

**DECISION No 11/2021
OF THE EUROPEAN UNION AGENCY
FOR THE COOPERATION OF ENERGY REGULATORS**

of 13 August 2021

**on the market-based allocation process of cross-zonal capacity for
the exchange of balancing capacity for the Core CCR**

THE EUROPEAN UNION AGENCY FOR THE COOPERATION OF ENERGY REGULATORS,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators¹, and, in particular, point (b) of the second subparagraph of Article 6(10) thereof,

Having regard to Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing, and, in particular, Articles 5(3)(h) and 6(2) thereof,

Having regard to the outcome of the public consultation and consultation with the concerned regulatory authorities and transmission system operators,

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

Having regard to the favourable opinion of the Board of Regulators of 12 August 2021, delivered pursuant to Article 22(5) of Regulation (EU) 2019/942,

Whereas:

1. INTRODUCTION

- (1) Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing (the 'EB Regulation') laid down a range of requirements for electricity balancing, for the exchange of balancing capacity, as well as pricing and settlement of balancing capacity. These requirements include the

¹ OJ L158, 14.6.2019, p. 22.

possibility for the transmission system operators of a capacity calculation region ('CCR') to develop a methodology for a market-based allocation process of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves.

- (2) Pursuant to Articles 4(1) and 5(3)(h) of the EB Regulation, transmission system operators of a CCR may agree on a common proposal for the market-based allocation process of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves in accordance with Article 41(1) of the EB Regulation and submit it to the regulatory authorities of that CCR for approval. In accordance with Article 5(6) of the EB Regulation, regulatory authorities shall reach an agreement and take a decision within six months after the receipt of the proposal by the last regulatory authority.
- (3) Regulatory authorities can require an amendment to the proposal in accordance with Article 6(1) of the EB Regulation where transmission system operators have two months to submit an amended proposal to regulatory authorities. Then, regulatory authorities have two months to decide on the amended proposal. When regulatory authorities fail to reach an agreement within the two-month period after the submission of the amended proposal or upon their joint request, ACER, pursuant to Article 6(2) of the EB Regulation, shall adopt a decision concerning the proposal in accordance with point (b) of the second subparagraph of Article 6(10) of Regulation (EU) 2019/942.
- (4) This Decision of ACER follows from the request of regulatory authorities of the Core CCR that ACER adopts a decision on the proposal for a market-based allocation process of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves methodology, which the transmission system operators of the Core CCR (hereafter referred to as 'the TSOs') submitted to the regulatory authorities of the Core CCR (hereafter referred to as 'the regulatory authorities') for approval and on which the regulatory authorities could not agree on. Annex I to this Decision sets out the methodology pursuant to Article 41(1) of the EB Regulation as decided by ACER.

2. PROCEDURE

2.1. Proceedings before regulatory authorities

- (5) Article 41(1) of the EB Regulation allows the TSOs to submit a proposal for a market-based allocation process of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves methodology by two years after the entry into force of the EB Regulation. As the EB Regulation entered into force on 18 December 2017, the deadline to submit a proposal was 18 December 2019.

- (6) On 20 September 2019, the TSOs published for public consultation the draft proposal² for the ‘Core CCR TSOs’ Methodology for a market-based allocation process of cross zonal capacity for the exchange of balancing capacity or sharing of reserves in accordance with article 41 of the Commission Regulation on (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing’. The consultation lasted from 20 September 2019 to 19 October 2019.
- (7) On 18 December 2019, the TSOs submitted to the regulatory authorities a ‘Core CCR TSOs’ Methodology for a market-based allocation process of cross zonal capacity for the exchange of balancing capacity or sharing of reserves in accordance with article 41 of the Commission Regulation on (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing’³, which was received by the last regulatory authority on 2 March 2020.
- (8) The regulatory authorities jointly agreed on 12 August 2020 to request an amendment and sent this request to the TSOs. The last regulatory authority issued the request for amendment nationally on 10 October 2020.
- (9) On 4 December 2020, the TSOs resubmitted the amended ‘Core CCR TSOs’ Methodology for a market-based allocation process of cross zonal capacity for the exchange of balancing capacity or sharing of reserves in accordance with article 41 of the Commission Regulation on (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing’⁴ to the regulatory authorities (hereafter referred to as the ‘Proposal’). The last regulatory authority received the Proposal on 22 December 2020. Therefore, the new deadline for approval by the regulatory authorities was 22 February 2021.

2.2. Proceedings before ACER

- (10) On 22 February 2021 ACER was notified via the ACER notification survey tool and via email that the regulatory authorities were not able to reach an agreement within the two-month deadline and requested ACER to adopt a decision on the Proposal pursuant to Article 6(10) of Regulation 2019/942. This notification included a description of the legal context and an assessment of the Proposal by the regulatory authorities.

² https://consultations.entsoe.eu/markets/ebgl-art-41-a-market-based-proposal-of-czca/supporting_documents/20190920_Art%2041%20Core%20TSOs%20Methodology_Marketbased%20allocation%20process%20of%20CZC.pdf

³ <https://www.acer.europa.eu/en/Electricity/MARKET-CODES/ELECTRICITY-BALANCING/12%20CZCAM/Action%206%20-%20MB%20CZCA%20Core%20proposal.pdf>

⁴ <https://www.acer.europa.eu/en/Electricity/MARKET-CODES/ELECTRICITY-BALANCING/12%20CZCAM/Action%2017%20-%20MB%20CZCA%20Core%20amended%20proposal.pdf>

- (11) Between 12 April and 2 May 2021, ACER held a public consultation⁵ on the Proposal, seeking views from all interested parties. Annex II provides a summary of comments received along with ACER's responses to these comments.⁶
- (12) Between 22 February 2021 and 1 June 2021, ACER engaged in discussions with the TSOs and regulatory authorities. These discussions involved numerous conference calls and electronic exchange of documents, allowing ACER to gather information and form its preliminary position on the Proposal. These discussions focused on ACER's assessment framework as described in section 6.1 and on reaching a common understanding or exchanging views on aspects of the Proposal as referred to in section 5.2.
- (13) Between 1 and 14 June 2021, ACER consulted TSOs and regulatory authorities on its preliminary position, by sharing an updated version of the Proposal setting out its suggested amendments and reasoning for these amendments. The consulted parties provided their views by 14 June. These views are summarised in section 5.4.
- (14) ACER considered all the written comments received on its preliminary position, and further discussed them with the individual stakeholders, where necessary. In particular, ACER held one oral hearing on 11 June 2021. Following this process, ACER introduced further amendments to the Proposal to take some issues raised by the consulted parties into account.
- (15) The AEWG was consulted between 17 and 24 June 2021, and provided its advice on 24 June 2021 (see section 5.5).
- (16) On 12 August 2021, ACER's BoR issued a favourable opinion pursuant to Article 22(5)(a) of Regulation (EU) 2019/942.

3. ACER'S COMPETENCE TO DECIDE ON THE PROPOSAL

- (17) Pursuant to Article 6(2) of the EB Regulation, where the regulatory authorities have not been able to reach an agreement or upon their joint request, ACER shall adopt a decision concerning the submitted terms and conditions or methodologies within six months in accordance with Article 6(10) of Regulation (EU) 2019/942.
- (18) According to the notification received on 22 February 2021, the regulatory authorities did not reach an agreement on the Proposal and therefore ACER became competent to adopt a decision on the Proposal pursuant to Article 6(2) of the EB Regulation.

⁵PC/2021/E/02, see ACER's consultation page:

https://www.acer.europa.eu/Official_documents/Public_consultations/Pages/PC_2021_E_02.aspx.

⁶This is a summary and not to be considered a complete representation of the comments received. All non-confidential responses are published on ACER's consultation page (see footnote 5).

4. SUMMARY OF THE PROPOSAL

- (19) The Proposal consists of the following elements:
- (a) the ‘Whereas’ section and Articles 1 and 2, which include general provisions on subject matter and scope and definitions and interpretation;
 - (b) Articles 3, 4 and 5, which cover principles for applying the market-based allocation process of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves (hereafter referred to as the ‘market-based allocation process’), the notification process for the use of a market-based allocation process and the timeframe of market-based allocation;
 - (c) Article 6, which describes the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity;
 - (d) Article 7, on the determination of the market value of cross-zonal capacity for the exchange of energy;
 - (e) Article 8, on the determination of the market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves;
 - (f) Article 9, which specifies the determination of the allocated volume of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves;
 - (g) Articles 10, 11 and 12, which describe the pricing of cross-zonal capacity, the firmness regime and the sharing of congestion income; and
 - (h) Articles 13, 14 and 15, which include provisions on publication, implementation timeline and language.

5. OBSERVATIONS RECEIVED BY ACER

5.1. Initial observations of the regulatory authorities

- (20) The notification referred to in Recital (10) stated that the regulatory authorities could not agree on:
- (a) the proposed determination of the forecasted market value of cross-zonal capacity for the exchange of energy due to the lack of detail and the insufficiently proven impact on the day-ahead market;
 - (b) the pricing principle for the market-based allocation process in the Proposal; and
 - (c) provisions in the Proposal related to transparency, non-discrimination and specifications related to the market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves.

5.2. Consultation of regulatory authorities and TSOs

- (21) ACER closely cooperated and consulted with the regulatory authorities and TSOs, as mentioned in Recital (12), above by discussing and exchanging views and proposals on:

- a) the comments received during the public consultation (see section 5.3) and the views of the regulatory authorities expressed in the aforementioned notification;
- b) the proposed forecasting approach for the determination of the forecasted market value of cross-zonal capacity for the exchange of energy and possible alternative approaches;
- c) the additions of the necessary details and provisions for the chosen forecasting approach for the determination of the forecasted market value of cross-zonal capacity for the exchange of energy;
- d) the implementation timeline and the applicable pricing principle for the market-based allocation process;
- e) the possible timing of performing the market-based allocation process;
- f) the process to define the maximum volume of allocated cross-zonal capacities for the exchange of balancing capacity or sharing of reserves;
- g) possible approaches for sharing congestion income and possibilities to address the risk of missing money for the remuneration of long-term transmission rights due to an application of the market-based allocation process; and
- h) other provisions like linking of bids and situations allowing a flexible TSO demand or provisions for situations with local shortage of balancing capacity bids and changes of the Proposal, aiming for a first harmonisation among existing regional market-based methodologies where possible.

5.3. Public consultation

- (22) Responses to ACER's public consultation⁷ are summarised in Annex II to this Decision.

5.4. Consultation on ACER's preliminary position

- (23) The following paragraphs provide a summary⁸ of views on ACER's preliminary position received during the hearing phase between 1 and 14 June 2021. ACER received written comments from the following parties:
- (a) BNetzA (i.e. regulatory authority of Germany)
 - (b) CREG (i.e. regulatory authority of Belgium)
 - (c) E-Control (i.e. regulatory authority of Austria)

⁷ See footnote 5.

⁸ This is ACER's summary of key concerns and not to be considered a complete representation of the comments received.

- (d) Elia (i.e. TSO of Belgium);
 - (e) the TSOs of the existing automatic frequency restoration reserve ('aFRR') balancing capacity cooperation of Germany and Austria; and
 - (f) common comments from all TSOs of the Core CCR;
- (24) In addition, the all TSOs of the Core CCR also provided oral feedback during a common oral hearing with ACER.
- (25) BNetzA provided comments on the single gate closure time and pricing principle used in the market-based allocation process and shared concerns about the continuation of the existing cooperation for the exchange of aFRR balancing capacity between German and Austrian TSOs.
- (26) CREG shared comments on the implementation phase of the methodology and the performance of the forecasting method and the related application of the adjustment factor.
- (27) E-Control provided their concerns regarding the implementation timeline and possibilities for the continuation of the existing cooperation for the exchange of aFRR balancing capacity between German and Austrian TSOs.
- (28) Elia shared comments on how the concept of sharing of reserves is considered by the market-based allocation process, the consideration of a required amendment of the capacity calculation methodology in accordance with Article 20(2) of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management ('CACM Regulation'), on the process determining the maximum volume of allocated cross-zonal capacity by the market-based allocation process, shared its support for the chosen adjustment factor approach and had other questions for clarification of certain aspects of the methodology.
- (29) The TSOs of the existing aFRR balancing capacity cooperation of Germany and Austria commented on the pricing principle used for the market-based allocation process, the price limit for balancing capacity bids and the implementation deadline.
- (30) The common feedback from all Core TSOs addressed the design of the adjustment factor, the requirement for the entity performing the forecast, on the frequency of possible compensation payments for missing money for the remuneration of long-term transmission rights, the timeline and implications of the implementation of this methodology and proposed additional provisions for considering the impact of payments for missing money for the remuneration of long-term transmission rights in the determination of the allocated volume of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves.
- (31) More detailed summaries of the presented feedback received and how ACER considered it can be found throughout section 6.2 below.

5.5. Consultation of the AEWG

- (32) The AEWG provided its advice on 24 June 2021, broadly endorsing the draft ACER Decision with Annexes. AEWG invited ACER to consider comments made by the regulatory authorities during the AEWG consultation phase and further seek with the involved regulatory authorities a workable solution to allow the prompt finalisation of the methodology without causing undue disruption to the ongoing cooperation project between Austria and Germany.
- (33) The AEWG further provided its advice on 28 July 2021, broadly endorsing the draft ACER Decision with Annexes including amendments following AEWG's advice from 24 June 2021.

6. ASSESSMENT OF THE PROPOSAL

6.1. Legal requirements

- (34) Articles 41(1) and 5(3)(h) of the EB Regulation provide that TSOs of a CCR may propose a methodology for a market-based allocation process of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves in accordance with Article 41(1) of the EB Regulation. This proposal must be submitted to the concerned regulatory authorities for their approval. Additionally, Article 6(1) of the EB Regulation requires the concerned TSOs to submit an amended proposal for the market-based allocation process for approval to the concerned regulatory authorities, following a request for amendment of the initial proposal by the concerned regulatory authorities. The methodology for the market-based allocation process shall apply for the exchange of balancing capacity or sharing of reserves with a contracting period of not more than one day and where the contracting is done not more than one week in advance of the provision of the balancing capacity. Article 41(1) of the EB Regulation further elaborates on the requirements for such a methodology, which shall include:
- (a) the notification process for the use of the market-based allocation process;
 - (b) a detailed description of how to determine the actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves, and the forecasted market value of cross-zonal capacity for the exchange of energy, and if applicable the actual market value of cross-zonal capacity for exchanges of energy and the forecasted market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves;
 - (c) a detailed description of the pricing method, the firmness regime and the sharing of congestion income for the cross-zonal capacity that has been allocated to bids for the exchange of balancing capacity or sharing of reserves via the market-based allocation process;
 - (d) the process to define the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves pursuant to Article 41(2) of the EB Regulation.

- (35) Article 41(2) of the EB Regulation provides that cross-zonal capacity allocated on a market-based allocation process shall be limited to 10 % of the available capacity for the exchange of energy of the previous relevant calendar year between the respective bidding zones or, in case of new interconnectors, 10 % of the total installed technical capacity of those new interconnectors, and provides the conditions for when this volume limitation may not apply. The second sentence of Article 41(2) of the EB Regulation provides that the volume limitation in the first sentence of Article 41(2) may not apply where the contracting is done not more than two days in advance of the provision of the balancing capacity or for bidding zone borders connected through High Voltage Direct Current ('DC') interconnectors until the co-optimised allocation process is harmonised at Union level pursuant to Article 38(3) of the EB Regulation.
- (36) Article 41(3) of the EB Regulation requires that the methodology is based on a comparison of the actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves and the forecasted market value of cross-zonal capacity for the exchange of energy, or on a comparison of the forecasted market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves, and the actual market value of cross-zonal capacity for the exchange of energy.
- (37) Article 41(4) of the EB Regulation provides that the pricing method, the firmness regime and the sharing of congestion income for cross-zonal capacity that has been allocated for the exchange of balancing capacity or sharing of reserves via the market-based allocation process shall ensure equal treatment with the cross-zonal capacity allocated for the exchange of energy.
- (38) Article 41(5) of the EB Regulation requires that cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves via the market-based allocation process shall be used only for the exchange of balancing capacity or sharing of reserves and associated exchange of balancing energy.
- (39) As a general requirement, Article 5(5) of the EB Regulation requires that the Proposal includes a proposed timescale for its implementation and a description of its impact on the objectives of the same Regulation.
- (40) Article 39 of the EB Regulation sets out the requirements for the calculation of market value of cross-zonal capacity and defines in its paragraph 3 that the actual market value of cross-zonal capacity for the exchange of balancing capacity used in a market-based allocation process shall be calculated based on balancing capacity bids submitted to the capacity procurement optimisation function pursuant to Article 33(3) of the EB Regulation.
- (41) Article 39(4) of the EB Regulation provides that the actual market value of cross-zonal capacity for the sharing of reserves used in a market-based allocation process shall be calculated based on the avoided costs of procuring balancing capacity.
- (42) Article 39(5) of the EB Regulation further elaborates that the forecasted market value of cross-zonal capacity shall be based on one of the following alternative principles:

- (a) the use of transparent market indicators that disclose the market value of cross-zonal capacity; or
- (b) the use of a forecasting methodology enabling the accurate and reliable assessment of the market value of cross-zonal capacity.

Moreover, the forecasted market value of cross-zonal capacity for the exchange of energy between bidding zones shall be calculated based on the expected differences in market prices of the day-ahead.

- (43) Article 39(6) of the EB Regulation further allows for the efficiency of the forecasting methodology pursuant to Article 39(5)(b) of the EB Regulation, including a comparison of the forecasted and actual market values of the cross-zonal capacity, to be reviewed by the relevant regulatory authorities. Furthermore it allows that where the contracting is done not more than two days in advance of the provision of the balancing capacity, the relevant regulatory authorities may, following this review, set a limit other than that specified in Article 41(2) of the EB Regulation.
- (44) Article 38(5) of the EB Regulation requires that TSOs may allocate cross-zonal capacity for the exchange of balancing capacity or sharing of reserves only if cross-zonal capacity is calculated in accordance with the capacity calculation methodologies developed pursuant to Regulation (EU) 2015/1222 and (EU) 2016/1719.
- (45) Article 38(6) of the EB Regulation requires that TSOs shall include cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves as already allocated cross-zonal capacity in the calculations of cross-zonal capacity.

6.2. Assessment of the legal requirements

6.2.1. Assessment of the requirements for the development and for the general content of the Proposal

6.2.1.1. Development of the Proposal

- (46) The Proposal fulfils the requirements of Articles 4(1), 4(2) and 5(3)(h) of the EB Regulation, as the TSOs from the Core CCR jointly developed a proposal for a market-based allocation process and submitted it for approval to all regulatory authorities of the Core CCR.
- (47) The procedure for the development of the Proposal did not respect the requirements of Article 41(1) of the EB Regulation, as the initial proposal, while submitted by most TSOs by 18 December 2019, which is within two years after entry into force of the EB Regulation, was submitted by the last TSO on 2 March 2020. This is in breach of the two years submission deadline.
- (48) Also subsequent deadlines for the development of the Proposal were not met. More specifically, this refers to the six months deadline for regulatory authorities pursuant to Article 5(6) of the EB Regulation (six months after 2 March 2020 is 2 September

2020, while the last regulatory authority issued the request for amendment on 10 October 2020) and the two months deadline pursuant to Article 6(1) of the EB Regulation for TSOs to submit an amended proposal after regulatory submitted a request for amendment (two months after 10 October 2020 is 10 December 2020, while the last regulatory authority received it on 22 December 2020).

6.2.1.2. Proposed timescale for implementation

- (49) The Proposal partly fulfils the requirements of Article 5(5) of the EB Regulation with regard to proposing a timescale for implementation.
- (50) Article 14 of the Proposal describes the implementation timeline of the Proposal including a requirement for assessing issues not resolved by the time of the submission of the Proposal and a requirement for submitting an amendment based on this assessment. Article 14(4) of the Proposal states that the methodology shall be considered implemented once such amendment is approved.
- (51) Following the revisions and amendments to the Proposal by ACER in coordination with the regulatory authorities and the TSOs an immediate amendment should not be necessary. However, questions were raised with respect to the meaning of the implementation of this methodology. Following the consultation with the regulatory authorities and the TSOs, especially with respect to the timeframe for the application of this methodology, as mentioned in Recital (63) and (65), ACER together with the regulatory authorities and TSOs, concluded that a single market-based allocation process would run at CCR level. This market-based allocation process should be in line with the requirements set in Annex I. Hence the implementation of this methodology by all Core TSOs requires the implementation of all the necessary components described in Annex I, including the algorithm for performing the cross-zonal capacity allocation for the exchange of balancing capacity or sharing of reserves, and any necessary amendments of other methodologies, in order to fulfil the requirements of Annex I. Therefore, ACER concluded that implementing the cross-zonal capacity allocation process means establishing the cross-zonal capacity allocation function to be ready for application.
- (52) In its response to ACER's preliminary position as mentioned in section 5.4, Elia invited ACER to add a paragraph addressing who should bear the costs of the implementation. ACER understands that since all Core TSOs committed to the voluntary submission of the Proposal and due to the need that the market-based allocation process is centrally performed for the whole CCR, it should be clear that the cost for the implementation of this methodology should be commonly borne by all TSOs of the CCR. In this context, also see Recital (127) clarifying that responsibilities generally addressed to TSOs in Annex I are referring to all TSOs of the Core CCR.
- (53) CREG mentioned in its feedback to ACER's preliminary position as mentioned in section 5.4, that while ex-post monitoring is foreseen in the presented methodology, ex-ante verification (e.g. parallel runs, experimental application of the forecasting method when no balancing capacity is exchanged, etc.) is not addressed. While ACER also deems these processes as highly relevant, it understands that such ex-ante

verification processes are implicitly addressed when requiring TSOs to implement a process. However, to ensure transparency on the implementation progress, ACER introduced an additional publication requirement in Article 12(11) of Annex I.

(54) In their common response to ACER's preliminary position as mentioned in section 5.4, all TSOs of the Core CCR asked about the implications of the implementation timeline and asked to reduce the implementation deadline from 24 to 18 months. ACER clarified in the discussions during the oral hearing mentioned in Recital (24) that, as stated in Article 13(2) of Annex I, the implementation of this methodology means that the cross-zonal capacity allocation function should be ready for application. ACER and TSOs concluded that this includes:

- (a) developing the cross-zonal capacity allocation function including the process for forecasting the market value of cross-zonal capacity for the exchange of energy;
- (b) the approval of the necessary amendments in the capacity calculation methodology in accordance with Article 20(2) of the CACM Regulation of the Core CCR and in the congestion income distribution methodology in accordance with 73(1) of the CACM Regulation; and
- (c) any other required developments to have the market-based allocation process ready for application (e.g. governance decisions on entity(ies) operating the cross-zonal capacity allocation function and forecast of the market value of cross-zonal capacity for the exchange including access to the relevant simulation facility; any needed clarifications depending on the choice of additional options for the foreseen process; the relevant ex-ante verification processes for implementing the market-based allocation process; etc.).

Although the Core TSOs had been notified that on 29 June 2021 the draft decision would be submitted to the Board of Regulators for its opinion, the Core TSOs informed ACER only on 2 July 2021 that they would provide additional feedback. Almost a month after the end of the hearing (which ended on 14 June 2021), the Core TSOs provided additional feedback, where they stated that they “*see comprehensive implementation challenging within a 24-month timeframe*”, contradicting the position expressed during their hearing input, as noted in the beginning of this Recital, and they stated that they “*can commit to providing a binding, detailed and feasible implementation plan three months after the ACER decision*” on this methodology. ACER considers that during the discussions with the Core TSOs over the last months, sufficient time was provided to them to estimate the timeline needed for the implementation of this methodology (ACER even changed the initial timeline by postponing milestones for allowing more time for submissions from TSOs), taking also into account the amendments of other methodologies required in this context (discussions were also held with Core TSO experts for the other methodologies). Besides, pursuant to Article 5(5) of the EB Regulation, an implementation timeline for this methodology is required, therefore, the Core TSOs' proposal on providing the implementation timeline after the approval of the methodology is not considered compliant with the EB Regulation. However, ACER understands that more time may

be needed for the implementation, and extending the deadline from 18 to 24 months is necessary.

- (55) The TSOs of the existing aFRR balancing capacity cooperation of Germany and Austria proposed in their response to ACER's preliminary position, as mentioned in section 5.4, to shorten the implementation timeline for the amendments of the Core day-ahead capacity calculation methodology and the congestion income distribution methodology from 24 to 12 months. In their respective feedback, Elia also commented on the implementation of Article 13 in Annex I by mentioning that this methodology can only be implemented if the day-ahead capacity calculation methodology of the Core CCR is amended to consider the market-based allocation process. Elia further mentions the steps for implementation which should be made clear and that a minimum of one year implementation time needs to be considered to allow for enough time for amending the relevant methodologies. ACER agrees that the day-ahead capacity calculation methodology of the Core CCR needs to be amended to consider the changes required for implementing the market-based allocation process and that all such measures need to be taken to make the market-based allocation process ready for application as stated in Article 13(2) of Annex I. Therefore, ACER also agrees that the amendment process of these methodologies should be processed and approved in significantly less than the 24 months. ACER acknowledges that the TSOs will also need some time for implementing the relevant amendments and urges TSOs to have a swift amendment process for the relevant provisions in these methodologies and invite them to prepare for the relevant implementation processes in parallel where possible, in order to fulfil the general implementation target of 24 months.
- (56) In its response to ACER's preliminary position as mentioned in section 5.4, E-Control shared its concerns about the implementation timeline of 24 months as proposed in ACER's preliminary position. More specifically, they stressed that the 24 months deadline without further provisions for existing cooperations exchanging balancing capacity before that date would lead to a situation where the legal basis for the existing cooperation for the exchange of aFRR balancing capacity between German and Austrian TSOs would run out (i.e. expiry of the contracting period of cross-zonal capacity allocated before the entry into force of the EB Regulation) without a clear possibility of continuation. Therefore, E-Control urges ACER to find a solution that ensures the continuation of the exchange of balancing capacity. Similarly also BNetzA shared their concerns regarding the possible discontinuation of the existing cooperation for the exchange of aFRR balancing capacity between German and Austrian TSOs and proposed to have a transition period where alternative methods for cross-zonal capacity allocation would be allowed or to have a step wise implementation where some features would only be implemented in the final step (i.e. after 24 months).
- (57) In further discussion during the consultation of the AEWG as described in section 5.5, BNetzA explained that they would not be able to move to marginal pricing (for further information on this issue see Recital (97)) within 18 months, since the required processes for approval and implementation of such change in Germany would already need 18 months (not considering any necessary preparation time for TSOs to submit

the relevant proposals). Therefore, for them to consider a change of the pricing principle they would need an implementation timeline longer than 18 months to apply the market-based allocation process including all related requirements. Further, to allow a continuation of the existing cooperation for the exchange of aFRR balancing capacity between German and Austrian TSOs a transitional solution would be needed between the expiry of the legal basis for the existing cooperation and implementation of the market-based allocation process.

- (58) Following the above described feedback received to ACER's preliminary position and in the scope of the consultation of AEWG, ACER agrees to amend Article 13 of Annex I on the implementation timeline of the methodology for market-based allocation by extending it to no later than 24 months after the approval of the methodology (as specified in Article 13(1) of Annex I), and by adding Article 13(3) to Annex I allowing early implementation of the market-based allocation process without the consideration of all relevant requirements until the final implementation deadline by 24 months after the approval of the methodology. This provision allows also the existing cooperation for the exchange of aFRR balancing capacity between German and Austrian TSOs to continue, based on an early implemented market-based allocation process though it may not yet be fully complete under the Article 13(3) of Annex I. ACER deems up to 6 months as sufficient time for German TSOs to initiate the relevant procedure to change the pricing principle (as mentioned in Recital (57), according to BNetzA the process for implementing a change of the pricing principle would require the remaining 18 months to fulfil the relevant requirements for applying the market-based allocation process by 24 months). ACER also deems a partial implementation of the market-based allocation process by the time needed for the continuation of the existing cooperation (i.e. 18 months) as feasible and urges TSOs to take the necessary measures to enable such continuation (e.g. start the amendment processes of the relevant methodologies right after this decision is taken). Further, following the feedback from all Core TSOs mentioned in Recital (54) the full implementation by 24 months should provide all Core TSOs with additional time to address all relevant requirements for establishing the complete market-based allocation process, allow the existing cooperation to be transformed to the target solution and allow interested TSOs apply the market-based allocation process after taking the necessary measures to join a cooperation which applies the market-based allocation process. Such early implementation of the market-based allocation process should only be considered as a transitory step towards the complete implementation of the market-based allocation process.
- (59) Such step wise implementation allows for early implementation of the market-based allocation process not only for an existing cooperation but for all TSOs, which therefore addresses any concerns regarding non-discrimination as stated in feedback received in the public consultation (see section 5.3). Further, ACER deems it important to limit the possibility of applying an incomplete market-based allocation process to the time needed to transform any early implementation projects into the target solution considering all relevant requirements in accordance with the EB Regulation.

6.2.1.3. Description of the expected impact on the objectives of the EB Regulation

(60) The Proposal partly fulfils the requirement of Article 5(5) of the EB Regulation on describing the expected impact on the objectives of the EB Regulation. Recital (1)(a) to (d) of the Proposal provides a description of the expected impact of the methodology for a market-based allocation process on the objectives of the EB Regulation. However, ACER deemed that the objectives were not sufficiently addressed in some cases while other objectives were not explicitly mentioned. Therefore, ACER amended these recitals to correctly address all objectives of the EB Regulation.

6.2.2. Assessment of the requirements for market-based allocation process

6.2.2.1. Requirements on the timeframe of application of market-based allocation

(61) Article 41(1) of the EB Regulation describes in general the time periods to which market-based allocation shall be applied, being not more than a week before the provision of the balancing capacity and a maximum contracting period of one day.

(62) The Proposal addresses the requirements pursuant to Article 41(1) with respect to the timing of the balancing capacity contracting in its Articles 3 and 5. However, following the consultation with the regulatory authorities and the TSOs on further specifying the market-based capacity allocation process and the interaction with the other cross-zonal capacity calculation and allocation processes, it became evident that amendments to the Proposal were required.

(63) Pursuant to Article 38(5) of the EB Regulation *“TSOs may allocate cross-zonal capacity for the exchange of balancing capacity or sharing of reserves only if cross-zonal capacity is calculated in accordance with the capacity calculation methodologies developed pursuant to Regulation (EU) 2015/1222 and (EU) 2016/1719.”* Therefore, the timings of the processes of this methodology need to respect the relevant timings of the respective capacity calculation methodology, the outcome of which will be used as input in this methodology. Given that the implementation of the capacity calculation methodology developed pursuant to the CACM Regulation is expected before the one pursuant to Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation (‘FCA Regulation’), the relevant timings for the processes of this methodology are chosen to interact with the day-ahead ones.

(64) Furthermore, Article 6(9) of Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (recast) (‘Electricity Regulation’) specifies that *“Contracts for balancing capacity shall not be concluded more than one day before the provision of the balancing capacity and the contracting period shall be no longer than one day, unless and to the extent that the regulatory authority has approved the earlier contracting... Where a derogation is granted, for at least 40 % of the standard balancing products and a minimum of 30 % of all products used for balancing capacity, contracts for the balancing capacity shall be concluded for no more than one day before the provision of the balancing*

capacity". So, earlier – than a day before the provision of balancing capacity – contracting is only allowed if all regulatory authorities (for the TSOs exchanging balancing capacity) provide national derogations, but even in this case, they can only provide the derogation up to a certain percentage of the procured balancing capacity. ACER understands that the target for this methodology should be in line with the target of the Electricity Regulation, which is that the contracting for balancing capacity – hence also the allocation of cross-zonal capacity for the exchange of balancing capacity – is conducted in the day-ahead balancing capacity timeframe.

- (65) Moreover, pursuant to Article 39(3) of the EB Regulation *“The actual market value of cross-zonal capacity for the exchange of balancing capacity used in a co-optimised or a market-based allocation process shall be calculated based on balancing capacity bids submitted to the capacity procurement optimisation function pursuant to Article 33(3).”* Since the balancing capacity bids are one of the inputs to this methodology, it is important to ensure the timely submission of this input. Hence, in Article 3 of the Proposal an explicit requirement has been added, which sets the gate closure time for the submission of the standard balancing capacity product bids at the latest one day before the provision of the standard balancing capacity product. Furthermore, since the cross-zonal capacity that can be allocated by this methodology should be first calculated by the CACM capacity calculation methodology, and afterwards the non-allocated part should be made available for allocation in the SDAC, the time window for the application of this methodology is really limited. This is why ACER, together with regulatory authorities and TSOs, reached the conclusion that a single gate closure time should be set for the standard balancing capacity bids that are input to this methodology. Moreover, differentiated gate closure times and applications of this methodology would raise issues of discrimination and non-equal level playing field among different products, since the allocation of the cross-zonal capacity would take place sequentially (following a first-come-first-served principle as described in Article 9(9) and (10) of the Proposal), favouring the applications of the methodology that take place earlier, leading to efficiency losses, since the sequential process does not optimise the allocation in economic surplus terms.
- (66) The discrimination and non-equal level playing field concerns were shared also by many participants in the public consultation conducted by ACER on this methodology, as mentioned in (22), where this issue was brought up, with a specific question for the stakeholders. However, there were also arguments in favour of keeping a sequential procurement of the balancing capacity for different products, mainly reasoned by occurring negative consequences which can be addressed by the possibility of linking the bids. It is important to underline that this requirement is only for the submission of balancing capacity bids in the context of the exchange of balancing capacity and not for the national procurement of balancing capacity. Moreover, any arguments for losses in welfare are covered by the possibility of linking bids of different products, as well as the TSO demand – in the context of the balancing capacity exchange – with local balancing capacity bids, used only for the national balancing capacity procurement (see the Recital (83) on linking of bids and flexible TSO demand below).

- (67) Therefore, ACER added the necessary provisions in the newly introduced Article 3 of Annex I. More specifically, Article 3(4) of Annex I describes the limitations for the contracting period, while Article 3(3) of Annex I describes the limits for the gate closure time when applying the market-based allocation process. Consequently, ACER also deleted the conflicting passages in the Proposal, including its Article 9(9) and (10). In order to ensure consistency with the processes of the day-ahead timeframe, the requirement for the gate closure refers to these processes.
- (68) In its response to ACER's preliminary position as mentioned in section 5.4, BNetzA provided feedback on the single gate closure time. While they agree that the time window to define a gate closure time is very limited, they deem it possible to have more than one gate closure time. They further mentioned that the existing regulation does not require parallel markets of different FRR products and as also mentioned by market participants parallel markets would only be efficient with proper options for linking bids for the different products. BNetzA is of the opinion that the implementation of the linking feature cannot be guaranteed by the time of implementing the market-based allocation process. BNetzA notes that especially smaller BSPs are already burdened by many changes in the balancing market design and that a single gate closure time would force the envisaged cooperation between German and Austrian TSOs for mFRR into moving to parallel procurement with aFRR. Such requirement would not facilitate the integration of balancing markets but endanger cross-border cooperation. While BNetzA acknowledges the mentioned issues regarding a level playing field and non-discrimination, which can be addressed by a single gate closure time, they stated that possible alternatives to address these issues were not discussed. Therefore, BNetzA urged ACER to leave the flexibility of defining more than one gate closure time for the market-based allocation process. ACER would like to clarify that sequential markets will still be possible at (partly) national level. When moving from the currently separate and sequential markets to the more efficient target solution of linked (in regards of cross-border and linking between products) parallel markets, ACER believes that one change of market design, which summarises the different necessary changes for the move to a cross-zonal integration and a single gate closure time with linking of bids, should be more efficient and less burdensome for market participants than many occurring subsequent changes over the same time (especially for smaller BSPs who would only need to invest resources to adapt to changes once). In general, ACER agrees that the possibility of linking BSPs' bids is an important element to enable efficient parallel markets using a single gate closure time and trusts in the TSOs' competence in assessing whether implementation is feasible or not (TSOs' feedback regarding the implementation timeline can be found in Recital (54) and (55)). Possible alternatives of efficient solutions, which would also effectively address the issue of non-discrimination and a level playing field, could not be identified or presented by any of the participating parties during the discussions referred to in Recital (12) and the discussions before the referral of the Proposal to ACER (as mentioned in Recital (20)(c), this was already a point in the Proposal, which regulatory authorities could not agree on). For these reasons and the arguments presented in this section, ACER does not agree with BNetzA regarding their preference to allow for several gate closure times within the market-based allocation process.

6.2.2.2. Requirements on the content of the methodology for a market-based allocation process

- (69) Articles 41(1)(a), (b), (c) and (d) of the EB Regulation set the requirements for the content of the methodology for a market-based allocation process. Following these requirements, the methodology for a market-based allocation process shall address a notification process, a detailed description on how cross-zonal capacity is allocated, a process to define the maximum volume of cross-zonal capacity to be allocated for the exchange of balancing capacity or sharing of reserves and the pricing method, the firmness regime and sharing of congestion income for cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves.
- (70) Article 4 of the Proposal addresses the notification process for the use of the market-based allocation process. Therefore, the Proposal fulfils the general requirement of Article 41(1)(a) of the EB Regulation. However, according to Article 150 of the Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guide line on electricity transmission system operation ('SO Regulation'), additional requirements need to be fulfilled for the notification process, in particular with respect to the involved TSOs, the average expected amount of power interchange, the maximum volume of allocated cross-zonal capacity through the process. Therefore, ACER amended this article in agreement with TSOs to improve its structure and content.
- (71) Article 7 of the Proposal describes how to determine the forecasted market value of cross-zonal capacity for the exchange of energy. As already observed by the regulatory authorities when referring this Proposal to ACER (see Recital (20)(a)), the Proposal does not fully fulfil the general requirement of Article 41(1)(b) of the EB Regulation, since it does not include a sufficiently clear and detailed description of how to determine the forecasted market value of cross-zonal capacity for the exchange of energy. Therefore, ACER closely coordinated with TSOs to agree on an understanding of the process on how to determine the forecasted market value of cross-zonal capacity for the exchange of energy including the related necessary details and amended Article 7 of the Proposal accordingly. More detailed description related to these amendments and newly introduced paragraphs of the corresponding Article 6 of Annex I, can be found in Section 6.2.3.
- (72) Article 8 of the Proposal describes how to determine the actual market value of cross-zonal capacity for the exchange of balancing capacity. Therefore, the Proposal fulfils the general requirement of Article 41(1)(b) of the EB Regulation with respect to the market value of cross-zonal capacity for the exchange of balancing capacity. ACER made small amendments to the text of Article 8 of the Proposal and deemed it necessary to add several provisions to this article. More detailed descriptions to these amendments can be found in section 6.2.2.4.
- (73) Articles 10, 11 and 12 of the Proposal describe the pricing, the firmness regime and the sharing of congestion income for the cross-zonal capacity that has been allocated to bids for the exchange of balancing capacity or sharing of reserves by the market-based allocation process. Therefore, the Proposal fulfils the general requirement of

Article 41(1)(c) of the EB Regulation. However, ACER deemed it necessary to amend these articles of the Proposal to increase the general quality of the text, address the possibility of flow-based capacity allocation and to fulfil the requirement on the equal treatment between the exchange of energy and the exchange of balancing capacity or sharing of reserves, pursuant to Article 41(4) of the EB Regulation. ACER's amendments to these Articles are further described in Section 6.2.2.5.

- (74) Article 6 of the Proposal describes the process of defining the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves. Therefore, the Proposal generally fulfils the requirement of Article 41(1)(d) of the EB Regulation. However, ACER deemed it necessary to amend this article to provide a feasible and transparent process for defining the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves which is compatible with the defined market-based capacity allocation process. These amendments are further described in Section 6.2.2.3.

6.2.2.3. Requirements on the determination of the maximum volume of allocated cross-zonal capacity by the market-based allocation process

- (75) Article 41(2) of the EB Regulation limits the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves which can be allocated by the market-based allocation process. While this limit should generally be at 10% of the available capacity for the exchange of energy of the previous relevant calendar year, this specific limit does not apply if the market-based allocation process is performed not more than two days before the provision of the balancing capacity. In case of this exemption, according to Article 39(6) of the EB Regulation, the relevant regulatory authorities can set another limit than the one specified in Article 41(2) of the EB Regulation after a review on the efficiency of the forecasting method by these regulatory authorities.
- (76) Article 6 of the Proposal sets a maximum of 10% of the average cross-zonal capacity calculated for the fallback procedure of the day-ahead timeframe. While such provision generally fulfils the requirement of Article 41(2) of the EB Regulation, it lacks sufficient clarity to determine the maximum volume of cross-zonal capacity which can be allocated for the exchange of balancing capacity or sharing of reserves and can be significantly improved regarding the compatibility with the chosen approach for the market-based allocation process. Therefore, ACER introduced significant revisions describing a process linking the maximum volume of cross-zonal capacity which can be allocated for the exchange of balancing capacity or sharing of reserves to the outcome of the relevant day-ahead capacity calculation process and similar to the one described in ACER Decision 22/2020 on the market-based allocation process of cross-zonal capacity for the exchange of balancing capacity for the Nordic CCR. More specifically, ACER introduced the following additional provisions for completeness and to improve this article:
- the possibility that if the 10% threshold is not sufficient to meet the local demand for a standard balancing capacity product in a bidding zone, TSOs shall be

allowed to increase this threshold up to 20% if such increase can help address the local shortage of bids;

- an automatic process describing the possibility of changing the default limit of 10% in case of a structural shortage of Balancing Service Providers' ('BSPs') bids in a bidding zone. Following the market-based allocation process described in this methodology, in case of a structural shortage of bids using the existing default limits such an increase would always lead to an overall increase of the economic surplus. Therefore, this process of increasing the default limit of Article 41(2) of the EB Regulation is following the principle of the requirement for changing the default limit in accordance with Article 39(6) of the EB Regulation; and
- references to any other limits concerning the exchange on bidding zone borders due to the provision of the SO Regulation.

(77) Hence, ACER replaced Article 6(1) to (4) of the Proposal with the above mentioned provisions and amended Article 6(5) of the Proposal for more clarity, structure and a first step towards the harmonisation among the existing market-based methodologies throughout different CCRs.

(78) As mentioned in section 5.4, Elia commented on this proposed process which was part of ACER's shared preliminary position. More specifically, Elia shared its concerns related to any possibility to increase the maximum limit beyond 10%. While instead of the solution for a case of insufficient bids to meet a TSO's local demand (Article 5(1)(b) of Annex I) they would prefer to only have the option of a fallback procedure (Article 7(6) of Annex I) they would also prefer to delete Article 5(1)(c) of Annex I and allow an increase of the maximum limit after an amendment of this methodology. If the process is kept as such, the condition of structural local shortage of BSPs' bids should be further clarified.

(79) ACER is of the opinion that the chosen process provides sufficient transparency which also directly addresses the specific situations of scarcity in the balancing capacity timeframe. Since in such situations the value of additional cross-zonal capacities for the exchange of balancing capacity or sharing of reserves can in general be considered as exceptionally high, ACER agrees with Elia that also in such situations there could be a negative impact on the day-ahead market. Therefore, ACER considers the proposed process which allows for an additional increase in exceptional situations while still limiting this exception and have a subsequent fallback as a pragmatic solution. However, since such situations should be thoroughly monitored, ACER included the relevant publication requirement in Article 12(10)(d) and (e) of Annex I. Further, ACER deems the condition of a structural situation as sufficiently clear in this context (e.g. where the situation Article 5(1)(b) of Annex I is triggered more often than the use of the default limit of Article 5(1)(a) of Annex I). For clarification following a further comment from Elia, in case of flow-based capacity parameters the 10% maximum should be considered as a maximum available percentage on the remaining available margin on each critical network element as the outcome from the flow-based capacity calculation.

6.2.2.4. Requirement on the comparison of values of cross-zonal capacity for the market-based allocation process

- (80) Article 41(3) of the EB Regulation requires the market-based allocation process to be based on the comparison of an actual value of cross-zonal capacity and a forecasted value of cross-zonal capacity for the two relevant markets, energy and balancing capacity. How these values of cross-zonal capacity shall be calculated is specified in Article 39(1), (3), (4) and (5) of the EB Regulation.
- (81) Article 9 of the Proposal describes the determination of the allocated volume of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves, by specifying that the objective function of the process is based on a comparison of the two market values: the actual market value of cross-zonal capacity for the exchange of balancing capacity and the forecasted market value of cross-zonal capacity for the exchange of energy. Therefore, the Proposal fulfils the requirement pursuant to Article 41(3) of the EB Regulation. However, ACER amended Article 9 of the Proposal in order to improve the clarity of the text by inserting new provisions (listing analytically the inputs, the constraints, the objective function and the output of the optimisation algorithm for the allocation of the cross-zonal capacity), deleting non necessary parts and improving the wording and structure of the Article.
- (82) Article 7 of the Proposal describes the forecasted market value of cross-zonal capacity for the exchange of energy which is calculated based on shadow prices associated to the critical network elements of the flow-based domain which are limiting the exchange of energy. Since these shadow prices on the limiting critical network elements are reflecting the expected differences in market prices of the day-ahead market, the Proposal does fulfil the requirement of Article 39(5) of the EB Regulation related to the comparison of values of cross-zonal capacity for the market-based allocation process. Information on ACER's amendment on Article 7 of the Proposal and the requirements related to the forecasted market value of cross-zonal capacity can be found in section 6.2.3.
- (83) Article 8 of the Proposal describes that the actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves is calculated by considering the economic surplus based on balancing capacity bids and the TSO demand. Therefore, the Proposal fulfils the requirement pursuant to Article 39(3) of the EB Regulation. Since the principle of economic surplus from the exchange of balancing capacity or sharing of reserves is also covering the avoided costs of procuring balancing capacity through the sharing of reserves, the Proposal also fulfils the requirement of Article 39(4) of the EB Regulation. ACER made amendments to the paragraphs of Article 8 of the Proposal and the related definition of economic surplus for the exchange of balancing capacity or sharing of reserves in Article 2(2)(d) of the Proposal for enhancing clarity and consistency. Following the consultation with Core regulatory authorities and TSOs and their agreement, ACER further added to Article 8 of the Proposal provisions for the possibilities of a flexible TSO demand and specified that, by default, TSOs shall not put a price on their demand in the market-based allocation process. Besides the possible consideration of an indivisible balancing capacity bid for decreasing the overall procurement costs and for sharing of

reserves, ACER also introduced a provision which allows TSOs to optimise their procurement among different products. While on a long-term, ACER deems the inclusion of all relevant bids for different standard balancing capacity products in the same process and the optimisation among them performed at a regional level as the most efficient solution, ACER allows a step wise approach towards this target, where local efficient solutions can be applied in parallel. Therefore, ACER added an exemption which allows TSOs to link a TSO demand within the marked-based allocation process to firm balancing capacity bids from a parallel procurement process not participating in the marked-based allocation process. To incentivise a first step towards a full integration in the marked-based allocation process, ACER limited such external links to standard balancing capacity products. The relevant added provision in Article 7(4)(b) of Annex I therefore allows TSOs to profit from efficiency gains by linking their balancing capacity demand of two parallel procured standard balancing capacity products (also to outside the market-based allocation process) as long as other TSOs are not ready yet to participate in a balancing capacity cooperation for both standard balancing capacity products. For the needed transparency of such process, ACER added a requirement in Article 12(5) of Annex I to publish the relevant information linked to such increase of a TSO balancing capacity demand. Moreover, ACER deems it necessary to add relevant provisions for cases of insufficient local balancing capacity bids to cover a TSO's balancing capacity demand in Article 7(6) and (7) of Annex I. Since the TSOs' demand should be fixed without the general possibility to introduce price caps, these additional paragraphs describe how the actual market value of cross-zonal capacity for the exchange of balancing capacity or the sharing of reserves should be considered in case of a local shortage of bids. The technical price limit included in the definition is referring to a mathematic maximum for the algorithm to function without having the purpose of limiting price formation. As the TSO demand is inelastic, this technical price limit will only affect the allocation in case of a shortage of local bids to cover the TSO's demand even after applying the market-based allocation process. Additionally, ACER added a reference for the provision of a fallback procedure, described under the methodology pursuant to Article 33(1) of the EB Regulation, if a local demand cannot be met after applying the market-based allocation process described in this methodology. ACER also included a provision for setting a technical price limit for balancing capacity for the sole purpose of calculating the change of economic surplus from the exchange of balancing capacity or sharing of reserves in the explicit case of a simultaneous scarcity situation on the day-ahead and the balancing capacity market. This provision was added to address Article 41(4) of the EB Regulation, which requires equal treatment of the cross-zonal capacity allocated for the exchange of energy and for the exchange of balancing capacity or sharing of reserves. Any other amendments related to this requirement can be found in the following section 6.2.2.5.

- (84) In their response to ACER's preliminary position as mentioned in section 5.4, all TSOs of the Core CCR commonly proposed two additional inputs under Article 8(2) of Annex I for considering the impact of missing money for the remuneration of long-term transmission rights. In the oral hearing it was further concluded that while both additions are options to address this issue, the second of the proposed option has more relevance. In general, ACER agrees that the described approach for considering

missing money for the remuneration of long-term transmission rights in the process of sharing congestion income, as described in Recital 6.2.2.5.3, can have an impact on the costs for the exchange of balancing capacity or sharing of reserves. Therefore, ACER added Article 8(2)(d) to Annex I as well as the related publication provision in Article 12(7) of Annex I.

- (85) In its response to ACER's preliminary position as mentioned in section 5.4, Elia commented on Article 7(5) of Annex I, which addresses the decrease of the TSO demand resulting from the sharing of reserves, by stating that the decrease of the TSO demand based on sharing of reserves should not be mentioned here but defined in accordance with the dimensioning rules pursuant to Article 157(2)(k) of the SO Regulation and Article 32(1) of the EB Regulation. ACER agrees that the TSO demand including the possibility of sharing of reserves needs to be done considering these requirements. However, ACER does already refer to these requirements in the definition of TSO demand in the introduced Article 2(2)(g) of Annex I, does not deem the relevant paragraph to be in conflict with this and considers it as necessary to have a clearer and more complete description of the process for the determination of the market value of cross-zonal capacity for the exchange of balancing capacity and sharing of reserves.
- (86) Elia further provided a general remark on how the concept of sharing of reserves is considered by the market-based allocation process. In their view it is not clear in the methodology, which is mainly focused on accommodating the exchange of balancing capacity, how this is considered and that the methodology should either recognise that it cannot be applied for sharing of reserves in its current form or include further details on how to address sharing of reserves. ACER does not agree with this view, since sharing of reserves is fully addressed by considering the reduced procurement cost from sharing of reserves which will be reflected in the increased TSO's economic surplus as defined in Article 2(2)(c) of Annex I and addressed in Article 7(1) of Annex I. Further, ACER is of the opinion that the possibility of sharing of reserves is sufficiently addressed throughout the whole methodology. More specifically, ACER understands that sharing reserves can be applied by TSOs on the basis of a sharing of reserves agreement, in which the TSOs agree on sharing a standard balancing capacity product in accordance with Article 168 or 170 of the SO Regulation and the choice of applying the market-based allocation process in accordance with Article 38(1) of the EB Regulation to accommodate the sharing of reserves. The conditions of sharing of reserves, based on a relevant agreement, needs to be incorporated in the TSO demand as defined in Article 2(2)(g) of Annex I. The cross-zonal capacity allocation function will consider the TSO demand (as mentioned in Article 8(2)(c) of Annex I) and the BSP's bids (as mentioned in Article 8(2)(b) of Annex I) to calculate the change of economic surplus from the exchange of balancing capacity or sharing of reserves (as defined in Article 2(2)(c) of Annex I) depending on the availability of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves. While the avoided costs for procuring balancing capacity by sharing reserves will be considered as the TSOs surplus component in economic surplus from the exchange of balancing capacity or sharing of reserves, the actual change of economic surplus will be

equivalent to the prices of the BSPs' bids which were not activated due to the sharing of reserves.

- (87) Elia provided a further comment on potential issues related to the equal treatment between the exchange of energy and the exchange of balancing capacity or sharing of reserves with regards to the technical price limit and shared its concern that a high price limit for balancing capacity could result in an advantage for balancing capacity in the comparison of market values. Also TSOs of the existing aFRR balancing capacity cooperation of Germany and Austria commented in their response to ACER's preliminary position as mentioned in section 5.4 on the technical price limit and suggest to limit balancing capacity bids to the price limit of the day-ahead market independently of the applied pricing principle. As discussed during the exchanges with TSOs and regulatory authorities referred to in Recital (12), ACER understands that in situations without local shortage of bids a price limit does not have an impact on the determination of the allocated volume of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves. It is not in the scope of this methodology to generally set a price limit for BSP's bids on balancing capacity if it is not required for the market-based allocation process. In situation with insufficient local bids to meet the TSO demand for balancing capacity the value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves should be considered high and not restricted by an unnecessary price cap. In case there is also scarcity on the day-ahead market, ACER agrees that equal treatment needs to be addressed by the provision as described in Recital (83) and set in Article 7(7) of Annex I.

6.2.2.5. Requirement on the equal treatment between the exchange of energy and the exchange of balancing capacity or sharing of reserves

- (88) Article 41(4) of the EB Regulation requires that the pricing method, the firmness regime and the sharing of congestion income for the cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves via the market-based allocation ensures equal treatment with the cross-zonal capacity allocated for the exchange of energy. Articles 10, 11 and 12 of the Proposal aim to fulfil this requirement

6.2.2.5.1. Firmness regime for cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves

- (89) Article 11 of the Proposal describes the firmness regime for cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves and how to deal with its related costs. The described process in this article does address the requirement of Article 41(4) of the EB Regulation, since it is using the same rules for ensuring firmness and sharing related costs as used for the cross-zonal capacities allocated for the exchange of energy. While ACER did not need to amend much of Article 11 of the Proposal, some amendments were made to improve wording, structure and clarity of the Proposal and deleted parts which were not considered relevant or covered elsewhere.

(90) In its response to ACER's preliminary position as mentioned in section 5.4, Elia commented on Article 9(2) of Annex I, which addresses curtailment in case of force majeure and emergency situations and allows to deviate from the default rule by introducing a more efficient and non-discriminatory solution in the methodology pursuant to Article 33(1) of the EB Regulation. Elia's comment mentions that as such possibility is limited it is likely that not all TSOs of a CCR are included in the methodology pursuant to Article 33(1) of the EB Regulation. ACER generally agrees but does not see a need to change the relevant requirement.

6.2.2.5.2. *Pricing of cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves*

(91) Article 10 of the Proposal describes the pricing of cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves. To ensure the equal treatment between cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves and allocated for the exchange of energy in accordance with Article 41(4) of the EB Regulation and establish a process which can also apply to a flow-based allocation environment, ACER deemed it necessary to amend the article on pricing of cross-zonal capacity. While the wording of Article 10 of the Proposal was changed to provide a description of pricing principles which is also suitable for the flow-based approach, its paragraph 4 which allows a pay-as bid pricing principle was deleted to fulfil the requirement pursuant to Article 41(4) of the EB Regulation.

(92) In their initial proposal the TSOs specified in Article 3(3) that: *“The settlement of balancing capacity bids for each BCC [i.e. balancing capacity cooperation] applying this MB CZCA methodology shall be based on marginal pricing (pay-as-cleared). For a transitional period of three years after approval of this MB CZCA Methodology, any other harmonised settlement of balancing capacity per BCC is allowed to be used.”* The Core regulatory authorities in their request for amendment requested that the *“option to apply alternative settlement mechanisms during a transitory period is deleted from the MB CZCA Proposal in Article 3(3), since Core RAs do not see a need for this.”* However, in their amended proposal, the TSOs although keeping the marginal pricing principle, replaced the transitory period provision with the following (in Article 3(2) of their amended proposal): *“Until the proposal to harmonize the methodology for the allocation process of cross-zonal capacity for the exchange of balancing capacity according to article 38(3) EB Regulation is applicable, a settlement of standard balancing capacity bids between TSOs and BSPs may be based on pay-as-bid.”* The Core regulatory authorities in their referral letter described this sequence of changes and presented also the different views among them: (a) some regulatory authorities think that the market-based cross-zonal capacity allocation methodology should not include any rules on the pricing principle (as these should be included in the methodology pursuant to Article 33(1) of the EB Regulation); these regulatory authorities also support that a requirement for marginal pricing would endanger the existing balancing cooperation, and (b) other regulatory authorities consider this principle to be a key component for the determination of the market value for cross-zonal capacity and are of the opinion that the exclusion of this principle from

the Core market-based cross-zonal capacity allocation methodology would undermine the level playing field within the Core CCR. Regarding the choice between marginal and pay-as-bid, most Core regulatory authorities consider the marginal pricing principle as the most transparent one with respect to the determination of all surpluses, notably the BSP surplus, and congestion income on the border(s) where two or more TSOs apply the Core market-based cross-zonal capacity allocation methodology. Some Core regulatory authorities point out that as a pragmatic approach, similar to the TSOs proposals, the general principle of usage of marginal pricing could be upheld, but for a limited period of time the usage of a pay-as-bid settlement should not be ruled out.

- (93) Following the discussions with TSOs and regulatory authorities, ACER understands that the market-based cross-zonal capacity allocation methodology should specify the pricing principle, since the choice of the pricing principle affects (a) the calculation of the economic surplus, which is used as a basis for the determination of the volume of the allocated cross-zonal capacity to the exchange of balancing capacity, (b) the calculation and distribution of the congestion income and (c) indirectly the bidding behaviour of BSPs participating in the balancing capacity cooperation and, as such, affecting the resulting value of the cross-zonal capacity for the exchange of balancing capacity. The abovementioned elements, namely the congestion income and the value of the cross-zonal capacity for the exchange of balancing capacity, are required to be described in this methodology. More specifically, Article 41(1)(b) of the EB Regulation requires that this methodology includes a detailed description of how to determine the actual market value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves; for this description the definition of the economic surplus is required, as described in Recital (83), thus also the inclusion of the pricing principle. Moreover, Article 41(1)(c) of the EB Regulation requires that this methodology includes a detailed description of – among others – the sharing of congestion income. As can be concluded from the description in Article 11(1) of Annex I, the calculation of the congestion income requires the balancing capacity price. Therefore, the definition of the pricing principle is part of this methodology.
- (94) Based on the discussions between ACER, the regulatory authorities and TSOs, so far in the context of this methodology, but also in that of other cross-zonal capacity allocation methodologies (ACER Decision 12/2020 on the methodology for a co-optimised allocation process of cross-zonal capacity, as well as ACER Decision 22/2020 on the market-based allocation process of cross-zonal capacity for the exchange of balancing capacity for the Nordic CCR), it is clear that the target for the application of the cross-zonal capacity allocation methodologies includes the marginal pricing principle. However, there is an already existing project, namely the balancing cooperation between Germany and Austria (which does not implement for now any of the cross-zonal capacity allocation processes envisaged in EB Regulation pursuant to Articles 40 to 41), which settles balancing capacity with BSPs with the pay-as-bid approach. Based on the discussions with Core TSOs and regulatory authorities, ACER understands that the existing project would like to continue using this approach after the expiry of the current contract (December 2022) for a transitory period after starting applying this market-based cross-zonal capacity allocation methodology.

- (95) Article 41(4) of the EB Regulation requires that – among other – the pricing method for cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves through this methodology, should ensure equal treatment with the cross-zonal capacity allocated for the exchange of energy. In order to ensure equal treatment the pricing method applied for the cross-zonal capacity should be the same under the two processes: market based allocation pursuant to Article 41(1) of the EB Regulation and single day ahead coupling pursuant to Title II, Chapter 5 of the CACM Regulation. Article 38(1) of the CACM Regulation specifies that the price coupling algorithm in the context of single day-ahead coupling uses the marginal pricing principle according to which all accepted bids will have the same price per bidding zone per market time unit. Moreover, Article 42 of the CACM Regulation requires that the day-ahead cross-zonal capacity charge should amount to the difference between the corresponding day-ahead clearing prices of the relevant bidding zones. Therefore, it is concluded that the pricing principle for the cross-zonal capacity allocated for the exchange of energy is the marginal pricing. In order to respect the requirement of Article 41(4) of the EB Regulation, the pricing principle for the cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves should also be the marginal pricing. Hence, ACER considers that pay-as-bid as a pricing principle for the definition of economic surplus and the calculation of congestion income for the market based cross-zonal capacity allocation is not compliant with Article 41(4) of the EB Regulation.
- (96) Taking the abovementioned conclusion into account, ACER specified in the version of Annex I that was shared with the Core regulatory authorities and TSOs, as pricing principle the marginal one. This position was also supported by numerous comments received during the public consultation referring both to efficiency gains from adopting the marginal pricing, but also to concerns for discrimination and non-equal level playing field, in case an exemption was allowed for the existing project.
- (97) In its response to ACER's preliminary position as mentioned in section 5.4, BNetzA notes that Article 30 of the EB Regulation only specifies marginal pricing for balancing energy products but not for balancing capacity products and that both the EB Regulation and the Electricity Regulation do not contain any provisions for pricing of balancing capacity at national level. Hence, BNetzA does not see a legal basis for the Proposal to introduce marginal pricing for the TSO-BSP settlement of balancing capacity at a national level and urges ACER to also allow for pay-as-bid pricing in the market based allocation process. As mentioned in Recital (56), BNetzA shared its concerns on the possible discontinuation of the existing cooperation for the exchange of aFRR balancing capacity between German and Austrian TSOs, which is currently using the pay-as-bid pricing principle. BNetzA agrees that the marginal pricing principle would provide an optimal basis for the comparison of the market values from day-ahead energy and balancing capacity but is of the opinion that marginal pricing is not the only valid option. BNetzA currently sees the introduction of marginal pricing in German energy markets as a tremendous risk due to high market concentration and volatile prices (to support this statement BNetzA shared a table with weekly indications of the Herfindahl-Hirschman-Index for the aFRR and mFRR capacity market indicating a high market concentration). While in the current situation they

assume that marginal pricing would have a negative effect on the price formation, BNetzA will consider a change to marginal pricing when there is a critical mass of TSOs and market participants in a larger balancing capacity cooperation that would alleviate the market concentration and increase the competition level (e.g. once more TSOs would join the existing cooperation). BNetzA further states that ACER's argumentation on the positive effect of marginal pricing on the EB Regulation objectives for efficiency and non-discrimination focuses on the comparison of day-ahead and balancing capacity markets but should focus instead on the efficiency and fostering non-discrimination in balancing capacity markets (functioning of national balancing capacity markets has a stronger impact than cross-zonal cooperations which are also restricted by export and import limits in accordance with the SO Regulation). Regarding the discrimination discussion if pay-as-bid is only allowed for existing cooperation, BNetzA points out that this is only an issue once other parties intend to join, which is currently not the case. Therefore, BNetzA proposes to allow the pay-as-bid pricing principle in the market-based allocation process for existing cooperation until marginal pricing can be implemented.

- (98) ACER notes that indeed there is no obligation foreseen by the EB Regulation nor by the Electricity Regulation on the national settlement of balancing capacity between TSO and BSPs. However, when the TSOs opt (TSOs have the possibility not to allocate cross-zonal capacity for the exchange of balancing capacity pursuant to Article 33(4)(a) of the EB Regulation) for allocating cross-zonal capacity for the exchange of balancing capacity or sharing of reserves, then there are requirements to ensure that the objectives of the EB Regulation are respected, and that the allocation of this cross-zonal capacity does not favour the exchange of balancing capacity at the expense of the exchange of energy. As mentioned in Recital (93) above, this methodology should define the pricing principle for the definition of the economic surplus and the calculation of the congestion income. And as concluded in Recital (95) above, pay-as-bid as a pricing principle for the definition of economic surplus and the calculation of congestion income for the market based cross-zonal capacity allocation is not compliant with Article 41(4) of the EB Regulation.
- (99) In their response to ACER's preliminary position as mentioned in section 5.4, the TSOs of the existing aFRR balancing capacity cooperation of Germany and Austria stated that they accept marginal pricing as the target model. However, they note that marginal pricing may cause major inefficiencies, if the market is too small or not mature enough. They recognise in Article 30(5) of the EB Regulation a general possibility for applying a pricing methodology alternative to marginal pricing, and they consider that this possibility is not only applicable to balancing energy but also to balancing capacity. Therefore they suggest that Core TSOs may request the application of a pricing method alternative to marginal pricing, if they identify inefficiencies in the application of marginal pricing. In such a case, the Core TSOs applying this cross-zonal allocation process should perform a detailed analysis demonstrating that the alternative pricing method is more efficient and the Core regulatory authorities should approve this alternative pricing method. A reassessment will take place, each time a new bidding zone will be included in the application. Finally, for equal treatment of the day-ahead energy market and the balancing capacity

market the Core TSOs suggest to equal the price limit of balancing capacity bids to the price limit of the day-ahead market independently of the applied pricing method.

- (100) ACER notes that Article 30 of the EB Regulation sets the requirements for the balancing energy pricing, with one of them being the marginal pricing, pursuant to Article 30(1)(a) of the EB Regulation, as well as the pricing of the cross-zonal capacity used for the exchange of balancing energy and the imbalance netting process (which should be based on the balancing energy prices pursuant to Article 30(3)(b) of the EB Regulation). Article 30(5) of the EB Regulation provides the alternative of a different (to marginal) pricing, if inefficiencies in the application of marginal pricing have been identified. The requirement for marginal as the pricing principle for the cross-zonal capacity allocated for the exchange of balancing capacity is not linked to the requirements of Article 30 of the EB Regulation, but follows from Article 41(4) of the EB Regulation, as explained in Recital (95) above. The proposal of German and Austrian TSOs to fulfil the equal treatment requirement is to set the bid price limits in the two markets equal. However, ACER considers that equalising the price limit is not sufficient to ensure equal treatment of the cross-zonal capacity allocated to the two markets, when the assessment of the value of the cross-zonal capacity in the two markets follows a different pricing approach.
- (101) Therefore, ACER amended Articles 3(2) and 10(4) of the Proposal by deleting the pay-as bid pricing principle to fulfil the requirement pursuant to Article 41(4) of the EB Regulation.
- (102) While ACER deems the pricing principle important to fulfil the requirement pursuant to Article 41(4) of the EB Regulation, ACER also deems it important to facilitate a transition of early implementation projects towards the target of a complete implementation of a methodology once this is available. Therefore, ACER agreed to allow for early implementation of the market-based allocation process as an implementation step towards the full implementation. More information about the implementation timeline of this methodology can be found in section 6.2.1.2.

6.2.2.5.3. Sharing of congestion income for the exchange of balancing capacity or sharing of reserves

- (103) Article 12 of the Proposal describes the sharing of congestion income for cross-zonal capacity that has been allocated for the exchange of balancing capacity or sharing of reserves. ACER amended Article 12 of the Proposal to make it also applicable for a flow-based allocation approach, to increase clarity, to ensure equal treatment between the exchange of energy and the exchange of balancing capacity or sharing of reserves, pursuant to Article 41(4) of the EB Regulation and to sufficiently address an eventual loss for TSOs resulting from a missing money problem for the remuneration of long-term transmission rights. To address these points, ACER agrees to the approach pursuant to Article 12(1) and (2) of the Proposal that as a first step the congestion income from the application of the market-based allocation process shall be considered day-ahead congestion income and shared in accordance with the methodology in accordance with Article 73 of the CACM Regulation. ACER interprets the remaining paragraphs of Article 12 of the Proposal as not compatible

with such approach and therefore deleted these. Following this, ACER considers it sufficient to address the congestion income from balancing capacity per application of the market-based allocation process pursuant to Article 38(1) of the EB Regulation which would be equally applicable for a flow-based and coordinated net transmission capacity approach. While treating the congestion income from balancing capacity as congestion income from day-ahead will largely address the missing money problem, ACER acknowledges the possibility of a remaining risk of missing money for the remuneration of long-term transmission rights. While ACER expects the congestion income from balancing capacity to be higher than in day-ahead in most cases due to the application of the adjustment factor in the forecasted market value of the cross-zonal capacity for the exchange of energy, ACER is of the opinion that the remaining risk should be carried by the TSOs profiting from the exchange of balancing capacity and sharing of reserves as described under Article 11(4) of Annex I. However, since the (flow-based) cross-zonal capacities allocated for the exchange of balancing capacity and sharing of reserves are not exclusively provided by the TSOs applying the market-based allocation process but could also be provided from TSOs outside of this application, ACER is of the opinion that the benefits from the use of this cross-zonal capacities shall be shared among all Core TSOs. For these reasons ACER replaced Article 12 of the Proposal with Article 11 of Annex I.

- (104) In their response to ACER's preliminary position as mentioned in section 5.4, all TSOs of the Core CCR commonly proposed to assess the missing money on a monthly basis, aligned with the frequency of the remuneration of long-term transmission rights as defined in the harmonised allocation rights in accordance with Article 51(1) of the FCA Regulation, instead of the annual frequency proposed by ACER. While ACER proposed this longer frequency to average out the risk of missing money for the remuneration of long-term transmission rights over a longer time period, TSOs stated that this would also be sufficiently addressed when applying such process on a monthly basis. Following the consultation on this issue ACER amended Article 11(3) and (4) linked the monthly frequency for the remuneration of long-term transmission rights.

6.2.2.6. Requirement on the use of cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves

- (105) Article 41(5) of the EB Regulation requires that cross-zonal capacity, which is allocated to the exchange of balancing capacity or sharing of reserves by the market-based allocation process, shall only be used for the associated exchange of balancing energy. Articles 38(4) and (9) of the EB Regulation set further requirements on the use of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves.
- (106) The Proposal addresses these requirements pursuant to Article 38(4) and 38(9) of the EB regulation. However, they were placed in different Articles, not relevant with the content. Therefore, ACER included two paragraphs fulfilling these requirements under Article 3 in Annex I listing, the principles for applying market-based capacity allocation process.

6.2.3. Assessment of the requirements for the forecasted market value of cross-zonal capacity

- (107) Article 39(5) of the EB Regulation sets the requirements on how to determine the forecasted market value of cross-zonal capacity. The forecast shall be based on the differences in day-ahead market prices of the relevant bidding zones. When calculating this forecasted value, additional relevant factors influencing demand and generation patterns in the different bidding zones shall be taken into account. The calculation can either be done by using transparent market indicators that disclose the market value of cross-zonal capacity (Article 39(5)(a) of the EB Regulation) or by using a forecasting methodology enabling the accurate and reliable assessment of the market value of cross-zonal capacity (Article 39(5)(b) of the EB Regulation).
- (108) Article 7 of the Proposal describes a method where the forecasted market value of cross-zonal capacity for the exchange of energy is calculated based on shadow prices associated to the critical network elements which are limiting the exchange of energy. Since such calculation does not allow to transparently disclose the market value of cross-zonal capacity as it would be the case when using a market spread of a reference day (i.e. as used in ACER Decision 22/2020 on the market-based allocation process for the Nordic CCR) the Proposal does not follow the principle in accordance with Article 39(5)(a) of the EB Regulation. However, the proposed approach allows for a more accurate assessment of the market value of cross-zonal capacity, which can also consider the wider impact on the flow-based capacity parameters of the whole CCR instead of being restricted to single bidding zone borders. Hence, the Proposal follows the principle in accordance with Article 39(5)(b) of the EB Regulation.
- (109) Article 7(3) of the Proposal requires the inclusion of adjustment factors to improve the accuracy of the forecasting and allows for the inclusion of mark-ups to take into account the uncertainty of the forecast. The Proposal does not further specify how such mark-up or adjustment factor would be applied in the proposed process for forecasting the market value of cross-zonal capacity for the exchange of energy but refers under Article 7(5) of the Proposal to the methodology pursuant to Article 33(1) of the EB Regulation where these concepts shall be further included and justified. As mentioned in section 6.2.2.2, a detailed description of the determination of the forecasted market value of cross-zonal capacity for the exchange of energy is a requirement for the Proposal according to the EB Regulation, and there is no legal basis for including any part of it in the methodology pursuant to Article 33(1) of the EB Regulation, which is different in scope both geographically (the methodology pursuant to Article 41(1) of the EB Regulation is submitted and approved at CCR level, while the methodology pursuant to Article 33(1) of the EB Regulation is submitted by two or more TSOs exchanging balancing capacity) and in applicability (TSOs sharing reserves may apply the methodology pursuant to Article 41(1) of the EB Regulation, but they do not submit/apply the methodology pursuant to Article 33(1) of the EB Regulation). Therefore, Article 7(3) of the Proposal does not sufficiently describe the mentioned concepts in accordance with the requirements of the EB Regulation.

- (110) While the proposed method based on the expected price differences of the day-ahead market is in principle fulfilling the requirement of Article 39(5) of the EB Regulation, the description of this method in Article 7 of the Proposal generally lacks in clarity, detail and transparency. In consultation with TSOs and regulatory authorities ACER improved Article 7 of the Proposal in this regards by replacing it with a more structured and detailed description of the process, specifying the related requirements and options for such forecasting process and adding related transparency requirements to Article 12 of Annex I on publication of information.
- (111) In consultation with TSOs, it was concluded that the proposed method for forecasting the market value of cross-zonal capacity for the exchange of energy should use bid curves from order books of a reference day in combination with a pre-final flow-based capacity domain for the upcoming single day-ahead coupling from the day-ahead capacity calculation in accordance with Article 20(2) of the CACM Regulation. Further, the forecasting method should also consider the different impact on the market prices of the single day-ahead coupling dependent on the amount of cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves. This should be considered by providing a dynamic forecasted market value of cross-zonal capacity for the exchange of energy. Such dynamic value can be calculated by recalculating the single day-ahead market coupling with the input parameters for the forecast considering different amounts of available cross-zonal capacity for the exchange of energy in each recalculation. A trajectory between the different recalculations should complete the calculation for a dynamic forecasted market value of cross-zonal capacity for the exchange of energy. These concluded descriptions of the forecasting process are reflected in Article 6(1) and (2) of Annex I including the definition pre-final day-ahead capacity domain in Article 2(2)(e) of Annex I.
- (112) ACER also consulted with TSOs and regulatory authorities on how to include provisions for an adjustment factor or mark-up in the Proposal. Since applying a mark-up value in EUR/MW as one value on all critical network elements or on separately per individual critical network elements was not considered an effective measure, the further focus of the discussion was on how to apply an adjustment factor. In the exchanges with TSOs, as referred to in Recital (12), TSOs provided a concept of an adjustment factor which is determined based on positive and negative forecast errors of the forecasted market value of cross-zonal capacity for the exchange of energy from the previous 30 trading days. ACER is of the opinion that such approach, which is solely based on historic average forecast errors, is not a suitable method to generally improve the accuracy of further forecasts but much better suited to efficiently address the risk of under-allocation of cross-zonal capacity for the exchange of energy. Therefore, ACER added a similar adjustment factor process which is only based on positive forecast errors and should be applied as a protection for the single day-ahead market coupling against an inefficient forecasting method used in the market-based allocation process (in principle similar to the mark-up concept introduced for the Nordic market-based allocation process by ACER Decision 22/2020). The average positive forecast error should not be higher than 5%. With such method any inefficient forecast applied by a market-based allocation process would lead to a subsequent constraint to the market-based allocation process which is used for allocating cross-

zonal capacity to the balancing timeframe. Hence, ACER introduced the relevant paragraphs (3), (4) and (5) in Article 6 of Annex I, the definition of a forecast error in Article 2(2)(d) of Annex I, amended the definition of adjustment factor in Article 2(2)(a) of the Proposal and deleted the definition for a mark-up in Article 2(2)(f) of the Proposal. Further, for the necessary transparency related to this process ACER introduced publication requirement in Article 12(4) and (10)(a) and (f) of Annex I.

- (113) ACER deemed it necessary to improve clarity of the description of the choice of reference day including the possibility to deviate from the default reference day. Therefore, ACER replaced Article 7(4) of the Proposal in coordination with TSOs with Article 6(6) and (7) of Annex I and added the necessary provisions for transparency in Article 12(4), (9) and (10)(b) of Annex I.
- (114) ACER further deemed it necessary to add Article 6(9) of Annex I since a forecasting approach as used for this market-based allocation process considering the flow-based domain of the CCR can only be efficiently provided by one single entity for the whole CCR.
- (115) Elia had a question for clarification of the concept as described in Recital (111) and discussed with the participating TSOs in the discussions referred to in Recital (12).
- (116) Elia shared its support for the adjustment factor concept as presented in ACER's preliminary position.
- (117) In their response to ACER's preliminary position as mentioned in section 5.4, all TSOs of the Core CCR commonly commented on the design of the adjustment factor. The Core TSOs, with the exception of Elia who supports ACER's approach, proposed to consider also negative forecast errors, since a wrong forecast could go in both direction and the objective of the adjustment process is to maximise the accuracy of the forecast. While these TSOs are of the opinion that the adjustment factor should also be allowed to be below one (1) they also acknowledge that the average of all forecast errors should be positive to protect the day-ahead market. As mentioned in Recital (112) above, in ACER's view the proposed design of an adjustment factor based on forecast errors does not provide a clear link with improving the forecasting but is more suitable as a protection against wrong forecasts, which is also necessary. Therefore, ACER did not change the concept of the forecast error. While ACER in principle deems it possible to include a concept of adjustment factors which improve the accuracy of the forecast, such concept could not be provided during the consultations referred to in Recital (12). ACER invites TSOs to keep working on ways to improve the forecast of the market value of cross-zonal capacity for the exchange of energy while protecting the day-ahead market from negative impacts resulting from forecast inaccuracies and if relevant after sufficiently assessing such improvements propose an amendment of this methodology in accordance with Article 6(3) of the EB Regulation. The Core TSOs further commonly requested to extend the thresholds for defining the adjustment factor. However, after some clarification in the oral hearing TSOs confirmed that these comments are addressed by the clarified understanding of the calculation of the average forecast error. Following this and to avoid further

misunderstandings, ACER added a sentence for clarification of this approach in Article 6(4) of Annex I.

- (118) Another provision addressed by the common response of all Core TSOs to ACER's preliminary position was Article 6(9) of Annex I. While the TSOs acknowledged that the forecast should be done by one entity for the whole CCR, they questioned the positive impacts on efficiency to require this entity to be the same as the one operating the cross-zonal capacity allocation function. In ACER's view the chosen forecasting process and the operation of the cross-zonal capacity allocation function are linked, which is why ACER expects them to be performed by the same entity. However, while the relevant responsibilities should remain the same, ACER acknowledges that in principle the operation of both tasks could be divided and the efficiencies related to its operations are currently not fully clear. Therefore, ACER decided to leave this open in the scope of this decision and softened the requirement of Article 6(9) of Annex I accordingly.
- (119) In its response to ACER's preliminary position as mentioned in section 5.4, CREG provided its view on the requirement pursuant to Article 39(5)(b) of the EB Regulation regarding the accuracy and reliability of the chosen forecasting method and the application of the adjustment factor. More specifically, CREG shares its understanding that while accuracy refers to the extent of the forecast errors, reliability refers to the number of occurrences of wrong forecasts and explains how the different aspects should be addressed. While ACER partly agrees, ACER is of the opinion that the approach of Article 6(4) of Annex I provides for an adequate protection against forecast errors for the single day-ahead coupling while still allowing a workable process and the possibility of allocating cross-zonal capacity to the balancing capacity timeframe when efficiency gains can be expected as a result of such allocation.
- (120) CREG also states that the chosen approach of an adjustment factor does not sufficiently address cases of forecast error where there is no forecasted market value (i.e. 0 EUR/MW) and proposes to apply an additional mark-up component to address this. ACER agrees that the effectiveness of the chosen adjustment factor process is limited in case of forecast errors on forecasted values which are close to 0 EUR/MW. However, ACER is of the opinion that in case of a forecasted market value of 0 EUR/MW, the day-ahead market would still be protected based on the allocation of cross-zonal capacities to day-ahead in case of equal market values as addressed in Article 8(6) of Annex I and the use of maximum volume limits in accordance with Article 5 of Annex I. As mentioned in Recital (112), consultations with TSOs and regulatory authorities could not conclude on a possible design for introducing a mark-up approach for the chosen forecasting method. In case the described approach proves to be ineffective for the application of the market-based allocation process in the Core CCR, ACER invites TSOs to propose a more effective approach in a proposal for amendment of this methodology in accordance with Article 6(3) of the EB Regulation.
- (121) In its feedback CREG further provided a comment questioning the reproducibility of the forecasting method and subsequent effects. Since the chosen forecasting method is based on the recalculations of the single day-ahead coupling and pursuant to Article 38(1)(e) of the CACM Regulation an objective of the algorithm for the single day-

ahead coupling is to be repeatable, ACER also expects the calculated forecasts to be repeatable.

6.2.4. Amendments necessary to ensure legal clarity and consistency with existing legal provisions

- (122) ACER amended Article 1 of the Proposal to improve the wording, clarify the scope of this methodology and clarify how this methodology can be applied. Further, ACER added the Article 1(6) of Annex I to specify that this methodology applies also to integrated scheduling process bids submitted in central dispatch systems, to the extent they are converted to standard balancing capacity product bids. This added paragraph also replaced related paragraphs in the Proposal addressing the central dispatch system.
- (123) Besides already mentioned (see Recitals (83), (85), (111) and (112)) amendment to the definitions in Article 2 of the Proposal, ACER deemed it necessary to amend the definitions for cross-zonal capacity allocation function and reference day of Article 2(2)(c) and (g) and delete the definitions for contracting of balancing capacity, shadow price (both not used in Annex I) and economic surplus for the exchange of energy (economic surplus for the single day-ahead or intraday coupling is already defined in Article 2(46) of the CACM Regulation) of Article 2(2)(b), (e) and (h) of the Proposal.
- (124) ACER deleted Article 5 of the Proposal, which described the process and timeframe of the market-based allocation process, to improve the structure of this methodology and leave the further description of the timeframe to the proposal for application of this methodology pursuant to Article 38(1) of the EB Regulation. The relevant content of the provisions of Article 5 have been moved to other Articles of the methodology (e.g. provisions on gate closure time, as addressed in section 6.2.2.1, to Article 3 of Annex I; provisions for central dispatch, as addressed in Recital (122), to Article 1 of Annex I; parts of Article 5(2) of the Proposal on the cross-zonal capacity allocation process were moved to Article 8 of Annex I)
- (125) Besides the already mentioned amendments in sections 6.2.2.1, 6.2.2.5.2 and 6.2.2.6, ACER further amended Article 3 of the Proposal by clarifying the provisions on linking in Article 3(6) of Annex I, deleting non relevant content and by improving the wording and further clarifying general principles for applying the market-based allocation process. For ensuring the effectiveness of the market-based allocation process, ACER deemed it necessary to further add a provision under Article 3(7) of Annex I ensuring the compatibility between the cross-zonal capacity allocation function and the capacity procurement optimisation function.
- (126) Besides the explicitly mentioned amendments, ACER provided some additional amendments to improve the wording, clarity and structure of the Proposal and deleting out of scope passages.
- (127) In its response to ACER's preliminary position as mentioned in section 5.4, Elia stated that it is not always fully clear in the methodology which TSOs are addressed by the different requirements in the methodology. ACER does not agree since TSOs are

clearly defined as the Transmission System Operators of the Core CCR in recital (3) of Annex I. Therefore any general reference to TSOs in Annex I relates to all TSOs of the Core CCR.

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

6.2.5.1. *Consultation and involvement of stakeholders*

(128) When drafting the Proposal, the TSOs aimed at addressing the requirements from Article 10 of the EB Regulation regarding the involvement of stakeholders.

(129) As indicated in Recital (6) above, the TSOs fulfilled the requirements of Article 10(4) of the EB Regulation, since stakeholders were consulted on the first draft of the proposal pursuant to Article 10(1) of the EB Regulation. This involvement took place during a public consultation, which ran from 20 September 2019 to 19 October 2019. In addition, the regulatory authorities were regularly informed and consulted pursuant to Article 10(1) of the EB Regulation. The justifications regarding the consideration given to the views expressed by stakeholders during the public consultation in the drafting of the Proposal were provided in a separate document and submitted to the regulatory authorities.

6.2.5.2. *Publication and transparency*

(130) The Proposal fulfils the requirements on publication and transparency in accordance with Article 7 of the EB Regulation, as pursuant to Article 14 of the Proposal the TSOs shall publish this methodology for market-based capacity allocation after its approval.

(131) Moreover, Article 13 of the Proposal summarises the publication requirements related to the market-based allocation. The provided deadlines and timings in this article are meeting the requirements of Article 12 of the EB Regulation. However, ACER introduced amendments to this article to improve the wording, provide more clarity on publication processes and added several provisions to ensure sufficient transparency of the market-based allocation process and allow for sufficient possibility of monitoring the effectiveness of this process.

(132) During the discussion with all regulatory authorities in the framework of the AEWG, as mentioned in section 5.5, the regulatory authority of Denmark proposed to add a publication requirement for monitoring the impact that cross-zonal capacity allocation for the exchange of balancing capacity and sharing of reserves has on the price formation on the single day-ahead coupling market. Such provision should allow for better supervision regarding cases of misconduct in bidding behaviour of market participants with market power. ACER agrees and added the relevant requirement in Article 12(10)(c) of Annex I.

7. CONCLUSION

- (133) For all the above reasons, ACER considers the Proposal in line with the requirements of the EB Regulation, provided that the amendments described in this Decision are integrated in the Proposal, as presented in Annex I.
- (134) Therefore, ACER approves the Proposal subject to the necessary amendments and to the necessary editorial amendments. To provide clarity, Annex I to this Decision sets out the Proposal as amended and approved by ACER,

HAS ADOPTED THIS DECISION:

Article 1

The market-based allocation process of cross-zonal capacity for the exchange of balancing capacity for the Core CCR in accordance with Article 41(1) of Regulation (EU) 2017/2195 is adopted as set out in Annex I to this Decision.

Article 2

This Decision is addressed to:

50Hertz Transmission GmbH,
Amprion GmbH,
Austrian Power Grid AG,
C.N.T.E.E. Transelectrica S.A.,
ČEPS, a.s.,
Creos Luxembourg S.A.,
ELES, d.o.o. sistemski operater prenosnega elektroenergetskega omrežja,
Elia System Operator S.A.,
HOPS d.o.o., Hrvatski operater prijenosnog sustava,
MAVIR ZRt,
Polskie Sieci Elektroenergetyczne S.A.,
Réseau de Transport d'Electricité,
Slovenská elektrizačná prenosová sústava, a.s.,
TenneT TSO B.V.,
TenneT TSO GmbH and
TransnetBW GmbH.

Done at Ljubljana, on 13 August 2021.

- SIGNED -

*For the Agency
The Director*

C. ZINGLERSEN

Annexes:

- Annex I Methodology for the market-based allocation process of cross-zonal capacity for the exchange of balancing capacity for the Core CCR pursuant to Article 41(1) of the Electricity Balancing Regulation
- Annex Ia Methodology for the market-based allocation process of cross-zonal capacity for the exchange of balancing capacity for the Core CCR pursuant to Article 41(1) of the Electricity Balancing Regulation (track-change version, for information only)
- Annex II Evaluation of responses to the public consultation on the cross-border capacity allocation methodologies for the exchange of balancing capacity in the Hansa, Core and Baltic regions (for information only)

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