EFET welcomes the TSOs of the EXPLORE project for their detailed report on a proposal for a target model for the exchange of frequency restoration reserves. We have been following the various balancing pilot projects since their inception, and continue to actively contribute to reflections on the pre-implementation of the draft Electricity Balancing Guideline. Therefore, we thank the TSOs for this opportunity to comment on the EXPLORE project report.

**The EXPLORE target model**

1. Do you feel interactions between balancing energy and wholesale markets have been sufficiently taken into account in the EXPLORE project? If not, what is missing?

   - The balancing market design should not only limit the overlap with intraday markets, it should actually foster the evolution of liquid intraday markets close to real-time for BRP self-balancing.
   - A local intraday gate closure time of 0 to 15 min (p15) is in place already in the bidding zones concerned by the EXPLORE project and must not be restricted by balancing energy markets.

2. Do you agree with the considerations in regards to marginal pricing? If not, could you elaborate?

EFET is the view that a combination of pay-as-cleared remuneration of BSPs and marginal pricing for the settlement of imbalances should be the target for all harmonised balancing products. This is in line with the letter and spirit of the Electricity Balancing Guideline, which establishes this principle.

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In the run-up to the full implementation of the Electricity Balancing Guideline, a co-existence of pay-as-bid and pay-as-clear may continue to exist for a transitory period. As opinions and practices diverge between system operators, but also between market participants on this subject, EFET wishes to present a list of pros and cons to the establishment of pay-as-cleared remuneration of BSPs:

<table>
<thead>
<tr>
<th>PROs</th>
<th>CONs</th>
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</thead>
<tbody>
<tr>
<td>Ease of bidding</td>
<td>Unclear application to real-time processes (aFRR) (p16)</td>
</tr>
<tr>
<td>No gaming opportunity (especially in a large, liquid market)</td>
<td>Complications in application for cross-border cooperations (p62)</td>
</tr>
<tr>
<td>Correct reflection of real-time value of energy towards imbalance settlement price</td>
<td>Particularly dangerous in concentrated markets</td>
</tr>
<tr>
<td>Real-time calculation of imbalance settlement price</td>
<td></td>
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<tr>
<td>Most efficient dispatch in Merit Order List</td>
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</table>

- We appreciate the effort undertaken by the EXPLORE project to investigate the pitfalls of applying a marginal price in practice. The possible inclusion of pay-as-bid into the decision alternatives should however be supported by further argumentation.
- When coming to a final suggestion for a pricing method, the decision criteria should be clearly defined.
- The discussion on the required preconditions for applicability of marginal pricing such as the complexity for creating bids, homogenous goods etc. are helpful.

However, we do not fully agree with the considerations on the marginal pricing methodology that the EXPLORE project partners bring forward on pages 15 and following. The question of differences in ease of bid setting between Pay-as-Bid (PaB) versus Pay-as-Cleared (PaC) is not so much related to the size of the portfolio, but rather the ability for market participants to formulate bidding strategies in a PaB versus PaC market:

- The observation that mark-ups will not fully disappear and are affected by the fact that there is an unknown amount of demand is stated without any supporting evidence or arguments. Given the potential size of the joint market, such expectation of deviation from rational market behaviour should be supported if used as an argument. Further, as stated in our paper on the free formation of prices\(^1\) in the wholesale energy market, we believe that using market design features to preemptively avoid potential cases of market abuse is the wrong approach. Strong oversight and ex-post monitoring by ACER and competition authorities should prevent potentially abusive market behaviour.
- Operational practice in The Netherlands and Belgium (mFRR) has shown that a correctly incentivizing signal can be – and is – given.

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• EFET is convinced that with integrated balancing markets, the prerequisite of sufficient supply can easily be maintained. In the future, this will be the case even more frequently given the introduction of free bids that are currently not available, and the creation of a regional Common Merit Order List (CMOL).

• Regarding the need for equal terms and conditions, it seems strange that the EXPLORE project partners are sceptical of achieving the required level of alignment. It should rather become a logical objective of the EXPLORE project to sufficiently align the necessary terms and conditions, to ensure a level playing field between market participants as much as to start applying marginal pricing.

EFET reiterates its support for marginal pricing in the target model. If EXPLORE countries would want to deviate from this target model, we ask that they provide further argumentation on both marginal pricing and pay-as-bid.

3. Do you support the EXPLORE conclusions in regards to the gate closure times?

The balancing energy market should not withdraw any additional capacity from the intraday market. While it is a tool to find the most efficient balancing resources, it must not enable the TSO to block excess capacity. Any bids exceeding the original demand of the TSO (according to dimensioning) have to be returned to the BSP for use in intraday markets and portfolio dispatch.

4. Do you have any further suggestions on how to better streamline intraday and balancing markets?

No comment

Pricing and Settlement

5. Do you miss anything in the analysis on pricing and settlement in the EXPLORE report? If so, what do you miss?

The report considers a number of detailed implementation issues and goes beyond previous high-level considerations. However, it seems unclear how some of the preliminary conclusions of the report can lead the EXPLORE project in the direction of the European target model for balancing. In order to achieve a common picture, EFET asks the EXPLORE project partners for a more critical view on the pay-as-bid scheme in the evaluations.

While the text is frequently referring to the ambiguity of a marginal price for continuous activation of aFRR, this is not reflected in the examples. The bid ladder divided into bids activated for TSO A and TSO B would need to be evaluated for every measurement interval (e.g. 4-sec). The examples indicate that a bid is activated for one TSO per BSP settlement interval, an individual bid can however be activated by multiple TSOs within the same ISP. It also remains unclear for which ISP an mFRR product with Direct Activation or Scheduled Activation with remuneration option 1.a and 2.a sets the Marginal Price. EFET asks for further clarifications on these elements.
**TSO-BRP settlement**

6. Do you agree with the EXPLORE criteria used to decide between local and cross-border imbalance pricing? In case your answer is no, could you elaborate on why?

EFET believes that the target of the EXPLORE project, as other balancing pilot projects aiming to harmonise balancing products and process, should aim for a single imbalance settlement price methodology across borders.

However, when applying this principle, one needs to take account of the existence of additional price components in the current local imbalance settlement pricing methodologies. Given the link that was identified by the EXPLORE project partners themselves between imbalance settlement and incentives towards BSP, such divergences put into question the level playing field between BSPs of different countries. An example would be the case of two BSPs in different countries with diverging approaches to the imbalance settlement price methodology, one with and one without an additional price component: The BSP in the country with additional price components will face higher imbalance risks through the difference between requested and delivered energy. This higher imbalance risk will have to be priced into the bid, resulting in a higher price for an otherwise similar product on the same CMOL. If the EXPLORE project wants to use the imbalance settlement price as an incentive towards BSPs to deliver the requested product, the imbalance settlement price methodologies should be sufficiently aligned, as planned in the Electricity Balancing Guideline. This would not allow for divergences in the form of additional price components or links to other market timeframes.

7. Do you agree with the EXPLORE conclusion of local imbalance pricing? In case your answer is no, could you elaborate on why?

As noted in our answer to Q6, the Electricity Balancing Guideline will require TSOs to harmonise their imbalance settlement pricing methodologies. EFET strongly supports this objective. However, until and even after these methodologies are harmonised, divergences in imbalance settlement prices between LFC blocks will remain. We hence agree that the imbalance price should reflect the situation of the corresponding LFC block to comply with local TSO responsibilities (as defined in SOGL). It guarantees the most correct incentive from the balancing market towards both the balancing and previous timeframes and the market parties of the relevant zone, i.e. the bidding zones that correspond to the LFC blocks.
TSO-BSP settlement

8. Which of the remaining TSO-BSP settlement options has your preference and why?

Local marginal pricing influenced by exported bids is to be preferred, but only if the imbalance settlement price solely reflects balancing energy bids that were activated for local purposes. This implies that a TSO-TSO settlement mechanism is implemented that correctly allocates the costs not covered locally – which are the costs of the exported bids and the infra-marginal rent of the bids that were not exported – towards the TSO or TSOs that used the exported bids.

EFET is aware that with this option, local TSO-BRP settlement highly depends on the TSO-TSO settlement scheme and requests further study to ensure clarity of pricing and real-time publication of the imbalance price.

9. Do you agree with the elimination of options that allocate different (marginal) prices to BSPs in one area for the same product? Could you elaborate your answer?

We do agree that if marginal pricing is used, remuneration for the identical product has to be the same for all activated BSPs in one area. Also, BSP remuneration must not depend on activation from either a local or remote TSO. Rather, the remuneration must be non-discriminatory and transparent.

10. Do you agree with the decision of per-product pricing (assuming one product for aFRR and one for mFRR)? Could you elaborate your answer?

EFET believes that as a target, taking into consideration all products used during one ISP better reflects the state of the system and the value of energy at that moment, and consequently gives a better, single price signal to the market. Indeed, the type of product used by the TSO to balance the system is of low importance: energy at a given moment should have one value. This point is particularly true when considering shorter ISPs that equal the fastest FAT, otherwise schedule-based products are not comparable to automatically activated products.

Hence, we favour a cross-product TSO-BSP settlement price that is the same for aFRR and mFRR, as a target, because it has the advantage of consistency of pricing between different means by which energy is injected and withdrawn from the system in the balancing timeframe. This helps to prevent arbitrage between the balancing and intraday market and provides incentives to BRPs to proactively support the system balance in real time.

In the meantime, thorough analysis of the deviation in imbalance pricing between the different products categories and within the bid ladder for each product should be performed to assess whether the specific quality of each product has an impact on its price that would fundamentally prevent the implementation of cross-product pricing. Specific attention should be given to potential breaches of equity between ISP-based products (mFRR, RR) and shorter activation products (aFRR).
Conclusions

17. What are your thoughts on the priority for usage of cross-border capacities between the different (close-to-)real-time processes (ID; aFRR, mFRR exchange/sharing)? What criteria should be used to evaluate choices in this?

- Cross-border capacity should not be reserved by TSOs for any particular timeframe
- Imbalance Netting should be included in the priority consideration. The implicit assumption that netting of imbalances is always favourable compared to activation of balancing energy is depending on the respective TSO-TSO and TSO-BRP settlement scheme, and can be invalid in the IGCC setup.