CSA Methodology \_ Amendments Article 21 and 27

For public consultation

**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

**Article 21**

**Remedial actions inclusion in individual grid models**

1. The status or set point of any network element modelled in the Individual Grid Models referred to in Article 33(1)(a) shall be defined to reflect the best forecast operational situation, in accordance with the provisions of Article 12 of CGM Methodology.

2. For topological configuration, no distinction is made between remedial actions and forecasts within the initial day-ahead IGMs.

3. Monitoring of topology included in the IGMs shall be performed by RSCs as a solution for improvement of forecasts and to prevent unfair behaviour of TSOs that could impact the Cost Sharing.

**Article 27**

**Overlapping zones, XNEs and XRAs**

1. Where a network element has been defined as XNE in a Bidding Zone belonging to two or more different CCRs and where the physical flows on this XNE are significantly impacted by activation of XRA in two or more CCRs as referred in paragraph 4, this XNE shall be defined as overlapping XNE. Such XNEs shall be grouped into overlapping zones and the concerned CCRs shall be considered as impacting CCRs for these overlapping zones.

2. The operational security violations on the overlapping XNEs shall be addressed at a regional level first, in a singleCCR, together with other XNEs of this CCR. This unique CCR shall be appointed by the overlapping XNE connecting TSO(s). In case an Overlapping XNE is a tie-line, this overlapping XNE shall be appointed to the CCR the border it belongs to. Subsequently, in day-ahead timeframe the residual operational security violations, resulting after each coordinated regional operational security assessment is finalised, shall be addressed with a common cross-regional coordination process involving TSOs and RSCs of all impacting CCRs.

3. For intraday timeframe, default approach is to run a cross-regional coordination after any intraday coordinated regional operational security assessment. In case within a CCR that a coordinated regional operational security assessment is not followed by a cross-regional coordination process due to time constraints or according to an agreement between involved CCRs, then a conservative approach shall be implemented for intraday coordinated regional operational security assessment. The participation within the cross-regional run after intraday shall be communicated at least on a yearly basis. This conservative intraday coordinated regional operational security assessment shall not increase the loading of overlapping XNEs more than a maximum percentage of the remaining available margin obtained in the CGM, which includes all the agreed XRAs from the previous cross-regional coordination process and regional coordination processes from all CCRs. It will ensure that neighbouring CCRs do not create residual overloads within intraday time frame in case no cross-regional coordination can be performed. This maximum percentage of the remaining available margin is described in Annex II.

4. Overlapping XNEs shall be identified through a quantitative approach by RSCs in cooperation with TSOs, according to the following process:

1. Individual remedial action influence factor shall be computed for each XRA appointed to a specific CCR against all the XNEs with contingencies which are appointed to a different CCR according to paragraph 2;
2. XRAs made up of multiple devices operated simultaneously in a common way (e.g. parallel PSTs operated with same tap position) shall be considered as an individual XRA and are therefore associated to an individual remedial action influence factor. Such XRAs constituting of multiple devices shall be defined by TSOs;
3. All XRAs which have an individual remedial action influence factor below 1% shall be discarded. The remaining XRAs shall be grouped per CCR in accordance to Article 27 paragraph (9);
4. The maximum potential XRAs impact of a given CCR A on XNEs with contingencies which are appointed to a different CCR B according to paragraph (c) is computed as the sum of the absolute values of the remedial action influence factors of the group of XRAs of CCR A;
5. If the maximum potential XRAs impact of a given CCR A on at least one XNE with contingencies appointed to a different CCR B is higher than or equal to 5%, this XNE is labelled as Overlapping XNE and CCR B is labelled as impacted by CCR A.

5. Overlapping XNEs are assessed on an yearly basis using the CGMs built for the year ahead scenarios established according to article 65 of SO Regulation and on TSO request in case of significant changes occurred in the grid (e.g. commissioning/decommissioning of relevant network elements, forced outages, etc.), using updated year-ahead common grid models in accordance with SO Regulation Article 68. Requesting TSO shall provide a sound justification for such a reassessment. If an XNE is identified as overlapping XNE during the assessment of at least one of the models, this XNE becomes an overlapping XNE as long as there is no new yearly assessment and it participates in further steps of the cross-regional coordination process.

6. When residual violations are identified during the common cross-regional coordination process:

1. If the violations are located on Overlapping XNEs as referred to in paragraph (4)(e), the effective XRAs (i.e. Overlapping XRAs) of the impacting CCRs should be used to solve such violations;
2. If the violations are on XNEs which are not Overlapping XNEs as referred to in paragraph (4)(e), the XRAs offered to the CCR to which the XNE is assigned according to paragraph 2 should be used.

7. To ensure a consistent interaction between coordinated regional operational security assessment and coordinated cross-regional operational security assessments, residual violations shall be identified with application of the contingency list from each CCR and the application of all XRAs from each CCR agreed within each coordinated regional operational security assessment. All the XRAs made available during each coordinated regional operational security assessment can be re-evaluated during this step.

8. RSCs of the concerned CCRs shall identify and propose solutions to manage residual violations with the available input data and supporting tools, and with respect to the time constraints of day-ahead and intraday processes. The identification of economically efficient remedial actions to address residual operational security violations at cross-regional level shall be done with the aim to limit deviation with agreed XRAs within each coordinated regional operational security assessment while:

* Solving the residual overloads
* Not generating new overloads on XNEs
* Minimizing the costs of remedial actions
* Respecting the technical, operational, procedural and legal constraints defined by each TSO within the coordinated regional operational security assessment.

9. The XRA connecting TSO(s) shall decide on a single impacting CCR to which it shall provide such remedial action. This decision shall take account of the assumptions on remedial actions considered in capacity calculation methodologies established pursuant to Articles 20 and 21 of the CACM Regulation.

10. In the implementation of Articles 78, 80 and 81 of the SO Regulation, RSCs and TSOs shall take into account the agreements reached in accordance with paragraphs 1 to 8.

Annex II

In accordance with Article 27, the maximum percentage of the remaining available margin is x% for the conservative approach within Intraday timeframe.