispatching and countertrading ~~or redispatching is applied, a set of data~~actions, a dataset shall be stored in a central database. ~~The documentation shall be such that it allows for a yearly review for improvement.~~The dataset shall be made available to all SEE TSOs, all SEE regulatory authorities and ACER, and shall contain at least the following:

The ~~following process steps shall be documented on the central database for each activation of a remedial action:~~

~~1. the corresponding security violation:~~

~~i. The overloaded element;~~

~~ii. The amount of overload (in absolute and relative value);~~

~~iii. The reason of activation.~~

~~2. the grid model used for the decision for the remedial action, i.e. the grid model that shows the overload;~~

~~1. the resources selected by the resource selection process;~~

~~2. the resources implemented;~~

~~3. the cost of the selected resources given as an~~ input data pursuant to ~~the resource selection process;~~

~~4. the final cost of the selected resources used for settlement;~~

~~5. the grid model containing the implementation of the remedial action, i.e. the grid model that shows the effectiveness of the remedial action.~~

~~Upon request, TSOs shall provide copies of the credit or debit notes between generators and TSOs. In case of confidentiality issues, the responsible TSO undertakes its best effort to provide the information in an alternative manner.~~

(a) Article ~~16~~4:

~~Regular Reporting to NRAs~~

~~TSOs will report on a regulary basis to NRAs the relevant information according the requirements of the article 74 of the CACM guideline and according the applicables provisions of the transparency guidelines.~~

~~Following information on~~ The results from mapping of costs~~ will be reported to NRAs on a quarterly basis:~~

~~1. Total redispatching and countertrading costs eligible for cost sharing per TSO/Country~~

~~1. Redispatch and countertrading costs according flow type Import/Export; Loop flows; Internal flows and Transit flows per bidding zone/Country~~

(b) ~~List all activations of remedial actions~~, including the ~~security violation, the activated resources and the associated costs;~~costs assigned to each XNEC;

> > ~~2.Overview of the total redispatching and countertrading costs eligible for cost sharing within the quarter per bidding zone/TSO according to the applied cost sharing arrangements;~~

> > ~~3.Overview of the total costs/revenues per control area since the implementation of this methodology;~~

(c) ~~Overview~~The results from flow decomposition showing all flow components as defined in Article 6(1);

(d) The results of application of threshold, including the separation of flow components below and above the individual threshold in accordance with Article 7(4);

(e) The identified contributions to congestion for each flow component in accordance with Article 7(6); and

(f) The splitting of ~~the~~ costs ~~allocated~~of each XNEC to ~~the~~different bidding zones ~~outside the~~and TSOs.

2. All SEE TSOs shall monitor the forecasting accuracy of network topology, generation and load in the individual grid models that are used for cost sharing and in particular the settings of PST tap positions. In case one or more SEE TSOs identify or suspect abusive behaviour (such as systematic forecast errors) or other negative impact of such forecasting, all SEE TSOs shall further investigate whether the concerned TSO has gained any financial advantage from such behaviour.

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Article 11
Reporting to SEE regulatory authorities and ACER

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All SEE TSOs shall provide a biannual report on cost sharing to all SEE regulatory authorities and ACER by no later than one month after the end of the relevant semester. The biannual report shall include:

(a) An overview of the total costs attributed to each bidding zone and TSO in SEE CCR ~~and the~~in application of this cost sharing ~~among TSOs~~methodology;

(b) ~~Based~~The information on the possible correction of results from previous biannual reports;

(c) Reporting on the monitoring, ~~TSOs will review~~ of forecasting of individual grid models in case of identified or suspected abusive behaviour with possible gained financial advantages pursuant to Article 10(2); and

(d) Detailed analysis of specific cases with unexpected or unusual results with the underlying details on data inputs, flow decomposition, application of threshold, contributions to congestion and final cost sharing among bidding zones and TSOs.

Article 12
Review of cost sharing methodology

1. All SEE TSOs shall perform an annual review of the cost sharing ~~process~~methodology in order to identify ~~potential~~possible improvements~~.~~ in:

~~The review shall consist of:~~

(a) ~~a) an assessment of~~meeting the objectives and purpose of this cost sharing methodology, in particular with regard to the polluter-pays principle and fairness of the cost sharing;

~~(a)~~(b) effectiveness of ~~the activated remedial actions~~this cost sharing methodology in terms of ~~volume and cost;~~:

    i. ~~b) an assessment of the proper functioning~~Reasonable financial planning;

    ii. Providing correct incentives for managing congestions in an efficient way, including reconfiguration of bidding zones and capacity calculation as well as incentives for network investments;

~~(b)~~(c) the efficiency of the ~~general~~ process for cost sharing with a specific focus on:

    i. ~~i. deadlines~~Deadlines regarding the delivery of data and information;

    ii. ~~ii. deadlines~~Deadlines regarding the settlement process; and

~~(c)~~(d) ~~iii.~~the quality of cost estimations~~;~~ related to this cost sharing methodology.

~~c) an assessment of the cost-sharing methodology against the criteria mentioned in Art. 74 (6) of CACM Regulation.~~

2. No later than twelve months after the implementation of this cost sharing methodology, all SEE TSOs shall develop a proposal for amendment of this methodology, which shall aim to improve

all the aspects of this cost sharing methodology. By the same deadline, the proposal for amendment shall be submitted for approval to SEE regulatory authorities.

Article ~~18~~

13
Implementation

1. ~~The~~SEE TSOs ~~of SEE CCR~~ shall publish ~~the methodology for~~this cost- sharing ~~of redispatching and countertrading~~ methodology without undue delay after ~~relevant national regulatory authorities have approved the proposed methodology or a~~the decision has been taken by ~~the Agency for the Cooperation of Energy Regulators~~ACER in accordance with Article 9 ~~(10), Articles 9 (11) and 9~~ (12) of the CACM Regulation.

~~The implementation of this~~This cost sharing methodology ~~for redispatching and countertrading cost sharing is subject to:~~

1. ~~Regulatory approval of this Redispatching and Countertrading Cost Sharing Methodology in accordance with Article 9 of the CACM Regulation;~~
1. ~~Regulatory approval of the SEE CCR RD and CT Methodology required by Article~~ shall be implemented by the implementation deadline as defined in the methodology pursuant to Article 35 of the CACM Regulation and ~~its implementation;~~
2. ~~Regulatory approval of~~ the ~~coordinated security analysis~~ methodology pursuant to Article ~~75(1) of SO guideline,~~
2. ~~The implementation~~76 of the ~~RD and CT cost sharing method is subject to the development, testing and implementation of the systems required to support it. This includes the software of RSC(s) to perform the activities, the communication channels among RSCs and TSOs (data exchange of network models) as well as the practical implementation of actions from TSOs~~SO Regulation.
3. ~~The TSOs of SEE CCR Region shall implement the proposed methodology not later than 12 months after the conditions specified in d) are fulfilled, and in any event no later than 1st July 2021.~~

3. The implementation process for this cost sharing methodology, which shall start with the entry into force of this methodology and finish by the deadline in accordance with paragraph 2, shall ensure provision of regular information to SEE regulatory authorities and stakeholders on the development and testing of this methodology. It shall also provide to SEE regulatory authorities regular reports on the results of testing.

TITLE 4
MISCELLANEOUS

Article ~~19~~

14
Language

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

methodology.