

**DECISION No 34/2020  
OF THE EUROPEAN UNION AGENCY  
FOR THE COOPERATION OF ENERGY REGULATORS**

**of 4 December 2020**

**on the Methodology for Regional Operational Security Coordination for  
the SEE Capacity Calculation Region**

THE EUROPEAN UNION AGENCY FOR THE COOPERATION OF ENERGY REGULATORS,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators<sup>1</sup> ('Regulation (EU) 2019/942'), and, in particular, Article 5(3) and Article 6(10) thereof,

Having regard to Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation<sup>2</sup>, and, in particular, Article 6(3)(b) and Article 6(8) thereof,

Having regard to the outcome of the consultation with the concerned national regulatory authorities and transmission system operators,

Having regard to the outcome of the consultation with the Agency's Electricity Working Group ('AEWG'),

Having regard to the favourable opinion of the Board of Regulators of 4 December 2020, delivered pursuant to Article 22(5)(a) of Regulation (EU) 2019/942,

Whereas:

**1. INTRODUCTION**

- (1) Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (the 'SO Regulation') laid down a range of requirements for operational security analysis coordination, among which is the requirement for the development of a methodology for regional operational security

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<sup>1</sup> OJ L158, 14.6.2019, p. 22.

<sup>2</sup> OJ L 220, 25.8.2017, p. 14

coordination in the capacity calculation region ('CCR') (hereafter referred to as the 'ROSC Methodology').

- (2) Pursuant to Articles 5(1) and 6(3)(b), of the SO Regulation, transmission system operators ('TSOs') of each CCR are required to develop a common proposal for ROSC in accordance with Article 76 of the SO Regulation and submit it to regulatory authorities for approval. In turn, according to Article 6(7) of the SO Regulation, regulatory authorities shall reach an agreement and take a decision on the proposal for the ROSC Methodology within six months after the receipt of the proposal by the last regulatory authority. When regulatory authorities fail to reach an agreement within the six-month period after the submission or upon their joint request, ACER, pursuant to Article 6(8) of the SO Regulation, shall adopt a decision concerning the TSOs' proposal in accordance with Article 6(10) of Regulation (EU) No 942/2019.
- (3) The present Decision of ACER follows from the joint request of the SEE regulatory authorities that ACER adopts a decision on the proposal for the ROSC Methodology, which SEE TSOs submitted to regulatory authorities of the region for approval and on which those regulatory authorities could not agree on. Annex I to this Decision sets out the ROSC Methodology pursuant to Article 76 of the SO Regulation as decided by ACER.

## **2. PROCEDURE**

### **2.1. Proceedings before regulatory authorities**

- (4) Article 76(1) of the SO Regulation requires TSOs to submit a proposal for the ROSC Methodology no later than three months after the approval of the methodology for coordinating operational security analysis ('CSAM Methodology') in Article 75(1) of the SO Regulation. As the CSAM Methodology was approved on 19 June 2019, TSOs were required to submit a proposal for the ROSC Methodology by 19 September 2019.
- (5) In light of an anticipated delay, all TSOs sent a letter to the European Commission on 10 July 2019, in which they bring to the Commission's attention the fact that the TSOs of each capacity calculation region will not be in a position to meet the deadline for the submission of the proposals pursuant to Article 76(1) of the SO Regulation.
- (6) In their referral letter<sup>3</sup>, dated 2 October 2020 and received by ACER via email on the same day, the SEE regulatory authorities explain that the European Commission, in a letter dated 30 July 2019, took note of the proposed delay and granted a submission by six months after the ACER decision on the methodology for coordinating operational

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<sup>3</sup> <http://www.acer.europa.eu/en/Electricity/OPERATION-CODES/SYSTEM-OPERATION/Documents/20201006%20referral%20letter%20SEE.pdf>

security analysis pursuant to Article 75(1) of the SO Regulation, until 21 December 2019.

- (7) On 12 November 2019, the SEE TSOs published for public consultation the draft ‘SEE CCR TSOs’ proposal for common provisions for regional operational security coordination in accordance with Articles 76 and 77 of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation<sup>4</sup>. The consultation lasted from 12 November 2019 until 13 December 2019.
- (8) On 19 December 2019, the SEE TSOs submitted to regulatory authorities a ‘SEE CCR TSOs proposal for common provisions for regional operational security coordination in accordance with Articles 76 and 77 of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation<sup>5</sup> (hereafter referred to as the ‘Proposal’). The last regulatory authority received the Proposal on 19 December 2019. Therefore, in accordance with Article 6(7) of the SO Regulation, a decision was required by each of the SEE regulatory authorities by 19 June 2020.

## **2.2. Proceedings before ACER**

- (9) In the referral letter, SEE regulatory authorities, informed ACER that they had jointly agreed to request ACER to adopt a decision on the Proposal pursuant to Article 6(8) of the SO Regulation.
- (10) The email with the referral letter was accompanied by a document titled ‘Non-paper of all SEE regulatory authorities on the SEE CCR TSOs’ proposal for common provisions methodology for regional operational security coordination in accordance with Article 76 and 77 of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission operation’<sup>6</sup> (hereafter referred to as ‘the Non-paper’), explaining the views of regulatory authorities. According to the aforementioned letter from the SEE regulatory authorities, a few critical points led the SEE regulatory authorities to refer the ROSC Methodology to ACER. These were the strong interaction of Article 76 of the SO Regulation with Article 74 of Commission Regulation (EU) 2015/1222 (‘CACM Regulation’), and its alignment with coordinated redispatching and countertrading methodology (‘RDCT Methodology’) and with coordinated redispatching and countertrading cost sharing methodology (‘RDCT Cost Sharing Methodology’) pursuant Article 35 and Article 74 of the CACM Regulation which ACER is in parallel deciding on for Core CCR. Due to these interactions between

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<sup>4</sup> [https://consultations.entsoe.eu/markets/sogl\\_76-77\\_see\\_ccr/](https://consultations.entsoe.eu/markets/sogl_76-77_see_ccr/)

<sup>5</sup> <http://www.acer.europa.eu/en/Electricity/OPERATION-CODES/SYSTEM-OPERATION/Documents/SEE%20CCR%20%20Proposal%20for%20Regional%20Operational%20Security%20Coordination.pdf>

<sup>6</sup> [http://www.acer.europa.eu/en/Electricity/OPERATION-CODES/SYSTEM-OPERATION/Documents/20201006%20SEE\\_Non-Paper%20on%20ROSC\\_clean.pdf](http://www.acer.europa.eu/en/Electricity/OPERATION-CODES/SYSTEM-OPERATION/Documents/20201006%20SEE_Non-Paper%20on%20ROSC_clean.pdf)

pending methodologies and the resulting difficulties to ensure consistency, SEE regulatory authorities could not approve or amend the ROSC Methodology.

- (11) ACER closely cooperated with regulatory authorities and TSOs of the SEE CCR and further consulted on the amendments to the Proposal during teleconferences, virtual meetings and through exchanges of draft amendments to the Proposal suggested by ACER. In particular, upon receiving the SEE regulatory authorities' referral letter and in order to ensure the requested harmonisation, ACER invited the regulatory authorities and TSOs of SEE to participate in the ongoing ACER proceedings on the methodologies for Core CCR mentioned in paragraph (10). In this regard, the following procedural steps were taken and, in general, before each interaction ACER shared with regulatory authorities and TSOs a new version of amendments proposed by ACER to the Proposal:

- 6 October 2020: teleconference with SEE regulatory authorities and TSOs;
- 9 October 2020: teleconference with SEE and Core regulatory authorities and TSOs;
- 16 October 2020: teleconference with SEE and Core regulatory authorities and TSOs;
- 23 October 2020: teleconference with SEE and Core regulatory authorities and TSOs;
- 28 October 2020: Discussion at AEWG.

### **3. ACER'S COMPETENCE TO DECIDE ON THE PROPOSAL**

- (12) Pursuant to point (b) of the first subparagraph of Article 5(3) of Regulation (EU) 2019/942, all regulatory authorities of the region concerned shall unanimously agree on proposals for terms and condition or methodologies for the implementation of those network codes or guidelines that were adopted before 4 July 2019 and require the approval of all the regulatory authorities of the region concerned; pursuant to the second subparagraph of Article 5(3) of Regulation (EU) 2019/942, those regulatory authorities may refer the proposals to ACER for approval pursuant to point (b) of the second subparagraph of Article 6(10) of Regulation (EU) 2019/942, and they shall do so pursuant to point (a) of the second subparagraph of Article 6(10) of that Regulation where they did not reach a unanimous agreement.
- (13) Pursuant to Article 6(3)(b) of the SO Regulation, which has been adopted as a guideline before 4 July 2019, the proposal for common provisions for each capacity calculation region for regional operational security coordination in accordance with Article 76 of the same Regulation shall be subject to approval by all regulatory authorities of the concerned region.
- (14) Pursuant to Article 6(7) and (8) of the SO Regulation, where the regulatory authorities have not been able to reach an agreement within six months following the receipt of the

submitted terms and conditions or methodologies by the last regulatory authority concerned, or upon their joint request, ACER shall adopt a decision concerning the submitted terms and conditions or methodologies within six months in accordance with Article 6(10) of Regulation (EU) 2019/942.

- (15) According to their referral letter, the SEE regulatory authorities agreed on 2 October 2020 to jointly request ACER to adopt a decision on the Proposal pursuant to Article 6(8) of the SO Regulation. On that date, the six-month period within which the SEE regulatory authorities had to reach an agreement on the Proposal, namely by 19 June 2020, had expired without the SEE regulatory authorities reaching such agreement.
- (16) As the SEE regulatory authorities were not able to reach an agreement on the Proposal by 19 June 2020, ACER has been responsible to adopt a decision, in accordance with point (a) of the second subparagraph of Article 6(10) of Regulation (EU) 2019/942, when the SEE regulatory authorities made their joint request on 2 October 2020.
- (17) Therefore, ACER is competent to adopt a decision concerning the Proposal in accordance with point (b) of the first subparagraph of Article 5(3), the second subparagraph of Article 5(3), and point (a) of the second subparagraph of Article 6(10) of Regulation (EU) 2019/942 as well as with Article 6(8) of the SO Regulation.

#### **4. SUMMARY OF THE PROPOSAL**

- (18) The Proposal consists of the following elements:
  - (a) The ‘Whereas’ section and Articles 1 and 2, which include general provisions, the scope of application, and the definitions;
  - (b) Article 3 and 4, which include general provisions for regional operational security coordination and intraday regional security analysis;
  - (c) Articles 5 to 13, which describe the definition and determination of Core cross-border relevant network elements, cross-border relevant remedial actions constraints and contingencies;
  - (d) Articles 14 to 20, which describe the preparation phase for the coordinated regional operational security analysis process, including preparation of individual grid models compilation of a list of agreed remedial actions and the consistency check of the input data;
  - (e) Articles 21 to 32, which specify the coordination phase for the coordinated regional operational security analysis process, including optimisation, balance, effectivity, robustness and coordination of remedial actions as well as the inter-CCR coordination;
  - (f) Articles 33 and 34, which include a detailed description of the validation phase;
  - (g) Articles 35 to 37, which describe the implementation of remedial actions, including the fast activation process;
  - (h) Article 38, which includes requirements for sharing of costs of remedial actions;

- (i) Article 39 and 40, which covers the monitoring and implementation of the ROSC Methodology;
- (j) Articles 41 to 42, which describe the appointment of regional security coordinators (RSCs) and delegation of tasks to RSCs, as well as, general rules concerning the governance and operation of the RSC;
- (k) Article 43, which includes the provisions for publication of the ROSC Methodology;
- (l) Article 44, which includes provisions on language.

## **5. SUMMARY OF THE OBSERVATIONS RECEIVED BY ACER**

### **5.1. Initial observations of regulatory authorities**

- (19) According to the referral letter, SEE regulatory authorities, raise the issue of strong interaction among different methodologies, especially the interaction of the Proposal with Article 35 and 74 of the CACM Regulation. Regulatory authorities agree with the general principles of the SEE TSOs' proposal for the ROSC Methodology. Nevertheless, all SEE regulatory authorities also agree that a number of consistency issues need to be resolved along with the following major issues:
  - (a) The nomination of the RSC is missing in the Proposal;
  - (b) Participation of the non-EU TSOs in the coordinated security analysis has to be specified in a separate agreement along with the guidance from the European Commission;
  - (c) Procedures for setting constraints on scanned elements as well as the exclusion and inclusion of scanned elements should be described in the Proposal;
  - (d) Disputes process between RSCs and RSC and SEE TSOs should be clarified; and
  - (e) The categories of remedial action in accordance with Article 22 of the SO Regulation should be clearly defined.
- (20) As per the Non-paper, SEE regulatory authorities could not agree on seven aspects of the Proposal:
  - (a) Requirement to determine the cross-border relevance of congestions pursuant to Article 76(2) of the SO Regulation;
  - (b) Information on Romanian TSO's status in SEE after the implementation of Article 35 of the Electricity Regulation;
  - (c) Harmonised description of an effective coordination and decision making process to resolve conflicting positions among RSCs and between RSC and RSC TSOs;
  - (d) Provisions on coordination between Core CCR RSCs and SEE CCR RSC;

- (e) A methodology for identification and definition of overlapping cross-border relevant remedial actions and cross-border relevant network elements in overlapping zones;
- (f) The requirements from Article 23(4) and 26(4) of CSAM for day-ahead and intraday regional operational security analysis; and
- (g) Conditions and how the curtailment of already allocated cross-zonal capacity as well as load shedding will be implemented in the optimization process.

## **5.2. Consultation of regulatory authorities and TSOs**

- (21) ACER, in close cooperation and consultation with SEE regulatory authorities and SEE TSOs as detailed in paragraph (11) above, and beyond the above-mentioned issues:
  - (a) Discussed with SEE TSOs and SEE regulatory authorities the views of SEE regulatory authorities expressed in the Non-paper;
  - (b) With respect to alignment with other ACER decisions, changed definitions and made changes to be consistent with ACER decisions in accordance with Article 35 and 74 of the CACM Regulation, especially definitions related to remedial actions and network elements as inputs for the optimisation;
  - (c) With respect to curtailment of already allocated cross-zonal capacity and load shedding, specified that these are not remedial actions to be considered in the common optimisation;
  - (d) With respect to cross-border relevance, further discussed and defined this aspect for remedial actions and network elements;
  - (e) With respect to the remedial action optimisation, further specified the inputs, the outputs, the common grid models used for mapping, and the handling of deviations (updates in point of time starting from recommendation, agreement to ordering and activation) for the volumes of remedial actions;
  - (f) With respect to the determination of final costs of remedial actions for cost sharing, further specified the prices and costs used for the remedial action optimisation as well as the treatment of price deviations (updates of remedial action prices between remedial action optimisation run and its activation or settlement, resulting from differences in forecasted and incurred costs) and clearly defined all the outputs which are required as inputs to the RDCT Cost Sharing Methodology to be approved by ACER under Article 74 of the CACM Regulation;
  - (g) With respect to the RSC, further specified aspects concerning the delegated tasks to the RSC, the governance, decision-making and coordination among TSOs, especially the roles and justifications for rejection of remedial actions by TSOs;

- (h) With respect to system constraints and contingencies, further clarified the relation to the operational security violations and contingencies defined in accordance with the SO Regulation and the use as input for the optimisation;
- (i) With respect to the monitoring and reporting obligations, further specified the process and topics for monitoring, especially including monitoring obligations for any deviations in volume and costs of remedial actions to guarantee transparency; and
- (j) Regarding the implementation of the ROSC Methodology, discussed a stepwise approach and specified the requirements for an interim solution.

### **5.3. Public consultation**

- (22) ACER did not launch a separate public consultation for this ROSC Methodology, but considered the points raised during the consultation on the ROSC Methodology in Core CCR (which was held between 4 September and 21 September 2020) also relevant for the ROSC Methodology in SEE CCR.

### **5.4. Hearing phase**

- (23) ACER initiated the hearing phase on 13 October 2020 by providing TSOs and regulatory authorities with a near final draft of Annex I to this Decision, as well as the reasoning for the introduced changes to the Proposal. The hearing phase lasted until 27 October 2020. During this time, ACER received a written submission from the Romanian regulatory authority and TSO.
- (24) Since the consistency between the ROSC methodologies in SEE CCR and Core CCR was requested by the SEE regulatory authorities, ACER organised parallel hearings for the ROSC Methodologies in SEE and Core CCRs. This allowed ACER to consider the comments and submissions received from both Core and SEE TSOs, as well as, from both Core and SEE regulatory authorities when finalising the ROSC Methodology.
- (25) The Romanian regulatory authority expressed a need for the coordination between Core CCR RSCs and SEE CCR RSC concerning the creation of joint tools to ensure efficient cooperation and coordination among the RSCs of the two CCRs.
- (26) The Romanian TSO expressed a few drafting concerns and raised an issue with the implementation timeline which should differ from that of the Core ROSC Methodology due to different resources available in SEE.

## **6. ASSESSMENT OF THE PROPOSAL**

### **6.1. Legal framework**

- (27) Articles 5(1), 5(2) and 6(3)(b) of the SO Regulation require TSOs to develop the proposal for ROSC Methodology in accordance with Article 76(1) of the SO Regulation. This proposal must be submitted for approval to the regulatory authorities in the SEE CCR.

- (28) The CSAM lays down further requirements for the common provisions for regional operational security coordination pursuant to Article 76(1) of the SO Regulation.
- (29) Article 76 of the SO Regulation lays down the requirements for the proposal for common provisions for regional operational security coordination, to be established by TSOs of the different CCRs. In this context, TSOs are required to develop a proposal for ROSC Methodology no later than three months after the approval of the CSAM as defined by Article 75(1) of the SO Regulation.
- (30) TSOs must consult the proposal on the ROSC Methodology in accordance with Article 11 of the SO Regulation.
- (31) Article 4 of the SO Regulation lists the objectives and regulatory aspects of the SO Regulation, which are relevant for this Proposal.
- (32) Article 20 of the SO Regulation provides that TSOs shall manage operational security violations by designing, preparing and activating remedial actions. These remedial actions shall be consistent with actions taken for capacity calculation in accordance with Article 25 of the CACM Regulation.
- (33) Articles 21 and 22 of the SO Regulation set out the principles for activating and coordinating remedial actions, as well as the criteria for selecting the appropriate remedial actions and introduce categories for remedial actions.
- (34) Article 23 of the SO Regulation defines the TSOs' obligations regarding the preparation, activation and coordination of remedial actions. Any impact of remedial actions needs to be measured not just inside a TSOs' control area, but also outside it, and all concerned TSOs need to be informed about the impact.
- (35) Article 25 of the SO Regulation lists the operational security limits, which include voltage limits, short-circuit current limits and current limits in terms of thermal rating including the transitory admissible overloads.
- (36) Article 33 of the SO Regulation covers the establishment of the list of contingencies by TSOs, which shall classify each contingency on the basis of whether it is ordinary, exceptional or out-of-range, taking into account the probability of occurrence and the principles set out in this article.
- (37) Article 70 of the SO Regulation contains provisions for the development of the methodology for building day-ahead and intraday common grid models.
- (38) Article 72 of the SO Regulation establishes that TSOs shall perform coordinated operational security analyses for the timeframes of year-ahead, day-ahead and intraday applying the methodology adopted pursuant to Article 75 of the SO Regulation. Article 72(3) of the SO Regulation also defines the rules on how to simulate contingencies in the N-situation and in the (N-1)-situation, in accordance with Articles 33 and 25 of the SO Regulation.

- (39) Article 73 of the SO Regulation prescribes that TSOs shall perform year-ahead operational security analyses. When a TSO detects a possible constraint, it shall design remedial actions in accordance with Articles 20 to 23 of the SO Regulation.
- (40) Article 74 of the SO Regulation establishes that TSOs shall perform day-ahead, intraday and close to real-time operational security analyses.
- (41) Article 77(1) of the SO Regulation prescribes that the TSOs' proposal for regional operational security coordination pursuant to Article 76(1) shall contain common provisions for the organisation of regional operational security coordination, including the appointment of regional security coordinators and their governance and operation, which shall meet the requirements of Article 77(2) of the same Regulation. In addition, Article 77(3) of the SO Regulation covers the tasks of the RSC that need to be delegated to an RSC within a CCR. Moreover, Article 77(3)(a) of the SO Regulation prescribes for the delegation by TSOs of the regional operational security coordination in accordance with Article 78 of the SO Regulation in order to support TSOs fulfil their obligations for the year-ahead, day-ahead and intraday time-frames in Article 34(3) and Articles 72 and 74 of the SO Regulation.
- (42) Article 78 of the SO Regulation lays down the rules on regional operational security coordination, namely the rules for coordination between TSOs and RSCs. Furthermore, Article 78 of the SO Regulation contains provisions on preparation of remedial actions, the identification of the appropriate remedial actions and their potential implementation.
- (43) Article 79 of the SO Regulation describes the process for building the common grid models, which is one of the tasks delegated by TSOs to the RSCs in accordance with Article 77(3)(b).
- (44) As a general requirement, Article 6(6) of the SO Regulation requires that the Proposal includes a proposed timescale for their implementation and a description of its impact on the objectives of the same Regulation.

## **6.2. Assessment of the legal requirements**

### **6.2.1. Assessment of the requirements for the development and for the content of the Proposal**

#### *6.2.1.1. Development of the Proposal*

- (45) The Proposal fulfils the requirements of Articles 5(1), 5(2) and 6(3)(b) of the SO Regulation, as TSOs jointly developed a proposal for ROSC Methodology and submitted it for approval to the regulatory authorities in the SEE CCR.
- (46) The procedure for the development of the Proposal did not respect the requirements of Article 76(1) of the SO Regulation. The European Commission was informed about a delay of the TSOs in submitting the ROSC Methodology to the relevant regulatory authorities on time. Deeming the justifications provided by the TSOs as reasonable, the

European Commission suggested by letter dated 30 July 2019 to extend the deadline by 3 months, i.e. until 21 December 2019 for the TSOs to submit their proposal for approval. The Proposal was received by the last regulatory authority on 19 December 2019.

(47) The Proposal was subject to consultation as described in Section 2.1 above.

*6.2.1.2. Description of the expected impact on the objectives of the SO Regulation*

(48) The recitals in the Proposal provide a description of the expected impact of the ROSC Methodology on the objectives of the SO Regulation. Nearly all of the relevant objectives set in Article 4 of the SO Regulation are addressed in the Proposal's recitals in a general manner, apart from the objectives on load frequency control which are out of scope of the Proposal. The regulatory aspects on transparency and responsibility assigned to the relevant TSO concerning system security are covered in the Proposal as well. ACER added specific sub-paragraphs (a) to (e) in a new recital (20) to address the expected impact on each of the objectives in more detail.

6.2.2. Assessment of the requirements for consistency with Article 75(1) of the SO Regulation

(49) Pursuant to Article 76(1) of the SO Regulation, the Proposal shall respect the CSAM in accordance with Article 75(1) of the SO Regulation. TSOs addressed nearly all provisions from CSAM for the SEE region and added the details needed to make a regional operational security analysis. TSOs did not make any provisions for long term studies and therefore ACER added the relevant provisions, as described below in section 6.2.4.

(50) Cost sharing between different CCRs and cross-regional coordination were not addressed due to the limited scope of the ROSC Methodology.

6.2.3. Assessment of the requirements to complement the methodologies pursuant to Article 35 and Article 74 of the CACM Regulation

(51) Pursuant to Article 76(1) of the SO Regulation, the Proposal needs to complement where necessary the methodologies in accordance with Articles 35 and Article 74 of the CACM Regulation.

(52) The RDCT Methodology for the SEE CCR pursuant to Article 35 of the CACM regulation was adopted by ACER in September 2019. Since these two methodologies need to be fully consistent as they describe the same coordination process, the proposal already complemented the RDCT Methodology where necessary by including more general and holistic requirements on coordination of remedial actions and provisions on the RSC, which does not need to be included in the RDCT Methodology.

(53) Nevertheless, ACER notes that a different timeline for the adoption of this ROSC methodology and the RDCT Methodology may imply the risk that these two methodologies prove to be inconsistent and that ACER could not mitigate this risk as it cannot decide on RDCT Methodology at the same time as for this ROSC Methodology.

For this reason, ACER recommends to SEE TSOs to make a proposal for amendment of the RDCT Methodology after the adoption of this ROSC Methodology to make it fully consistent with this ROSC Methodology.

- (54) The RDCT Cost Sharing Methodology for the SEE CCR pursuant to Article 74 of the CACM Regulation is to be adopted by ACER also in a similar timeframe as this ROSC Methodology. This RDCT Cost Sharing Methodology covers all necessary aspects required for sharing the costs of remedial actions and therefore no additional provisions to complement it are needed in the ROSC Methodology. A description of changes to ROSC Methodology by ACER can be found in sections 6.2.8.7 and 6.2.8.8.

#### 6.2.4. Assessment of the requirements on year-ahead coordination

- (55) Concerning the regional operational security coordination in year-ahead timeframe, in accordance with Article 77(3) of the SO Regulation, the Proposal fails to prescribe which specific ROSC provisions shall be implemented and which tasks shall be performed by the RSC upon the delegation by the SEE TSOs in accordance with Article 41(3)(a) of the Proposal.
- (56) Nevertheless, because the CSAM already contains high-level principles on coordinated operational security analyses concerning year-ahead up to week-ahead (long-term) studies at the European Union level, ACER amended Article 1 of the Proposal, on the subject matter and scope, to clarify that the year-ahead timeframe is in the scope of the ROSC Methodology. ACER also amended Article 3 of the Proposal, on general provisions for ROSC, to specify that regional operational security coordination in year-ahead timeframe(s) shall be performed in accordance with the CSAM. Moreover, when SEE 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 the year-ahead timeframe as well as possible other long-term timeframes. This is because the CSAM implicitly expects details on the long-term studies to be developed at the regional level. Presently, the CSAM prescribes for checking, by each RSC, of the presence of cross-regional impact in studying additional (long-term) common grid models created by TSOs in accordance with Article 72(1)(a) or (b) of the SO Regulation. In case of the existence of cross-regional impact, the RSC shall coordinate the building and analysis of appropriate additional (long-term) common grid models with relevant RSCs and respective TSOs. However, rules and processes describing this coordination are not prescribed in the CSAM. The CSAM rather prescribes that additional (long-term) common grid models shall be studied by relevant RSCs and TSOs by applying the ROSC Methodology.
- (57) Also, ACER amended Article 14 of the Proposal, concerning the inputs to the regional coordination of operational security, to allow for a possibility for TSOs to exclude from the concerned day-ahead and intraday coordinated regional operational security assessment relevant cross-border relevant network elements with contingency and scanned elements associated with a contingency, for cases where specific violations have been more efficiently addressed before the day-ahead and intraday coordinated

regional operational security assessment (for example via special protection schemes), subject to all SEE TSOs' agreement.

6.2.5. Assessment of the requirements on day-ahead and intraday coordination

- (58) In accordance with Article 74 of the SO Regulation, each TSO shall perform day-ahead operational security analysis to detect possible constraints and prepare and activate the remedial actions with any other concerned TSOs. Each TSO shall perform coordinated operational security analysis for the day-ahead and intraday timeframes in accordance with the methodology adopted pursuant to Article 75 of the SO Regulation, as provided by Article 72(1) and (2) of the same Regulation.
- (59) In addition, in accordance with Article 76(1)(a) of the SO Regulation, the ROSC Methodology shall determine the conditions and frequency of intraday coordination of operational security analysis and updates to the common grid model by the RSC.
- (60) ACER understands that SEE TSOs propose the TSOs' coordination in day-ahead and intraday in Article 3 of the Proposal and the provisions for updating the corresponding individual grid models are defined in Article 15 of the Proposal.
- (61) Concerning the day-ahead and intraday timeframes, the Proposal specifies one day-ahead and three intraday coordinated regional operational security assessments in Article 3 of the Proposal. Each coordinated regional operational security assessment consists of preparation, coordination and validation phases.
- (62) The Proposal specifies that the different steps of the day-ahead coordinated regional operational security assessment process will be performed respecting the timings T0 till T5 defined in accordance with the CSAM.
- (63) A minimum of three intraday coordinated regional operational security assessments shall be performed considering the three mandatory common grid models which have to be built for 00h00, 08h00 and 16h00 according to the common grid model methodology in accordance with Articles 67(1) and 70(1) of the SO Regulation<sup>7</sup>.
- (64) The Proposal sets out a validation session to be hosted by SEE RSC in order to consolidate the results of the day-ahead coordinated regional operational security assessment to reach a final agreement and acknowledge remedial actions that have been agreed during the day-ahead coordinated regional operational security assessment.
- (65) Although the proposed day-ahead and intraday regional operational security coordination by TSOs comply with the legal provisions mentioned in recitals (58) and (59) of this Decision, ACER made changes to clarify the process, adding more details

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<sup>7</sup> [https://eepublicdownloads.entsoe.eu/clean-documents/nc-tasks/SOGL/SOGL\\_A67\\_70\\_180222\\_CGM%20methodology\\_180314.pdf](https://eepublicdownloads.entsoe.eu/clean-documents/nc-tasks/SOGL/SOGL_A67_70_180222_CGM%20methodology_180314.pdf)

by cross-referencing the already existing provisions throughout the Proposal. ACER added the intraday regional security analysis, as described in Article 4 of the Proposal, to the ROSC process. This was needed to clarify the relation between ROSC and coordinated regional operational security assessment runs.

- (66) In addition, ACER added the implementation and activation process, as already specified by TSOs, to the ROSC process, making it phase four for each coordinated regional operational security assessment. Another addition by ACER specified that a coordinated regional operational security assessment may consist of two coordination runs, as described in Article 21 of the Proposal.

6.2.6. Assessment of the requirements on fast activation (process)

- (67) In accordance with Article 74 of the SO Regulation each TSO shall perform close to real-time operational security analysis to detect possible constraints and prepare and activate the remedial actions with any other concerned TSOs. ACER understands that the fast activation process, set out in Article 37 of the Proposal, covers the close to real-time timeframe.
- (68) Besides the ROSC process specified for mandatory intraday timeframes, Article 4 of the Proposal prescribes for an intraday regional security analysis to be performed by SEE TSOs and the SEE RSC for each hour of the day for each timestamp until the end of the day. According to intraday regional security analysis, the RSC shall perform, on the basis of continuously updated individual grid models by the TSOs, load flow and contingency analysis calculations and provide TSOs with the latest information about the loading of the grid and previously undetected violations of operational security limits, which may serve as a trigger for a fast activation process in accordance with Article 37 of the Proposal.
- (69) ACER considers that the provisions of Article 4 and Article 37 of the Proposal meet the requirements of Article 76 of the SO Regulation and determine conditions and frequency of intraday coordination of operational security analysis and updates to the common grid model by the RSC. In addition, Article 37 of the Proposal defines the close to real-time operational security analysis to comply with Article 74 of the SO Regulation.
- (70) Nevertheless, ACER introduced minor changes to Article 4 and Article 37 of the Proposal to streamline the fast activation process and the intraday regional security analysis as a part of the ROSC with a purpose to modify or order new remedial actions or cross-border relevant remedial actions as required closer to the real-time operation.
- (71) In addition, ACER specified two conditions when the fast activation process can be triggered, which will be relevant for the cost sharing of remedial actions ordered from the fast activation process.

6.2.7. Assessment of the requirements for updates on common grid model

- (72) Article 76(1)(a) of the SO Regulation requires that the Proposal includes the conditions and frequency for updates to the common grid model by the RSC. These provisions are included in Article 15 of the Proposal and are compliant with the legal requirements of Article 76(1)(a) of the SO Regulation.
- (73) ACER made a few minor changes to Article 15 to account for changes made elsewhere in the Proposal. This is relevant for the used terminology for remedial actions and the remedial action optimisation process. ACER added a new paragraph (5) to specify that costs of cross-border relevant remedial actions included in the individual grid model resulting from the local preliminary assessment shall not be included in the final costs to be shared in accordance with RDCT Cost Sharing Methodology.
- 6.2.8. Assessment of the methodology for the preparation of remedial actions managed in a coordinated way
- (74) This section covers the methodology for preparation of remedial actions managed in a coordinated way in accordance with Article 76(1)(b) of the SO Regulation. The methodology as per the Proposal is divided into four phases: preparation, coordination, validation and implementation of remedial actions.
- (75) Section 6.2.8.1 covers the procedure for exchanging the information of the available remedial actions between relevant TSOs and the RSC in accordance with Article 76(1)(b)(i) of the SO Regulation. Section 6.2.8.2 describes the classification of constraints and the remedial actions in accordance with Article 76(1)(b)(ii) of the SO Regulation. These two sections are part of the preparation phase.
- (76) The coordination phase is described in section 6.2.8.3 and the remedial action optimisation which identifies the most effective and economically efficient remedial actions in section 6.2.8.4 in accordance with Article 76(1)(b)(iii) of the SO Regulation.
- (77) In addition to the mandatory scope of the methodology for the preparation of remedial actions managed in a coordinated way in accordance with Article 76(1)(b) of the SO Regulation, the Proposal introduces a validation phase assessed in section 6.2.8.5. The introduction of this step is in line with Article 76(1)(b) of the SO Regulation because the latter sets out a non-exhaustive list of requirements for the methodology.
- (78) The preparation and activation of remedial actions in accordance with Article 76(1)(b)(iv) of the SO Regulation represent the implementation phase and is tackled in section 6.2.8.6.
- (79) Finally, cost sharing in accordance with Article 76(1)(b)(v) of the SO Regulation is described in sections 6.2.8.7 and 6.2.8.8.

*6.2.8.1. Preparation: Procedure for exchanging the information between TSOs and RSC*

- (80) As per Chapter 1 of the Proposal, Articles 14 to 20 deal with the preparation phase aiming at gathering all relevant inputs for the coordinated regional operational security assessment including those related to available remedial actions in accordance with

Article 76(1)(b)(i) of the SO Regulation. Each SEE TSO shall make available the following input data to the SEE RSC:

- Individual grid models in line with the common grid model methodology, including the operational security limits for each cross-border relevant network element or scanned network element;
- Available remedial actions;
- System constraints;
- Lists of cross-border relevant network elements and scanned elements; and
- Contingency list.

- (81) Concerning the delivery or update by TSOs of the input data before the commonly agreed process deadlines in accordance with Article 14(3) of the Proposal, ACER clarified in this provision that all SEE TSOs and RSC shall define for each coordinated regional operational security assessment the common gate closure time by which the inputs can be delivered and updated by SEE TSOs. The reference established by common gate closure time(s) is advantageous to only rough timings established in CSAM. Also, in this article, ACER introduced provisions of Article 19 of the Proposal which was consequentially removed.
- (82) With regard to the preparation and update of remedial actions by SEE TSOs in accordance with Article 16 of the Proposal, ACER removed the concept of shared and non-shared remedial actions and replaced it with a concept according to which any remedial action is either available, not available or conditionally available. Any further terminology (i.e. shared and non-shared remedial actions) is not needed as it would render the ROSC process unclear and difficult to implement. Also in this article, ACER introduced a requirement for each SEE TSO to also provide, for the purpose of day-ahead and intraday coordinated regional operational security assessment, the information on the available volume of cross-border relevant remedial actions considering the constraints of cross-border relevant remedial actions. This is because a change of cross-border relevant remedial actions availability is possible subject to technical, operational or procedural constraints. Similarly, ACER included a provision that, in case cross-border relevant remedial actions are owned or provided by a third party, such third party cross-border relevant remedial action providers shall provide to the cross-border relevant remedial action connecting TSOs the best up-to-date information on the availability of their cross-border relevant remedial actions, including all the necessary information that is required for coordinated regional operational security assessments. This is to ensure that the remedial action optimisation uses the correct input.
- (83) Concerning the system constraints prescribed in Article 17 of the Proposal, ACER introduced an additional paragraph specifying that when SEE TSOs propose a first

amendment to this ROSC Methodology, they shall include in this proposal also the information on:

- Which TSOs need to apply system constraints;
- Which system constraints need to be applied and which operational security limits are represented in such system constraints;
- Justification on why these system constraints need to be applied in coordinated regional operational security assessments and why other measures are not sufficient or appropriate; and
- Information about possible long-term measures to mitigate the need for system constraints.

(84) ACER understands that details on the definition and use of constraints by TSOs are needed to ensure transparency; however, these details can only be defined in due course of the implementation. Therefore, ACER introduced the abovementioned provision that will ensure the provision of necessary information in the future.

(85) In Article 20 of the Proposal, concerning the consistency and quality check of the input data, ACER made changes regarding the role of the SEE RSC to besides assessing the consistency and quality of each input data file to also monitor the consistency and quality check of the input data. This is because monitoring is a necessary step before performing an assessment.

*6.2.8.2. Preparation: Classification of constraints and remedial actions in accordance with Article 22 of the SO Regulation*

(86) The classification of the remedial actions in accordance with Article 22 of the SO Regulation is prescribed for in Article 9 of the Proposal.

(87) ACER made changes to this article in order to clarify which categories of remedial actions shall not be used for the classification of cross-border relevant remedial actions (categories (d), (h), (i) and (j) of Article 22 of the SO Regulation). Clarity on the treatment of load shedding (category (j)) and curtailment (category (i)) was also requested by regulatory authorities in the Non-paper.

(88) Beyond the prescribed classification of constraints (Article 76(1)(b)(ii) of the SO Regulation), Title 3 of the Proposal introduces definitions and determination of cross-border relevant network elements, cross-border relevant remedial actions and contingencies. These provisions are necessary to allow for an efficient ROSC and harmonised definitions of inputs entering the remedial action optimisation.

(89) ACER introduced changes to Title 3 to clarify the process of establishing and maintaining the lists of cross-border relevant network elements and scanned elements (Article 7 of the Proposal) and to distinguish these provisions from those that are used to define the cross-border relevant network elements and scanned elements (Articles 5 and 6 of the Proposal, respectively). ACER removed Article 8 of the Proposal and

incorporated the relevant provision regarding cross-border relevant network elements in Article 7.

- (90) Article 10 of the Proposal on cross-border relevance of remedial actions was amended to include the TSOs' consideration of the potential remedial actions recommended by the SEE RSC in accordance with Article 78(2)(a) of the SO Regulation. For consistency with the Core ROSC Methodology, ACER introduced in this article a more frequent assessment of possible remedial actions which shall now take place at least on a biannual basis. Moreover, ACER streamlined the approach for the determination of the cross-border relevant remedial actions by introducing a new paragraph in Article 10 clarifying that all potential remedial actions identified pursuant to paragraph (1) of Article 10 of the Proposal shall be considered as cross-border relevant, unless all SEE TSOs in coordination with the SEE RSC unanimously agree that a potential remedial action is not cross-border relevant. This represents the most efficient, consistent and legally clear approach to the determination of cross-border relevant remedial actions. Also, any remedial action that can resolve a congestion on cross-border relevant network element is, by definition, cross-border relevant.
- (91) Concerning Article 12 of the Proposal on the quantitative assessment of cross-border relevant remedial actions, ACER introduced a possibility to reduce the significance threshold if agreed by SEE TSOs subject to the governance framework. The threshold of 5% as per the CSAM might prove too high and this change gives room to TSOs to reduce it.

#### *6.2.8.3. Coordination*

- (92) The coordination phase is covered in chapter 2 of the Proposal; in accordance with Article 76(1)(b) of the SO Regulation, remedial actions shall be managed in a coordinated way. Therefore, TSOs propose provisions on the coordination process, operational security analysis, remedial action optimisation, constraints, relieving and avoiding violations, efficiency and effectiveness, energy balance, robustness, coordination of cross-border relevant remedial actions within CCR and inter-CCR coordination. ACER understands that all provisions are compliant with Article 76(1)(b) of the SO Regulation.
- (93) Nevertheless, ACER made changes to the Proposal to clarify their meaning. These clarifications were made in Article 21 on general provisions for the coordination process, Article 23 on optimisation of remedial actions and Article 26 on avoiding additional operational security violations on cross-border relevant network elements and scanned elements, Article 28 on energy balance of cross-border relevant remedial actions and Article 30 on robustness.
- (94) ACER renamed Article 22 of the Proposal to operational security analysis because power flow analysis is only part of operational security analysis. Here, ACER added a provision to use mainly the AC (alternating current) load flow calculation, with DC (direct current) as a fall-back option because it is less accurate. ACER also specified the results that the RSC delivers to TSOs by listing them separately in sub-points a) to

- e) as current limits, loadings, voltage limits, voltages calculated on common grid models and fall-back situations with DC load flow calculation.
- (95) ACER renamed Article 24 of the Proposal from time-coupled optimisation to constraints on cross-border relevant remedial actions because time-coupled or intertemporal optimisation is only one of the constraints mentioned in this article for the optimisation of remedial actions. The other clarifications made by ACER in this article should improve the understanding of the topic of constraints included in the remedial action optimisation.
- (96) ACER made most changes in Article 25 of the Proposal on relieving operational security violations to clarify the meaning, the notion of operational security violation, system constraints and to ensure the consistency of this article with Article 17 of the Proposal on system constraints.
- (97) ACER made changes in the first paragraph of Article 25 noting that operational security violations can be addressed both with the remedial action optimisation and the coordination process in Article 31 of the Proposal. This was done to clarify the difference between system constraints expressed in current limits and other constraints applied directly during the coordination of cross-border relevant remedial actions. ACER also introduced the concept of current limit, which may be different from thermal limit to better reflect Article 25 of the SO Regulation. Thermal limits should be fixed system constraints entering the remedial action optimisation, current limits can be modified if needed to receive a feasible solution. It shall be understood that it is not the goal of the remedial action optimisation to solve system constraints but the remedial action optimisation should not create or worsen operational security violations.
- (98) Due to a request from one TSO and one regulatory authority during the hearing process, ACER added new paragraphs (2) and (3) to this Article. These new paragraphs introduce the obligations on TSOs to apply dynamic (thermal) limits for cross-border relevant network elements, when this is considered economically efficient. The dynamic (thermal) limits mainly involve the instalment of specific sensors that measure temperature and sagging of lines from which a maximum current limit can be calculated closer to real-time. In turn, the TSOs considers these dynamic (thermal) limits in system operation.
- (99) The value of the thermal limits of cross-border relevant network elements will have a significant effect on the volume and costs of remedial actions. It is therefore of regional interest that each TSO behaves efficiently and explores other options to reduce these costs, such as introducing dynamic (thermal) limits. ACER therefore added an obligation for each SEE TSO to compare the costs and benefits of introducing the dynamic thermal limits on cross-border relevant network elements and then implement these limits if the benefits exceed the costs. In order to reduce the burden on SEE TSOs, this analysis should be performed only for cross-border relevant network elements which are congested (and cause costs) in a significant number of hours. ACER also added the requirement for SEE TSOs to make the analysis and report to SEE RSC, which in turn need to report to SEE regulatory authorities.

- (100) ACER added in paragraph (3) that additional constraints such as voltage violations can be addressed with coordinated regional operational security assessment or the coordination process in Article 31 as well (and not just with the local assessments). ACER added a new paragraph (5) to clarify the difference between paragraph (4) on additional constraints and system constraints in accordance with Article 17 of the Proposal. Therefore, TSOs may also apply system constraints that reflect other operational security limits referred to in paragraph (4). Changes to the last two paragraphs were made to clarify the meaning and delete superfluous content on agreed but not ordered cross-border relevant remedial actions, which is already included in Article 17 of the Proposal.
- (101) Article 30 of the Proposal includes minor changes to monitor and report the need, the effectiveness and the impact of the reduction of current limits applied pursuant to paragraph (2). The RSC is tasked with this monitoring obligation and shall report to all TSOs.
- (102) ACER made changes in Article 31 of the Proposal on coordination of cross-border relevant remedial actions to clarify the role of the RSC and TSOs during the coordination process and to clarify the process for informing the affected parties. In addition, ACER clarified in paragraph (2) the process for rejection of recommended cross-border relevant remedial actions, integrating paragraph (3). This was done to ensure the legal consistency of the ROSC Methodology with both the CSAM and the Electricity Regulation, which provide rules for the rejection of recommended cross-border relevant remedial actions. The conditions for the rejection were clarified into two separate cases: either the recommended cross-border relevant remedial action would result in operational security violations or the cross-border relevant remedial action is no longer available.
- (103) The last three paragraphs (paragraphs (3) to (5)) of this article include only minor changes to better describe the process for providing reasons for the rejection of recommended cross-border relevant remedial actions by the relevant TSOs and to monitor the rejection of cross-border relevant remedial actions. Therefore, ACER clarified that individual occurrence of rejection will be analysed at the request of any SEE TSO or the RSC. The frequent occurrence of rejections is analysed on a mandatory basis. ACER also clarified the cost comparison for rejected cross-border relevant remedial actions. ACER added a provision to mitigate regular rejections of cross-border relevant remedial action, where the rejecting SEE TSO shall propose and apply mitigating measures to avoid similar rejections in the future.
- (104) ACER deleted the fast activation process from Article 31 as coordination can only be achieved with a full coordinated regional operational security assessment process, whereas the fast activation process is not based on a coordinated regional operational security assessment.
- (105) Finally, ACER made a few minor changes to Article 32 on inter-CCR coordination to clarify the relation with the CSAM. All direct references to articles in the CSAM and the amendment were deleted to ensure legal robustness in case of future amendments.

*6.2.8.4. Remedial action optimisation: Identification of most effective and economically efficient remedial actions*

- (106) SEE TSOs proposed in Article 27 of the Proposal that the optimisation of remedial actions shall aim at minimising the incurred costs, resulting from the indicative price or cost information of the costly remedial actions.
- (107) Article 76(1)(b)(iii) of the SO Regulation specifies that the methodology for remedial actions managed in a coordinate way shall determine the identification of the most effective and economically efficient remedial actions. Remedial actions shall be used in case of operational security violations referred to in Article 22 of the SO Regulation. Minimising only the incurred costs with remedial action optimisation would not address the matter of physical effectiveness of remedial actions to operational security violations.
- (108) During the consultation with TSOs and regulatory authorities, it was clarified that cost minimisation was not the only objective for the remedial action optimisation. Therefore, ACER made changes to include all the objectives of the remedial action optimisation and rank them by priority. Starting with relieving operational security violations, followed by cost minimisation and adding that also the amount or volume of cross-border relevant remedial actions shall be minimised.
- (109) Article 27 of the Proposal was renamed to economic efficiency and effectiveness because this is a better description of the goal of the optimisation and because these two objectives can only be addressed together. Therefore, ACER also deleted Article 29 of the Proposal on remedial action effectiveness and integrated the content into the newly named Article 27.
- (110) Since ACER added this priority list of objectives for the remedial action optimisation in the newly named Article 27, it was also necessary to add a new paragraph (2), stating that the objectives can be relaxed in order to find a solution for the optimisation. Paragraph (3) was reworded to include the remedial action influence factor as influence of a cross-border relevant remedial action on an operational security violation, originally described in the Proposal in a separate Article 29. A new paragraph (4) was taken from the original Article 29 as well in order to describe the process when the remedial action optimisation is not able to relieve all operational security violations.

*6.2.8.5. Validation of remedial actions*

- (111) Chapter 3 of the Proposal specifies requirements concerning the validation of remedial actions by specifying a process (Article 33) and outcomes of the validation (Article 34).
- (112) During the validation session at the end of day-ahead, a session shall be hosted by the SEE RSC in order to consolidate results of the day-ahead coordinated regional operational security assessment and for SEE TSOs to reach a final agreement and acknowledge remedial actions that have been agreed during the day-ahead coordinated regional operational security assessment. Also, any remaining violations of operational security limits must be reported during this phase.

- (113) ACER introduced a small change in Article 34 of the Proposal in order to clarify the role for specifying next steps in the validation. Based on discussions with the TSOs and regulatory authorities this role has been given to the TSOs.

*6.2.8.6. Implementation: Preparation and activation of remedial actions*

- (114) Chapter 4 of the Proposal specifies requirements on the implementation of remedial actions and thereby implements Article 76(1)(b)(iv) of the SO Regulation that requires the preparation and activation of remedial actions in accordance with Article 23(2) of the SO Regulation.
- (115) In particular, Article 35 of the Proposal provides rules to be followed by the remedial action connecting TSOs for the activation of remedial actions including underlying conditions for the activation and the reassessment of ordered remedial actions or already activated remedial actions.
- (116) In order to clarify the conditions and coordination of the available cross-zonal capacities within the intraday and balancing timeframes, ACER made changes to Article 35 of the Proposal so as to allow TSOs to modify the cross-zonal capacities outside the coordinated capacity calculation process pursuant to the day-ahead and intraday capacity calculation methodology as only as a last resort measure if available remedial actions are exhausted. Also, ACER clarified in this article that TSOs may prevent the netting of cross-border schedules, which result from activated cross-border relevant remedial actions, with cross-zonal capacities. This will allow TSOs to prevent that these schedules increase cross-zonal capacities in the directions in which additional trade could worsen operational security.

*6.2.8.7. Assessment of the requirements for cost sharing*

- (117) As already stated in section 6.2.3 and in accordance with Article 76(1)(b)(v) of the SO Regulation, the requirements for sharing the costs of remedial actions in the Proposal shall complement where necessary the common methodology developed in accordance with Article 74 of the CACM Regulation. ACER notes that the common methodology developed in accordance with Article 74 of the CACM Regulation fully covers the cost sharing topic and that there is no need to complement it in the Proposal beyond that elaborated in the following paragraphs.
- (118) SEE TSOs proposed that all coordinated remedial actions shall be subject to cost sharing, as laid down in the RDCT Cost Sharing Methodology in accordance with Article 74 of the CACM Regulation. SEE TSOs further specified that activated remedial actions, which had been agreed by SEE TSOs, resulting from coordinated regional operational security assessment and the fast activation process, shall be considered as coordinated remedial actions. In addition, information needed on these coordinated remedial actions to apply the RDCT Cost Sharing Methodology shall be provided by TSOs and the RSC.
- (119) SEE regulatory authorities agreed that it is of utmost importance to make the RDCT Methodology and the RDCT Cost Sharing Methodology consistent with the ROSC

Methodology. Especially, network elements which will be subject to the RDCT Cost Sharing Methodology have to be defined in the ROSC Methodology. One regulatory authority considers that cross-border relevant network elements are not defined in the Proposal, but they are the basis for later cost sharing principles. SEE regulatory authorities did not express concerns with the Proposal in Article 38 on general provisions for cost sharing of remedial actions.

- (120) ACER consulted stakeholders on this issue and asked who should bear the risk of uncertainty between the prices and costs at the time of the remedial action optimisation and the realised prices and costs. Stakeholders expressed diverging views on this issue. Some stakeholders contended that the prices and costs provided to TSOs should be firm in order to prevent possible manipulation with realised costs. Other stakeholders alleged that they cannot provide firm prices and costs because of the long delay between the time they need to provide these estimates and the time they receive information on whether they are activated or not.
- (121) With regard to the determination of costs of remedial actions for cost sharing, ACER identified two conditions for including the costs of remedial actions into common costs to be shared in the application of RDCT Cost Sharing Methodology within the SEE CCR. The first condition is that remedial actions are cross-border relevant and are managed in a regionally coordinated way in accordance with Article 76(1)(b) of the SO Regulation. The second condition is that cross-border relevant remedial actions are used to solve congestions on cross-border relevant network elements in accordance with second sentence of Article 76(1)(b)(v) of the SO Regulation. Only when both conditions are fulfilled, the related costs of these cross border relevant remedial actions can be included in the common costs for cost sharing, subject to the RDCT Cost Sharing Methodology.
- (122) ACER agrees with that part of the Proposal where cost sharing is applied to cross border relevant remedial actions applied in coordinated regional operational security analysis, because both conditions above are fulfilled, i.e. coordinated regional operational security analysis applies a regional coordination process involving cross-border relevant remedial actions. On the other hand, ACER disagrees that remedial actions resulting from the fast activation process shall be subject to cost sharing on a general basis. The fast activation process does not use coordinated regional operational security assessment and happens either between coordinated regional operational security assessments or after the last coordinated regional operational security assessment, due to urgent or real time updates that indicate operational security limit violations. Since the process is lacking the level of coordination achieved with coordinated regional operational security assessment, any remedial actions resulting from it cannot be considered as fully coordinated. This lack of coordination means that the first condition mentioned in in recital (121) of this Decision is not fulfilled. Nevertheless, ACER specified that if the ordered cross-border relevant remedial action is no longer available due to unexpected technical unavailability of the underlying assets and alternative cross-border relevant remedial actions need to be activated, this alternative cross-border relevant remedial action can still be subject to cost sharing.

- (123) Therefore, ACER made changes in Article 38 of the Proposal. Firstly, in paragraph (1) of this amended article, cost sharing shall only apply to ordered cross-border relevant remedial actions resulting from coordinated regional operational security assessment or from the fast activation process if the ordered cross-border relevant remedial action is no longer available due to unexpected technical unavailability. Secondly, ACER specified the data or information needed to apply cost sharing by replacing paragraph (2) with eight new paragraphs, adding more specific details. Paragraph (3) now specifies that TSOs and RSC shall determine the total costs for each coordinated regional operational security assessment run separately and for each cross-border relevant remedial action. A new paragraph (4) specifies which costs and prices shall be used to calculate the costs for each cross-border relevant remedial action and a new paragraph (10) specifies the deadline for establishing, settling and sharing the final costs of cross-border relevant remedial actions, which was missing in the SEE TSOs' Proposal. A new paragraph (11) lays down the obligation to determine and calculate input parameters on the basis of each coordinated regional operational security assessment for the RDCT Cost Sharing Methodology, which will be applied afterwards.
- (124) In addition, ACER made changes to Article 15 on the preparation and updates of individual grid models by SEE TSOs, clarifying that the costs of cross-border relevant remedial actions included in the individual grid model and resulting from the local preliminary assessment shall not be included in the final costs to be shared in accordance with the RDCT Cost Sharing Methodology.
- (125) In accordance with Article 76(2) of the SO Regulation, in determining whether congestions have cross-border relevance, the TSOs shall take into account the congestion that would appear in the absence of energy exchanges. ACER understands that TSOs have analysed this provision and determined that operational security limit violations on network elements with a voltage level higher than or equal to 150 kV need to be managed in a coordinated way. Also, ACER understands that TSOs consider that in the absence of energy exchanges these elements would not be congested and are thus cross-border relevant.

#### *6.2.8.8. Cost deviations*

- (126) SEE TSOs did not address the topic of cost deviations in the Proposal. Deviations can result from the difference between costs provided by TSOs for the remedial action optimisation and the final incurred costs for settlement with the third party cross-border relevant remedial action provider.
- (127) During the proceedings for this Decision, ACER outlined several problems related to the proposal that the remedial action optimisation is based on estimated or indicative costs and prices, whereas the costs and prices used for settlement and cost sharing can be different and thereby lead to deviations between optimal remedial actions and costs determined by the remedial action optimisation and actual costs of remedial actions to be settled and shared among TSOs. The first problem is that indicative prices and costs lead to a suboptimal solution of remedial action optimisation, since the optimal activation of remedial actions is done on wrong costs or prices. Second, the providers

of redispatching and countertrading resources can consistently provide low indicative prices in order to be competitive in the remedial action optimisation, whereas after they have been activated, provide higher ex-post costs. This strategy could always yield them positive benefits and risk free profits. For example, an ex-post statistical analysis showing significant average upward correction of costs and prices would indicate such abusive behaviour.

- (128) The majority of SEE TSOs and regulatory authorities supported that providers of redispatching and countertrading resources should be able to provide indicative prices and costs to TSOs and after they are activated provide realised prices and costs which may be different from indicative prices and costs. A majority of SEE TSOs and regulatory authorities also supported that cost deviations resulting from the difference between indicative and realised prices and costs should be subject to cost sharing.
- (129) ACER notes that this problem is not addressed in the SEE RDCT Methodology established pursuant to Article 35 of the CACM Regulation and therefore the ROSC Methodology needs to complement it. With this regard, Article 35(5) and (6) of the CACM Regulation is not clear on whether the prices of redispatching are based on indicative prices or realised prices. On the one hand, these two paragraphs require that these prices shall be provided to TSOs *ex-ante* (before they are committed) to enable the calculation of costs. On the other hand, these two paragraphs also state that the prices shall be based on (actual) prices of relevant markets or actually incurred costs. ACER therefore understands that Article 35(5) and (6) of the CACM Regulation allows both indicative prices and costs as well as actually incurred prices and costs to be used for coordination. Given that TSOs and regulatory authorities supported this solution, ACER also deems it appropriate.
- (130) With regard to the two concerns raised in paragraph (127) above, ACER notes that the remedial action optimisation based on indicative prices indeed may lead to a suboptimal solution; however TSOs informed ACER that given the limited competition in the remedial actions to solve specific congestion, it is less likely that ex-post changes in prices and costs would significantly alter the optimal solution. With regard to the possible abuse of this solution, ACER provided an option to all SEE TSOs to reject accepting the cost deviations for cost sharing if they suspect abusive behaviour on the side of the providers. Such rejection will incentivise the connecting TSO(s) to investigate the reasons and implement appropriate measures to prevent such abuse.

#### 6.2.9. Assessment of the requirements for organisation of regional operational security coordination

##### 6.2.9.1. *Appointment of the RSC*

- (131) In accordance with Article 77(1)(a) of the SO Regulation, Article 41 of the Proposal contains the rules on the appointment of the RSC. SEE TSOs were not able to provide a clear wording for the appointment and therefore ACER included that for the SEE CCR the RSC SeleNE CC will perform the tasks listed in Article 77(3) of the SO Regulation.

#### *6.2.9.2. Governance and operation of the RSC*

- (132) In accordance with Article 77(1)(b) of the SO Regulation Article 42 of the Proposal covers the rules for governance and operation of the RSC. However, SEE TSOs did not sufficiently address the provision for equitable treatment of TSOs, which is another requirement from Article 77(1)(b) of the SO Regulation.
- (133) During the proceedings on the decision for the Core ROSC Methodology, it was agreed to clarify the governance of the regional TSOs and specify the decision-making process. Although, this was not a topic raised by SEE parties explicitly, ACER made the same changes in the ROSC Methodology to be consistent with the Core ROSC Methodology.
- (134) Therefore, ACER added a new Article 36 in Title 6 with further detailed rules on governance and decision-making among SEE TSOs to ensure the equitable treatment of TSOs. Paragraph (1) requests TSOs to introduce common bodies for coordination for the implementation of the ROSC Methodology with voting rules in accordance with Article 5(5) of the SO Regulation.
- (135) Paragraphs (2) and (3) further detail the common rules for at least one common body, the steering committee. Here, ACER included provisions on resolving conflicts and made clear that the common bodies shall not intervene in close to real time operations of the RSC.
- (136) In addition, ACER changed paragraph (3) of Article 42 of the Proposal to clarify that a dispute between the RSC and SEE TSOs shall be finally settled by a decision of SEE TSOs pursuant to governance rules determined in Article 36 mentioned above. This is because SEE TSOs are the shareholders and shall have the final say on the disputes involving the RSC. An arbitration process as originally proposed by the TSOs is appropriate between equal parties not between parent and daughter companies as is in this case.
- (137) ACER also added a new Article 39 on coordination and decision-making for the RSC and SEE TSOs. This was mainly done to be consistent with Core ROSC Methodology.

#### 6.2.10. Assessment of the requirements for the implementation timescale

##### *6.2.10.1. Implementation timescale for the ROSC Methodology*

- (138) The Proposal included in Article 40 a timescale for implementation of the ROSC Methodology in order to fulfil the requirement of Article 6(6) of the SO Regulation.
- (139) Article 40 of the Proposal lays down the implementation deadlines for the ROSC Methodology.
- (140) Paragraph (4) of Article 40 of the Proposal describes different steps that will be necessary for the definition, the development and the testing of the target solution as set out in paragraph 1 of Article 40 of the Proposal. An estimation of the maximum

time to accomplish the final step is laid down in paragraph 5 of Article 40 of the Proposal.

- (141) The Proposal fulfils the requirement of Article 6(6) of the SO Regulation as it specifies the implementation deadline. ACER agrees with an implementation deadline at the end of 2021. However, ACER has concerns that this deadline cannot be met anymore, because of the late approval (end of 2020 instead of June 2020). In addition, it was a clear request from SEE regulatory authorities to align the ROSC Methodology with the Core ROSC Methodology. Therefore, ACER aligned the implementation timeline. The reasons for this later and stepwise implementation are presented below.
- (142) Article 16(8) of the Electricity Regulation in principle requires that each TSO offers a minimum of 70% of the technical capacity of network elements for cross-zonal trade. In addition, Article 16(4) of the same Regulation requires that the maximum level of capacity of the interconnections and the transmission networks affected by cross-border capacity shall be made available to market participants complying with the safety standards of secure network operation. Countertrading and redispatch, including cross-border redispatch, shall be used to maximise available capacities to reach the minimum capacity provided for in Article 16(8) of the same regulation. Article 16(4) of the same regulation further specifies that a coordinated and non-discriminatory process for cross-border remedial actions shall be applied to enable such maximisation, following the implementation of a redispatching and counter-trading cost-sharing methodology.
- (143) The requirements of Article 16(8) of the Electricity Regulation, which are applicable from the beginning of 2020, are essentially conditional on the implementation of coordinated redispatching and countertrading as outlined in Article 16(4) of the same regulation. For this reason, ACER considers that coordination of remedial actions in order to maximise cross-zonal capacities needs to be implemented as soon as technically possible.
- (144) To apply the approach of an interim solution, ACER specified exactly the minimum requirements for the interim solution which is called the first implementation step of the ROSC Methodology. This step includes the implementation of coordinated regional operational security assessment only for the day-ahead timeframe and incorporating only coordination of redispatching and phase shifting transformers. This simplified coordination process therefore involves only one coordination per day and only the most commonly applied remedial actions. These simplifications should help reduce the complexity in the implementation and minimise the risk of implementation delay.
- (145) With regard to the implementation of the second implementation step of the ROSC Methodology, ACER specified that this implementation step must include all requirements of the ROSC Methodology and that it must be implemented 4.5 years after the adoption to ensure consistency with the implementation of the Core ROSC Methodology.
- (146) ACER evaluated that the implementation of the RDCT Cost Sharing Methodology is less demanding and challenging than implementing the day-ahead coordinated regional

operational security assessment with redispatching and countertrading. Its implementation should therefore not be a problem related to the implementation of the first implementation step of the ROSC Methodology. ACER considers that 30 months for implementation of the cost sharing solution is a feasible deadline. Nevertheless, if this deadline proves to be insufficient, TSOs still have the right to justify to SEE regulatory authorities that the deadline has not been respected because it was not realistic.

- (147) The development, testing and implementation of the IT tools as well as systems and procedures required to support the ROSC Methodology was discussed with the regulatory authorities and a need for a coordinated approach in Continental Europe synchronous area was recognised. To this end, ACER added a provision in Article 37 of the Proposal specifying that all SEE TSOs and the SEE RSC shall closely follow the implementation of the ROSC Methodology in the Core CCR and strive to adopt the same tools, systems and processes in the ROSC Methodology for the SEE CCR, when duly justified.

*6.2.10.2. Complementing RDCT Cost Sharing Methodology regarding the implementation deadline*

- (148) Article 76(1)(b)(v) of the SO Regulation requires that the ROSC Methodology complements, where necessary, the RDCT Cost Sharing Methodology. As the RDCT Cost Sharing Methodology refers to the implementation deadline defined in the ROSC Methodology and the RDCT Methodology, but does not specify whether it refers to the first or the second implementation step of both methodologies, ACER finds it necessary to complement the RDCT Cost Sharing Methodology to provide further clarity how these implementation steps apply to the implementation of the RDCT Cost Sharing Methodology.
- (149) After consulting SEE TSOs and regulatory authorities, ACER was informed by them that the implementation of the RDCT Cost Sharing Methodology is conditional on the implementation of the ROSC Methodology and the RDCT Methodology and therefore could not be implemented before these two methodologies are implemented. This is because the costs of cross-border relevant remedial actions and all the other inputs to the RDCT Cost Sharing Methodology are determined only once these two methodologies are implemented and operational.
- (150) At the same time, the majority of SEE TSOs were of the opinion that the ROSC Methodology and the RDCT Methodology also could not be implemented without the implementation of the RDCT Cost Sharing Methodology. This is because the coordination of remedial actions applies the optimisation that aims to minimise the costs of remedial actions to solve congestions in the whole SEE CCR, which implies that TSOs help each other to solve congestions in the most economically efficient way. For example, a congestion on the border between Romania and Bulgaria may be most efficiently resolved by involving downward redispatching of generating unit(s) in Romania and upward redispatching of generating unit(s) in Greece. It is expected that this redispatching actions will involve some revenues for Romanian TSOs and some

costs for the Greek TSO. Naturally, the Greek TSO will only be willing to support solving the congestion on the border between Romania and Bulgaria if the incurred costs will be shared with all involved TSOs based on the polluter-pays principle. It is thus impossible to expect that TSOs can fully coordinate remedial actions at regional level without having the certainty that the corresponding costs will be shared among all TSOs.

- (151) For the above reason, the RDCT Cost Sharing Methodology must be implemented at the same time as the ROSC Methodology and the RDCT Methodology. In other words, all three methodologies are considered as an inseparable part of the regional coordination of remedial actions. ACER notes that this understanding has been confirmed by regulatory authorities in all other CCRs when approving the respective cost sharing methodologies as they all link the implementation of the cost sharing methodology to the implementation of the RDCT Methodology.
- (152) Taking into account the need for the RDCT Cost Sharing Methodology to complement the stepwise implementation of the ROSC Methodology and the RDCT Methodology, ACER specified in these two methodologies that the RDCT Cost Sharing Methodology must be implemented for both implementation steps of the ROSC Methodology and the RDCT Methodology, i.e. by 30 months for the first implementation step and by 54 months for the second implementation step of the ROSC Methodology and the RDCT Methodology.

#### 6.2.11. Assessment for the requirements for the monitoring provisions

- (153) Regarding reporting and monitoring, the Proposal included in its Article 39 the obligation to record and share all necessary data to enable SEE TSOs and RSC to fulfil the obligations of the ROSC Methodology, the cost-sharing methodology and the SO Regulation. However, the article was silent on concrete monitoring topics and reporting obligations. Therefore, ACER found it necessary to include the requirement for SEE TSOs and RSC to perform regular monitoring of the efficiency, effectiveness and robustness of ROSC process, and included a list of the requirements.
- (154) To add robustness to the monitoring process, ACER also included the list of general monitoring items for SEE TSOs and RSC to prepare and submit to SEE regulatory authorities on a biannual basis a report on the efficiency and effectiveness of the ROSC process, as well as the list of the data regarding the ROSC process to make available to SEE regulatory authorities. ACER added that SEE regulatory authorities are to be consulted regarding the detailed specification of the reporting and data delivery requirements and have the right to request additional reporting and data delivery in coordination with SEE TSOs and the RSC. Finally, ACER added the obligation for the TSOs to develop a description of national rules and procedures for activation of remedial actions, focusing on redispatching actions, by no later than six months after the adoption of the ROSC Methodology.
- (155) One regulatory authority claimed in the Non-paper that the requirements pursuant to Articles 23(4) and 24(6) of the CSAM (definition of rules for exceptional situations in

the day-ahead and intraday regional operational security analysis) have not been fulfilled. ACER did not find reasons to believe that the Proposal fails to address these exceptional situations. Nevertheless, ACER found room for improvement of robustness via increasing the monitoring of the actions taken in exceptional situations by TSOs. To this end, Article 30 of the Proposal was amended to include a provision for SEE RSC to monitor the need, the effectiveness and the impact of the reduction of current limits applied by TSOs in case of exceptional situations.

6.2.12. Amendments necessary to ensure legal clarity and consistency with existing legal provisions

- (156) Definitions and concepts contained in Article 2 of the Proposal were revised. For clarity, ACER revised the definition of ‘cross-border relevant remedial action’ or ‘XRA’, as well as detailed the definitions of ‘available XRA’, ‘recommended XRA’, ‘agreed XRA’, ‘ordered XRA’, ‘agreed but not ordered XRA’ or ‘ANORA’, ‘activated XRA’ and ‘conditionally available XRA’, and clarified the sequence in which the ROSC Methodology determines the different types of cross-border relevant remedial actions (paragraph 2 of Article 2).
- (157) ACER introduced definitions that were not included in the Proposal, namely the definition of ‘CGM’ (common grid model), ‘CGMM’ (common grid model methodology), ‘CSAM’ (methodology for coordinating operational security analysis) and ‘CROSA’ or ‘coordinated regional operational security assessment’. Similarly, ACER added the definitions on ‘ID RSA’ (intraday regional operational security analysis) and ‘IGM’ (individual grid model). The definition of the acronym ‘ROSC’ was also added to Article 2.
- (158) The definition of ‘scanned element’ was adapted. ACER also revised the definitions of ‘XNE’ or ‘cross-border relevant network element’, ‘XNEC’ or ‘cross-border relevant network element with contingency’, ‘XNE connecting TSO’ and ‘third party (X)RA provider’. A definition of ‘network element’ was also introduced.
- (159) ACER revised the definition of ‘RAIF’ or ‘remedial action influence factor’, and added the definitions of ‘preventive (X)RA’, ‘local preliminary assessment’, ‘overlapping XNE’, ‘overlapping XRA’ and ‘curative (X)RA’.
- (160) ACER found it necessary to revise, for clarity, paragraph 3 of Article 2 on the types of constraints determined by the ROSC Methodology and amended the Proposal in this regard. ACER also clarified, in paragraph 4 of the same article, that the acronym ‘(X)RA’ is used throughout the methodology where the reference can mean both the remedial action or cross-border relevant remedial action.
- (161) ACER made changes to Article 5 of the Proposal and rendered the secured elements as cross-border relevant network elements in order to maintain the consistency with the CSAM. Also, relevant provisions concerning the conditions and process to establish and maintain the list of cross-border relevant network elements was moved to Article 7.

- (162) To establish a consistent approach between cross-border relevant network elements and scanned elements, ACER made changes to Article 6 of the Proposal and moved relevant provisions concerning the conditions and process to establish and maintain the list of scanned elements to Article 7.
- (163) Similarly, Article 8 of the Proposal concerning cross-border relevant network elements is no longer required as its provisions have been merged with Article 5 and Article 7, whereas, the explanation on the RDCT Cost Sharing Methodology was removed because it is superfluous.

6.2.13. Assessment of the requirements for consultation, transparency and stakeholder involvement

*6.2.13.1. Consultation and involvement of stakeholders*

- (164) When drafting the Proposal, TSOs aimed at addressing the requirements from Article 11 of the SO Regulation regarding the involvement of stakeholders.
- (165) As indicated in paragraph (7) above, all TSOs fulfilled the requirements of Article 11 of the SO Regulation, since stakeholders were consulted on the draft Proposal pursuant to Article 11(1) of the SO Regulation. This involvement took place during a public consultation, which ran from 12 November 2019 until 13 December 2019. In addition, regulatory authorities were regularly informed and consulted pursuant to Article 11(1) of the SO Regulation.

**7. CONCLUSION**

- (166) For all the above reasons, ACER considers the Proposal in line with the requirements of the SO Regulation, provided that the amendments described in this Decision are integrated in the Proposal, as presented in Annex I. The amendments ensure that the Proposal is in line with the purpose of the SO Regulation and contributes to market integration, non-discrimination, effective competition and the proper functioning of the market.
- (167) Therefore ACER approves the Proposal subject to the necessary amendments. To provide clarity, Annex I to this Decision sets out the Proposal as amended and approved by ACER,

HAS ADOPTED THIS DECISION:

*Article 1*

The Methodology for Regional Operational Security Coordination for the SEE Capacity Calculation Region in accordance with Article 76 of Regulation (EU) 2017/1485 is adopted as set out in Annex I to this Decision.

*Article 2*

This Decision is addressed to SEE TSOs:

ESO - Elektroenergien Systemen Operator EAD

IPTO - Independent Power Transmission Operator S.A.

Transelectrica - National Power Grid Company Transelectrica S.A.

Done at Ljubljana, on 4 December 2020.

**- SIGNED -**

*For the Agency  
The Director*

C. ZINGLERSEN

Annexes:

Annex I – Methodology for Regional Operational Security Coordination for the SEE CCR in accordance with Article 76 of the Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation

Annex Ia (for information only) – Methodology for Regional Operational Security Coordination for the SEE CCR in accordance with Article 76 of the Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation – with track changes

*In accordance with Article 28 of Regulation (EU) 2019/942, the addressees may appeal against this Decision by filing an appeal, together with the statement of grounds, in writing at the Board of Appeal of the Agency within two months of the day of notification of this Decision.*

*In accordance with Article 29 of Regulation (EU) 2019/942, the addressees may bring an action for the annulment before the Court of Justice only after the exhaustion of the appeal procedure referred to in Article 28 of that Regulation.*