

## Answer from BSTOR SA/NV to the public consultation on a proposal for amendment to Elia's LFC block operational agreement

BSTOR SA/NV ("BSTOR") welcomes the opportunity given by Elia to provide feedback and would like to thank Elia for their efforts to provide clarity and transparency on the proposal.

Please find below BSTOR contribution to the consultation. This answer can be considered as non-confidential.

### 0 Key messages

- As the IGCC potential is set to decrease and get more difficult to forecast, BSTOR suggests to refrain from taking IGCC netting into account, both in the minimum threshold in FRR dimensioning; as in the 5' aFRR activations simulation in aFRR dimensioning.
- Next to that, applying a cap to the yearly and monthly FRCE feedback loop may fail to capture fast evolutions in imbalance and the FRCE (after connection of large offshore windfarms in Belgium or surrounding countries, or after strengthening of the FRCE criterion). BSTOR therefore suggests to increase this cap (e.g. with 5%) each time it would be reached several months (e.g. 3) in a row for the monthly loop, and each time it would be reached for the annual loop. Furthermore, BSTOR suggests for the yearly feedback loop to work with a rolling period of 12 month instead of a fixed year to allow smoother evolution of the associated correction factor, and avoid instabilities whereby the yearly correction factor would subsequently hit the floor then the cap, then the floor, etc.
- BSTOR welcomes the aFRR needs projections on the longer term published by Elia, but they may be too optimistic because not capturing evolution such as IGCC potential exhaustion, exhaustion of Belgian fast reserve means by Picasso, FCRE threshold strengthening due to reducing grid inertia, exhaustion of the energy limited assets potential due to longer imbalance schemes, potentially disappointing contribution of CCMD for flex to be delivered within the hour, 15 min, 5 min.

### 1 BSTOR

BSTOR SA/NV is the battery storage assets origination, development, financing and operation vehicle from Ackermans & van Haaren, the SRIW-Environnement and Bruno Vanderschueren.

BSTOR owns 75% of ESTOR-LUX SA, the « *Special Purpose Vehicle* » owner of the ESTOR-LUX project in Bastogne (10MW / 20MWh), Belgium's first battery park connected to the high voltage grid.

BSTOR aims to develop a pipeline of at least 150 MW of storage battery capacity, established on several sites, with the objective of concluding the financial close by 2024 and ensuring its commissioning by 2025-2026.

## 2 Answer to the consultation

### 2.1 Overall methodology and dynamic dimensioning.

In general, BSTOR, supports the methodology and the principle of dynamic dimensioning of the aFRR needs.

However, BSTOR believes that the decision of taking the netting potential from the IGCC mechanism into account in the volume definition for FRR and aFRR should be re-evaluated. In theory it makes sense to look at the required “net regulation volume” after such netting, but as the share of solar and especially offshore wind energy in the European mix (and in particular in countries surrounding Belgium) is set to massively increase, BSTOR believes that the IGCC netting potential will decrease, become less forecastable and provide for a “regulation mean” that can no longer be considered as “firm”.

Generation patterns, including the need for close to real time flexibility caused by forecast deviations and volatility of the renewable generation are indeed doomed to homogenize over Belgium and the (much larger) connected LFC-Block (with on the mid-term a much larger share of renewables). Imbalances are likely to occur at more or less the same moment in the same direction, leading to an exhaustion of the IGCC netting potential.

For the reasons mentioned above, and in order to provide the market with the most accurate and stable signal about the need for FRR, BSTOR suggests to refrain from IGCC netting in both FRR and aFRR dimensioning.

1. For the FRR dimensioning, CREG requests IGCC to be taken into account in the minimum threshold. However, the principle to count on IGCC seems to BSTOR not consistent with the philosophy of a minimum threshold as IGCC netting can never be guaranteed.
2. aFRR dimensioning: the simulated 5' aFRR activations are based on IGCC activations observed over a rolling 2 year period of historical data. Taking the IGCC potential observed over the last two years “for granted” for simulations for the day after may lead to failing to capture evolutions of this netting potential which may go faster than two years and can be also subject to sudden evolutions in case of connection of large offshore wind farms in surrounding countries for instance. Such a sudden evolution was for instance observed with connection of Borssele to the grid.

For all these reasons, BSTOR believes that forecasting the IGCC potential will become more and more complex and that taking this potential into account in these simulations will only lead to a less accurate forecast of the aFRR needs, artificial volatility (not justified by real drivers) in the aFRR volumes and incorrect signals given to the market.

In current design methodology, where there is no FRCE feedback loop, BSTOR understands the justification of including the IGCC potential in the computation (although still believing that it doesn't provide for the appropriate signal on the longer run, which is confirmed by the projection of the future needs provided by Elia) for avoiding over-dimensioning, but in this new methodology, over-dimensioning of the FRR/aFRR needs because of not considering IGCC, which in the end can enable to stay far below the FRCE thresholds should be prevented by the FRCE feedback loops (if necessary with lower floor values than 80% in case of persisting “overshooting” of the threshold resulting in correction factors staying equal to the floor of 80%).

As for the 120% cap on the correction factor defined by the FRCE feedback loops, BSTOR believes that it could prevent the methodology to deliver the needed aFRR capacity to comply with the FRCE criterion in case of significant and/or sudden evolution of the imbalance, or the FRCE itself. As already mentioned, this could be caused by connection of large offshore wind farms in Belgium or abroad and the accelerating development of renewables in general which can lead to higher (and longer) imbalance reducing the liquidity from energy limited assets, the decrease of liquidity on the NRV means due to increasing competition from arbitrage possibilities on the spot and the intraday markets and from aFRR activation in surrounding countries through Picasso, strengthening of the criteria for FRCE due to increasing volatility of the frequency related to the vanishing of grid inertia provided by thermal generators, etc. In particular, situations where the annual feedback-loop correction factor cap would be hit, and/or the monthly one for several months in a row should raise concern. For these reasons, BSTOR recommends considering to work with dynamic caps, that could be increased (by increment of 5% for instance), for the annual loop as soon as the cap would be reached (reaching the annual cap means structural under-dimensioning and high risk of not meeting the FRCE criterion), and for the monthly loop, in case the monthly cap would be reached for several (e.g. 3) months in a row.

Furthermore, instead of working with a fixed period of 12 month for a complete year, BSTOR suggests that the yearly feed-back loop would be carried out on a 12 month rolling period. This would allow

- smoother evolution of the correction factor from month to month;
- the yearly correction factor to stay up-to-date with recent evolutions;
- avoiding instabilities where from one year to another, the yearly correction factor would be defined by the floor, then the cap, then the floor, etc.

## 2.2 Future (a)FRR needs projections

BSTOR welcomes Elia providing insight in the future (a)FRR needs for giving the right investment signal, but believes that the projections may be too optimistic, considering:

- Exhaustion of the IGCC potential for reasons explained above;
  - Picasso leading to exhaustion of flexibility means in Belgium;
  - Increasing arbitrage opportunities on the spot and intraday markets, decreasing liquidity on the NRV means;
  - Risk/expectation of the FRCE target parameters being tightened as a result of decreasing inertia and increasing frequency deviation (as seen elsewhere such as UK where they needed to introduce faster reserve services than FCR);
  - Risk of imbalances taking longer to be compensated leading to an exhaustion of the contribution from energy limited assets;
  - Risk of CCMD contribution being less than projected. In particular the share of flex that must be activated last minute, which strongly conflicts with the primary usage of grid users and will lead to increasing opportunity costs for staying available for reactive balancing, considering arbitrage opportunities in spot and (early) intraday markets.
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