ACER
Agency for the Cooperation of Energy Regulators

ACER Decision on CSAM: Annex II

Evaluation of responses to the public consultation on the amendments of the proposal for a methodology for coordinating operational security analysis

1 Introduction

On 14 September 2018, all transmission system operators ('TSOs') submitted the proposal for the *'methodology for coordinating operational security analysis in accordance with Article 75 of Commission Regulation (EU) 2017/1485 of 2 August 2017' (hereafter referred to as the 'Proposal').* The last regulatory authority received the Proposal on 1 October 2018.

All regulatory authorities did reach a unanimous agreement to request the Agency to adopt a decision on the Proposal pursuant to Article 75 of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (the 'SO Regulation'). In accordance with Article 6(8) of the SO Regulation, all regulatory authorities referred the Proposal to the Agency for a decision. In order to take an informed decision, the Agency launched a public consultation on 25 January 2019 inviting all interested parties to express their views on potential amendments of the Proposal. The closing date for comments was 18 February 2019.

More specifically, the public consultation invited stakeholders to comment on the following aspects of the methodology for coordinating operational security analysis ('CSAM'):

(i) Common probabilistic risk assessment;
(ii) Infrastructure for data on common operational probabilistic coordinated security assessment and risk assessment;
(iii) Local scenarios;
(iv) Involvement of RSCs in cross regional impact of local scenarios;
(v) Best forecast approach for day-ahead and intraday uncertainty handling
(vi) Allocation of remedial actions between regions;
(vii) Influence thresholds;
(viii) The implementation timeline, reporting periods and common hours;
(ix) Other aspects of concern.

2 Responses

By the end of the consultation period, the Agency received responses from eight[1] respondents.

This evaluation paper summarises all received comments and responses to them. The table below is organised according to the consultation questions and provides the respective views from the respondents, as well as a response from the Agency clarifying the extent to which their comments were taken into account.

[1] One respondent asked to be treated confidentially and is therefore not listed here nor are the answers provided to the consultation.

Respondents' views	ACER views
Question 1: Please comment on the suggested approach for the development of the methodology on common probabilistic risk assessment. *(Initial views by the Agency: Acknowledging that a strict fulfilment of Article 75(1)(b) of the SO Regulation, concerning the common operational probabilistic coordinated security assessment and risk management is not immediately achievable, the Agency finds the TSOs proposal lacking ambition in the fulfilment of Article 75(1)(b). The Agency proposes to set a deadline, 31 December 2027, for all TSOs and RSCs, with the support of ENTSO-E, to develop and submit a proposal. This proposal should be an amendment to the CSAM including a methodology on the common operational probabilistic coordinated security assessment and risk management taking full account of the requirements of Article 75(1)(b) and Article 75(5) of SO Regulation.* *In addition, Article 43(5) of the CSAM, as TSOs proposed, envisages a mere setting up of the operational processes required to collect the necessary data. However, the Agency finds this requirement lacking precision and suggests that all TSOs and RSCs, with the support of ENTSO-E, set up the infrastructure required to both collect and process the data referred to in paragraph 3 of Article 44 of the CSAM, as proposed by the Agency. This should happen by 21 months after approval of the methodology on the common operational probabilistic coordinated security assessment and risk management.)*	
One respondent (ENTSO-E) provided an answer to this question.	

Respondents' views	ACER views
ENTSO-E: As already mentioned in the supporting document provided by all TSOs with the proposal of CSAM, TSOs recognize that, in the recent years, progresses towards full top-down probabilistic and/or risk based processes for common security assessment in operational planning and in real-time activities (as referred to in article 75 of the SO GL) have been achieved in different national or European R&D initiatives in which TSOs have been deeply involved (e.g.: iTesla, Garpur, Umbrella…) and especially for what concern the conceptual, algorithms and tooling aspects. Nevertheless, these initiatives have also reported that there are still important topics and questions that require in depth additional R&D and/or demonstration activities before becoming mature enough to be translated into pan-European operational requirements and processes. Among these topics we may highlight *(i) the principles identifying the collection of data and the related methodology to provide correct evaluation of the density function of the possible grid situations and of the probability of occurrence of contingencies, especially the exceptional ones;* *(ii) the effective availability of sufficient historical data to estimate these probabilities for each situation and each contingency* *(iii) the impact assessment on the cost/benefit and on the TSO management endorsement of such significant changes in the way to assess the security of the system, taking into account differences between TSOs/countries in historical grid design choices (i.e. tower design vs wind withstanding capability, different design of substation,) or in risk management.*	The Agency disagrees, and maintains its original views from the public consultation. The latter is aligned with the views of the regulatory authorities expressed in their referral letter explaining that because of an unsatisfactory level of detail, the CSAM proposal is not compliant with the requirements of the SO Regulation. In order to reflect the current situation in the development for probabilistic coordinated security and risk assessment, the Agency introduced changes to former Article 43 of the Proposal to accommodate a stepwise development of operational probabilistic coordinated security assessment and risk management. As a first step, the data that needs to be collected in order to develop the operational probabilistic coordinated security assessment and risk management will be defined. In turn, all TSOs and RSCs with the support of ENTSO-E shall setup the operational processes and infrastructure required to collect and process these data. By 31 December 2027, all TSOs are expected to jointly develop the methodology on common probabilistic risk assessment taking full account of the requirements of Article 75(1)(b) and Article 75(5) of the SO Regulation, and propose it as an amendment of the CSAM in accordance with Article 7(4) of the SO Regulation. The changes to former Article 44 of the Proposal also envisage TSOs' biennial reporting on achievements, potential

Respondents' views	ACER views
By definition, topics or questions which are still considered as R&D cannot be associated to strict deadline in terms of deliverables, especially when it concerns deliverables related to operational activities, from D-1 to close to real time: TSOs cannot take any risk to operate the whole interconnected European system using the development and implementation for a fixed deadline of methodologies and processes based on non-mature concepts. In any case, when all the methodologies would have been defined, it would remain a fundamental decision for the executive management of each TSO to operate their system without always having the capability to face the loss of a single element, notably considering their responsibility and image impact towards public and national authorities in case of the occurrence of such an incident with large consequences. *Considering the above, and without reconsidering their willingness to progress on these topics, TSOs cannot engage their responsibility in developing and submitting a proposal for the amendment to the CSAM including a methodology on the common operational probabilistic coordinated security assessment and risk management taking full account of the requirements of Article 75(1)(b) and Article 75(5) of SOGL.* *However, TSOs and NRAs might organize recurring workshops following the publication of the reports on probabilistic risk assessment development where they might jointly exchange on the feasibility of a probabilistic risk assessment and discuss the next steps towards developing a methodology on common probabilistic risk assessment.*	hurdles and forward planning concerning the development of this methodology. In addition, the name of the former Article 43 of the Proposal was changed to reflect better the new content.

Respondents' views	ACER views
Question 2: Please comment on the suggested approach for setting up the infrastructure required to collect and process data necessary to inform the development of the common operational probabilistic coordinated security assessment and risk management.	
Five respondents provided an answer to this question.	
Three respondents agree with the Agency (E.DSO, BDEW, Eurelectric): *We agree with the changes proposed by ACER. We welcome the obligation on TSOs to set up the infrastructure to collect and process the data. From our point of view in the former draft version there was a risk for DSOs of being responsible for setting up part of the infrastructure to collect data on behalf of TSOs.* .	The Agency agrees. Changes in the former Article 43 of the Proposal were introduced.
ENTSO-E: *TSOs and RSCs, with the support of ENTSO-E, confirm that this is the idea to develop clear requirements and processes to set up and operate the infrastructure required to both collect and process the data referred to in paragraph 3 of Article 43 of the CSAM. Nevertheless, without knowing those detailed requirements, it is impossible for them to engage their responsibility to have this infrastructure developed and operational within a fixed timing defined so far in advance.*	The Agency agrees. Therefore, the Agency prolonged the proposed timescale to implement a probabilistic approach until 31 December 2027.
EDF: *would like to draw the attention on the fact that the development of the methodology on common probabilistic risk assessment must be consistent with the title 2 of SO GL on data exchange. Title 2 of SO GL covers the exchanges of data between TSO, DSO and SGU. These issues have furthermore been complemented by the KORRR document developed by ENTSO-E. EDF understands now that the CSAM methodology may also give the opportunity to TSO to request new data. Therefore, EDF would like to stress that any new data requirement must be consistent with the already numerous requirements in the Regulation and KORRR, justified and limited to what is necessary, as it may imply costs and incoherency with other data provided.*	The Agency agrees. Therefore, the Agency added a reference to Article 40 of the SO Regulation in the former Article 43(3) of the Proposal to clarify the legal basis for data collection.

Respondents' views	ACER views
Question 3: Please comment on the handling of the local scenarios at a regional level. *(Initial views by the Agency: The CSAM proposal distinguishes between the long-term and short-term management of uncertainties. In the Annex I of the supporting document, TSOs argue that, in the long-term, CSAM basis for the management of uncertainties is the possibility for TSOs to add local scenarios to the common scenarios defined pursuant to Article 65 of the SO Regulation. Whereas, in the short-term, CSAM relies on the proven classical approach based on best forecasts and frequency of forecast updates to be determined by TSOs at a regional level. This method acknowledges the fact that reliability margins are already taken into account during capacity calculations and thus avoids adding additional unjustified margins.* *Long term studies* *Concerning the approach on the handling of uncertainties in the long-term, the Agency agrees that any local TSOs studies need to be carried out based on the commonly agreed scenarios in order to improve robustness of the operational security analyses against uncertainties.* *However, it is important how individual TSOs escalate the issues identified based on local scenarios to a wider region. The Agency believes that the local scenarios, as prepared by individual TSOs, need to be thoroughly verified, and in turn managed in a coordinated way if the situation so requires, in order to optimise the use of remedial actions, by TSOs and RSC(s) at a regional level. Arguably, such an approach is currently not fully demonstrated in Article 22 of CSAM proposal.)*	
Four respondents provided an answer to this question.	

Respondents' views	ACER views
Three respondents approve the Agency's proposal (E.DSO, BDEW, Eurelectric): *We are convinced local scenarios need to be strongly coupled to and should not deviate significantly from commonly agreed scenarios. If there are local scenarios identified by a TSO which deviate significantly, we see a need to adapt commonly agreed scenarios. Having said this we fully agree to ACER's position local scenarios have to be based on the commonly agreed scenarios.*	The Agency agrees. Corresponding changes to the Proposal are listed and explained in section 6.2.6. of the Decision.
ENTSO-E: First, let's remind that Art.22 of CSAM proposal only concerns operational security. The way to handle scenarios for long-term capacity calculations is dealt with according to FCA guidelines and the corresponding (all NRA- approved) CGM methodology. *The objective in "long-term" operational planning, i.e. from yearly to week-ahead timeframes, is to assess whether the system will be able to be securely operated, and the main corresponding activity is to plan the outages. SOGL provides a complete development on the regional outage coordination process for "relevant assets" outage planning from Art 82 to 103. In this part, TSOs are required to coordinate between them and with other parties to determine the outage plans. In SOGL, the evaluation of the compatibility of the outages with security is left to each TSO in terms of scenarios to be taken into account. This is consistent with its full responsibility as regards the security of the system.* *The detection of outage planning incompatibilities (and the definition of proposals to avoid them), shall be supported by RSCs to which TSOs have delegated this task, according to Art 82. Art 82(3)(c) clearly stipulates that each TSO shall provide the RSCs with the scenarios the TSO believes necessary to take into account for the RSC activity.* *It shall be also outlined that, in the scope of operational planning "long-term" activities, TSOs are aiming at detecting risk of unsecure situations and to avoid their occurrence. The main tool for that is the planning of outages, where the resolution of incompatibilities is based on changing the planed period of some outages (with relevant application of the contractual or legal national conditions) or on some particular non-costly remedial actions such as a specific topology. In addition, TSOs can study the effect*	The Agency partly agrees and introduced changes to Article 22 of the Proposal to reflect on stakeholders' responses along the Agency's views above. In addition, the Agency tackled, in this article, the impact of additional scenarios on TSOs' individual grid models and the link to reliability margins from the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (hereafter 'CACM Regulation') Regulation.

Respondents' views	ACER views
of potential additional remedial actions where needed. The need to agree to prepare and activate such remedial actions would be confirmed in a much shorter timing, in general day-ahead, where all the agreed rules for coordination and relevant cost-sharing applies. *TSOs believe that:* • *the evaluation of system security in long-term timeframes require several scenarios of stress to be analyzed, because there is no good forecast at this long-term stage (for example, neither in terms of weather-dependent forecasts, market positions…); this is recognized in ACER comment above.* • *Basic average scenarios are commonly established by all TSOs according to SOGL Art 65, resulting in the establishment of common grid models* • *Each TSO is responsible to define the relevant local scenarios which are needed to simulate a stressed system, according to its specific deep knowledge of its control area sensitivity* • *Each TSO shall require the RSC to study its local scenarios on top of the studies done on the common grid models* • *Where an RSC would detect an incompatibility issue with a local scenario, it shall inform all the TSOs of the region about an incompatibility and proposals to remove it; as a result, the analysis of this incompatibility and the best ways to remove it will be known and agreed in a coordinated way between the TSOs of the region* *The proposal as developed in the CSAM draft delivered by TSOs to NRAs on 14 September of 2018 is consistent with this analysis and with the roles and responsibilities foreseen and defined in the SOGL.*	
Question 4: What is in your view the appropriate involvement of the RSC(s) in assessing and handling the cross-CCR impact of the local scenarios?	

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(Initial views by the Agency: The CSAM proposal distinguishes between the long-term and short-term management of uncertainties. In the Annex I of the supporting document, TSOs argue that, in the long-term, CSAM basis for the management of uncertainties is the possibility for TSOs to add local scenarios to the common scenarios defined pursuant to Article 65 of the SO Regulation. Whereas, in the short-term, CSAM relies on the proven classical approach based on best forecasts and frequency of forecast updates to be determined by TSOs at a regional level. This method acknowledges the fact that reliability margins are already taken into account during capacity calculations and thus avoids adding additional unjustified margins. *Long term studies* *Concerning the approach on the handling of uncertainties in the long-term, the Agency agrees that any local TSOs studies need to be carried out based on the commonly agreed scenarios in order to improve robustness of the operational security analyses against uncertainties.* *However, it is important how individual TSOs escalate the issues identified based on local scenarios to a wider region. The Agency believes that the local scenarios, as prepared by individual TSOs, need to be thoroughly verified, and in turn managed in a coordinated way if the situation so requires, in order to optimise the use of remedial actions, by TSOs and RSC(s) at a regional level. Arguably, such an approach is currently not fully demonstrated in Article 22 of CSAM proposal.)*	
Five respondents provided an answer to this question.	

Respondents' views	ACER views
Four respondents support the Agency approach overall. *E.DSO, BDEW, Eurelectric: We agree with the specifications required by ACER. We recommend TSOs to coordinate with the respective RSC as soon as local studies reveal issues with regional impact. Such studies should be verified by the respective TSO and the RSC and, if verified, the appropriate remedial action(s) should be recommended by the RSC.* *EDF agrees the local scenarios could be part of the process of long term studies. National TSOs' missions enable them to anticipate trend in local demand/generation/storage evolutions that can impact future global scenarios. Therefore, local scenarios after cross-verification by RSC could be the basis for a change in the global scenarios defined in CGM.*	Answers to the Public Consultation overall confirm the approach proposed by the Agency. The Agency introduced changes to Article 22 of the Proposal to reflect on stakeholders' responses. Especially, the involvement of RSCs in the assessment of regional and cross-regional effect in additional scenarios.
ENTSO-E: As explained above, in the long-term activities for operational planning, the focus is on outage planning. Outage planning incompatibilities may potentially appear across Outage Coordination Regions (OCRs, at least equal to CCRs). It is the view of TSOs that the regional processes shall allow to detect and solve any outage incompatibility, including implying TSOs of different OCRs. *For this reason, the Article 35 of the CSAM proposal requires RSCs to coordinate with other RSCs where needed to elaborate cross-RSC proposals to TSOs to remove any incompatibility. This is consistent with SOGL Art 83(3) which stipulates that "If outage planning incompatibilities arise between different outage coordination regions, all TSOs and regional security coordinators of those regions shall coordinate to resolve those outage planning incompatibilities".*	The Agency disagrees, and added references to include the RSC(s) in the information exchange, definition and study of the additional common grid models in Article 22 of the CSAM, as well as, in the assessment of cross-regional impact in studying additional common grid models and coordination with other RSCs.
Question 5: Please comment on the best forecast approach as proposed by TSOs in the Day-ahead and Intraday uncertainty handling (Article 23(1) of the CSAM).	
Five respondents provided an answer to this question.	

Respondents' views	ACER views
Three respondents share the Agency's view (E.DSO, BDEW, Eurelectric): *We strongly support that there is a clear definition of the level of uncertainties and its maximum severity. The points raised in the consultation are in line with of our criticism that the influence computation method does not fully clarify nor describe the criteria, which is used to select the scenarios for determining the observability area and how to deal with the probability of occurrence.* *We also believe that there is a need for a harmonised maximum level of uncertainties agreed at European level in order to facilitate an optimisation of uncertainty management.*	Although the majority of stakeholders support a need for a clear definition of the level of uncertainties and its maximum severity, the Agency did not introduce such changes to Article 23(1) of the Proposal. This is because after reviewing TSOs' explanations received during this public consultation, the Agency believes, with the current knowledge, that the provisions of Article 23, Article 24, **Error! Reference source not found.**, **Error! Reference source not found.** and Article 39 of the Proposal constitute the harmonised maximum level of uncertainties agreed at European level. However, the Agency sees room for future improvement when information and experiences collected through the implementation monitoring show inefficiencies with the current approach. At the current stage, it is not possible to form an educated opinion on how uncertainties are handled efficiently because the approach is not yet implemented, as proposed by TSOs.
Two respondents agree with original TSOs' proposal. *EDF has no concern regarding the best forecast approach proposed by TSOs in Article 23(1) of the CSAM.*	See the answer above.

Respondents' views	ACER views
ENTSO-E: For the short-term horizons, the proposal of the TSOs for managing uncertainties is based on the well-established and proven robust approach of "best-estimates". This takes into account that: • *the situation can be quite well forecasted in the day-ahead and moreover intraday timeframes: market positions, outages, preferred topologies are declared/defined; RES and load forecasts are available;* • *margins have already been taken into account in the CC process* • *the experience shows that the current practice, based on best-forecast and sufficient updates of the forecasts, and taking into account that remedial actions are activated at latest respecting the needed delay of activation, provide a well-balanced approach in terms of security (avoiding to face a non-forecasted situation for which no remedial action would be available) and costs (avoiding to activate remedial actions which would appear unnecessary)* • *for a given level of uncertainties, their impact is not the same for different system situations, depending on the variability of estimated flows with injections and on the proximity of the flows to their limits.* *Moreover, TSOs and RSCs do not have possibility to study a lot of variants in a very constrained operational timing, and, would it be possible, the definition of the criteria to establish a consistent decision making rules, in this kind of probabilistic approaches, remains a controversy topic (R&D issue).*	

Respondents' views	ACER views
A "result-oriented" approach, based on a maximum acceptable level of uncertainty, would be very difficult to specify and to apply, because, as regards e.g. uncertainties on RES generation, the forecast accuracy is strongly affected by the local weather characteristics affecting these variables; for example, it is not reasonable to request the same level of accuracy for PV forecast in GB and in south of Spain. Facing this fact, the CSA proposal aims at addressing it by requesting differentiating levels of frequency updates. This is to be analysed together with the obligation made to each TSO in SOGL Article 70(5) to monitor the impacts of its forecast quality on the security analysis reliability. *Finally, if any (harmonized) additional way was defined to take into account uncertainties on forecasts (and therefore uncertainties on the results of the security analyses), above the average "best-forecast" estimate, it would imply additional remedial actions to be activated, with additional costs to be borne by TSOs, i.e. by network users through tariffs.* *TSOs, in their CSAM proposal, have considered this option was not necessary in the next years, taking into account that at least 3 updates of the IGMs/CGM will be performed in intraday (according to CGM methodology developed according to SOGL Art 67) and that TSOs of each CCR can already agree to increase this frequency. Nevertheless, TSOs also acknowledge that the situation could degrade in the future, and this is the reason why Article 39 of CSAM proposal require TSOs to review every 3 years the frequency of IGM/CGM intraday updates.*	
Question 6: Please comment on the issue of allocation of remedial actions between CCRs by TSOs and potential solutions. *(Initial views by the Agency: Currently, some CCRs in Europe are covered by two RSCs. For example, TSCNet and Coreso simultaneously cover the Italy North and Core regions. According to Article 30(3) of CSAM, in providing its RSC with necessary information on the possible remedial actions, each TSO shall decide on whether a remedial action is offered simultaneously to different CCRs or is offered only to one CCR.* *The Agency understands that a remedial action might have a beneficial effect in one CCR and a detrimental one in another. Notwithstanding the economic effects, this impact might even be big enough to jeopardise the system security. However, there is no guidance in place that would help TSOs to avoid the arbitrage in allocating remedial actions among CCRs (in case a TSO is associated with more than one CCR).)*	

Respondents' views	ACER views
Five respondents provided an answer to this question.	
Three respondents share the Agency's view (E.DSO, BDEW, Eurelectric): *We share the view that Art. 30(3) CSAM might bear inefficiencies or even risks. We propose to oblige TSOs to offer an available remedial action to all RSC in case there is more than one. If a remedial action is to be chosen by one RSC, it has to be coordinated not only with the respective TSO(s), but also with the second RSC to avoid detrimental effects on the system.*	The Agency agrees to the necessary cross-regional coordination of RSCs and introduced changes to Article 27 of the Proposal in order to ensure that appropriate rules will be established to: (i) identify overlapping zones between CCRs; (ii) address operational security violations within the overlapping zones with a common procedure involving RSCs; (iii) share responsibilities between CCRs in terms of identification of remedial actions; (iv) share costs associated with activated remedial actions.
EDF acknowledges the challenge with forecasting transit flows from other CCRs, or managing countertrading on borders in other CCRs. *TSOs should offer all available remedial actions simultaneously to different CCRs. Allocation of remedial actions between CCRs must be the best economic-oriented solution in order to achieve the highest global social welfare as long as network security is ensured. When a TSO is associated with more than one CCR, the use of remedial actions must be shared and coordinated with all the CCRs involved in the process by calculating the best solution from an economic point of view.* *Transparency to all stakeholders and communication after the use of remedial actions are key to improve confidence in the use of remedial actions. An annual feedback of such an allocation of remedial actions between CCRs could help addressing new challenges in the future.*	See the answer above. The Agency agrees that the transparency is fundamental and believes that the existing provision of Article 17(2)(b) of the SO Regulation, concerning the reporting on statistics of constraints, including their duration, location and number of occurrences together with the associated remedial actions activated and their costs in case they have been incurred, , meet the transparency obligations at this point.
ENTSO-E: The concepts for regional coordination which are formalized in SOGL and CSAM are based on:	See the answers above.

Respondents' views	ACER views
• *Determination by TSOs of each CCR of the rules to be applied within one CCR (e.g.: which congestions to monitor, which remedial actions to coordinate, which remedial actions to offer, which process between RSCs and TSOs, which function for the search of most economical and effective remedial actions…)* • *Inter-RSC Coordination rules provided by CSAM draft Articles 26 to 36 (e.g.: exchanging results of RSC analyses, evaluation of impacting envisaged remedial actions, search for additional remedial actions if no satisfying solution founded inside a CCR,…)* *TSOs would like to underline that these concepts for regional coordination are largely new, even if inspired from best practices already established by some RSCs and TSOs. It is therefore very difficult today to anticipate in a top-down approach, based on a theoretical analysis on paper and not yet enhanced by actual tests and effective operation, all the possible effects of the adopted rules and their mitigation/enhancement. This is for example the case with the question raised here by ACER. Moreover, the best fitted answer to this question can significantly differ from one couple of CCRs to another one. It's the reason why TSOs do recommend that any addition on these topics in CSAM should be thoroughly and prudently assessed, and be formulated in a sufficiently open approach to be adaptable to the future reality of its application. Also, any additional requirement must remain consistent with SO GL Article 76.* *As regards the question raised here, the following elements have to be taken into account:*	

Respondents' views	ACER views
• *With respect to the impacts on costs borne by a TSO due to the different cost-sharing agreements which will be agreed by CCRs, it seems legitimate that a TSO who owns a given remedial action has the right to select the preferred CCR where the use of this remedial action will reduce its own costs* • *Article 31 of CSAM proposal draft avoids that this TSO right could introduce too extensive limitations: when a supportive RSC tries to identify possible additional remedial actions (located in one CCR) to solve a congestion that a requesting RSC cannot solve by using the available remedial actions at its disposal (in another CCR), the supportive RSC shall not take into account such limitations set by one TSO; obviously, according to SOGL Art 78, all the affected TSOs in both CCRs, including the owner of the remedial action, shall agree to the proposal established by the RSCs.* • *Making available a given remedial action to 2 CCRs in parallel increase the complexity of the coordination process to ensure that its usage is efficient and secure in both regions* • *A too "simple" approach based e.g. on compared potential efficiencies of a remedial action on different congestions located in different CCRs to make available this remedial action to a CCR can be detrimental: in some cases, it is preferable to use a remedial action, even with a relatively low efficiency, to decrease a congestion, thus allowing that the rest of very costly remedial actions needed for solving this congestion will be decreased in volume, rather than using it to solve "efficiently" another congestion located in another CCR, provided there are other sufficiently efficient and non-costly or relatively low-cost remedial actions available in this CCR to solve this latter congestion.* • *More generally, there is no evidence that there would exist a stable rule for allocating at best a given remedial action to a given CCR.*	

Respondents' views	ACER views
As a result, TSOs believe the current CSAM proposal includes sufficient requirements on this topic. But TSOs and RSCs acknowledge they will have to look for providing adequate answers, on a case-by-case approach if necessary, to these questions when implementing the Art 76 proposals per CCR and the inter-RSC coordination rules.	
Question 7: Please comment on the need to reduce the ranges for the power flow identification influence thresholds as in Annex 1 of the CSAM proposal. *(Initial views by the Agency: Article 3 of the proposal on CSAM describes the influence factor computation method while referencing to Annex 1 to the CSAM where detail to the computational method is provided. This computation method is used both for determining the elements to be included in the observability area of a TSO, and for determining those to be included in the contingency list. However, these vary in the ranges of thresholds to be applied in accordance with Articles 5.5 and 6.2 of CSAM.* *The influence factor computation method is clearly described and well understood. However, in the absence of a clear impact of the selected power flow identification influence threshold on the size of the observability area and on the external contingency lists, the Agency is not convinced that such a large range for the thresholds on power flow influence factors as proposed by TSOs in Annex 1 is needed. The Agency understands that there is a risk of discrimination concerning the effect on system users in different control areas should very different thresholds be applied by TSOs in the identification of the observability area and of external contingencies. The Agency is minded to narrow down the proposed ranges for the power flow identification influence thresholds in Annex 1.)*	
Five respondents provided an answer to this question.	
Four respondents share the Agency's initial view. *E.DSO, BDEW, Eurelectric: We clearly see the need to reduce the proposed threshold. We propose to choose a small range at the upper end of the bandwidth as currently proposed by TSOs. We are convinced that the chosen scenarios are already an estimation following a very conservative approach. Using lower thresholds in combination with strongly conservative scenarios would lead to unrealistically large observability areas and thus an extremely high number of relevant assets.* *EDF agrees on the need to reduce the ranges for the thresholds used in Annex 1 of the CSAM proposal. This reduction would help limiting the risk of discrimination.*	The Agency partly agrees. The Agency was looking into the possibility to reduce the ranges for thresholds. However, in the absence of factual consequences of such a reduction and after evaluating stakeholders' answers and explanations obtained during the consultation with all regulatory authorities and TSOs, the Agency could not find a better compromise then what TSOs are proposing at this point. Therefore, the Agency did not make any changes in the Annex I of the CSAM to reduce the ranges for the power flow identification influence

Respondents' views	ACER views
The selection of a threshold must primarily be based on the TSO's experience. The use of these methodologies must not lead to dramatic changes in current practices and improvements should be introduced gradually as the scenarios are modified. So the first step is to properly set the ranges in order to reflect how the coordination among TSOs occurs today. *EDF wishes also the ranges used in Annex 1 of the RAOCM to be reduced in the same way. RAOCM will define the relevant assets which need a coordination more intense between TSO. It would be more appropriate to have a common criteria or at least a reduced range to select relevant assets. Otherwise a discrimination among producers will occur which could impact the competition between generators. In EDF's view, in order to initialize in a proper manner the methodology, TSOs should select threshold for the RAOCM to pick out only the production units whose activities need coordination among TSOs. EDF understands that some assets need coordination even though incompatibilities are rare. It would be inefficient if production units that have never needed coordination among TSOs become relevant assets. EDF wonders whether the selection of a threshold value by each TSO would lead to unequal treatment for the same situation in different countries. In any case, EDF considers it is essential that TSOs justify their choice.* *For the choice of a relevant power flow influence threshold, ENTSOE explains in its supporting document that it shall be "low enough to minimize the risk that outages of not relevant grid could treat the security of neighbouring control areas; and high enough to avoid too long relevant asset lists that are not compatible with time requirements of the outage coordination process". The choice of a relevant threshold is also used in the formula proposed to estimate the power flow influence. This formula consists in calculating the asset maximum influence among all the possible combinations of scenarios and disconnected network elements. In this case, a high threshold range should be associated in order to avoid too long relevant asset lists. In case of a lower threshold range, a quantile method would to be more appropriate.*	thresholds. Nevertheless, the Agency added an obligation for ENTSO-E to assess any interoperability issues stemming from different threshold values for the identification of external contingencies selected by TSOs, and report on its findings and proposals within the scope of its reporting obligations pursuant to Article 17 of the SO Regulation.

Respondents' views	ACER views
One respondent disagrees with the Agency. *ENTSO-E: TSOs want to underline that the ranges provided in the Annex 1 of the CSAm proposal were evaluated by experts of several TSOs to determine which thresholds lead to technically sensible results. These evaluations included comparisons with lists resulting from proven practices previously used in order to take into account the corresponding know-how. Based on the feedback of the TSOs experts the different ranges of thresholds were narrowed down as much as possible.* *As stated in the Supporting Document, defining a common threshold for each list at the level of Synchronous Area is not achievable and not advisable:* • *Some TSOs need a larger view on the rest of the interconnected system due to the structure of their grid and the conditions under which they operate their grid (typically loading and margins, cross-border market activity and loop flows, actions of other TSOs, etc.).* • *For other TSOs this necessity is lower and it is not efficient to impose them to invest more resources on it. It would be detrimental to the application of SO GL Article 4(2)(c) to impose the same threshold to these TSOs than the one needed for the previous ones.* *Moreover, lowering the higher value of the range will mean larger Observability Areas for some TSOs that do not really need it; conversely, increasing the lower value of the range could impact security assessment of some TSOs which need larger Observability Areas, in real time.* *TSOs would like to remind that the proposed range of thresholds does not have any impact on stakeholders as regards horizontal observability area and associated data exchanges and that for the TSO-DSO observability area a qualitative agreement remains the preferred option.*	See the answer above.

Respondents' views	ACER views
Question 8: Please comment on the TSOs proposal for implementation times of various CSAM provisions, on the reporting periods and on the default common hours set in Article 44(2) of the CSAM. *(Initial views by the Agency: The Agency notes different implementation deadlines for the implementation of different CSAM provisions and of the reporting periods. For example:* *- on the implementation of Article 37, which is first to be applicable 24 months after the approval of the CSAM proposal, and* *- on the implementation of Article 38, which is to be applicable 12 months after the approval of the CSAM proposal.* *The Agency wonders if the TSOs proposals concerning the implementation of different CSAM provisions and of the reporting periods are consistent and ambitious enough.)*	
Four respondents provided an answer to this question.	
E.DSO, BDEW, Eurelectric: *We propose to harmonise the implementation deadline to 12 months. Forecasts of intermittent generation are state of the art and available widely on the market. We do not see the need for TSOs to reserve 24 months to incorporate such technology into their systems.*	The Agency agrees. The implementation for forecasts on load and intermittent generation was harmonised to 12 months in the former Article 45(3) of the Proposal.
ENTSO-E: *TSOs would like to ensure ACER that they have setup the deadlines for implementation as the most realistic and feasible ones. It's always possible to reduce such implementation targets on a paper but the reality will come back: any implementation requires sufficient time to apply the professional processes that are relevant, such as: detailed specification establishment, decision making by the executive management, application of applicable rules regarding competition when external providers are needed, time to develop and test, time to introduce in the business processes and training of concerned operators.*	Apart from changing the implementation time for the forecasts on load and intermittent generation, the Agency did not change the default common hours for Day-Ahead cross-regional process mentioned by TSOs.

Respondents' views	ACER views
On the differentiation of implementation timings for Articles 37 and 38, elements are already available in the line 31 of the response to public consultation comments on CSAM. It is explained by the fact that the requirements set up in Article 38 (Load forecast) is already satisfied for most of the TSOs. On the contrary, a benchmark made by TSOs during the development of CSAM proposal showed that approximately half of the TSOs do not satisfy the requirements setup in Article 37 (RES forecast). And the upgrades on this topic necessarily request a quite long time: either the TSO aims at procuring such a service (or build its own home-made forecasts) and this requires times to define and qualify the solution, including the fact that it may request additional data (measurements) not yet available; or the TSO requests market participants to provide such forecasts and this also needs times to include that in the national market rules and then for market participants to make it available. *As regards the default common hours for Day-Ahead cross-regional process:* • *For T0, the value is based on the current situation where the time necessary to receive from all market participants (and DSOs where applicable) their positions and the corresponding generation or load scheduled programs is quite long and different from one country to another one. This may also include time needed by market participants to program their participation to FCR and FRR reserves, based on the results of the procurement processes. Then each TSO has to run an internal process to establish best forecasts using these market participants data and the own TSO information about the net positions, grid elements; this includes running preliminary security analyses to assess the feasibility of the IGM (a load-flow must be able to run successfully on it).*	

Respondents' views	ACER views
• *For T1 to T5 values, they are provisional, because the corresponding process is not yet in place. Considering this cross-regional process implies successive steps where a lot of coordination RSC/TSOs and RSC/RSC will take place, TSOs rather believe that these timings are challenging rather than comfortable. In any case, it's in the interest of TSOs to make the total time as short as possible because the sooner the results are available, the better it is to prepare the operation and go to intra-day security analyses processes.*	
Question 9: Please provide any further comment on the CSAM or RAOCM. Please make sure to reference any relevant article in case this is needed.	
Eight respondents provided feedback.	

Respondents' views	ACER views
Three respondents provided comments on Article 17(4) of the CSAM (ERU Energy Regulatory Office, EOP Elektrárny Opatovice, a.s., CEZ): *According to Article 78(4) of SOGL each TSO shall decide on the implementation of each remedial action recommended by the RSC. In case of refusal the only condition is to provide an explanation to the RSC.* *„(…) The TSO shall decide whether to implement the recommended remedial action. Where it decides not to implement the recommended remedial action, it shall provide an explanation for this decision to the RSC. Where the TSO decides to implement the recommended remedial action, it shall apply this action for the elements located in its control area provided that it is compatible with real-time conditions."* *On the other hand, Article 17(4) of CSA Methodology introduces additional conditions under which each affected TSO is obliged to implement the recommended remedial action. These additional conditions are not compliant with provisions of Article 78(4) of SOGL.* *In addition, fulfillment of these conditions will not be being performed in real time but on DACF or IDCF Common Grid Model (CGM) instead. System state is determined based on real time grid situation which might differ significantly compared to DACF or IDCF CGM.* *Based on the arguments mentioned above these additional conditions introduced in CSA Methodology shall be removed.*	The Agency agrees. The Agency changed paragraphs (1), (5), (6) and (7) of Article 17 of the Proposal clarifying that such remedial actions shall be implemented by TSOs in accordance with Article 78(4) of the SO Regulation and other relevant Union legislation. In addition, the notions of 'not refuse to' were replaced with the aforementioned references.
EDF: *About CSAM and RAOCM as well, EDF considers that before the operational window, and as long as the potential of remedial actions (costly or not) could be sufficient and economical to restore secure operation, N-1 contingencies could be disregarded. EDF also considers that the proposed methodology for "influence computation" should be less conservative and not systematically take into account N-2 situations (simulation of the loss of both the asset analyzed and the outage of all elements).*	The Agency disagrees. In accordance with Article 35(4) of the SO Regulation, a TSO shall not be required to comply with the (N-1) criterion during switching sequences and time periods required to prepare and activate remedial actions. Nevertheless, in accordance with Article 35(5) of the SO Regulation, unless a Member State determines otherwise, a TSO shall not be required to comply with the (N-1) criterion

Respondents' views	ACER views
EDF recognizes that an IT infrastructure and process must be developed to allow for an efficient coordinated security assessment. In addition to setting a deadline for full implementation of the methodology, EDF believes it could be relevant to promote a stepwise approach, with faster developments for simple yet relatively efficient solutions to be assessed through CSA, such as countertrading for example.	as long as there are only local consequences within the TSO's control area.
Three respondents provided the following response (BDEW, E.DSO, Eurelectric): *We are very pleased that ACER is currently revising the method.* *On one hand from our perspective there are some new improvements and good points related to the Influence computation.* *On the other hand it is unclear what happened with other critical points raised up during the first consultation:* *- The draft mentions "Own Grid Model" several times in Article 3. However, there is no definition available of such a grid model. In the existent European framework, only IGM and CGM are defined and available. We see a backdoor and huge risk of legal uncertainty in introducing new, undefined models in a secondary document within the European legal framework. Therefore we strongly encourage ACER to delete all references to "Own Grid Model" and replace them by making use of well-known models like IGM instead. Otherwise it is not clear to stakeholders what data will be required in the future.* *- Regarding Article 4 and the entitlement of TSOs contained in there to use dynamic studies and request data for them, it is difficult for stakeholders to assess how likely such a situation is. We recommend to foresee a coordination between affected SGUs, DSOs and the respective TSO as soon as dynamic stability assessment becomes likely, that is, steady-state limits and dynamic stability limits converge.*	The Agency agrees and removed the references to "Own Grid Model", as well as, provided a clearer wording to address the issue of complementing individual grid models with network elements connected to DSO/CDSO networks. The Agency partly agrees and introduced references to RSCs in Article 4 of the Proposal. These references are introduced in accordance with Article 75(1)(d) of the SO Regulation and because of the requirement to coordinate on the remedial actions in accordance with Article 21(1) of the SO Regulation. This coordination includes the remedial actions aiming to ensure the dynamic stability referred to in Article 39(1) of the SO Regulation.

Respondents' views	ACER views
- *According the Article 5(4), the TSO has the final say if there is a disagreement about the necessary data for defining the observability area. In such a case, the DSO has to hand over the complete set of detailed data of its whole distribution system to put the TSO in a position to calculate the observability area. That all is unacceptable for DSOs, as it implies huge costs to DSOs without ensuring added value. A coordination is urgently needed. In such a case the role of the NRA as mediator should be possible.* *We would be very happy if these points were also considered.*	The Agency understands stakeholders' concern, but does not think any changes to the CSAM are needed because any such data request by TSOs is subject to Article 4(2) of the SO Regulation, requiring the application of the principles of proportionality, non-discrimination, transparency and principle of optimisation between the highest overall efficiency and lowest total costs for all parties involved. In addition, in case of disputes, Article 6(10) of the SO Regulation applies.
ENTSO-E: *Network Codes and Guidelines, directives / regulations are so-called delegated acts. Essential specifics should be part of a regulation and not be hidden within a methodology deducted from a guideline obligation.* *TSOs suggest to take care of this principle when finalizing CSAM.*	The Agency did not specify anything in the CSAM without a legal basis. Legal provisions stem from the SO Regulation and CACM Regulation, as well as, other methodologies already approved by NRAs or ACER.

3 List of respondents

Organisation	Type
BDEW Federal Association of the German Energy and Water Industries	Association
CEZ	Energy company
EDF SA	Energy company
E.DSO for Smart Grids	Association
EOP Elektrárny Opatovice, a.s.	Energy company
ENTSO-E	Association of Transmission System Operators
ERU Energy Regulatory Office	Energy Regulator for Czech Republic
Eurelectric	Association