
**ENTSO-E proposal for System Operation Regions
(SOR) in accordance with Article 36 of the
Regulation (EU) 2019/943 of the European
Parliament and of the Council of 5 June 2019 on
the internal market for electricity**

Committee Approved
for submission to ACER, 6 January 2020

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ENTSO-E, taking into account the following,

Whereas

- (1) ENTSO-E is mandated to develop a proposal defining the system operation regions (hereafter referred to as “SOR Proposal”) in accordance with Article 36 of Commission Regulation (EU) 2019/943 on the internal market for electricity (hereafter referred to as “Regulation 2019/943”).
- (2) The SOR Proposal takes into account the general principles and goals set out in the Electricity Regulation as well as in:
 - a. the Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity (hereafter referred to as “Directive 2019/944”),
 - b. all the applicable Network Codes and Guidelines referred to in the Regulation 2019/943, adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009 such as the Regulation (EU) 2017/1485 establishing a guideline on electricity transmission system operation (hereafter referred to as “SO GL”), Regulation (EU) 2015/1222 establishing a guideline on capacity allocation and congestion management (hereafter referred to as “CACM GL”), Regulation (EU) 2016/1719 establishing a guideline on forward capacity allocation (hereafter referred to as “FCA GL”), Regulation (EU) 2017/2196 establishing a network code on electricity emergency and restoration (hereafter referred to as “ER NC”) and Regulation (EU) 2017/2195 establishing a guideline on electricity balancing (hereafter referred to as “EB GL”).
- (3) The SOR Proposal intends to specify the geographical scope in which technical processes need to be coordinated in a harmonised way between TSOs, while preserving a smooth and secure operation of electricity exchanges with third countries, which safeguards the security of operation for the European electricity system.
- (4) Regulation 2019/943 recognises, in its recitals 42 and 53, that an effective progress towards the optimal management of the electricity transmission network can be achieved by establishing the regional geographical scope for which harmonization of the cooperative operational processes should take place. The SOR Proposal clarifies the regional scope for optimising processes, and consequently contributes to the general objectives of the Regulation 2019/943 to the benefit of all market participants and electricity end consumers and to contribute effectively to enhance system security and market efficiency.
- (5) The SOR Proposal should clarify Article 36(2) requirement on the coordination between regional coordination centres for the borders adjacent to SOR without prejudice of the creation of Regional Coordination Centres (hereafter referred to as “RCC(s)”) in line with Article 35(1) of the Electricity Regulation. The SOR Proposal cannot be interpreted as direct or indirect TSOs’ intention to create a specific RCC. Consequently, when establishing RCCs, TSOs should be allowed the flexibility needed in that regard to ensure a suitable level of coordination of technical processes within the geographical scope of the SOR and with the borders adjacent to the SOR.
- (6) TSOs of the SOR should have the flexibility to describe the business processes in the region in a way best fitting the coordination requirement for TSOs to ensure efficient and secure system operation.

- (7) The European electricity network evolves with the primary goal of ensuring stability of the system and security of supply while enabling the integration of the EU energy markets and fulfilling the ambitious RES deployment objectives of the EU. This is only possible if all relevant operational processes are coordinated and applied by all TSOs (EU and non-EU TSOs) in Europe. The need to strengthen and deepen coordination with the synchronously interconnected TSOs not bound by the respective EU legislation was highlighted and implemented based on the current Network Codes and Guidelines, notably by EU Regulation 2017/1485 on electricity transmission system operation and EU Regulation 2017/2196 on electricity emergency and restoration.
- (8) In this respect, the Regulation 2019/943 in its recital 70 further stresses the need for close cooperation with Member States, the Energy Community Contracting Parties and other third countries which apply this Regulation or are part of the synchronous area of Continental Europe. This cooperation should cover all matters concerning the development of an integrated electricity trading region and ensure that the Member States take no measures that endanger the further integration of electricity markets or security of supply of Member States and Contracting Parties. In line with this provision, the SOR proposal provides that all TSOs of those SOR involving third country TSOs should endeavour where necessary to enter into agreements setting the basis for their technical cooperation and compliance with the relevant EU legislation. The scope of this cooperation is included in the informative Annexes to this proposal.
- (9) ENTSO-E structures and regional agreements, provisions and methodologies listed in Article 6(2) and 6(3) of SO GL and in particular the synchronous area agreements implemented in line with Article 118 of SO GL including as applicable the agreements with TSOs not bound by the Regulation, implementing the SO GL Article 13, and the ER NC Article 10, will be tools for TSOs to ascertain and clarify operational coordination.

SUBMITS THE FOLLOWING SOR PROPOSAL TO ACER:

Article 1
Subject matter and scope

1. According to Article 36(1) of Regulation 2019/943, Article 3 of this SOR Proposal specifies which transmission system operators, bidding zones, bidding zone borders, capacity calculation regions and outage coordination regions are covered by each of the system operation regions, taking into account the grid topology, including the degree of interconnection and interdependency of the electricity system in terms of flows.
2. According to Article 36(2) of Regulation 2019/943, Article 4 of this SOR Proposal specifies how the coordination between regional coordination centres is to take place for bidding zone borders adjacent to SOR.

Article 2 Definitions and interpretation

1. For the purposes of the SOR Proposal, terms used in this document shall have the meaning of the definitions included in Article 2 of the Regulation 2019/943, in the Directive 2019/944, in the SO GL and CACM GL.
2. In this SOR Proposal, the following acronyms are used:
 - a. CCR means Capacity Calculation Region;
 - b. OCR means Outage Coordination Region;
 - c. BZ means Bidding Zone.
3. In this SOR Proposal, unless the context requires otherwise:
 - a. the table of contents and headings are inserted for convenience only and do not affect the interpretation of this SOR Proposal; and
 - b. any reference to legislation, regulations, directive, order, instrument, code or any other enactment shall include any modification, extension or re-enactment of it then in force.

Article 3 Proposal for System Operation Regions (SOR)

Only TSOs that have obligations that are relevant for system operations, such as, but not limited to: calculation of capacity, assessment of needed remedial actions to ensure security of the whole system, coordination of all the outages to ensure security and efficiency, adequacy assessment and tasks related to the provision of balancing, shall be included in the relevant SOR.

TSOs included in a CCR but not incorporated in the SOR of the mentioned CCR are considered relevant stakeholders for the purpose of the SOR Proposal and shall be properly consulted.

Within 18 months after the approval of this proposal, all TSOs of a System Operation Region neighbouring third country TSOs shall endeavour to conclude with the third country TSOs not bound by the Regulation EU 2019/943 agreements setting the basis for their cooperation concerning secure system operation and setting out arrangements for the compliance of the third country TSOs with the obligations set in this Regulation EU 2019/943.

1. Baltic SOR

CCR	OCR	TSOs	BZ	BZ borders
Baltic CCR	Baltic (1)	Litgrid AST Elering	LT LV EE	Baltic CCR borders

(1) The Baltic OCR equals the Baltic CCR.

2. Nordic SOR

CCR	OCR	TSOs	BZ	BZ borders
Nordic	Nordic (2)	Energinet Fingrid Svenska Kraftnät	DK1, DK2 FI SE1, SE2, SE3, SE4	Nordic CCR borders

(2) The Nordic OCR encompasses the Nordic assets relevant for outage coordination in accordance with the Nordic System Operation Agreement.

3. IU SOR

CCR	OCR	TSOs	BZ	BZ borders
IU Channel	IU (3) Channel (4)	SONI EirGrid NGESO	SEM GB	GB-SEM Channel CCR borders

(3) The IU OCR is the Outage Co-ordination Region associated with the IU CCR.

(4) The Channel OCR is the Outage Co-ordination Region associated with the Channel CCR.

4. Central Europe SOR

CCR	OCR	TSOs	BZ	BZ borders
Core Italy North	OCR based on Core OCR based on Italy North (5)	RTE ELIA TenneT NL Amprion TransnetBW TenneT DE 50Hertz Creos PSE ČEPS APG VUEN MAVIR ELES SEPS HOPS Transelectrica TERNA.	FR BE NL DE/LU PL CZ AT HU SI SK HR RO IT NORD	Core CCR borders Italy North CCR borders

(5) The Outage Coordination Regions involving the TSOs of the Synchronous Area Continental Europe are defined in the Synchronous Area Framework Agreement for RG CE – Annex 4: Policy on Coordinated Operational Planning, Article C-2-1.

5. SEE SOR

CCR	OCR	TSOs	BZ	BZ borders
SEE	OCR based on SEE (6)	ESO IPTO	BG GR	SEE CCR borders

(6) The Outage Coordination Regions involving the TSOs of the Synchronous Area Continental Europe are defined in the Synchronous Area Framework Agreement for RG CE – Annex 4: Policy on Coordinated Operational Planning, Article C-2-1.

6. GRIT SOR

CCR	OCR	TSOs	BZ	BZ borders
GRIT	GRIT (7)	TERNA IPTO	IT NORD IT CNOR IT CSUD IT SUD IT SICI IT SARD IT ROSN	GRIT CCR borders

(7) The GRIT OCR is equal to the GRIT CCR.

7. SWE SOR

CCR	OCR	TSOs	BZ	BZ borders
SWE	SWE (8)	RTE REE REN	FR ES PT	SWE CCR borders

(8) The SWE OCR is equal to the SWE CCR.

Article 4 Coordination of the bidding zone borders adjacent to SORs

1. Bidding Zone borders adjacent to Baltic SOR and Nordic SOR

1. The bidding zone borders adjacent to Baltic SOR and Nordic SOR are :
 - a. Estonia - Finland (EE - FI)
 - b. Lithuania – Sweden fourth bidding zone (LT-SE4)
2. The RCC established by the TSOs of the Baltic SOR shall coordinate these bidding zone borders in accordance with applicable terms, conditions and methodologies, covering inter alia:
 - a. Baltic Capacity Calculation Methodology pursuant to Articles 20 and 21 of the CACM GL and Article 10 of the FCA GL,
 - b. Baltic Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. Baltic Regional Outage Coordination according to Article 80 of the SO GL,
 - e. Cooperative processes established pursuant to Article 38 of Regulation 2019/943.
3. The RCC established by the TSOs of the Baltic SOR shall allow Svenska Kraftnät and Fingrid to participate in the coordination of the borders through the RCC established by Nordic TSOs, which will have an agreement with the RCC established by Baltic TSOs.

2. Bidding Zone borders adjacent to Baltic SOR and Central Europe SOR

1. The bidding zone border adjacent to Baltic SOR and Central Europe SOR is Lithuania- Poland (LT-PL).

2. The RCC established by the TSOs in the Baltic SOR shall coordinate the LT-PL bidding zone border in accordance with applicable terms, conditions and methodologies, covering inter alia:
 - a. Baltic Capacity Calculation Methodology pursuant to Articles 20 and 21 of the CACM GL and Article 10 of the FCA GL,
 - b. Baltic Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. Baltic Regional Outage Coordination according to Article 80 of the SO GL.
3. Moreover the RCC established by TSOs in the Baltic SOR shall coordinate the tasks of regional relevance for the Baltic SOR with regards to this border, in cooperation with PSE, which will have a contractual relationship with the RCC established by Baltic TSOs.

3. Bidding Zone borders adjacent to Nordic SOR and Central Europe SOR

1. The bidding zone borders adjacent to Nordic SOR and Central Europe SOR are the bidding zone borders of Hansa CCR.
2. RCC established by the TSOs in Nordic SOR and RCC established by the TSOs in Central Europe SOR shall coordinate those bidding zone borders in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. Hansa Capacity Calculation Methodology pursuant to Articles 20 and 21 of the CACM GL and Article 10 of the FCA GL,
 - b. Hansa Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. the cooperative processes established for the interface between the Nordic SOR and the Central Europe SOR pursuant to Article 38 of the Regulation 2019/943.

4. Bidding Zone borders adjacent to IU SOR and Central Europe SOR

1. The bidding zone borders adjacent to IU SOR and Central Europe SOR are the bidding zone borders of Channel CCR.
2. The RCC established by the TSOs in the IU SOR and the RCC established by the TSOs in Central Europe shall coordinate those three bidding zone borders in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. Channel Capacity Calculation Methodology pursuant to Articles 20 et 21 of the CACM GL and Article 10 of the FCA GL,
 - b. Channel Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 et 70 of the SO GL,
 - d. Channel Regional Outage Coordination according to Article 80 of the SO GL,
 - e. the cooperative processes established for the interface between the IU SOR and the Central Europe SOR pursuant to Article 38 of the Regulation 2019/943.

5. Bidding zone borders adjacent to GRIT SOR and Central Europe SOR

1. Taking into account that bidding zone IT NORD is part of both SOR, the bidding zone borders adjacent to GRIT SOR and Central Europe SOR are the bidding zone borders of Italy North CCR, which are integrated in the Central Europe SOR, and the border Italy NORD – Italy CNORD (IT NORD- IT CNORD), which is integrated in the GRIT SOR.

2. The RCC established by the TSOs in Central Europe SOR shall coordinate the the bidding zone borders of Italy North CCR in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. Italy North Capacity Calculation Methodology pursuant to Articles 20 and 21 of the CACM GL and Article 10 of the FCA GL,
 - b. Italy North Coordinated Security Analysis Methodology applicable pursuant to Article 76 of the SO GL
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. Regional Outage Coordination according to Article 80 of the SO GL,
 - e. cooperative processes established for the tasks of regional relevance for the Central Europe SOR with regards to this border.

3. The RCC established by TSOs in the GRIT SOR shall coordinate the IT NORD-IT CNORD bidding zone border in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. GRIT Calculation Methodology pursuant to Articles 20 and 21 of the CACM GL and Article 10 of the FCA GL,
 - b. GRIT Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. GRIT Regional Outage Coordination according to Article 80 of the SO GL,
 - e. cooperative processes established for the tasks of regional relevance for the GRIT SOR with regards to this border.

4. The RCCs established by the TSOs in the Central Europe SOR and by the TSOs in the GRIT SOR shall coordinate the bidding zone Italy NORD in accordance with the cooperative processes pursuant to Article 38 of Regulation (EU) 2019/943.

6. Bidding zone borders adjacent to SEE SOR and GRIT SOR

1. The bidding zone borders adjacent to SEE SOR and GRIT SOR is the border IT SUD - GR.

2. The RCC established by the TSOs in the GRIT SOR shall coordinate the bidding zone border in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. GRIT Calculation Methodology pursuant to Articles 20 and 21 of the CACM GL and Article 10 of the FCA GL,
 - b. GRIT Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. GRIT Regional Outage Coordination according to Article 80 of the SO GL,
 - e. cooperative processes established for the tasks of regional relevance for the GRIT SOR, and in line with other applicable cooperative processes developed in line with Article 38 of Regulation 2019/943.

7. Bidding Zone borders adjacent to SWE SOR and Central Europe SOR

1. Taking into account that the BZ France is part of both SOR, the bidding zone borders adjacent to SWE SOR and Central Europe SOR are:
 - a. France – Spain (FR-ES), which is integrated in the SWE SOR, and

- b. France- Belgium (FR-BE)
 - c. France-Germany/Luxembourg (FR-DE/LU)
 - d. Italy NORD – France (IT NORD – FR),
which are integrated in the Central Europe SOR.
2. The RCC established by the TSOs in SWE SOR shall coordinate the FR-ES bidding zone border in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. SWE Calculation Methodology pursuant to Articles 20 et 21 of the CACM GL and Article 10 of the FCA GL,
 - b. SWE Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. Regional Outage Coordination according to Article 80 of the SO GL,
 - e. cooperative processes established for the tasks of regional relevance for the SWE SOR, and in line with other applicable cooperative processes developed in line with Article 38 of Regulation 2019/943.
3. The RCC established by TSOs in Central Europe shall coordinate the FR-BE, FR-DE/LU, FR-CH and IT-NORD-FR bidding zone borders in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. CORE and North Italy Calculation Methodologies pursuant to Articles 20 et 21 of the CACM GL and Article 10 of the FCA GL and applicable agreements with Swissgrid,
 - b. CORE and North Italy Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL and applicable agreements with Swissgrid,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. Regional Outage Coordination according to Article 80 of the SO GL,
 - e. cooperative processes established for the tasks of regional relevance for the Central SOR, integrating applicable description of the arrangements pursuant to Article 35(1)(g), and in line with other applicable cooperative processes developed in line with Article 38 of Regulation 2019/943.
4. The RCCs established by the TSOs in the Central Europe SOR and by the TSOs in the SWE SOR shall coordinate the bidding zone France in accordance with the cooperative processes pursuant to Article 38 of Regulation (EU) 2019/943.

8. Bidding Zone borders adjacent to SEE SOR and Central Europe SOR

1. The bidding zone borders adjacent to SEE SOR and Central Europe SOR is :
 - a. Bulgaria-Romania (BG-RO), which is integrated in the SEE SOR.
2. The RCC established by the TSOs in the SEE SOR shall coordinate the BG-RO bidding zone border in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. SEE Calculation Methodology pursuant to Articles 20 et 21 of the CACM GL and Article 10 of the FCA GL,
 - b. SEE Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. Regional Outage Coordination according to Article 80 of the SO GL,
 - e. cooperative processes established for the tasks of regional relevance for the SEE SOR, and in line with other applicable cooperative processes developed in line with Article 38 of Regulation 2019/943.

3. The RCC established by the TSOs in the SEE SOR shall coordinate the BG-RO bidding zone border in accordance with the tasks of regional relevance for the SEE SOR pursuant to Article 35(1)(b) of Regulation (EU) 2019/943 and in cooperation with Transelectrica through contractual relationship.
4. The interface between SEE and the Central SOR will be further clarified by cooperation between the RCCs established in both regions and by making best use of the regional agreements and structures within ENTSO-E.

Article 5 **Consultation with the NRAs and relevant stakeholders**

1. Where the SOR definition includes BZ borders and transmission assets that span into a TSO(s) control area of a different SOR, the TSOs of that SOR shall consult in the development of the applicable cooperative processes with all relevant stakeholders which will include, where required, the NRA(s) established in the other TSOs control area.
2. When clarifying cooperative processes in accordance with Article 38 of the Regulation 2019/943, the TSOs of the SOR shall describe the operational procedures to be applied for the existing grid. These procedures can describe also the foreseen evolution applicable in line with network or other legal developments. Otherwise, TSOs shall send updated coordination procedures to the affected NRAs when the network is developed or when there is a change of the regional applicable methodologies.

Article 6 **Implementation of the Proposal**

The TSOs shall apply the SORs as described in Article 3 as soon as the decision has been taken by ACER in accordance with Article 36(3) of the Regulation 2019/943 and published on ACER website.

Article 7 **Language**

The reference language for this Proposal shall be English. For the avoidance of doubt, where TSOs need to translate this Proposal into their national language(s), in the event of inconsistencies between the English version published by ACER in accordance with Article 36(3) of the Electricity Regulation and any version in another language, the relevant TSOs shall, in accordance with national legislation, provide the relevant national regulatory authorities with an updated translation of the Proposal.

Annex 1

Full list of TSOs, BZ and BZ borders in SOR defined in article 3

Where a SOR encompasses the European Economic Area, reference is made to the EEA Agreement.

Where a SOR neighbours both Union TSOs and Energy Community TSOs, all Union TSOs in that SOR shall endeavour to conclude with the Energy Community TSOs not bound by Regulation (EU) 2019/943 agreements setting forth the agreements for their compliance with, including but not limited to, all necessary technical procedures, governance structures and cost sharing obligations with the obligations set out in the aforementioned Regulation. These agreements shall be subject to NRAs' approval of the respective SOR.

1. Baltic SOR

CCR	OCR	TSOs	BZ	BZ borders
Baltic CCR	Baltic	LITGRID AB AST ELERING AS	LT LV EE	LT-PL LT-SE4 LT-LV LV-EE EE-FI

2. Nordic SOR

CCR	OCR	TSOs	BZ	BZ borders
Nordic	Nordic	Energinet	DK1 DK2	DK1-SE3 DK2-SE4 DK1-DK2
		Fingrid	FI	DK1-NO2 SE1-FI
		Svenska Kraftnät	SE1 SE2 SE3 SE4	SE3-FI SE4-SE3 SE3-SE2 SE2-SE1 SE3-NO1
		Statnett	NO1 NO2 NO3 NO4 NO5	SE2-NO3 SE2-NO4 SE1-NO4 NO3-NO5 NO3-NO4 NO1-NO3 NO1-NO5 NO1-NO2 NO2-NO5

3. IU SOR

CCR	OCR	TSOs	BZ	BZ borders
IU Channel	IU (3) Channel (4)	NGESO SONI EirGrid	GB SEM	GB-FR GB-NL GB-SEM GB-BE

4. Central Europe SOR

CCR	OCR	TSOs	BZ	BZ borders
Core	OCR based on Core	RTE	FR	FR-BE BE-NL
Italy North	OCR based on Italy North	ELIA TenneT NL	BE NL	FR-DE/LU NL-DE/LU BE-DE/LU DE/LU-PL DE/LU-CZ AT-CZ AT-HU AT-SI CZ-SK CZ-PL HU-SK PL-SK HR-SI HR-HU RO-HU HU-SI DE/LU-AT CH-DE/LU CH-AT CH-FR BA-HR RS-HR RS-HU RS-RO IT NORD-FR IT NORD-AT IT NORD-SI IT NORD-CH
		Amprion TransnetBW TenneT DE 50Hertz Creos	DE/LU	
		PSE	PL	
		ČEPS	CZ	
		APG	AT	
		VUEN		
		MAVIR	HU	
		ELES	SI	
		SEPS	SK	
		HOPS	HR	
		Transelectrica	RO	
		Swissgrid	CH	
		TERNA	IT NORD	

5. SEE SOR

CCR	OCR	TSOs	BZ	BZ borders
SEE	OCR based on SEE (6)	ESO IPTO OST NOS BiH CGES MEPSO EMS	BG GR AL BA ME MK RS	GR-BG BG-RO GR-AL GR-MK AL-MK AL-ME AL-RS ME-BA ME-RS RS-BA GR-AL GR-MK BA-HR RS-HR RS-HU RS-RO RS-BG RS-MK BG-MK

6. GRIT SOR

CCR	OCR	TSOs	BZ	BZ borders
GRIT	GRIT (7)	TERNA IPTO	IT NORD IT CNOR IT CSUD IT SUD IT SICI IT SARD IT ROSN	IT NORD-IT CNOR IT CNOR-IT CSUD IT CNOR-IT SARD IT SARD-IT CUSD IT CSUD-IT SUD IT SUD-IT ROSN IT ROSN-IT SICI IT SUD-GR

7. SWE SOR

CCR	OCR	TSOs	BZ	BZ borders
SWE	SWE	RTE REE REN	FR ES PT	FR-ES ES-PT

Annex 2

Coordination of the bidding zone borders adjacent to SORs with full list of TSOs, BZ and BZ borders in SOR defined in article 4

Where a SOR encompasses the European Economic Area, reference is made to the EEA Agreement.

Where a SOR encompasses both Union TSOs and Energy Community TSOs, all Union TSOs in that SOR shall endeavour to conclude with the Energy Community TSOs not bound by Regulation (EU) 2019/943 agreements setting forth the agreements for their compliance with, including but not limited to, all necessary technical procedures, governance structures and cost sharing obligations with the obligations set out in the aforementioned Regulation. These agreements shall be subject to NRAs' approval of the respective SOR.

1. Bidding Zone borders adjacent to Baltic SOR and Nordic SOR

1. The bidding zone borders adjacent to Baltic SOR and Nordic SOR are :
 - a) Estonia - Finland (EE - FI)
 - b) Lithuania – Sweden fourth bidding zone (LT-SE4)
2. The RCC established by the TSOs of the Baltic SOR shall coordinate these bidding zone borders in accordance with applicable terms, conditions and methodologies, covering inter alia:
 - a) Baltic Capacity Calculation Methodology pursuant to Articles 20 and 21 of the CACM GL and Article 10 of the FCA GL,
 - b) Baltic Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c) Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d) Baltic Regional Outage Coordination according to Article 80 of the SO GL,
 - e) Cooperative processes established pursuant to Article 38 of Regulation 2019/943.
3. The RCC established by the TSOs of the Baltic SOR shall allow Svenska Kraftnät and Fingrid to participate in the coordination of the borders through the RCC established by Nordic TSOs, which will have an agreement with the RCC established by Baltic TSOs.

2. Bidding Zone borders adjacent to Baltic SOR and Central Europe SOR

1. The bidding zone border adjacent to Baltic SOR and Central Europe SOR is Lithuania- Poland (LT-PL).
2. The RCC established by the TSOs in the Baltic SOR shall coordinate the LT-PL bidding zone border in accordance with applicable terms, conditions and methodologies, covering inter alia:
 - a. Baltic Capacity Calculation Methodology pursuant to Articles 20 and 21 of the CACM GL and Article 10 of the FCA GL,
 - b. Baltic Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. Baltic Regional Outage Coordination according to Article 80 of the SO GL,
3. Moreover the RCC established by TSOs in the Baltic SOR shall coordinate the tasks of regional relevance for the Baltic SOR with regards to this border, in cooperation with PSE, which will have a contractual relationship with the RCC established by Baltic TSOs.

3. Bidding Zone borders adjacent to Nordic SOR and Central Europe SOR

1. The bidding zone borders adjacent to Nordic SOR and Central Europe SOR are the bidding zone borders of Hansa CCR and
 - a. Norway 2– - Netherlands (NO2-NL)
 - b. Norway 2 – Germany/Luxembourg (NO2-DE/LU)
 - c. Sweden 4 – Germany/Luxembourg (SE4-DE/LU)
2. RCC established by the TSOs in Nordic SOR and RCC established by the TSOs in Central Europe SOR shall coordinate those bidding zone borders in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. Hansa Capacity Calculation Methodology pursuant to Articles 20 and 21 of the CACM GL and Article 10 of the FCA GL,
 - b. Hansa Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. the cooperative processes established for the interface between the Nordic SOR and the Central Europe SOR pursuant to Article 38 of the Regulation 2019/943.

4. Bidding Zone borders adjacent to IU SOR and Central Europe SOR

1. The bidding zone borders adjacent to IU SOR and Central Europe SOR are the bidding zone borders of Channel CCR.
2. The RCC established by the TSOs in the IU SOR and the RCC established by the TSOs in Central Europe shall coordinate those three bidding zone borders in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. Channel Capacity Calculation Methodology pursuant to Articles 20 et 21 of the CACM GL and Article 10 of the FCA GL,
 - b. Channel Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. Channel Regional Outage Coordination according to Article 80 of the SO GL,
 - e. the cooperative processes established for the interface between the IU SOR and the Central Europe SOR pursuant to Article 38 of the Regulation 2019/943.

5. Bidding zone borders adjacent to GRIT SOR and Central Europe SOR

1. Taking into account that bidding zone IT NORD is part of both SOR, the bidding zone borders adjacent to GRIT SOR and Central Europe SOR are:
 - a. the bidding zone borders of Italy North CCR, and the border Italy NORD – Switzerland (IT NORD-CH), which are integrated in the Central Europe SOR, and
 - b. the border Italy NORD – Italy CNORD (IT NORD- IT CNORD), which is integrated in the GRIT SOR.
2. The RCC established by the TSOs in Central Europe SOR shall coordinate the the bidding zone borders of Italy North CCR in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. Italy North Capacity Calculation Methodology pursuant to Articles 20 and 21 of the CACM GL and Article 10 of the FCA GL,
 - b. Italy North Coordinated Security Analysis Methodology applicable pursuant to Article 76 of the SO GL

- c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. Regional Outage Coordination according to Article 80 of the SO GL,
 - e. cooperative processes established for the tasks of regional relevance for the Central Europe SOR with regards to this border.
3. The RCC established by TSOs in the GRIT SOR shall coordinate the IT NORD-IT CNORD bidding zone border in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. GRIT Calculation Methodology pursuant to Articles 20 and 21 of the CACM GL and Article 10 of the FCA GL,
 - b. GRIT Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. GRIT Regional Outage Coordination according to Article 80 of the SO GL,
 - e. cooperative processes established for the tasks of regional relevance for the GRIT SOR with regards to this border.
4. The RCCs established by the TSOs in the Central Europe SOR and by the TSOs in the GRIT SOR shall coordinate the bidding zone Italy NORD in accordance with the cooperative processes pursuant to Article 38 of Regulation (EU) 2019/943.

6. Bidding zone borders adjacent to SEE SOR and GRIT SOR

1. The bidding zone borders adjacent to SEE SOR and GRIT SOR is the border IT SUD - GR and the border Italy Centre Sud - Montenegro (IT CSUD-ME) between Balkans countries and GRIT SOR.
2. The RCC established by the TSOs in the GRIT SOR shall coordinate the adjacent bidding zone border in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. GRIT Calculation Methodology pursuant to Articles 20 et 21 of the CACM GL and Article 10 of the FCA GL,
 - b. GRIT Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. GRIT Regional Outage Coordination according to Article 80 of the SO GL,
 - e. cooperative processes established for the tasks of regional relevance for the GRIT SOR, and in line with other applicable cooperative processes developed in line with Article 38 of Regulation 2019/943.
3. As an interim solution, the interconnection between IT CSUD and ME is not assigned to any SORs. The coordination of the border shall be ensured through bilateral agreements between Terna and CGES. This proposal shall be reviewed at the latest when Montenegro will accommodate in its national law the rights and obligations in the electricity sector common to and binding on the Member States of the European Union.

7. Bidding Zone borders adjacent to SWE SOR and Central Europe SOR

1. Taking into account that the BZ France is part of both SOR, the bidding zone borders adjacent to SWE SOR and Central Europe SOR are:

- a. France – Spain (FR-ES), which is integrated in the SWE SOR, and
 - a. France- Belgium (FR-BE)
 - b. France-Germany/Luxembourg (FR-DE/LU)
 - c. France-Switzerland (FR-CH)
 - d. Italy NORD – France (IT NORD – FR),
which are integrated in the Central Europe SOR.
2. The RCC established by the TSOs in SWE SOR shall coordinate the FR-ES bidding zone border in accordance with the applicable terms, conditions and methodologies, covering inter alia:
 - a. SWE Calculation Methodology pursuant to Articles 20 et 21 of the CACM GL and Article 10 of the FCA GL,
 - b. SWE Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. Regional Outage Coordination according to Article 80 of the SO GL,
 - e. cooperative processes established for the tasks of regional relevance for the SWE SOR, and in line with other applicable cooperative processes developed in line with Article 38 of Regulation 2019/943.
 3. The RCC established by TSOs in Central Europe shall coordinate the FR-BE, FR-DE/LU, FR-CH and IT-NORD-FR bidding zone borders in accordance with the applicable terms, conditions and methodologies covering inter alia:
 - a. CORE and North Italy Calculation Methodologies pursuant to Articles 20 et 21 of the CACM GL and Article 10 of the FCA GL and applicable agreements with Swissgrid,
 - b. CORE and North Italy Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL and applicable agreements with Swissgrid,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL [tbd FCA y CACM],
 - d. Regional Outage Coordination according to Article 80 of the SO GL,
 - e. cooperative processes established for the tasks of regional relevance for the Central SOR, and in line with other applicable cooperative processes pursuant to Article 35(1)(g) of Regulation 2019/943 or developed in line with Article 38 of Regulation 2019/943.
 4. The RCCs established by the TSOs in the Central Europe SOR and by the TSOs in the SWE SOR shall coordinate the bidding zone France in accordance with the cooperative processes pursuant to Article 38 of Regulation (EU) 2019/943.

8. Bidding Zone borders adjacent to SEE SOR and Central Europe SOR

1. The bidding zone borders adjacent to SEE SOR and Central Europe SOR are :
 - a. Bulgaria-Romania (BG-RO), which is integrated in the SEE SOR.
 - b. The bidding zone borders between the Balkan countries and the Central Europe SOR are:
 - i. Croatia-Bosnia (HR-BA)
 - ii. Croatia-Serbia (HR-RS)
 - iii. Hungary-Serbia (HU-RS)
 - iv. Romania-Serbia (RO-RS)

2. The RCC established by the EU-TSOs in the SEE SOR shall coordinate the BG-RO bidding zone border in accordance with the applicable terms, conditions and methodologies covering inter alia:
 - a. SEE Calculation Methodology pursuant to Articles 20 et 21 of the CACM GL and Article 10 of the FCA GL,
 - b. SEE Coordinated Security Analysis Methodology pursuant to Article 76 of the SO GL,
 - c. Common Grid Model Methodology pursuant to Articles 67 and 70 of the SO GL,
 - d. Regional Outage Coordination according to Article 80 of the SO GL,
 - e. cooperative processes established for the tasks of regional relevance for the SEE SOR, and in line with other applicable cooperative processes developed in line with Article 38 of Regulation 2019/943.
3. The RCC established by the EU-TSOs in the SEE SOR shall coordinate the BG-RO bidding zone border in accordance with the tasks of regional relevance for the SEE SOR pursuant to Article 35(1)(b) of Regulation (EU) 2019/943 and in cooperation with Transelectrica through contractual relationship.
4. The RCC established by the EU-TSOs in the SEE SOR and the RCC established by TSOs in the Central Europe SOR shall coordinate their proposals in line with the cooperative processes established in line with Article 38 Regulation 2019/943.
5. The interface between SEE and the Central SOR will be further clarified by cooperation between the RCCs established in both regions and by making best use of the regional agreements and structures within ENTSO-E.

9. Bidding zone border adjacent to IU SOR and Nordic SOR – future definition

This interface will relate to a HVDC link between Norway (NO2) and GB, currently under construction. Such interface is subject to a future CCR and SOR allocation. The interface will be managed in accordance with the applicable terms, conditions and methodologies.

Annex 3 -List of acronyms

APG	Austrian Power Grid AG
VUEN	Vorarlberger Übertragungsnetz GmbH
OST	OST sh.a – Albanian Transmission System Operator
NOS BiH	Nezavisni operator sustava u Bosni i Hercegovini
Elia	Elia System Operator SA
ESO	Electroenergien Systemen Operator EAD
Swissgrid	Swissgrid ag
ČEPS	ČEPS a.s.
TransnetBW	TransnetBW GmbH
TenneT DE	TenneT TSO GmbH
Amprion	Amprion GmbH
50Hertz	50Hertz Transmission GmbH
Energinet	Energinet
Elering	Elering AS
REE	Red Eléctrica de España S.A.
Fingrid	Fingrid Oyj
RTE	Réseau de Transport d'Electricité
NG ESO	National Grid ESO
SONI	System Operator for Northern Ireland Ltd
IPTO	Independent Power Transmission Operator S.A.

HOPS	HOPS d.o.o.
MAVIR ZRt.	MAVIR Magyar Villamosenergia-ipari Átviteli Rendszerirányító Zártkörűen Működő Részvénytársaság
EirGrid	EirGrid plc
Landsnet	Landsnet hf
Terna	Terna - Rete Elettrica Nazionale SpA
Litgrid	Litgrid AB
Creos	Creos Luxembourg S.A.
AST	AS Augstsprieguma tīkls
CGES	Crnogorski elektroprenosni sistem AD
MEPSO	Transmission System Operator of the Republic of North Macedonia
TenneT NL	TenneT TSO B.V.
Statnett	Statnett SF
PSE	Polskie Sieci Elektroenergetyczne S.A.
REN	Rede Eléctrica Nacional, S.A.
Transelectrica	C.N. Transelectrica S.A.
EMS	Akcionarsko društvo Elektromreža Srbije
Svenska Kraftnät	Svenska Kraftnät
ELES	ELES, d.o.o.
SEPS	Slovenská elektrizačná prenosová sústava, a.s.