

**DECISION No 05/2022**  
**OF THE EUROPEAN UNION AGENCY**  
**FOR THE COOPERATION OF ENERGY REGULATORS**

**of 7 April 2022**

**on the definition of system operation regions**

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>, and, in particular, Article 7(2)(a) thereof,

Having regard to Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for Electricity, and, in particular, Article 36(3) thereof,

Having regard to the outcome of the consultation with the European Network of Transmission System Operators for Electricity ('ENTSO-E') and the regulatory authorities,

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

Having regard to the favourable opinion of the Board of Regulators of 6 April 2022, delivered pursuant to Article 22(5)(a) of Regulation (EU) 2019/942,

Whereas:

**1. INTRODUCTION**

- (1) Regulation (EU) 2019/943 of 5 June 2019 on the internal market for Electricity (the 'Electricity Regulation') defines a range of requirements for the internal electricity market, and for the regional coordination of transmission system operators ('TSOs'), to be further developed with an enhanced institutional framework via the establishment of regional coordination centres ('RCCs'). These requirements include

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

the geographical scope of RCCs in accordance with Article 36 of the Electricity Regulation.

- (2) Pursuant to Article 36(1) of the Electricity Regulation, ENTSO-E must develop a proposal defining system operation regions ('SORs') and submit it to ACER for approval. Within three months of receipt, ACER shall either approve the proposal or propose amendments in accordance with Article 7(2)(a) of Regulation (EU) 2019/942 and Article 36(3) of the Electricity Regulation.
- (3) By Decision No 10/2020 of 6 April 2020 ('Decision No 10/2020'), ACER approved ENTSO-E's proposal of 6 January 2020 for the definition of SORs, however with amendments. Following an appeal by ENTSO-E against Decision No 10/2020, ACER's Board of Appeal remitted the case to ACER's Director by Decision A-007-2020 of 24 September 2020 ('BoA Decision').
- (4) By Decision No 08/2021 of 29 June 2021 ('Decision No 08/2021'), ACER repealed its Decision No 10/2020 and approved ENTSO-E's proposal of 6 January 2020, however again with amendments, in particular by integrating the SWE capacity calculation region ('CCR') and the Italy North CCR into the CE SOR.
- (5) By Decision No 13/2021 of 19 October 2021, ACER withdrew Decision No 08/2021 in the course of appeal proceedings launched by ENTSO-E against that Decision<sup>2</sup>. It immediately initiated the present proceedings for the adoption of a decision on the definition of SORs, which focuses on the part of the SOR definition against which ENTSO-E's appeal was directed, namely the inclusion of the SWE CCR in the CE SOR instead of a separate SWE SOR.
- (6) The present Decision replaces Decision No 10/2020. Annex I to this Decision defines the SORs as decided by ACER.

## **2. PROCEDURE**

### **2.1. Proceedings before ACER**

- (7) On 24 October 2019, ENTSO-E published for public consultation the draft ENTSO-E proposal for SORs definition in accordance with Article 36(1) of the Electricity Regulation<sup>3</sup>. The consultation lasted from 24 October 2019 until 20 November 2019. ACER was not informally consulted by ENTSO-E prior to the launch of the public consultation.

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<sup>2</sup> Case A-012-2021. Following the withdrawal of Decision No 08/2021, the Board of Appeal decided that there is no need to decide on ENTSO-E's appeal (BoA Decision A-012-2021 of 8 December 2021).

<sup>3</sup> [https://consultations.entsoe.eu/system-operations/sor-proposal/supporting\\_documents/191024%20ENTSOE%20proposal%20for%20System%20Operation%20Regions%20CEP%20art.%2036\\_for%20public%20consultation.docx](https://consultations.entsoe.eu/system-operations/sor-proposal/supporting_documents/191024%20ENTSOE%20proposal%20for%20System%20Operation%20Regions%20CEP%20art.%2036_for%20public%20consultation.docx)

- (8) On 6 January 2020, ENTSO-E submitted to ACER an ENTSO-E proposal for SOR definition in accordance with Article 36(1) of the Electricity Regulation (the ‘Proposal’).
- (9) On 6 January 2020, ACER launched a public consultation on the Proposal, inviting all stakeholders to submit their comments by 19 January 2020. The public consultation document asked stakeholders to provide views on four specific topics, as well as allowed respondents to submit comments on any other views. The responses received, as well as ACER’s assessment of the responses received, are presented in Annex II to this Decision.
- (10) A bilateral consultation with ENTSO-E was planned and agreed in advance in order to ensure a swift and efficient decision-making process.
- (11) During and after the public consultation, ACER closely cooperated with regulatory authorities, TSOs and ENTSO-E and further consulted on the intended amendments to the Proposal through telephone conference calls and electronic exchanges of intended amendments. In particular, the following steps were taken:
- *14 January 2020: telephone conference call with the European Commission, Danish regulatory authority, Danish TSO on specifics for its control area being part of Nordic and Continental Europe synchronous areas;*
  - *16 January 2020: telephone conference call with all regulatory authorities in the framework of ACER’s System Operation Grid Connection Taskforce (SOGC TF);*
  - *20 January 2020: telephone conference call with regulatory authorities and TSOs from South West CCR (ES, FR, PT);*
  - *21 January 2020: telephone conference call with ENTSO-E and all regulatory authorities;*
  - *22 January 2020: telephone conference call with Italian regulatory authority and Italian TSO on specifics for GRIT CCR;*
  - *23 January 2020: telephone conference call with relevant regulatory authorities and TSOs regarding the DK1 bidding zone (DK, DE, NE);*
  - *28 January 2020: telephone conference call with ENTSO-E and TSOs regarding the treatment of third countries’ TSOs;*
  - *29 January 2020: draft amendments to the Proposal were sent to ENTSO-E and all regulatory authorities;*
  - *30 January 2020: telephone conference call with ENTSO-E and all regulatory authorities;*
  - *5 February 2020: telephone conference call with all regulatory authorities;*
  - *7 February 2020: telephone conference call with ENTSO-E and all regulatory authorities;*
  - *12 February 2020: orientation discussion at the AEWG;*

- *13 February 2020: telephone conference call with ENTSO-E, Austrian regulatory authority and Austrian TSOs APG and VUEN on specifics for VUEN;*
- *14 February 2020: telephone conference call with ENTSO-E and all regulatory authorities;*
- *18 February 2020: telephone conference call with Italian regulatory authority and Italian TSO on specifics for GRIT CCR;*
- *18 February 2020: amendments to the Proposal, along with the legal reasoning, were sent to ENTSO-E and all regulatory authorities;*
- *19 February 2020: ENTSO-E submission to ACER of a written Position Paper regarding Central Europe SOR (CE SOR);*
- *20 February 2020: additional telephone conference call with ENTSO-E and all regulatory authorities, as per ENTSO-E request, to hear ENTSO-E's views on ACER's proposed changes to the Proposal.*
- *27 February 2020: telephone conference call with all regulatory authorities in the framework of the SOGC TF;*
- *5 March 2020: ACER amendments to the Proposal discussed at the AEWG.*

(12) Following the BoA Decision, the following steps were taken:

- *25 January 2021: telephone conference call with the Irish Regulator, CRU and the European Commission to discuss IU SOR following the withdrawal of the UK from the EU;*
- *18 February 2021: telephone conference call with the Irish Regulator, CRU and the European Commission to discuss IU SOR following the withdrawal of the UK from the EU;*
- *24 February 2021: orientation discussion at the AEWG;*
- *4 March 2021: amendments to Decision No 10/2020, along with the legal reasoning, were sent to ENTSO-E and all regulatory authorities for their comments;*
- *8 April 2021: draft amended decision discussed at the AEWG;*
- *9 April 2021: telephone conference call with the Italian regulatory authority to discuss GRIT SOR;*
- *15 April 2021: telephone conference call with the Spanish regulatory authority to discuss SWE SOR;*
- *23 April 2021: telephone conference call with the French regulatory authority to discuss SWE SOR.*

- (13) Following the withdrawal of Decision No 08/2021 and the reopening of the proceedings for the adoption of a decision on the definition of SORs, the following steps were taken:
- *21 October 2021: access provided to ENTSO-E to calculations resulting from ACER's methodology set out under Annex IV of Decision No 08/2021;*
  - *3 November 2021: telephone conference call with ENTSO-E and regulatory authorities;*
  - *10 November 2021: telephone conference call with ENTSO-E and regulatory authorities;*
  - *17 November 2021: telephone conference call with ENTSO-E and regulatory authorities;*
  - *24 November 2021: telephone conference call with ENTSO-E and regulatory authorities;*
  - *30 November 2021: telephone conference call with ENTSO-E and regulatory authorities;*
  - *3 December 2021: telephone conference call with regulatory authorities;*
  - *20 December 2021: amendments to the proposal, along with ACER's preliminary position, were sent to ENTSO-E and all regulatory authorities;*
  - *12 January 2022: ACER's preliminary position, as well as the views put forward by ACER and ENTSO-E during the discussions leading to ACER's preliminary views, were discussed at the AEWG;*
  - *25 January 2022: ENTSO-E written submission to ACER of ENTSO-E's response to ACER's preliminary position on the definition of SORs and ENTSO-E's reasoning document for ENTSO-E's response to ACER's preliminary position on the definition of SORs;*
  - *26 January 2022: oral hearing with ENTSO-E and TSOs of the SWE CCR to discuss ENTSO-E's written submission and to hear statements from TSOs of the SWE CCR;*
  - *2 February 2022: telephone conference call with regulatory authorities to discuss ENTSO-E's hearing submissions and the hearing statements by TSOs of the SWE CCR;*
  - *10 February 2022: ACER's intended amendments to the Proposal, as well as the views put forward by ENTSO-E and the TSOs of the SWE CCR during the hearing phase, were discussed at the AEWG;*

- *21 February 2022: ACER's revised position shared with AEWG for consideration;*
- *2 March 2022: ACER's revised position shared with ENTSO-E for consideration.*

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

- (14) Pursuant to Article 7(2)(a) of Regulation (EU) 2019/942, as well as Article 36(3) of the Electricity Regulation, ACER shall decide on the proposal defining the system operation regions, by approving it or proposing amendments, within three months of receipt of such proposal from ENTSO-E.
- (15) Since ENTSO-E submitted the Proposal in accordance with Article 36(1) of the Electricity Regulation, ACER is competent to decide on this Proposal according to Article 7(2)(a) of Regulation (EU) 2019/942 and Article 36(3) of the Electricity Regulation.

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

- (16) The Proposal consists of the following elements:
- a) The 'Whereas' section and Articles 1 and 2, which include the subject matter and scope, as well as the definitions and interpretation;
  - b) Article 3, which contains the proposal for SORs based on the capacity calculation regions and includes the relevant TSOs, outage coordination regions, bidding zones and bidding zone borders;
  - c) Article 4, which includes the proposal on coordination of the bidding zone borders adjacent to SORs and specifies how the coordination between RCCs for those borders is to take place;
  - d) Articles 5 to 7, which address consultation with the regulatory authorities and relevant stakeholders, the implementation of the Proposal and language.
- (17) For the sake of clarity, ACER wishes to emphasise that ENTSO-E's informative annexes to the Proposal are not part of ACER's Decision. A list of the third countries mentioned in ENTSO-E's informative annexes is included in Annex III to this Decision, for information.

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

#### **5.1. Public consultation**

- (18) On 6 January 2020, ACER launched a public consultation on the Proposal, inviting all stakeholders to submit their comments by 19 January 2020. The public consultation document asked stakeholders to provide views on four specific topics of the Proposal: (i) the 'Whereas' section, covering the legal scope of the Proposal, as well as the participation of third countries, (ii) the proposal for SORs, including the scope for RCCs and SORs definition in light of grid topology, degree of interconnection and flows today and in the future, (iii) the coordination of the bidding zone borders



adjacent to SORs, covering also the participation of non-EU TSOs, (iv) the consultation with the regulatory authorities and relevant stakeholders, including the coordination rules for RCCs and between different SORs. In addition, the public consultation document allowed stakeholders to submit comments on any other views.

- (19) ACER received responses from five stakeholders. The evaluation of the responses received is presented in Annex II to this Decision. It contains stakeholders' concerns regarding the questions covering the above mentioned issues, summarised below:
- a) Regarding the legal scope and participation of third countries in SORs addressed in the 'Whereas' section of the Proposal, as well as touched upon in Article 2 thereof, two stakeholders supported the proposed approach by ACER to remove references to Article 35 of the Electricity Regulation as it is out of scope of the Proposal, as well as not to take into consideration in this Decision the informative annexes to the Proposal. However, the majority of stakeholders argued for the inclusion of third countries in the definition of SORs; the majority of respondents stated their concerns regarding the possibility of involving third countries in the SOR or RCC. Three respondents stated that they see "no reason to exclude borders with adjacent non-EU countries, where the EU legislation does not apply, to ensure the possibility of an efficient coordination with the same tools and mechanisms". Nevertheless, all three respondents acknowledged the legal issues surrounding the inclusion of third countries in the SORs;
  - b) Two of three stakeholders who answered ACER's question regarding the range of tasks to be covered by the Proposal agreed with ACER's position that the entire range of tasks for RCCs listed in Annex I of the Electricity Regulation should be included in the Proposal;
  - c) Regarding the scope for RCCs and SORs definition in light of grid topology, degree of interconnection and flows today and in the future, two of the three stakeholders who provided an answer to this question supported ACER's initial views to list the entire range of tasks of Annex I of the Electricity Regulation; those stakeholders also agreed that the Proposal did not take adequately into account the grid topology, including the degree of interconnection and of interdependency of the electricity system in terms of flows today and in the near future. The same two stakeholders stated that "the most logical composition of System Operation Regions should be by synchronous system". The third stakeholder (ENTSO-E) emphasised its availability to provide more clarifications to ACER in this regard (which was later done as described in paragraph (11));
  - d) Regarding the coordination rules for RCCs and between different SORs, stakeholders supported ACER's proposal to delete the provisions which did not stem from Article 36 of the Electricity Regulation;
  - e) Regarding other topics, two stakeholders expressed concerns whether the Proposal adequately took into account future network and market developments, as well as a closer system operation coordination. Respondents "would like to encourage ACER and TSOs to take future network and market developments into account when defining SORs" and stated, quote: "*The current proposal for SORs seems to be the reflection of*

*the current situation without taking future network and market developments nor the required closer system operation cooperation into account.”*

## **5.2. Consultation of ENTSO-E, TSOs and regulatory authorities**

- (20) During the close cooperation between ACER, regulatory authorities, ENTSO-E and TSOs as detailed in paragraph (11) above, ACER:
- a) Discussed the comments received during the public consultation (see section 5.1.);
  - b) Discussed and further clarified the purpose and scope of the Proposal and excluded topics, for example reference to organisational/coordination or governance aspects concerning future RCC establishment, that were out of scope;
  - c) With respect to the participation of third countries, further clarified the scope of the Proposal and discussed the inclusion of a new recital on the importance of third countries for secure system operations, as well as a timeline for the conclusion of agreements with third countries;
  - d) Discussed the definition of the SORs in light of grid topology, including the degree of interconnection and of interdependency of the electricity system in terms of flows today and in the near future, and discussed different options for the definition of SORs in accordance with both technical and legal requirements, namely those contained in Chapter V of the Electricity Regulation;
  - e) With respect to future RCCs, discussed the scope regarding legal provisions and tasks to be performed, as well as discussed the ability for third country TSOs to contribute to the decision-making process when establishing the RCCs and in particular in carrying out and developing the procedure for the adoption and revision of coordinated actions and recommendations issued by RCCs;
  - f) With respect to the applicability on TSOs, discussed which TSOs should be named in the Proposal based on the responsibilities assigned to TSOs at national level or the designation of TSOs at national level, and discussed the inclusion of a new paragraph to address circumstances where more than one TSO exists in a Member State;
  - g) Discussed rules and procedures with respect to coordination aspects for the bidding zone borders adjacent to SORs;
  - h) Discussed ACER’s intended amendments to the Proposal with the AEWG.
- (21) On 19 February 2020, ENTSO-E submitted to ACER a Position Paper in response to ACER’s intent to define a single SOR for the Continental Europe Synchronous Area (‘CE SA’).
- (22) In this Position Paper, containing key statements, legal clarifications and technical considerations, ENTSO-E asked ACER to accept the SORs as defined by ENTSO-E and withdraw its alternative configuration of one SOR for the whole CE SA.



- (23) ENTSO-E explained in its Position Paper why, in its view, ACER’s configuration of one SOR for the whole CE SA does not take into account grid topology, degree of interconnection and interdependency in terms of flows, and why it raises a number of difficulties, costs and risks.
- (24) ACER heard ENTSO-E’s concerns and views presented in its Position Paper during an additional telephone conference call, held as per ENTSO-E’s request, on 20 February 2020.
- (25) During the abovementioned conference call, ACER and ENTSO-E were able to agree on a number of necessary amendments of the proposal (on all aspects other than the configuration of the SOR(s) in the CE SA).
- (26) On 5 March 2020, the AEWG discussed ACER’s intended amendments to the Proposal, analysed legal and technical requirements of the Electricity Regulation, as well as analysed the risks and benefits of SOR definitions, both as proposed and as amended by ACER. Participants’ opinions were divided on the issue of creating a single SOR for CE SA.
- (27) Following the meeting, on 10 March 2020, the AEWG made the following recommendations in order to reach a compromise between the different views, quote:
- a. *“Keep the SOR South-East Europe (SEE), considering different operational and organisational requirements in the SORs Central Europe (CE) and SEE and also the already announced setup of a regional security centre (RSC) in Thessaloniki. The Romanian TSO would be part of the SOR CE and establish cooperation with SOR SEE via contractual arrangements;”*
  - b. *“Include the SOR South-West Europe (SWE) in the SOR CE, to avoid participation of the French TSO in two SORs;” and*
  - c. *“Solve the double participation of the Italian TSO with the allocation of Terna to the SOR CE and providing for coordination in the SOR SEE via contractual arrangements. The Italy Northern Borders CCR would be part of the SOR CE. The Greece and Italy (GRIT) CCR would act as interface between the SORs CE and SEE.”*
- (28) The AEWG further emphasised that “generally, an efficient and effective coordination between the SORs (especially the SORs in one synchronous area) and, later in the process, their RCCs in terms of organisational approach as well as technical interfaces seems to be relevant for the [regulatory authorities].”
- (29) In conclusion, the AEWG “strongly asked for a compromise solution in this important decision, to strengthen the future implementation and enforcement procedures with a broad majority of regulatory authorities, also taking into account that the definition of the SORs is the base for the setup of the regional coordination centres (RCCs), which develop from the RSCs.”

- (30) Following the BoA Decision, ACER's draft amended decision was sent to ENTSO-E. On 25 March 2021, ENTSO-E submitted written observations covering the following points:
- a) Background, details on the ENTSO-E proposal for SOR configuration, Decision No 10/2020 and the BoA Decision and the steps after the BoA Decision: ENTSO-E provided an overview of the background to the proposal, its considerations regarding the definition of SORs leading up to Decision No 10/2020 and then an assessment following the BoA Decision.
  - b) The case of Greece-Italy region: ENTSO-E presented in detail its views regarding the consideration of the proposed GRIT SOR, namely that the Italian transmission system is a peninsular and insular grid with multiple bidding zones, spanning over two synchronous areas, presenting detail on the establishment of SEleNE CC as the GRIT and SEE RSC, proposing amendments and making other specific comments regarding the SOR decision and presenting its conclusions on the case of GRIT SOR.
  - c) The case of South West Europe: ENTSO-E presented in detail its views regarding the consideration of the proposed SWE SOR, namely emphasising the Proposal's consistency with Article 36(2) of the Electricity Regulation, that TSOs have differentiated requirements to address at SOR level; ENTSO-E also assessed the interdependency of SWE and the assessment made by ACER, explained the coordination of remedial actions in the French power system and the cross-CCR coordinated security assessments and the temporary nature of CCRs, presented reasons that consider that the ACER's draft amended decision is a risk for the SWE SOR and inefficient for the CE SOR and presented its conclusions on the case of the SWE SOR.
  - d) The case of Ireland: ENTSO-E acknowledged ACER's proposed addition of EirGrid and SONI to the CE SOR and that their obligations pertaining to the RCCs' tasks shall become effective only upon the start of the operation of the Celtic Interconnector between Ireland and France.
  - e) Additional concern with the ACER draft amended decision: ENTSO-E highlighted a concern regarding Article 3(4) of Decision No 10/2020, namely regarding its interaction with Article 36(3) of the Electricity Regulation and suggesting its revision to reflect the necessary involvement of ENTSO-E in any future changes to the SOR decision. Additionally, ENTSO-E noted that the Finnish TSO Kraftnät Åland of the Åland Islands is missing from the Nordic SOR.
  - f) TSOs calculations: ENTSO-E submitted an annex containing TSOs calculations regarding zone-to-zone PTDF, reasoning as to why this would be the correct method to check interdependency and an explanation on the effect of outages/contingencies in the flows of the other border.

- (31) On 8 April and 11 May 2021, the AEWG discussed ACER's intended revisions to Decision No 10/2020 and intended amendments to the Proposal, as well as the views put forward by ENTSO-E in its hearing submission.
- (32) On 14 May 2021, the AEWG broadly endorsed the draft ACER Decision on the definition of SORs (including the late change related to a TSO's proposal to extend the deadline from six to ten months for TSOs to comply with the requirements of Article 5 of that draft Decision) and supported that the proposed editorial changes received in the commenting phase were considered by ACER. The AEWG stated that three regulatory authorities submitted comments, including one substantial disagreement with the legal interpretation whether a TSO can belong to more than one SOR, however clarified that no other regulatory authority had actively shared this interpretation.
- (33) Following the AEWG's advice, ACER made all editorial changes proposed by the regulatory authorities, as explained in section 6.2.3.2.8 below.
- (34) Following the withdrawal of Decision No 08/2021 and the reopening of the proceedings for the adoption of a decision on the definition of SORs, ACER discussed the following points in the context of the proposed SWE SOR with ENTSO-E during a number of telephone conference calls:
- a) Article 36(1) of the Electricity Regulation (namely on the methods to assess interdependency in terms of flows and the results of calculations);
  - b) Article 36(2) of the Electricity Regulation;
  - c) Other articles of the Electricity Regulation with regard to the establishment of RCCs, and their tasks, cooperation and coordinated actions (in particular Articles 35, 37, 38 and 42 of the Electricity Regulation);
  - d) The wording of the Proposal as suggested by ENTSO-E with regard to the intention of the TSOs to establish the current RSC CORESO as the RCC for the SWE SOR.
- (35) ACER discussed the topics concerning the proposed SWE SOR with regulatory authorities during a separate telephone conference call on 3 December. During this call ACER received, inter alia, the following comments:
- a) The Portuguese regulatory authority stated that it sees no change in the legal basis compared to the one for Decision No 08/2021 and therefore considers that there is no reason to change the decision on the definition of SORs. The Portuguese regulatory authority also stated that it does not agree with ENTSO-E's technical arguments and emphasised the importance of harmonised rules and the process for putting in place a pan-European relationship in the Internal Energy Market, which is ongoing and should not be based on individualities;

- b) The Spanish regulatory authority stated that, on technical aspects, they have to rely on ENTSO-E and their expertise in claiming that there is no strong interdependency and that cooperation at CCR level is enough. The Spanish regulatory authority stated that following the technical debate, it is open to analyse the technical results and to be convinced by ACER that the interdependencies exist; regarding Article 36(2), it does not see a limitation for the participation of RTE in two SORs if RTE participates in the same RCC;
- c) The French regulatory authority stated that it was in favour of Decision No 08/2021 and still considers it as reflecting the most relevant configuration, not seeing the added value of a separate SOR since the SWE CCR intends to participate in CORESO and any specificities can be dealt with within the SOR. The French regulatory authority added that, regarding the aspect of interdependencies in terms of flows, since this notion is not defined in the Electricity Regulation, it can be assessed in many different ways and in any case, it is clear that the French bidding zone is influenced by flows from both the Iberian Peninsula and Central Europe.
- (36) In light of the discussions, ACER's preliminary position with regard to the SWE CCR, was to amend the Proposal with regard to the SWE SOR, placing the SWE CCR within the CE SOR. ACER's preliminary position regarding any other aspects concerning the definition of the remaining SORs was to maintain the amendments that it had made in the context of Decision No 08/2021.
- (37) On 7 January 2022, in response to ACER's preliminary position, the Spanish regulatory authority stated that following technical and legal discussions, the Spanish regulatory authority did not find enough evidence to be convinced by ACER that the interdependencies exist, and also considers that there is no legal barrier to establish the SWE CCR as a SOR. Therefore, the Spanish regulatory authority considers that the SWE CCR should be defined as an independent SOR.
- (38) On 25 January 2022, ENTSO-E submitted its written observations on ACER's preliminary position. In its written submission, ENTSO-E emphasised that a separate SWE SOR, covering the Portuguese, the Spanish and the French TSOs, coordinated by CORESO, would be the most suitable SOR configuration for the SWE region. To support its views, ENTSO-E provided a number of reasons, summarised below:
- With regard to ACER's assessment of interdependency, ENTSO-E disagreed with ACER's conclusion that calculations have determined a degree of interdependency in terms of flows between SWE and Italy North CCRs that justifies placing them in the same SOR. ENTSO-E emphasised that ENTSO-E and the TSOs have provided operational evidence as well as calculations (e.g. based on the zone-to-zone PTDF method) demonstrating that the SWE CCR is only to a negligible extent interdependent with the Core and Italy North CCRs;
  - With regard to the application of Article 36(2) of the Electricity Regulation, ENTSO-E argued that the Electricity Regulation does not associate RCCs with SORs on a one-to-one basis and that it does not contain any prohibition for a TSO

to be placed in two SORs. ENTSO-E emphasised that it is the intention of all three TSOs of the SWE CCR to propose the establishment of CORESO as the RCC for the SWE SOR, and stressed that both ENTSO-E as a whole and each of the concerned SWE CCR TSOs support the establishment of a separate SWE SOR provided that it includes all three TSOs. ENTSO-E argued that the Electricity Regulation does not contain a prohibition for a RCC to coordinate or be established for two SORs.

(39) On 26 January 2022, ACER held an oral hearing with ENTSO-E and TSOs of the SWE CCR to discuss ENTSO-E's written submission, hear ENTSO-E's views on ACER's preliminary position as well as hear the views of TSOs of the SWE CCR. During the oral hearing, TSOs of the SWE CCR generally demonstrated support for ENTSO-E's position. ENTSO-E reinstated its proposal for a SWE SOR.

(40) Following a thorough revision of ENTSO-E's written and oral submissions received, the input from the SWE CCR TSOs and considering the outcome of the discussions with regulatory authorities, ACER changed its preliminary position with regard to the proposed SWE SOR, informing regulatory authorities and ENTSO-E of the following views:

- Following ENTSO-E's written and oral submissions, and the input from the SWE CCR TSOs, ACER understands that the interdependency in terms of flows of the SWE CCR with the Italy North CCR and Core CCR exists only to a negligible extent. With the strengthening of interconnections in the future, it may however be necessary to revisit this assessment of the criteria of Article 36(1) of the Electricity Regulation and, in particular, interdependency in terms of flows;
- Given the explanations and assurances provided by ENTSO-E jointly with the SWE CCR TSOs that the RCC to be established for the SWE SOR would be CORESO, and that RTE would participate only in this one RCC, i.e. CORESO, ACER considers that the legal text of Article 36(2) of the Electricity Regulation does not clearly exclude the possibility that the same RCC CORESO is responsible for two separate SORs, i.e. CE and SWE.
- Therefore, ACER considers that it is acceptable that the SWE CCR is defined as a separate SOR, as proposed by ENTSO-E.

(41) ACER received comments on its changed of preliminary position from the Italian, Portuguese, Spanish and French regulatory authorities, summarised below:

- a) The Italian regulatory authority stated that it does not object to the creation of a SWE SOR as per the Proposal, and commented that:
  - the topics of liability and responsibility of CORESO as the RCC for two SORs would be carefully discussed among regulatory authorities when assessing the RCC establishment provisions for the CE SOR. The liability towards stakeholders is mainly governed by the company law of the relevant Member State where the RCC is established and the RCC establishment provisions

include standard liability clauses. With regard to the responsibilities, there would be the need to slightly change the establishment provisions of CORESO regarding the tasks in relation to SWE CCR;

- the CE SOR regulatory authorities would aim to establish a strong coordination with the SWE SOR regulatory authorities in order to ensure full consistency of the establishment provisions for CORESO in case SWE SOR is created;
  - regarding solving any controversies among SORs within CORESO, the current RCC establishment provisions encompass the possibility of arbitrage.
- b) The Portuguese regulatory authority (ERSE) considers that creating a SWE SOR for Portugal, Spain and France separated from the CE SOR is contrary to the construction of the Internal Energy Market, not being in line with the objectives of reinforcement of the physical interconnections connecting the Iberian Peninsula with the rest of Europe, and of harmonisation of all the rules applied to the market and to the electric system. ERSE commented that:
- defining a separate SWE SOR would be a strategic error that goes against the political objective of building and consolidating the Internal Energy Market, representing a step back in its implementation. It is essential that the rules in the field of system operation in the CE SA are harmonised and common to all the parties involved;
  - Whilst the interdependency in terms of flows is relevant for the coordinated capacity calculation to be performed by an RCC, this is only one aspect to be taken into account under the RCC tasks listed in Article 37(1)(a) of the Electricity Regulation. ERSE considers that there should be an increase in the number and availability of the capacity of interconnections instead of the preservation of the interconnections' current limitations and constraints;
  - the RCC tasks are more effective (or only possible) if performed under a wider geographical framework including the Iberian Peninsula (e.g. the European dimension of the consequences of incidents such as the one of 8 January 2021 or, e.g., the treatment of phenomena like those identified as related to 'long-lasting imbalance in Continental Europe', which requires a Continental Europe approach for their resolution);
  - Regarding the liability and responsibility of CORESO as RCC for both SORs and the impact on the CE and SWE TSOs, both as co-shareholders of CORESO, all involved parties should be responsible, namely, RCC, TSOs and regulatory authorities;
  - the possible disagreements between the SWE SOR TSOs and the CE SOR TSOs, as well as any disagreements between the regulatory authorities of the SWE SOR and CE SOR would be avoided by keeping a CE SOR definition that includes Spain and Portugal. This issue should be analysed and solved



within the scope of the construction of the Internal Energy Market and the objectives of the Clean Energy Package (CEP);

- as the European balancing platforms are being implemented, it is difficult to understand a CE SOR which does not include Portugal and Spain. The Internal Energy Market would lose much more than what it would gain if RCCs' tasks were developed separately by a CE SOR and an SWE SOR. In the past, before 2009 and the creation of ENTSO-E, the perspective of TSOs organised under the UCTE framework provides lessons for the dimension that a CE SOR should attain in the context of Continental Europe.
- c) The Spanish regulatory authority (CNMC) expressed support for ACER's change of position, which in its view allows a more efficient and simple governance, facilitates and optimises coordination for SWE CCR TSOs and is in line with the requirements set by Article 36 of the Electricity Regulation. CNMC considers that the proposed configuration fulfils the needs of the Iberian Peninsula. CNMC commented that:
- the negligible extent of the interdependencies between ES-FR border and other French borders is now correctly assessed by ACER;
  - most of RCC tasks will rely on terms, conditions and methodologies developed under various regulations, and the scope of these methodologies (European, synchronous zone, regional, CCR, national) is already defined. CNMC is committed and open to continuously develop and improve the methodologies concerning RCC tasks;
  - there is no risk in terms of responsibility of the RCC if terms, conditions and methodologies are well defined and RCC liabilities are well defined;
  - when necessary, coordination between RCCs is provided to manage incidents such as the one on 8 January 2021. Incidents such as the one on 24 July 2021, revealed that the Iberian Peninsula is affected differently by incidents in the ES-FR interconnection, and there was no need for real time security coordinated actions with other countries beyond France.
- d) The French regulatory authority (CRE) stated that it does not oppose to ACER's change in position. CRE commented that:
- ACER's change in position would have a limited impact on the establishment of RCCs and their functioning, since (i) CORESO should still be the RCC carrying out the tasks within SWE CCR, (ii) the new proposal should not change the principles established in the previous CE SOR concerning the functioning of CORESO and (iii) the scope of application of the different tasks is defined in the relevant methodologies;

- It regrets that the analyses, in particular concerning the interdependency in terms of flows, were not carried out earlier and that the position changes shortly before the entry into operation of the RCCs;
- the specificities of the Iberian Peninsula could have been dealt with within the CE SOR.

(42) ACER also received comments from ENTSO-E, supporting the change in the preliminary position in line with the ENTSO-E's initial proposal, according to which SWE CCR is defined as a separate SOR including REN, RTE and REE, taking into account that RTE will indeed participate in only one RCC, i.e. CORESO. Further, ENTSO-E fully supported that no changes are foreseen on the configuration of the SORs other than SWE SOR.

(43) On 22 March 2022, the AEWG endorsed the draft ACER Decision on the definition of SORs. The AEWG acknowledged the effort by ACER on technical analyses and the strong involvement of the regulatory authorities.

(44) In its advice, the AEWG stated that there were no remaining strong concerns among its members and invited ACER to follow up on two minor comments raised by the German regulatory authority with regard to Article 4(4) and Article 5 of the Proposal. These comments are addressed in section 6.2.3.2.8 below.

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

### **6.1. Legal framework**

(45) Article 30(1)(f) and Article 36(1) of the Electricity Regulation require ENTSO-E to adopt a proposal for the definition of SORs and, by 5 January 2020, submit it to ACER for decision.

(46) Article 31 of the Electricity Regulation requires ENTSO-E to consult on the proposal for the definition of SORs.

(47) Article 36 of the Electricity Regulation sets out requirements for the development and the content of the proposal for the definition of SORs.

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

#### **6.2.1. Assessment of the requirements for the development, implementation and publication of the Proposal**

(48) The procedure for the development of the Proposal did respect the requirements of Article 36(1) of the Electricity Regulation.

(49) ENTSO-E submitted the Proposal on 6 January 2020. Given that 5 January 2020 was a Sunday, the Proposal was actually submitted on the next working day. In addition, Article 36 of the Electricity Regulation does not declare a submission after 5 January

2020 as invalid. In ACER's view, it is not the purpose of the deadline of 5 January 2020 to exclude any later submission.

(50) Therefore, ACER considers the submission of the Proposal as valid.

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

(51) ACER considers that ENTSO-E fulfilled the requirements of Article 31 of the Electricity Regulation, since stakeholders were consulted on the draft Proposal. This involvement took place during a public consultation, which ran from 24 October 2019 until 20 November 2019.

(52) In addition, ENTSO-E and regulatory authorities were informed and consulted before submitting the Proposal to ACER.

(53) The justifications regarding the consideration given to the views expressed by stakeholders during the public consultation in the drafting of the Proposal were provided in a separate document submitted to ACER.

6.2.3. Assessment of the requirements under Article 36 of the Electricity Regulation

6.2.3.1. *The requirements of Article 36 of the Electricity Regulation*

(54) The legal requirements of Article 36(1) and Article 36(2) of the Electricity Regulation are cumulative criteria.<sup>4</sup> Consequently, the Proposal must be compliant with the legal requirements of both Article 36(1) and Article 36(2) of the Electricity Regulation.

6.2.3.1.1. *The requirements of Article 36(1) of the Electricity Regulation*

(55) Article 36(1) states that “[b]y 5 January 2020 the ENTSO for Electricity shall submit to ACER a proposal specifying 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. The proposal shall take into account the grid topology, including the degree of interconnection and of interdependency of the electricity system in terms of flows and the size of the region which shall cover at least one capacity calculation region”.

(56) Article 36(1) of the Electricity Regulation contains several requirements:

- The first sentence of Article 36(1) of the Electricity Regulation prescribes that the Proposal must specify which TSOs, bidding zones, bidding zone borders, capacity calculation regions and outage coordination regions are covered by each of the SORs;

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<sup>4</sup> As confirmed in Case A-007-2020, Decision of the Board of Appeal of 24 September 2020, para. 78.

- The second sentence of Article 36(1) of the Electricity Regulation prescribes that the Proposal shall take into account the grid topology, including the degree of interconnection and of interdependency of the electricity system in terms of flows;
  - Furthermore, the second sentence of Article 36(1) of the Electricity Regulation prescribes that the Proposal shall take into account the size of the region which shall cover at least one capacity calculation region.
- (57) The Electricity Regulation does not describe how the “*grid topology, including the degree of interconnection and of interdependency of the electricity system in terms of flows*” are to be taken into account. It does not prescribe specific criteria for this assessment; in particular, it does not prescribe any modelling.
- (58) The Proposal and its Explanatory document did also not specify how the requirements of the second sentence of Article 36(1) of the Electricity Regulation with regard to the grid topology, including the degree of interconnection, and of interdependency of the electricity system in terms of flows were taken into consideration by ENTSO-E.
- (59) In that regard, ACER has considered several elements as relevant when taking into account “*the grid topology*”, including but not limited to the use of modelling. ACER considered these as the critical elements:
- (i). The synchronous area (‘SA’) as a starting point to assess the scope of the region (as high voltage direct current (‘HVDC’) lines are all individual elements and SAs in Europe are interconnected by HDVC lines and therefore the power flow between SAs is more readily controllable than within a SA);
  - (ii). The joint participation of the different TSOs of a SA in the same RSC<sup>5</sup> (as “*(t)he establishment of regional coordination centres should take into account existing [...] regional coordination initiatives*”<sup>6</sup>);
  - (iii). The expected development of interconnection between bidding zones (as “*[i]n performing their tasks, regional coordination centres should contribute to the achievement of the 2030 and 2050 objectives set out in the climate and energy policy framework*”<sup>7</sup>);
  - (iv). The extent to which remedial actions located in a bidding zone, which has borders with several CCRs, can efficiently address congestions within other bidding zones also having borders with some of these CCRs (as “*[r]egional*”

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<sup>5</sup> In the multilateral agreement that ENTSO-E members have all signed, RSCs must carry out five services: (i) security analysis; (ii) capacity calculation; (iii) outage coordination; (iv) adequacy forecast; and (v) common grid model.

<sup>6</sup> Recital (53) of the Electricity Regulation.

<sup>7</sup> Recital (56) of the Electricity Regulation.

*coordination centres should carry out tasks where their regionalisation brings added value compared to tasks performed at national level”<sup>8</sup>).*

- (60) As regards the extent to which remedial actions located in a bidding zone, which has borders with several CCRs, can efficiently address congestions within other bidding zones also having borders with some of these CCRs, ACER conducted a nodal PTDF-based modelling analysis on a voluntary basis for the purpose of identifying the interdependency of remedial actions between several CCRs, i.e. to take into account the “*interdependency of the electricity system in terms of flows*”<sup>9</sup>. A detailed methodological description of this modelling analysis is provided in Annex IV to this Decision.
- (61) Moreover, ACER’s modelling analysis only covers the remedial actions located in France that significantly address congestion issues both in Italy and Spain, as ACER considered that this analysis would be relevant to assess any amendments to the Proposal, as regards integrating the SWE CCR and the Italy North CCR into the CE SOR.
- (62) Following the withdrawal of Decision No 08/2021, ACER conducted further calculations based on the methodology for coordinating operational security analysis (CSAM)<sup>10</sup> – suggested by ENTSO-E early in the discussions as a relevant methodology to assess the interdependency in terms of flows – in order to assess the interdependency in terms of flows between the SWE CCR and the Italy North CCR. A detailed description of this analysis is provided in Annex V to this Decision.

#### *6.2.3.1.2. The requirements of Article 36(2) of the Electricity Regulation*

- (63) Article 36(2) states that “[t]he transmission system operators of a system operation region shall participate in the regional coordination centre established in that region. In exceptional circumstances, where the control area of a transmission system operator is part of various synchronous areas, the transmission system operator may participate in two regional coordination centres. For the bidding zone borders, adjacent to system operation regions, the proposal in paragraph 1 shall specify how the coordination between regional coordination centres for those borders is to take place. For the Continental European synchronous area, where the activities of two regional centres may overlap in a system operation region, the transmission system operators of that system operation region shall decide to either designate a single regional coordination centre in that region or that the two regional coordination centres carry out some or all of the tasks of regional relevance in the entire system

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<sup>8</sup> Recital (55) of the Electricity Regulation.

<sup>9</sup> Article 36(1) of the Electricity Regulation.

<sup>10</sup> Methodology for coordinating operational security analysis in accordance with Article 75 of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation.

*operation region on a rotational basis while other tasks are carried out by a single designated regional coordination centre”.*

- (64) The first and second sentence of Article 36(2) of the Electricity Regulation set out general considerations for the participation of TSOs in SORs, requiring the TSOs of a SOR to participate in the RCC established in that region, while allowing a TSO to participate in two RCCs in exceptional circumstances, where the control area of a TSO is part of various synchronous areas.
- (65) The third sentence of Article 36(2) of the Electricity Regulation addresses the coordination between RCCs, requiring ENTSO-E’s proposal to specify, for the bidding zone borders adjacent to SORs, how the coordination between the concerned RCCs is to take place.
- (66) Finally, the fourth sentence of Article 36(2) of the Electricity Regulation, establishing an exception for the CE SA in relation to Article 37 of the Electricity Regulation (according to which each RCC shall carry out its tasks of regional relevance in the SOR where it is established), requires that for the CE SA, where the activities of two RCCs may overlap in a SOR, the TSOs of that SOR decide to either designate a single RCC in that region or that the two RCCs carry out some or all of the tasks of regional relevance in the entire SOR on a rotational basis, while other tasks are carried out by a single designated RCC.

#### *6.2.3.2. Assessment of the Proposal and amendments to the Proposal on a regional basis under Article 36 of the Electricity Regulation*

- (67) ENTSO-E proposed seven SORs – CE SOR, Baltic SOR, Nordic SOR, IU SOR, SWE SOR, GRIT SOR and SEE SOR – largely based on existing CCRs and, to some extent, along the borders of SAs, as well as taking into account a few regional specificities concerning peninsulas of the CE SA. As stated in ENTSO-E’s Position Paper of 19 February 2020, ENTSO-E considered that the Proposal met all the legal requirements of Article 36 of the Electricity Regulation and that its proposed definition of SORs would be the only possible configuration allowing timely implementation of the SOR/RCC framework; ENTSO-E explained that its proposed definition of SORs was not questioned by stakeholders in the public consultation.
- (68) The following subsections detail ACER’s assessment with regards to the compliance of each proposed SOR with the legal requirements of Article 36 of the Electricity Regulation and the necessary amendments introduced by ACER to the Proposal in accordance with these legal requirements.

##### *6.2.3.2.1. Nordic SOR*

- (69) In ACER’s view, the Proposal fulfils the requirements of the first sentence of Article 36(1) of the Electricity Regulation in the sense that it specifies which TSOs, bidding zones, bidding zone borders, CCRs and outage coordination regions are covered by the Nordic SOR. Article 3 of the Proposal contains a table with the aforementioned specifications.



- (70) The Proposal fulfils the requirements of the second sentence of Article 36(1) of the Electricity Regulation with regard to the size of the SOR, namely that it “*shall cover at least one capacity calculation region*”,<sup>11</sup> as the Nordic SOR includes a complete list of the bidding zone borders of the concerned CCR.
- (71) As regards the second requirement of Article 36(1) of the Electricity Regulation, to take into account the “*grid topology, including the degree of interconnection and of interdependency of the electricity system in terms of flows*”, ACER understands that there is a strong interdependency inside a SA because of the existence of alternative current (‘AC’) interconnections between TSOs’ control areas. In such a case, electricity flows according to the laws of physics (i.e. over the path of least resistance (impedance)) and cannot therefore be fully controlled by the TSOs. Conversely, in case of interconnected SAs, the interconnections take the form of HVDC systems comprised of at least two HVDC converter stations with direct current (‘DC’) transmission lines or cables between the HVDC converter stations. In such cases, the interdependency between SAs is significantly reduced compared with that of the AC interconnections. This is because of the full controllability of the transmitted active power flow between the HVDC converter stations. The following control areas belong to the Nordic SA: Denmark 2 (DK2), FI, SE1, SE2, SE3 and SE4, of which DK2 is controlled by the Danish TSO (Energinet) (DK1), FI by the Finnish TSO (Fingrid) and SE1, SE2, SE3 and SE4 by the Swedish TSO (Svenska Kraftnät). In addition to these control areas, the Proposal includes in the Nordic SOR one control area CE SA, i.e. Denmark 1 (DK1) which is also managed by Energinet. However, this control area is currently in terms of flows very weakly connected with the CE SA. Also, in the telephone conference call with the European Commission, the Danish regulatory authority, and the Danish TSO on 14 January 2020, it has been brought to ACER’s attention that the DK1 control area connections with the CE SA behaviour allows Energinet full controllability of the transmitted active power flows with the CE SA. In addition, no concerns with placing the DK1 control area in Nordic SOR have been expressed during a dedicated telephone conference call with the relevant regulatory authorities and TSOs of DK, DE and NE on 23 January 2020. Therefore, ACER finds the configuration of the Nordic SOR as defined in the Proposal compliant with the second requirement of Article 36(1) of Electricity Regulation.
- (72) As regards the first and second sentence of Article 36(2) of the Electricity Regulation, Energinet’s control area is part of two different SAs, i.e. the Nordic SA and the CE SA. There are two Danish bidding zones. Denmark 1 (DK1) is part of the CE SA and Denmark 2 (DK2) is part of the Nordic SA. Therefore, Energinet could be placed in two different SORs.

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<sup>11</sup> Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management OJ L 197, 25.7.2015, p. 24–72 (‘CACM Regulation’). In this regard, CCRs shall be considered as the bidding zones of Member States to which the CACM Regulation applies.

- (73) As the exception contained in Article 36(2) of the Electricity Regulation offers the option, but does not impose an obligation to place TSOs in two different SORs, ACER deems this proposal compliant with Article 36(2) of the Electricity Regulation. Therefore, ACER agrees to keep both Danish bidding zones in the Nordic SOR and handle the coordination for the border to the CE SOR as proposed in Article 4(3) of the Proposal.
- (74) The Proposal partly fulfils the requirements of the third sentence of Article 36(2) of the Electricity Regulation with regard to specifying how the coordination between RCCs is to take place for the bidding zone borders adjacent to SORs. ENTSO-E proposes to use all given flexibility to coordinate all adjacent borders in the most efficient way and has outlined the criteria for the coordination of the adjacent borders to SORs as proposed. However, ACER found it necessary to amend Article 4 of the Proposal to clarify for which adjacent borders this is applicable and how the coordination would take place. This change was agreed to by ENTSO-E. More detail is provided below in section 6.2.3.2.8.
- (75) In its hearing submission of 25 March 2021, ENTSO-E noted that the Finnish TSO Kraftnät Åland is missing from the Nordic SOR. ACER has amended the Proposal to integrate this TSO in the Nordic SOR.
- (76) Provided that the amendments described above are integrated in the Proposal, ACER considers the proposed Nordic SOR is in line with the cumulative criteria of Article 36(1) and Article 36(2) of the Electricity Regulation.

#### 6.2.3.2.2. *Baltic SOR*

- (77) In ACER's view, the Proposal fulfils the requirements of the first sentence of Article 36(1) of the Electricity Regulation in the sense that it specifies which TSOs, bidding zones, bidding zone borders, CCRs and outage coordination regions are covered by the Baltic SOR. Article 3 of the Proposal contains a table with the aforementioned specifications.
- (78) The Proposal fulfils the requirements of the second sentence of Article 36(1) of the Electricity Regulation with regard to the size of the SOR, namely that it "*shall cover at least one capacity calculation region*", as the Baltic SOR includes a complete list of the bidding zone borders of the concerned CCR.
- (79) ACER understands that the Baltic SA consists of control areas of the three Baltic TSOs (Litgrid, AST and Elering).
- (80) ACER also understands that the Baltic CCR includes, in addition to the above mentioned TSOs, the TSOs of Finland, Sweden and Poland. These latter TSOs are however connected to the Baltic SA via HVDC systems.
- (81) According to Article 36(1) of the Electricity Regulation, the Proposal needs to take into account the grid topology, including the degree of interconnection and of interdependency of the electricity system in terms of flows. ACER understands that

there is a strong interdependency inside a SA because of the existence of alternative current ('AC') interconnections between TSOs' control areas. In such a case, electricity flows according to the laws of physics (i.e. over the path of least resistance (impedance)) and cannot therefore be fully controlled by the TSOs. Conversely, in case of interconnected SAs, the interconnections take the form of HVDC systems comprised of at least two HVDC converter stations with direct current ('DC') transmission lines or cables between the HVDC converter stations. In such cases, the interdependency between SAs is significantly reduced compared with that of the AC interconnections. This is because of the full controllability of the transmitted active power flow between the HVDC converter stations. Therefore, ACER agrees with the configuration of the Baltic SOR as defined in the Proposal.

- (82) The Proposal fulfils the criteria of the first and second sentence of Article 36(2) of the Electricity Regulation, as each TSO of the Baltic SOR, whose control area is part of the same SA, would participate in only one RCC established in that region.
- (83) The Proposal partly fulfils the requirements of the third sentence of Article 36(2) of the Electricity Regulation with regard to specifying how the coordination between RCCs is to take place for the bidding zone borders adjacent to SORs. ENTSO-E proposes to use all given flexibility to coordinate all adjacent borders in the most efficient way and has outlined the criteria for the coordination of the adjacent borders to SORs as proposed. However, ACER found it necessary to amend Article 4 of the Proposal to clarify for which adjacent borders this is applicable and how the coordination would take place. This change was agreed to by ENTSO-E. More detail is provided below in section 6.2.3.2.8.
- (84) Provided that the amendments described above are integrated in the Proposal, ACER considers the proposed Baltic SOR to be in line with the cumulative criteria of Article 36(1) and Article 36(2) of the Electricity Regulation.

#### 6.2.3.2.3. IU SOR

- *The IU SOR proposed by ENTSO-E*
- (85) The proposed IU SOR consists of: the Irish TSO (EirGrid), the Northern Irish TSO (SONI) and the British TSO (NG ESO); the Irish and British bidding zones; and all the bidding zone borders included in the IU and Channel CCRs.
- *Assessment of the Proposal under Article 36(1) and Article 36(2) of the Electricity Regulation and under the EU-UK Agreement*
- (86) The Proposal specifies, in accordance with Article 36(1) of the Electricity Regulation, which TSOs, bidding zones, bidding zone borders, CCRs and outage coordination regions are covered by the IU SOR. However, the proposed IU SOR includes the GB TSO NG ESO and the Northern Ireland TSO SONI. Following the UK's withdrawal

from the EU<sup>12</sup> and since the SOR definition concerns EU Member States only, non-EU TSOs must be removed from the SOR definition.<sup>13</sup> Therefore, references throughout the Proposal to the NG ESO were deleted. In accordance with the Protocol on Ireland/Northern Ireland ('IE/NI Protocol'), included in the Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community ('Withdrawal Agreement')<sup>14</sup>, the provisions of Union law governing wholesale electricity markets listed in Annex 4 to the Protocol shall apply, under the conditions set out in that Annex, to and in the UK in respect of Northern Ireland. In this light, references to SONI in the Proposal were kept.<sup>1516</sup>

- (87) By virtue of the UK's withdrawal from the EU, the IU and Channel CCRs and bidding zones cease to exist<sup>17</sup>. Since the SOR "*shall cover at least one capacity calculation region*", the requirement of the second sentence of Article 36(1) of the Electricity Regulation would not be met if an IU SOR were to be defined without covering at least one CCR. ACER therefore deleted the IU SOR in its entirety and all references to it from the Proposal.
- (88) In accordance with Article 36(1) of the Electricity Regulation, in order to take into account the grid topology, degree of interconnection and interdependency of the electricity system in terms of flows, the Proposal placed GB and IE/NI SAs in the IU SOR. However, with the withdrawal of the UK from the EU, the coordination needed between the EU and the UK will be one between the EU and a third country, and

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<sup>12</sup> Since 1 February 2020, the UK has withdrawn from the EU and has become a third country. During the transition period, which ended on 31 December 2020, the EU and the UK negotiated a Trade and Cooperation Agreement, which applies provisionally since 1 January 2021. See Trade and Cooperation Agreement between the European Union and the European Atomic Energy Community, of the one part, and the United Kingdom of Great Britain and Northern Ireland, of the other part (OJ L 444, 31.12.2020, p. 14–1462). ([https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L\\_.2020.444.01.0014.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2020.444.01.0014.01.ENG)).

<sup>13</sup> See European Commission Notice to Stakeholders – Withdrawal of the United Kingdom and EU Rules in the Field of the Internal Energy Market: *Since 1 January 2021, system operation regions no longer cover the United Kingdom*. ([https://ec.europa.eu/info/sites/info/files/notice-to-stakeholders-brexite-energy-market\\_en.pdf](https://ec.europa.eu/info/sites/info/files/notice-to-stakeholders-brexite-energy-market_en.pdf))

<sup>14</sup> Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community OJ L 29, 31.1.2020, p. 7–187 (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02020W/TXT-20201218&from=EN>).

<sup>15</sup> Since the end of the transition period, the Protocol on Ireland/Northern Ireland, included in the Withdrawal Agreement, applies. See Article 185 of the Withdrawal Agreement and Article 9 and Annex 4 of the Protocol on Ireland/Northern Ireland. See also Article 6(1) of the Withdrawal Agreement concerning the amendment or replacement of the EU legal acts listed in Annex 4.

<sup>16</sup> See European Commission Notice to Stakeholders – Withdrawal of the United Kingdom and EU Rules in the Field of the Internal Energy Market: "*The IE/NI Protocol makes certain provisions of EU law applicable also to and in the United Kingdom in respect of Northern Ireland. In the IE/NI Protocol, the EU and the United Kingdom have furthermore agreed that insofar as EU rules apply to and in the United Kingdom in respect of Northern Ireland, Northern Ireland is treated as if it were a Member State.*"

<sup>17</sup> See ACER Decision No 04/2021 of 7 May 2021 on the determination of capacity calculation regions.

therefore, reference to the GB bidding zone was deleted from the Proposal. Equally, the bidding zone SEM was also deleted from the Proposal, since the IU and Channel CCRs cease to exist following the withdrawal of the UK from the EU. Article 3(4) of the Proposal as revised by ACER anticipates that in case of amendments to the determination of CCRs<sup>18</sup> and until such amendments are incorporated in the definition of SORs, the list of bidding zones, bidding zone borders and TSOs in SORs are to be understood as reflecting the changes to the determination of CCRs, without prejudice to the relevant TSOs' right under Article 36(4) of the Electricity Regulation to submit a proposal to ACER for amendments – ACER made changes to Article 3(4) to clarify this.

- (89) With the withdrawal of the UK from the EU leading to the deletion of the IU SOR from the Proposal, it is ever so important that Ireland becomes interconnected with continental Europe to facilitate the market integration as well as ensure the efficient and secure operation of electricity systems across the Union<sup>19</sup>.
- (90) In accordance with Recital (53) of the Electricity Regulation, the establishment of RCCs should be efficient and take into account existing or planned regional coordination initiatives and should support the increasingly integrated operation of electricity systems across the Union. Bearing in mind that EirGrid has been participating in RSC CORESO since 2017<sup>20</sup>, and that the Celtic Interconnector between Ireland and France is due to be completed in 2026<sup>21</sup> (creating a new bidding zone border between the island of Ireland and continental Europe), and given the necessary deletion of the IU SOR from the Proposal, ACER considers that it is justified to place EirGrid in the CE SOR. In the same light, given that SONI has also been participating in RSC CORESO since 2017<sup>22</sup>, and in accordance with the IE/NI Protocol, references in the Proposal to SONI were also added to the CE SOR. However, given that the Celtic Interconnector is not yet operational, ACER added a paragraph to the Proposal detailing that the TSOs' obligations pertaining to the RCCs'

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<sup>18</sup> Pursuant to Article 15 of the CACM Regulation.

<sup>19</sup> <https://www.cre.fr/en/News/celtic-obtains-an-eu-grant-on-par-with-the-stake>

<sup>20</sup> EirGrid is a member and shareholder of CORESO RSC, which is deemed to become one of the two RCCs of the CE SOR.

<sup>21</sup> The Celtic Interconnector is a Project of Common Interest for a planned undersea link (HVDC) to allow the exchange of electricity between Ireland and France (700 MW). The total length of the HVDC interconnector between the two countries would be about 575 km.

See [https://ec.europa.eu/energy/sites/ener/files/documents/pci\\_factsheet\\_celtic\\_interconnector\\_2017\\_0.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/pci_factsheet_celtic_interconnector_2017_0.pdf) and <http://www.eirgridgroup.com/site-files/library/EirGrid/Celtic-Interconnector-Project-PCI-Information-Brochure.pdf>.

<sup>22</sup> SONI is a member and shareholder of CORESO RSC, which is deemed to become one of the two RCCs of the CE SOR.

tasks shall become effective only upon the start of operation (energisation) of the Celtic Interconnector.

- (91) In accordance with Recital (54) of the Electricity Regulation, the geographical scope of RCCs should allow them to contribute effectively to the coordination of the operations of TSOs across regions and should lead to enhanced system security and market efficiency. It is therefore important to ensure that Ireland remains interconnected and in close coordination with the Internal Energy Market through its participation in the CE SOR.
- (92) The Proposal fulfilled the criteria of the first and second sentence of Article 36(2) of the Electricity Regulation, as each TSO of the IU SOR, whose control area is part of the same SA, would participate in only one RCC established in that region.
- (93) The Proposal partly fulfilled the requirements of the third sentence of Article 36(2) of the Electricity Regulation with regard to specifying how the coordination between RCCs is to take place for the bidding zone borders adjacent to SORs. ENTSO-E proposes to use all given flexibility to coordinate all adjacent borders in the most efficient way and has outlined the criteria for the coordination of the adjacent borders to SORs as proposed.
- (94) However, due to UK's withdrawal from the EU, as explained above, ACER deleted the IU SOR in its entirety and all references to it from the Proposal, as well as all references to the GB SA and NG ESO. Following ACER's modifications to the definition of SORs in this regard, the requirements of Article 36(2) of the Electricity Regulation in relation to CE SOR are detailed in section 6.2.3.2.7.
- (95) For all the reasons stated above, ACER made changes to the Proposal to remove all references to IU SOR, GB SA and NG ESO and to place EirGrid and SONI in the CE SOR.

#### 6.2.3.2.4. *SEE SOR*

- *The SEE SOR proposed by ENTSO-E*
- (96) The proposed SEE SOR consists of: the TSOs ESO and IPTO; the BG and GR bidding zones; and all the bidding zone borders included in the SEE CCR.
- *Assessment of the Proposal under Article 36(1) and Article 36(2) of the Electricity Regulation*
- (97) In ACER's view, the Proposal fulfils the requirements of the first sentence of Article 36(1) of the Electricity Regulation in the sense that it specifies which TSOs, bidding zones, bidding zone borders, CCRs and outage coordination regions are covered by the SEE SOR. Article 3 of the Proposal contains a table with the aforementioned specifications.



- (98) The Proposal fulfils the requirements of the second sentence of Article 36(1) of the Electricity Regulation with regard to the size of the SOR, namely that it “*shall cover at least one capacity calculation region*”, as the SEE SOR includes a complete list of the bidding zone borders of the concerned CCR.
- (99) As regards the second requirement of Article 36(1) of the Electricity Regulation, i.e. to take into account the “*grid topology, including the degree of interconnection and of interdependency of the electricity system in terms of flows*”, ACER understands that the underlying grid for the SEE CCR bidding zone borders is part of the CE SA and could thus in principle be included in the CE SOR. However, during the discussions with the concerned TSOs mentioned in paragraph (10), ACER was informed that the flows in the concerned region are generally under adequate control. Also, the size of the SOR could hamper the efficient coordination by TSOs. Last but not least, the concerned TSOs had announced already the creation of a dedicated SEE RSC with a seat in Thessaloniki<sup>23</sup>, which should be taken into account as per Recital (53) of the Electricity Regulation. For these reasons, ACER finds the geographical scope in terms of CCR borders as defined in the Proposal compliant with the second requirement of Article 36(1) of Electricity Regulation.
- (100) As regards the criteria of the first and second sentence of Article 36(2) of the Electricity Regulation, the Proposal implies that the Greek TSO (IPTO) is to be placed in both the SEE SOR and the GRIT SOR, which would require IPTO to participate in two different RCCs each of which would be responsible for a different SOR, namely the one established for the SEE SOR and the one established for the GRIT SOR, although IPTO’s control area is part of the same SA, namely the CE SA. In that regard, the Proposal contradicts the first and second sentence of Article 36(2) of the Electricity Regulation which prescribes that the TSOs of an SOR are to participate in the RCC established in that region, while allowing a TSO to participate in two RCCs in exceptional circumstances, where the control area of a TSO is part of various synchronous areas.
- (101) As it is explained in detail in paragraphs (107)-(114), ACER’s amendments to the Proposal as regards the GRIT SOR remove that SOR and bring about an alternative SEE SOR configuration. As a result, ACER’s amendments entail that IPTO will only be part of the SEE SOR (and the RCC established in that region); this configuration complies with the requirement, under Article 36(2) of the Electricity Regulation, that the TSOs of an SOR should participate in the RCC established in that region, in the absence of exceptional circumstances, where the control area of a TSO is part of various synchronous areas.
- (102) The Proposal partly fulfils the requirements of the third sentence Article 36(2) of the Electricity Regulation with regard to specifying how the coordination between RCCs

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<sup>23</sup> <https://www.entsoe.eu/news/2019/07/17/south-east-europe-tsos-agree-on-a-mou-for-establishing-a-regional-coordination-centre/> (now named SEleNe CC RSC).

is to take place for the bidding zone borders adjacent to SORs. ENTSO-E proposes to use all given flexibility to coordinate all adjacent borders in the most efficient way and has outlined the criteria for the coordination of the adjacent borders to SORs as proposed. However, ACER found it necessary to amend Article 4 of the Proposal to clarify for which adjacent borders this is applicable and how the coordination would take place. This change was agreed to by ENTSO-E. More detail is provided below in section 6.2.3.2.8.

- (103) ENTSO-E proposes that the SEE SOR is established for the South East Europe region, excluding the Romanian TSO (Transelectrica) from participating in this SOR but including all the SEE CCR bidding zone borders (including Bulgaria-Romania (BG-RO) bidding zone border).
- (104) Further, ENTSO-E proposes the BG-RO bidding zone border as the adjacent bidding zone border to the SEE SOR and CE SOR for which a coordination, in accordance with the applicable terms, conditions and methodologies, shall be executed by the RCC established by the TSOs in the SEE SOR. This shall be ensured in cooperation with the Romanian TSO that shall have a contractual arrangement with the RCC established by the TSOs in the SEE SOR.
- (105) While one could ponder whether the interdependency in terms of flows for the BG-RO bidding zone border would require combining the SEE SOR with the CE SOR, ACER decided to follow the AEWG of 10 March 2020 advising to keep the SEE SOR as proposed by ENTSO-E “*considering different operational and organisational requirements in the SORs Central Europe (CE) and SEE and also the already announced setup of a regional security centre (RSC) in Thessaloniki. The Romanian TSO would be part of the SOR CE and establish cooperation with SOR SEE via contractual arrangements*”.
- (106) As explained below in detail regarding the GRIT SOR, the Italian transmission system spans across two SAs. Therefore, the case of the Italian TSO, Terna, is in line with the exceptional circumstances according to the second sentence of Article 36(2) of the Electricity Regulation, and Terna may participate in two RCCs. As a result, ACER included Terna in the CE SOR and the SEE SOR, confirming the integration of the bidding zone borders of the Italy North CCR in the CE SOR and placing the bidding zone borders of the GRIT CCR in the SEE SOR.
- (107) Provided that the amendments described above are integrated in the Proposal, ACER considers the proposed SEE SOR to be in line with the cumulative criteria of Article 36(1) and Article 36(2) of the Electricity Regulation.

#### 6.2.3.2.5. GRIT SOR

- *The GRIT SOR proposed by ENTSO-E*

- (108) The proposed GRIT SOR consists of: the TSOs Terna and IPTO; the IT NORD, IT CNOR, IT CSUD, IT SUD, IT SICI, IT SARD, and IT ROSN bidding zones; and all the bidding zone borders included in the GRIT CCR.

- *Assessment of the Proposal under Article 36(1) and Article 36(2) of the Electricity Regulation*

- (109) In ACER's view, the Proposal fulfils the requirements of the first sentence of Article 36(1) of the Electricity Regulation in the sense that it specifies which TSOs, bidding zones, bidding zone borders, CCRs and outage coordination regions are covered by the GRIT SOR. Article 3 of the Proposal contains a table with the aforementioned specifications.
- (110) The Proposal fulfils the requirement of the second sentence of Article 36(1) of the Electricity Regulation with regard to the size of the SOR, namely that it "*shall cover at least one capacity calculation region*", as the GRIT SOR includes a complete list of the bidding zone borders of the concerned CCR.
- (111) Regarding the requirement of the second sentence of Article 36(1) of the Electricity Regulation concerning grid topology, including the degree of interconnection and of interdependency of the electricity system in terms of flows, as already mentioned above, the Proposal implies that the Greek TSO (IPTO) is to be placed in both the SEE SOR and the one established for the GRIT SOR, which would require IPTO to participate in the RCCs each of which would be responsible for a different SOR, namely the one established for the SEE SOR and GRIT SOR although IPTO's control area is part of the same SA, namely the CE SA. In that regard, the Proposal contradicts the first and second sentence of Article 36(2) of the Electricity Regulation which provides that the TSOs of an SOR are to participate in the RCC established in that region, while allowing a TSO to participate in two RCCs in exceptional circumstances, where the control area of a TSO is part of various synchronous areas.
- (112) In its hearing submission of 25 March 2021, ENTSO-E explained that the Italian transmission system is characterised by its peninsular and insular grid with multiple bidding zones spanning over two synchronous areas: the Sardinia island and the remainder of Italy (including Sicily island), which is part of the CE SA. Indeed, spanning across two synchronous areas, the case of Terna satisfies the exceptional circumstances of the second sentence Article 36(2) of the Electricity Regulation, and therefore Terna may participate in two RCCs.
- (113) However, the Proposal implies that Terna is to be placed in both the CE SOR and the GRIT SOR, which would require Terna to participate in the RCCs established for CE SOR and the one that would be established for GRIT SOR. As described in more detail below, ACER believes that the creation of a separate GRIT SOR would not be justified; also, taking into consideration Terna's participation in "existing or planned regional coordination initiatives" in accordance with Recital (53) of the Electricity Regulation, Terna participates in the recently established SEleNe RSC, which is an existing regional coordination initiative. It is reasonable to expect that Terna would continue to participate in SEleNe after it is established as an RCC and not potentially in a completely new RCC established in GRIT SOR in accordance with Article 35 of the Regulation.

- (114) Moreover, the creation of a GRIT SOR implies that IPTO is to be placed in both SEE SOR and GRIT SOR, which would require IPTO to participate in the RCCs established for SEE SOR and the one that would be established for GRIT SOR, which is contrary to the provisions of Article 36(2) of the Electricity Regulation since IPTO's control area is not in two synchronous areas.
- (115) Therefore, ACER considers that the proposed GRIT SOR is not in line with the cumulative criteria of Article 36(1) and Article 36(2) of the Electricity Regulation and that amendments to the Proposal need to be introduced in order to fulfil these requirements, as described in detail in the section below.
- *Amendments to the Proposal in accordance with Article 36(1) and Article 36(2) of the Electricity Regulation*
- (116) In its hearing submission of 25 March 2021, ENTSO-E explained that Terna's control area (as defined in the Electricity Regulation), "*spreads across two synchronous areas, i.e. the Sardinia island and the remainder of Italy (including Sicily island), which is part of the Continental Europe synchronous area.*" ENTSO-E also emphasised the analogous nature of GRIT region's characteristics to the exceptional circumstances indicated in Article 36(2) of the Electricity Regulation.
- (117) Regarding the legal requirements under the second sentence of Article 36(1) of Electricity Regulation, namely the assessment of the grid topology, including the degree of interconnection and of interdependency in terms of flows, it is important to highlight that the GRIT CCR contains the Sardinia SA, which is connected via two HVDCs to the CE SA (Italy Middle North and Italy Middle South). There are direct current flows inside the GRIT CCR, which contains the whole synchronous area of Sardinia, and which are treated differently than the CE SA.
- (118) As regards the legal requirements under Article 36(2) of the Electricity Regulation, the Italian transmission system spans over two synchronous areas: the Sardinia Island and the remainder of Italy which is part of the CE SA. Indeed, spanning across two synchronous areas, Terna's case is in line with the exceptional circumstances of Article 36(2), second sentence, and therefore Terna may participate in two RCCs.
- (119) For the reasons above, ACER included Terna in the CE SOR and SEE SOR, confirming the integration of the bidding zone borders of the Italy North CCR in the CE SOR and placing the bidding zone borders of the GRIT CCR in the SEE SOR. Also, Terna is placed in the CE SOR and in the SEE SOR.
- (120) It is important to highlight that the changes made by ACER in this regard are completely in line and compatible with the situation already in place today as Terna currently participates in the RSC CORESO and RSC SEleNe<sup>24</sup>. Therefore, ACER

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<sup>24</sup> The Italian regulatory authority approved the appointment of SEleNe CC as the RSC for the GRIT CCR on 1 July 2020.

considers the interface to be also a pragmatic, cost-efficient and proportionate solution.

(121) Finally, as regards IPTO, it is referred to paragraphs (95)-(106) concerning the assessment of the SEE SOR which already includes IPTO as one of the TSOs of that region and is approved by ACER, provided the amendments related to the SEE SOR are integrated in the Proposal. As explained above, ACER's amendments regarding the GRIT SOR imply its complete removal and an alternative CE SOR configuration. As a result, ACER's amendments entail that IPTO will only be part of the SEE SOR (and the RCC established in that region); this configuration complies with the wording of the first and second sentence of Article 36(2) of the Electricity Regulation.

(122) In the light of the foregoing and as will be explained below, ACER's amendments to the Proposal and the alternative CE SOR configuration are in line with the cumulative criteria of Article 36(1) and Article 36(2) of the Electricity Regulation.

#### 6.2.3.2.6. SWE SOR

- *The SWE SOR proposed by ENTSO-E*

(123) The proposed SWE SOR consists of the TSOs RTE, REE, and REN, the French, Spanish and Portuguese bidding zones; and all the bidding zone borders included in the SWE CCR.

- *Assessment of the Proposal under Article 36(1) and Article 36(2) of the Electricity Regulation*

(124) In ACER's view, the Proposal fulfils the requirements of the first sentence of Article 36(1) of the Electricity Regulation in the sense that it specifies which TSOs, bidding zones, bidding zone borders, CCRs and outage coordination regions are covered by the SWE SOR. Article 3 of the Proposal contains a table with the aforementioned specifications.

(125) The Proposal fulfils the requirements of the second sentence of Article 36(1) of the Electricity Regulation with regard to the size of the SOR, namely that it "*shall cover at least one capacity calculation region*", as the SWE SOR includes a complete list of the bidding zone borders of the concerned CCR.

- *On the discussions between ACER and ENTSO-E regarding Article 36(1) of the Electricity Regulation*

(126) For the purposes of analysing the other requirements of the second sentence of Article 36(1) of the Electricity Regulation, namely taking into account the grid topology, including the degree of interconnection and of interdependency of the electricity system in terms of flows, ACER has conducted calculations based on two different methodologies: i) the modelling nodal PTDF-based analysis described in Annex IV which ACER used for assessing interdependency in terms of flows, and ii) the CSAM-



based methodology described in Annex V which ENTSO-E considered as relevant for analysing interdependency in terms of flows.

- (127) According to ACER's calculations based on representative common grid models as described in Annex IV, a significant number of remedial actions located in France can efficiently address congestions both in the Italy North CCR and in the SWE CCR. Specifically, almost half of all generators (connected at the 380 kV voltage level) in France have a simultaneous significant impact (i.e. more than 5%)<sup>25</sup> on at least one critical network element with contingency located in either region. This means that almost half of generators in France are needed to address physical congestions in both CCRs. In accordance with the CSAM, the TSOs are required to carry out a coordinated cross-regional operational security assessment. This assessment is comprised of a common cross-regional coordination process, for the coordination of remedial actions, involving TSOs and RSCs of all impacting CCRs.
- (128) In ENTSO-E's hearing submission of 25 March 2021, ENTSO-E presented calculations based on the zone-to-zone PTDF (power transfer distribution factors) method in order to provide an indication on the degree of interdependency between the SWE CCR and the North Italy CCR. ENTSO-E argued that there is minimal interdependency between FR-North Italy and the ES-FR interconnection.
- (129) ACER accepts the validity of ENTSO-E's abovementioned calculations which shed light on possible aspects of interdependency on the basis of calculated zone-to-zone PTDF values. ACER stresses that there are multiple ways to calculate and demonstrate interdependency in terms of flows and none is prescribed in the Electricity Regulation; indeed, there is no indication in the Electricity Regulation on how the assessment of interdependency in terms of flows should be made.
- (130) Following the withdrawal of Decision No 08/2021, ACER conducted further calculations based on the CSAM – suggested by ENTSO-E early in the discussions as a relevant methodology to assess the interdependency in terms of flows – in order to assess the interdependency in terms of flows between the SWE and Italy North CCRs as described in Annex V to this Decision.
- (131) In its written and oral hearing submissions of January 2022, ENTSO-E claimed that while ACER's methodologies for assessing the interdependency in terms of flows as described in Annexes IV and V are useful for assessment of cross-regional influence of remedial actions, these methodologies cannot be applied for the purpose of checking the requirements of Article 36(1) of the Electricity Regulation, since real-life operational conditions should be considered instead. It is also to be noted that it is a duty and responsibility of TSOs to set out these operational conditions. ENTSO-E also argued that the methodologies developed pursuant to Articles 75 and 76 of

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<sup>25</sup> In accordance with CSAM, a remedial action is deemed to have a significant cross-border impact if its remedial action influence factor is higher than 5%.



Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation ('SO Regulation') state as input into the assessment the list of cross-border relevant remedial actions (XRAs) that have been identified by TSOs, and that an assessment of interdependency of remedial actions cannot be based on hypothetical XRAs.

- (132) With regard to the calculations to assess the interdependency in terms of flows, ACER understands that the evidence put forward by ENTSO-E is based on real-life system operation that demonstrates a lack of significant interdependency. In ACER's view, this negligible interdependency in terms of flows does not preclude defining a separate SWE SOR.
- (133) Aside from the results obtained with the methodologies described in this Decision, ACER notes that the interdependency between the Iberian Peninsula and Continental Europe can reasonably be expected to increase in the coming years in light of the already planned infrastructure projects between France and Spain, most notably the submarine interconnector across the Biscay Gulf along with the upgrade of some 400 kV lines connecting Gatica (Spain) substation, which will almost double the interconnection capacity between the two countries (from 2800 MW to 5000 MW) in the coming years. Other two HVDC interconnections in the Pyrenees will also contribute to strengthening the interconnection capacity between France and Spain within the next decade. Such development could lead to the need for revisiting this assessment of the criteria of Article 36(1) of the Electricity Regulation and, in particular, interdependency in terms of flows.
- On the discussions between ACER and ENTSO-E regarding Article 36(2) of the Electricity Regulation
- (134) The Proposal places the French TSO (RTE) in both the CE SOR and the SWE SOR, which would require RTE to participate in the RCCs established for both the CE SOR and the SWE SOR, although its control area is part of the same SA, namely the CE SA. In that regard, ENTSO-E and the TSOs of the SWE CCR explained and assured that RTE will not participate in two RCCs, but rather only in an RCC, namely CORESO, which is the same RCC for the CE SOR and for the SWE SOR.
- (135) Indeed, in its hearing submissions, ENTSO-E emphasised that it is the intention of the three concerned TSOs of the SWE CCR – REN, REE, and RTE – that the RCC of the proposed SWE SOR continues to be RSC CORESO (which is deemed to become one of the two RCCs of the CE SOR) and in which these TSOs currently participate (along with some other TSOs of the CE SA). The three concerned TSOs expressed the intention for CORESO to be formally established also as RCC of the SWE SOR by the three TSOs of SWE CCR. ENTSO-E argued that, in their view, the SWE TSOs can establish CORESO as RCC of the region without the need for the SWE TSOs to be placed in the same CE SOR.
- (136) In this regard, while it is clear from Article 36(2) of the Electricity Regulation that a TSO should participate in the RCC established in a region, ACER considers that the legal text of Article 36(2) of the Electricity Regulation does not clearly exclude that

the same RCC is established also for another region, thereby coordinating two SORs. In ACER's view, it is therefore not precluded by the legal text that CORESO can be responsible for two SORs as the RCC established for both the SWE SOR and the CE SOR.

- (137) During the course of the proceedings, ENTSO-E expressed its concerns regarding the inclusion of SWE CCR in CE SOR due to, in their view, specific operational needs of the region and the application of the SWE methodologies, to be implemented through cooperative processes. ACER notes that, in this regard, the existing methodologies will continue to apply per CCR and regardless of which SOR the CCR would be part of; similarly, ACER sees no obstacle for the cooperative processes that exist within CORESO with regard to the SWE CCR to continue to exist, provided that these processes are specified and agreed among TSOs and approved by regulatory authorities during the establishment of RCCs.
- (138) In its written submission, ENTSO-E also asked for a clarification on “*what are the TSOs and [regulatory authorities] that should agree on the processes to be applied to SWE in case SWE is part of Central SOR as proposed by ACER: are these only the SWE TSOs and [regulatory authorities] or the TSOs and [regulatory authorities] of Central SOR (from Poland and Romania to Portugal)?*” ACER sought a response to this question from the regulatory authorities, which commented that, in this regard, there is the intention to harmonise the cooperation processes, and that the idea would be to preserve a simpler coordination on the basis of the different methodologies.
- (139) In light of ACER's change of preliminary position, ERSE expressed a number of concerns, summarised above in paragraph (41). ACER understands the concerns raised by ERSE, however considers that the goals set for the Internal Energy Market of having more integrated and efficient markets can still be reached with the definition of a separate SWE SOR. The tools at the disposal of regulatory authorities and ACER will allow for the level of efficiency and harmonisation among the SWE SOR and the CE SOR to be increased through the implementation of the methodologies related to the tasks of the RCCs in accordance with Article 37(1) of the Electricity Regulation, each of which has an appropriate and justified geographical scope.
- (140) Notably, the three other regulatory authorities mostly concerned – ARERA, CNMC and CRE – did not oppose ACER's change of preliminary position.
- (141) Therefore, since the existing, albeit only negligible, interdependency in terms of flows in accordance with Article 36(1) of the Electricity Regulation, does not conflict with defining the SWE CCR as a separate SOR, ACER considers that the Proposal is not in contradiction with the legal requirements of Article 36(1) of the Electricity Regulation. Also, the legal text of Article 36(2) of the Electricity Regulation does not clearly exclude the possibility that the same RCC CORESO is responsible for two separate SORs, i.e. CE and SWE, and given the explanations and assurances provided by ENTSO-E jointly with the SWE CCR TSOs that the RCC to be established for the SWE SOR would be CORESO, and that RTE would participate in only this one RCC, i.e. CORESO, ACER considers the Proposal compatible with the requirements of Article 36(2) of the Electricity Regulation.

- (142) In this context, ACER deems it important that regulatory authorities consider how the Electricity Regulation's provisions concerning the establishment and functioning of CORESO as the RCC for both the CE SOR and the SWE SOR will be applied, in particular as regards its liability and responsibilities.
- (143) ACER notes that the Electricity Regulation, especially its Article 35(1)(f) and (g) and Article 47, put some emphasis on the liability and the need for clear responsibilities of the RCCs, and that ENTSO-E intends to entrust CORESO with executing the mandatory tasks for both the CE SOR TSOs and SWE SOR TSOs. ACER is conscious that the arrangements in terms of liability and responsibility of CORESO for both SORs would need to consider the impact on the CE SOR TSOs – as co-shareholders of CORESO – (respectively the SWE SOR TSOs – as co-shareholders of CORESO) should CORESO fail in executing one of its mandatory tasks in the SWE SOR (respectively the CE SOR).
- (144) Similarly, possible disagreements between the SWE SOR TSOs and the CE SOR TSOs, as well as any disagreements between the regulatory authorities of the SWE SOR and CE SOR, would need to be handled. In ACER's view, those discussions will be important to understand whether a new SOR definition, which merges SWE SOR and CE SOR, could become necessary as a fall-back solution.
- (145) For the reasons explained above, ACER considers that it is acceptable for SWE CCR to be defined as a separate SOR, as proposed by ENTSO-E. Since the Proposal concerns EU Member States, the references to Swiss borders and to the Swiss TSO in Article 4(4)(3) of the Proposal were deleted.

#### 6.2.3.2.7. CE SOR

- (146) The proposed CE SOR consists of the following TSOs: RTE, ELIA, TenneT NL, Amprion, TransnetBW, TenneT DE, 50Hertz, Creos, PSE, CEPS, APG, VUEN, MAVIR, ELES, SEPS, HOPS, Transelectrica, and Terna; and all the bidding zone borders included in the Core CCR and Italy North CCR.
- (147) In ACER's view, the Proposal fulfils the requirements of the first sentence of Article 36(1) of the Electricity Regulation in the sense that it specifies which TSOs, bidding zones, bidding zone borders, CCRs and outage coordination regions are covered by the CE SOR. Article 3 of the Proposal contains a table with the aforementioned specifications.
- (148) The Proposal fulfils the requirements of the second sentence Article 36(1) of the Electricity Regulation with regard to the size of the SOR, namely that it "*shall cover at least one capacity calculation region*", as the CE SOR includes a complete list of the bidding zone borders of the concerned CCRs.
- (149) Having regard to the amendments made by ACER with respect to the GRIT SOR, an alternative CE SOR configuration is defined by ACER which includes the Italy North CCR borders. As demonstrated above, this alternative CE SOR is compliant with the legal requirements of Article 36(1) of the Electricity Regulation.

- (150) As explained above in section 6.2.3.2.3, having regard to the deletion by ACER of the IU SOR, ACER placed EirGrid and SONI in the CE SOR; given that the Celtic Interconnector is not yet operational, ACER added a paragraph to the Proposal detailing that these TSOs' obligations pertaining to the RCCs' tasks shall become effective only upon the start of operation of the Celtic Interconnector.
- (151) With the alternative CE SOR as defined in this Decision, each TSO of the CE SOR whose control area is part of the same CE SA would participate in only one of the RCCs established in that region; for this reason, the amendments to the Proposal and the alternative CE SOR configuration are therefore compliant with the legal requirements of Article 36(2) of the Electricity Regulation.
- (152) In the light of the foregoing, ACER's amendments to the Proposal and the alternative CE SOR configuration are in line with the cumulative criteria of Article 36(1) and Article 36(2) of the Electricity Regulation.
- 6.2.3.2.8. Other amendments necessary to ensure legal clarity and consistency with existing legal provisions*
- (153) In light of the above considerations, ACER made a number of amendments to the Proposal.
- (154) ACER made changes to the 'Whereas' section of the Proposal to clarify the purpose and scope of the document and removed references to Article 35 of the Electricity Regulation, as it is out of scope of the definition of SORs under Article 36 of the Electricity Regulation. ENTSO-E agreed with the changes made in this regard.
- (155) ACER removed references to third countries from the 'Whereas' section as these are out of scope of this Decision. Nevertheless, ACER included Recital (7) in the 'Whereas' section to highlight the importance of third countries for secure system operation inside all SAs across the Union. ENTSO-E agreed with the changes made in this regard.
- (156) ACER made minor editorial changes to the 'Whereas' section for consistency with the wording of the Electricity Regulation, as well as with the wording of the Articles for the SOR definition, as revised. ENTSO-E agreed with the changes made in this regard.
- (157) ACER made minor editorial changes to Article 1 to clarify the purpose and scope of the Proposal. ENTSO-E agreed with the changes made in this regard.
- (158) In ACER's view, Article 2 of the Proposal fell short of all acronyms necessary for the understanding of the Proposal; ACER made the necessary changes for clarity. ENTSO-E agreed with the changes made in this regard.
- (159) ACER made changes to Article 3(1) of the Proposal to clarify which TSOs have to be part of SORs and fulfil the obligations stemming from the present Decision. Only TSOs that have been designated or assigned with responsibilities relevant for system

operation will be included in SORs. These responsibilities are for example: 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 system balancing. ENTSO-E agreed with the changes made in this regard.

- (160) Since at national level Member States or regulatory authorities can assign or designate TSOs with responsibilities for system operation, ACER included a new paragraph (2) in Article 3. This paragraph specifies that the list of TSOs in SORs is without prejudice to the Member States' ability to designate or assign, or the regulatory authorities' ability to assign, one or several responsibilities to other TSOs in accordance with the Electricity Directive<sup>26</sup>. ENTSO-E agreed with the changes made in this regard.
- (161) ACER made changes to paragraph (3) of Article 3 to clarify and strengthen the requirement for consultation with the TSOs which are part of the CCR and which have not been included in the SOR. ACER deems the reinforcement of the requirement for consultation necessary to preserve a minimum of level-playing field in the decisions taken at SOR level, which could impact neighbouring TSOs not included in the SOR. ENTSO-E agreed with these changes.
- (162) ACER made changes to Articles 3 and 4 to define the CE SOR as detailed above in section 6.2.3.2.7, as well as introduced more details regarding coordination aspects. Changes in this regard reflect the advice received from the AEWG.
- (163) Furthermore, the geographical scope of RCCs, as per Recital (54) of the Electricity Regulation, should allow them to contribute effectively to the coordination of the operation of TSOs across regions. As per the same recital, RCCs should have the "flexibility to carry out their tasks in the way which is best adapted to the nature of individual tasks entrusted to them", which ACER does not dispute nor preclude with this definition of SORs.
- (164) ACER believes that its amendments to the Proposal have a limited impact on the implementation timeline and costs. ACER anticipates governance requirements, to be defined according to Article 35 of the Electricity Regulation, to be covered in a more holistic, but not necessarily more complex manner.
- (165) Moreover, the Electricity Regulation offers viable options (as detailed in paragraph (11)) to address the possible complexities of having a larger SOR: sub-regional specificities could be addressed through the possible establishment of a regional desk in accordance with Article 44 of the Electricity Regulation, or, in accordance with Article 36(2) of the Electricity Regulation, the TSOs of the CE SA can decide, where

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<sup>26</sup> 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 and amending Directive 2012/27/EU, OJ L 158, 14.6.2019, p. 125–199



the activities of two RCCs do not overlap in a SOR, to designate a single RCC in that region to carry out some or all of the tasks of regional relevance.

- (166) ACER included detailed provisions in Articles 3 and 4 on how the coordination between RCCs for bidding zone borders adjacent to SORs is to take place. These changes were discussed and agreed with ENTSO-E and then further developed for consistency following AEWG's advice of 10 March 2020. Following AEWG's advice of 22 March 2022, ACER revised Article 4(4) concerning the proposed SWE SOR to ensure consistency with the references included for other SORs to the relevant common methodologies for coordinated redispatching and countertrading and common methodologies for redispatching and countertrading cost sharing, pursuant to Articles 35 and 74 of the CACM Regulation; Article 4(4) now also contains a reference to those methodologies. In the same vein, for consistency, ACER included in Article 4(4) the coordination of the tasks of cross-regional relevance together with the RCC(s) established by the TSOs of Central Europe SOR and by the TSOs in the SWE SOR, as necessary, in line with changes introduced for other SORs.
- (167) ACER made changes to Articles 3 and 4 to include Terna in the CE SOR and SEE SOR, confirming the integration of the bidding zone borders of the Italy North CCR in the CE SOR and placing the bidding zone borders of the GRIT CCR in the SEE SOR. Terna is placed in the CE SOR and in the SEE SOR and IPTO will only be part of the SEE SOR, as explained in detail above in section 6.2.3.2.4.
- (168) ACER emphasises that the Proposal concerns EU Member States, as RCCs will encompass Union TSOs only and as it is provided for by the Electricity Regulation. Therefore, any references in the Proposal to non-EU TSOs were deleted. Specifically, the references to Swiss borders and to the Swiss TSO in Article 4(4)(3) of the Proposal were deleted. Similarly, the references to the GB TSOs and borders contained in the Proposal were deleted.
- (169) ACER acknowledges that, as emphasised in Recital (15) of the SO Regulation, SAs do not stop at the Union's borders and can include the territory of third countries. The Union, Member States and TSOs should aim for secure system operation inside all SAs across the Union. They should support third countries in applying similar rules to those contained in the SO Regulation. ENTSO-E should facilitate cooperation between Union TSOs and third country TSOs concerning secure system operation. Nevertheless, ACER emphasises that it is bound by the remit set out in Article 36 of the Electricity Regulation, as well as by Regulation (EU) 2019/942.
- (170) Recital (70) of the Electricity Regulation emphasises that *“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 should closely cooperate on all matters concerning the development of an integrated electricity trading region and should take no measures that endanger the further integration of electricity markets or security of supply of Member States and Contracting Parties.”*
- (171) Indeed, ACER acknowledges the intention of the TSOs to conclude with the third country TSOs not bound by the Electricity Regulation 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 the Electricity Regulation. For clarity, ACER moved paragraph (3) of Article 3 to Article 5 as this provision also concerns an implementation task. ENTSO-E agreed with this change. With the revision of the Decision following the BoA Decision, ACER intended to revise the implementation timeline of Article 5 to six months. On 7 May 2021, ENTSO-E submitted via email a request for the extension of the Article 5 deadline to ten months after the decision is final. ENTSO-E stated that this extension would be necessary to ensure that all the needed arrangements in all the SORs are in place at the moment the deadline expires and that ENTSO-E would aim to finalise the work ahead of this schedule. Following this request and considering the advice from the AEWG, which endorsed also this extension, ACER changed the implementation timing to ten months in Article 5. With regard to the comment on Article 5 mentioned in the AEWG advice of 22 March 2022, ACER notes that the ten-month deadline remained unchanged since there could be still agreements to be concluded (e.g. Ukraine, Moldova).

- (172) ACER removed Article 5(2) of the Proposal as it referred to the implementation of Article 38 of the Electricity Regulation, which is out of scope of the present Decision. ENTSO-E agreed with this change.
- (173) ACER made changes to the Proposal taking into account those future and market developments that are certain, namely regarding the inclusion of Energinet and both Danish bidding zones in the Nordic SOR. Nevertheless, ACER stresses that certain future developments that are not yet well defined or cannot be anticipated at the time of this Decision have not been accounted for; these will need to be addressed at a later stage by means of amendments to the definition of SORs once these future developments materialise, become certain or foreseeable, depending on an assessment made on a 'case-by-case' basis. ENTSO-E agreed with the changes made in this regard.
- (174) ACER made changes to Article 3 to clarify that relevant TSOs shall be consulted when coordinated actions will be developed in accordance with Article 42 of the Electricity Regulation. ENTSO-E agreed with these changes.
- (175) ACER introduced a new paragraph (4) in Article 3 of the Proposal to address potential changes to the HANSA CCR and CORE CCR. ENTSO-E agreed with this change.
- (176) ACER amended Article 4 in order to specify how the coordination between RCCs is to take place in regard to the bidding zone border adjacent to Baltic SOR and CE SOR. ENTSO-E agreed with the changes made in this regard.
- (177) ACER clarified the outage coordination for the HANSA CCR by adding a reference in Article 4(3) of the Proposal to the HANSA Regional Outage Coordination in accordance with Article 80 of the SO Regulation. ENTSO-E agreed with the changes made in this regard. Also, ACER added to Article 4 references to the common methodology for coordinated redispatching and countertrading and common methodology for redispatching and countertrading cost sharing, pursuant to

Articles 35 and 74 of the CACM Regulation which were missing. ENTSO-E agreed with the changes made in this regard.

## 7. CONCLUSION

(178) For all the above reasons, ACER considers the Proposal in line with the requirements of the Electricity Regulation, provided that the amendments described in this Decision are integrated in the Proposal, as presented in Annex I.

(179) Therefore ACER approves the Proposal subject to the necessary amendments and editorial changes. 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 definition of the system operation regions according to Article 36 of Regulation (EU) 2019/943 is adopted as set out in Annex I to this Decision.

### *Article 2*

ACER's Decision No 10/2020 of 6 April 2020 on the definition of system operation regions is repealed.

### *Article 3*

This Decision is addressed to ENTSO-E.

Done at Ljubljana, on 7 April 2022.

**- SIGNED -**

*For the Agency  
The Director*

C. ZINGLERSEN

Annexes:

Annex I – Definition of system operation regions in accordance with Article 36 of Regulation (EU) 2019/943 on the geographical scope of regional coordination centres

Annex Ia (for information only) – Track change version of Annex I compared to the Proposal

Annex II (for information only) – Evaluation of responses to the public consultation on the amendments of the proposal for system operation regions

Annex III (for information only) – List of third countries mentioned in the informative annexes as received from ENTSO-E

Annex IV – Methodological description of the nodal PTDF-based modelling analysis conducted by ACER

Annex V - Methodological description of the CSAM-based modelling analysis conducted by ACER

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

*In accordance with Article 29 of Regulation (EU) 2019/942, the addressee 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.*