



AGREEMENT BY THE CORE CCR REGULATORY AUTHORITIES

on

THE THIRD AMENDMENT OF THE DAY-AHEAD CAPACITY CALCULATION METHODOLOGY OF THE CORE CAPACITY CALCULATION REGION

**in accordance with Articles 20ff. of the Commission
Regulation (EU) 2015/1222 of 24th July 2015
establishing a guideline on capacity allocation and
congestion management**

1 July 2024

1. Introduction and legal context

This document elaborates an agreement of the Core Regulatory Authorities (hereafter: “Core NRAs”), agreed on 1 July 2024 at the Core Energy Regulators’ Regional Forum (hereafter: “CERRF”) on the Core Transmission System Operators (hereafter: “Core TSOs”) proposal for the third amendment of the Day-Ahead Capacity Calculation Methodology of the Core Capacity Calculation Region (hereafter: “Core DA CCM 3rd amendment proposal”). The Core DA CCM 3rd amendment proposal was submitted in accordance with Articles 20ff. and Article 9(13) of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity calculation and congestion management as amended by Commission implementing regulation (EU) 2021/280 of 22 February 2021 amending Regulations (EU) 2015/1222, (EU) 2016/1719, (EU) 2017/2195 and (EU) 2017/1485 in order to align them with Regulation (EU) 2019/943 (hereafter: “CACM Regulation”).

Pursuant to Article 9(13) of the CACM Regulation, Core TSOs submitted an amended proposal that was received by the last regulatory authority on 6 February 2024.

This agreement of all Core NRAs (ACM, AGEN-RS, ANRE, BNetzA, CRE, CREG, E-Control, ERU, HEA, HERA, ILR, URE, URSO) shall provide evidence that a decision on the Core DA CCM 3rd amendment proposal does not, at this stage, need to be adopted by ACER pursuant to Article 9(11) of the CACM Regulation as amended by Regulation 2021/280. It is intended to constitute the basis on which the Core NRAs will each subsequently issue a national decision to approve the Core DA CCM 3rd amendment proposal pursuant to Article 9(10) of the CACM Regulation as amended by Regulation 2021/280.

The legal provisions that lie at the basis of the Core DA CCM 3rd amendment proposal and this Core NRAs’ agreement on the methodology, can be found in Articles 3, 9 and 20ff of the CACM Regulation that are set out below for reference.

CACM Regulation

Article 3 - Objectives of capacity allocation and congestion management cooperation

This Regulation aims at:

- (a) promoting effective competition in the generation, trading and supply of electricity;*
- (b) ensuring optimal use of the transmission infrastructure;*
- (c) ensuring operational security;*
- (d) optimising the calculation and allocation of cross-zonal capacity;*
- (e) ensuring fair and non-discriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants;*

(f) ensuring and enhancing the transparency and reliability of information;

(g) contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union;

(h) respecting the need for a fair and orderly market and fair and orderly price formation;

(i) creating a level playing field for NEMOs;

(j) providing non-discriminatory access to cross-zonal capacity.

Article 9 as amended by Regulation 2021/280 - Adoption of terms and conditions or methodologies

1. TSOs and NEMOs shall develop the terms and conditions or methodologies required by this Regulation and submit them for approval to the Agency or the competent regulatory authorities within the respective deadlines set out in this Regulation. In exceptional circumstances, notably in cases where a deadline cannot be met due to circumstances external to the sphere of TSOs or NEMOs, the deadlines for terms and conditions or methodologies may be prolonged by the Agency in procedures pursuant to paragraph 6, jointly by all competent regulatory authorities in procedures pursuant to paragraph 7, and by the competent regulatory authority in procedures pursuant to paragraph 8.

(...)

5. Each regulatory authority or where applicable the Agency, as the case may be, shall approve the terms and conditions or methodologies used to calculate or set out the single day-ahead and intraday coupling developed by TSOs and NEMOs. They shall be responsible for approving the terms and conditions or methodologies referred to in paragraphs 6, 7 and 8. Before approving the terms and conditions or methodologies, the Agency or the competent regulatory authorities shall revise the proposals where necessary, after consulting the respective TSOs or NEMOs, in order to ensure that they are in line with the purpose of this Regulation and contribute to market integration, non-discrimination, effective competition and the proper functioning of the market.

6. The proposals for the following terms and conditions or methodologies and any amendments thereof shall be subject to approval by the Agency:

(...)

(e) the proposal for a harmonised capacity calculation methodology in accordance with Article 21(4);

(...)

9. The proposal for terms and conditions or methodologies shall include a proposed timescale for their implementation and a description of their expected impact on the objectives of this Regulation. Proposals for terms and conditions or methodologies subject to the approval by several regulatory authorities in accordance with paragraph 7 shall be submitted to the Agency within 1 week of their submission to regulatory authorities. Proposals for terms and conditions or methodologies subject to the approval by one regulatory authority in accordance with paragraph 8 may be submitted to the Agency within 1 month of their submission at the discretion of the regulatory authority while they shall be submitted upon the Agency's request for information purposes in accordance with Article 3 paragraph 2 of the Regulation (EU) 2019/942 if the Agency considers the proposal to have a cross-border impact. Upon request by the competent regulatory authorities, the Agency shall issue an opinion within 3 months on the proposals for terms and conditions or methodologies.

10. Where the approval of the terms and conditions or methodologies in accordance with paragraph 7 or the amendment in accordance with paragraph 12 requires a decision by more than one regulatory authority, the competent regulatory authorities shall consult and closely cooperate and coordinate with each other in order to reach an agreement. Where applicable, the competent regulatory authorities shall take into account the opinion of the Agency. Regulatory authorities or, where competent, the Agency shall take decisions concerning the submitted terms and conditions or methodologies in accordance with paragraphs 6, 7 and 8, within 6 months following the receipt of the terms and conditions or methodologies by the Agency or the regulatory authority or, where applicable, by the last regulatory authority concerned. The period shall begin on the day following that on which the proposal was submitted to the Agency in accordance with paragraph 6, to the last regulatory authority concerned in accordance with paragraph 7 or, where applicable, to the regulatory authority in accordance with paragraph 8.

11. Where the regulatory authorities have not been able to reach agreement within the period referred to in paragraph 10, or upon their joint request, or upon the Agency's request according to the third subparagraph of Article 5(3) of Regulation (EU) 2019/942, the Agency shall adopt a decision concerning the submitted proposals for terms and conditions or methodologies within 6 months, in accordance with Article 5(3) and the second subparagraph of Article 6(10) of Regulation (EU) 2019/942.

12. In the event that the Agency, or all competent regulatory authorities jointly, or the competent regulatory authority request an amendment to approve the terms and conditions or methodologies submitted in accordance with paragraphs 6, 7 and 8 respectively, the relevant TSOs or NEMOs shall submit a proposal for amended terms and conditions or methodologies for approval within 2 months following the request from the Agency or the competent regulatory authorities or the competent regulatory authority. The Agency or the competent regulatory authorities or the competent regulatory authority shall decide on the amended terms and conditions or methodologies within 2 months following their submission. Where the competent regulatory authorities have not been able to reach an agreement on terms and conditions or methodologies pursuant to paragraph 7 within the 2-month deadline, or upon their joint request, or upon the Agency's request according to the third subparagraph of Article 5(3) of Regulation (EU) 2019/942, the Agency shall adopt a decision concerning the amended terms and conditions or methodologies within 6 months, in accordance with Article 5(3) and the second subparagraph of Article 6(10) of Regulation (EU) 2019/942. If the relevant TSOs or NEMOs fail to submit a proposal for amended terms and conditions or methodologies, the procedure provided for in paragraph 4 of this Article shall apply.

13. The Agency, or all competent regulatory authorities jointly, or the competent regulatory authority, where they are responsible for the adoption of terms and conditions or methodologies in accordance with paragraphs 6, 7 and 8, may respectively request proposals for amendments of those terms and conditions or methodologies and determine a deadline for the submission of those proposals. TSOs or NEMOs responsible for developing a proposal for terms and conditions or methodologies may propose amendments to regulatory authorities and the Agency.

The proposals for amendment to the terms and conditions or methodologies shall be submitted to consultation in accordance with the procedure set out in Article 12 and approved in accordance with the procedure set out in this Article.

14. TSOs and NEMOs responsible for establishing the terms and conditions or methodologies in accordance with this Regulation shall publish them on the internet after approval by the Agency or the competent regulatory authorities or, if no such approval is required, after their establishment, except where such information is considered as confidential in accordance with Article 13.'

Article 21 - Capacity calculation methodology

1. *The proposal for a common capacity calculation methodology for a capacity calculation region determined in accordance with Article 20(2) shall include at least the following items for each capacity calculation time-frame:*

(a) methodologies for the calculation of the inputs to capacity calculation, which shall include the following parameters:

(i) a methodology for determining the reliability margin in accordance with Article 22;

(ii) the methodologies for determining operational security limits, contingencies relevant to capacity calculation and allocation constraints that may be applied in accordance with Article 23;

(iii) the methodology for determining the generation shift keys in accordance with Article 24;

(iv) the methodology for determining remedial actions to be considered in capacity calculation in accordance with Article 25.

(b) a detailed description of the capacity calculation approach which shall include the following:

(i) a mathematical description of the applied capacity calculation approach with different capacity calculation inputs;

(ii) 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;

(iii) rules for taking into account, where appropriate, previously allocated cross-zonal capacity;

(iv) rules on the adjustment of power flows on critical network elements or of cross-zonal capacity due to remedial actions in accordance with Article 25;

(v) for the flow-based approach, a mathematical description of the calculation of power transfer distribution factors and of the calculation of available margins on critical network elements;

(vi) for the coordinated net transmission capacity approach, the rules for calculating cross-zonal capacity, including the rules for efficiently sharing the power flow capabilities of critical network elements among different bidding zone borders;

(vii) where the power flows on critical network elements are influenced by cross-zonal power exchanges in different capacity calculation regions, the rules for sharing the power flow capabilities of critical network elements among different capacity calculation regions in order to accommodate these flows.

(c) a methodology for the validation of cross-zonal capacity in accordance with Article 26.

2. *For the intraday capacity calculation timeframe, the capacity calculation methodology shall also state the frequency at which capacity will be reassessed in accordance with Article 14(4), giving reasons for the chosen frequency.*

3. *The capacity calculation methodology shall include a fallback procedure for the case where the initial capacity calculation does not lead to any results.*

4. *All TSOs in each capacity calculation region shall, as far as possible, use harmonised capacity calculation inputs. By 31 December 2020, all regions shall use a harmonised capacity calculation methodology which shall in particular provide for a harmonised capacity calculation methodology for the flow-based and for the coordinated net transmission capacity approach. The harmonisation of capacity calculation methodology shall be subject to an efficiency assessment concerning the harmonisation of the flow-based methodologies and the coordinated net transmission capacity*

methodologies that provide for the same level of operational security. All TSOs shall submit the assessment with a proposal for the transition towards a harmonised capacity calculation methodology to all regulatory authorities within 12 months after at least two capacity calculation regions have implemented common capacity calculation methodology in accordance with Article 20(5).

2. The Core TSO's proposal

Following the adoption process of the original Core Day-ahead capacity calculation methodology and its amendments (hereafter: "the Core DA CCM") via the relevant ACER and Core NRAs' decisions¹, the methodology foresees that – no later than 18 months after the implementation of the methodology in accordance with its Article 28 (3), an amendment has to be developed and submitted in order to detail the methodology for coordinated validation, the list of internal network elements (combined with the relevant contingencies) to be defined as CNECs, the further harmonization of the generation shift key methodology, an approach and justification for selecting flow reliability margin (hereafter: "the FRM"), and an alternative solution for using allocation constraints. These provisions are included in Article 5 (5), Article 7 (4), Article 8 (7), Article 9 (6) and Article 20 (4) of the Core DA CCM.

The draft amendment proposals were consulted by all TSOs of the Core CCR (50HERTZ, AMPRION, APG, CREOS, ČEPS, ELES, ELIA, HOPS, MAVIR, PSE, RTE, SEPS, TENNET GMBH, TENNET B.V., TRANSELECTRICA, TRANSNET BW) through ENTSO-E via the online ENTSO-E Consultation Hub from 22 September 2023 until 25 October 2023 in line with Article 12 of the CACM Regulation².

Core NRAs provided the Core TSOs with their opinion on the draft DA CCM 3rd amendment proposal through a shadow opinion, which was commonly endorsed and submitted for the Core TSOs' consideration on 7 November 2023.

The DA CCM 3rd amendment proposal, dated 8 December 2023, was received by the last Core NRA on 6 February 2024. The document is publicly available on the ENTSO-E website³.

The DA CCM 3rd amendment proposal consists of several documents:

- the Core DA CCM amendment proposal itself;
- a public consultation report;
- an explanatory document; and

¹ ACER Decision 02-2019 on the original proposal (February 2019) and relevant individual Core NRAs' decisions on the amendments (May-June 2021 for the first amendment and December 2023-March 2024 for the second amendment).

² [Core TSOs' proposal for the 3rd amendment of the Day-Ahead Flow-based Capacity Calculation Methodology on multiple technical aspects - European Network of Transmission System Operators for Electricity - Citizen Space \(entsoe.eu\)](#)

³ The DA CCM 3rd amendment proposal is publicly available on the ENTSO-E website:

https://consultations.entsoe.eu/markets/core-tsos-proposal-3rd-amendment/dafbccm/supporting_documents/Core%20DA%20CCM%203rd%20RfA%20%20Whereas%20section.pdf

- a consolidated version, including the amendments under track changes in the original Core DA CCM

The Core TSOs in the Core DA CCM 3rd amendment proposal proposes to introduce the following modifications to the Core DA CCM:

- Article 5 (provision of a list of internal network elements)
 - o According to Core DA CCM 3rd amendment proposal, the provision of a proposal for a first list of internal network elements are postponed to forty-two months after Core FB DA MC go-live, i.e. to end 2025.
- Article 7 and Annex 1 (extension of the use of allocation constraints by PSE by additional 2 years)
 - o According to the Core DA CCM 3rd amendment proposal PSE aims at extending the transition period of using allocation constraints (hereafter: "AC") by two additional years. Moreover, provisions were proposed indicating the conditions that must be met in order for a given Core TSO to apply for the possibility of using AC.
 - o Changes in the detailed methodology for calculating the values for AC and a justification for the extension of the transition period have been introduced in Annex 1.
- Article 8 (harmonization of the FRM approach)
 - o According to the Core DA CCM 3rd amendment proposal the approach and justification for selecting FRM is postponed to sixty months after Core FB DA MC go-live. However, the FRM values to be applied until then are set to 10% of Fmax.
- Article 9 (provision of the harmonization of generation shift key methodology)
 - o According to Core DA CCM 3rd amendment proposal the harmonization of the generation shift key methodology are postponed to forty-two months after Core FB DA MC go-live, i.e. to end 2025.
- Articles 11, 12, 13 and 17 (amendments regarding Advanced Hybrid Coupling)
 - o According to the Core DA CCM 3rd amendment proposal Core TSOs aim to correct small errors in the Core NRA decision on the 2nd amendment of the Core DA CCM.
- Article 12 (circular flows around HVDC interconnectors)
 - o According to Core DA CCM 3rd amendment proposal and in order to prevent the behaviour leading to the appearance of circular flows and the resulting high loading of nearby AC network of existing and future HVDC Interconnectors on Core bidding zone borders, Core TSOs aim to introduce a zone-to-zone PTDF threshold for virtual hubs in the context of the Evolved Flow-Based method.

- Article 20 (coordinated validation)
 - o According to Core DA CCM 3rd amendment proposal Core TSOs detail the steps of the coordinated validation methodology and set a timeline for it. The proposed methodology makes it possible to include network elements not being CNECs pursuant to Article 15(1) in the coordinated validation. This is to enable a consistent use of all available RA potential on all relevant critical elements to ensure operational security in a coordinated manner. At the same time, it is acknowledged that the impact of such network elements on cross-zonal capacities must be monitored pursuant to Article 20(15). Any coordinated validation adjustment (*CVA*) is capped to guarantee a minimum capacity floor in terms of the percentage of the RAM before validation (RAM_{bv}) pursuant to Article 19(2) in relation to the maximum admissible active power per CNEC (F_{max}) pursuant to Article 6(2)(d). The *CVA* shall be capped to respect this floor, such that any remaining operational security violations are left to the individual validation. The implementation of the full coordinated validation analysis is expected not earlier than forty-two months after Core FB DA MC go-live which occurred in June 2022.
 - o The process of coordinated validation is included in article 20, however the abovementioned changes are also reflected in small adjustments in articles 2, 4, 6, 10, 14, 17, 18, 22, 25 and 27.
- Article 28 (amendment regarding DA FB MC go-live date)
 - o According to Core DA CCM 3rd amendment proposal the original implementation deadline mentioned in article 28(3) is replaced by the actual go-live date.

3. The NRAs' assessment

Core NRAs have assessed the Core DA CCM 3rd amendment proposal against the requirements of the CACM Regulation, the inputs provided during the interactions with Core TSOs and through the shadow opinion. Core NRAs welcome the submitted version of the Core DA CCM 3rd amendment proposal and acknowledge that the TSOs have improved the content of the submitted version compared to the consulted draft in line with the NRAs' suggestions from the shadow opinion.

3.1. General comments

- Core NRAs requested that Core TSOs wait for the final version of the 2nd amendment proposal of the Core DA CCM from the Core NRAs to include the revised wording into their 3rd amendment proposal. Core TSOs have done so, and the revised wording is included in the 3rd amendment proposal.
- Core NRAs stated in a shadow opinion that Article 5(5) (and other post go-live studies) refers to Article 28(3). Applying the proposal would therefore lead to 28 August 2025. However, the intention is to set

the deadline to 31 December 2025. This could be achieved either by substituting "18 months after the implementation of this methodology in accordance with Article 28(3)" by "31 December 2025" or by changing 28(3) into the actual go-live of 08 June 2022.

Core TSOs revised Article 28(3) accordingly.

- Core NRAs would like to make Core TSOs aware that Regulation (EC) 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity is no longer applicable and has been replaced by Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity. As such this should be considered in the next round of amendments.

3.2. Coordinated validation

To explain the rationale behind the inclusion of non-CNECs, Core TSOs added a respective explanation to chapter 3 of the Explanatory document. Furthermore, Core TSOs explained that the proposed coordinated validation method does not foresee any systematic inclusion of additional CNECs to subsequent process steps and eventually to the cross-zonal capacities. This is a major difference to the chain of ROSC and subsequent ID CC, where it is foreseen to allow for inclusion of certain network elements identified in the ROSC round as CNECs to the next one.

Core NRAs acknowledge that the proposal on coordinated validation:

- will lead to an improvement over the current situation where only individual validation adjustment (hereafter: "IVA") is used, as it is a joint and fully coordinated process including an optimization across the whole CCR and using information on all available RAs to assure cross-zonal capacities and operational security.
- has a minimum capacity threshold that according to TSOs is a target solution and already tackles the minimum capacity requirement ensuring minimum safeguards for the provision of cross-zonal capacities.
- is an intermediate step which will be followed by shifting the Core DA CCM implementation towards the Central Europe CCR DA CCM in accordance with ACER Decision 04/2024 on the amendment to the determination of capacity calculation regions⁴ (to be finalized after 2025).

Core NRAs remind Core TSOs that parametrization and thresholds should be carefully selected during experimentation in order to avoid any unnecessary reductions while also guaranteeing an efficient functioning of tooling and process. Additionally, during the implementation phase, other methods may be evaluated to improve the selection criteria. Core NRAs expect that the process for the selection shall be

⁴ ACER decision 04/2024 of the European Union Agency for the Cooperation of Energy Regulators of 19 March 2024 on the amendment to the determination of capacity calculation regions.

made clear and transparent, and that Core NRAs shall be involved in the different steps in order to ensure the appropriateness of the outcome of these processes.

Regarding the circumstances and parametrization Core TSOs also improved ex ante transparency of the set up for those.

3.3. Extension of the use of allocation constraints by PSE

Regarding the Polish extension of the use of allocation constraints for two more years, Core NRAs do not object PSE's extension and ask PSE to continue working on and provide an alternative approach as requested in the Article 7(4) of this methodology.

3.4. Postponement of various studies (selection list of internal network elements, generation shift key study and flow reliability margin study)

Core TSOs presented and discussed with the Core NRAs the priority projects of Core CCR (including but not limited to the Core roadmap as regularly presented by Core TSOs). Accordingly, Core NRAs approve the postponement with respect to the timely implementation of the mutually agreed list of Core priority projects. Core NRAs also point to the upcoming Central Europe DA CCM as requested by CACM Regulation also in line with ACER Decision 04/2024 to be submitted for NRAs approval 10 months after the adoption of said decision where the provisions of the post go-live studies requested by the Core DA CCM are going to be addressed.

With regards to the FRM study Core TSOs, with the support of Core NRAs, have in October 2023 introduced the 10% FRM lump sum approach on all CNECs in order to avoid undue discrimination between CNECs where no flow-based was applied before the Core FB DA go-live and CNECs of existing initiatives where flow-based was applied before Core FB DA go-live, until the proposal for amendment of this methodology on the approach and justification for selecting the *FRM* has been approved by all Core regulatory authorities.

Core NRAs remind that the 10% FRM lump sum is thus to be considered as a temporary and pragmatic value to be applied awaiting an FRM assessment in line with Art. 22 of the CACM Regulation, and Art. 8 of the Core DA CCM. This temporary solution is acceptable to Core NRAs to free up resources at Core TSOs' side, in order to first work on the bottom-up improvement of the CGMs before performing the required FRM computations.

3.5. Circular flows around HVDC interconnectors

As stated in the shadow opinion, Core NRAs do not object this Core TSO proposal, especially given that it is a temporary solution awaiting the ROSC go-live. Core NRAs are looking forward to the parameter study referred to in the Explanatory document with the aim of improving the approach and finding more optimal solutions.

Core NRAs agree with this amendment and remind Core TSOs that the efficiency of this patch should be monitored in line with the proposal.

4. Conclusions

Core NRAs have assessed, consulted and closely cooperated and coordinated to reach the agreement that they approve the 3rd amendment proposal submitted by the Core TSOs, pursuant to Article 9(13) of the CACM Regulation.

However, Core NRAs emphasize that the approval of the current amendment is without prejudice to the right of Core NRAs to review any of its elements in the future (also in light of operational results) and ask for submission of amendments accordingly or ask for a request for amendment in case a new proposal or an amendment of the methodology is submitted for approval by the TSOs.

Core NRAs will issue their national decisions to approve the 3rd amendment proposal on the basis of this agreement.