

**DECISION No 22/2020
OF THE EUROPEAN UNION AGENCY
FOR THE COOPERATION OF ENERGY REGULATORS**

of 5 August 2020

**on the market-based allocation process of cross-zonal capacity for
the exchange of balancing capacity for the Nordic 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 balancing², 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 Agency's Electricity Working Group ('AEWG'),

Having regard to the favourable opinion of the Board of Regulators of 16 July 2020, delivered pursuant to Article 22(5)(a) 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

¹ OJ L158, 14.6.2019, p. 22.

² OJ L312, 23.11.2017, p. 6.

electricity balancing, for the exchange of balancing capacity, as well as pricing and settlement of balancing capacity. These requirements include the 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 capacity calculation region shall 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 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 six-month period after the submission of the initial proposal or 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 Nordic CCR that ACER adopts a decision on the proposals for a Nordic capacity market for frequency restoration reserves with automatic activation ('aFRR'), which includes the proposal for 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 CCR Nordic (hereafter referred to as 'the TSOs') submitted to the regulatory authorities of the Nordic 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 3 September 2018, the TSOs published for public consultation the draft proposal³ for a methodology for a market-based allocation process of cross-zonal capacity for the exchange of aFRR balancing capacity in accordance with Article 38(1) of the EB Regulation. The consultation lasted from 3 September 2018 to 4 October 2018.
- (7) On 15 April 2019, the TSOs submitted to the regulatory authorities an ‘All TSOs of CCR Nordic proposal for a methodology for a market-based allocation process of cross-zonal capacity for the exchange of balancing capacity in accordance with Article 41(1) of the Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing’⁴. The last regulatory authority received the Proposal on 17 April 2019.
- (8) The regulatory authorities jointly agreed to request an amendment to the Proposal and sent this request to the TSOs. The last regulatory authority issued the request for amendment nationally on 17 October 2019.
- (9) On 17 December 2019, the TSOs resubmitted the amended Proposal⁵ to the regulatory authorities and the last regulatory authority received the amended Proposal on 17 December 2019 (hereafter referred to as the ‘Proposal’). Therefore, the new deadline for approval by the regulatory authorities was 17 February 2020.

2.2. Proceedings before ACER

- (10) In a letter dated 28 February 2020, the Finnish Energy Authority on behalf of the regulatory authorities informed ACER that they 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.
- (11) On 24 March 2020, ACER started the consultation phase on the Proposal, inviting parties concerned, here TSOs and regulatory authorities of the Nordic CCR, to send their comments on the Proposal.
- (12) ACER cooperated closely with regulatory authorities and TSOs and further consulted on the amendments to the Proposal during teleconferences, meetings and through exchanges of draft amendments to the Proposal suggested by ACER. In particular, the following procedural steps were taken and, in general, before each interaction, ACER shared with the regulatory authorities and TSOs a new version of amendments proposed by ACER to the Proposal:

³ https://consultations.entsoe.eu/markets/nordic-tsos-proposals-for-the-methodology-for-a-ma/supporting_documents/Legal%20Proposal%20to%20article%2038.pdf

⁴ <https://www.acer.europa.eu/en/Electricity/MARKET-CODES/ELECTRICITY-BALANCING/11%20CZCA/Action%201%20-%20Nordic%20CZCA%20appl%20proposal.pdf>

⁵ <https://www.acer.europa.eu/en/Electricity/MARKET-CODES/ELECTRICITY-BALANCING/12%20CZCAM/Action%203%20-%20MB%20CZCA%20Nordic%20amended%20proposal.pdf>

- 24 March 2020: teleconference with regulatory authorities;
- 27 March 2020: teleconference with regulatory authorities and TSOs;
- 30 March 2020: teleconference with regulatory authorities;
- 8 April 2020: teleconference with regulatory authorities and TSOs;
- 14 April 2020: teleconference with regulatory authorities and TSOs;
- 21 April 2020: teleconference with regulatory authorities and TSOs;
- 29 April 2020: teleconference with regulatory authorities and TSOs;
- 6 May 2020: teleconference with regulatory authorities and TSOs;
- 13 May 2020: discussion with all regulatory authorities in the framework of the Electricity Balancing Task Force (EB TF);
- 14 May 2020: teleconference with all regulatory authorities and TSOs;
- 20 May 2020: teleconference with regulatory authorities and TSOs;
- 25 May 2020: teleconference with regulatory authorities and TSOs;
- 27 May 2020: teleconference with regulatory authorities and TSOs;
- 27 May 2020: discussion with all regulatory authorities in the framework of the AEWG;
- 5 June 2020: teleconference with TSOs;
- 9 June 2020: discussion with all regulatory authorities in the framework of the EB TF;
- 12 June 2020: discussion with regulatory authorities individually following their hearing phase input
- 15 June 2020: teleconference with regulatory authorities;
- 17 June 2020: discussion with all regulatory authorities at the ACER Board of Regulators' meeting.
- 24 June 2020: discussion with all regulatory authorities in the framework of the AEWG;
- 26 June 2020: teleconference with regulatory authorities;
- 16 July 2020: discussion with all regulatory authorities at the ACER Board of Regulators' meeting.

3. ACER'S COMPETENCE TO DECIDE ON THE PROPOSAL

- (13) 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.

- (14) According to the letter of the Finnish Energy Authority dated 28 February 2020, 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. This letter was sent by the regulatory authorities after the expiry of the two-month deadline after receiving the amended Proposal (i.e. 17 February 2020).
- (15) Therefore, in accordance with Article 6(2) of the EB Regulation and Article 6(10) of Regulation (EU) 2019/942, ACER became responsible to adopt a decision concerning the Proposal by the expiry of the deadline for regulatory authorities on 17 February 2020 and communicated to ACER on 28 February 2020.

4. SUMMARY OF THE PROPOSAL

- (16) 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) Article 3, which covers the notification process for the use of a market-based allocation process;
 - (c) Article 4, which describes the maximum volume of allocated CZC for the exchange of balancing capacity;
 - (d) Article 5, on the determination of the market value of CZC for the exchange of energy;
 - (e) Article 6, which specifies the determination of the allocated volume of CZC for the exchange of balancing capacity;
 - (f) Articles 7, 8 and 9, which describe the firmness regime, the price of CZC and the sharing of congestion income and publication of information; and
 - (g) Articles 10 and 11, which include the final provisions on publication and implementation of the proposal and language.

5. SUMMARY OF THE OBSERVATIONS RECEIVED BY ACER

5.1. Initial observations of the regulatory authorities

- (17) The letter of the Finnish Energy Authority dated 28 February 2020 states that the regulatory authorities closely cooperated among each other to agree on approving the Nordic aFRR Balancing Capacity Market proposals, which includes the Proposal pursuant to Article 41 of the EB Regulation, and that however, after extensive discussion, it became evident that the regulatory authorities were not able to reach an agreement within the deadline of two months.
- (18) Regulatory authorities could not agree on two main aspects of the Proposal pursuant to Article 41 of the EB Regulation: (a) the proposed way to accept a legally compliant interim solution with regard to Article 38(5) of the EB Regulation and (b) how to improve the accuracy of the forecasting method.

5.2. Consultation of regulatory authorities and TSOs

- (19) ACER, in close cooperation and consultation with the regulatory authorities and TSOs as detailed in Recital (12) above, and beyond the above-mentioned issues:
- a) discussed with TSOs and regulatory authorities the comments received during the public consultation (see Section 5.3.) and the views of the regulatory authorities expressed in the aforementioned letter of the regulatory authorities;
 - b) revised the structure of the proposals and separated the algorithms principles for market based allocation and balancing capacity procurement;
 - c) revised the process to define the maximum volumes of cross-zonal capacity in the methodology pursuant to Article 41(1) of the EB Regulation clarifying all the relevant aspects;
 - d) improved the description of the determination of forecasted and actual market values in the methodology pursuant to Article 41(1) of the EB Regulation;
 - e) improved the setting of the market timeframe and the balancing capacity gate closure time.

5.3. Public consultation

- (20) On 30 April 2020, ACER launched a public consultation on the Nordic aFRR Balancing Capacity Market proposals, inviting all stakeholders to provide their views on the four proposals included in this package by 20 May 2020.
- (21) With regard to the Proposal, the consultation document asked stakeholders to provide views on two topics, which were deemed as the most relevant: (i) the approach that should be followed for the optimisation of the market-based allocation and balancing capacity procurement and (ii) the accuracy of the proposed forecasting method; respondents were also invited to submit their views on other topics under (iii):
- (i) Regarding the approach to the optimisation of the market-based allocation and balancing capacity procurement, most respondents reasoned towards an approach in which the optimisation is performed together. Seven stakeholders replied to the question with another solution but these were mostly understood to support the one run approach where optimisation is performed together. Four stakeholders emphasised the choice of the one run approach explicitly clarifying that it is simpler, more transparent, selects the best orders and brings the same result. A couple of respondents also mentioned that the market based approach is a second best solution and should preferably be replaced by the co-optimisation approach pursuant to Article 40 of the EB Regulation.
 - (ii) Most of the respondents raised concerns about the accuracy of the proposed forecasting method. Four stakeholders explicitly disagreed with the proposal and expressed concerns about a number of aspects including how to deal after the change to flow-based allocation. Four stakeholders, although agreeing with the proposed method, did emphasise that the method should be further improved

and updated when there is more experience on its functioning. Regarding possible improvements of the forecasting method, most of the respondents provided possible approaches among which regular re-assessment was the one mostly supported together with regular reporting of hourly results. A couple of respondents also mentioned that the proposed mark-ups are too low to ensure that cross-zonal capacity is not over-allocated to the balancing capacity market.

(iii) Regarding the other topics, some respondents expressed concerns with regard to compatibility of the Nordic solution with the rest of the EU and with the implementation of other EU legislative provisions with regards to the Commission Regulation (EU) (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (hereafter “CACM Regulation”). Some stakeholders emphasised that there is a need to monitor the CZC allocation and to apply the 10% maximum limit to the exchange of balancing capacity. Stakeholders further emphasised the importance of transparency and publication of results.

(22) The summary and evaluation of the responses received are presented in Annex II to this Decision. It presents the summary of stakeholders’ concerns regarding some of the above mentioned issues and in particular on the questions made by ACER.

5.4. Hearing phase

(23) ACER initiated a hearing phase on 27 May 2020, by providing the TSOs and the regulatory authorities with a near final draft of Annex I to this Decision, as well as the reasoning for the introduced changes to the Proposal. The hearing phase lasted until 11 June 2020. During this time, ACER received one written response from the Nordic TSOs, one from the Finnish regulatory authority, one from the Danish regulatory authority and one from the Swedish regulatory authority.

(24) As agreed with the TSOs and regulatory authorities during the consultation, their feedback was submitted in two parts: one focusing on wording suggestions (submitted at the end of the first week), and one on content issues. In general, the TSOs and regulatory authorities appreciated the content clarifications and improvements added to the methodology, but they also raised a few topics where they disagreed with the approach proposed by ACER.

(25) The TSOs jointly submitted a written response including concerns on the ongoing ACER decisions on the terms and conditions and methodologies pursuant Article 33(1), 38(1) and 41(1) of the EB Regulation. This response contained feedback within the scope of this Proposal on: a) inconsistency in the implementation of articles and related to the inclusion in the decisions of non-Union TSOs, b) Geographic scope, c) regarding the maximum volume of cross-zonal capacity that can be allocated to the market-based reservation and d) Maximum volume of cross-zonal capacity in fall-back situation.

(26) The Finnish regulatory authority suggested some improvements to the methodology for calculating the mark-up.

- (27) The Swedish regulatory authority submitted comments on Article 38(5) of the EB Regulation, improvements to the process to calculate the maximum volume of cross zonal capacity and on the sharing of congestion rent resulting from the exchange of balancing capacity.
- (28) The Danish regulatory authority submitted comments on Article 38(5) of the EB Regulation and the application of the market-based methodology on DC-Interconnectors.

6. ASSESSMENT OF THE PROPOSAL

6.1. Legal framework

- (29) Articles 4(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. This methodology 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.
- (30) Article 41(2) of the EB Regulation provides that cross-zonal capacity allocated on a market-based 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 rules for when this volume limitation may not apply.

- (31) Article 41(2) of the EB Regulation in the second sentence also provided 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.
- (32) Further requirements for this methodology are detailed in paragraphs (3), (4) and (5) of Article 41 of the EB Regulation.
- (33) Paragraph (3) of Article 41 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.
- (34) 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 process shall ensure equal treatment with the cross-zonal capacity allocated for the exchange of energy.
- (35) 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.
- (36) 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.
- (37) Article 17(2) of Regulation (EU) 2019/943 requires TSOs to propose an appropriate structure for the allocation of cross-zonal capacity across timeframes and defines the requirements for this structure to take into account:
 - (a) the characteristics of the markets;
 - (b) the operational conditions of the electricity system, such as the implications of netting firmly declared schedules;
 - (c) the level of harmonisation of the percentages allocated to different timeframes and the timeframes adopted for the different cross-zonal capacity allocation mechanisms that are already in place.

- (38) Article 17(4) of Regulation (EU) 2019/943 requires that where cross-zonal capacity is allocated for the exchange of balancing capacity or sharing of reserves pursuant to Article 6(8) of this Regulation, TSOs shall use the methodologies developed in the EB Regulation adopted on the basis of Article 6(11) of Regulation (EC) No 714/2009.
- (39) Article 17(5) of Regulation (EU) 2019/943 requires that where TSOs shall not increase the reliability margin calculated pursuant to Regulation (EU) 2015/1222 due to the exchange of balancing capacity or sharing of reserves.
- (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 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) 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 or 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.
- (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.

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

- (44) The Proposal fulfils the requirements of Articles 4(1), 4(2) and 5(3)(h) of the EB Regulation, as the TSOs from the Nordic CCR jointly developed a proposal for a market-based allocation process and submitted it for approval to all regulatory authorities of the Nordic CCR.

- (45) The procedure for the development of the Proposal followed the requirements of Article 41(1) of the EB Regulation, as the TSOs from the Nordic CCR decided to develop and submit the Proposal to the regulatory authorities of the Nordic CCR at the latest by 17 April 2019, which is within two years after entry into force of the EB Regulation. The Proposal was subject to consultation as described in Section 2.1 above.

6.2.1.2. Proposed timescale for implementation

- (46) The Proposal fulfils the requirements of Article 5(5) of the EB Regulation with regard to proposing a timescale for implementation.

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

- (47) 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. Recitals (11) to (15) of the Proposal provide 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 or that the description was out of scope of the Proposal 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 from Article 17 of the Electricity Regulation on allocation across timeframes

- (48) Pursuant to Article 17(2) of Regulation (EU) 2019/943, the TSOs shall propose an appropriate structure for the allocation of cross-zonal capacity across timeframes, including day-ahead, intraday and balancing, which shall be subject to review by the relevant regulatory authorities. The Proposal is considered to be such a structure as specified in Article 17(4) of the Regulation (EU) 2019/943.
- (49) The Proposal generally fulfils the requirement of Article 17(2) of Regulation (EU) 2019/943 by describing the foreseen process for allocating cross-zonal capacity to the exchange of balancing capacity or sharing of reserves, while taking into account a forecasted estimation of costs for the day-ahead market. However, to clarify that the market-based allocation process is to allocate cross-zonal capacities across timeframes and to explicitly describe an appropriate structure of this process, ACER deemed it necessary to amend the Proposal's structure, re-formulate the concept of the described market based allocation process and add content clarification. These amendments are mainly reflected in the changes to Article 5 and 6 of the Proposal and the introduction of a new Article 7 in Annex I (as described in Sections 6.2.3.4 and 6.2.3.5) but also in the general description in Article 3(1) of Annex I and new definitions in Article 2(2) of Annex I.

6.2.3. Assessment of the requirements for market-based cross-zonal allocation process

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

- (50) 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.
- (51) The Proposal does not address the requirements pursuant to Article 41(1). 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. In order to ensure consistency with the methodology pursuant to Article 33 of the EB Regulation and the requirement for the gate closure was aligned to be not more than one day before the provision of the standard balancing capacity products.

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

- (52) 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.
- (53) Article 3 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. To improve the structure and content of Article 3 of the Proposal, ACER amended this article in agreement with the TSOs.
- (54) Article 5 and 6 of the Proposal describe how to determine the forecasted market value of cross-zonal capacity for the exchange of energy. Since a description on how to determine the actual value of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves is not included in the Proposal, the Proposal does not fulfil the general requirement of Article 41(1)(b) of the EB Regulation. Therefore, ACER deemed it necessary to add Article 7 of Annex I. A more detailed description of the newly introduced Article 7 of Annex I, as well as necessary amendments to Articles 5 and 6 of the Proposal, can be found in Section 6.2.3.4.
- (55) Articles 7 and 8 of the Proposal describe the firmness regime, pricing 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(3) of the EB Regulation (see Section 6.2.3.5 below).

(56) Article 4 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 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. These amendments are further described in Section 6.2.3.3.

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

(57) 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 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.

(58) While Article 4 of the Proposal sets a maximum of 10% of the cross-zonal capacity calculated for the day-ahead timeframe, according to the simultaneously submitted proposal pursuant to Article 33(1) of the EB Regulation, the market-based allocation process including the related procurement of balancing capacity shall take place on the day before the provision of the contracted balancing capacity. Therefore, the Proposal generally fulfils the requirement of Article 41(2) of the EB Regulation but required significant revisions concerning the clarity of the text, clarity related to the use of cross-zonal capacity calculated for the day-ahead timeframe pursuant to the CACM Regulation and the completeness of the process. 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 Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation ('SO Regulation').
- (59) In the feedback referred to in Recital (25), TSOs noted that, pursuant to Article 41(2) of the EB Regulation, there are no limits when contracting is done not more than two days in advance but a limit can be lowered by the relevant regulatory authorities according to Article 39(6) of the EB Regulation. Furthermore, the TSOs stated that since there might be other cross-border markets for standard balancing capacity products (e.g. mFRR on DK1-DK2), such limits should preferably be set in the proposals pursuant to Article 33(1) or 38(1) of the EB Regulation instead of the methodology pursuant to Article 41(1) of the EB Regulation, which is applicable to all balancing capacity markets applying the market-based method in the Nordic CCR. As described in Recital (56) above and in accordance with the text of Article 39(6) of the EB Regulation, following an efficiency assessment the relevant regulatory authorities can set another limit than specified in Article 41(2) of the EB Regulation where the contracting is not done more than two days in advance. Since the default limit set in Article 41(2) of the EB Regulation is 10% and under the scope of Article 41 of the EB Regulation, ACER agrees with the setup as described in the Proposal. If this limit can be increased following an efficiency assessment in accordance with Article 39(6) of the EB Regulation, TSOs are therefore required to amend this methodology, if deemed beneficial.
- (60) In the feedback referred to in Recital (25) TSOs noted that, to allow market-based allocation of cross-zonal capacity, up to 20 percent of cross-zonal capacity calculated for the DA market time frame may not be a robust fall-back solution in situations where the cross-zonal capacity in the day-ahead market timeframe is reduced compared to normal cross-zonal capacity due to line outages and expected grid situation. TSOs therefore suggested that as a fall-back approach it would be better to set the limit to 20 percent of the average cross-zonal capacity available for energy exchange in the day-ahead market time frame of the previous calendar year as referred to in Article 41(2) of the EB Regulation. ACER does not agree to this proposed change, since the backup limit should still ensure that a share of the available cross-zonal capacity will be available to the Single day ahead coupling. Especially in case of outages, the forecast method using a reference day cannot always ensure a correct reflection of the market situation, which is why the Single day ahead coupling should also in such a situation be protected against the uncertainty of the forecasting method. If this increased limit is still not sufficient, a fall-back procedure in line with the methodology pursuant to Article 33(1) of the EB Regulation will need to address this situation.
- (61) During the discussion with all regulatory authorities in the framework of the AEWG, the Swedish regulatory authority requested to improve transparency around the actual percentage limit applied on each border pursuant to Article 5 paragraph 1(a) to 1(c) of Annex I. As the percentage limit could indeed change in time and be different per bidding zone border ACER agrees with the need to improve transparency in relation to these limits.

- (62) Therefore, ACER amended Article 12(1)(c) in Annex I to publish together with the allocated volume the applied percentage limit for the maximum volume of cross-zonal capacity allocated for the exchange of balancing capacity.

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

- (63) 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) and (5) of the EB Regulation.
- (64) The Proposal does not fulfil the requirement pursuant to Article 41(3) of the EB Regulation. While Articles 5 and 6(4) of the Proposal are determining the forecasted value of cross-zonal capacity for the exchange of energy, the actual value of cross-zonal capacity for the exchange of balancing capacity and the sharing of reserves is not described in the Proposal. Further, the process described in Article 6 of the Proposal does not describe the comparison of values for cross-zonal capacity for the exchange of energy and the exchange of balancing capacity, but a minimisation of socioeconomic costs of procurement, which is further described in the methodology pursuant to Article 33(1) of the EB Regulation. While ACER acknowledges that the outcome of the combined description of the process, as submitted in the proposals pursuant to Articles 33(1), 38(1) and 41(1) of the EB Regulation, might be identical to the process described in accordance with the requirements of the EB Regulation, the described process in the Proposal does not sufficiently meet the legal requirements for the methodology for a market-based allocation process. Hence, ACER introduced significant amendments to Articles 5 and 6 of the Proposal and added Article 7 of Annex I.
- (65) ACER amended Article 5 of the Proposal by re-wording the description on how the forecasted market value for the exchange of energy in single day-ahead coupling is determined. Since the final forecasted market value also includes a mark-up, Article 6(4) of the Proposal was re-positioned and included in the same article as the other elements of the forecasted market value of cross-zonal capacity for the exchange of energy. Finally, ACER specified the provision of reviewing the efficiency of the forecast.
- (66) ACER introduced a new article describing the determination of the actual market value of cross-zonal capacity for the exchange of balancing capacity or the sharing of reserves in accordance with Article 39(3) of the EB Regulation. Linked to the principles describing how to calculate the actual market value of cross-zonal capacity for the exchange of balancing capacity or the sharing of reserves, ACER introduced a definition for the economic surplus from the exchange of balancing capacity or sharing of reserves in Article 2(2)(d) of Annex I. Besides these principles, this new article also includes provisions for cases of local shortages of bids to cover the TSOs' demand for a balancing capacity product in a certain bidding zone where the market-based allocation process is applied. Since the TSOs' demand should be fixed without the 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 can be

determined 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 with 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 demand even after applying the market based process. Additionally, ACER added a reference for the provision of a fall-back 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 process described in this methodology.

- (67) ACER significantly amended Article 6 of the Proposal to fulfil the requirement pursuant to Article 41(3) of the EB Regulation by explicitly describing a process which compares the forecasted market value for the exchange of energy in single day-ahead coupling with the actual market value of cross-zonal capacity for the exchange of balancing capacity or the sharing of reserves. Recital (68) below describes more specific amendments, which were necessary to comply with this requirement.
- (68) The objective described in Article 6(2) of the Proposal relates to the balancing capacity market procurement optimisation function and aims for a minimisation of the socioeconomic costs. Following the descriptions in the methodology proposed pursuant to Article 33(1) of the EB Regulation, the descriptions in the explanatory documents, which were published at the time of the submission of the Proposal and the consultation with TSOs, ACER understands that the socioeconomic costs should reflect the BSPs' provision costs of balancing capacity, as well as the costs for cross-zonal capacity allocated to the procurement of balancing capacity reflected by the forecasted market value for the exchange of energy in single day-ahead coupling. Given the inelastic TSOs' demand for balancing capacity, selecting bids based on the minimisation of BSPs' provision costs would result in the same outcome as selecting bids based on the maximisation of the economic surplus of TSOs and BSPs. However, to describe a transparent process with an adequate comparison of the market value for cross-zonal capacity allocation to the two involved market timeframes and to keep in the scope of this methodology, ACER changed to a process description based on a maximisation of economic surplus depending on the allocation of cross-zonal capacity to either of the two involved market timeframes. Since the economic surplus for the single day-ahead coupling can only be forecasted at the time of the market-based allocation process, this should be done on the basis of the determined forecasted market value for the exchange of energy in single day-ahead coupling.

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

- (69) 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 7 and 8 of the Proposal aim to fulfil this requirement
- (70) Article 7 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 not fully address the requirement of Article 41(4) of the EB Regulation. To address this requirement, ACER introduced an additional paragraph 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 case of partial curtailment. To further ensure the fulfilment of this requirement, ACER amended Article 7 of the Proposal by describing a process, using the same rules for ensuring firmness and sharing related costs as used for the cross-zonal capacities allocated for the exchange of energy.

- (71) Article 8 of the Proposal describes the pricing of cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves and the sharing of congestion income. To improve the structure of this methodology, ACER split this article into two new ones to address the two topics separately. 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 further amend the article on pricing of cross zonal capacity. While for the pricing method ACER provided a general description of pricing principles for both the coordinated net transmission capacity and the flow-based approach, for the sharing of congestion income ACER established a direct link to the methodology for sharing congestion income pursuant to Article 73 of the CACM Regulation.
- (72) In the feedback referred to in recital (27) the Swedish regulatory authority expressed concerns over the clarity how the sharing of congestion rents from the exchange of balancing capacity would be executed. Following this remark, ACER amended Article 11 of Annex I in order to separate the congestion rent for the exchange of balancing capacity from the day ahead congestion income although keeping the reference to the methodology pursuant to Article 73 of the CACM regulation.

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

- (73) 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.
- (74) The Proposal does not address these requirements pursuant to Article 38(4) and 38(9) of the EB regulation. Therefore, ACER included two paragraphs to fulfil these requirements under the newly introduced Article 3 in Annex I listing the principles for applying market-based cross-zonal capacity allocation process.

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

- (75) 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).
- (76) Article 5 of the Proposal describes a method using the day-ahead price market price spread between biddings zones from the most recent day (reference day). Therefore, the Proposal applies the principle in accordance with Article 39(5) of the EB Regulation and generally fulfils the requirement to base the forecasted market value on day ahead market price differences between relevant bidding zones. To cope with possible inaccuracy of this method due to short term changes in the demand and generation patterns, Article 6(4) of the Proposal includes a fixed mark-up on the value of the reference day. This method again follows the transparency principle pursuant to Article 39(5)(a) of the EB Regulation. Even though it is likely that the proposed method can be improved in terms of accuracy, such potential improvements are currently linked to significant uncertainties. Therefore, ACER agrees to apply the currently described method with a limited scope, by using a 10% limit for the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity and the described mark-up, while closely monitoring after the implementation when there is more certainty on the impact of the applied process. To ensure this monitoring process, ACER added a paragraph to Article 12 of the Proposal for the provision of a yearly report on the efficiency of the forecasting method by TSOs and an additional preliminary report by 3 months after the initial go-live or after any adjustment to the forecasting method.
- (77) During the discussion with all regulatory authorities in the framework of the AEWG, the Finnish and Swedish regulatory authorities raised concerns on the accuracy of the forecasted market value for the exchange of energy in Article 5 of the proposal. The Finnish regulatory authority stated that this methodology would likely lead to economically unjustified allocation of cross zonal capacity for the exchange of balancing capacity and to the detriment of the day-ahead market and that this would result in increased day-ahead prices and social costs as benefits from the increased balancing capacity exchange would not be expected to cover day-ahead losses due to the errors in forecasting the market value for the exchange of energy. The Swedish regulatory authority analysed the average absolute forecast errors - between the reference day market spread and the actual market spread of the trading day - for the period 2016-2020 per direction for each bidding zone border for CCR Nordic and concluded that the absolute forecast error differs quite a lot between different bidding zone borders, that the static mark-up of 1 EUR does not mirror these differences and that it is extremely hard to find a static value that can be applied for all the bidding zone borders.
- (78) The Swedish regulatory authority therefore suggested to add a requirement in the proposal that gives the TSOs twelve months to submit an amendment including a

dynamic mark-up methodology that mirrors the differences between the bidding zone borders. The Finnish regulatory authority expressed support with this proposal striking a fair balance on this controversial topic.

- (79) Following the assessment of the above concerns and the consultation with the regulatory authorities and TSOs, ACER understands the main concern to be related to a risk of under estimating the day-ahead market spread for the actual trading day by using the market spread of the reference day as a forecast, as this can lead to forecast errors that can be substantially different for different bidding zone borders and that the 1 EUR/MWh mark-up proposed would not be enough to prevent over allocation of cross-zonal capacity to the balancing capacity market. Because a fixed higher value for the mark-up would disregard the borders with lower average forecast errors, ACER concludes that the methodology should move towards a method with different mark-up values per bidding zone border.
- (80) ACER therefore amended Article 5 of the proposal and included two new paragraphs 3 and 4. In paragraph 3, a method is introduced that requires a monthly rolling average re-adjustment of the mark-up value per bidding zone border in case of a higher average positive forecast error. Paragraph 4 requests TSOs to submit an amendment to this methodology for the forecasted market value and based on one of the alternative principles pursuant to Article 39(5). This amendment would need to be submitted after twelve months replacing both paragraphs accompanied with a number of assessments on the accuracy of the forecasting market value.

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

- (81) 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.
- (82) Besides some general improvements of wording, ACER amended Article 2 of the Proposal by:
- deleting the definition for market time unit, which is already covered under Article 2 of the Commission Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council;
 - introducing a definition for TSO demand;
 - introducing a definition for cross-zonal capacity allocation function to refer to the function used for the market-based allocation process;
 - introducing a definition of economic surplus from the exchange of balancing capacity or sharing of reserves to implement the amendments described in Recital (66);
 - clarifying the reference to cross-zonal capacities; and

- allowing more efficient document internal cross references to improve the structure of the Proposal.
- (83) ACER introduced the new Article 3 of Annex I to the Proposal to describe various principles for applying market-based cross-zonal capacity allocation process. Besides the introduced paragraphs in this article to ensure the necessary fulfilment of the requirements as already described in Recitals (49), (51), (53) and (74), ACER introduced in consultation with the TSOs the following provisions:
- the limitation to only use bids from standard balancing capacity products as required in accordance with Articles 39(3) and 33(3) of the EB Regulation;
 - the specification of the validity period of standard balancing capacity bids exchanged with this market-based allocation process; and
 - the usage of marginal pricing to ensure the functionality of the described market-based allocation process and the pricing method as described in this methodology in accordance with Article 41(1)(c) of the EB Regulation.
- (84) ACER amended Article 10 of the Proposal to include all necessary publication processes of TSOs applying the market-based allocation process. Hence, ACER added one paragraph regarding the publication of the applicable default limits for the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity or sharing of reserves on the relevant bidding zone borders and one paragraph describing the requirement for publishing an annual report to assess the efficiency of the forecasting method, including a description of the content of such report.
- (85) 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.
- 6.2.6. Assessment of the requirements for consultation, transparency and stakeholder involvement
- 6.2.6.1. *Consultation and involvement of stakeholders*
- (86) When drafting the Proposal, the TSOs aimed at addressing the requirements from Article 10 of the EB Regulation regarding the involvement of stakeholders.
- (87) 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 draft Proposal pursuant to Article 10(1) of the EB Regulation. This involvement took place during a public consultation, which ran from 3 September 2018 until 4 October 2018. 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.

6.2.6.2. Publication and transparency

- (88) The Proposal fulfils the requirements on publication and transparency in accordance with Article 7 of the EB Regulation.
- (89) Article 9 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. ACER introduced amendments to this article to improve the wording, provide more clarity on publication processes and delete a paragraph which is out of scope.

7. CONCLUSION

- (90) 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.
- (91) 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 Nordic 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 Nordic CCR TSOs

Energinet

Fingrid, and

Svenska kraftnät

Done at Ljubljana, on 5 August 2020.

- 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 Nordic CCR pursuant to Article 41(1) of the Electricity Balancing Regulation

Annex Ia (for information only) – Methodology for the market-based allocation process of cross-zonal capacity for the exchange of balancing capacity for the Nordic CCR pursuant to Article 41(1) of the Electricity Balancing Regulation – with track changes

Annex II (for information only) – Evaluation of responses to the public consultation on the Nordic aFRR Balancing Capacity Market

In accordance with Article 28 of Regulation (EU) 2019/942, the addressee 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.

In accordance with Article 29 of Regulation (EU) 2019/942, the addressee may bring an action for the annulment before the Court of Justice only after the exhaustion of the appeal procedure referred to in Article 28 of that Regulation.