

All NEMOs' proposal for products that can be taken into account by NEMOs in single day-ahead process in accordance with Article 40 of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management

14 February 2017

All NEMOs, taking into account the following

Whereas

Background

- (1) This document is a common proposal developed by all Nominated Electricity Market Operators (hereafter referred to as “NEMOs”) for products that can be taken into account in the single day-ahead coupling (hereafter referred to as the “DA Products Proposal”) in accordance with Articles 40 and 53 of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (hereafter referred to as the “CACM Regulation”).
- (2) According to Article 40 of the CACM Regulation *“No later than 18 months after the entry into force of this Regulation NEMOs shall submit a joint proposal concerning products that can be taken into account in the single day-ahead coupling. NEMOs shall ensure that orders resulting from these products submitted to the price coupling algorithm are expressed in euros and make reference to the market time. All NEMOs shall ensure that the price coupling algorithm is able to accommodate orders resulting from these products covering one market time unit and multiple market time units.”*
- (3) According to Article 40 Paragraph of the CACM Regulation *“By two years after the entry into force of this Regulation and every second subsequent year, all NEMOs shall consult in accordance with Article 12: (a) market participants to ensure that available products reflect their needs; (b) all TSOs, to ensure that the available products take into account operational security; (c) all regulatory authorities, to ensure that the available products comply with the objectives of this Regulation.”* All NEMOs shall amend the products if needed pursuant to the results of the consultation.
- (4) The All NEMOs’ proposal for the DA Products Proposal shall be submitted to all regulatory authorities for approval by 18 months after the entry into force of the CACM Regulation – i.e. 14 February 2017. There is no obligation in the CACM Regulation for NEMOs to consult on the DA Products Proposal prior to submitting it to all regulatory authorities. However, NEMOs value stakeholder feedback on the proposals and have decided to consult.
- (5) In accordance with the Whereas (14) of the CACM Regulation *“For efficiency reasons and in order to implement single day-ahead and intraday coupling as soon as possible, single day-ahead and intraday coupling should make use of existing market operators and already implemented solutions where appropriate, without precluding competition from new operators.”*, the products proposed in the DA Products Proposal are based on the current coupling solutions, either implemented or under development and updated or amended where seen appropriate.
- (6) NEMOs shall establish, consistent with the MCO plan, through a NEMO Cooperation Agreement entered into by all NEMOs, a NEMO Committee and associated governance arrangements compliant with the CACM Regulation. Joint NEMO decisions and responsibilities regarding this DA Products Proposal shall be undertaken via the NEMO Committee and associated governance arrangements. As the introduction of any new or modified products may require an amendment to the price coupling algorithm, any change shall be subject to the Change Management Principles established under the Algorithm Methodology.
- (7) Decisions of the NEMO Committee in this proposal refers to decisions of All NEMOs coordinated via the NEMO Committee.

Impact on the objectives of CACM Regulation

- (1) The proposed DA Products Proposal takes into account the general objectives of capacity allocation and congestion management cooperation described in Article 3 of the CACM Regulation.
- (2) By mandating the availability of a wide range of products that NEMOs are able to make available to market participants as part of Single Day Ahead Coupling (SDAC), the DA Products Proposal promotes effective competition in the generation, trading and supply of electricity. To ensure that the DA Products Proposal continues to promote effective competition, NEMOs shall consult market participants at least every two years to ensure that available products reflect their needs.
- (3) The range of products that NEMOs are able to make available to market participants as part of Single Day Ahead Coupling (SDAC) reflects the needs expressed by market participants along the years and, where relevant, the local regulatory constraints on market design. As such, the proposed range of product supports overall liquidity with respect to OTC trading and the DA Products Proposal promotes price resiliency and welfare maximisation.
- (4) As the orders resulting from the products are compatible with the characteristics of cross-zonal capacity, the DA Products Proposal helps to promote the optimal allocation of cross-zonal capacity and to ensure the optimal use of the transmission infrastructure. As all orders resulting from the available products shall be able to access the available cross-zonal capacity via the DA MCO Function, the DA Products Proposal provides for non-discriminatory access to cross-zonal capacity.
- (5) The DA Products Proposal shall ensure operational security, as NEMOs are required to consult TSOs at least every two years to ensure that the available products take into account operational security. Moreover, if TSOs identify any challenge with respect to operational security they are entitled to request NEMOs to propose an amendment to the DA Products Proposal.
- (6) The products listed in the DA Products Proposal shall be available for NEMOs to offer their respective market participants and are all compatible with SDAC. As a result, the DA Products Proposal ensures fair and non-discriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants. To ensure that the DA Products Proposal continues to promote fair and non-discriminatory treatment, NEMOs shall consult all parties at least every two years on the available products.
- (7) In addition, we propose to that any changes to the available products shall be managed in accordance with the Change Management Principles and process described in the All NEMOs' proposal for the price coupling algorithm and for the continuous trading matching algorithm. These principles:
 - a) Provide an open, transparent, non-discriminatory way to manage change requests, including stakeholder input where relevant;
 - b) Provide assurance that the Algorithm Performance shall be maintained at acceptable levels now and over a reasonable period of time in the future, assuming plausible market growth and development;
 - c) Enable individual NEMO or TSO requests to be supported where this does not harm others or includes measures to mitigate any harm;
 - d) Establish a fair and efficient process that supports timely market development.
- (8) By following the Algorithm Monitoring Principles, in order to monitor the quality of market outcomes and identify potential deterioration in the algorithm performance, and the Change Management Principles and process described in the All NEMOs' proposal for the price coupling algorithm and for the continuous trading matching algorithm when introducing any changes to the available products, NEMOs shall ensure that the DA Products Proposal respects the need for a fair and orderly market and fair and orderly price formation.
- (9) By requiring NEMOs to publish and maintain a detailed public description of the products supported for SDAC the DA Products Proposal shall ensure and enhance the transparency and

reliability of information. Moreover, NEMOs shall involve all stakeholders in any consultation necessary to manage changes to the DA Products Proposal or the available products.

- (10) The DA Products Proposal creates a level playing field for NEMOs as all products listed in the DA Products Proposal shall be available to all NEMOs, and any change to the products available products shall be governed by the Change Management Principles in the All NEMOs' proposal for the price coupling algorithm and for the continuous trading matching algorithm.
- (11) By consulting all parties at least every two years on the available products, all NEMOs shall ensure that the DA Products Proposal continues to contribute to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union.
- (12) Each individual product can have an impact on the performance of the algorithm, which depends on their actual usage and the actual composition of the orders. In particular the impact on the performance of the algorithm depends on, among others:
 - i. number of orders submitted of that product;
 - ii. the specific values of the parameters specified in the orders submitted of that product, including prices and quantities and the relation between blocks as for block products;
 - iii. its concurrent usage together with the other products and the TSO requirements.

Implementation timeline

The NEMOs shall implement the Products Proposal in a Bidding Zone with respect to the operation of the SDAC immediately after:

1. the common grid model methodology developed in accordance with Article 17 of the CACM Regulation, the capacity calculation methodology developed in accordance with Article 20 of the CACM Regulation, and the relevant coordinated capacity calculator have been set up in accordance with Article 27 of the CACM Regulation on the borders of the relevant Capacity Calculation Region, and
2. the MCO function has been implemented in accordance with Article 7(3) of the CACM Regulation, and, the arrangements to accommodate multiple NEMOs developed in accordance with Article 57, are implemented in all the Bidding Zones where there are multiple NEMOs.

Article 1

General Requirements

1. Products shall be made available to market participants in accordance with the relevant NEMO's market rules.
2. All orders resulting from these products submitted to the price coupling algorithm shall be expressed in euros and make reference to the market time. NEMOs are entitled to arrange that orders submitted by market participants are expressed and settled in local currencies or euros.
3. New or modified products are subject to a change request. Such change request shall be subject to the Change Management Principles established in the All NEMOs' proposal for the price coupling algorithm and for the continuous trading matching algorithm (hereafter referred to as the "Algorithm Proposal").
4. The reference language for this proposal shall be English. For the avoidance of doubt, where NEMOs need to translate this proposal into their national language(s), in the event of inconsistencies between the English version published by the NEMOs in accordance with Article 9(14) of the CACM Regulation and any version in another language, the relevant NEMOs shall be

obliged to dispel any inconsistencies by providing a revised translation of this proposal to their relevant national regulatory authorities.

Article 2

Single Day Ahead Coupling Products

The price coupling algorithm shall support the following products:

Aggregated Hourly Orders

1. Demand (resp. supply) aggregated hourly orders are indicated bids (offers) from all market participants submitted in the same bidding area and aggregated into a single curve referred to as aggregated demand (resp. supply) curve defined for each period of the day. Orders are sorted by price:
 - a. Demand orders are sorted from the highest price to the lowest
 - b. Supply orders are sorted from the lowest to the highest price.
2. Following kind of aggregated hourly orders exist:
 - a. Linear piecewise curves containing only interpolated orders (curves should be strictly monotonous i.e. two consecutive points of the same curve cannot have the same price, except for the first two points defined at the maximum / minimum prices of the bidding area)
 - b. Stepwise curves containing only step orders (curves should be monotonous i.e. two consecutive points always have either the same price or the same quantity).
 - c. Hybrid curves containing both types of orders (composed by both linear and stepwise segments).
3. One demand (resp. supply) hourly order is said to be in-the-money when the market clearing price is lower (resp. higher) than the price of the hourly order. Any order in-the-money must be fully accepted.
4. One demand (resp. supply) hourly order is said to be out-of-the-money when the market clearing price is higher (resp. lower) than the price of the hourly order. Any order out-of-the money must be rejected.
5. One demand or supply hourly order is said to be at-the-money when the price of the hourly order is equal to the market clearing price. Any order at-the-money can be either accepted (fully or partially) or rejected.

Complex Orders

6. Complex orders comprise Minimum Income Condition (MIC) orders and Load Gradient orders.
7. MIC orders (maximum payment orders) orders are composed by:
 - a. 24 set of hourly sub-orders (sell for minimum income condition; buy for maximum payment order), one set per period (23 for day-light saving day ; 25 for long clock change day)
 - b. An economic condition, which represents the minimum income (maximum payment) expected by order's owner defined by:
 - i. A fix term (Tf) in euros
 - ii. A variable term (Tv) in euros per accepted MWh.
8. If the economic condition is not fulfilled, MIC (MP) must be rejected (deactivated). If the economic condition is fulfilled, MIC (MP) could be accepted (activated). If the economic condition is fulfilled, but MIC is rejected, MIC (MP) is defined as paradoxically rejected.
9. Scheduled Stop condition only applies to deactivated MIC orders and only in the periods declared as part of the Scheduled Stop interval by the MIC order. In case on which MIC is deactivated, the

first hourly sub-order of the set of offers belonging to the deactivated MIC in the period will remain activated and they will be (could be) accepted if they are in the money (at the money).

10. Load Gradient orders: (sell complex order with or without MIC condition) condition limits the variation between the accepted volume of an order in a period and the accepted volume of the same order in the adjacent periods, according to an increase gradient and/or a decrease one. Between two consecutive periods, the accepted volume of a Load Gradients order cannot vary by more than the defined gradients.

Block Orders

11. A block order consists of a fixed price limit (minimum price for sales block and maximum price for purchase blocks), a minimum acceptance ratio and a volume for a number of periods. If volume is not the same for all periods, block is defined also as profile.
12. Block orders cannot be accepted for a volume less than their minimum acceptance ratio. Acceptance ratio¹ must be the same for all periods belonging to the block.
13. For block orders one single price shall be calculated on the volume weighted average of the respective hourly prices.
14. The condition of rejection for a block order depends on the block volume weighted average margin clearing prices over all periods:
 - a. Sales block orders must be rejected if the block volume weighted average MCP (market clearing price) is lower than the block order price.
 - b. Purchase block orders must be rejected if the block volume weighted average MCP (market clearing price) is higher than the block order price.
 - c. A block can be paradoxically rejected (not accepted in the money block), but not paradoxically accepted (accepted out of the money block)
15. Linked Block Orders: block orders in the same bidding area can be linked together in a parent-child relation. A child block cannot be accepted is the parent one is rejected. An out of money parent block can be saved by one or more in the money children blocks (if the child's acceptance compensate, in terms of welfare, the loss associated to parent's acceptance).
16. Exclusive Groups of Block Orders: is a set of block orders for which the sum of the acceptance ratios cannot exceed 1.
17. Flexible Hourly Orders: a flexible "hourly" order is a regular block order with duration of 1 period but for which the period is let free (not defined by the participant). The period, in which the flexible hourly order is accepted, is calculated by the algorithm and determined by the optimization criterion.

Merit Orders and PUN Orders

18. Merit Orders and PUN Orders: "Stepwise" hourly normal order per bidding area that includes a merit order number. This merit order number shall act as tie-break rule setting the acceptance priority between merit orders at the same price (pro-quota criteria are not applied for merit orders). Merit orders can be divided in:
 - a. Selling/buying merit orders:
 - i. Cleared at their own bidding market area clearing price
 - ii. Must be accepted if in the money
 - iii. Must be rejected if out the money
 - iv. Can be accepted or rejected if at the money

¹ Minimum percentage on offered volume for which a block can be accepted. It cannot be different for periods belonging to the same block.

- v. Cannot be paradoxically accepted or rejected.
 - b. PUN merit orders:
 - i. Buying merit orders cleared at PUN price²
 - ii. Must be accepted if in the money
 - iii. Must be rejected if out the money
 - iv. Can be accepted or rejected if at the money
 - v. Cannot be paradoxically accepted or rejected.
- 19. The usage and parameterisation of any individual product is a decision of each individual NEMO, subject, to the extent it has an impact on the algorithm performance, to the application of the Change Control Procedure established under the Algorithm Proposal.

² Weighted average of market areas where PUN orders' volume is major than 0 clearing prices. Weight is accepted PUN volumes. Some tolerance is applied.