

**Disclaimer notice for R&D deliverables and co-opt implementation via R&D**

- *The R&D deliverables have the goal of illustrating how the concept of Co-Optimization mandated by the Algo Methodology can be implemented given the current EU market design and regulatory requirements. In this context the R&D deliverables do not aim to:*
  - *provide any cost-benefit analysis for the implementation of co-optimization, with particular reference to any trade-off between expected welfare benefits and implementation costs.*
  - *provide any assessment of differential benefits expected from co-optimization vs the market-based approach.*
  - *assess the overall welfare impact of Co-Optimization, especially in relation to implications for the overall market and for MPs due to possible sharing/re-allocation of CZC between energy and balancing capacity.*

## Questions from Informal Co-optimization webinar 11/10

### 1. Does the new design mean that the "10%-rule" no longer will be used?

The 10% rule applies to the (sequential) market-based allocation process in Article 41 of EBGL (§41.2). This limit is because bids in the market-based allocation process depend on a forecast of SDAC prices, causing an inherent uncertainty. The objective of the limit is to avoid erring in such a way that excessive exchange capacity is allocated to balancing capacity, reducing the social welfare of SDAC.

For co-optimisation, there is no corresponding limitation up to now.

### 2. Why is the possibility to further reduce the available transmission capacity from SDAC beneficial?

The co-optimisation implementation stems from the legal obligation. Generally, it may or may not be beneficial, depending on the prices/costs of energy and balancing capacity respectively. The original requirement is to optimise the allocation of CZC for the exchange of energy or exchange of balancing capacity and sharing of reserves. Such implementation however brings several trade-offs.

### 3. How will the capacity be allocated in the case of non-intuitive flows in the SDAC?

Answer to this question is to be further studied in the second section of the R&D.

### 4. How does initiative relate to previous R&D activities on explicit bids and the envisaged concept of a bidding guide drafting process? Is the previous approach discarded?

The previous approach is still under consideration in the ongoing R&D (in line with the newly approved Algorithm methodology, please check items (a-c) of Article 4.p15).

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### 5. For whom is the increased reduction beneficial? How will the customer reap the benefits?

In this context, TSOs and NEMO understand that reduction means a reduction of CZC available for the exchange of energy through the allocation of available CZC to the exchange of balancing capacity or sharing of reserves. For co-optimised markets, the exchange of balancing capacity increases social welfare, primarily resulting in reduced costs of balancing and generation because of more efficient distribution of energy production and balancing capacity among generation units. Ultimately, this results in lower costs for providing balancing capacity, resulting in lower grid tariffs for electricity consumers (and producers, where relevant). This R&D on co-optimisation is also initiated for investigating such possible benefits.

### 6. Will cross-zonal procurement of balancing capacity be allowed under co-optimisation?

This is the whole point of co-optimisation in the SDAC framework – to optimise the allocation of CZC for the exchange of energy or exchange balancing capacity and sharing of reserves under SDAC and as a result, it will be provided most efficiently, as a mix from one or several bidding zones.

### 7. How is the potential reservation of capacity of 50% for balancing energy in line with the 70%-rule?

In principle, it is possible that a total of 70% could be allocated for the exchange balancing and or sharing of reserves, while requirements and limits for the exchange of FRR according to SO GL have to be respected.

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8. **Thank you for the clear explanations. The survey questions are targeting concrete implementation aspects. Beyond working on the implementation of co-optimisation, could you elaborate to which extent R&D will help address concerns expressed during recent consultations by NEMOs (Sep. 2023) and ACER (Feb. & Jun. 2024)? Many concerns were expressed and it seems these should be addressed by R&D, but are not part of the survey: scalability issues, compatibility with flow-based approaches, governance aspects, performance bottlenecks following the 15min MTU implementation, requirements for unit-based bidding, transparency of price formation, limited flexibility for storage/hydro for multi-step optimisation, implementation / IT costs for market participants, reduction of cross-border capacity in the day-ahead market, etc.**

The workstream conducting this survey does not aim to answer the question of whether Co-optimisation should be implemented or not. It is based on R&D work launched according to the Algorithm Methodology approved by ACER Decision 11 of 27 September 2024. The R&D consists of several phases, as explained in the presentation. Phase 1 considers:

- a) product design which captures intertemporal and cross-product dependencies between SDAC and SPBC;
- b) bid design which properly reflects at least variable and fixed costs;
- c) determination of clearing prices for day-ahead energy and SPBC.

The other topics (also including those mentioned in the question) shall be included in subsequent R&D phases or other relevant workstreams.

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9. **Which balancing markets will be included in the SDAC-algorithm? Is it aFRR and mFRR? In the Nordics the FCR-market is cleared in two separate auctions, one before the SDAC and one after. Would FCR-trade in the Nordics need to be changed as a result of the changes discussed here? Could it be co-optimized as well?**

FCR will not be considered under Co-Optimisation – only regional procurement of aFRR and mFRR as no CZC has to be allocated for the exchange of FCR which is covered by the reliability margin.

Please note that only the allocation of CZC for the exchange of balancing capacity (regional procurement of balancing capacity (BC)) or sharing of reserves will be included in SDAC Algorithm. Exchange of BC is voluntary according to EB Regulation and sharing of reserves is voluntary according to SO Regulation. If there is a voluntary regional procurement of BC or sharing of reserves, this will be handled through the Co-Optimisation. Nevertheless, SDAC Algorithm must be adapted to provide this possibility.

Article 32.2(a) of EBGL, Procurement rules, states that “the procurement method shall be market-based for at least the frequency restoration reserves and the replacement reserves”. Furthermore, Article 33.4 states “Cross-zonal capacity allocated for the exchange of balancing capacity or sharing of reserves shall be used exclusively for frequency restoration reserves with manual activation, for frequency restoration reserves with automatic activation and for replacement reserves. The same article 33.4 subsequently says that the reliability margin shall be used for frequency containment reserves.

Moreover, in line with Regulation (EU) 2019/943 Article 6.9 "Contracts for balancing capacity shall not be concluded more than one day before the provision of the balancing capacity and the contracting period shall be no longer than one day, unless and to the extent that the regulatory authority has approved the earlier contracting or longer contracting periods to ensure the security of supply”.