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Methodology for Regional Operational Security Coordination for the Core CCR

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Methodology for Regional Operational Security Coordination for the Core CCR

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**Methodology for regional operational
security coordination ~~infor~~ the capacity
~~calculation region~~ ~~CORE~~Core CCR**

in accordance with Article 76(1) of Commission Regulation (EU)
2017/1485 of 2 August 2017 establishing a guideline on electricity
transmission system operation

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 **December 2020**

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Whereas

- ~~(1) Commission~~ This document describes the methodology for regional operational security coordination for the capacity calculation region Core pursuant to Article 76(1) of the Regulation (EU) 2017/1485 ~~establishes~~ establishing a guideline on electricity transmission system operation (hereafter referred to as the 'SO Regulation'), which entered into force on 2 August 2017.
- ~~(2)(1)~~ This document is ~~the common methodology of all Transmission System Operators (hereafter referred to as 'Core TSOs')~~ of the Core Capacity Calculation Region (hereafter referred to as 'Core CCR'), and defines the methodology for Regional Operational Security Coordination within the Core CCR (hereafter referred to as 'Core the 'ROSC Methodology'') in accordance with ~~articles 76 and 77 of SO Regulation.~~
- ~~(3)(2)~~ ~~The Core~~ This ROSC Methodology takes into account the general principles and goals set in the SO Regulation as well as Commission Regulation (EC) 2015/1222 establishing a guideline on ~~Capacity Allocation~~ capacity allocation and ~~Congestion Management~~ congestion management (hereafter referred to as the 'CACM Regulation').
- ~~(4)(3)~~ ~~The Core~~ This ROSC Methodology takes into account the possible dependencies with Commission Regulation (EU) 2017/2195 establishing a guideline on ~~Electricity Balancing~~ electricity balancing, Commission Regulation (EU) 543/2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) 714/2009 (hereafter referred to as the 'Transparency Regulation') as well as Commission Regulation (EU) 1227/2011 on wholesale energy market integrity and transparency (hereafter referred to as the 'REMIT Regulation').
- ~~(5)(4)~~ Article 76 of the SO Regulation constitutes the legal basis and defines the requirements for the Core ROSC Methodology. ~~Article 76 of SO Regulation defines that the Core ROSC Methodology should address at least the following requirements:~~
- ~~(a) conditions and frequency of intraday coordination of operational security analysis and updates to the CGM by the regional security coordinator (hereafter referred to as 'RSC');~~
 - ~~(b) the methodology for the preparation of remedial actions (hereafter referred to as "RAs") managed in a coordinated way, considering their cross-border relevance as determined in accordance with article 35 of CACM Regulation, taking into account the requirements in articles 20 to 23 of SO Regulation and determining at least: (i) the procedure for exchanging information about available RAs between relevant TSOs and the RSC; (ii) the classification of constraints and RAs in accordance with article 22 of SO Regulation; (iii) the identification of the most effective and economically efficient RAs in case of operational security limit violations referred to in article 22 of SO Regulation; (iv) the preparation and activation of RAs in accordance with article 23 (2) of SO Regulation; (v) the sharing of the costs of RAs referred to in article 22 of SO Regulation, complementing, where necessary, the common methodology developed in accordance with article 74 of CACM Regulation.~~
- ~~(6)(5)~~ ~~The Core~~ This ROSC Methodology defines an adequate frequency of intraday coordination of operational security analysis and updates to the CGM as detailed in Article 3 of this Methodology

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to ensure network security and stability in accordance with ~~article~~Article 76-(1)-(a) of the SO Regulation.

~~(7)~~(6) ~~The Core~~This ROSC Methodology contributes to the objectives stated in ~~article~~Article 76-(1)-(b) of the SO Regulation introducing a coordination process ~~which defines with~~ explicit rules for the preparation of ~~RA~~cross-border relevant remedial actions in a coordinated way ~~as detailed in Title 4 Chapter 1~~ and assigns ~~the~~clear responsibilities for the Core TSOs and Core RSCs.~~RSC(s).~~

~~(8)~~(7) For the exchange of relevant information and preparation of ~~RA~~cross-border relevant remedial actions in accordance with ~~article~~Article 76-(1)-(b)-(i) and ~~article~~Article 76-(1)-(b)-(iv) of the SO Regulation~~the Core~~, this ROSC Methodology ~~describes~~determines all input data relevant for ~~executing the process as detailed in Article 14~~regional operational security coordination.

~~(9)~~ For the activation of RAs in accordance with article 76 (1) (b) (iv) the Core ROSC Methodology ~~defines the requirements as detailed in Article 35.~~

~~(8)~~ ~~The Core~~For the activation of cross-border relevant remedial actions in accordance with Article 76(1)(b)(iv) of the SO Regulation, this ROSC Methodology defines two types of coordination processes which aim to resolve operational security violations with cross-border relevant remedial actions. The standard coordination process is called coordinated regional operational security analysis ('CROSA') in accordance with Article 78 of the SO Regulation that is performed at a regional level by all Core TSOs and RSC(s) together. In cases where the CROSA cannot be applied, TSO(s) can apply a fact activation process, which is a limited coordination performed by a TSO(s) facing operational security violation in coordination with RSC(s) and other TSOs, which may be affected by application of remedial actions.

~~(10)~~(9) This ROSC Methodology defines ~~the~~all relevant types of constraints ~~as detailed in Article 2~~ which are necessary to ensure the ~~network~~operational security in accordance with ~~article~~Article 76-(1)-(b)-(ii) of the SO Regulation.

~~(11)~~(10) To identify the most effective and economically efficient ~~RA~~remedial actions in accordance with ~~article~~Article 76-(1)-(b)-(iii) of ~~SO Regulation~~the Core SO Regulation, this ROSC Methodology introduces ~~an~~the remedial action optimisation of RAs following the principles ~~described in Article 23~~('RAO'). The aim of ~~the~~this optimisation is to minimise the incurred cost in accordance with Article 27 on the one hand side ~~and as well as~~ to ensure the ~~RA~~remedial actions are applied effectivity ~~as detailed in Article 29 on the other side~~to address operational security violations.

~~(12)~~ Core ROSC Methodology introduces the general provisions for cost sharing of remedial actions as detailed in Article 38 and ensures the applicability of Core Cost Sharing Methodology in accordance with article 76 (1) (b) (v) of SO Regulation.

~~(11)~~ To fulfil the obligation of determining whether congestionIn accordance with Article 76(1)(b)(v) of the SO Regulation, this ROSC Methodology complements the cost sharing methodology for the Core CCR established pursuant to Article 74 of the CACM Regulation. While the cost sharing methodology determines the concrete cost sharing solution, this ROSC Methodology determines all the relevant input data and parameters that are required for the application of the cost sharing methodology.

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(12) As the Core CCR is characterised by a highly meshed network, all network elements of voltage equal or higher than 220 kV and all available remedial actions are generally considered as cross-border relevant. This is because in Core CCR it is generally not possible to identify a network element that would be impacted only by remedial actions that do not have any impact on other cross-border relevant network elements. Still, exceptions to the rule are possible if all Core TSOs agree that individual network elements can be considered as not cross-border relevant.

(13) As all potential remedial actions are considered as cross-border relevant in Core CCR, when it comes to coordinated regional operational security analysis, there is no need for qualitative or quantitative assessment of their cross-border relevance in accordance with article 76 (2) of SO Regulation, Core ROSC Methodology CSAM. Nevertheless, after optimal cross-border remedial actions are determined by RAO, these can be further modified by subsequent coordination and fast activation process and these modifications need to be coordinated only among the TSOs which are directly affected by the concerned remedial action. For this purpose, this ROSC Methodology also defines a methodology for a qualitative assessment of cross-border relevant remedial actions as detailed in Article 11 and a methodology for a quantitative assessment as detailed in Article 12 of TSOs that are significantly affected by cross-border relevant remedial actions.

(14) To achieve the objectives stated in article 76(1) of the SO Regulation, the Core ROSC Methodology considers and, where necessary, complements:

- (a) the methodology for coordinating operational security analysis in accordance with article 75 of the SO Regulation (hereafter referred to as 'CSAM');
- (b) the common Core methodology for coordinated ~~Redispatching~~ redispatching and ~~Countertrading~~ countertrading (hereafter referred to as 'Core RD and CT Methodology') in accordance with article 35 of the CACM Regulation;
- (c) the common Core methodology for coordinated ~~Redispatching~~ redispatching and ~~Countertrading Cost Sharing~~ countertrading cost sharing (hereafter referred to as 'Core Cost Sharing Methodology' cost sharing methodology) in accordance with article 74 of the CACM Regulation.

(15) In accordance with article 6(6) of SO Regulation, the Core ROSC Methodology includes a timescale for its implementation.

(15) ~~The Core~~ In this ROSC Methodology, the CROSA, consists of a preparation step, a coordination step (containing one or more coordination runs) and a validation step. The CROSA describes the coordination between TSOs and RSC(s) of the Core CCR as well as coordination of Core TSOs and RSC(s) with the TSOs and RSC(s) of other CCRs.

(16) In accordance with Recital (15) of the SO Regulation, synchronous areas do not stop at the European Union's (EU) borders and can include the territory of third countries. The TSOs should aim for secure system operation inside all synchronous areas which include EU countries. This ROSC Methodology is open to participation of third country TSOs subject to a common agreement and equal rights and responsibilities.

(17) To ensure the tools implemented to build CGMs and operated by RSC(s) will be compliant with the respective requirements set up in the relevant legislation in force, including the SO Regulation

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(notably Article 79(5) of the SO Regulation), the CGMM and the CSAM, while ensuring reliability of the CGM delivery process and the aligned use of the resulting unique CGM, a consistent and harmonised approach at pan-European level is needed. This should be facilitated by ENTSO-E where all EU TSOs are involved.

(18) This ROSC methodology also includes the appointment of RSC(s), rules concerning the governance and operation of RSC(s), a proposal for a coherent allocation of the tasks between RSC(s) and an assessment demonstrating that the proposed setup of RSC(s) and allocation of tasks is efficient, according to Articles 77(1), 77(2) and 77(3) of the SO Regulation.

(19) To fulfil the obligation of providing an assessment demonstrating that the proposed setup of RSC(s) and allocation of tasks is efficient, effective and consistent with the regional coordinated capacity calculation established pursuant to Articles 20 and 21 of the CACM Regulation, Core RSC(s) in coordination with Core TSOs have provided to Core regulatory authorities an assessment of the efficiency and effectiveness of allocation of tasks to RSCs that demonstrates the efficiency and effectiveness of the proposed setup.

(20) In accordance with Article 35(2) of Regulation 2019/943 of the European Parliament and of the Council on the internal market for electricity (hereafter referred to as the “Electricity Regulation”), the regional coordination centres (‘RCCs’) shall replace the RSCs established pursuant to the SO Regulation and shall enter into operation by 1 July 2022. Core RCC(s) shall complement the role of TSOs by performing the tasks of regional relevance assigned to them in accordance with Article 37 of the Electricity Regulation.

(21) This ROSC Methodology contributes to the objectives of the SO Regulation concerning the as follows:

(d) for the Core CCR common operational security requirements and principles are followed with the common remedial action optimisation in accordance with Article 4(1)(a) of the SO Regulation as well as introducing common interconnected system operational planning principles for remedial actions in accordance with Article 4(1)(b) of the SO Regulation;

(a) it ensures the conditions for maintaining of the operational security throughout the Union by specifying the provisions and process for all TSOs and RSCs on the coordination of operational security within Core CCR as well as with neighbouring CCRs systems in accordance with Article 4(1)(d) of the SO Regulation;

(b) promoting the coordination of system operation and operational planning, by using for the Core CCR a common remedial action optimisation where RSCs together with TSOs will ensure efficient coordination in accordance with Article 4(1)(f) of the SO Regulation;

(16)(c) ensuring transparency and reliability of information on transmission system operation, and the efficient operation of the electricity transmission system in the Union, by introducing common monitoring obligations and communication formats in accordance with Article 4(1)(g) of the SO Regulation;

(17) Furthermore, contributing to the Core ROSC Methodology ensures application of efficient operation and development of the principles of proportionality and non-discrimination, transparency, electricity transmission system and electricity sector in the Union making sure

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that the most efficient resources are used in the optimisation between the highest overall efficiency and lowest total costs for all parties involved; and use of market-based mechanisms as far as possible, to ensure network security and stability.

~~(18)(d)~~ In relieving congestions in accordance with Recital (5) Article 4(1)(h) of the SO Regulation, synchronous areas do not stop at the European Union's (EU) borders and can include the territory of third countries. The TSOs should aim for secure system operation inside all synchronous areas stretching on the EU. They should support third countries in applying similar rules to those contained in this Regulation. ENTSO for Electricity should facilitate cooperation between EU TSOs and third country TSOs concerning secure system operation;

~~(19)~~ The Core ROSC methodology includes common provisions concerning the organisation of regional operational security coordination, including the appointment of RSCs, rules concerning the governance and operation of RSCs, a proposal for a coherent allocation of the tasks between RSCs and an assessment demonstrating that the proposed setup of RSCs and allocation of tasks is efficient, according to articles 77 (1), 77 (2) and 77 (3) of SO Regulation.

~~(20)~~ To fulfil the obligation of providing an assessment demonstrating that the proposed setup of RSCs and allocation of tasks is efficient, effective and consistent with the regional coordinated capacity calculation established pursuant to articles 20 and 21 of CACM Regulation Core RSCs in coordination with Core TSOs have provided an Efficiency and Effectiveness Assessment demonstrating the efficiency and effectiveness of the proposed setup.

~~(21)(22)~~ In conclusion, the Core this ROSC Methodology contributes to the general objectives of the SO Regulation and of the Electricity Regulation and to the benefit of all TSOs, the Agency, national regulatory authorities and market participants: and electricity end-users.

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TITLE 1 GENERAL PROVISIONS

Article 1 Subject matter and scope

- ~~The Core~~This ROSC Methodology shall be considered as the methodology of Core TSOs ~~is developed~~ in accordance with ~~article~~Article 76 of ~~the~~ SO Regulation and for organisation ~~for~~of regional operational security coordination in accordance with ~~article~~Article 77 of ~~the~~ SO Regulation.
- ~~The Core~~This ROSC Methodology shall cover the year-ahead, day-ahead and intraday regional operational security coordination within Core CCR. ~~Core~~
- ~~2.3.~~This ROSC Methodology shall apply to all TSOs and RSCs within the Core CCR. This ROSC Methodology shall apply to Core RCCs upon their establishment pursuant to Article 35 of the Electricity Regulation.

~~3. The Core~~ This ROSC Methodology is ~~subject~~ shall also apply to ~~Core NRA approval in accordance with~~ third country TSO(s), if such TSO(s) have signed an agreement with article 6 (3)(b) of SO Regulation.

Article 2

Definitions and interpretation

~~1. In all Core TSOs that they shall comply with this Core~~ ROSC Methodology, as well as the following acronyms are used:

- (a) ~~'ANORA'~~ means 'Agreed but Not Ordered Remedial Action';
- (b) ~~'CGM'~~ means Core methodologies pursuant to Article 35 and Article 74 of the 'common grid model';
- (e) ~~'CGMM'~~ means CACM Regulation and accept all the methodology regarding articles 67 and 70 of SO Regulation;
- (d) ~~'CROSA'~~ means 'Coordinated Regional Operational Security Assessment';
- (e) ~~'IGM'~~ means rights and obligations stemming from them. In such case the 'individual grid model';
- (f) ~~4. 'RD and CT'~~ means 'redispatching reference to Core TSO(s) and countertrading'; Core CCR in this methodology shall also include such third country TSO(s).
- (g) ~~'ROSC'~~ means 'Regional Operational Security Coordination'.

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Article 2

Definitions and concepts

~~1. For the purposes of the Core~~ this ROSC Methodology, the terms used shall have the meaning of the definitions included in ~~article~~ Article 3 of the SO Regulation, ~~article~~ Article 2 of the CACM Regulation, ~~article~~ Article 2 of ~~Commission~~ the Electricity Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and article Article 2 of ~~CSAM~~ the Transparency Regulation.

~~2. In addition, the following acronyms and definitions shall apply:~~

- (a) ~~'Activated RA'~~ means the ordered RA ~~'cross-border relevant remedial action'~~ or 'XRA' means a remedial action identified as cross-border relevant and needs to be applied in a coordinated way;
- (b) ~~'available XRA'~~ means an XRA that is available for the CROSA to relieve operational security violations;
- (c) ~~'recommended XRA'~~ is an XRA determined as optimal by RAO and/or recommended by RSC(s) to TSOs;
- (d) ~~'agreed XRA'~~ means an XRA which has agreed during the coordination among Core TSOs and RSC(s);
- (e) ~~'ordered XRA'~~ is an agreed XRA that bindingly ordered after the end of CROSA;
- (f) ~~'agreed but not ordered XRA'~~ or ~~'ANORA'~~ is an agreed XRA that has not been agreed and ordered after the end of CROSA;

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- (g) 'activated XRA' means ordered XRA that has been implemented in the network by the XRA connecting TSO(s), or by the resource request for their activation has been sent to the third party XRA provider;
- (h) 'Conditionally shared RA' means a shared RA; 'CGM' means the common grid model as defined in Article 2(2) of the CACM Regulation;
- (i) 'CGMM' means the common grid model methodology pursuant to Articles 67 and 70 of the SO Regulation;
- (j) 'conditionally available XRA' means an XRA whose availability depends on conditions determined by the XRA Connecting TSO(s);
- (k) 'CROSA Affected' 'CSAM' means the methodology for coordinating operational security analysis pursuant to Article 75 of the SO Regulation;
- (l) '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;
- (m) 'coordinated operational security analysis' means an operational security analysis performed by a TSO in accordance with Article 72(3) and 72(4) of the SO Regulation;
- (n) 'ID RSA' means the intraday regional operational security analysis as referred to in Article 72(1)(d) of the SO Regulation;
- (o) 'IGM' means the individual grid model as defined in Article 2(1) of the CACM Regulation;
- (p) 'RAO', means remedial action optimisation that determines optimal set of XRAs within each CROSA;
- (q) 'RD and CT' means 'redispatching and countertrading' as defined pursuant to Article 2(26) and Article 2(13) of the Transparency Regulation;
- (r) 'ROSC' means 'regional operational security coordination';
- (s) 'scanned element' means a network element which is monitored during CROSA such that CROSA does not worsen, or create new operational security violations.
- (t) '(X)RA connecting TSO' means a TSO which is affected by the full set of RAs resulting from CROSA with a RA influenced factor greater than the threshold defined in article 15 (5) of CSAM.
- (u) 'Non Shared RA' means a RA used to relieve specific operational security limits violations and not available for the global optimisation;
- (v) 'Ordered RA' is the subset of the agreed RA that is bindingly ordered by the RA Requesting TSO and RA Connecting TSO;
- (w) 'RA Connecting TSO' means the TSO responsible for the control area where the (X)RA is located or connected or activated. In case of an interconnector, the TSO executing the topological change shall be considered as (X)RA connecting TSO;
- (x) 'RA Requesting' 'XRA affected TSO' means the TSO which is significantly impacted by the activation of an XRA;
- (y) 'XNE' or 'cross-border relevant network element' means a network element identified as cross-border relevant and on which operational security violations need to be managed in a coordinated way;

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- (w) 'XNEC' or 'cross-border relevant network element with contingency' means an XNE associated with a contingency. For the purpose of this methodology, the term XNEC also covers the case where an XNE is used in operational security analysis without a specified contingency;
- (x) 'XNE connecting TSO' means the TSO responsible for the control area where the XNE is located or connected. In case of an interconnector, the TSOs on both sides of the interconnector shall be considered as XNE connecting TSOs;
- (y) 'third party (X)RA provider' means a party other than the (X)RA connecting TSO who owns and/or operates the assets involved in the activation of in the concerned (X)RA;
- (z) 'network element' means any component of a transmission system, including interconnectors, or of a distribution system, including a closed distribution system, such as a single line, a single circuit, a single HVDC system, a single transformer, a single phase-shifting transformer, or a voltage compensation installation;
- (aa) 'RAIF' or 'remedial action influence factor' means a flow deviation on a XNEC resulting from the application of a remedial action, normalised by the PATL on the associated XNE;
- (bb) 'preventive (X)RA' means a remedial action that is the result of an operational planning process and needs to be activated prior to the investigated timeframe for compliance with the (N-1) criterion;
- (cc) 'local preliminary assessment' means an operational security analysis performed by a TSO to prepare an individual grid model;
- (dd) 'overlapping XNE' means an XNE on which the physical flows are significantly impacted by electricity exchanges in two or more CCRs or by XRAs from two or more CCRs;
- (ee) 'overlapping XRA' means an XRA that is able to address operational security violations on overlapping XNE;
- (ff) 'curative (X)RA' means a remedial action that is the result of an operational planning process and is activated straight subsequent to the occurrence of the respective contingency for compliance with the (N-1) criterion, taking into account TATL and the accepted duration of transitory admissible overload;
- (gg) 'virtual positive load margin' means a positive margin defined by a TSO for a scanned element that will be applied on top of the PATL in order to represent the influence of available remedial action which is not an XRA.
- (hh) 'permanent admissible transmission loading', or 'PATL' means the maximum loading in amperes, MW or MVA that can be sustained on a network element for an unlimited duration without risk to the equipment;
- (ii) 'temporary admissible transmission loading', or 'TATL' means the maximum loading in amperes, MW or MVA that can be sustained on a network element for a limited duration without risk to the equipment;
- (jj) 'thermal limit' refers to both PATL and TATL;

(kk) 'transitory admissible overload' means the temporary overload of a network element which is allowed for a limited period and which do not cause physical damage to the network element as long as the defined duration and thresholds are respected;

2. This ROSC Methodology defines the following types of XRAs determined in the following sequence:

- (a) Recommended XRAs are the XRAs determined as optimal by RAO and recommended by RSC(s) to TSOs;
- (b) Agreed XRAs are the recommended XRAs which are either agreed or modified during the coordination among TSOs and RSC(s);
- (c) Ordered XRAs are agreed XRAs for which TSOs and RSC(s) agree that their activation cannot be postponed until the next CROSA due to specific activation constraints (e.g. required activation time) of such XRAs;
- (d) Activated XRAs are the ordered XRAs which have been implemented by the XRA connecting TSOs, or the request for their activation has been sent to the resource provider.

3. This ROSC Methodology determines the following types of constraints:

(a) Operational security limits: the acceptable operating boundaries for secure grid operation of the control area where the violation of. This ROSC Methodology shall cover the following operational security limits is detected. In case of a violation of operational security:

(g)(i) thermal limits on a cross border transmission line, both TSOs responsible for the operation of that line are considered to be RA Requesting TSOs; of network elements (PATL and TATL);

(h) 'Secured Element' means an assessed element on which, when violations of an operational security limit are identified during the regional or cross regional security analysis, RAs are needed in order to relieve these violations.

(i) 'Scanned Element' means an assessed element on which the electrical state (at least flows) may be computed and may be subject to an observation rule during the regional security analysis process. Such an observation rule can be for example to avoid increasing a constraint or to avoid creating a constraint on this element, as a result of the design of RAs needed to relieve violations on the Secured Elements.

(j) 'Shared RA' means a RA available for the global optimisation to relieve operational security limit violations;

3. The following types of constraints are considered in this methodology:

(a) Operational security constraints: constraints in line with SO Regulation mean a situation in which there is a need to prepare and activate a RA in order to respect operational security limits. The consideration of these constraints within Core ROSC Methodology is further defined in Article 25. The constraints consist of the following:

(i) Currents and voltages exceeding operational security limits;

(ii) Violations of voltage limits;

(iii)(iii) stability limits of the transmission system identified in accordance with article Article 38(2) and article Article 38(6) of the SO Regulation; and

(iii)(iv) Violations of short-circuit current limits of the transmission system.

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(b) Constraints on ~~RA~~XRAs: constraints related to all aspects required to be taken into account when using ~~RA~~XRAs and classified as following:

- (i) ~~Technical~~technical constraints are ~~all the rules related to the~~representing technical limitations for ~~resources for redispatching in accordance with article 5 and countertrading in accordance with article 6~~activation of ~~Core RD and CT Methodology or network elements~~XRAs;
- (ii) ~~Operational~~operational constraints are ~~all~~ the operational conditions and usage rules taking into account the timings to operate the network and avoid a premature ageing of the ~~network elements~~assets included in the XRAs;
- (iii) ~~Procedural~~procedural constraints are all the timing constraints due to local or regional processes; and
- (iv) ~~Legal~~priority constraints are ~~the representing national~~ legal requirements stated in national laws regarding the priority of activation of ~~RA~~XRAs.

(c) Additional optimisation constraints called system constraints are ~~all the~~additional optimisation constraints ~~added by Core TSOs~~, expressed as ~~flow limitation~~current limits on a single or a set of ~~Secured~~XNEs and ~~Seanned Elements~~scanned elements and necessary to respect ~~stability limits or~~ operational security limits other than current limits. ~~These are further detailed in Article 17~~PATL and TATL.

4. In this ~~Core~~ ROSC Methodology, unless the context requires otherwise:

(a) The acronym '(X)RA' is used where the reference can mean both the remedial action or cross-border relevant remedial action;

~~(a)~~(b) The singular indicates the plural and vice versa;

~~(b)~~(c) Headings are inserted for convenience only and do not affect the interpretation of this ~~Core~~ ROSC Methodology;

~~(c)~~(d) Any reference to legislation, regulations, directives, orders, instruments, codes or any other enactment shall include any modification, extension or re-enactment of it when in force;

(e) Any reference to an Article without an indication of the document shall mean a reference to this ROSC Methodology.

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TITLE 2

REGIONAL OPERATIONAL SECURITY COORDINATION

Article 3

General provisions for ROSC

1. Core TSOs in coordination with Core ~~RSC~~RSC(s) shall perform the ROSC for long term studies for year-ahead regional operational security coordination in accordance with CSAM. When Core TSOs propose a first amendment to this ROSC Methodology, they shall include in this proposal also the detailed process for regional operational security coordination for year-ahead timeframe as well as possible other long-term timeframes.

2. Core TSOs in coordination with Core ~~RSC~~RSC(s) shall execute the ROSC for each ~~hour~~timestamp of the target operation day. The ROSC ~~is composed~~consists of the following activities:

- ~~(a) Core TSOs and Core RSCs shall perform Intraday regional operational security analysis (ID RSA) as described in Article 4;~~
- ~~(b) One day-ahead and several intraday CROSAs. Day-ahead CROSAs shall be performed in accordance with the timings of article 45 defined in CSAM. Intraday CROSAs shall be performed at least three times in the intraday timeframe in accordance with article 24 of timings defined in CSAM. Each CROSA shall consist of:~~
- ~~(i) Preparation as described in Chapter 1 of Title 4;~~
 - ~~(ii) Coordination as described in Chapter 2 of Title 4;~~
 - ~~(iii) Validation as described in Chapter 3 of Title 4.~~
- ~~(b) Core TSOs shall implement the Agreed RAs in the subsequent IGMs and shall activate the Ordered RAs following the provisions in accordance with Articles 35 and 36.~~
- ~~(iv) Implementation and activation as described in Chapter 4 of Title 4.~~
- ~~A CROSA may consist of two coordination runs.~~
- ~~(c) Fast activation process as described in Title 5. Core TSOs shall have the right to modify an Ordered RA ordered XRA or may activate a new (X)RA following the fast activation process in accordance with Article 37.~~

Article 4 **Intraday regional operational security analysis**

- ~~1. In addition to intraday CROSA, Core TSOs with Core RSCs shall perform intraday regional security analysis ('ID RSA').~~
- ~~2.1~~ The goal of the ID RSA is to provide Core TSOs ~~each hour of the day with~~ the latest information ~~for each timestamp of the operation day~~ about the loading of the transmission system and previously undetected ~~operational security violations of operational security limits~~, which may serve as a trigger for a fast activation process.
- ~~3.2~~ ~~This~~ ID RSA shall be performed at each hour of the day for each timestamp until the end of the ~~operation~~ day.
- ~~4.3~~ ID RSA shall be performed on the updated IGMs containing the latest available forecast of generation and load, planned ~~and outages~~, forced outages, ~~Agreed RAs~~ and ~~Ordered RAs agreed XRAs~~.
- ~~5.4~~ For the purpose of ID RSA, each Core ~~TSOs~~ TSO shall provide ~~every hour~~ IGMs ~~to Core TSOs and RSC(s)~~ for all remaining ~~hour~~ timestamps of the ~~operation~~ day, respecting CGMM provisions ~~for their content~~ and including all ~~Agreed RAs agreed XRAs~~ resulting from ~~the~~ latest CROSA or fast activation process.
- ~~6.5~~ ~~RSCs~~ Core RSC(s) shall merge updated IGMs into an updated CGM, perform a load flow and contingency analysis ~~calculation~~ and deliver the results to all Core TSOs.

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TITLE 3
DEFINITION AND DETERMINATION OF ~~CORE XNES, XNAS, CONSTRAINTS AND~~
CONTINGENCIES CROSA INPUTS

Article 5
Secured elements Definition of XNEs

1. Secured Elements XNEs shall represent a set of be:
 - (a) all critical network elements in the Core CCR ('CNEs') included in the final list of CNEs in the day-ahead and intraday capacity calculation methodology of the Core CCR in accordance with the CACM Regulation; and
 - (b) all other network elements within the control area of Core TSOs with a voltage level higher than or equal to 220 kV, except for those network elements that are not CNEs and for which Core TSOs agree that they are not cross-border relevant for the Core CCR and may therefore be excluded, following the process referred to in Article 7(3)(b)(iii).
2. The list of XNEs shall contain all XNEs defined in paragraph 1.

Article ~~subject to the CROSA,~~ 6
Definition of scanned elements

1. The scanned elements shall be network elements, which are not XNEs and on which CROSA shall not worsen eventually existing operational security limits-violations-need to be managed in a coordinated way, or create new operational security violations.
2. The Secured Elements For CROSA purposes only, each Core TSO shall be identified as cross-border relevant network elements (XNEs) in accordance with CSAM within set on each scanned element an individual virtual positive load margin, on top of the Core CCR.
3. Secured Elements shall at least include all Core Critical Network Elements PATL defined in day-ahead and intraday capacity calculation methodology in accordance with article 21 of CACM Regulation of the Core CCR and XBRNEs in accordance with Core RD and CT Methodology-its IGM.
3. Core TSOs shall have a right The list of scanned elements shall contain all scanned elements defined pursuant to paragraph 1.

Article 7
The establishment and maintenance of the lists of XNEs and scanned elements

1. By twelve months before the implementation of the first implementation step of this methodology, all Core TSOs, with the support of Core RSC(s) shall determine the list of XNEs and the list of scanned elements in accordance with Article 5 and Article 6.
2. By twelve months before the implementation of this methodology, all Core TSOs, with the support of Core RSC(s), shall agree on a process for amendments and regular review of the list of XNEs and the list of scanned elements.

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3. When establishing and maintaining the list of XNEs and the list of scanned elements, each Core TSO shall have the right, for the network elements which are at least partly located in its control area:

(c) to include in the list of XNEs any network element with a voltage level higher than or equal to 220 kV without further agreement with other Core TSOs, if the network element is modelled in the TSO's year-ahead IGM or in the IGM otherwise specified in the process pursuant to paragraph 2;

4.(d) to exclude any network element from the Secured Elements set that fulfils one of the following criteria: list of XNEs (except for CNEs) as follows:

(a) Element is a power plant line;

(b) Element is the following network elements may be subject to exclusion without further agreement with other Core TSOs: (i) radial line;

(c) Element is connected to a DSO;

(d)(i) Element is a transformer lines, including those connecting power plants, (ii) distribution network elements and (iii) transformers with the secondary voltage side lower than 220 kV;

5. Core TSOs shall have the right at any time to exclude any element from the Secured Elements set, except mandatory elements defined in paragraph 3, if there is a common agreement between Core TSOs that such element may be excluded.

6.(ii) Core TSOs, which are part of more than one CCR, shall have the right to exclude from the list of XNEs any network element from the Secured Elements set which that is subject to CROSA regional operational security coordination within other CCRs, CCR(s). In such case, the corresponding Core TSO shall inform the TSOs and RSC(s) of the other CCR(s), about the network elements it excluded;

7.(iii) The list of excluded Core TSOs shall have the right to exclude any elements from the Secured Elements set shall be shared with the respective Core RSCs and amongst list of XNEs (except for CNEs) if there is a common agreement amongst Core TSOs; that such elements can be excluded;

8. Each Core TSO shall have the right at any time to include any element with a voltage level higher than or equal to 220 kV in the Secured Elements set.

Article 6

Scanned list of scanned elements

1. Scanned elements shall represent a set of elements on which CROSA shall not create new operational security limits violations or worsen any existing violation. Each Core TSO may, for CROSA purposes only, deviate from this by setting individual thresholds for the Scanned Elements of its IGM.

2.(c) Core TSOs shall have the right at any time to include any any network element excluded from the Secured Elements set in the Scanned Elements set: list of XNEs;

3.(f) Core TSOs shall have the right at any time to include any in the list of scanned elements any network element which is modelled in its IGM, with a voltage level lower

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than 220 kV in the Scanned Elements set, which is modelled in its IGM, providing justification for its inclusion that is not on the list of XNEs;

4.(g) Core TSOs shall have the right at any time to exclude any network element from the Scanned Elements set; list of scanned elements;

Article 7

~~The list of secured elements and to move any network element from its control area fulfilling the criteria for XNEs defined in Article 5 from the list of scanned elements~~

~~1.(h) By three months after the approval of this methodology, Core TSOs with the support of the respective Core RSCs shall define to the list of Secured Elements and the list of Scanned Elements in accordance with Article 5 and Article 6 XNEs.~~

~~4. If a new~~ Each Core TSO shall have the right to include in the list of scanned elements also overlapping XNEs which are declared as XNEs in other CCRs as well as other network elements which are part of its observability area.

~~2.5. When applying the process referred to in paragraph 2 and if a new network element with a voltage level higher than or equal to 220 kV is commissioned, it shall be included in the Secured Elements list, unless the Core TSO operating this network element decides not to include it shall decide on its inclusion in the Secured Elements list in accordance with of XNEs pursuant to paragraph 2 while respecting Article 5.~~

~~3.6. If a new~~ When applying the process referred to in paragraph 2 and if a new network element with a voltage level lower than 220 kV is commissioned, the Core TSO operating this network element may shall decide to include it on its inclusion in the Scanned Elements list in accordance with of scanned elements pursuant to paragraph 2 while respecting Article 6.

~~4. Each Core TSO shall have the right at any time to move any element it operates with a voltage level higher than or equal to 220 kV from the Scanned Elements list to the Secured Elements list.~~

~~5.7. Core TSOs~~ By applying the process referred to in paragraph 2, Core TSOs shall update the Secured Elements list of XNEs and Scanned Elements the list of scanned elements when necessary and inform the Core RSCs RSC(s) about the change. The lists list of Secured Elements XNEs and the list of Scanned Elements scanned elements shall be reassessed by Core TSOs at least once a year.

~~8. Core RSCs TSOs shall use share the latest lists list of Secured Elements XNEs and Scanned Elements the list of scanned elements with Core RSC(s) for day-ahead and intraday CROSAs.~~

~~6.9. Core RSC(s) shall start using the newly shared by the Core TSOs list of XNEs and the list of scanned elements in the next CROSA.~~

Article 8

Cross-border relevant network elements

~~1. The list of Secured Elements defined in accordance with Article 7, represents the list of cross-border relevant network elements of Core CCR, hereafter 'Core XNEs'.~~

The Core Cost Sharing Methodology defines how the cost sharing for the Core XNEs will apply, and distinguish between XBRNEs as defined by the Core RD and CT Methodology and non-XBRNEs.

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Article 9
Classification of remedial actions

1. Each Core TSO shall classify the RAs in accordance with ~~article~~Article 22 of ~~the~~ SO Regulation.
2. ~~RAs classified in categories (d), (h), (i) and (j) of Article 22(1) of the SO Regulation shall not be used for the ROSC process.~~

Article

Article 10
9
Cross-border relevance of remedial actions

1. Within one month after the list of ~~Secured Elements set~~XNEs has been defined in accordance with Article 7, Core TSOs shall share with the Core ~~RSCs~~RSC(s) all potential RAs, designed in accordance with ~~article 14~~ of CSAM, which are at least ~~generally~~~~sometimes~~ able to address violations of current limits ~~on XNEs. In doing so, each Core TSO shall also consider the potential RAs recommended by Core RSC(s) in accordance with Article 78(2)(a) of the SO Regulation. Each Core TSO shall continuously assess the possibility for new potential RAs. All Core TSOs and RSC(s) shall commonly assess the possibility for new potential RAs at least on biannual basis.~~
2. ~~All potential RAs identified pursuant to paragraph 1 shall be considered as cross-border relevant (XRAs), unless all Core TSOs unanimously agree that a potential RA is not cross-border relevant.~~
- 2.3. ~~Core TSOs, in coordination with Core RSCs, RSC(s), shall jointly assess the cross-border relevance of potential RAs shared by Core XRA affected TSOs in accordance for each XRA determined pursuant to paragraph 4.2.~~
- 3.4. ~~Core TSOs shall aim at agreeing on a qualitative approach in accordance with Article 14.10 to determine RAs that are deemed cross border relevant and to determine the corresponding TSOs XRA affected by those RAs TSOs for each XRA.~~
5. ~~If the concerned XRA is quantifiable such as RD and CT, change of set point on HVDC systems or change of taps on phase-shifting transformers, the quantity above which this XRA is having a significant effect on the control areas of other TSOs and its control area has to be specified in accordance with CSAM.~~
- 4.6. ~~If Core TSOs cannot agree on XRA affected TSOs based on a qualitative approach, in accordance with Article 11, for a certain RA a 10, quantitative approach in accordance with Article 12.11 shall be used for this RA to determine the XRA affected TSOs.~~
- 5.7. ~~Core TSOs shall jointly define and share with the Core RSCs RSC(s) the list of RAs that are deemed cross-border relevant XRA affected TSOs and any update to such list.~~
6. ~~Reassessment of the list of cross-border relevant RAs shall be done on a yearly basis by Core TSOs with the support of Core RSCs.~~
7. ~~If a new RA is designed in day ahead or intraday operational planning, each Core TSO shall assess its cross-border relevance using a quantitative approach in accordance with article 15 (5) of CSAM.~~
8. ~~The RA influence factor computation for RAs described in paragraph 7 shall be performed on the latest available CGM.~~
- 9.8. ~~If a new RA is designed between two mandatory assessments in accordance with paragraph 6 and prior to day-ahead operational planning, each Core TSO shall assess its cross-border relevance in~~

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accordance with Article 11. In case Core RSC(s), shall reassess the XRA affected TSOs cannot agree on the result of the qualitative approach, a quantitative approach in accordance with Article 12 shall be assessed at least on an annual basis.

~~10. Core TSOs shall delegate the task described in paragraph 7 to Core RSCs.~~

~~11.9.~~ If a new potential RA is designed by a Core TSO for its control area during real time operation and if the system is in alert state in accordance with the Article 18 of the SO Regulation, ~~the RA Connecting and determined as XRA pursuant to paragraph 2~~, the XRA connecting TSOs shall use quantitative assessment in order to identify ~~if this RA is cross border relevant. When the XRA affected TSOs. In doing this so~~, the ~~RA Connecting TSOs~~ XRA connecting TSO shall check that the activation of such ~~RA~~ XRA does not lead to ~~violations of operational security limits~~ violations on network elements of its observability area using either the latest available CGM or its model from the state estimator. If such analysis shows that the activation of RA as a new XRA may cause operational security violations on network elements of its observability area, its activation has to be coordinated with the TSOs TSO(s) where the ~~violation occurs~~ operational security violations occur.

~~12. In an emergency state, Core TSOs shall apply the provision of article 16 (4) of CSAM.~~

~~10. During real time operation, if the system is in emergency state and only when operational conditions allow it, when preparing restoring remedial actions each TSO shall assess the XRA affected TSOs.~~

~~13.11.~~ Between two mandatory assessments of ~~RAs in accordance with~~ XRA affected TSOs pursuant to paragraph ~~68~~, each Core TSO shall have the right to request an additional assessment of ~~a RA~~ XRA affected TSOs providing justification for such a request to the ~~RA Connecting~~ XRA connecting TSO and respective Core ~~RSCs~~ RSC(s).

~~14.12.~~ During fast activation process, when a Core TSO proposes an XRA in ~~accordance with paragraphs 3 and 4 of article 17 of the emergency and alert state pursuant to~~ CSAM and when this TSO is the ~~RA Connecting~~ XRA connecting TSO as well as the only XRA affected TSO, the activation of this XRA shall not be subject to further coordination. Core TSOs and Core RSC(s) shall be informed of the activation of such XRA.

~~15. If a RA is not identified as cross border relevant in accordance with Article 11 and Article 12, it shall be considered as non cross border relevant.~~

Article _____ 14

Article 10 Qualitative assessment of XRAs ~~XRA affected TSOs~~

~~1. Core TSOs, with the support of Core RSCs, shall jointly establish a list of potential RAs provided by Core TSOs to Core RSCs in accordance with Article 10 (1).~~

~~2. For each RA included in the list defined in paragraph 1:~~

~~1. For each XRA identified pursuant to Article 9(2):~~

~~a.(a) _____ Each Core TSO shall individually assess the cross border relevance effect of the RA each XRA on its control area;~~

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~~b.(b)~~ Each ~~RA Connecting~~XRA connecting TSO shall assess the ~~cross border relevance~~effect of the RA~~its~~ XRA~~s~~ on control areas of other ~~Core~~ TSOs and also on its control area;

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~~e.~~ If the RA is quantifiable such as RD and CT, change of set point on HVDC systems or change of taps on phase shifting transformers, the quantity above which this RA is deemed cross border relevant on the control areas of other TSOs and its control area has to be specified in accordance with article 15 (7) of CSAM;

~~3.2~~ Core TSOs may delegate the tasks described in paragraph 21 to ~~their respective~~ Core RSC~~(s)~~.

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~~3.~~ ~~Each~~When a Core TSO identifies that an XRA has a significant impact on its control area, it shall propose RAs, considered by that Core inform the XRA connecting TSO and request that it be determined as being cross border relevant providing XRA affected TSO and provide justification for their selection to RA Connecting such request.

~~4.~~ If Core TSOs-

~~5.4~~ If reach a common agreement among Core TSOs is reached that an XRA has significant impact on specific control area, then the RA is concerned TSO shall be defined as cross border relevant and all XRA affected TSOs are identified TSO.

~~6.~~ If a RA is not proposed as cross border relevant by If XRA connecting TSO receives no request from any other Core TSO, it is considered to be determined as non cross border relevant.

~~7.5~~ If a RA is identified as cross border relevant only by the RA Connecting XRA affected TSO, ~~this~~the XRA connecting TSO shall be considered as the only XRA affected TSO.

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Article 1211 Quantitative assessment of XRA affected TSOs

1. Core TSOs RSC(s) shall use the CGMs established in accordance with ~~article~~Article 67 of the SO Regulation when computing RA influence factor in accordance with article 15 CSAM, quantifying the effect of XRA on TSOs.

~~2.~~ Each Core TSO shall provide a list of elements on which the influence of a RA shall be assessed. ~~The~~Quantitative assessment of XRA affected TSOs shall be done at least on the XNEC elements on all XNEs defined in accordance with article 15 (4) of CSAM.

~~3.2~~ The RA influence factor shall be calculated in accordance with article 15 (4) Articles 5 and article 15 (5) of CSAM for RAs for which an agreement on using a qualitative approach in accordance with Article 11 could not be reached. 7.

~~4.3~~ If a RA an XRA consists of a combination of actions, ~~its cross border relevance~~the quantitative assessment of XRA affected TSOs shall be assessed done for the combined effect of the combination.

~~5.~~ Core TSOs shall delegate the task of performing calculations of RA influence factors to the Core RSCs.

~~6.~~ All RAs for which an influence factor for at least one XNEC is greater than the threshold defined in article 15 (5) of CSAM shall be considered as cross border relevant, otherwise the RAs shall be considered as non cross border relevant.

~~7. All Core TSOs that have at least one affected XNEC for which the RA influence factor is greater than the threshold. A TSO shall be considered as XRA affected TSOs, TSO if the RAIF calculated in accordance with article 15 (8) of CSAM.~~

4. CSAM for this XRA is equal or higher than 5% on any XNE (in N-situation or contingency) for which this TSO is the XNE connecting TSO. This significance threshold may be reduced if agreed by Core TSOs subject to governance framework defined in Article 1336.

5. The RAIF referred to in paragraph 4 shall be calculated on the latest available CGM.

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Article 12 **Contingency list**

1. Each Core TSO shall establish the list of contingencies (hereafter referred to as 'contingency list') to be simulated in operational security analysis. The contingency list shall be established in accordance with ~~article 10~~ Article 33 of the CSAM, hereafter referred to as "Contingency List". SO Regulation.
2. Each Core TSO shall provide the respective Core ~~RSCs~~ RSC(s) and Core TSOs with ~~the Contingency List~~ its contingency list to be used in CROSA and shall inform the Core ~~RSCs~~ RSC(s) about any update of this list in accordance with ~~article 11 of CSAM.~~
- ~~3. Core RSCs shall use the latest Contingency Lists shared by the Core TSOs.~~
3. In case a specific operational security violation on XNE or scanned element with specific contingency can be more efficiently addressed outside of the day-ahead and intraday CROSA, the Core TSOs and Core RSC(s) may exclude the relevant XNECs and scanned elements associated with a contingency from the concerned day-ahead and intraday CROSA if there is a common agreement amongst Core TSOs that such XNECs can be excluded.
4. Core RSC(s) shall start using the newly shared contingency lists in the next CROSA.

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TITLE 4 **COORDINATED REGIONAL OPERATIONAL SECURITY ANALYSIS PROCESS**

CHAPTER 1 **PREPARATION**

Article 1413 **Provision of ~~the regional operational security~~ CROSA inputs**

1. Each Core TSO shall provide the following input data to Core ~~RSCs~~ RSC(s):
 - ~~a-~~ (a) IGM according to Article ~~15~~ 14, including the operational security limits for each ~~Secured or Scanned Element~~ XNE and scanned element according to Articles 5 and 6;
 - (b) XNEs and scanned elements according to Articles 5 and 6;
 - (c) Contingency list according to Article 12.
 - ~~b-~~ (d) Available ~~RA~~ XRAs within its control area according to Article ~~16~~ 15;

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- (e) Constraints on XRAs in accordance with Article 2(4) and Article 15; and
- e.(f) When relevant, system constraints according to Article 17¹⁶;
- d. Secured and Scanned Elements according to Articles 5 and 6;
- e. Contingency List according to Article 13.

2. Core RSC(s) shall provide for each intraday CROSA the list of agreed XRAs from previous CROSA's archived by Core RSC(s) in accordance with Article 30.
3. When providing information on XNEs and XRAs pursuant to paragraphs 1(b) and (d) the connecting TSO shall also provide the information whether the concerned XNE or XRA is overlapping as determined pursuant to Article 28.
- ~~2.4.~~ The input data pursuant to paragraph 1 shall cover all ~~hours for a business~~ timestamps of the operation day ~~related to intraday and~~ in case of day-ahead CROSA ~~and all applicable timestamps~~ of the operation day in case of intraday CROSA.
- ~~3.5.~~ Each Core TSO shall ~~deliver or update when required~~ the input data ~~before for the commonly agreed process deadlines~~ second coordination run of the day-ahead CROSA and possible second coordination runs in intraday CROSA's in accordance with the provisions defined in Articles 14 to 17.
6. Article 15 ~~Within the timelines established pursuant to Article 18(4), all Core TSOs and RSC(s) shall define for each CROSA the common gate closure time by which the inputs pursuant to in paragraph 1 can be delivered and updated by Core TSOs.~~

Article 14

Preparation and updates of IGMs by Core TSOs

1. Each Core TSO shall prepare and deliver day-ahead and intraday IGMs for day-ahead and intraday CROSA's as defined in CSAM and the ~~methodology in accordance with article 70 (1) of SO Regulation~~ CGMM.
- ~~2.~~ Each Core TSO shall have the right to perform a local preliminary assessments. When preparing IGMs, each assessment pursuant to CSAM. Each Core TSO shall have the right to include in its IGM the (X)RAs resulting from these the local preliminary assessments in accordance with article 21 (3) of CSAM which were performed by Core TSOs assessment performed before the first day-ahead CROSA.
- ~~3.2.~~ When preparing IGMs, Core TSOs shall have the right to include non cross-border relevant RAs in accordance with article 21 (4) of the rules specified in CSAM resulting from local preliminary assessments performed by Core TSOs at any time.
- ~~3.~~ In accordance with CSAM, each Core TSO shall have the right to include ~~RD~~ in its IGM, the (X)RAs for which this TSO is the only XRA affected TSO and ~~CT~~ in their IGMs that are resulting from the local preliminary assessments in assessment performed by such Core TSO at any time.
4. In accordance with paragraph 2 and 3 of Article 15 CSAM, if a Core TSO includes in its IGMs the (X)RA(s) resulting from the local preliminary assessments pursuant to paragraphs 2 and 3, the information on ~~ordered RD and CT~~ these (X)RA(s) shall be shared among Core TSOs in order to and

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be clearly distinguishable in the IGM from the ~~network topology~~ initial state variables without these (X)RAs applied in accordance with ~~article~~ Article 70(4) of the SO Regulation.

~~5.~~ In case the methodology The costs of (X)RAs included in IGM resulting from the local preliminary assessment shall not be included in the final costs to be shared in accordance with ~~article 21 of CSAM is amended as requested by article 21 (6) of CSAM,~~ cost sharing methodology.

~~5-6.~~ In case paragraphs 2 and 3 are contradicting the provisions of ~~the amended article 21 of CSAM~~ shall suspend paragraph 2 and 3 of Article 15 if the amendment is related to these paragraphs, the relevant provisions from CSAM shall prevail.

~~6-7.~~ If the ~~result of the optimisation contains Agreed RAs~~ RAO results in agreed XRAs for the respective control area, each Core TSO shall provide to Core ~~RCS~~ RSC(s) an updated IGM with agreed XRAs between two coordination runs within one CROSA in accordance with ~~article 33 (1) (c) of CSAM~~ and ~~articles 3 and 4 of CGMM~~. The ~~RAs~~ XRAs resulting from the first coordination run ~~are~~ shall not be binding and shall be possible to be changed by the ~~optimisation function~~ RAO during the ~~second following~~ second following coordination run within the same CROSA if deemed ~~unnecessary~~ necessary.

Article 15 Information on available XRAs

Article 16

Preparation and update of remedial actions by Core TSOs

1. Each Core TSO shall make available all ~~potential RAs~~ XRAs as identified in Article 9(2) to the Core ~~RCS~~ RSC(s) for each day-ahead and intraday CROSAs as defined in CSAM unless an XRA is not available pursuant to this Article.
2. When identifying ~~the RAs that whether the XRAs identified pursuant to Article 9(2)~~ shall be made available for the day-ahead and intraday CROSAs, each Core TSO shall ~~take in consideration~~ respect the following principles:
 - a. ~~Define the RAs in line with the categories of article 22 of SO Regulation considering the provisions stated in articles 10 and 11 of the Core RD and CT Methodology;~~
 - b. (a) ~~Assess~~ Each XRA connecting TSO shall assess the availability of ~~the all its~~ XRAs defined according to identified in Article 10:9(2);
 - c. ~~Consider non XRAs, as defined according to Article 10, which could have an impact on any of~~ Each XRA connecting TSO may declare the ~~Secured or Seanned Element of his control area;~~
 - d. ~~Assess the availability of the RAs which were available for the previously performed CROSAs or capacity calculation of the same hour and the previously ANORAs;~~
 - e. (b) ~~Not consider the RAs which are XRA as not available following in case it~~ cannot be activated due to:
 - i. an unforeseen event, or
 - ii. ~~an~~ planned or unplanned outage, or
 - iii. a declaration of unavailability status done by a third party ~~owning the assets providing the RA~~ XRA provider, or

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iv. any other cause outside of the responsibility of the Core TSOs;
f. ~~Identify whether a RA provided to Core CCR is an overlapping~~In case XRA according to article 27 (3) of CSAM;

g. ~~(c) Identify whether a RA is shared, non-shared or is conditionally shared available,~~
the XRA connecting TSO shall provide to Core RSC(s) and additionally provide a other Core TSOs the conditions for its availability and the underlying justification to Core RSCs and Core TSOs why a RA is non-shared or conditionally shared;
h. ~~Identify to which CCR a RA is also made available.~~

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3. ~~Each Core TSOs~~TSO shall provide any relevant information for each RA available or conditionally available XRA for the purpose of day-ahead and intraday ~~ROSC~~CROSA process that will reflect the technical, operational or procedural constraints of the ~~RA~~XRA as defined in accordance with Article 2.

4. ~~Each Core TSO shall also provide, for the purpose of day-ahead and intraday CROSA, the information on the available volume of XRAs considering the constraints of XRAs as defined in accordance with Article 2.~~

5. ~~Core TSOs and Core RSC(s) shall agree and define a detailed specification of information requirements for XRAs needed for each CROSA. This shall include a predefined set of conditions for conditionally available XRAs.~~

~~4.6.~~In case of a second coordination run of the coordination stage of day-ahead or intraday CROSA, each Core TSO shall provide to the Core RSCs~~RSC(s)~~ an updated list of RAs~~information on available XRAs~~, considering:

a. ~~(a) The agreed outcome of the latest coordination run for the RAs~~XRAs in accordance with Article ~~3127~~ and ~~3228~~;

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b. ~~(b) Any~~Any update of XRA availability related to unplanned or forced outages or changes of outage schedules of relevant assets;

c. ~~(c) If relevant~~Any update of available XRA volumes related to the latest schedules of load and generation.

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7. In case XRAs are owned or provided by a third party, such third party XRA providers shall provide to the XRA connecting TSOs best up-to-date information on the availability of their XRAs, including all the necessary information that is required for CROSAs. This information shall be provided by the deadline determined by the XRA connecting TSO, which shall be shortly before the gate closure time referred to in Article 13(6). The provided information shall include at least the following:

(a) Available volume of XRAs;

(b) Technical characteristics and constraints of XRAs;

(c) Information on prices or costs of XRAs, which shall enable the XRA connecting TSOs and Core RSC(s) the estimation of total costs of XRAs subject to their optimal and/or ordered volume.

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Article 16

Article 17
System constraints

~~Each Core TSO shall have the right to make available to Core RSCs~~**System constraints**

1. ~~Core TSOs may apply~~ system constraints in accordance with Article 2 for the purpose of ~~dynamic stability, voltages exceeding~~respecting operational security limits ~~in the N-situation and after occurrence of a contingency from the Contingency List described in Article 13~~other than thermal limits. Such system constraints shall be expressed as a current limit on a single XNE or a set of XNEs and scanned elements.
2. The system constraints ~~introduced~~ for the purpose of dynamic stability, shall be defined based on ~~the criteria on~~for dynamic system stability in accordance with ~~articles~~Articles 38 and 39 of the SO Regulation.
3. ~~When~~Before applying such system constraints, the concerned Core TSO shall provide to other Core TSOs and Core ~~RSCs the reasoning of these system constraints~~RSC(s) in a transparent manner.
4. ~~If relevant, each Core TSO shall provide to the Core RSCs updated all the details and possible underlying studies on how the value of each specific system constraints, at the end of any coordination run of the coordination stage of day-ahead or intraday CROSA.~~

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Article 18

Preparation of secured and scanned elements and contingencies

1. ~~Each Core TSO shall make available the list of Secured and Scanned Elements for its control area to the Core RSCs for day-ahead and intraday CROSA in accordance with the principles defined in Article 7.~~
- 2.3 ~~Each Core TSO shall make available the Contingency List for its control area to the Core RSCs for day-ahead was determined and intraday CROSA pursuant to the principles defined in Article 13 developed in line with CSAM~~calculated.

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Article 19
List of Agreed RAs

4. ~~The~~When Core RSCs ~~TSOs propose a first amendment to this ROSC Methodology, they shall make available for intraday~~include in this proposal also the information on:
 - (a) which TSOs need to apply system constraints;
 - (b) which system constraints need to be applied and which operational security limits are represented in such system constraints;
 - 1.(c) justification on why these system constraints need to be applied in CROSA the list of Agreed RAs logged by Core RSCs in accordance with Article 36 and why other measures are not sufficient or appropriate; and
 - (d) information about possible long-term measures to mitigate the need for system constraints.

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Article 2017
Consistency and quality check of the input data

1. The Core ~~RSCs~~RSC(s) shall assess and monitor the consistency and quality of each input data file provided by each Core TSO in accordance with CGMM and CSAM.
2. Core ~~RSCs~~RSC(s) shall monitor if the ~~Agreed RAs~~agreed XRAs are included in the IGMs provided by each Core TSO.
3. The Core ~~RSCs and Core TSOs~~RSC(s) shall inform the concerned Core TSOs on the identified issues ~~in accordance with~~pursuant to paragraphs 1 and 2 in an appropriate timeframe before starting the ~~RA optimisation~~RAO, to give Core TSOs the opportunity to correct these errors or inconsistencies and provide updated input files.

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CHAPTER 2
COORDINATION

Article 2118
General provisions of coordination process

1. Core ~~RSCs~~RSC(s) in coordination with Core TSOs shall perform the day-ahead and intraday ~~CROSA~~CROSA~~s~~ in accordance with ~~articles 23 and 24 of~~CSAM.
2. ~~At~~The day-ahead stage, CROSA ~~will~~shall include two coordination runs and ~~at the~~each intraday stage, CROSA will include at least one coordination run. Each coordination run ~~will~~shall consist of the following steps:
 - a. ~~(a)~~ Building of the CGMs by the ~~Core RSCs~~RSC(s) in accordance with CGMM;
 - b. ~~(b)~~ ~~Running power~~Performing the load flow and ~~security~~contingency analysis in accordance with Article ~~2219~~;
 - c. ~~(c)~~ ~~RAs optimisation~~RAO in accordance with Articles ~~2320 to 3026~~;
 - d. ~~(d)~~ ~~RAs coordination~~Coordination of XRAs in accordance with Article ~~3127~~;
 - e. ~~(e)~~ Inter-CCR coordination in accordance with Article ~~3228~~.
3. ~~The~~ RAO of each CROSA shall use all available XRAs as identified in accordance with Articles ~~9 to 11 and Article 15~~. All recommended XRAs that are the result of the RAO shall be considered for the purpose of subsequent processes, i.e. coordination of XRAs, validation, inter-CCR coordination and determination of costs for cost sharing.
4. ~~All~~ Core TSOs with the support of RSC(s) shall jointly define the timeline of each step of the day-ahead and intraday CROSA, in accordance with CSAM and CGMM. ~~The~~ timings shall be published on the ENTSO-E website.
3. ~~Within~~ ENTSO-E, TSOs will set up a consistent and harmonised approach at pan-European level to ensure that the solutions implemented to build CGMs and operated by RSCs will be compliant with the respective requirements set up in the relevant legislation in force, including SO Regulation (notably article 79 (5) of SO Regulation), the CGMM and the CSAM, while ensuring reliability of the CGM delivery process and the aligned use of the resulting unique CGM.
4. Each Core TSO shall update the input data for the second coordination run in the day-ahead stage in accordance with the provisions defined in the Articles ~~14—20~~.

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5. ~~In the intraday CROSA, In accordance with Article 32, during the intraday CROSA, the Core TSOs and Core RSCs~~RSC(s) shall reassess the ANORAs ~~in accordance with Article 36 and that were agreed in the day-ahead CROSA or previous intraday CROSA as well as other available XRAs (except ordered XRAs), for the period until relevant for the results of the following~~actual intraday CROSA ~~are available.~~
6. Information about ~~Ordered RAs~~ordered XRAs and ANORAs during day-ahead and intraday CROSA shall be ~~logged~~archived by Core ~~RSCs~~RSC(s).

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Article 22 Power flow and Operational security analysis

1. Core ~~RSCs~~RSC(s) shall perform the ~~power flow and~~operational security analysis by using the CGM built in accordance with CGMM. The security analysis will be performed considering the latest ~~Contingency List~~contingency list as well as the latest list of ~~Secured XNEs~~and Scanned Elementsscanned elements provided by ~~the~~ Core TSOs.
2. Operational security analysis shall be performed by applying the AC load flow calculation. For the eventual cases of AC load flow divergence (at the particular contingencies), DC load flow can be used as the fall-back solution.
3. Core ~~RSCs~~RSC(s) shall provide to all Core TSOs the ~~power flow and~~ operational security analysis results. These results shall contain, at least:
 - (a) applied current limits for XNEs and scanned elements;
 - (b) current loading of the XNEs and scanned elements with contingencies;
 - (c) applied voltage limits;
 - (d) voltages calculated on the CGM;
 - 2-(e) cases of AC load flow divergence and possible fall-back DC load flow results.

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- 3.4. Core TSOs shall have the opportunity to validate the power flow and operational security analysis results. This validation aims at identifying ~~errors in input~~mistakesdata, which would make the ~~outcome~~outcome of the operational security analysis non-realistic and to give Core TSOs the opportunity to correct these errors. In case of the detection of errors in input data, the concerned Core TSOs shall update their input data.
~~In case of the detection of input mistakes, Core TSOs shall update their input files in accordance with Article 20 (3).~~

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Article 20 Remedial action optimisation

~~4~~

~~Article 23~~ Optimisation of remedial actions

1. Core TSOs and ~~Core RSCs~~RSC(s) shall optimise ~~RAs~~XRAs in order to identify in a coordinated way the most effective and economically efficient ~~RAs~~XRAs, based on ~~the~~ following principles:
 - a-(a) The remedial action optimisation (RAO) of RAsXRAs shall be performed with ~~the~~ consideration of all available ~~RAs~~XRAs in accordance with Article 15;

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- ~~b.~~(b) The ~~optimisation is time-coupled~~RAO shall consider all constraints on XRAs in accordance with Article ~~24~~21;
- ~~e.~~(c) The ~~optimisation of RAs~~RAO shall aim at relieving operational security ~~limit~~ violations on ~~Secured Elements~~XNEs in accordance with Article ~~25~~22;
- ~~d.~~(d) The ~~optimisation~~RAO shall not create additional operational security ~~limit~~ violations on ~~Secured~~XNEs and ~~Seanned Elements~~scanned elements in accordance with Article ~~26~~23;
- ~~e.~~(e) The ~~optimisation~~RAO shall aim at ensuring economic efficiency by minimising the incurred costs of XRAs as well as the effectiveness of the XRAs to address operational security violations in accordance with Article ~~27~~24;
- ~~f.~~—The ~~optimisation shall consider constraints of the RAs in accordance with Article 2 (3)~~;
- ~~g.~~—The ~~optimisation shall propose balanced RAs in accordance with Article 28~~;
- ~~h.~~(f) The ~~optimisation~~RAO shall ensure ~~the RA effectivity~~energy balance of XRAs* in accordance with Article ~~29~~25;
- ~~i.~~(g) The ~~optimisation~~RAO shall take into account the impact of variations in forecasts and market activities in accordance with Article ~~30~~26.

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Article 24 **Time-coupled optimisation** **Constraints on XRAs**

1. The ~~optimisation of RAs~~RAO shall ~~be time-coupled~~take into account all constraints of XRAs as determined in the identification of the Article 2 and provided by Core TSOs in accordance with Article 13, including intertemporal constraints, when identifying the most effective and economically efficient RAsXRAs for all timestamps that are being optimised.
2. ~~In the optimisation~~The RAO for day-ahead ~~all hours of the day~~CROSA shall ~~be optimised~~optimise all timestamps of the operation day.
3. ~~For~~The RAO for intraday CROSA shall optimise all remaining ~~hour~~timestamps until the end of the operation day shall be optimised.
4. In the ~~optimisation~~RAO for both day-ahead and intraday CROSA, any constraints in accordance with Article 2(4) on ~~Agreed RAs~~ordered XRAs from previous ~~hour~~timestamps shall be taken into account.

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Article 25 **Relieving operational security limit-violations**

- ~~1.~~—When performing day-ahead and intraday ~~CROSA, Core TSOs and~~CROSA, Core ~~RSCs~~TSOs and Core RSC(s) shall detect ~~if currents violate~~operational security ~~limits~~violations. These violations can be addressed with RAO or during the coordination of XRAs pursuant to Article 27. The RAO shall aim to reduce the currents on XNEs in N-situation or after occurrence of a contingency.
- ~~2.1.~~ In intraday CROSA down to the detection of applicable current limits. The current limits violations in accordance with paragraph 1 shall be performed on CGMs after removal of ANORAs shall

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represent the thermal limits (PATL and TATL) of an XNE, unless otherwise defined in this methodology.

2. For the detection of other constraintsThe thermal limits of XNEs shall be defined as follows:
 - (a) Seasonal limit, which means a fixed limit for all hours of each of the four seasons.
 - (b) Dynamic limit, which means a value per hour reflecting the varying ambient conditions.
 - (c) Fixed limits for all hours, in case of specific situations where the physical limit reflects the capability of overhead lines, cables or substation equipment installed in the primary power circuit (such as circuit-breaker, or disconnecter) with limits not sensitive to ambient conditions.
3. Core TSOs shall aim at gradually phasing out the use of seasonal limits pursuant to paragraph 2(a) and replace them with dynamic limits pursuant to paragraph 2(b), when the benefits are greater than the costs. After the end of each calendar year, each TSO shall analyse for all its XNEs for which seasonal limits are applied and have been congested at least in 0.1% of timestamps in the previous calendar year, the expected reduction of remedial action costs and increase in economic surplus from single day-ahead and intraday coupling in the next 10 years resulting from the implementation of dynamic limits, and compare it with the cost of implementing dynamic limits. Each TSO shall provide this analysis to Core RSC(s) and all Core TSOs shall report these analyses to Core regulatory authorities. If the cost benefit analysis, taking into account other planned investments, is positive, the concerned TSO shall implement the dynamic limits within three years after the end of the analysed calendar year. In case of interconnectors, the concerned TSOs shall cooperate in performing this analysis and implementation when applicable.
- 3.4. For addressing violations of other operational security limits, such as voltage violations, violations of short-circuit current limits or violations of stability limits, each Core TSO should perform local assessment and long-term operational security analysis in accordance with articlesArticles 31, 38 and 73 of the SO Regulation. These violations may be addressed in CROSA during the coordination of XRAs pursuant to Article 27. When addressing these violations by applying suchadditional constraints on XRAs, the concerned Core TSO shall provide to other Core TSOs and Core RSCsRSC(s) the reasoning offor these constraints in a transparent manner.
4. Other constraints than current limits may be reflected intoCore TSOs may also apply system constraints in accordance with Article 17.
5. The optimisation process shall aim at identifying RAs from a list of non costly and costly RAs made available by Core TSOs in accordance with Article 16 to relieve that reflect other operational security limitlimits referred to in paragraph 4 for the purpose that RAO does not create new or worsen the existing underlying operational security violations on Secured Elements, detected in accordance with paragraph 1. The list of available RAs. However, RAO shall not resolve these underlying violations as these shall include the ANORAs that have been removedbe resolved in accordance with paragraph 2-unless ANORAs are no longer technically available4.
6. In intraday CROSA, the detection of current limits violations pursuant to paragraph 1 shall be performed on CGMs, which do not include ANORAs.

7. The RAO shall aim at identifying the optimal XRAs from the list of available XRAs in accordance with Article 15 to relieve violations of applicable current limits on XNEs in N-Situation and all contingencies, detected pursuant to paragraph 1.

6.8. Curative RAsXRAs shall be used for relieving operational security limit-violations in contingency case on a Secured Elementan XNE as long as the temporarily admissible thermal limit of the TATL of a network element is not exceeded. Under consideration of all recommended preventive and curative RAsXRAs, the permanent admissible thermal limitPATL of the Secured ElementsXNEs shall be respected.

Article 26 Avoid23

Avoiding additional violations of operational security limitsviolations on securedXNEs and scanned elements

1. The activation of RAs-identified-XRAs determined by the RAO for relieving operational security limit-violations on Secured ElementsXNEs:
 - a.(a) Shallshall not lead to additional operational security violations of operational security limits on SecuredXNEs and Scanned Elements;scanned elements; and
 - b.(b) Shallshall not worsen eventually existing operational security limits-violations on Scanned Elements;scanned elements in accordance with Article 6.
2. On request of Core TSOs and in case a Scanned Elementscanned element constrains the optimisationRAO in a significant frequency, the Core TSO who has defined this Scanned Elementscanned element shall assess-possibilitiesdo everything in its power to reduce its constraining character, e.g. by increasing its virtual positive load margin.

Article 27

Minimise incurred costs24 Economic efficiency and effectiveness

1. The optimisationRAO shall aim at minimisingdetermine the incurred costs in accordance with article 16optimal set of Core RD and CT Methodology, resulting fromXRAs and their volumes by respecting the indicative price or costs informationfollowing objectives (in order of the costly RAs used-priority):
 - 1-(a)aim to relieve operational security limit-violations- in accordance with Article 22 and 23;
 - (b) The minimisationaim to minimise total sum of costs and revenues of XRAs; and
 - (c) aim to minimise the amount and volume of XRAs.
2. In case RAO is not able to find a solution given the three objectives defined in paragraph 1 it may relax these three objectives to the minimum extent required and in reverse order of priority in order to find a solution.
3. The RAO shall take into account the effectivity of RAs in accordance with-impact of XRAs on operational security violations with RA remedial action influence factor (RAIF), which determine the impact of each RA on the power flow or current on XNEs and scanned elements as a function of their nominal power flow or current.

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4. If RAO is not able to relieve all operational security violations, it shall provide all relevant information on the remaining operational security violations.

~~2-~~ **Article 29-25**
Energy balance of XRAs

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Article 28
Balance of RAs

1. In order to guarantee the energy balance of the electricity system after activation of RAs~~XRAs~~, the optimisation~~RAO~~ shall ensure that the identified RAs~~are balanced~~optimised XRAs do not create energy imbalances and can be activated in a balanced-way that does not create energy imbalances in each timeframe.

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Article 29
RA effectivity

- ~~1. The optimisation shall include computation of the flow sensitivity of RAs.~~
- ~~2. The flow sensitivity of a RA reflects the variations of power flow or current on Secured and Scanned Elements as a function of their nominal power flow or current.~~
- ~~3. The flow sensitivity of a RA shall be balanced with their direct costs in order to ensure the selection of the most economically efficient and technically effective RAs.~~
- ~~4. The optimisation shall localize any remaining operational security limits violations and flows.~~

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~~**Article 30**~~
~~**Robustness**~~

1. Taking into account all the principles introduced in Articles ~~23~~21 to ~~29~~25, the optimisation~~RAO~~ shall ensure that the identified RAs~~XRAs~~ for relieving operational security limit-violations on the Secured Elements~~XNEs~~ are robust to variations of forecasts in consumption, RES production, and market activities and allow Core TSOs to operate their control area without violation of operational security limits~~violations~~.
2. In case of exceptional situations, such as, but not limited to, unpredictable arrival of a wind front or snowfall on PV modules, where the accuracy of one or more of the forecasts variables included in the IGMs is insufficient to allow the correct identification of operational security limit-violations, Core TSOs shall have the right to change thermal limits~~the current limit~~ of their XNEs referred to in Article 22 in regional day-ahead or intraday processes in accordance with ~~articles 23 (4) and 24 (4) of CSAM~~.
3. Concerned TSOs shall inform without undue delay Core TSOs and ~~Core RSCs~~RSC(s) in case of application of paragraph 2, providing at least the following information:
 - a. (a) Elements~~XNEs~~ and timestamps which are affected by the application of the paragraph 2;
 - b. (b) Estimate of the time for which application of paragraph 2 is needed.
4. In case of application of paragraph 2, the concerned Core TSOs shall provide ex-post on request of any Core TSO its justification about its decision to other Core TSOs and ~~Core RSCs~~RSC(s).

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5. Core RSC(s) shall monitor the need, the effectiveness and the impact of the reduction of current limits applied pursuant to paragraph 2 and report to all Core TSO(s). Subject to this report, all Core TSOs may agree, in accordance with governance rules pursuant to Article 36, to exclude additional costs of XRAs resulting from reduced current limits from cost sharing.

Article 27 Coordination of XRAs

Core RSC(s)

Article 31 Coordination of RAs

1. ~~In day-ahead and intraday CROSA, Core TSOs in coordination with Core RSCs shall manage in a coordinated way, operational security violations on all Secured Elements considering all RAs in accordance with article 17 of CSAM. To this end, Core RSCs shall make recommendations for recommend the implementation of the most effective and economically efficient RAs to the concerned Core TSOs according to the result of the optimisation in accordance with Article 23.~~ XRAs identified by the RAO to the XRA connecting TSOs and inform at least all XRA affected TSOs about this recommendation.
2. ~~During each CROSA, RA Connecting TSOs and CROSA Affected TSOs shall decide whether to agree or reject proposed RAs in~~ In accordance with ~~article~~CSAM, Article 78–(4) of the SO Regulation and ~~article 17~~Article 42(2) of CSAM.
3. ~~In case all RA Connecting TSOs and CROSA Affected TSOs agree on a proposed RA, this RA is deemed~~the Electricity Regulation, during each CROSA, the recommended XRAs shall be considered as agreed, ~~except where it is rejected by Core TSOs:~~
 - (a) any XRA affected TSO (including XRA connecting TSOs) on the grounds that the implementation of a specific XRA would result in operational security violations;
 - (b) XRA connecting TSO on the grounds that the recommended XRA is no longer available.
4. ~~If a Core TSO rejects a RA proposed by Core RSCs the reasons shall be justified, documented by the relevant Core TSO~~recommended XRAs, it shall provide to Core RSC(s) and ~~provided to Core RSCs, in accordance with article 78 (4) of the SO Regulation~~other Core TSOs clear reasons for rejection, including the evidence for the claimed grounds of rejection.
5. ~~If a Core TSO rejects a proposed RA~~recommended XRAs, except in the case of an unavailability of the proposed ~~RA, XRA, the Core RSC(s) in coordination with~~ the respective Core TSO shall ~~be able to~~ perform an ex-post assessment, ~~at the request of any Core TSO or RSC,~~ to determine the additional costs and impact resulting from the rejected ~~RA~~XRA on the congestion. These costs and impact shall be compared with the costs ~~(and impact on congestion resulting from)~~ of possible (X)RAs not regarded in the CROSA and Fast Activation Process, recommended by RSC(s) which would lead to an acceptance of the rejected RA, avoid the rejection of a recommended XRA. If a ~~proposed RA~~recommended XRA is frequently rejected by a Core TSO due to a specific reason, the Core RSC(s) in coordination with the rejecting Core TSO shall, ~~at the request of at least one of the affected Core TSOs,~~ perform an ex-post assessment ~~as described above. The rejecting Core TSO shall also propose and apply mitigating measures to avoid similar rejections in future.~~

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6.5. In case of rejection of a ~~proposed RA~~ recommended XRAs, the concerned Core TSOs shall coordinate with Core RSCs ~~RSC(s)~~ and other Core TSOs to identify and plan alternative RAs ~~XRAs~~ taking into account cost and efficiency to relieve the operational security ~~limits~~ violations in a coordinated way in accordance with ~~Core ROSC Methodology and article 17 (7) of CSAM~~ this methodology and CSAM. In accordance with Article 78(2)(a) of the SO Regulation, the Core RSC(s) may recommend alternative XRAs other than those identified by the concerned Core TSO(s).

Article 3228 Inter-CCR coordination

1. ~~Core RSCs~~ In accordance with the CSAM, Core RSC(s) and relevant other ~~RSCs~~ RSC(s) in coordination with Core TSOs shall relieve operational security ~~limits~~ violations on overlapping XNEs and shall coordinate ~~XRA overlapping XRAs~~ impacting these overlapping XNEs ~~in accordance with the proposal for amendment to be developed in~~.
1. ~~In accordance with article 27 (3) of CSAM~~.
2. ~~Core RSCs~~ RSC(s) shall perform the coordinated cross-regional operational security assessment with relevant other ~~RSCs in accordance with article 30 of CSAM~~.
3. ~~RSC(s). In doing so~~ Core ~~RSCs~~ RSC(s) shall consider and coordinate with relevant other ~~RSCs the use of RA potential of adjacent CCRs in accordance with the proposal for amendment to be developed in accordance with article 27 (3) of CSAM~~ RSC(s) the use of XRAs available in the concerned CCRs.
4. ~~Until the amendment of article 27 (3) CSAM is implemented, Core TSOs and RSCs shall continue applying the existing bilateral and/or multilateral operational agreements with TSOs and RSCs of other CCRs~~.
3. Core RSC(s) in coordination with XRA connecting TSOs and XNE connecting TSOs shall assess whether the concerned XRAs and XNEs are overlapping according to CSAM;

CHAPTER 3 VALIDATION

Article 3329 Validation session

1. In the end of the day-ahead CROSA in accordance with ~~article 33 (1)(f) of CSAM~~, a session Core RSC(s) and core TSOs shall be hosted by Core RSCs in order to consolidate results of the day-ahead CROSA and for Core TSOs to reach a final agreement and acknowledge RA ~~validate XRAs~~ that have been agreed during the day-ahead CROSA.

Article 3430 Outcome of validation

1. All Ordered RAs Core RSC(s) shall archive all ordered XRAs and ANORAs ~~shall be logged~~ after the validation session.

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2. ~~Remaining violations of~~Core RSC(s) shall report any remaining operational security ~~limits must be reported. The~~violations. Based on this input, Core TSOs shall specify next steps shall be specified ~~and which~~ may include, but not limited to, an intraday CROSA or fast activation process.
3. Core ~~RSCs~~RSC(s) shall ensure the availability of results and decisions to all Core TSOs.
4. Core ~~RSCs~~RSC(s) shall archive all necessary data for the yearly report in accordance with ~~article~~Article 17 of ~~the~~SO Regulation.

CHAPTER 4 IMPLEMENTATION OF REMEDIAL ACTIONS

Article 3531 Activation of ~~remedial actions~~XRAs

1. Each ~~RA Connecting~~XRA connecting TSO shall activate ~~RAs~~XRAs at the latest time compatible with technical, operational and procedural constraints of the resources in accordance with ~~article 19 of~~CSAM.
- ~~2. In case of activating RD or CT, the RA Connecting TSO shall apply the provisions of article 14 of Core RD and CT Methodology.~~
- ~~3.2. Each~~fast activation process, each Core TSO shall have the right to request a reassessment of ~~Ordered RAs~~ordered XRAs or already ~~Activated RAs~~activated XRAs in case the ~~RAs~~XRAs are not required anymore and considering technical, operational and procedural constraints. XRA affected ~~Core TSO~~TSOs shall reassess the ~~Ordered RAs~~ordered XRAs via fast activation process in accordance with Article 3733.
3. ~~The~~In order to prevent the effect of activated XRAs on operational security to be diminished by additional cross-zonal trade Core TSOs shall ~~update~~may:
 - (a) prevent the netting of cross-border schedules, which result from activated XRAs, with cross-zonal capacities and prevent that these schedules increase cross-zonal capacities in the directions in which additional trade could worsen operational security;
 - (b) as a last resort measure, modify cross-zonal capacities outside the coordinated ~~manner~~ the capacity calculation process pursuant to the day-ahead and intraday capacity calculation methodology of the Core CCR, if:
 - i. waiting for the next coordinated capacity calculation would endanger operational security; and
 - ii. additional cross-zonal trade would create operational security violations which would not be possible to be addressed with available cross-zonal capacities within the intraday or balancing timeframe by taking account the activation of XRAs. The updated capacities shall not aggravate the operational security.XRAs.

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Article 3632
Consideration of remedial actions in next IGM

1. All ~~Agreed RAs~~ agreed XRAs shall be classified based on a possibility of their reassessment in later CROSA:
 - (a) If activation time of an ~~RA~~ agreed XRA prevents waiting for the next CROSA for possible reassessment, then ~~the RA~~ such XRA shall be classified as ~~Ordered RAs~~ ordered XRA. Only fast activation process can change the status of ~~an Ordered RA~~ such ordered XRA;
 - (b) If a reassessment of ~~the RA~~ an agreed XRAs in the next CROSA is ~~a possibility~~ possible, then ~~the RA~~ such XRA shall be classified as ANORA.
2. Each Core TSO shall include all ~~RAs~~ agreed XRAs determined during the latest CROSA in the intraday IGMs ~~according to the provision of articles 20 and 21 of as provided in CSAM~~. Information about all ~~RAs~~ agreed XRAs determined during day-ahead and intraday CROSA shall be ~~logged~~ archived by Core ~~RSCs~~ RSC(s).
3. Core ~~RSCs~~ RSC(s) shall monitor the inclusion of ~~Agreed RAs~~ agreed XRAs into IGMs in accordance with ~~article 28 of~~ CSAM.

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TITLE 5
FAST ACTIVATION PROCESS

Article 3733
Fast activation process

- ~~1. A Core TSO shall trigger the fast activation process to relieve operational security limit violation(s) in case the detection of the physical congestion occurs:~~
 - ~~(a) Between CROSA eyes and a fast activation of a XRAs is required because it cannot wait for the next CROSA;~~
 - ~~(b) After the latest CROSA.~~
- ~~2.1~~ The fast activation process shall ~~also~~ be considered as a ~~fallback~~ fall-back solution for situations where coordination through the ~~Core RSCs~~ CROSA is no longer possible due to insufficient time and the regular process described in Article ~~2418~~ could not be properly applied.
- ~~2. A Core~~ In case of new circumstances (determined in paragraph 3) which lead to detection of operational security violations on XNEs (in N-situation or after occurrence of a contingency):
 - ~~(a) between two CROSA, when a fast activation of XRAs is required because it cannot wait for the next CROSA; or~~
 - ~~(b) after the latest CROSA.~~the XNE connecting TSO shall trigger the fast activation process in the case that an Ordered RA is ~~not~~ to relieve operational security violations on such XNEs.
- ~~3. The fast activation process can be triggered for the following circumstances:~~
 - ~~(a) The ordered XRA and is ~~not~~ no longer available ~~any more~~ due to unexpected technical unavailability of the underlying assets and alternative XRAs need to be activated; and~~

~~3-(b)~~ New operational security violations have been detected and they cannot be resolved with the next CROSA.

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4. During the fast activation process ~~RA Connecting, the XRA connecting~~ TSOs and XRA affected TSOs shall coordinate among each other to identify, plan and activate alternative ~~RAs~~ or additional XRAs to relieve the operational security ~~limits~~ violations in a coordinated way while respecting the relevant provisions of ~~article 17~~ CSAM. New operational security violations as a result of CSAM those XRAs should be avoided.
5. In the fast activation process, the activation of preventive as well as curative XRAs may be applied.
6. In the fast activation process, each Core TSO may activate XRAs in direct coordination with XRA affected TSOs in accordance with the principles for coordination of XRAs described in CSAM.
7. ~~The~~ Core TSO activating XRAs through fast activation process shall provide the Core ~~RSCs~~ RSC(s) the relevant information on which the decision to activate XRAs was based.
8. The fast activation process ~~ends~~ shall end once ~~RAs~~ XRAs to relieve the operational security violation are identified, coordinated and agreed. These ~~RAs~~ XRAs will be considered as Agreed RAs agreed XRAs.
9. Core TSOs ~~will take into account~~ shall include the Activated RAs in changes regarding activated XRAs resulting from fast activation process in the next relevant IGMs. ~~New congestions as a result~~

TITLE 6

DETERMINATION OF INPUTS FOR COSTS SHARING

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Article 34 Inputs for cost sharing of XRAs

1. Cost sharing pursuant to the cost sharing methodology shall be applied for ordered XRAs resulting from each CROSA. Cost sharing shall also be applied to XRAs which have been ordered in fast activation process in a circumstance determined pursuant to Article 33(3)(a). Cost sharing pursuant to the cost sharing methodology shall not be applied to XRAs which have been ordered in fast activation process pursuant to Article 33(3)(b). The costs of these XRAs shall be borne by the XNE connecting TSO(s) triggering the fact activation process.
2. 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.
3. Core TSOs and RSC(s) shall determine for each CROSA and for each XRA the total costs and/or revenues that shall be shared between Core TSOs in accordance with the cost sharing methodology.
4. The costs and/or revenues of ordered XRAs shall be determined based on the prices and costs provided by TSOs and used in RAO and the volumes of ordered XRAs determined by RAO or subsequent coordination in accordance with Article 27.
5. Any deviations in costs and/or revenues resulting from the difference between:
 - (a) the prices and costs per volume, provided by TSOs for the execution of the RAO; and

(b) the final incurred costs per volume or settled costs per volume with third party XRA provider,

shall also be subject to cost sharing pursuant to the cost sharing methodology.

6. The deviations of costs and/or revenues resulting from deviations between ordered and delivered volume of XRAs shall not be subject to cost sharing.
7. All Core TSOs and RSC(s) shall monitor the deviations in costs and/or revenues of ordered XRAs as defined in paragraph 5 and identify systematic deviations or other potential abuse resulting from these deviations. In case of identified abuse, Core TSOs shall have the right to reject a specific deviation to be included in cost sharing in accordance with the governance principles pursuant to Article 36.
8. All Core TSOs and RSC(s) shall monitor the impact of deviations in costs and/or revenues of ordered XRAs as defined in paragraph 5 on the efficiency and effectiveness of RAO. This monitoring shall focus on the loss of economic efficiency as well as possible effectiveness of RAO arising from these deviations.
9. For XRAs which have significant deviations pursuant to paragraph 5, all Core TSOs and RSC(s) shall identify mitigating measures to minimise the impact of these deviations on RAO and cost sharing.
10. All Core TSOs shall establish, share and settle the provisional costs and/or revenues of ordered XRAs for cost sharing and settlement by no later than 30 days after the end of the calendar month. Any corrections to the provisional costs and/or revenues of ordered XRAs shall be established, shared and settled by no later than 90 days after the end of a given quarter. Any deviations in costs and revenues beyond this deadline shall not be subject to cost sharing pursuant to the cost sharing methodology.
11. All Core TSOs shall determine and calculate all the parameters and data resulting from each CROSA that are required as inputs to cost sharing and as determined in cost sharing methodology, including particular versions of CGMs from each CROSA.

TITLE 7

MONITORING AND IMPLEMENTATION

Article 35

Reporting and monitoring

1. Core RSC(s) shall record and share all necessary data to enable Core TSOs and RSC(s) to fulfil the obligations regarding this methodology, the cost sharing methodology and Articles 14 and 17 of the SO Regulation. This data shall be stored for at least 3 years and shall be made available to Core regulatory authorities at request.
2. Core TSOs and RSC(s) shall perform regular monitoring of the efficiency, effectiveness and robustness of ROSC process after its implementation. This shall in particular include the following:
 - (a) Monitoring of the input data and inclusion of agreed XRAs in IGMs in accordance with Articles 17 and 33;
 - (b) Monitoring of deviations between indicative and realised prices and/or costs of XRAs and their impact on efficiency and effectiveness of RAO pursuant to Article 34;

(c) Monitoring the need, the effectiveness and the impact of the reduction of current limits due to variations of forecasts in consumption, RES production, and market activities in accordance with Article 26;

(d) Monitoring the occurrence and the reasons for the use of the fast activation process pursuant to Article 33; and

(e) Monitoring the need, the effectiveness and the impact of the operational security violations on scanned elements in accordance with Article 23.

3. Core TSOs and RSC(s) shall prepare and submit to Core regulatory authorities on biannual basis a report on efficiency and effectiveness of ROSC process. This shall in particular include:

(a) Reporting on the occurrence and impact of rejected XRAs in accordance with Article 27;

9.(b) Reporting on the deviations between indicative and realised prices and/or costs of XRAs, their impact on efficiency and effectiveness of RAO as well as possible abuses and rejections to include those RAs should be avoided, deviations in cost sharing in accordance with Article 34 and Article 35(2)(b);

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TITLE 5

SHARING OF COSTS OF REMEDIAL ACTIONS

Article 38

General provisions for cost sharing of remedial actions

- ~~1. Any Activated RAs, which are Agreed RAs resulting from CROSA and fast activation process in accordance with this Core ROSC Methodology, are coordinated RAs and shall be subject to the cost sharing principles in accordance with Core Cost Sharing Methodology. Any Activated RAs which are not Agreed RAs are uncoordinated RAs.~~
- ~~2. Each Core TSO and the Core RSCs shall provide all needed information about these Activated RAs to ensure the application of the Core Cost Sharing Methodology.~~

TITLE 6

MONITORING AND IMPLEMENTATION

Article 39

Reporting

- ~~1. RAs will be reported by Core TSOs as described in the article 13 (1) of Transparency Regulation (EC) 543/2013 and the Regulation for Energy Market Integrity and Transparency 1227/2011.~~
- ~~2. Core RSCs shall record and share all necessary data to enable Core TSOs to fulfil the obligations regarding Core ROSC Methodology, Core Cost Sharing Methodology and article 17 of SO Regulation.~~
- ~~3. By 12 months after approval of the Core ROSC Methodology, Core TSOs shall submit an amendment of Article 39 listing the monitoring and reporting obligations regarding this Core ROSC~~

Methodology. Core TSOs shall consult Core NRAs to elaborate on the monitoring and reporting obligations.

(c) Article 40 Reporting on input data and inclusion of agreed XRAs in IGMs in accordance with Article 35(2)(a);

(d) Reporting on the robustness of XRAs in accordance with Article 35(2)(c).

(e) Reporting on the occurrence and the reasons to use the fast activation process in accordance with Article 35(2)(e).

4. Core TSOs and RSC(s) shall make available to Core regulatory authorities at their request the following data regarding the ROSC process:

(a) For each timestamp, each CROSA and each XNEC relieved by RAO: The list of XNECs relieved by RAO, their loading before and after RAO, applicable current and flow limits;

(b) For each timestamp, each CROSA and each XRA recommended by RAO and ordered XRA: The prices and/or costs used in RAO, the volumes determined by RAO, the type of XRAs, the ordered volume of XRAs, the final settled cost of XRAs;

(c) The loading of XNEC defined in point (a) in real-time (based on e.g. real time snapshots).

5. Core TSOs and RSC(s) shall consult and coordinate with Core regulatory authorities regarding detailed specification of the above reporting and data delivery requirements. Core regulatory authorities shall have the right to request additional reporting and data delivery in coordination with Core TSOs and RSC(s), or to withdraw the requirement for specific reporting or data delivery, if they consider it no longer valid. Core TSOs, RSC(s) and regulatory authorities shall cooperate to avoid duplication of reporting and data delivery requirements.

6. By no later than 6 months after adoption of this ROSC Methodology, each Core TSO shall develop a description of national rules and procedures for activation of remedial actions, with specific focus on redispatching actions. This description shall entail all relevant information that is required for understanding of these rules and procedures. For cost-based compensation of redispatching actions, the description shall clearly list the different cost categories, and identifies which cost categories are to be considered as incurred costs in the cost sharing methodology. It shall also include the planning on future evolution of these rules and assessment of potential incompatibilities with this ROSC Methodology. This assessment shall be updated on an annual basis and provided to Core RSC(s), Core TSOs and Core regulatory authorities.

Article 36

Rules concerning governance and decision making among Core TSOs

1. All Core TSOs shall cooperate for the implementation and operation of this ROSC 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 5(5) of the SO Regulation shall apply.

2. All Core TSOs shall establish a steering committee consisting of one representative from each Core TSO. The steering committee shall make binding decisions on any matter or question related to the implementation and operation of this ROSC 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 Core TSOs regarding the implementation and operation of this ROSC 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 37 **Implementation**

- ~~1. The Core~~This ROSC Methodology shall be implemented as stated in this Article, except for two steps. In the matters related to the first step, all Core RDTSOs and CT Methodology, Core Cost Sharing Methodology, which RSC(s) shall be implemented after the regulatory approval of, and jointly with the implement first implementation of the Core RDstep of the ROSC Methodology as described in paragraphs 2, 3 and 5. In the second step all Core TSOs and CT Methodology, Core Cost Sharing Methodology and in a consistent manner with the CGMM and the CSAM.
1. The RSC(s) shall implement the second implementation step of the ROSC Methodology as described in paragraphs 4 and 5.
2. All Core TSOs and RSC(s) shall implement the first implementation step of the ROSC Methodology by 30 months after the adoption of this ROSC Methodology. The first implementation step of the ROSC Methodology shall fulfil at least the following requirements:
 - (a) Implementation of day ahead CROSA;
 - (b) Implementation of cost sharing for day-ahead CROSA pursuant to cost sharing methodology;
 - (c) RAO for day-ahead CROSA must include at least optimisation of redispatching resources and phase shifting transformers;
3. The first implementation step of the ROSC Methodology may include some other simplification of the ROSC Methodology ~~shall consider~~ which do not significantly infringe the requirements pursuant to paragraph 2. These simplifications shall be consulted with Core regulatory authorities.
4. All Core TSOs and RSC(s) shall implement the second implementation step of the ROSC Methodology by 54 months after the adoption of this ROSC Methodology. The second implementation step of the ROSC Methodology shall fulfil all the requirements of this ROSC Methodology and shall be complemented by the implementation of the cost sharing methodology.

~~2.5. The implementation process for both steps of the ROSC Methodology shall consist of the development, testing and implementation of the IT tools, as well as systems and procedures required to support the Core ROSC Methodology, CGMES format included and the CSAM.~~

~~6. During the implementation of the Core ROSC Methodology, the Core TSOs with the support of Core RSCs shall jointly define the timeline of each step of the day ahead and intraday ROSC, in accordance with article 45 of the CSAM and with the methodology in accordance with article 70 of SO-Regulation. All Core TSOs and RSCs shall regularly share information on the development of their tools, systems and processes with TSOs and RSC(s) of South East Europe CCR and allow their experts to participate as observers in Core TSOs' working groups in order to allow the South East Europe TSOs and RSC to use the same tools, systems and processes to be used in the ROSC Methodology for the South East Europe CCR.~~

~~7. By no later than four months after the adoption of this ROSC Methodology, all Core TSOs and RSC(s) shall develop a detailed implementation plan for this ROSC Methodology and update it regularly. The implementation plan shall define:~~

~~(a) clear implementation tasks, milestones and deliverables for which each Core TSO and Core RSC is responsible individually; and~~

~~(b) clear implementation tasks, milestones and deliverables for which Core TSOs and RSC(s) are responsible jointly.~~

~~8. All Core TSOs with the support of Core RSC(s) shall regularly provide to Core regulatory authorities the following information regarding the implementation of this ROSC Methodology:~~

~~(a) the implementation plan as well as its regular updates;~~

~~(b) the information on the implementation progress with regard to individual and joint implementation steps, milestones and deliverables;~~

~~(c) without undue delay, the possible risks of implementation delay and possible mitigation options;~~

~~(d) the individual entities responsible for delays in implementation tasks, milestones and deliverables with individual responsibilities; and~~

~~(e) the contribution of individual entities to the failure to meet the implementation tasks, milestones and deliverables with joint responsibilities.~~

~~2.4. After adoption of this ROSC Methodology and during its implementation, all Core TSOs and Core RSC(s) shall endeavour to continue to improve the existing ~~The timings shall be published on the ENTSO E website.~~~~

~~4. The Core TSOs and Core RSCs shall define and implement a target solution in line with the provisions of this Core ROSC Methodology and taking into account the cross-regional common functions and tools needed for a secure and efficient system operational planning in accordance with article 40 of CSAM.~~

~~5. Core TSOs and Core RSCs shall consider, subject to Article 40 (1), the following steps for the implementation of this target solution:~~

~~(a) High level business solution consisting among others on identification of the contractual needs between Core TSOs and Core RSCs, drafting of the business process, performing the gap analysis with the current situation, screening the market for potential solution to fill the gaps and drafting related business, IT and service level~~

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~~requirements for tools and hardware and determining the acceptance criteria for validating the accuracy and robustness of the solution;~~

~~(b) Tendering consisting in preparing and performing the selection and contracting of the vendors for the different tools and hardware solution identified in the step 5(a);~~

~~(c) Development of the solution including the negotiation of performance requirements, functional acceptance test, site acceptance test and user acceptance test;~~

~~(d) Experimentation of the solution by Core TSOs and Core RSCs experts and key users aiming at tuning the different parameters to ensure accuracy and robustness of the solution towards the acceptance criteria defined in the step 5(a);~~

~~(e) Parallel operational run where Core TSOs and Core RSCs will train their operators and perform operational runs in parallel with the existing operational processes to assess the accuracy and robustness of the solution towards the acceptance criteria defined in step 5(a);~~

~~(f) Operational go-live where the solution will replace the existing operational processes.~~

~~6. Core TSOs and Core RSCs shall respect the following maximum timing (Time of Implementation, hereafter "TI") for the different implementation steps defined in the paragraph 5:~~

~~(a) Step 5(a) shall be achieved at the latest at TI1 equals to TI0 + 12 months, where TI0 is the date of approval of the Core ROSC Methodology;~~

~~(b) Step 5(b) shall be achieved at the latest at TI2 equals to TI1 + an estimation of 12 months;~~

~~(c) Step 5(c) shall be achieved at the latest at TI3 equals to TI2 + 18 months;~~

~~(d) Step 5(d) shall be achieved at the latest at TI4 equals to TI3 + 6 months;~~

~~(e) Step 5(e) shall be achieved at the latest at TI5 equals TI4 + 6 months;~~

~~(f) Step 5(f) shall be achieved at the latest at TI6 equals to TI5 + 1 month.~~

~~7. At the end of the step 5(b), Core TSOs with the support of Core RSCs shall issue an amendment of the Core ROSC Methodology reviewing the steps and the maximum timings of 5(c), 5(d), 5(e) and 5(f) considering the contractual agreements with selected vendors.~~

~~8. In parallel to the implementation of the target solution in accordance with paragraph 1 to paragraph 6 and with an estimated time of 24 months after the approval of the ROSC Methodology, the Core RSCs with the support of Core TSOs, shall develop and implement a stepwise approach considering an interim solution. Interim solution shall include an approach for matters regulated under Core RD and CT Methodology and Core Cost Sharing Methodology. This approach will consider the following conditions:~~

~~(a) Improvement of the level of coordination in the existing operational processes and of the platforms and tool allowing the centralisation of relevant functions operated by Core RSCs;~~

~~(b) Improvement shall be based on the provisions of Core ROSC Methodology and shall respect the specific acceptance criteria that be defined for the interim solution.~~

~~9. In case the stepwise approach contains an interim solution:~~

~~(a) It shall be faster implemented than the target solution;~~

~~(b) The Implementation shall not delay the implementation of the target solution;~~

(e) ~~The Implementation shall require reasonable efforts from Core TSOs and Core RSCs.~~
10. ~~Within 12 months after the approval of the Core ROSC Methodology, Core TSOs with the support of Core RSCs shall submit an amendment of the Core ROSC Methodology to amend the implementation plan with the description of the stepwise approach resulting from the paragraph 8 and 9. The approach for the matters regulated under Core RD and CT Methodology and Core Cost Sharing Methodology included in the interim solution, as foreseen in paragraph 8 (second sentence), shall be proceeded, in accordance with the respective provisions of the CACM Regulation.~~

11.9. ~~Starting from the submission of the Core ROSC Methodology and for continuous improvement in the Core CSA, Core TSOs and Core RSCs shall work on the improvement of and the existing day-ahead and ID RSA processes to mitigate the impact of the Core Day-Ahead Market Coupling.~~

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TITLE 78 ALLOCATION OF TASKS BY RSCS

Article 4138 Appointment of RSCs and delegation of tasks to RSCs

1. Core TSOs appoint CORESO and TSCNET as RSCs that ~~will~~shall perform the tasks listed in ~~article~~Article 77-(3) of ~~the~~ SO Regulation in the Core CCR.
2. CORESO and TSCNET ~~will~~shall perform the tasks listed in ~~article~~Article 77-(3) of ~~the~~ SO Regulation in the Core CCR for all Core TSOs ~~and for technical counterparties of the Core CCR~~ in a transparent and non-discriminatory manner.
3. In accordance with ~~article~~Article 77-(3) of ~~the~~ SO Regulation all Core TSOs delegate the following tasks to CORESO and TSCNET:
 - (a) ROSC in accordance with ~~Article 78 of the~~ SO Regulation ~~article 78~~ in order to support Core TSOs to fulfil their obligations for the year-ahead, day-ahead and intraday timeframes in accordance with ~~articles~~Articles 34(3), 72 and 74 of ~~the~~ SO Regulation;
 - (b) Building of CGM in accordance with ~~article~~Article 79 of ~~the~~ SO Regulation;
 - (c) Regional outage coordination in accordance with ~~article~~Article 80 of ~~the~~ SO Regulation, in order to support Core TSOs to fulfil their obligations in ~~articles~~Articles 98 and 100 of ~~the~~ SO Regulation; ~~and~~
 - (d) Regional adequacy assessment in accordance with ~~article~~Article 81 of ~~the~~ SO Regulation in order to support Core TSOs to fulfil their obligations under ~~article~~Article 107 of ~~the~~ SO Regulation.

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Article 4239 Allocation of tasks between RSCs

1. CORESO and TSCNET ~~shall~~ carry out the task for ROSC in accordance with ~~article~~Article 78 of ~~the~~ SO Regulation on a rotational basis over a pre-determined period as defined in paragraph 2.
2. The rotational basis assumes that CORESO and TSCNET will rotate the roles of ~~Leading~~leading and ~~Backup~~backup RSC over pre-determined periods. The ~~Leading~~leading RSC ~~is~~shall be

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responsible and accountable for the effective and efficient execution of the ROSC in accordance with ~~the article~~Article 78 of ~~the~~ SO Regulation over a pre-determined period. The ~~Backup~~backup RSC ~~is~~shall be responsible for supporting the ~~Leading~~leading RSC to ensure the effectiveness of the ROSC process for all Core TSOs. ~~This support can be either requested by the Leading RSC or suggested by the Backup RSC.~~

3. CORESO and TSCNET shall carry out the task of CGM building on a rotational basis over a pre-determined period in accordance with articleArticle 20 of CGMM and ~~with article~~Article 79 of ~~the~~ SO Regulation.
4. TSCNET shall carry out the task of regional outage coordination in accordance with articleArticle 80 of ~~the~~ SO Regulation.
5. CORESO shall carry out the task of regional adequacy assessment in accordance with articleArticle 81 of ~~the~~ SO Regulation.
6. The organization of the regional outage coordination task and of the regional adequacy assessment task in ~~(paragraphs 4) and (5)~~ may be amended in accordance with Article 4340 and Article 441.

Article 4340

Efficiency and effectiveness of the allocation of tasks between RSCs

1. Core TSOs in coordination with CORESO and TSCNET shall monitor the effectiveness and efficiency of the allocation of the tasks for which they are responsible and, where applicable, the rotation of those tasks and their operational performance on a yearly basis in the scope of preparation of the annual reports on regional coordination assessment according to articleArticle 17 of ~~the~~ SO Regulation.
2. Core TSOs in coordination with CORESO and TSCNET shall agree on clear and specific performance indicators with Core TSOs to perform the tasks mentioned in Articles 4138 and 4239 and to be monitored and reported in accordance with Article 39 (3), 35.
3. CORESO and TSCNET ~~will~~shall ensure, in consultation with the Core TSOs, transparency and interoperability of all processes and the associated data within the operational tasks mentioned in this ~~methodology~~ROSC Methodology.
4. CORESO and TSCNET shall assess interoperability issues and propose changes aiming at ~~improving effectiveness and efficiency in the coordination of system operation-coordination.~~

Article 441

Coordination and decision-making process

1. The ~~Leading~~leading RSC with the support of the backup RSC will ensure the coordination with all Core TSOs as required by this ROSC Methodology.
2. RSCs shall cooperate in good faith and shall seek to adopt a fair and loyal treatment of the other Parties concerned.
3. RSCs ~~will~~shall implement the provision of the tasks in close consultation and cooperation with the Core TSOs.
4. RSCs and Core TSOs ~~will~~shall establish a contractual framework for the implementation of this methodology.

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Article 4542
Rules concerning governance and operation of RSCs

1. The security of supply shall be the responsibility of each of the Core TSOs according to national laws and regulations. The responsibility for secure system operation and for any decision taken based on ~~services from~~tasks performed by CORESO and TSCNET shall remain with the Core TSOs. Governance rules shall be further defined and agreed by Core TSOs and Core RSCs ~~in accordance with Article 40 (5) (a) and within the timescales defined in Article 40 (6) (a) during the implementation of this ROSC Methodology.~~
2. For the avoidance of doubt, these rules ~~do~~shall not replace any provision of national or European law that may apply to any of the Core TSOs. The provisions of these rules shall be complementary and interpreted in accordance with the applicable regulations. In case of contradictions between these rules and the applicable laws and regulations, the provisions of these rules shall be amended accordingly.
3. Any dispute between the RSCs and between RSCs and Core TSOs arising out of or in connection with this methodology shall be settled amicably between the Parties. In case the dispute cannot be settled amicably between the Parties within 60 calendar days after having been notified hereof, the dispute shall be finally settled by ~~an arbitration process a decision of Core TSOs pursuant to governance rules determined in Article 36.~~
4. CORESO and TSCNET shall agree on a contractual framework defining the rules for operation of RSCs and the ~~liability~~liabilities between RSCs.

TITLE 89
FINAL PROVISIONS

Article 4643
Publication of this proposal

1. Upon approval by the ~~competent regulatory authorities~~European Union Agency for the Cooperation of Energy Regulators, each Core TSO shall publish this ~~Core~~-ROSC Methodology on ~~the internet~~their respective websites in accordance with ~~article~~Article 8(1) of ~~the~~ SO Regulation.

Article 4744
Language

1. The reference language for this ~~Core~~ ROSC Methodology shall be English. For the avoidance of doubt, when Core TSOs need to translate this ~~Core~~-ROSC Methodology into their national language(s), in the event of inconsistencies between the English version published by Core TSOs in accordance with ~~article~~Article 8(1) of ~~the~~ SO Regulation and any version in another language, the relevant Core TSOs shall, in accordance with national legislation be obliged to dispel any inconsistencies by providing a revised translation of this ~~Core~~-ROSC Methodology to their relevant national regulatory authorities.

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