DECISION No 04/2020
OF THE EUROPEAN UNION AGENCY
FOR THE COOPERATION OF ENERGY REGULATORS

of 30 January 2020

on the nominated electricity market operators’ proposal for the price coupling algorithm and for the continuous trading matching algorithm, also incorporating TSOs’ and NEMOs’ proposals for a common set of requirements

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, Articles 5(2)(b) thereof,

Having regard to Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management², and, in particular, Article 53(1) thereof,

Having regard to the outcome of the consultation with regulatory authorities, nominated electricity market operators, transmission system operators and market participants,

Having regard to the favourable opinion of the Board of Regulators of 22 January 2020, delivered pursuant to Article 22(5) of Regulation (EU) 2019/942,

Whereas:

1. **INTRODUCTION**

   (1) Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (the ‘CACM Regulation’) laid down

a range of requirements for cross-zonal capacity allocation and congestion management in the day-ahead and intraday markets in electricity. These requirements also include specific provisions for the development and maintenance of a price coupling algorithm and of a continuous trading matching algorithm for the single day-ahead coupling (‘SDAC’) and for the single intraday coupling (‘SIDC’), in accordance with Chapters 4 to 6 of the CACM Regulation.

(2) On 26 July 2018, ACER issued its Decision No 08/2018 on the nominated electricity operators’ (‘NEMOs’) proposal for the price coupling algorithm and for the continuous trading matching algorithm, also incorporating TSOs’ and NEMOs’ proposals for a common set of requirements (‘Algorithm methodology’), in accordance with Article 37 of the CACM Regulation.

(3) Pursuant to Article 5(2) of the Regulation (EU) 2019/942, where proposals for common terms and conditions or methodologies or their amendments, as the case might be, require the approval of all regulatory authorities, those proposals shall be submitted to ACER for revision and approval.

(4) Accordingly, on 31 July 2019, all NEMOs submitted to ACER a proposal for amendment to the Algorithm methodology (‘proposal for amendment’). This Decision is hereby made to revise and approve the proposal for amendment. Annex I to this Decision sets out the amended Algorithm methodology, pursuant to Article 37(5) of the CACM Regulation.

2. PROCEDURE

2.1. Proceedings before ACER

(5) On 3 June 2019, the NEMO Committee, on behalf of all NEMOs, published the proposed amendments to the Algorithm methodology for public consultation, in accordance with Article 9(13) and Article 12 of the CACM Regulation and the consultation finished on 2 July 2019.

(6) By email of 31 July 2019, the NEMO Committee, on behalf of all NEMOs, submitted a proposal for amendment to the Algorithm methodology to ACER for decision.

(7) On 21 October 2019, ACER launched a public consultation on the proposal for amendment, inviting all market participants to submit their comments by 17 November 2019. In particular, ACER asked stakeholders to provide comments on (i) the timing of suspension of the cross-zonal capacity allocation within continuous trading during intraday auctions (‘IDAs’), (ii) possible simplification of the choice of products in case the algorithms would face performance problems and iii) on the choice of monitoring and reporting indicators.

(8) During the decision-making process, ACER closely cooperated with all NEMOs, all regulatory authorities and all transmission system operators (‘TSOs’) and consulted them on the proposed amendments during numerous teleconferences and meetings.
and through exchanges of textual amendments via emails. In particular, the following procedural steps were taken in 2019:

(a) 30 September: teleconference with NEMOs, TSOs and regulatory authorities;
(b) 3 October: teleconference with NEMOs, TSOs and regulatory authorities;
(c) 7 November: discussion with the regulatory authorities during the CACM Task Force meeting³;
(d) 14 November: teleconference with NEMOs, TSOs and regulatory authorities;
(e) 19 November: discussion during the ACER Electricity Working Group⁴ meeting with regulatory authorities;
(f) 25 November: teleconference with NEMOs, TSOs and regulatory authorities;
(g) 5 December: teleconference with NEMOs, TSOs and regulatory authorities;
(h) 9 December: teleconference with the regulatory authorities;
(i) 10 December: discussion during the Trilateral Coordination Group meeting with the NEMOs, TSOs, regulatory authorities and the representatives of the European Commission;
(j) 11 December: teleconference with NEMOs and discussion with the regulatory authorities during the Board of Regulators⁵ meeting;
(k) 13 December: teleconference with NEMOs;
(l) 17 December: discussion with the regulatory authorities during the CACM Task Force meeting; and
(m) 9 January 2020: discussion with the regulatory authorities during the ACER Electricity Working Group meeting.

3. ACER’S COMPETENCE TO DECIDE ON THE PROPOSAL FOR AMENDMENT

According to Article 9(13) of the CACM Regulation, the NEMOs responsible for developing a proposal for terms and conditions or methodologies may request amendments of these terms and conditions or methodologies, which shall be approved in accordance with the procedure set out in that Article.

³ ACER’s platform for discussing all issues connected to the CACM Regulation with the regulatory authorities.
⁴ According to Article 30 of Regulation No 2019/942 of the European parliament and of the Council of 5 June 2019, establishing a European Union Agency for the Cooperation of Energy Regulators, the ACER Electricity working group supports the work of the Director and of the Board of Regulators on regulatory issues and for the purpose of preparing the opinions, recommendations and decisions.
⁵ The Board of Regulators is a decision-making body defined in Articles 21 and 22 of Regulation No 2019/942 of the European parliament and of the Council of 5 June 2019, establishing a European Union Agency for the Cooperation of Energy Regulators.
(10) According to Article 9(6)(g) of the CACM Regulation, proposals related to the algorithm developed in accordance with Article 37 of the CACM Regulation shall be subject to approval by all regulatory authorities.

(11) According to Article 5(2)(a) of Regulation (EU) 2019/942, proposals for terms and conditions or methodologies, based on network codes and guidelines adopted before 4 July 2019 (i.e. the CACM Regulation), which require the approval of all regulatory authorities, shall be submitted to ACER for revision and approval.

(12) Accordingly, on 31 July 2019, all NEMOs submitted the proposal for amendment on the Algorithm methodology to ACER for revision and approval, thereby making ACER competent to adopt a decision in that respect.

4. SUMMARY OF THE PROPOSAL FOR AMENDMENT

(13) The proposal for amendment includes the following elements:

(14) The Recitals and Articles 1 and 2, which include general provisions, the scope of application and the definitions;

(15) Articles 3 to 6, which include the summary of the algorithm requirements, the provisions on the price coupling algorithm, the continuous trading matching algorithm and the intraday auction algorithm including the timelines for the implementation of specific requirements;

(16) Articles 7 to 9, which include provisions on the concept of usage of products and functionalities of the algorithms, on the monitoring of the algorithm performance and on the reporting of scalability;

(17) Articles 10 and 11, which include provisions on the planning of changes and research and development activities;

(18) Article 12, which determines corrective measures to be used in the case of an algorithm’s performance degradation;

(19) Articles 13 to 19, which include provisions describing the management of change process of the algorithms;

(20) Articles 20 to 23, which include provision on the decision making process of all NEMOs and TSOs, including the functioning and establishment of an arbitral tribunal;

(21) Articles 24 to 26, which include provisions on publishing, reporting, transparency and applicable language;

(22) Annexes 1 and 2, which include the common set of requirements for the DA and ID timeframes; and

(23) Annexes 3 and 4, which include the algorithm monitoring methodologies for the DA and ID timeframes.
5. ASSESSMENT OF THE PROPOSAL FOR AMENDMENT

5.1. Legal framework

(24) According to Article 7(1)(b) of the CACM Regulation, NEMOs are responsible for establishing collectively the requirements for the single day-ahead and intraday coupling, the requirements for the market coupling operator (‘MCO’) functions and the price coupling algorithm with respect to all matters related to electricity market functioning in accordance with Article 7(2) and Articles 36 and 37 of the CACM Regulation.

(25) According to Article 7(2) of the CACM Regulation, NEMOs have to carry out the MCO functions jointly with other NEMOs and those functions need to include the following: (i) developing and maintaining the algorithms, systems and procedures for single day-ahead and intraday coupling in accordance with Articles 36 and 51 of the CACM Regulation; (ii) processing input data on cross-zonal capacity and allocation constraints provided by coordinated capacity calculators in accordance with Articles 46 and 58 of the CACM Regulation; (iii) operating the price coupling and continuous trading matching algorithms in accordance with Articles 48 and 60 of the CACM Regulation; and (iv) validating and sending single day-ahead and intraday coupling results to the NEMOs in accordance with Articles 48 and 60 of the CACM Regulation.

(26) According to Article 8(1) and 8(2)(a) and (b) of the CACM Regulation, all TSOs in Member States electrically connected to another Member State must participate in the single day-ahead and intraday coupling and jointly establish the TSOs requirements for the price coupling and continuous trading matching algorithms for all aspects related to capacity allocation in accordance with Article 37(1)(a) of the CACM Regulation, and jointly validate the matching algorithms against the above mentioned requirements in accordance with Article 37(4) of the CACM Regulation.

(27) According to Article 36(1) and (2) of the CACM Regulation, all NEMOs must develop, maintain and operate a price coupling algorithm and a continuous trading matching algorithm. They must ensure that the price coupling algorithm and the continuous trading matching algorithm meet the requirements provided for, respectively, in Articles 39 and 52 of the CACM Regulation.

(28) According to Article 36(4) of the CACM Regulation, where possible, NEMOs must use already agreed solutions efficiently to implement the objectives of the CACM Regulation.

(29) According to Article 37(1) of the CACM Regulation (i) all TSOs need jointly to provide all NEMOs with a proposal for a common set of requirements for efficient capacity allocation to enable the development of the price coupling algorithm and of the continuous trading matching algorithm, where these requirements shall specify the functionalities and the performance, including the deadlines for the delivery of single day-ahead and intraday coupling results and the details of the cross-zonal capacity and allocation constraints to be respected; and (ii) all NEMOs need jointly to propose a
common set of requirements for efficient matching to enable the development of the price coupling algorithm and of the continuous trading matching algorithm.

(30) According to Article 37(2) of the CACM Regulation, no later than three months after the submission of the TSOs’ and NEMOs’ proposals for a common set of requirements mentioned above, all NEMOs must develop a proposal for the algorithms in accordance with these requirements. This proposal shall indicate the time limit for the submission of the received orders by NEMOs required to perform the MCO functions in accordance with Article 7(1)(b) of the CACM Regulation.

(31) According to Article 37(3) of the CACM Regulation, the all NEMOs’ proposal mentioned above has to be submitted to all TSOs. If additional time is required to prepare this proposal, all NEMOs must work together supported by all TSOs for a period of not more than two months to ensure that the proposal complies with Article 37(1) and (2) of the CACM Regulation.

(32) According to Article 37(4) of the CACM Regulation, the proposals referred to in Article 37(1) and (2) of the CACM Regulation shall be subject to consultation in accordance with Article 12 of the CACM Regulation.

(33) According to Article 37(5) of the CACM Regulation, all NEMOs must submit the proposal developed in accordance with Article 37(2) and (3) of the CACM Regulation to all regulatory authorities for approval by no later than 18 months after the entry into force of this Regulation.

(34) According to Article 38 of the CACM Regulation, the price coupling algorithm should produce the results set out in Article 39(2) of the CACM Regulation in a manner which: (i) aims at maximising the economic surplus for single day-ahead coupling for the price-coupled region for the next trading day; (ii) uses the marginal pricing principle according to which all accepted bids will have the same price per bidding zone and per market time unit; (iii) facilitates efficient price formation; (iv) respects cross-zonal capacity and allocation constraints; and (v) is repeatable and scalable. Moreover, the price coupling algorithm shall be developed in such a way that it would be possible to apply it to a larger or smaller number of bidding zones.

(35) According to Article 39(1) of the CACM Regulation, in order to produce results, the price coupling algorithm shall use: (i) allocation constraints established in accordance with Article 23(3) of the CACM Regulation; (ii) cross-zonal capacity results validated in accordance with Article 30 of the CACM Regulation; and (iii) orders submitted in accordance with Article 40 of the CACM Regulation.

(36) According to Article 39(2) of the CACM Regulation, the price coupling algorithm should produce at least the following results simultaneously for each market time unit: (i) a single clearing price for each bidding zone in EUR/MWh; (ii) a single net position for each bidding zone; (iii) the information which enables the execution status of orders to be determined.
According to Article 39(3) of the CACM Regulation, all NEMOs must ensure the accuracy and efficiency of results produced by the price coupling algorithm.

According to Article 40 and Article 53 of the CACM Regulation the algorithms must be able to accommodate the orders resulting from the products covering one market time unit and multiple market time units.

According to Article 51(1) of the CACM Regulation, from the intraday cross-zonal gate opening time until the intraday cross-zonal gate closure time, the continuous trading matching algorithm shall determine which orders to select for matching such that matching: (i) aims at maximising economic surplus for single intraday coupling per trade for the intraday market timeframe by allocating capacity to orders for which it is feasible to match in accordance with the price and time of submission; (ii) respects the allocation constraints provided in accordance with Article 58(1) of the CACM Regulation; (iii) respects the cross-zonal capacity provided in accordance with Article 58(1) of the CACM Regulation; (iv) respects the requirements for the delivery of results set out in Article 60 of the CACM Regulation; and (v) is repeatable and scalable.

According to Article 51(2) of the CACM Regulation, the continuous trading matching algorithm should produce the results provided for in Article 52 of the CACM Regulation and correspond to the product capabilities and functionalities set out in Article 53 of the CACM Regulation.

According to Article 52(1) of the CACM Regulation, all NEMOs, as part of their MCO function, need to ensure that the continuous trading matching algorithm produces at least the following results: (i) the execution status of orders and prices per trade; and (ii) a single net position for each bidding zone and market time unit within the intraday market.

According to Article 52(2) of the CACM Regulation, all NEMOs must ensure the accuracy and efficiency of results produced by the single continuous trading matching algorithm.

According to Article 62 of the CACM Regulation, as soon as the orders are matched, each NEMO must publish for relevant market participants at least the status of execution of orders and prices per trade produced by the continuous trading matching algorithm in accordance with Article 52(1)(a) of the CACM Regulation and each NEMO must ensure that information on aggregated executed volumes and prices is made publicly available in an easily accessible format for at least 5 years. The information to be published should be proposed by all NEMOs within the proposal for continuous trading matching algorithm pursuant to Article 37(5) of the CACM Regulation.

As a general requirement, Article 9(9) of the CACM Regulation demands that every proposal for terms and conditions or methodologies includes a proposed timescale for their implementation and a description of their expected impact on the objectives set out in Article 3 of the CACM Regulation.
According to Recital 22 and Article 55 of the CACM Regulation, all TSOs shall develop a proposal for single methodology for pricing intraday cross-zonal capacity to establish reliable pricing of transmission capacity, which reflects congestion, if capacity is scarce. This requirement is understood as complementing the other legal requirements for single intraday coupling.

In addition, the ACER Decision No. 01/2019 of 24 January 2019, determines the Methodology for pricing intraday cross-zonal capacity, in accordance with Article 55 of the CACM Regulation. Articles 5 and 6 of Annex I to that ACER Decision set out the frequency of IDAs and require all TSOs to update and complement the common set of requirements for efficient capacity allocation to enable the development of the algorithm for IDAs, in accordance with Article 37(1)(a) of the CACM Regulation. While this methodology is not directly legally binding for the Algorithm methodology, the latter should nonetheless be consistent with the former.

5.2. Assessment of the legal requirements of the CACM Regulation

5.2.1. Requirements of Article 7 of the CACM Regulation

The proposal for amendment fulfils the requirements of Article 7(1)(b) of the CACM Regulation, as all NEMOs and, where required in cooperation with all TSOs, collectively established the requirements for the single day-ahead and intraday coupling, as set out in Annex 1 and Annex 2 to the proposal for amendment.

The proposal for amendment fulfils the requirements of Article 7(2)(a) and (b) of the CACM Regulation by: (i) providing rules and procedures for developing and maintaining the algorithms, systems and procedures as described in Articles 4 to 7 and in Article 10 of the proposal for amendment; and (ii) taking into account the cross-zonal capacity and allocation constraints, as set out in Articles 3(6), 3(7) and 3(8) of the proposal for amendment.

The proposal for amendment fulfils the requirements of Article 7(2)(c) and (d) of the CACM Regulation and the requirements of Article 48(1)(a) and (b) and Article 48(3) of the CACM Regulation because it specifies, in Article 4(12) of the proposal for amendment, the necessity to deliver single day-ahead coupling results: (i) to all NEMOs and all coordinated capacity calculators for the results set out in Article 39(2)(a) and (b) of the CACM Regulation; and (ii) to all NEMOs for the results set out in Article 39(2)(c) of the CACM Regulation.

5.2.2. Requirements of Articles 8, 36 and 37 of the CACM Regulation

The proposal for amendment fulfils the requirements of Article 8(2)(a) and (b) of the CACM Regulation by establishing the requirements for the price coupling and continuous trading matching algorithms in Annex 1 and Annex 2 of the proposal for amendment and providing them to all NEMOs in accordance with Article 37(1)(a) of the same Regulation.
(51) The proposal for amendment fulfils the requirements set out in Article 36(1) and (2) of the CACM Regulation, because all NEMOs have developed and submitted both the price coupling algorithm and the continuous trading matching algorithm for approval to ACER, while meeting the requirements provided for in Articles 39 and 52 of the CACM Regulation, as assessed in Paragraphs 5.2.4 to (65), (69) and (71) below.

(52) The proposal for amendment fulfils the requirements of Article 36(4) of the CACM Regulation by using the existing day-ahead and intraday algorithm solution in Article 2(2) of the proposal for amendment.

(53) The proposal for amendment generally fulfils the requirements of Article 37(1) to (5) of the CACM Regulation (except for the requirements outlined in paragraph 56 below), because all NEMOs developed the proposal for amendment in accordance with Article 37(1) to (3) of the CACM Regulation, consulted on it and submitted it to ACER.

(54) The time limit for the submission of received orders by NEMOs required to perform the MCO functions in accordance with Article 7(1)(b) of the CACM Regulation is set out in Article 4(12) of the proposal for amendment. The obligation under Article 37(2) of the CACM Regulation demands the time to be mentioned in the common set of requirements for the algorithms. Even though the time is determined in the body text of the proposal for amendment and not in the common set of requirements, these requirements form part of the proposal for amendment. Therefore, the proposal for amendment fulfils the criteria of Article 37(2) of the CACM Regulation to include the time limit for the submission of received orders by NEMOs.

(55) The common sets of requirements, as annexed to the Algorithm methodology fulfil the requirements of Article 37(1) and (2) and once approved and implemented fulfil the objectives of Article 38 of the CACM Regulation.

(56) In accordance with Article 37(1) and (2) of the CACM Regulation the algorithms must fulfil requirements of TSOs and NEMOs. The algorithm methodology generally fulfils all these DA and ID requirements, except in cases the algorithm performance deteriorates and the algorithm cannot accommodate all DA and ID requirements. In such a fallback scenario, all NEMOs propose, among others, the application of corrective measures (Article 12 of the proposal for amendment) for DA and ID requirements which have already been accommodated and implemented; or postponement or rejections of change requests (Title IV of the proposal for amendment) for DA and ID requirements, which still need to be implemented.

(57) ACER deemed it necessary to amend Articles 12, 14 and 19 of the proposal for amendment in order to ensure that in case of a fallback scenario of algorithm performance deterioration, the DA and ID requirements have a higher priority than other requirements. For this purpose, a new paragraph has been added to Article 14 of the proposal for amendment to determine all that all DA and ID requirements have direct legal requirements stemming from the CACM Regulation. These requirements should therefore be implemented regardless of the algorithm performance problems and ACER reflected this fact in its amendments to the Algorithm methodology. To
this end, ACER specified in Article 19 that the change requests related to these direct legal requirements should not be rejected or postponed and instead corrective measures should be applied in case these change requests would deteriorate algorithm performance. Similarly, in Article 12, ACER specified that corrective measures on direct legal requirements may only be applied if corrective measures on other requirements are infeasible or insufficient to restore an algorithm’s performance. This latter requirement must take into account also the impact of these requirements on the algorithm’s performance.

(58) ACER added one paragraph to Article 12(1) of the proposal for amendment to complement the application of the six-month deadline for the use of any corrective measure and to oblige all NEMOs to submit a proposal for amendment to the Algorithm methodology or the products that can be used in SDAC or SIDC, if the application of the corrective measure did not succeed in restoring the algorithm’s performance and/or confirming the timely implementation of a legal requirement.

(59) ACER amended the six-month deadline referenced in the previous paragraph and changed it into an eight-month deadline to reflect the fact that the corrective measures shall be applied for the maximum of six months, after which all NEMOs need to propose changes to the Algorithm methodology or the SIDC and/or SDAC products, in accordance with Articles 40 and 53 of the CACM Regulation. In analogy to the procedures set out in Article 9 of the CACM Regulation, all NEMOs shall submit the proposal(s) within two months after the need for an amendment has been triggered.

5.2.3. Requirements of Articles 38 of the CACM Regulation

(60) The proposal for amendment partly fulfils the objectives of Article 38 of the CACM Regulation, as Article 3(6) of the proposal for amendment generally addresses all the algorithm’s objectives. However, the requirement for algorithm scalability is being questioned by the proposal for amendment in case of deterioration of an algorithm’s performance. In such fallback scenarios, all NEMOs propose, among others, the application of corrective measures (Article 12 of the proposal for amendment) for scalability requirements which have already been accommodated and implemented; or postponement or rejections of change requests (Title IV of the proposal for amendment) for scalability requirements which still need to be implemented.

(61) ACER deemed it necessary to amend Articles 12, 14 and 19 of the proposal for amendment in order to ensure that in case of a fallback scenario of algorithm performance deterioration, the scalability requirements have a higher priority than other requirements. For this purpose, a new paragraph has been added to Article 14 of the proposal for amendment to determine all that all scalability requirements have direct legal requirements stemming from the CACM Regulation. These requirements should therefore be implemented regardless of the algorithm performance problems and ACER reflected this fact in its amendments to the Algorithm methodology. To this end, ACER specified in Article 19 that the change requests related to these scalability requirements should not be rejected or postponed and instead corrective measures should be applied in case these change requests would deteriorate algorithm performance. Similarly, in Article 12 ACER specified that corrective measures on
scalability requirements may only be applied if corrective measures on other requirements are infeasible or insufficient to restore algorithm performance. This latter requirement must take into account also the impact of these requirements on algorithm performance based on the evidence provided about such impact. In this way, ACER ensured a non-discriminatory approach to all market participants and NEMOs, which could be affected by these corrective measures.

(62) In Article 17(7) of the proposal for amendment, ACER amended the prioritisation that shall apply on requests for change to reflect the new principles securing high priority for the implementation of the direct legal requirements as introduced above.

5.2.4. Requirements of Article 39 of the CACM Regulation

(63) The proposal for amendment fulfils the requirements of Article 39(1) of the CACM Regulation, as Article 3(6) of the proposal for amendment specifies that the price coupling algorithm shall use the orders submitted in accordance with Article 40 of the CACM Regulation, as well as the allocation constraints in accordance with Article 23(3) of the CACM Regulation and the cross-zonal capacity results validated in accordance with Article 30 of the CACM Regulation.

(64) The proposal for amendment fulfils the requirements of Article 39(2) of the CACM Regulation, as Article 4(1) of the proposal for amendment presents a list of necessary results that the price coupling algorithm should produce.

(65) The proposal for amendment fulfils the requirements of Article 39(3) of the CACM Regulation, as Article 4(7) of the proposal for amendment indicates that the price coupling algorithm performs checks on every solution found to validate that all the market and network constraints are respected within a given tolerance.

5.2.5. Requirements of Articles 40 and 53 of the CACM Regulation

(66) The proposal for amendment generally fulfils the requirement of Article 40 and 53 of the CACM Regulation, as it accommodates all the orders resulting from the products covering one market time unit and multiple market time units. However, the requirement for accommodating these products is being questioned by the proposal for amendment in case of deterioration of algorithm performance. In such fallback scenarios, all NEMOs propose, among others, the application of corrective measures (Article 12 of the proposal for amendment) for products which have already been accommodated and implemented; or postponement or rejections of change requests (Title IV of the proposal for amendment) for products which still need to be implemented.

(67) ACER deemed it necessary to amend Articles 12, 14 and 19 of the proposal for amendment in order to ensure that in case of a fallback scenario of algorithm performance deterioration, the product requirements which have a direct legal basis in Article 40 and 53 of the CACM Regulation have a higher priority than other product requirements. For this purpose, a new paragraph has been added to Article 14 of the proposal for amendment to determine that products covering one market time unit and
multiple market time units have a direct legal basis in the CACM Regulation. These products should therefore be implemented regardless of the algorithm performance problems and ACER reflected this fact in its amendments to the Algorithm methodology. To this end, ACER specified in Article 19 that the change requests related to these products should not be rejected or postponed and instead corrective measures should be applied in case these change requests would deteriorate algorithm performance. Similarly, in Article 12 ACER specified that corrective measures on these products may only be applied if corrective measures on other requirements are infeasible or insufficient to restore algorithm performance. This latter requirement must take into account also the impact of these products or requirements on algorithm performance based on the evidence provided about such impact. In this way, ACER ensured a non-discriminatory approach to all market participants and NEMOs, which could be affected by these corrective measures.

5.2.6. Requirements of Articles 51, 52 and 62 of the CACM Regulation

(68) The proposal for amendment fulfils the requirements of Article 51(1) of the CACM Regulation as Article 3(7) of the proposal for amendment addresses all the objectives and describes the way the continuous trading matching algorithm should reach a result.

(69) The proposal for amendment fulfils the criteria of Article 52(1) of the CACM Regulation because it contains the information about execution status, prices per trade and single net positions in its Article 5(1).

(70) The proposal for amendment fulfils the requirements of Article 62(2) of the CACM Regulation because the proposal for amendment obliges all NEMOs to publish aggregated executed volumes and prices in its Article 23(6).

(71) The proposal for amendment fulfils the criteria of Article 52(2) of the CACM Regulation, as the general approach and steps used by the continuous trading matching algorithm described in Article 5 of the proposal for amendment ensures that any matching done by the continuous trading matching algorithm is accurate and efficient.

5.2.7. Requirements of Article 55 of the CACM Regulation

(72) The proposal for amendment generally contains provisions that aim to fulfil the requirements of Article 55 of the CACM Regulation, because it includes provisions on pricing intraday cross-zonal capacity. The requirements of Article 55 of the CACM Regulation were already fulfilled through the adoption of the Methodology for pricing intraday cross-zonal capacity, which sets out that the pricing mechanism for cross-zonal capacity in the intraday timeframe shall be based on IDAs.

(73) This methodology sets out the timing and the implementation of IDAs and requires the TSOs to update and complement the common set of requirements for efficient capacity allocation to enable the development of the algorithm for the IDAs in accordance with Article 37(1)(a) of the CACM Regulation and provide it to all NEMOs.
All NEMOs complied with the amended TSOs’ requirements and provided, in Article 6 of the proposal for amendment, the main features of the algorithm for the implementation of IDAs.

ACER changed the structure of the whole Article 6 of the proposal for amendment in order to prevent potential ambiguities. Article 6(1) determines the main features of the IDAs and makes reference to the day-ahead timeframe of Article 4 and indicates that the same provisions of Article 4 shall apply for IDAs, with exceptions listed below that paragraph.

Therefore, ACER copied all necessary provisions from Article 4 to Article 6 and amended them in a way to ensure they are ready to be applied in the IDA algorithm. Apart from the change of structure, the content and goal of Article 6 remain the same.

ACER amended Articles 5(19) and 5(20) to minimise the impact of the IDAs on continuous trading, because the public consultation revealed that the market participants value shortening the time for the suspension of cross-zonal capacities in the continuous SIDC. Nevertheless, at the same time, ACER should secure that the results of the IDA algorithm are consistent and robust. Therefore, ACER determined an overall suspension time of 40 minutes, including 20 minutes before the deadline for bid submission, which are reserved for TSOs to merge the recalculated capacities with the capacities from the continuous SIDC (5 minutes) and for placing bids to the IDA (15 minutes) and 20 minutes after the deadline for bid submission, which are reserved for the calculation of the auction results, verification, transfer of data and publication of results.

After consulting all NEMOs on the shortened time period for delivering results from the IDAs, ACER introduced a temporary measure, which allows the NEMOs and TSOs to extend the suspension time to the originally proposed length of 30 minutes before the deadline for bid submission and 30 minutes after, if they identify the need in the testing phase of the preparation of IDAs.

The proposal for amendment fulfils the criteria of Article 9(9) of the CACM Regulation, because it describes the proposed implementation timescale in Articles 4 to 6 and in Annexes 1 and 2, and because it describes the expected impact on the objectives of the CACM Regulation in its Recitals (5) to (14).

The NEMO Committee, representing all NEMOs, consulted the stakeholders on the draft proposal for amendment Union-wide, from 3 June to 2 July 2019. Moreover, on 4 March 2019, all NEMOs organised a stakeholder workshop to discuss ongoing problems related to the algorithm, including the proposal for amendment for the price coupling algorithm and the continuous trading matching algorithm.
Therefore, the proposal for amendment has been subject to a public consultation in accordance with Article 12 of the CACM Regulation and complies with Article 37(4) of the CACM Regulation.

5.2.10. Recitals

ACER did not change the content of the Recitals, nevertheless, it amended the text in order to precise the expressions, put in place the appropriate abbreviations and to generally clarify the intent and purpose of the Algorithm methodology.

5.2.11. Proposed timescale for implementation

Articles 4 and 5 of the proposal for amendment define the implementation timelines of the Algorithm methodology as regards the implementation of the price coupling algorithm and the continuous trading matching algorithm.

In Article 4(14) of the proposal for amendment, ACER amended the already past deadlines for implementation for the already existing requirements of 1 August 2018 and 1 May 2019 and referred to them as to ‘existing’. Moreover, ACER added one new deadline for implementation of half-hourly and quarter-hourly granularity of DA products. This change stems from the requirement of Article 8(4) of Regulation (EU) 2019/943 of the European parliament and of the Council of 5 June 2019 on the internal market for electricity.

In Article 5(14) of the proposal for amendment, ACER amended, in analogy to the previous paragraph (84), the already past deadlines for implementation and referred to them as to ‘existing’. Moreover, after consulting all NEMOs, TSOs and regulatory authorities, ACER amended the timeline for implementation of the IDAs and postponed it by one year to 1 January 2023, which means that all functionalities and requirements (e.g. switchover and switchback) with their respective deadlines shall be implemented together with the implementation of IDAs.

In Article 6(6) of the proposal for amendment, ACER amended, in analogy to the previous paragraph (84), the already past deadlines for implementation and referred to them as to ‘existing’. Moreover, after consulting all NEMOs, TSOs and regulatory authorities, ACER amended the timeline for implementation of the IDAs and postponed it by one year to 1 January 2023 in order to relieve the envisaged algorithm performance issues.

ACER defined the above mentioned deadlines after consultation with all NEMOs, TSOs, regulatory authorities and market participants. ACER understands that the NEMOs face the risk of not meeting the adequate algorithm performance criteria once all the future algorithm requirements are implemented. Nevertheless, ACER considers that the NEMOs should manage this risk via a revision of the need and use of products, as well as reasonable specification of requirements, particularly those having a significant impact on the algorithm performance and not being explicitly required by the CACM Regulation or the European law. Therefore, ACER considers that all
NEMOs should be able to maintain an adequate performance of the algorithms without jeopardising the implementation of all the future algorithm requirements.

5.3. Specific issues of the Algorithm methodology

5.3.1. Definitions

(88) Article 2 of the proposal for amendment sets out the definitions used throughout the document.

(89) In Article 2(1), ACER amended and updated the already repealed Regulation (EU) 714/2009 with the new Regulation (EU) 2019/943 and in Article 2(2) added the definitions set out in the Methodology for pricing intraday cross-zonal capacity, because it is also implementing Article 55 of the CACM Regulation for implementing IDAs, therefore relevant for the establishment of the IDA algorithm.

(90) In Article 2(3), ACER:

(a) amended the definitions of the Algorithm monitoring methodology, Algorithm performance, Change control procedure, Corrective measure, First “OK” solution, Functionality, Paradoxically rejected order, DA/ID/IDA products and Request for change in order to reflect the new structure of the document and new abbreviations;

(b) amended the definitions of the Go-live window and Originator in order to simplify it and to provide legal clarity;

(c) added the definitions of the Algorithm monitoring procedure, Back-up procedure, Fallback procedure, Methodology for pricing intraday cross-zonal capacity, Operational contract, Operational procedure, Switchover and Switchback to enable better understanding of the Algorithm methodology and to identify the concrete documents, where additional information can be found (for all contracts and procedures);

(d) deleted the definition of the Algorithm service provider, because it does not constitute a party under the CACM Regulation and could cause ambiguities about legal responsibilities;

(e) deleted the definition of the Assessment body and the Decision body, because the whole concept of decision-making was deleted from the proposal for amendment as discussed in paragraph (112);

(f) deleted the definition of the Future requirements and Initial requirements, because the concept was replaced by the introduction of explicit implementation deadlines in order to make the deadlines easy to find in the common sets of requirements and to unify the style for both the DA and ID timeframes;

(g) deleted the definition of the IDA, because it has been already defined in the Methodology for pricing intraday cross-zonal capacity as introduced by ACER above in paragraph (89);
(h) deleted the definition of Party, which is not necessary to abbreviate, as it stands for ‘any NEMO and TSO’. Therefore, ACER replaced all occurrences of the Party by its former definition, i.e. by ‘any NEMO or TSO’; and

(i) deleted the definition of Usage, because it attempts to define several concepts at once and it was moved to the beginning of Article 7 of the proposal for amendment dealing with usage.

5.3.2. Algorithm requirements

(91) Article 3 of the proposal for amendment sets out the main requirements for the price coupling algorithm, the continuous trading matching algorithm and the IDA algorithm, the details of which are defined in Annex 1 and Annex 2 to the proposal for amendment.

(92) ACER deleted paragraph 2, as it repeats the scope of the Algorithm methodology and became redundant.

(93) Repeatability is a crucial feature of the algorithm, because it secures that any run of the algorithm provides output, which can be back-tracked and potentially used in infringement procedures to prove market manipulation.

(94) Therefore, ACER amended paragraph 5 to ensure that the repeatability of the algorithm is ensured and reinstalled the wording of the last ACER Decision 08/2018 on the same subject, which sets out that the algorithm should consistently deliver the same results.

5.3.3. Price coupling algorithm

(95) Article 4 of the proposal for amendment determines the main features of the price coupling algorithm. It provides details on the algorithm outputs, on the calculation of scheduled exchanges and on the way to find solutions. It also provides some details on the operational procedures and timings and puts obligations on NEMOs regarding the provision of data and information to TSOs and market participants, including the public description of the algorithm.

(96) ACER amended paragraph 4 in order to better describe the combinations of products, which the algorithm shall evaluate. As it became difficult to list all products, which should be evaluated, ACER instead listed the products which should not be.

5.3.4. Calculation of effective usage, anticipated usage and usage range

(97) Article 7 of the proposal for amendment determines the main features of the concept of the algorithm usage. The algorithm usage gives a quantitative indication on the average use of products or functionalities.

(98) ACER amended paragraph 1 to reflect the general idea of usage and used for that purpose the deleted definition of ‘Usage’ from Article 2 of the proposal for amendment.
ACER corrected and unified the terminology in Article 7 to use the same terms (where confirmed by NEMOs that the underlying meaning is the same) in the Algorithm methodology with those used in the annexes. These amendments did not change the substance of the Algorithm methodology and its annexes.

5.3.5. Monitoring algorithm performance

ACER deleted paragraph 3. In the last ACER Decision 08/2018, it served as a legal basis for the current proposal for amendment. Its purpose was to set out the minimum requirements on the monitoring and it became redundant in the current proposal for amendment, because the implementation of those provisions shifted all the content to Annexes 3 and 4 of the Algorithm methodology.

ACER amended Article 8(5), in order to set the deadline until when the NEMOs should send the yearly report and added a provision, by which the NEMOs should share the data used for the production of the report with ACER. Moreover, ACER added a new provision, which requests the NEMOs to provide an analysis of each product and its impact on the algorithm performance. Such analysis should be used by NEMOs in case of the need of simplification of the products used in SDAC or IDAs.

5.3.6. Roadmap for planning of changes

ACER, without changing the meaning of Article 10, slightly changed the structure and moved Article 16(8) in a paragraph of Article 10, because it is closely related to the roadmap.

ACER deleted paragraph 5, because it became redundant. It describes the conditions under which a request for change cannot be considered as a part of the roadmap, while the rest of the content of Article 10 makes it clear under what conditions a request for change can become part of the roadmap.

5.3.7. Research and development activities

Except for clarifying the text of the whole Article 11, ACER deleted paragraph 7, which mentioned the potential tasks of the algorithm provider. The deletion of the paragraph is in accordance with the reasoning of paragraph (90)(d).

5.3.8. Algorithm change management
Title 4 of the proposal for amendment describes in its Articles 13 to 23 the governance of all NEMOs and management of requests for change. It contains principles on submission, assessment, timing, prioritisation and decision-making connected to the requests for change.

All NEMOs enhanced over time their cooperation with all TSOs, which goes even beyond the minimum requirements of the CACM Regulation, and which is positively acknowledged by ACER. For that reason, all NEMOs introduced for their governance purposes a phrase stating that ‘all NEMOs and all TSOs shall/may/…’ to stress that the algorithm connected decisions are made together with all TSOs. Even though ACER supports such cooperation, there is no legal mandate for ACER to lay any obligations on TSOs in a proposal submitted by all NEMOs. In support of the statement in the previous sentence, the Decision is addressed to all NEMOs, which submitted the proposal for amendment to ACER; therefore, the TSOs are not recipients of the Decision and the Decision cannot have any legal effect on them.

Therefore, after consultation with all NEMOs and all TSOs, ACER amended the phrase in the whole proposal for amendment and changed it into ‘all NEMOs in cooperation with all TSOs’, which keeps the original concept of enhanced cooperation, but does not imply any direct legal obligation on TSOs.

All NEMOs proposed in Title 4 a concept, which envisaged the existence of several decision-making bodies, which would in different steps manage the decision-making process. In particular, they are the assessment body, the decision body and the independent arbitral tribunal. The assessment body and the decision body are defined in Article 2 of the proposal for amendment.

After consultation with all NEMOs and TSOs, ACER requested the NEMOs to change the concept of decision-making bodies, because the process of assessing requests for change resulted in a decision of the arbitral tribunal, which was binding for all NEMOs and TSOs and ACER could not have agreed on any binding decisions imposed on TSOs as argued earlier in the text. Therefore, ACER deleted not only the definitions, but also deleted and amended Articles 21 to 23 and replaced the decision-making bodies with a phrase ‘all NEMOs in cooperation with all TSOs assess/decide/…’ in all the relevant places of the proposal for amendment.

For enhancing clarity, ACER moved paragraph 6 of Article 15 describing the timing of submission to the beginning of Article 16, as it better reflects the purpose of Article 16, which directly covers the timing of requests for change.

ACER deleted Article 16(8) because it introduces rules and concepts that have been already described in Articles 10, 13 and 17.

ACER merged Articles 18 and 19 because the content was close to identical, only distinguishing the DA and ID timeframes.

ACER deleted Article 20(9) because the timing has been sufficiently described in the relevant Article 16.
ACER deleted Article 20(14) because the concept of the decision body was deleted and replaced by the common decision of all NEMOs in cooperation with all TSOs.

5.3.9. Publications and reporting

Article 24 of the proposal for amendment sets out the list of publications and their timings that all NEMOs shall produce.

ACER added one paragraph obliging the NEMOs to publish and continuously update all procedures and contracts, which are mentioned in the document and defined (as amended by ACER) in Article 2. The procedures and contracts provide in more details the specific parts of the Algorithm methodology and especially details on monitoring of the algorithms’ performance and reporting.

5.3.10. Annex 1 to the Algorithm methodology: Common set of requirements or the price coupling algorithm

ACER amended and updated the table referring to the ‘State’ of the requirements with the new denotations from the Algorithm methodology.

In paragraph 1.1(a)(i), ACER changed the deadline for implementation of the 15 minute and 30 minute market time units, in accordance with Regulation (EU) 2019/943.

ACER deleted paragraph 1.1(j) because it is identical to paragraph 1.1(i) therefore redundant.

During the consultation with NEMOs, TSOs and regulatory authorities, ACER received inputs that the requirement for intuitive flow-based approach does not have a legal basis in the CACM Regulation and has a significant impact on the SDAC algorithm. The Agency evaluated this claim and indeed concluded that the intuitive flow-based approach cannot be supported by the SDAC algorithm because:

(a) The constraints required to enforce intuitive solution for the flow-based approach cannot be accommodated by Article 39(1) of the CACM Regulation, which defines inputs to the SDAC algorithm, because these constraints are neither supported by the cross-zonal capacities nor by allocation constraints. In case of flow-based approach, the cross-zonal capacities are flow-based parameters (i.e. available margins on critical network elements and power transfer distribution factors) and in case of allocation constraints these are, according to Article 23(3) of the CACM Regulation, the constraints that are needed to maintain the transmission system within operational security limits and that cannot be transformed efficiently into maximum flows on critical network elements; or the constraints intended to increase the economic surplus for single day-ahead or intraday coupling. The constraints required to enforce intuitive solution for the flow-based approach do not fit into either of these categories.
(b) The constraints required to enforce intuitive solution for the flow-based approach are directly contradicting Article 38(1) of the CACM Regulation, which requires that the SDAC algorithm aims at maximising the economic surplus, while respecting cross-zonal capacities and allocation constraints. This is because the constraints required to enforce intuitive solution for the flow-based approach are limiting the maximisation of the economic surplus in order to achieve intuitive solution. Such limitation of economic surplus has no legal basis in the CACM Regulation.

Therefore, ACER deleted paragraph 2.2 and 3.4 form the Common set of requirements for the price coupling algorithm.

5.3.11. Annex 2 to the Algorithm methodology: Common set of requirements for the continuous trading matching and the intraday auction algorithms

(124) ACER deleted the introductory sections ‘Background’ and ‘Impact on the objectives of the CACM Regulation and implementation timeline’ because all the content of these sections is covered by the Algorithm methodology and makes them redundant.

(125) ACER amended and updated the table referring to the ‘State’ of the requirements with the new denotations from the Algorithm methodology.

(126) ACER deleted paragraph 1.3(g)(vi) and merged its content with paragraph 1.3(g)(i).

(127) ACER deleted paragraph 1.3(g)(vii) and merged its content with paragraph 1.3(g)(ii).

(128) ACER deleted paragraph 1.3(m) and merged its content with paragraph 1.3(g)(ix).

(129) ACER deleted paragraphs 1.3(h) to 1.3(l) because identical provisions are mentioned under paragraphs 1.3(g)(iii) to 1.3(g)(vii) and are, therefore, redundant.

(130) ACER deleted paragraph 2.2 on the intuitive flow-based approach for the reasons described in paragraph (123).

(131) ACER amended paragraph 6.2(c), in order to provide more precise explanations of the reasons under which partial coupling can occur.

(132) ACER deleted paragraph 7.2 and 8.4 on the intuitive flow-based approach for the reasons described in paragraph (123).

5.3.12. Annex 3 to the Algorithm methodology: Methodology for monitoring the performance and usage of the price coupling algorithm

(133) In Article 10 of the proposal for amendment, after consultation with NEMOs, ACER deleted paragraph 1(a), which determines the number of curve points as a monitoring indicator, because it is not necessary in combination with Article 10(1)(b), which determines the number of curve steps and does not bring any added value for the monitoring purposes.
To enhance readability, ACER generally restructured the whole Annex. ACER unified the terminology and abbreviations used in the Algorithm methodology and in the Annex and rearranged and reworded the content of most Articles in order to provide clarity. Nevertheless, the content (i.e. the choice of indicators and the method by which they should be calculated, used and reported) and the purpose of the Annex remains unchanged.

5.3.13. Annex 4 to the Algorithm methodology: Methodology for monitoring the performance and usage of the continuous trading matching algorithm.

To enhance readability, ACER generally restructured the whole Annex. ACER unified the terminology and abbreviations used in the Algorithm methodology and in the Annex and rearranged and reworded the content of most Articles in order to provide clarity. Nevertheless, the content (i.e. the choice of indicators and the method by which they should be calculated, used and reported) and the purpose of the Annex remains unchanged.

5.3.14. Assessment of other points of the proposal for amendment

ACER deleted Article 7 because it did not have any content.

ACER introduced several editorial amendments. The most significant one relates to the transformation of the document into a format which enables enforceability. Further, the wording, use of the appropriate abbreviations and ordering of some chapters were changed in order to improve readability and clarity.

6. CONCLUSION

For all the above reasons, ACER considers the proposal for amendment compliant with the requirements of the CACM Regulation, provided that the amendments described in this Decision are integrated in the proposal for amendment, as presented in Annexes I, II, III, IV and V to this Decision.

Therefore, ACER approves the proposal for amendment subject to the necessary amendments and to the necessary editorial amendments. To provide clarity, Annexes I, II, III, IV and V to this Decision set out the proposal for amendment as amended and as approved by ACER,

HAS ADOPTED THIS DECISION:

Article 1

The Algorithm methodology, the common set of requirements for the price coupling algorithm, the continuous trading matching algorithm and intraday auction algorithm, and the day-ahead and intraday algorithm monitoring methodologies,
developed pursuant to Article 37 of Regulation (EU) 2015/1222, are adopted as set out in Annexes I, II, III, IV and V to this Decision.

Article 2

This Decision is addressed to
- BSP Regionalna Energetska Borza d.o.o.
- CROPEX Ltd
- EirGrid plc
- EMCO AS
- EPEX Spot SE
- EXAA AG
- GME Spa
- HEnEx SA
- HUPX Zrt.
- Independent Bulgarian Power Exchange (IBEX)
- Nasdaq Oslo ASA
- Nord Pool AS
- OKTE a.s.
- OMIE S.A.
- OPCOM S.A.
- OTE a.s.
- SONI Ltd
- Towarowa Gielda Energii S.A.

Done at Ljubljana, on 30 January 2020.

- SIGNED –

For the Agency
The Director

C. ZINGLERSER

Annexes:

Annex I – Methodology for the price coupling algorithm, the continuous trading matching algorithm and the intraday auction algorithm also incorporating a common set of requirements in accordance with Article 37(5) of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management
Annex II – Common set of requirements for the price coupling algorithm

Annex III – Common set of requirements for the continuous trading matching algorithm and the intraday auction algorithm

Annex IV – Algorithm monitoring methodology for single day-ahead coupling

Annex V – Algorithm monitoring methodology for single intraday coupling

Annex VI (for information only) – Evaluation of responses to the public consultation on the compliance of the all NEMOs’ proposal for Methodology for the price-coupling algorithm and the continuous trading matching algorithm

Annex Ia – Methodology for the price coupling algorithm, the continuous trading matching algorithm and the intraday auction algorithm also incorporating a common set of requirements in accordance with Article 37(5) of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (track-change version, for information only)

Annex IIa – Common set of requirements for the price coupling algorithm (track-change version, for information only)

Annex IIIa – Common set of requirements for the continuous trading matching and the intraday auction algorithms (track-change version, for information only)

Annex IVa – Algorithm monitoring methodology for single day-ahead coupling in accordance with Article 8 of the Algorithm methodology (track-change version, for information only)

Annex Va – Algorithm monitoring methodology for single intraday coupling in accordance with Article 8 of the Algorithm methodology (track-change version, 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 ACER within two months of the day of notification of this Decision.