

TSOs' methodology for the exchange of balancing capacity or sharing of reserves



EFET response – 25 July 2019

The European Federation of Energy Traders (EFET) welcomes the opportunity to comment on the ENTSO-E consultation on the proposal for a methodology for a co-optimised allocation process of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves in accordance with Article 40 of the Electricity Balancing Guideline (EBGL).

1. General thoughts on the reservation of cross-border transmission capacity by the TSOs for balancing purposes

Since the early stage of drafting of the Electricity Balancing network code, we have opposed the concept of reservation of cross-border transmission capacity by the TSOs for balancing purposes. Though by the time of the adoption of the EBGL, the concept was rebranded as “cross-zonal allocation of capacity”, its effects remain the same.

The cross-border reservation of transmission capacity by the TSOs for balancing purposes poses a serious risk to the availability of cross-border transmission capacity in the preceding trading timeframes. By allocating transmission capacity specifically for use in the balancing timeframe, TSOs remove available capacity from the allocation in the other timeframes, thereby restricting market participants' ability to adjust their positions across borders in the most economically efficient manner, and to contribute to overall system balance.

The use of cross-border transmission capacity is a key element of European market integration in the forward, day-ahead and intraday timeframes. A major objective of integration projects such as the EU Harmonised Allocation Rules for forward transmission rights, as well as single day-ahead and intraday coupling are to improve the access and use of such transmission capacity by the market. Reserving capacity (from the forward timeframe onwards) for use by the TSOs in the balancing timeframe would turn the clock back on those improvements.

While we understand that the development of the present methodology proposal is a requirement of the EBGL, we invite TSOs and NRAs to refrain from implementing any of the cross-border capacity reservation processes, whether it be the one currently under consultation (co-optimisation) or one of the two other options to be potentially developed at regional level (so-called “market-based” or “economic efficiency” allocation methods).

2. General remarks and prerequisites related to the co-optimisation allocation process and its implementation

Bearing in mind our general opposition to the concept of cross-border transmission capacity reservation by the TSOs for balancing purposes (see above), we see a number of limitations in the current proposal of the TSOs:

- a. First and foremost, **co-optimisation in the spirit of the EBGL was supposed to be the most rigorous capacity reservation method out of the three proposed in the Guideline**, with a tool optimising between DA energy bids and balancing capacity bids. In contrast, the so-called “market-based” or “economic efficiency” approaches would be reserving capacity based on forecasted energy and/or capacity bids.

This expected precision in the co-optimisation process is best shown in the EBGL by the absence of a maximum percentage of capacity that is possible to reserve through this process, contrary to the “market-based” method (10% of the CZC) or the “economic efficiency” method (5% of the CZC). The existence of those maximum values for the CZC allocated to balancing capacity is linked to the (potentially miscalculated) estimations of the energy bids and/or balancing capacity bids. On the contrary, the absence of maximum value for the co-optimisation process implies implicitly that the co-optimisation process should result in a perfect economic optimum.

However, because of the complexity of operating the co-optimisation process in a rigorous manner, the TSOs proposal foresees a system whereby market participants would need to choose between submitting DA energy bids or balancing capacity bids in two separate merit orders, without a possibility to link bids (or make them exclusive from one another). This means that it is not actually the algorithm

that would make optimise between allocating capacity to the day-ahead coupling or balancing, but first market participants themselves. The algorithm will only play its role after individual market participants have made a choice where they place their bids. As proposed, the process is rather equivalent to a co-clearing than a co-optimisation.

This will result in a sub-optimal allocation of capacity between DA coupling and balancing, as market participants will need to forecast the energy price when pricing their capacity bids (including risk premiums associated with uncertainties). To avoid such effects, the final co-optimisation methodology proposal therefore absolutely needs to include the possibility of linking energy and capacity bids in order to limit inefficiencies linked to the concomitance of the two markets.

- b. Even if the possibility to link bids in both markets becomes a reality, **the change in the bidding process of market participants should not be underestimated**. This will require time to adapt and alignment with TSOs in order to design it.

Procuring several standard balancing capacity products in a co-optimised manner requires linking not only between balancing and energy-only market bids but also between the different balancing capacity products. Indeed, as per this proposal and the proposal on the implementation of article 25(2) of the EBGL, there will not be just one type but three standard products for balancing capacity. Three product types means that bids would not be the same and BSPs would be forced to choose one of them. Hence, unaccepted bids for one standard balancing capacity product cannot be subsequently offered for another standard balancing capacity product, as it is done currently.

A complex bid in a co-optimised allocation process has to conditionally link bids for the day-ahead market, aFRR, mFRR and possibly RR balancing capacity. The additional complexity introduced appears hardly feasible, not only from a computational point of view for the clearing algorithm, but also for market parties submitting bids.

- c. Looking ahead at the implementation of the co-optimisation process, **we harbour deep concerns with regard to the functioning of day-ahead market coupling**. We note that the Euphemia algorithm for DA coupling is already at its limit in terms of capability. The reduction of the Market Time Unit to 15 minutes in the future will certainly further strain the performance of the algorithm. Whether or not linked bids are included in the final proposal of the TSOs, the co-optimisation process is likely to have a profound effect on the efficiency of the Euphemia algorithm.

Neither the methodology nor the accompanying explanatory document seem to address this point. We invite the TSOs, together with the NEMOs if not already

done, to properly analyse the impact of the co-optimisation process on the performance of the DA coupling before any implementation decision is made, as well as involve and inform market participants accordingly.

In order to make sure the order of priority is clear, we oppose any limitations of the DA coupling process, such as a reduction in the variety of energy products and bidding flexibility offered in DA coupling, to accommodate the algorithmic complexity of co-optimisation; furthermore we also clearly reject any negative effect on the evolution of new products and services offered in DA coupling. We also oppose any prolongation of time needed for calculation or results publication.

- d. The description of **the co-optimisation process implicitly assumes that the energy allocation in DA is ATC-based. However, some CCRs use flow-based (FB) allocation (or will use it in the future), and there is in our view an incompatibility between these two options.** Indeed, in a FB environment, network constraints are related to firm energy net positions (taking into account that certain allocated energy flows can relieve a constraint and allow other flows to be accepted). However, since there is no certainty about the activation of the procured balancing capacities, their impact on energy net positions is unknown. Given that Article 33(7) of EBGL forbids that reliability margins are increased to accommodate the uncertainty linked to the activation or non-activation of the contracted reserves (FRR or RR), we do not see how the co-optimisation process could be applied in the context of a FB capacity calculation without endangering the management of the grid. We invite the TSOs to find a way to design a FB-proof co-optimisation process; if not possible, this would be major obstacle to the implementation of co-optimisation.
- e. Third, **the co-optimisation process (like the other two capacity reservation process) ignores the intraday market** by setting the co-optimisation stage in the day-ahead market. This means that, in theory (see our second point below), the value of capacity is only compared between the DA market and the expected value in the balancing timeframe, without taking account of the value of that capacity in the intraday timeframe.

Besides the lack of precision in this approach, it also forecloses opportunities for market participants to adjust their positions in intraday across borders. This contradicts some of the most fundamental principles in the EBGL itself: Recital 12 *“The integration of balancing energy markets should facilitate the efficient functioning of the intraday market in order to provide the possibility for market participants to balance themselves as close as possible to real time”* and article 3.2.e *“When applying this Regulation, Member States, relevant regulatory authorities, and system operators shall ensure that the development of the forward, day-ahead and intraday markets is not compromised”*.

- f. In the context of the **implementation of article 16 of the recast Electricity Regulation approved as part of the Clean Energy Package (Regulation (EU) 2019/943)**, the TSOs will need to allocate to the market a minimum of 70% transmission capacity respecting operational security limits after deduction of contingencies. As the transmission capacity reserved by the TSOs through the co-optimisation process would be used by the TSOs themselves for the exchange of balancing capacity or the sharing of reserves, we would welcome a clear statement by the TSOs that this capacity will not be counted within the minimum 70% threshold.

3. Detailed comments on selected articles

Articles 1 and 2 ‘Subject matter and scope’ and ‘Definitions and interpretation’

- In article 1.7, there is a reference to an exclusive usage of the cross-zonal capacity (CZC) for the product it was reserved for. But afterwards, in article 3.10, it is mentioned that “it shall be released for the exchange of balancing energy with shorter activation time”. Please clarify the sentence to make it line with the article 3.10.
- Article 2.2 proposes new definitions of well-known and already defined concepts (notably under the CACM) and apply them to this specific methodology. E.g “Allocation of cross zonal capacity” is not limited to the CZC allocated for the exchange of balancing capacity or sharing of reserves. This remark is a.o. also valid for the definition of “Use of cross zonal capacity” and “Release of cross zonal capacity”. We ask for a consistent use of already existing definitions and to not tweak them in order to fit with this specific methodology.
- In article 2.2g, is the "duration of application" synonymous of the "contracting period" used in the explanatory note of the SPBC methodology? If yes, please use a common wording.

Article 3 ‘Principles of balancing capacity cooperation’

- Under article 3.5, more explanation would be welcome on how to combine a co-optimisation with the derogation to procure upward and downward jointly and without derogation (treating them separately)? We see implementation challenges.
- In article 3.7, clarification would be welcome on how to combine SDAC for 24h with a minimum contracting of balancing capacity bids period smaller than 24h. Following our understanding, the contracting period must be identical for the SDAC and for the capacity procurement, i.e. 24h.

Article 4 ‘Notification process for the use of the co-optimised allocation process’

- In article 4, each balancing capacity cooperation implementing co-optimisation should not only "Inform all TSOs" but more generally should "inform all market participants".
- Article 4 lists the specifications of the balancing cooperation that should be part of the notification process; the type of balancing capacity product (aFRR, mFRR or RR) to be shared/exchanged should also make part of this list.

Article 5 ‘Timeframe of co-optimised allocation process’

- In article 5.1.b, why is a delay of maximum one hour needed for the notification of selected upward/downward balancing capacity bids to market participants? This does not seem necessary. We don't understand why the results of the DA market and the selected balancing capacity bids cannot be published at the same time.
- In article 5.2.c, it is not clear which conversion of the balancing capacity bids is required.
- Concerning the article 5.2 d:
 - The wording is not clear between supply/demand order books and TSO demand (up and down). Please clarify.
 - If there are minimum local reserve requirements and/or additional thresholds per product and per direction, we think they should be harmonised at the level of the balancing capacity cooperation to ensure a level-playing field to avoid competition distortions across bidding zones.
- We understand from articles 5.2.g to 5.2.j that the MCO only gives as output of the co-optimised SDAC, the CZCs allocated for balancing capacity exchange, and that these CZCs are used as input by the TSOs to calculate the accepted balancing capacity bids in each zone. However, to obtain the CZCs allocated for balancing capacity exchange, the MCO has to solve the whole optimisation problem, so it is already able to give the accepted capacity bids in each zone. Therefore, we fail to understand the rationale of the additional step performed by the TSOs. Governance issues between the MCO and TSOs should not lead to extra unnecessary steps in a process that is already very challenging in terms of timings and complexity. Besides, we underline that this additional step, where capacity is allocated by the TSOs independently from energy, is clearly incompatible with the possibility to link energy and capacity bids, which is of utmost importance for us, as emphasised above.

- Concerning article 5.2.i:
 - The co-optimisation process will allocate CZC for energy bids and balancing capacity bids, so we wonder what kind of validation is needed from the TSOs. If needed, it is important to ensure transparency in this process and to list the reasons for a negative validation.
 - Currently, only a positive or a negative validation is foreseen. The possibility of partial validation is not mentioned. Can you justify why? We see advantages in having partial validation in order not to lose all the advantages of the balancing capacity cooperation for a negative validation caused by a marginal issue at TSO side.
 - In case of negative validation, a re-run of the SDAC should be performed so that the CZC reserved for balancing capacity (and finally not used by TSOs for the BC allocation due to the negative validation) can be used for energy bids. How can that be managed that in terms of timing and potential delay? Will the co-optimisation be cancelled on that day? Back up procedures should be properly described.
- In article 5.2.f, "5.2.d" should be replaced by "5.2.c"

Article 7 ‘Determination of the actual market value of cross zonal capacity for the exchange of energy’

- In article 7.1a: given the definition of the market value of CZC, brackets should be deleted.

Article 8 ‘Determination of the actual market value of cross zonal capacity for the exchange of balancing capacity or sharing of reserves’

- Concerning article 8.3, it is not clear why a TSO cannot ask for more capacity than the one submitted locally. If it is to avoid the risk of "free riding" by some TSOs, we oppose this concept, as we consider that the exchange of balancing capacity (if capacity is indeed reserved by the TSOs) is precisely a means of fulfilling the demand of a TSO even if there is not enough offer in its zone; besides, applying such a provision would lead to a situation where the TSO with insufficient offer in its zone would not cover its reserve requirement as dimensioned pursuant to the SOGL. Therefore, arbitrarily reducing the TSO's demand should not be considered as an option. If this is because the computation would not be possible because of an infinite surplus in the zone with insufficient offer, could you then clarify that?
- Article 8.1.e is not in line with the article 3.8 where it is defined that the minimum validity period is equal or a multiple of the DA MTU. Please correct this article.

Article 10 'Firmness regime of cross zonal capacity'

- Under article 10.2, we would welcome clarification on the time schedules for the process of releasing unused CZC for the exchange of balancing energy with shorter activation times in order to ensure feasibility.
- Under article 10.3, what do the "transmission constraints" (referring to article 9 where the term "transmission constraints" is not present) refer to?
- Concerning article 10.4:
 - Could TSOs clarify that the balancing capacity contracted cross-border is not subject to curtailment even if the CZC is curtailed, and that the compensation referred to in Article 10.4 is therefore only an inter-TSO compensation (related to the additional costs from the procurement of replacement balancing capacity)?
 - We consider that, in case of CZC curtailment, BSPs should also be compensated (without compensation cap) for the loss of opportunity.
- Article 10.5 is not directly related to firmness issue.

Article 13 'Publication'

- It is unclear why TSOs would publish information on allocated cross-zonal capacity for the exchange of balancing energy / sharing of reserves only six hours before its use. For the sake of transparency, this information should be published together with DA market results.
- The EBGL states in its article 12.3.i that information on the use of allocated cross-zonal capacity should be published at the latest one week after its use. This does not prevent TSOs from publishing this information earlier. The methodology should clearly state when the information will be published.
- Under article 13.5, which "approved methodologies" are referred to?

4. Additional comments

- It should be clear that the CZC on a BZB that has not been allocated to energy bids in DA (which results in a price coupling on that BZB) nor to balancing capacity (because the TSOs' needs are fulfilled), has to be released to the ID market.
- Has the proposed co-optimisation process been designed only for a TSO-TSO model? Would it be compatible also with a TSO-BSP model, as allowed by Art. 35 of EBGL?
- What is the difference between the Minimum Validity Period and the Validity Period. Can you clarify who defines them (cf. figure 1 in the Explanatory Note). Can multiple Validity Period be linked to each other?

- We would welcome numerical/graphical examples to be included in the explanatory note as it was done for other EBGL methodologies.
- There is little information available on the characteristics of the TSO demand. How will it look like? Can the TSO demand be elastic? Would it be based on volume only or on volume and price together? This has an impact on the determination of the consumer surplus.
- It would be advisable to change the terms “producer” and “consumer” by “seller” and “buyer”, respectively. As a BSP is not necessarily a producer and a TSO does not consume balancing capacity.