MESC – EBGL update

05 December 2018

Counter-activations

Compromise proposal for counter-activations in the mFRR- and aFRR-Platforms

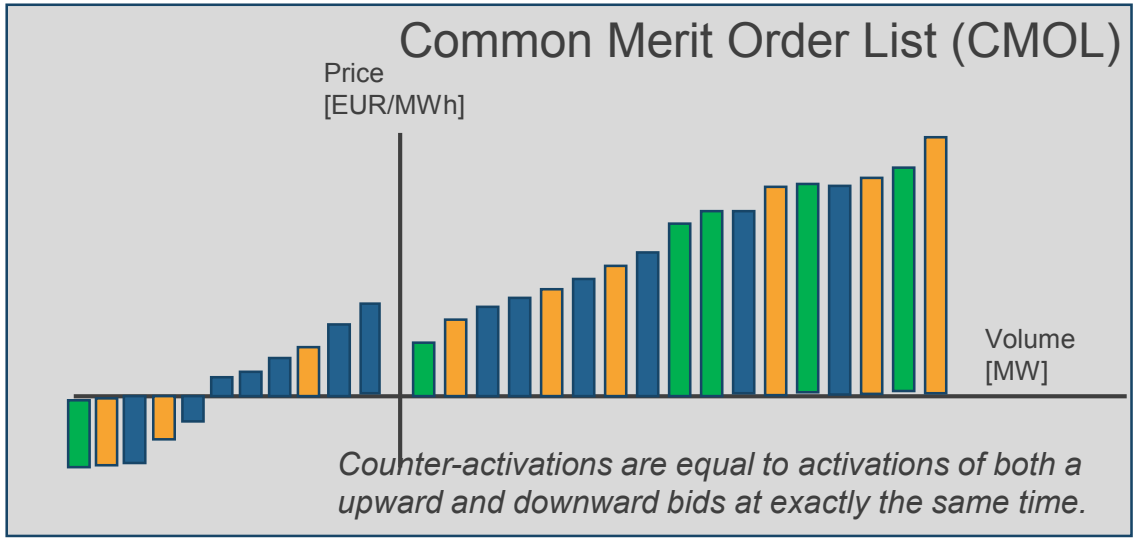
Counter-activations

In case of price inversion between the upward and downward CMOL, the optimisation algorithm will naturally tend to activate in both directions if this is not explicitly prevented by an additional constraint.

Prevention of CA is hard to achieve together for instance with indivisible bids or unforeseen rejection of divisible bids.

➔ From algorithmic perspective, it is therefore **beneficial to allow CA**

But there is a **side effect for the market**: counter-activating these bids is creating an additional economic surplus, like the preceding markets (DA, ID)



The perception of this side effect is very different

- Some NRAs/TSOs and BSPs/BRPs believe that the side effect is very negative: not the role of TSOs, threat for ID…
- Some NRAs/TSOs and BSPs/BRPs believe that the side effect is positive by itself thanks to the additional surplus created

Common proposal from MARI&PICASSO:

Starting point: To fully allow counter activations in MARI & to fully block them in PICASSO (Package Deal). And commit in the IFs to monitor the side effects.

Summary of the analyses in PICASSO

Algorithm perspective

Feasibility of blocking CAs

- PICASSO TSOs have concluded that in terms of algorithm, all options are possible (allowing CAs, allowing partially CAs, blocking CAs). The difference with MARI arises from the absence of indivisible and link bids.

Interactions between IN and aFRR

- Having implicit netting within aFRR (where it applies) before IN contributes to increase efficiency (see INIF: optimisation region)
- But having IN after aFRR without specific tweaking of the algorithm will lead not to activate the bids for CAs

Other considerations

Mixed views…

- **BSP-to-BSP exchange and role of the TSOs**
- **Economic efficiency**
- Risks for mark-ups
- Efficient use of cross-zonal capacity
- Transparency or understandability of the results for BSPs
- Importance of: repartition of surplus between TSOs, non-monotonic behaviour of price, non-intuitive flows & negative rent
- Legal requirements (REMIT, EBGL)

Conclusion

PICASSO TSOs propose to block the possibility of counter-activations in a first stage

Summary of the analyses in MARI

Algorithm starting point

«1-step» vs. «2-step»	• **As a starting point**, MARI TSOs, comforted by an external analysis (N-Side), believe that the **1-step algorithm is the most efficient** in terms of optimisation for the balancing, and use of CZC

MARI project context

Foreseen use of indivisible bids	• Based on the **current design decisions** in the MARI project, the use of **extended features** such as **indivisible** bids or **linking** between bids are necessary for **technical reasons** and also for TSOs to be able to **operate their balancing** processes

Implementation concerns

Risk on the go-live date due to complexity of handling CA	• Extended features generate cases of **acceptance / rejection of divisible and indivisible bids** that **MARI has to handle** • According to the external analysis (N-Side), the **handling of those cases with the reduction/blocking of counter-activations** is **not known in terms of algorithmic implementation, and it is unknown if a solution can be found**

Conclusion

MARI TSOs propose to secure (technically and timely) the implementation of the mFRR platform based on a 1-step algorithm, acknowledging the possibility of counter-activations as a side effect in a first stage

FAT aFRR

Technical and economical assessment

- **Technical simulations** run on a limited number of countries
  - AT, BE, FR, DE, NL ➔ proxy for the other countries
  - Different assumptions for FAT
  - Analysis of the impact of the individual FRCE quality target for each LFC block, and on the impact of the overall FRCE quality of the region, considered as a proxy for the frequency quality at synchronous area level
    - ➔ **Risk of not being compliant with frequency quality indicators for Continental Europe**
    - ➔ Many assumptions: how will the market develop? What will be the pattern of imbalances in the future?
    - ➔ **heading to a more volatile world** compare to what we know nowadays
- Effect on the procurement costs for balancing capacity have been analysed for FR and BE
- FR: expected increase of procurement costs of 26 MEUR/year (+54%).Mostly driven by impact on opportunity costs
- BE: expected increase of procurement of 8 to 20 MEUR/year, depending on assumptions on Clean Spark Spread. Mostly driven by must-run costs of out-of-money units

	Belgium (Elia)	France (RTE)
Current FAT	7,5 minutes	6,7 minutes (400 seconds)
Dimensioned aFRR volume	≈ 140 MW	[500 MW – 1200 MW] (dynamic band) (≈ 660 MW on average)
Type of aFRR providers	Gas units (CCGT)	Nuclear, coal, gas, DSM, hydro

- Currently, **values from 2 to 15 min in Europe**
- Potential candidates: **5 min and 7.5 min**

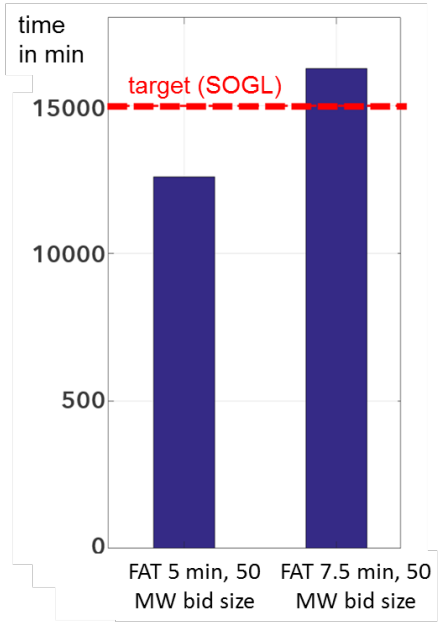


FIGURE 6: SIMULATED YEARLY MINUTES OUTSIDE THE STANDARD FREQUENCY RANGE OF CONTINENTAL EUROPE

Neither 5 min or 7.5 min is considered as a good sustainable solution

Proposed approach

- **aFRR FAT of 5 min is seen as a need for the system in the future**
  - More volatility arising from renewables and HVDC interconnections
  - Fast products will help limiting other measures that may limit the welfare in other timeframes (ramping constraints for instance)
  - New entrants typically are able to offer fast flexibility without increased costs

- **This 5-min would have a too big impact as of now, or as of go-live of the platform**
  - Need for the market to develop, and to let new entrants participating, attracted by an integrated market, and a merit-order activations

- **Delay the harmonisation of the FAT during 4 years**
  - Impact on the level-playing field (hence harmonisation), but limited when it comes to balancing energy (mainly for non-contracted bids)
  - No need to implement specific products has of go-live, which could have led to a situation where the specific products would have continued to be accepted

Stakeholder WS on CZC Allocation

Stakeholder WS on CZC allocation: 4/02/2019

Purpose

- Introduce the topic CZC allocation for exchange and sharing of balancing capacity
- Present the requirements of EBGL articles 40, 41 and 42 and high level methods for CZC allocation
- Receive early input from stakeholders in the drafting process of methodologies

Agenda

1. Introduction on cross-zonal capacity allocation
2. Requirements of Electricity balancing guideline
3. Three allocation methods
   - Co-optimised
   - Market based
   - Economic efficiency
4. Market value of cross-zonal capacity
5. Timeline of proposals

EBGL planning

EBGL Planning

#	NC	Article	Level 1 Article content/activity
128	EBGL	A 19.1	Proposal for implementation framework for RR Platform
130	EBGL	A 19.5	Implementation of RR Platform
131	EBGL	A 20.1	Proposal for implementation framework for European mFRR Platform
133	EBGL	A 20.5	Proposal for modifications to European mFRR Platform
134	EBGL	A 20.6	Implementation of mFRR Platform
135	EBGL	A 21.1	Proposal for implementation framework for European aFRR Platform
137	EBGL	A 21.5	Proposal for modifications to European aFRR Platform
138	EBGL	A 21.6	Implementation of aFRR Platform
139	EBGL	A 22.1	Proposal for implementation framework for European IN Platform
141	EBGL	A 22.5	Implementation and making operational European IN Platform
144	EBGL	A 25.2	Proposal for list of Standard Balancing Capacity Products
147	EBGL	A 29.3	Proposal for Activation Purposes
148	EBGL	A 30.1	Proposal for pricing method for all products
149	EBGL	A 37.3	Methodology for calculating CZC for balancing
151	EBGL	A 40.1	Proposal for a methodology for cooptimised CZC allocation
152	EBGL	A 41.1	Proposal for a methodology for market based CZC allocation
153	EBGL	A 42.1	Proposal for a methodology for the allocation of cross-zonal capacity bas
154	EBGL	A 50.1	Proposal for TSO-TSO settlement of intended exchanges of energy
155	EBGL	A 50.3	Proposal for TSO-TSO settlement of ramps and FCR within SA
156	EBGL	A 50.4	Proposal of TSO-TSO settlement of ramps and FCR between SA
157	EBGL	A 51.1	Proposal for TSO-TSO settlement of unintended exchanges within SA
158	EBGL	A 51.2	Proposal for TSO-TSO settlement of unintended exchanges between SA
159	EBGL	A 52.2	Proposal for harmonisation of certain features of imbalance calculation &
160	EBGL	A 53.1	Harmonisation of Imbalance Settlement Period
161	EBGL	A 59.2.a	European report on integration of balancing markets (Detailed)
162	EBGL	A 59.2.b	European report on integration of balancing markets (High Level)
171	EBGL	A 63.1	monitor the implementation of this Regulation
174	EBGL	Various	Implementation of minimum requirements for Imbalance Settlement