

**2<sup>nd</sup> REQUEST FOR AMENDMENT BY THE SEE CCR  
REGULATORY AUTHORITIES**

**OF**

**THE SEE CCR TSOs' PROPOSAL OF THE COMMON  
CAPACITY CALCULATION METHODOLOGY FOR THE DAY-  
AHEAD AND INTRADAY MARKET TIME-FRAME IN  
ACCORDANCE WITH ARTICLE 21 OF COMMISSION  
REGULATION (EU) 2015/1222 OF 24 JULY 2015  
ESTABLISHING A GUIDELINE ON CAPACITY ALLOCATION  
AND CONGESTION MANAGEMENT**

**24 October 2018**

## I. Introduction and legal context

This document elaborates an agreement of the SEE CCR Regulatory Authorities (hereinafter: SEE NRAs), agreed on 24 October 2018 at SEE CCR Energy Regulators' Regional forum, on the SEE CCR TSOs' (hereinafter: SEE TSOs) proposal of common capacity calculation methodology for the day-ahead and intraday market timeframe (hereinafter: SEE CCM/the amended proposal/the methodology), submitted as required by Article 20 (2) and in accordance with Article 21 of Commission Regulation 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management (hereinafter: CACM Regulation).

This agreement of the SEE NRAs shall provide evidence that a decision on the SEE CCM does not, at this stage, need to be adopted by ACER pursuant to Article 9(11) of CACM. It is intended to constitute the basis on which the SEE NRAs will each subsequently request a 2<sup>nd</sup> amendment to the SEE CCM pursuant to Article 9(12) of CACM.

The legal provisions that lie at the basis of the SEE CCM, and this SEE NRAs agreement on the above mentioned methodology, can be found in Articles 3, 8, 9, 14, 20, 21, 22, 23, 24, 25, 26, 29, 30, 46 and 58 of CACM. They were set out in the previous RfA for reference.

## II. The SEE TSOs' proposal

The SEE TSOs (initial) SEE CCM proposal was consulted by the SEE TSOs through ENTSO-E for one month from 13 November 2017 to 14 December 2017, in line with Article 20 and Article 12 of CACM<sup>1</sup>. The SEE TSOs (initial) SEE CCM version was received by the last Regulatory Authority of the SEE Capacity Calculation Region on 19 January 2018. All NRAs of SEE CCR reached a unanimous agreement, at the SEE CCR Energy Regulators' Regional forum organised on 8 June 2018, to request to the SEE CCR TSOs an amendment to the initial proposal on common capacity calculation methodology for the day-ahead and intraday market timeframe for SEE CCR. Pursuant to article 9 (12) of the CACM, all SEE CCR TSOs sent to all NRAs the amended Proposal for the SEE CCM, which was received by the last NRA of the SEE CCR on 27 August 2018.

Article 9(12) of CACM requires SEE NRAs to consult and closely cooperate and coordinate with each other in order to reach an agreement, and make decisions within two months following receipt of submissions of the last Regulatory Authority concerned. A decision is therefore required by each Regulatory Authority by 27 October 2018.

## III. The SEE NRAs' position

All SEE NRAs appreciate all the efforts made by the SEE TSOs to improve the SEE CCM, still the amended proposal for SEE CCM did not take into consideration most of the comments made by SEE CCR NRAs in their Position Document and such the amended proposal for SEE CCM is still not fully compliant with the CACM Regulation. Consequently, all SEE NRAs unanimously agreed, at the SEE CCR Energy Regulators' Regional forum organized on 24 October 2018, to request a 2<sup>nd</sup> amendment to the methodology.

General remarks on the content and list of actions:

- Legal ambiguity in specific provisions and insufficient level of detail in the amended proposal. The methodologies included in the SEE CCM should contain detailed, consistent and fully CACM compliant methodologies with clear, transparent and harmonized definitions, as well as defined and justified thresholds or values. The SEE CCM methodology should be amended to address the issues above. As far the technical contents are concerned, SEE CCM shall deal with all the elements listed in Article 21 of CACM because in some cases details are still missing (e.g. rules for avoiding undue

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<sup>1</sup> The public consultation is available on the ENTSO-e website: [https://consultations.entsoe.eu/markets/see-ccr-tsos-proposal-of-ccm/consult\\_view/](https://consultations.entsoe.eu/markets/see-ccr-tsos-proposal-of-ccm/consult_view/)

discrimination between internal and cross-zonal exchanges), while in other cases more transparency is welcomed.

The methodology shall define detailed requirements and obligations in order to avoid misused or incorrect implementation.

- The CCM shall not affect TSOs' right to delegate their task in accordance with the Article 81 of the CACM Regulation. However, the delegating TSO shall remain responsible for ensuring compliance with the obligations under the CACM Regulation, so the provisions of article 4 (3) shall be rewritten accordingly;
- Current description allows – during the whole process of capacity calculation – individual TSOs to have the option to discretionary use or modify several inputs before or during the calculation process. SEE CCM shall include a clear, transparent and harmonized (ideally automated) set of criteria for processing, with discretionary modifications fully excluded or with thoroughly justified exceptions.
- The SEE CCM shall detail all the steps listed under Article 29(8) of the CACM.
- The rules for avoiding undue discrimination between internal and cross-zonal exchanges, are not clear. The methodology still doesn't tackle the problem of undue discrimination between internal and cross-zonal exchanges.

Rules for avoiding undue discrimination between internal and cross-zonal exchanges to ensure compliance with point 1.7 of Annex I to Regulation (EC) no. 714/2009, as requested in article 21 (1)(b)(ii) of the CACM, are still not covered in the SEE CCM. These rules are further to be applied by the coordinated capacity calculator as provided by article 29(7)(d) of the CACM.

In case of discrimination between internal and cross-border flows, measures on how to resolve this discrimination in the long term shall be provided (eg. launch of the bidding zones review in accordance with article 32 of CACM).

ACER has established two high-level principles regarding the treatment of internal congestion and of loop flows on the interconnectors according to ACER Recommendation No. 02/2016 of 11 November 2016,. The SEE CCM shall also include detailed explanation on the temporary nature of deviations from these principles.

Since the methodology allows for internal critical network elements and loop flows to reduce the available cross-border capacity, the methodology shall also include long-term solutions that will ensure that such discrimination is temporary.

- The SEE CCM still does not include provisions regarding how the coordinated capacity calculator will be appointed (article 27 (2) of the CACM). The SEE NRAs note that capacity calculation is a regional task which according to CACM Regulation should be assigned to the Coordinated Capacity Calculator (hereinafter referred to as “CCC”) in the SEE CCR.

The proposal shall provide sufficient clarity on the roles and responsibilities of the CCC and individual TSOs in the capacity calculation process (eg. Expressions such as “Each SEE TSO shall provide (...)” shall be rewritten so that to be clear to whom the TSOs shall provide this information).

- For the review process, updates and publication of data, significant details are missing (e.g. when the review is taking place; the timeline of the parallel run analysis). Furthermore, article 14 lacks a sufficient implementation plan. There are no concrete milestones or explanation of interdependencies. There are no provisions on the parallel run analysis, this is shortly described only in the explanatory note. This is highly important since the results obtained would help the TSOs to further improve the methodology. The up-coming implementation process, especially the parallel runs, will give the SEE NRAs and market players and TSOs respectively valuable knowledge on how the methodology will actually work in practice and how it might be developed and improved through future amendments pursuant to article 9 (13) of CACM. Therefore, the SEE TSOs shall amend the methodology accordingly, taking into account all the elements mentioned above and shall include detailed provision regarding the review process, updates, publication of data, implementation plan, milestones, explanation on the interdependencies, the parallel run analysis. SEE TSOs shall explain how the tasks listed in Article 8(2)(e) of the CACM Regulation are carried out.

The SEE TSOs shall include a dedicated article regarding the implementation monitoring of the methodology by the NRAs, including reporting to the NRAs and provisions on the confidentiality of

data, in order for NRAs to supervise a non-discriminatory and efficient congestion management in SEE CCR.

## On the CNTC approach

According to Article 20(7) of CACM, in order to apply the CNTC approach, the TSOs shall demonstrate that application of the capacity calculation methodology using the flow-based approach would not yet be more efficient compared to the coordinated net transmission capacity approach. Such demonstration should thus be included in the SEE CCM.

According to article 4 (1) of the Proposal, *“This approach has been selected since a flow-based approach is effective only when is applied to a large number of borders which are in a closed-loop formulation, on contrary the GR-BG-RO connection is like a single path connection, where bidding zones are connected though a single root. In line with the above and based on Article 20(4) of CACM Regulation after at least all South East Europe Energy Community Contracting Parties participate in the single day-ahead coupling the flow-based method shall be proposed”*.

However, all SEE NRAs request a further detailed explanation of this statement in the explanatory note. The way it is now written, it seems that a flow-based approach would never be more efficient, so further details on this issue are necessary.

For the intraday capacity calculation time-frame, reasons for the chosen frequency of two years, at which capacity will be reassessed, shall be given as well as proper justification on the performance of the calculation in the end of D-1 and not earlier.

The deadline for the TSOs to provide the inputs to the capacity calculator and the actions that need to be taken if inputs are missing or are incomplete, shall be provided.

List of action points:

- a) Include in the explanatory note a more detailed reasoning/explanation for justifying the adoption of CNTC approach.
  - a. Article 4 (1) indeed presents a short justification for which the TSOs choose the CNTC approach, but, having into consideration article 20 (4) of CACM *“No later than six months after at least all South East Europe Energy Community Contracting Parties participate in the single day-ahead coupling, the TSOs from at least Croatia, Romania, Bulgaria and Greece shall jointly submit a proposal to introduce a common capacity calculation methodology using the flow-based approach for the day-ahead and intraday market time-frame.”*, the reasoning presented in the methodology seems to point out that a FB approach would never be more effective.
- b) Provide the reasoning for the chosen frequency of two years, at which intraday capacity will be reassessed as well as proper justification on the performance of the calculation in the end of D-1 and not earlier;
- c) Provide the deadline for the TSOs to provide the inputs to the capacity calculator and what actions need to be taken if the inputs are missing or are incomplete;
- d) Include the amount of capacity being made available at the IDCZGOT or at any time during the intraday market timeframe as well as the justification of this availability;
- e) Include clarifications on transparency and communication to stakeholders treatment;
- f) Delete any references to the merging of individual grid models and clarify that the capacity calculation is based on the unique common grid model built in accordance with Articles 17 and 28 of CACM;
- g) Include a rule for splitting the correction of cross-zonal capacity between different bidding zone borders;
- h) The SEE TSOs shall include the capacity calculation process – a logical diagram in a dedicated annex to the SEE CCM, which shall provide: the roles of the entities involved, the input and output data in the capacity calculation process, all the necessary steps starting from the individual grid model and finishing with the information given to the market, and also the one-year observation period for

obtaining the probability distribution, provided in article 6 (9) regarding the fact that all differences for all market time units are statistically assessed and how it interacts with the capacity calculation process;

- i) Article 4 (2) "*The TSOs of the SEE CCR shall provide the coordinated capacity calculator (CCC) **sufficiently in advance** of the day-ahead firmness deadline (...)*" shall be reviewed so that the legal ambiguity is eliminated and to have more transparency in order to avoid wrong implementation.
- j) SEE CCM shall include the following: "Using the latest available information, all TSOs shall regularly and at least once a year review and update:
  - the operational security limits, contingencies and allocation constraints used for capacity calculation;
  - the probability distribution of the deviations between expected power flows at the time of capacity calculation and realised power flows in real time used for calculation of reliability margins;
  - the remedial actions taken into account in capacity calculation;
  - the application of the methodologies for determining generation shift keys, critical network elements and contingencies referred to in Articles 22 to 24 from the CACM Regulation."

## **Interaction with Acer Recommendation No 02/2016 – Rules for avoiding undue discrimination between internal and cross-zonal exchanges**

With Recommendation No 02/2016 issued on 11 November 2016, the Agency, in accordance with point 1.7 of Annex I to Regulation 714/2009, provides some high level principles to be taken into account while developing the capacity calculation methodologies pursuant to Article 20 of CACM. In particular, treatment of internal congestions should not lead in general to any limitations of cross-zonal exchanges; indeed a temporary limitation may be accepted, if needed to grant operational security and is economically more efficient than other possible measures. Nonetheless limitations, if applied, should be discontinued by developing mid and long term measures such reconfiguration of bidding zones or new investments; only if limitations are deemed more efficient than any other available mid and long term measures, the TSOs may continue to use them.

A similar recommendation is also included directly in CACM: in particular Article 21(1), letter b), point ii), foresees the inclusion in the capacity calculation methodology of rules to avoid discrimination between internal and cross-zonal congestions to ensure compliance with point 1.7 of Annex I to Regulation 714/2009.

In SEE CCM rules to avoid discrimination between internal and cross-zonal exchanges are still not explicitly addressed. Clarifications about this issue shall be included by SEE TSOs. The SEE CCM shall include a detailed explanation on the temporary nature of deviations from these principles.

Since the methodology allows for internal critical network elements and loop flows to reduce the available cross-border capacity, the methodology shall also describe mid and long-term solutions that will ensure that such discrimination is temporary.

Moreover, SEE CCM shall include a dedicated article regarding the rules for avoiding undue discrimination between internal and cross-zonal exchanges, a detailed explanation on the temporary nature for deviating from the principles of ACER's Recommendation No 02/2016, mid and long-term solution for ensuring that such deviations are temporary, and a provision for regular analysis performed by the TSOs which shall be reported to NRAs.

## **Coordination with Intraday Cross-Zonal Gate Opening Time (IDCZGOT) Proposal**

CACM defines the IDCZGOT as "*the point in time when cross-zonal capacity between bidding zones is released for a given market time unit and a given bidding zone border*".

According to paragraph 52 of Decision 04/2018 of ACER on IDCZGT, it is stated that:

*"... In this framework, the IDCZGOT can, therefore, only be understood as a general rule for when TSOs have to release the available cross-zonal capacity to the market, whereas the rules on how much cross-zonal*

*capacity TSOs have to offer and at which times during the intraday timeframe fall within the scope of the regional intraday capacity calculation methodology. In that respect, the TSOs' concerns related to the intraday capacity calculation, internal and cross-zonal congestion management and scheduling could, if properly justified, be taken into account by defining, within the intraday capacity calculation methodology, the amount of capacity being made available at different times during the intraday market timeframe."*

Therefore, the amount of capacity being made available at the IDCZGOT or at any time during the intraday market timeframe shall be provided within the intraday capacity calculation methodology as well as the justification of this availability.

## Common grid model

Articles 4(5) and 5(6)) of SEE CCM still contain provisions regarding the merging activity and they may lead to misunderstandings (in particular one could argue that in SEE CCR a different common grid model might be used). To avoid any misinterpretations, SEE TSOs shall delete any references to the merging activity and clarify that capacity calculation is based on the unique common grid model relevant for each timeframe.

## Reliability margin methodology

According to Article 22 of CACM, the proposal for a common capacity calculation methodology shall include a methodology to determine the reliability margin. The methodology to determine the reliability margin consists of three steps. Firstly, the relevant TSOs shall estimate the probability distribution of deviations between the expected power flows at the time of the capacity calculation and realised power flows in real time, i.e. establish a statistical analysis of the differences between predicted and observed power flows. Secondly, the reliability margin shall be calculated by deriving a value from the probability distribution, by defining the acceptable risk level. Thirdly, an operational adjustment is proposed.

SEE TSOs shall provide more details within the explanatory note about the third step foreseen in the proposal, including the criteria considered for adjusting the reliability margin (eg. Clarify why *"a possible third step is to undertake an operational adjustment on the values derived previously, which can applied to adjust the computed RM values to a value within the range between 1% and 20% of the TTC calculated under normal weather conditions"*).

Article 6 (9) a) states that *"All differences for all market time units of a one-year observation period are statistically assessed and a probability distribution is obtained;"* The principles for calculating the probability distribution of deviations between the expected power flows at the time of the time of the capacity calculation and realised power flows in real time are still not described; the SEE CCM only reiterates article 22(2)(a) and (b) provisions. The statistical model for computing the reliability margin is still not clear, namely a probability distribution including input data, process and methodology. Furthermore, the procedure and the common harmonised principles for deriving reliability margin from the probability distribution are still not set out.

List of action points:

- SEE CCM shall include the grid elements for which the reliability margin is determined;
- SEE CCM shall include the frequency for determining the probability distribution of the deviation between the expected and realized (observed) power flows; it shall state if it is based on historical snapshots of the CGM for different market time units or not;
- SEE CCM shall provide if the unintended deviations of physical flows within a market time unit, caused by the adjustment of electricity flows within and between control areas, to maintain a constant frequency (frequency containment reserve) are part of the reliability margin described in the methodology or if they are assessed separately and to provide how it is calculated, for this last case, the final reliability margin value;
- SEE CCM shall include the formulas for defining the unintended deviations, uncertainties, reliability margin;
- SEE TSOs shall review the list of all the uncertainties covered by the reliability margin values and complete the list, if deemed necessary (for example, could the internal trades in each bidding zone or grid model errors, assumptions and simplifications be seen as uncertainties?); also, within the

explanatory note, the TSOs shall provide a clear justification for each and every one of the above elements, explaining why it is considered an uncertainty and why they consider the list to be complete.

- SEE CCM shall define the risk level;
- For the common risk level of 5%, SEE TSOs shall provide further information (criteria within the CCM and a detailed explanation within the explanatory note) regarding what they took into consideration for defining the common risk level (eg. Operational security limits, the power system uncertainties, the available reliability margin etc.);
- SEE CCM shall include provisions regarding storing the differences between the realized and expected flows in a database so that TSOs can make statistical analyses. Provisions for also storing the probability distributions, the reliability margin values etc. for each CNE and cross-zonal interconnection, shall be included.

## **Operational security limits and contingencies selection**

Explicit criteria and thresholds shall be given within the SEE CCM for the selection of critical network elements with a contingency (hereinafter CNECs) in order to achieve a broad level of transparency and economic efficiency. The criteria of critical network elements' addition/removal and the description on how operational security limits and contingencies are selected shall be more precise as well as the list of contingencies shall be more precisely defined. The sensitivity threshold for CNECs selection shall be set with economic efficiency and non-discrimination in mind. The list of contingencies shall be defined more precisely and if this is not possible, then provide a reasoning for it in the explanatory note. The methodology shall include a formula and explicit provisions on defining the sensitive factor.

SEE CCM shall include a specific threshold to identify network elements to be monitored ("based on operational experience" is not enough as an explanation; criteria shall be provided), define the critical network elements addition/removal criteria as well as describe how operational security limits and contingencies are selected.

Since the methodology allows for internal critical network elements and loop flows to reduce the available cross-border capacity, the methodology shall also describe mid and long-term solutions that will ensure that such discrimination is temporary.

## **Generation shift keys methodology**

Article 24 of CACM provides rules for the generation shift keys methodology. Also, article 2 point 12 defines the generation shift key term. If, also, load shift keys are going to be considered in SEE CCM, there shall be a clear definition, criteria and a detailed explanation for justifying the use of LSKs, including other CCR which are applying LSKs and how those TSOs justified using LSKs having into consideration that LSKs are not foreseen in the CACM Regulation. If the TSOs have a clear and sound reasoning for using LSKs, they shall also state whether these will be taken into account temporarily or not, and shall also review the methodology in this regard, in order to be consistent.

Moreover, the methodology for determining GSK shall also include provisions regarding:

- The strategy for selecting GSK for each bidding zone, aiming at an optimal GSK based on certain conditions which will also be defined within the SEE CCM (eg. Non-flexible production units – if they are ignored or not, the TSO shall aim to find a GSK strategy that minimizes the prediction error between the forecasted and observed flows for all production and load units in each bidding zone for a certain time span etc.);
- The GSK strategy for each bidding zone shall be communicated to the market participants;
- The selected GSK strategy shall be provided to the CCC to be used in the CC for each bidding zone and also the market time units for which the GSK strategy shall be valid;
- The TSOs shall make ex-post analysis of GSK strategy regularly and, if necessary to change it.
- Clarify if the SEE TSOs could freely apply differing principles;
- Provide how the monitoring generation and load shift keys methodology will be applied.

## Methodology for remedial actions in capacity calculation

The details about how remedial actions are taken into account in the capacity calculation process and how they will be used in order to maximize cross-zonal capacities (RAO) shall be provided. Also, it shall describe the decision process to use remedial actions.

The TSOs shall provide in the methodology details about the Remedial Action Optimization process and at which point in time it takes place respectively.

Also, since the proposal states that the SEE TSOs shall individually define RAs to be taken into account in the day-ahead and intraday CCM, it shall also describe how the TSOs coordination will take place.

Regarding Article 9(7) *“In accordance with Article 25(6) of the CACM Regulation, the RAs taken into account are the same for day-ahead and intra-day common capacity calculation, depending on their technical availability.”*, the TSOs shall explain what will happen in case they are not technical available; the SEE NRAs consider this to be important having into consideration the provisions of article 25 (6) of the CACM Regulation stating that the same set of RA is available for all capacity calculation time-frames.

The SEE CCM shall specify the determination of the common list of remedial actions for capacity calculation taking into account that remedial actions in a bidding zone with borders in several CCRs can only be assigned to one CCR. The frequency at which the common list of remedial actions are reassessed shall be specified.

## Cross-zonal capacity validation methodology

As provided in Article 26(2) of CACM, the SEE TSOs shall include in the capacity calculation methodology a rule for splitting the correction of cross-zonal capacity between the different bidding zone borders and provide more details in the explanatory note.

## Regarding Data provision

According to Articles 46(1) and 58(1) of CACM the coordinated capacity calculator shall ensure that the NEMOs are provided with proper cross-zonal capacity values. The coordinated capacity calculator shall provide SEE TSOs with the final validated values. There shall be provided a clarification on how the transparency and the communication to stakeholders are treated.

SEE CCM shall contain a list, definitions and formats of the data to be provided to SEE NRAs and to market participants.

## Fallback procedures

The SEE CCM shall also include provisions regarding providing the coordinated values to NEMOs.

## Implementation timeline

There are no concrete milestones or explanation of interdependencies. There are no provisions on the parallel run analysis, this is shortly described only in the explanatory note. This is highly important since the results obtained would help the TSOs to further improve the methodology. The up-coming implementation process, especially the parallel runs, will give the SEE NRAs and market players and TSOs respectively valuable knowledge on how the methodology will actually work in practice and how it might be developed and improved through future amendments pursuant to article 9 (13) of CACM.

SEE TSOs shall include provisions regarding the internal parallel run and the public parallel run, as stated in the explanatory note, plus what happens with the obtained results. SEE CCM shall provide concrete milestones and explanation of the interdependencies. For example, TSOs shall state if they will request amendments in order to improve the approved methodology before the go-live deadline. Also, the explanatory

note shall include milestones (eg. Market simulation, investment decisions, parallel runs, amendments to the approved SEE CCM in order to improve it as a result of the parallel run, if it will be the case etc.) and criteria to be met before moving to the next milestone, having into consideration the go live of the NTC CCM in SEE CCR.

## Conclusions

The SEE NRAs have assessed, consulted and closely cooperated and coordinated and have reached an agreement on 24 October 2018, at the SEE CCR Energy Regulators' Regional forum, to **request a 2<sup>nd</sup> amendment to the SEE CCM submitted by SEE TSOs pursuant to Article 20 of CACM** since the amended proposal does not meet the requirements of CACM Regulation and as such cannot be approved. The amended SEE CCM shall take into account the SEE NRAs position stated above, and shall be submitted by TSOs no later than 2 months after the last national decision to request an amendment has been made, in accordance with Article 9 (12) of CACM.

The SEE NRAs must make their national decisions to request an amendment to the capacity calculation methodology, on the basis of this agreement, by 27 October 2018 at the latest.