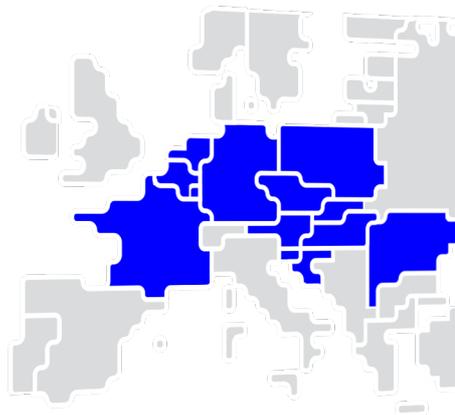




# Core TSOs' common methodology for regional operational security coordination in accordance with article 76 of Commission Regulation (EU) 2017/1485 of 2 August 2017

## “Core ROSC Methodology”

19 December 2019



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## WHEREAS

1. Commission Regulation (EU) 2017/1485 establishes a guideline on electricity transmission system operation (hereafter referred to as 'SO Regulation'), which entered into force on 2 August 2017.
2. 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 ROSC Methodology') in accordance with articles 76 and 77 of SO Regulation.
3. The Core 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 and Congestion Management (hereafter referred to as 'CACM Regulation').
4. The Core ROSC Methodology takes into account the possible dependencies with Commission Regulation (EU) 2017/2195 establishing a guideline on Electricity Balancing.
5. Article 76 of SO Regulation constitutes the legal basis 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. The Core 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 to ensure network security and stability in accordance with article 76 (1) (a) of SO Regulation.
7. The Core ROSC Methodology contributes to the objectives stated in article 76 (1) (b) of SO Regulation introducing a coordination process which defines explicit rules for the preparation of RAs in a coordinated way as detailed in Title 4 Chapter 1 and assigns the responsibilities for the Core TSOs and Core RSCs.
8. For the exchange of relevant information and preparation of RAs in accordance with article 76 (1) (b) (i) and article 76 (1) (b) (iv) of SO Regulation the Core ROSC Methodology describes all input data relevant for executing the process as detailed in Article 14.
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.
10. The Core ROSC Methodology defines the relevant types of constraints as detailed in Article 2 which are necessary to ensure the network security in accordance with article 76 (1) (b) (ii) of SO Regulation.

11. To identify the most effective and economically efficient RAs in accordance with article 76 (1) (b) (iii) of SO Regulation the Core ROSC Methodology introduces an optimisation of RAs following the principles described in Article 23. The aim of the optimisation is to minimise the incurred cost in accordance with Article 27 on the one hand side and to ensure the RA effectivity as detailed in Article 29 on the other side.
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.
13. To fulfil the obligation of determining whether congestion have cross-border relevance in accordance with article 76 (2) of SO Regulation, Core ROSC Methodology 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.
14. To achieve the objectives stated in article 76 (1) of 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 SO Regulation (hereafter referred to as 'CSAM');
  - b. the common Core methodology for coordinated Redispatching and Countertrading (hereafter referred to as 'Core RD and CT Methodology') in accordance with article 35 of CACM Regulation;
  - c. the common Core methodology for coordinated Redispatching and Countertrading Cost Sharing (hereafter referred to as 'Core Cost Sharing Methodology') in accordance with article 74 of CACM Regulation.
15. In accordance with article 6(6) of SO Regulation, the Core ROSC Methodology includes a timescale for its implementation.
16. The Core ROSC Methodology contributes to the objectives of the SO Regulation concerning the maintaining of the operational security throughout the Union by specifying provisions for all TSOs and RSCs on the coordination of system operation and operational planning, transparency and reliability of information on transmission system operation, and the efficient operation of the electricity transmission system in the Union.
17. Furthermore, the Core ROSC Methodology ensures application of the principles of proportionality and non-discrimination, transparency; 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. In accordance with Recital (5) 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. In conclusion, the Core ROSC Methodology contributes to the general objectives of the SO Regulation to the benefit of all TSOs, the Agency, national regulatory authorities and market participants.

## TITLE 1 GENERAL PROVISIONS

### Article 1 Subject matter and scope

1. The Core ROSC Methodology shall be considered as the methodology of Core TSOs in accordance with article 76 of SO Regulation and for organisation for regional operational security coordination in accordance with article 77 of SO Regulation.
2. The Core ROSC Methodology shall cover the day-ahead and intraday regional operational security coordination within Core CCR. Core ROSC Methodology shall apply to all TSOs and RSCs within the Core CCR.
3. The Core ROSC Methodology is subject to Core NRA approval in accordance with article 6 (3)(b) of SO Regulation.

### Article 2 Definitions and interpretation

1. In this Core ROSC Methodology, the following acronyms are used:
  - d. 'ANORA' means 'Agreed but Not Ordered Remedial Action';
  - e. 'CGM' means the 'common grid model';
  - f. 'CGMM' means the methodology regarding articles 67 and 70 of SO Regulation;
  - g. 'CROSA' means 'Coordinated Regional Operational Security Assessment';
  - h. 'IGM' means the 'individual grid model';
  - i. 'RD and CT' means 'redispatching and countertrading';
  - j. 'ROSC' means 'Regional Operational Security Coordination'.
2. For the purposes of the Core ROSC Methodology, the terms used shall have the meaning of the definitions included in article 3 of the SO Regulation, article 2 of CACM Regulation, article 2 of Commission Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and article 2 of CSAM. In addition, the following definitions shall apply:
  - a. 'Activated RA' means the ordered RA which has been agreed and implemented in the network by the TSO or by the resource provider;
  - b. 'Conditionally shared RA' means a shared RA whose applicability depends on conditions provided by the RA Connecting TSO;
  - c. 'CROSA Affected 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.
  - d. 'Non-Shared RA' means a RA used to relieve specific operational security limits violations and not available for the global optimisation;
  - e. 'Ordered RA' is the subset of the agreed RA that is bindingly ordered by the RA Requesting TSO and RA Connecting TSO;

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- f. 'RA Connecting TSO' means the TSO responsible for the control area where the RA is located or connected or activated;
  - g. 'RA Requesting TSO' means the TSO responsible for the operation of the control area where the violation of operational security limits is detected. In case of a violation of operational security limits on a cross-border transmission line, both TSOs responsible for the operation of that line are considered to be RA Requesting TSOs;
  - 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 stability limits of the transmission system identified in accordance with article 38 (2) and article 38 (6) of SO Regulation;
    - iii. Violations of short-circuit current limits of the transmission system.
  - b. Constraints on RAs: constraints related to all aspects required to be taken into account when using RAs and classified as following:
    - i. Technical constraints are all the rules related to the technical limitations for resources for redispatching in accordance with article 5 and countertrading in accordance with article 6 of Core RD and CT Methodology or network elements;
    - ii. 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;
    - iii. Procedural constraints are all the timing constraints due to local or regional processes;
    - iv. Legal constraints are the legal requirements stated in national laws regarding the priority of activation of RAs.
  - c. Additional optimisation constraints called system constraints are all the optimisation constraints added by Core TSOs, expressed as flow limitation on a single or a set of Secured and Scanned Elements and necessary to respect stability limits or operational security limits other than current limits. These are further detailed in Article 17.
4. In this Core ROSC Methodology, unless the context requires otherwise:
- a. The singular indicates the plural and vice versa;
  - b. Headings are inserted for convenience only and do not affect the interpretation of this Core ROSC Methodology;
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- c. Any reference to legislation, regulations, directives, orders, instruments, codes or any other enactment shall include any modification, extension or re-enactment of it when in force.

## TITLE 2 REGIONAL OPERATIONAL SECURITY COORDINATION

### Article 3 General provisions for ROSC

1. Core TSOs in coordination with Core RSCs shall execute the ROSC for each hour of the target day. The ROSC is composed of the following activities:
  - a. Core TSOs and Core RSCs shall perform day-ahead and intraday CROSA. Day-ahead CROSA shall be performed in accordance with the timings of article 45 CSAM. Intraday CROSA shall be performed at least three times in intraday timeframe in accordance with article 24 of 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.
  - c. Core TSOs shall have the right to modify an Ordered RA or may activate a new RA following the fast activation process in accordance with Article 37.

### Article 4 Intraday regional security analysis

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

## TITLE 3 DEFINITION AND DETERMINATION OF CORE XNES, XRAS, CONSTRAINTS AND CONTINGENCIES

### Article 5 Secured elements

1. Secured Elements shall represent a set of network elements in the Core CCR with a voltage level higher than or equal to 220 kV subject to the CROSA, on which operational security limits violations need to be managed in a coordinated way.

2. The Secured Elements shall be identified as cross-border relevant network elements (XNEs) in accordance with CSAM within the Core CCR.
3. Secured Elements shall at least include all Core Critical Network Elements 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.
4. Core TSOs shall have a right to exclude any element from the Secured Elements set that fulfils one of the following criteria:
  - a. Element is a power plant line;
  - b. Element is a radial line;
  - c. Element is connected to a DSO;
  - d. Element is a transformer 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. Core TSOs, which are part of more than one CCR, shall have the right to exclude any element from the Secured Elements set which is subject to CROSA within other CCRs.
7. The list of excluded elements from the Secured Elements set shall be shared with the respective Core RSCs and among Core TSOs.
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 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. Core TSOs shall have the right at any time to include any element excluded from the Secured Elements set in the Scanned Elements set.
3. Core TSOs shall have the right at any time to include any element with a voltage level lower than 220 kV in the Scanned Elements set, which is modelled in its IGM, providing justification for its inclusion.
4. Core TSOs shall have the right at any time to exclude any element from the Scanned Elements set.

#### **Article 7 The list of secured elements and the list of scanned elements**

1. By three months after the approval of this methodology, Core TSOs with the support of the respective Core RSCs shall define the list of Secured Elements and the list of Scanned Elements in accordance with Article 5 and Article 6.
2. If a new 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 element decides not to include it in the Secured Elements list in accordance with Article 5.
3. If a new element with a voltage level lower than 220 kV is commissioned, the Core TSO operating this element may decide to include it in the Scanned Elements list in accordance with 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. Core TSOs shall update the Secured Elements list and Scanned Elements list when necessary and inform the Core RSCs about the change. The lists of Secured Elements and the list of Scanned Elements shall be reassessed by Core TSOs at least once a year.
6. Core RSCs shall use the latest lists of Secured Elements and Scanned Elements shared by the Core TSOs.

#### **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.

#### **Article 9 Classification of remedial actions**

1. Each Core TSO shall classify the RAs in accordance with article 22 of SO Regulation.

#### **Article 10 Cross-border relevance of remedial actions**

1. Within one month after the list of Secured Elements set has been defined in accordance with Article 7, Core TSOs shall share with the Core RSCs all potential RAs, designed in accordance with article 14 of CSAM, which are at least generally able to address violations of current limits.
2. Core TSOs, in coordination with Core RSCs, shall jointly assess the cross-border relevance of potential RAs shared by Core TSOs in accordance to paragraph 1.
3. Core TSOs shall aim at agreeing on a qualitative approach in accordance with Article 11 to determine RAs that are deemed cross-border relevant and to determine the corresponding TSOs affected by those RAs.
4. If Core TSOs cannot agree on a qualitative approach, in accordance with Article 11, for a certain RA a quantitative approach in accordance with Article 12 shall be used for this RA.
5. Core TSOs shall jointly define and share with the Core RSCs the list of RAs that are deemed cross-border relevant.
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. 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 accordance with Article 11. In case Core TSOs cannot agree on the result of the qualitative approach, a quantitative approach in accordance with Article 12 shall be assessed.
10. Core TSOs shall delegate the task described in paragraph 7 to Core RSCs.
11. If a new 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 SO Regulation, the RA Connecting TSOs shall use quantitative assessment in order to identify if this RA is cross-border relevant. When doing this, the RA Connecting TSOs shall check that the activation of such RA does not lead to violations of

operational security limits on elements of its observability area using either the latest available CGM or its model from the state estimator. If such analysis shows that activation of RAs may cause violations on elements of its observability area, its activation has to be coordinated with the TSOs where the violation occurs.

12. In an emergency state, Core TSOs shall apply the provision of article 16 (4) of CSAM.
13. Between two mandatory assessments of RAs in accordance with paragraph 6, each Core TSO shall have the right to request an additional assessment of a RA providing justification for such a request to the RA Connecting TSO and respective Core RSCs.
14. During fast activation process, when a Core TSO proposes an XRA in accordance with paragraphs 3 and 4 of article 17 of the CSAM and when this TSO is the RA Connecting TSO as well as the only XRA affected TSO, the activation of this XRA shall not be subject to further coordination.
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 11 Qualitative assessment of XRAs**

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:
  - a. Each Core TSO shall individually assess the cross-border relevance of the RA on its control area;
  - b. Each RA Connecting TSO shall assess the cross-border relevance of the RA on control areas of other TSOs and also on its control area;
  - c. 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. Core TSOs may delegate the tasks described in paragraph 2 to their respective Core RSC.
4. Each Core TSO shall propose RAs, considered by that Core TSO as being cross-border relevant providing justification for their selection to RA Connecting TSOs.
5. If a common agreement among Core TSOs is reached, then the RA is defined as cross-border relevant and all XRA affected TSOs are identified.
6. If a RA is not proposed as cross-border relevant by any Core TSO, it is considered as non-cross-border relevant.
7. If a RA is identified as cross-border relevant only by the RA Connecting TSO, this TSO shall be considered as the only XRA affected TSO.

#### **Article 12 Quantitative assessment of XRAs**

1. Core TSOs shall use the CGMs established in accordance with article 67 of the SO Regulation when computing RA influence factor in accordance with article 15 CSAM.
2. Each Core TSO shall provide a list of elements on which the influence of a RA shall be assessed. The assessment shall be done at least on the XNEC elements in accordance with article 15 (4) of CSAM.

3. The RA influence factor shall be calculated in accordance with article 15 (4) 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.
4. If a RA consists of a combination of actions, its cross-border relevance shall be assessed for the 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 shall be considered as XRA affected TSOs, in accordance with article 15 (8) of CSAM.

#### **Article 13 Contingency list**

1. Each Core TSO shall establish the list of contingencies to be simulated in operational security analysis in accordance with article 10 of the CSAM, hereafter referred to as “Contingency List”.
2. Each Core TSO shall provide the respective Core RSCs and Core TSOs with the Contingency List to be used in CROSA and shall inform the Core RSCs 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.

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

### **CHAPTER 1 PREPARATION**

#### **Article 14 Provision of the regional operational security inputs**

1. Each Core TSO shall provide the following input data to Core RSCs:
  - a. IGM according to Article 15, including the operational security limits for each Secured or Scanned Element according to Articles 5 and 6;
  - b. Available RAs within its control area according to Article 16;
  - c. When relevant, system constraints according to Article 17;
  - d. Secured and Scanned Elements according to Articles 5 and 6;
  - e. Contingency List according to Article 13.
2. The input data shall cover all hours for a business day related to intraday and day-ahead CROSA.
3. Core TSOs shall deliver or update when required the input data before the commonly agreed process deadlines.

#### **Article 15 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 as defined in CSAM and the methodology in accordance with article 70 (1) of SO Regulation.

2. Core TSOs shall have the right to perform local preliminary assessments. When preparing IGMs, each Core TSO shall have the right to include RAs resulting from these local preliminary assessments in accordance with article 21 (3) of CSAM which were performed by Core TSOs before the first day-ahead CROSA.
3. When preparing IGMs, Core TSOs shall have the right to include non-cross-border relevant RAs in accordance with article 21 (4) of CSAM resulting from local preliminary assessments performed by Core TSOs at any time.
4. If Core TSOs include RD and CT in their IGMs resulting from preliminary assessments in accordance with paragraph 2 and 3 of Article 15, the information on ordered RD and CT shall be shared among Core TSOs in order to be clearly distinguishable from the network topology without RAs applied in accordance with article 70 (4) of SO Regulation.
5. In case the methodology in accordance with article 21 of CSAM is amended as requested by article 21 (6) of CSAM, 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.
6. If the result of the optimisation contains Agreed RAs for the respective control area, each Core TSO shall provide to Core RSCs an updated IGM between two coordination runs in accordance with article 33 (1) (c) of CSAM and articles 3 and 4 of CGMM. The RAs resulting from the first coordination run are not binding and shall be possible to be changed by the optimisation function during the second coordination run if deemed unnecessary.

#### **Article 16 Preparation and update of remedial actions by Core TSOs**

1. Each Core TSO shall make available all potential RAs to the Core RCSs for day-ahead and intraday CROSA as defined in CSAM.
2. When identifying the RAs that shall be made available, each Core TSO shall take in consideration 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. Assess the availability of the XRAs defined according to Article 10;
  - c. Consider non-XRAs, as defined according to Article 10, which could have an impact on any of the Secured or Scanned Element of his control area;
  - d. Assess the availability of the RAs which were available for the previously performed CROSA or capacity calculation of the same hour and the previously ANORAs;
  - e. Not consider the RAs which are not available following:
    - i. an unforeseen event, or
    - ii. an unplanned outage, or
    - iii. a declaration of unavailability status done by a third party owning the assets providing the RA, or
    - iv. any other cause outside of the responsibility of the Core TSOs;
  - f. Identify whether a RA provided to Core CCR is an overlapping XRA according to article 27 (3) of CSAM;
  - g. Identify whether a RA is shared, non-shared or conditionally shared and additionally provide a 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.

3. Core TSOs shall provide any relevant information for each RA for the purpose of day-ahead and intraday ROSC process that will reflect the technical, operational or procedural constraints of the RA as defined in accordance with Article 2.
4. 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 an updated list of RAs, considering:
  - a. The agreed outcome of the latest coordination run for the RAs in accordance with Article 31 and 32;
  - b. Any unplanned or forced outages or changes of outage schedules of relevant assets;
  - c. If relevant the latest schedules of load and generation.

#### **Article 17 System constraints**

1. Each Core TSO shall have the right to make available to Core RSCs system constraints in accordance with Article 2 for the purpose of dynamic stability, voltages exceeding operational security limits in the N-situation and after occurrence of a contingency from the Contingency List described in Article 13.
2. The system constraints, for the purpose of dynamic stability, shall be defined based on the criteria on dynamic system stability in accordance with articles 38 and 39 of SO Regulation.
3. When applying such system constraints, the concerned Core TSO shall provide to other Core TSOs and Core RSCs the reasoning of these system constraints in a transparent manner.
4. If relevant, each Core TSO shall provide to the Core RSCs updated system constraints, at the end of any coordination run of the coordination stage of day-ahead or intraday CROSA.

#### **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 CROSAs in accordance with the principles defined in Article 7.
2. Each Core TSO shall make available the Contingency List for its control area to the Core RSCs for day-ahead and intraday CROSAs pursuant to the principles defined in Article 13 developed in line with CSAM.

#### **Article 19 List of Agreed RAs**

1. The Core RSCs shall make available for intraday CROSAs the list of Agreed RAs logged by Core RSCs in accordance with Article 36.

#### **Article 20 Consistency and quality check of the input data**

1. The Core RSCs shall assess the consistency and quality of each input data file provided by each Core TSO in accordance with CGMM and CSAM.
2. Core RSCs shall monitor if the Agreed RAs are included in the IGMs provided by each Core TSO.
3. The Core RSCs and Core TSOs shall inform the concerned Core TSOs on the identified issues in accordance with paragraphs 1 and 2 in an appropriate timeframe before starting the RA optimisation 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 21 General provisions of coordination process**

1. Core RSCs in coordination with Core TSOs shall perform the day-ahead and intraday CROSA in accordance with articles 23 and 24 of CSAM.
2. At day-ahead stage, CROSA will include two coordination runs and at the intraday stage CROSA will include at least one coordination run. Each coordination run will consist of the following steps:
  - a. Building of the CGMs by the Core RSCs in accordance with CGMM;
  - b. Running power flow and security analysis in accordance with Article 22;
  - c. RAs optimisation in accordance with Articles 23 to 30;
  - d. RAs coordination in accordance with Article 31;
  - e. Inter-CCR coordination in accordance with Article 32.
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.
5. In the intraday CROSA, Core TSOs and Core RSCs shall reassess the ANORAs in accordance with Article 36 and that were agreed in the day-ahead CROSA or previous intraday CROSA for the period until the results of the following intraday CROSA are available.
6. Information about Ordered RAs and ANORAs during day-ahead and intraday CROSA shall be logged by Core RSCs.

### **Article 22 Power flow and security analysis**

1. Core RSCs shall perform the power flow and security analysis by using the CGM built in accordance with CGMM. The security analysis will be performed considering the latest Contingency List as well as the latest list of Secured and Scanned Elements provided by the Core TSOs.
2. Core RSCs shall provide to all Core TSOs the power flow and operational security analysis results.
3. Core TSOs shall have the opportunity to validate the power flow and operational security analysis results. This validation aims at identifying input mistakes which would make the outcomes of the operational security analysis non-realistic and to give Core TSOs the opportunity to correct these errors.
4. In case of the detection of input mistakes, Core TSOs shall update their input files in accordance with Article 20 (3).

### **Article 23 Optimisation of remedial actions**

1. Core TSOs and Core RSCs shall optimise RAs in order to identify in a coordinated way the most effective and economically efficient RAs, based on following principles:
  - a. The optimisation of RAs shall be performed with consideration of all available RAs;
  - b. The optimisation is time-coupled in accordance with Article 24;

- c. The optimisation of RAs shall aim at relieving operational security limit violations on Secured Elements in accordance with Article 25;
- d. The optimisation shall not create additional operational security limit violations on Secured and Scanned Elements in accordance with Article 26;
- e. The optimisation shall aim at minimising incurred costs in accordance with Article 27;
- 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. The optimisation shall ensure the RA effectivity in accordance with Article 29;
- i. The optimisation shall take into account the impact of variations in forecasts and market activities in accordance with Article 30.

#### **Article 24 Time coupled optimisation**

1. The optimisation of RAs shall be time-coupled in the identification of the most effective and economically efficient RAs.
2. In the optimisation for day-ahead all hours of the day shall be optimised.
3. For intraday all remaining hours until the end of the day shall be optimised.
4. In the optimisation for both day-ahead and intraday, any constraints in accordance with Article 2 on Agreed RAs from previous hours shall be taken into account.

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

1. When performing day-ahead and intraday CROSA, Core TSOs and Core RSCs shall detect if currents violate operational security limits in N-situation or after occurrence of a contingency.
2. In intraday CROSA the detection of current limits violations in accordance with paragraph 1 shall be performed on CGMs after removal of ANORAs.
3. For the detection of other constraints, 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 articles 31, 38 and 73 of SO Regulation. When applying such constraints, the concerned Core TSO shall provide to other Core TSOs and Core RSCs the reasoning of these constraints in a transparent manner.
4. Other constraints than current limits may be reflected into 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 operational security limit violations on Secured Elements, detected in accordance with paragraph 1. The list of available RAs shall include the ANORAs that have been removed in accordance with paragraph 2 unless ANORAs are no longer technically available.
6. Curative RAs shall be used for relieving operational security limit violations in contingency case on a Secured Element as long as the temporarily admissible thermal limit of the element is not exceeded. Under consideration of all recommended preventive and curative RAs, the permanent admissible thermal limit of the Secured Elements shall be respected.

**Article 26 Avoid additional violations of operational security limits on secured and scanned elements**

1. The activation of RAs identified for relieving operational security limit violations on Secured Elements:
  - a. Shall not lead to additional violations of operational security limits on Secured and Scanned Elements;
  - b. Shall not worsen existing operational security limits violations on Scanned Elements in accordance with Article 6.
2. On request of Core TSOs and in case a Scanned Element constrains the optimisation in a significant frequency, the Core TSO who has defined this Scanned Element shall assess possibilities to reduce its constraining character.

**Article 27 Minimise incurred costs**

1. The optimisation shall aim at minimising the incurred costs in accordance with article 16 of Core RD and CT Methodology, resulting from the indicative price or costs information of the costly RAs used to relieve operational security limit violations.
2. The minimisation of costs shall take into account the effectivity of RAs in accordance with Article 29.

**Article 28 Balance of RAs**

1. In order to guarantee the balance of the system after activation of RAs, the optimisation shall ensure that the identified RAs are balanced and can be activated in a balanced way in each timeframe.

**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.

**Article 30 Robustness**

1. Taking into account all the principles introduced in Articles 23 to 29, the optimisation shall ensure that the identified RAs for relieving operational security limit violations on the Secured Elements 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.
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 right to change thermal limits of their XNEs 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 in case of application of paragraph 2, providing at least following information:
  - a. Elements and timestamps which are affected by the application of the paragraph 2;
  - 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 its justification about its decision to other Core TSOs and Core RSCs.

#### **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 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.
2. During each CROSA, RA Connecting TSOs and CROSA Affected TSOs shall decide whether to agree or reject proposed RAs in accordance with article 78 (4) of the SO Regulation and article 17 of CSAM.
3. In case all RA Connecting TSOs and CROSA Affected TSOs agree on a proposed RA, this RA is deemed agreed by Core TSOs.
4. If a Core TSO rejects a RA proposed by Core RSCs the reasons shall be justified, documented by the relevant Core TSO(s) and provided to Core RSCs, in accordance with article 78 (4) of the SO Regulation.
5. If a Core TSO rejects a proposed RA, except in the case of an unavailability of the proposed RA, the respective Core TSO shall be able to perform an ex-post assessment to determine the additional costs and impact resulting from the rejected RA on the congestion. These costs and impact shall be compared with the costs and impact on congestion resulting from possible RAs not regarded in the CROSA and Fast Activation Process, which would lead to an acceptance of the rejected RA. If a proposed RA is frequently rejected by a Core TSO due to a specific reason, the rejecting Core TSO shall, at the request of at least one of the affected Core TSOs, perform an ex-post assessment.
6. In case of rejection of a proposed RA, the concerned Core TSOs shall coordinate with Core RSCs and other Core TSOs to identify and plan alternative RAs 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.

#### **Article 32 Inter-CCR coordination**

1. Core RSCs and relevant other RSCs in coordination with Core TSOs shall relieve operational security limits violations on overlapping XNEs and shall coordinate XRA impacting these overlapping XNEs in accordance with the proposal for amendment to be developed in accordance with article 27 (3) of CSAM.
2. Core RSCs shall perform the coordinated cross-regional operational security assessment with relevant other RSCs in accordance with article 30 of CSAM.

3. Core RSCs 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.
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.

## CHAPTER 3 VALIDATION

### **Article 33 Validation session**

1. In the end of the day-ahead CROSA in accordance with article 33 (1)(f) of CSAM, a session 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 that have been agreed during the day-ahead CROSA.

### **Article 34 Outcome of validation**

1. All Ordered RAs and ANORAs shall be logged after the validation session.
2. Remaining violations of operational security limits must be reported. The next steps shall be specified and may include but not limited to an intraday CROSA or fast activation process.
3. Core RSCs shall ensure the availability of results and decisions to all Core TSOs.
4. Core RSCs shall archive all necessary data for the yearly report in accordance with article 17 of SO Regulation.

## CHAPTER 4 IMPLEMENTATION OF REMEDIAL ACTIONS

### **Article 35 Activation of remedial actions**

1. Each RA Connecting TSO shall activate RAs 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. Each Core TSO shall have the right to request a reassessment of Ordered RAs or already Activated RAs in case the RAs are not required anymore and considering technical, operational and procedural constraints. XRA affected Core TSO shall reassess the Ordered RAs via fast activation process in accordance with Article 37.
4. The Core TSOs shall update in a coordinated manner the 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.

### **Article 36 Consideration of remedial actions in next IGM**

1. All Agreed RAs shall be classified based on a possibility of their reassessment in later CROSAs:

- a. If activation time of an RA prevents waiting for next CROSA for possible reassessment, then the RA shall be classified as Ordered RAs. Only fast activation process can change the status of an Ordered RA;
  - b. If a reassessment of the RA in the next CROSA is a possibility, then the RA shall be classified as ANORA.
2. Each Core TSO shall include all RAs agreed during the latest CROSA in the intraday IGMs according to the provision of articles 20 and 21 of CSAM. Information about all RAs agreed during day-ahead and intraday CROSA shall be logged by Core RSCs.
3. Core RSCs shall monitor the inclusion of Agreed RAs into IGMs in accordance with article 28 of CSAM.

#### **Article 37 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 cycles and a fast activation of a XRAs is required because it cannot wait for the next CROSA;
  - b. After the latest CROSA.
2. The fast activation process shall also be considered as a fallback where coordination through the Core RSCs is no longer possible due to insufficient time and the regular process described in Article 21 could not be properly applied.
3. A Core TSO shall trigger the fast activation process in the case that an Ordered RA is an XRA and is not available anymore.
4. During the fast activation process RA Connecting TSOs and XRA affected TSOs shall coordinate among each other to identify, plan and activate alternative RAs to relieve the operational security limits violations in a coordinated way while respecting the relevant provisions of article 17 of CSAM.
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 the relevant information on which the decision was based.
8. The fast activation process ends once RAs to relieve the violation are identified, coordinated and agreed. These RAs will be considered as Agreed RAs.
9. Core TSOs will take into account the Activated RAs in the next relevant IGMs. New congestions as a result of those RAs should be avoided.

## **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.

### Article 40 Implementation

1. The Core ROSC Methodology shall be implemented as stated in this Article, except for the matters related to the Core RD and CT Methodology, Core Cost Sharing Methodology, which shall be implemented after the regulatory approval of, and jointly with the implementation of the Core RD and CT Methodology, Core Cost Sharing Methodology and in a consistent manner with the CGMM and the CSAM.
2. The implementation of the Core ROSC Methodology shall consider development, testing and implementation of the IT tools, systems and procedures required to support the Core ROSC Methodology, CGMES format included and the CSAM.
3. 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. 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 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;
  - c. 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. Starting from the submission of the Core ROSC Methodology and for continuous improvement in the Core coordinated operational security analysis, Core TSOs and Core RSCs shall work on the improvement of the existing day-ahead and ID RSA processes to mitigate the impact of the Core Day-Ahead Market Coupling.

## TITLE 7 ALLOCATION OF TASKS BY RSCS

### **Article 41 Appointment of RSCs and delegation of tasks to RSCs**

1. Core TSOs appoint CORESO and TSCNET as RSCs that will perform the tasks listed in article 77 (3) of SO Regulation in the Core CCR.
2. CORESO and TSCNET will perform the tasks listed in article 77 (3) of 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 77 (3) of SO Regulation all Core TSOs delegate the following tasks to CORESO and TSCNET:
  - a. ROSC in accordance with 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 34(3), 72 and 74 of SO Regulation;
  - b. Building of CGM in accordance with article 79 of SO Regulation;
  - c. Regional outage coordination in accordance with article 80 of SO Regulation, in order to support Core TSOs to fulfil their obligations in articles 98 and 100 of SO Regulation;
  - d. Regional adequacy assessment in accordance with article 81 of SO Regulation in order to support Core TSOs to fulfil their obligations under article 107 of SO Regulation.

### **Article 42 Allocation of tasks between RSCs**

1. CORESO and TSCNET carry out the task for ROSC in accordance with article 78 of 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 and Backup RSC over pre-determined periods. The Leading RSC is responsible and accountable for the effective and efficient execution of the ROSC in accordance with the article 78 of SO Regulation over a pre-determined period. The Backup RSC is responsible for supporting the 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 carry out the task of CGM building on a rotational basis over a pre-determined period in accordance with article 20 of CGMM and with article 79 of SO Regulation.
4. TSCNET carry out the task of regional outage coordination in accordance with article 80 of SO Regulation.
5. CORESO carry out the task of regional adequacy assessment in accordance with article 81 of SO Regulation.
6. The organization of the regional outage coordination task and of the regional adequacy assessment task in (4) and (5) may be amended in accordance with Article 43 and Article 44.

**Article 43 Efficiency and effectiveness of the allocation of tasks between RSCs**

1. 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 article 17 of SO Regulation.
2. CORESO and TSCNET shall agree on clear and specific performance indicators with Core TSOs to perform the tasks mentioned in Articles 41 and 42 and to be monitored and reported in accordance with Article 39 (3).
3. CORESO and TSCNET will 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.
4. CORESO and TSCNET shall assess interoperability issues and propose changes aiming at improving effectiveness and efficiency in the system operation coordination.

**Article 44 Coordination and decision-making process**

1. The Leading RSC with the support of the backup RSC will ensure the coordination with all Core TSOs.
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 implement the provision of the tasks in close consultation and cooperation with the Core TSOs.
4. RSCs and Core TSOs will establish a contractual framework for the implementation of this methodology.

**Article 45 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 any decision taken based on services from 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).
2. For the avoidance of doubt, these rules do 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.
4. CORESO and TSCNET shall agree on a contractual framework defining the rules for operation of RSCs and the liability between RSCs.

## TITLE 8 FINAL PROVISIONS

### **Article 46 Publication of this proposal**

1. Upon approval by the competent regulatory authorities, each Core TSO shall publish this Core ROSC Methodology on the internet in accordance with article 8 (1) of SO Regulation.

### **Article 47 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 8 (1) of 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.