

## ACER consultation on the implementation of co-optimisation in the electricity day-ahead coupling algorithm

Brussels, 18 June 2024 - Energy Traders Europe appreciates the ACER consultation, the public workshop, and the interactions at the last Market Stakeholder Committee (MESC).

Since the early stage of drafting of the Electricity Balancing network code, we have questioned the concept of reservation of cross-border transmission capacity by the TSOs for balancing purposes.

While we understand that the amendment of the present methodology is a requirement of the EBGL and the Clean Energy Package (CEP), we invite TSOs and NRAs to refrain from setting up balancing capacity cooperations, based on co-optimisation.

The ACER's welfare gains consultancy study is only a first step for further discussion and we appreciate the further R&D with the 15 min MTU resolution. We also note that this study has several flaws in its assumptions that might lead to unreliable quantitative outcomes.

We recommend that the implementation of this project should be put on hold until the technical complexity for the algorithm and market bidding is manageable. It is also essential to maintain or increase products offering while maintaining portfolio bidding.

Any further steps should be discussed in the European forums before ACER commits to any implementation timeline.

### Key messages

- We notice that a thorough analysis of multilateral linking is missing. It is important that offers can be linked in terms of bindingness, exclusivity, and divisibility. Electric

and balancing bids are logically related from the participant's perspective. Detailed support for interconnection and binding/exclusivity is essential to avoid market inefficiencies.

- The estimated welfare gains seem exaggerated. Even with a simplified representation of intraday corrections and portfolio readjustments, the estimated welfare gains decrease from 1218 million € to less than 700 million € and this figure could be much lower with a more realistic setup. Moreover, the Core region should be carefully used as a reference for the rest of the EU where methodologies are different.
- The study should provide better insight for market participants to model a real or hypothetical portfolio to comprehend and plan for the complexity of future offerings under co-optimisation.
- Thorough consideration is needed. Ensuring maximum flexibility for bidders is crucial, including family offers, exclusive offers, and conditional and interdependent offers across markets and products, according to market granularity and the entire day interval.
- Some of the costs seems to be overlooked in the study such as: costs of implementation and adaptation of operating systems and processes; increase of algorithm computational times; difficulty for market participants to decide on the optimal "share" between balancing capacity vs SDAC offers; need for bid linking; risk of reduction of cross-border capacity for day ahead market.

## Detailed comments

1. *The consultancy study shows significant welfare gains for co-optimisation under a design where market participants are not required to forecast the day-ahead energy market outcome when bidding for balancing capacity. As shown in Appendix G1, introducing an explicit price for balancing capacity, based on opportunity costs, leads to a deterioration of benefits of about 15%. In light of these findings, do you agree to further assess the bid design without an explicit price for balancing capacity in the upcoming R&D activities to be carried out by NEMOs and TSOs for the implementation of co-optimisation in the SDAC algorithm?*

# CONSULTATION RESPONSE

The bid design without an explicit price for balancing capacity R&D seems to point towards a central dispatch and unit bidding model. This will remove market participants ability to price balancing capacity. It is a major market design change that should not require further assessment. Bid design without explicit price is a dead end in terms of research for Energy Traders Europe because:

- It requires a change in the day-ahead market towards unit-based bidding.
- It requires correct reflection of technical parameters of underlying assets, which is near-impossible given the wide range of assets and way of representing such assets across market participants.
- It would further burden the algorithm with additional complexity at a time when performance is under strain.
- It removes the ability from market participants to define and implement bidding strategies and choices of markets to be active in.
- Market clearing and transparent price formation as it its will disappear and instead of providing a clear price signal to forward markets and long-term investments, SDAC results will be at the discretion of ambiguous algorithm decisions.

2. *Please list advantages and disadvantages of a co-optimisation design where bids for balancing capacity are based on the price of the linked day-ahead energy bid and the day-ahead energy price calculated by the SDAC algorithm.*

## **Advantages**

- Externalization of bidding complexity from market participants to algorithm/market coupling.

## **Disadvantages**

In general, disadvantages of co-optimisation:

- Co-optimisation, as proposed, appears to limit the flexibility of certain generation assets (i.e. storage, hydro) and ancillary services providers for incremental or multi-step optimisation.

# CONSULTATION RESPONSE

- increases complexity of SDAC calculations and Euphemia
- implementation and regional impact
- joint clearing of day-ahead market and balancing capacity procurement will result in an increase of paradoxical market results.
- costs of implementation and adaptation of operating systems and processes
- risk of reduction of cross-border capacity for the day ahead market
- transparency decrease (it could be more difficult for the operators to understand the reasons behind accepted/not accepted bids).
- reduces product diversity and flexibility.

Specifically, disadvantages of bidding without explicit pricing:

- Introduction of unit-based bidding.
- Further escalation of algorithm complexity.
- Simplification of asset representation to fit pre-determined parameters, resulting in bid efficiency degradation.
- Removal of free pricing ability for market participants, reducing attractiveness of balancing capacity market.

3. *Please provide any other comments on the consultancy study.*

We see these further issues with ACER's consultancy welfare study:

## **Methodology**

The theoretical study simply assumes a lot of the required implementation challenges.

The stochastic nature of balancing energy provisioning that is posing actual challenges to most units (particularly storage) is not captured with a two-stage perfect-foresight model run.

For a correct quantitative assessment, the impact of less-than-ideal bidding design should be assessed. Also the fall back solution need to be studied in case of SDAC decoupling, as well as the increase of risk of decoupling under the – more complex – co-optimisation context.

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## Applicability

There are no estimates on the balancing market volumes that will be procured in SDAC.

Price forecast error estimation methodology is too simplistic, not correctly reflecting the effort market participants put into such forecasting. This leads to an overestimation of the welfare gains co-optimisation can achieve compared to scenario's where market price forecasts are used.

The underlying data is outdated (e.g. nuclear in Germany), putting into question the applicability of the quantified results to a future electricity system. Especially in light of the fast developments in terms of renewables, storage and demand response. No reserve provisioning by renewables units, batteries or demand side response is considered in the study.

The identified drivers for the alleged superiority of co-optimisation underline the limited applicability of the study. The observed advantages are on the one hand artefacts of the model design, where naive market participants with no foresight are considered and all dispatch decisions are taken centrally. On the other hand, the quoted challenges (minimum load, fixed costs), that co-optimisation is better suited for, relate to a generation portfolio dominated by large conventional power plants which is already outdated.

For instance, the study suggests that dispatch of nuclear plants is an outcome of the balancing market, which hardly reflects market reality. A market participant (other than the respective model equation) will most certainly not refrain from bidding a low-cost nuclear plant at its full capacity into the energy market, just because there is another plant is already providing balancing capacity with some of its generation capacity ("taking up space from the dispatch"). In turn the other plant would be running at partial load and the responsible market participant will make sure by subsequent bidding and dispatch decisions that this will not happen again.

# CONSULTATION RESPONSE



## Implications

The comparison reference resulting in the relative welfare gain is unclear. The impact on the day ahead market should be made explicit, and more transparency on the quantified results should be provided.

Given the immense collateral implications on existing market-coupling achievements, the magnitude of the questionable benefits attributed to co-optimisation are negligible.

## Recommendations

Any deadline for implementation should be discussed in the MESC and MCCG with an open mind and with further R&D from the TSOs and NEMOs before we move to a firm decision on implementation by 2030.

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