

**NON-PAPER OF ALL REGULATORY AUTHORITIES  
AGREED AT THE ENERGY REGULATORS' FORUM**

**ON**

**The all TSOs' proposal on methodologies for pricing  
balancing energy and cross-zonal capacity used for the  
exchange of balancing energy or operating the  
imbalance netting process pursuant to Article 30(1) and  
Article 30(3) of Commission Regulation (EU) 2017/2195  
of 23 November 2017 establishing a guideline on  
electricity balancing**

**23 July 2019**

## I. Introduction and legal context

This document elaborates the position of all Regulatory Authorities (RAs), agreed at the Energy Regulators' Forum on 23 July 2019, on the all TSOs' proposal on methodologies for pricing balancing energy and cross-zonal capacity used for the exchange of balancing energy or operating the imbalance netting process pursuant to Article 30(1) and Article 30(3) of Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing (hereafter referred to as: the "Pricing Proposal" – or "PP").

Through this document, and the accompanying letter of the ERF Chair to the ACER Director, all Regulatory Authorities wish to inform ACER of their positions with regards to the Pricing Proposal. All Regulatory Authorities request ACER to take a decision, following the provisions in Article 5(7) of Regulation 2017/2195, on the Pricing Proposal. This document is intended to identify the positions of the Regulatory Authorities and the reasons preventing the Regulatory Authorities from approving the Pricing Proposal.

The legal provisions relevant to the submission and approval of the Pricing Proposal and this All Regulatory Authority agreement on the Pricing Proposal, can be found in Articles 3, 30(1), and 30(3) of the Regulation 2017/2195. In their assessment of the Pricing Proposal, Regulatory Authorities also consider articles 45, 47, and 48 of the Regulation 2017/2195 to be relevant.

### **Article 3** of Regulation 2017/2195:

1. *This Regulation aims at:*
  - (a) *fostering effective competition, non-discrimination and transparency in balancing markets;*
  - (b) *enhancing efficiency of balancing as well as efficiency of European and national balancing markets;*
  - (c) *integrating balancing markets and promoting the possibilities for exchanges of balancing services while contributing to operational security;*
  - (d) *contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union while facilitating the efficient and consistent functioning of day-ahead, intraday and balancing markets;*
  - (e) *ensuring that the procurement of balancing services is fair, objective, transparent and market-based, avoids undue barriers to entry for new entrants, fosters the liquidity of balancing markets while preventing undue distortions within the internal market in electricity;*
  - (f) *facilitating the participation of demand response including aggregation facilities and energy storage while ensuring they compete with other balancing services at a level playing field and, where necessary, act independently when serving a single demand facility;*
  - (g) *facilitating the participation of renewable energy sources and support the achievement of the European Union target for the penetration of renewable generation.*

### **Article 30(1)** of Regulation 2017/2195

1. *By one year after the entry into force of this Regulation, all TSOs shall develop a proposal for a methodology to determine prices for the balancing energy that results from the activation of balancing energy bids for the frequency restoration process pursuant to Articles 143 and 147 of Regulation (EU) 2017/1485, and the reserve replacement process pursuant to Articles 144 and 148 of Regulation (EU) 2017/1485. Such methodology shall*
  - (a) *be based on marginal pricing (pay-as-cleared);*
  - (b) *define how the activation of balancing energy bids activated for purposes other than balancing affects the balancing energy price, while also ensuring that at least balancing energy bids activated for internal congestion management shall not set the marginal price of balancing energy;*
  - (c) *establish at least one price of balancing energy, for each imbalance settlement period;*
  - (d) *give correct price signals and incentives to market participants;*
  - (e) *take into account the pricing method in the day-ahead and intraday timeframes."*

**Article 30(3) of Regulation 2017/2195**

3. *The proposal pursuant to paragraph 1 shall also define a methodology for pricing of cross-zonal capacity used for exchange of balancing energy or for operating the imbalance netting process. Such methodology shall be consistent with the requirements established under Regulation (EU) 2015/1222, and:*
  - (a) *reflect market congestion;*
  - (b) *be based on the prices for balancing energy from activated balancing energy bids, determined in accordance either with the pricing method pursuant to paragraph 1(a), or if applicable, the pricing method pursuant to paragraph 5;*
  - (c) *not apply any additional charges for the exchange of balancing energy or for operating the imbalance netting process, except a charge to compensate losses if this charge is also taken into account in other timeframes..*

**Article 45 of Regulation 2017/2195**

1. *As regards the settlement of balancing energy for at least the frequency restoration process and the reserve replacement process, each TSO shall establish a procedure for:*
  - (a) *the calculation of the activated volume of balancing energy based on requested or metered activation;*
  - (b) *claiming the recalculation of the activated volume of balancing energy.*
2. *Each TSO shall calculate the activated volume of balancing energy according to the procedures pursuant to paragraph 1(a) at least for:*
  - (a) *each imbalance settlement period;*
  - (b) *its imbalance areas;*
  - (c) *each direction, with a negative sign indicating relative withdrawal by the balancing service provider, and a positive sign indicating relative injection by the balancing service provider.*
3. *Each connecting TSO shall settle all activated volumes of balancing energy calculated pursuant to paragraph 2, with the concerned balancing service providers.*

**Article 47 of Regulation 2017/2195**

1. *Each connecting TSO shall calculate and settle the activated volume of balancing energy for the frequency restoration process with balancing service providers pursuant to paragraphs 1 and 2 of Article 45*
2. *The price, be it positive, zero or negative, of the activated volume of balancing energy for the frequency restoration process shall be defined for each direction pursuant to Article 30 as defined in the Table 1.*

**Article 48 of Regulation 2017/2195**

1. *Each connecting TSO shall calculate and settle the activated volume of balancing energy for the replacement reserve process with balancing service providers pursuant to paragraphs 1 and 2 of Article 45*
2. *The price, be it positive, zero or negative, of the activated volume of balancing energy for the replacement reserve process shall be defined for each direction pursuant to Article 30 as defined in the Table 1.*

**Table 1** referred to in articles 47 and 48 above, is copied below:

Table 1

**Payment for balancing energy**

	Balancing energy price positive	Balancing energy price negative
Positive balancing energy	Payment from TSO to BSP	Payment from BSP to TSO
Negative balancing energy	Payment from BSP to TSO	Payment from TSO to BSP

## **II. The Pricing Proposal**

The Pricing proposal was consulted by all TSOs from 12 September 2018 until 13 November 2018, in line with Article 10 of Regulation 2017/2195.

All TSOs submitted the Pricing Proposal in accordance with Article 5(2)(f) of Regulation 2017/2195 to the last Regulatory Authority (RA) on 11 February 2019. The Pricing Proposal contains, as required by Article 5(5) of the Regulation 2017/2195, a description of the timeline for implementation as well as a description of the expected impact on the objectives of Regulation 2017/2195 as listed in Article 3 of this Regulation. Following the requirements in Article 10(6) of Regulation 2017/2195 on the transparency of the outcome of the public consultation, a consultation report including the views of the stakeholders and the assessment of TSOs' has been sent along, for information, with the approval document.

Article 5(6) of Regulation 2017/2195 requires all RAs to consult and closely cooperate and coordinate with each other in order to reach an agreement, and make a decision within six months following receipt of submissions to the last RA. A decision was therefore required by each RA by 11 August 2019.

All RAs were not able to adopt a decision by 11 August 2019. Therefore, they jointly request ACER to adopt a decision concerning the Pricing Proposal according to Article 5(7) of Regulation 2017/2195, in accordance to Article 8(1) of Regulation 713/2009.

This document elaborates the different RA positions which have triggered the referral of the Pricing Proposal to the Agency as well as amendments RAs agree on.

## **III. Topics of disagreement between Regulatory Authorities**

### **Period over which to price a product of balancing energy (article 6 and article 7 of the PP)**

RAs observe that TSOs introduce the term 'balancing energy pricing period' (hereafter: BEPP). The length of the BEPP is defined for each product. RAs are divided on this topic against the requirements of article 30(1) and chapter 2 of title V of the EBGL.

RAs disagree on the BEPP for pricing the standard aFRR product and on the BEPP for pricing the standard mFRR product with direct activation type. In the PP, the standard aFRR product has a BEPP equal to the

optimisation cycle (shorter than the ISP), while the standard mFRR product with direct activation type has a BEPP equal to the ISP (larger than the optimisation cycle<sup>1</sup>).

## Pricing aFRR balancing energy (article 7 of the PP)

### **Arguments against the length of the pricing period for balancing energy equal to the optimisation cycle**

Some RAs are concerned that the approach of a BEPP not equal to the ISP for pricing balancing energy from aFRR does not achieve the objectives nor fulfils the requirements of the EBGL, most notably the settlement principles in article 44(1). These RAs conclude, from the reading of articles 45, 47 and 53 of the EBGL, that the number of balancing energy prices following article 30.1(c) of the EBGL is limited to two for the proposed aFRR standard product for each ISP, that is one price per direction of activated volumes of balancing energy calculated for each ISP.

Furthermore, these RAs fear that a pricing period shorter than the ISP would increase the administrative burden associated with the balancing energy settlement process, creating undue barriers to entry for new aFRR BSPs. As follows from article 47 of the EBGL, each volume of balancing energy shall be settled with BSPs per ISP. This avoids the increase in measurement costs needed for settling the delivered aFRR balancing energy.

Additionally, these RAs are concerned that a BEPP not equal to the ISP does not provide for a consistent functioning of day-ahead, intraday and balancing markets when reflecting market congestion (as defined pursuant to CACM article 2(17)), as for these markets the smallest market time unit has been set to be equal to the ISP<sup>2</sup>. Although an explicit reference to balancing is not included, market congestion is defined in the CACM guideline as a situation in which the economic surplus has been limited by cross-zonal capacity or allocation constraints; This (limitation of) surplus and thus the market congestion is based on the interplay between the available cross zonal capacity and the bids and offers for the exchange of energy. The values of cross zonal capacity and the bids and offers are constant in volume per market time unit and the bids and offers are also constant in price. The economic surplus and the congestion cost are based on these values. These RAs therefore see that when applying these principles consistently in the balancing market this leads to bids and offers and cross zonal capacity to be constant per market time unit and a pricing period which is then equal to the ISP.

These RAs also see not using a pricing period equal to the ISP as incentivising BSPs to provide price mark-ups in their bids. These price mark-ups are the result of BSPs not receiving the full marginal value of the delivered balancing energy over the period they are bidding (validity period) and are settled in (the ISP). Because BSPs do not automatically receive this value – based on the highest bid activated in an ISP – but will get a substantial volume of delivered balancing energy remunerated on a pay-as-bid volume<sup>3</sup>, they will try to estimate what mark-up would increase revenue without being excluded from activation. As all BSPs individually face this incentive, the aggregate behaviour will materialize even in a competitive market.

These individual mark-ups could impact the order and level of all the bids in the common merit order lists, resulting in higher (marginal) balancing energy prices for aFRR which in turn again further increase the incentives for providing a price mark-up to maximize revenue. The increase in prices for aFRR balancing energy could escalate into welfare redistribution and possible welfare losses because BSPs are not incentivised to always provide their most competitive bids on a marginal cost basis. This could also result in BSPs not providing bids at all as it requires complex assessment of the bidding strategy instead of simply

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<sup>1</sup> Although the wording “optimisation cycle” is only used by TSOs when pricing aFRR in the PP, RAs use the wording as well when discussing the pricing of mFRR direct activatable bids. RAs recognise that the activation optimisation function in the aFRR and mFRR platform for direct activation are not identical, and there are a number of similarities and differences on how they operate within an ISP.

<sup>2</sup> <https://acer.europa.eu/Media/News/Pages/ACER-adopts-a-decision-on-intraday-cross-zonal-gate-opening-and-closure-time.aspx>

<sup>3</sup> TSOs estimate that roughly 20% of delivered balancing energy would need to be remunerated on a pay-as-bid basis

looking at one's own marginal costs. The latter would mainly affect small market participants as they would lack the resources for this kind of behaviour. A pure marginal pricing system is therefore considered to be more fair than the current proposal. These RAs consider that the proposed mechanism is therefore not in line with the principles described in article 44.1(f) and article 44.1(h).

These RAs therefore require that the period for pricing and settling aFRR balancing energy is equal to the ISP as this would ensure compliance with all the requirements from articles 30.1, 30.3 and the general settlement principles from article 44(1) and to create efficient, better functioning and attractive balancing markets. A pricing and settlement period equal to the ISP avoids raising costs for all consumers and thus complies with the objectives in article 3 of the EBGL. These RAs also point to the negative feedback received by most stakeholders in the stakeholder consultation report and national consultations with respect to the chosen pricing period equal to the optimisation cycle.

#### *Compromise position*

In this context, detached from the legal reasoning of the BEPP being equal to the ISP, some of these RAs suggest to also consider a BEPP equal to 5 minutes, where the validity period of the bids would be 5 minutes as well. This would also decrease the administrative burden of the settlement process and deal with the danger of mark-ups.

#### **Arguments in favour of the length of the pricing period of balancing energy equal to the optimisation cycle**

Other RAs support a pricing of balancing energy equal to the optimisation cycle. These RAs think that the pricing method is compliant with article 30 of the EBGL, which specifically allows for more than one price for balancing energy, for each ISP. These RAs also stress that article 45 and 53 of the EBGL do not oblige the period over which the activated volumes of balancing energy are calculated to be equal to the ISP. These RAs also consider that the requirement of article 30(1)(a) (*be based on marginal pricing [pay-as-cleared]*) is fulfilled only with a BEPP set in coherence with the algorithm optimisation cycle, as in each optimisation cycle, the AOF of the platform clears the market and defines a clearing price that corresponds to the market equilibrium of that cycle, providing the correct incentive to deliver the selected volumes and define the correct price of balancing energy and cross-zonal capacity. Any price different to the clearing price in each BEPP would create incentives to deviate from the selected volumes. For that reason, these RAs consider that the proposed rule for the aFRR platform will provide correct incentives for BSPs to offer and deliver balancing services to the connecting TSOs.

Additionally, and equally important, these RAs are of the opinion that the current proposal is the only mean to accurately reflect and price congestions for the aFRR process. The reason for this is that the aFRR process is a continuous process, implying that market congestions can change and evolve during each ISP, potentially in both directions and between LFC areas, and therefore also the configuration of the uncongested areas can change. Thus, the price for cross-zonal capacity will evolve from optimisation cycle to optimisation cycle and within the ISP. Setting the BEPP equal to 15 minutes could on the contrary lead to the situation in which bids and TSO demands are settled as if there was a congestion, even though this congestion was not present when the bids were activated. This is because a unique price per ISP cannot reflect more than one configuration of uncongested areas and the consequence is a welfare transfer between TSOs/BRPs and BSPs.

On the other hand, setting a price every optimization cycle would reflect the changes of the available cross zonal capacity and the configuration of the uncongested areas and price scarcity accurately. Thus, according to these RAs, the only way to price cross zonal capacity *to reflect market congestions*, as required by EBGL article 30(3)(a), is to define the BEPP equal to the optimisation cycle.

As a response to the RAs in favour of a BEPP equal to the ISP, the RAs in favour of the optimisation cycle BEPP think that the pricing period equal to the optimisation cycle will not lead to additional mark-ups compared to the BEPP equal to the ISP. First of all, activations, clearing prices and congestions are in any case difficult to predict in a multi-LFC area optimisation. Secondly, the clearing price auction every optimisation cycle will give the appropriate incentives to bid marginal costs in a competitive market. At last, any strategic bidding due

to market power exploitation is a complex issue that cannot be managed through changing the length of the pricing period, but should be solved through other measures.

Last but not least, some RAs are deeply concerned that a BEPP equal to the ISP may lead to a very high imbalance price and hence high costs for BRPs even if a high volume of aFRR bids (including bids with a high bid price) is only activated for a few seconds within the ISP (e. g. one optimisation cycle) while in the remaining time of the ISP significantly fewer aFRR bids (bids with lower bid prices) are activated. That way the imbalance would be settled at a price that does not reflect the imbalance situation as required by article 44.1(a), nor contributes to price imbalances at the real time value of energy as required by article 44.1(b) of the EBGL.

#### *Compromise position*

Some of these RAs, while in principle supporting the optimisation cycle BEPP, would also be ready to consider the length of the BEPP to be longer than the optimisation cycle, while still being shorter than the ISP to allow multiple BEPPs within one ISP (for example a BEPP equal to one, three or even 5 minutes). This could be seen as a pragmatic compromise to facilitate a common RA solution.

### Pricing mFRR balancing energy (article 6 of the PP)

#### **Arguments against the length of the pricing period for balancing energy equal to the ISP**

Some RAs consider the usage of direct activations (DAs) as a continuous process, with all the features of a bilateral negotiation through an order book according to the first come first served principle, as foreseen by XBID for the intraday market. Therefore, the reasonable pricing is pay-as-bid, as in a bilateral negotiation there is not a market clearing and a marginal price. If the DA continuous process would be discretized into several auctions with a clearing every optimization cycle (TSOs mention 1 minute), each clearing will activate different products (because the point in time of the activation is different) and the reasonable pricing would be the marginal price of each optimization cycle. This would be in line with the requirements of art. 30(1)(a) of EBGL, pay-as-cleared principle.

The main concern of these RAs on the BEPP equal to the ISP is related to the capability of the pricing scheme to properly reflect market congestions. Since the activations change continuously (or every minutes) within an ISP, market congestions can change in the 15 minutes period, and therefore also the configuration of the uncongested areas. Setting a single price over an ISP could lead to the situation in which bids and TSO demands are settled according to a price that reflects a congestion, even though it was not present when the bids have been activated. This is because a unique price per ISP cannot reflect more than one configuration of uncongested areas and the consequence is a welfare transfer between TSOs/BRPs and BSPs. On the contrary, setting a price every optimization cycle would reflect the changes of the available cross zonal capacity and the configuration of the uncongested areas and thereby price cross-zonal capacity *to reflect market congestions*, as required by the EBGL article 30(3)(a).

#### **Arguments in favour of the length of the pricing period for balancing energy equal to the ISP**

These RAs are of the opinion that the pricing of direct activatable mFRR balancing energy bids for a period smaller than the ISP would lead to BSP behaviour similar to a pay-as-bid auction. According to these RAs, this is caused by BSPs aiming to capture the marginal rent given the very low volume of activations currently expected from mFRR direct activation. Everything else held constant, the cost of balancing would increase. Moreover, these RAs believe that pricing direct activatable bids per optimisation cycle is not the intention of article 30 of the EBGL, which requires marginal pricing (pay-as-cleared).

As a result, these RAs support the TSOs view that pricing for mFRR direct activation should be per ISP with the price floor of the scheduled activations of the adjacent periods.

These RAs also believe that overall network congestion in the ISP will be captured by the platform. Within an ISP there may be periods where there are constraints on the flow of energy across bidding zones. These constraints may disappear or change as this and other processes affect cross-zonal capacity. Under the

current proposal, at the end of the ISP, there could be either congested areas with different marginal prices as a result of the constraints within the ISP, or an uncongested area that reflect that a constraint appeared and was solved leading to a single price across the uncongested area. This would therefore price cross zonal capacity *to reflect market congestions*, as required by EBGL article 30(3)(a).

These RAs also note that there are similarities and differences between the mFRR and the aFRR platforms. One of those differences is that the delivery of the energy in the aFRR platform is fully optimized at every optimisation cycle while in mFRR the delivery is for at least one ISP. Another key difference is that TSOs expect very few activations of mFRR directly activatable energy bids compared to the activation of aFRR balancing energy in every optimisation cycle. Therefore, these RAs believe it is important to consider the impact that the design of each platform has on BSP behaviour to ensure that the PP is meeting both the letter and the purpose of Regulation 2017/20195.

### Pricing the two activation types for balancing energy from restoration reserves with manual activation (article 5 and article 6 of the PP)

All RAs note, from articles 5(2) and 6(2) of the PP, that scheduled activation mFRR standard product bids are remunerated differently than directly activated mFRR standard product bids that are selected to deliver afterwards but before the next ISP.

RAs disagree on whether a different remuneration of mFRR products based on activation type, gives correct incentives. Some RAs prefer remunerating the standard mFRR product with scheduled activation type at the same price as standard mFRR product with direct activation type, other RAs prefer remunerating the two activation types separately as two different mFRR standard products, and some other RAs prefer the current proposal.

#### **Arguments in favour of remunerating the mFRR standard products with scheduled activation type at the same CBMP as the mFRR standard product with direct activation type**

Some RAs have concerns regarding the fairness of differently remunerating standard mFRR product bids based on the moment they are requested by the TSO even though these bids serve the same balancing purpose during the pricing period. These RAs are concerned that objectives (a) and (e) of article 3 of the EBGL are not fulfilled.

These RAs note that the activation type only serves the purpose of allowing market participants to choose the points in time when they can be potentially activated by TSOs: either only at one point in time in every ISP or at any point in time within an ISP. The two activation types serve the same balancing purpose as evident by the combination of direct activatable bids together with the scheduled activatable bids in the merit order per ISP (see article 5 and 6 of the PP). These RAs therefore do not consider the activation type as sufficient to remunerate the two activation types differently as two balancing energy standard products. These RAs believe any difference in value between the two activation types to be reflected when procuring the respective balancing capacity by the TSO and that the balancing energy bids for both activations types will be equally based on the short-run marginal costs of the BSP.

The remuneration of the balancing energy for both activation types has to be equal when delivery is in the same delivery period in order to avoid unfair treatment or discrimination between parties offering the same balancing (energy) service. Equal remuneration also avoids BSPs including mark-ups in their balancing energy bids with direct activation type to account for the opportunity loss when being selected in the scheduled activatable auction rather than in the more profitable direct activatable auction, thereby increasing the balancing energy costs for consumers.

#### **Arguments in favour of separating the mFRR standard product into two mFRR standard products, based on the activation type, and remunerating each mFRR standard product differently**



Other RAs see the mFRR direct activatable type and mFRR scheduled activatable type as two distinct products. These RAs would like to see two separate merit order lists, one for each product with a dedicated price, in order to avoid the risk of wrong incentives to BSPs, due to different prices applied to the same product. Moreover these RAs consider the mFRR direct activatable continuous process more suitable for a pay-as-bid pricing, as all the bids selected have different timing of activation and thus they are not a homogeneous product traded in the same auction and subject to a single clearing price. If the mFRR direct activatable type is discretized in several auctions (e.g. every minutes) a clearing price coherent with the activation cycle should be defined. However, these RAs acknowledge that splitting the two products into separate CMOL may lead to a scarcity situation for one product, even though the resources are not scarce, but they just bid for the other product.

### **Arguments in favour of the proposal**

A third group of RAs agrees with the proposal as it ensures that direct activatable bids are not remunerated less than scheduled activatable bids. This will then increase the incentives for BSPs to also offer their bids as directly activatable and thereby to a larger degree fulfil the TSOs obligation to reduce the FRCE to zero within the time to restore frequency and meeting the dimensioning requirements.

These RAs also believe that the choice of a BSP on whether it is flexible to be activated at any point in time or only at the scheduled point should be reflected in the potential price that the party can receive.

Therefore, these RAs believe that the TSOs' proposal ensures an appropriate balance between attracting a sufficient number of directly activatable bids and that BSPs still submit bids that reflect their short-run marginal costs. This is preferable to the alternative of having several prices, one for each clearing auction with balancing energy bids with direct activatable type, as each of these auctions have a reduced CMOL, BSPs might be incentivized to include mark-ups to take advantage of the reduced liquidity. These RAs agree with the pricing method described in the PP.

The next ISP scheduled auction price also setting a floor is appropriate as it removes the incentives for the BSP to not bid a directly activatable bid in any ISP if they expect prices in the next ISP to be significantly higher.

### **Definition of the cross-border marginal price (article 3, article 4 and article 5 of the PP)**

RAs are of different opinions on what the general principles of marginal pricing is and on whether or not it is correctly applied in the PP. Some RAs consider that the principle of marginal pricing is that the price for balancing energy reflects the cost for activating an additional MW of balancing energy. These RAs consider that this is not well reflected by the proposal. Other RAs consider the principle of marginal pricing is correctly reflected in the PP. While differences in opinion on the general principles of marginal pricing underlie multiple topics of disagreement, this section highlights the disagreement on whether different CBMPs could exist for each activation direction.

### **Arguments in favour of differentiating the CBMP for positive and for negative balancing energy**

Some RAs have concerns with the determination of one CBMP for both activation directions in article 3(1)(a)(i), article 3(1)(b)(i) and article 3(1)(d)(i) of the PP. These RAs refer to the wording in paragraph 2 of article 47 and article 48 of the EBGL to support their legal concerns which state explicitly that a price shall be defined for each direction. These RAs hence support determining one CBMP for each activation direction, as described in article 3(1)(c)(i) of the PP instead of requiring the same price for positive and negative balancing energy when activations in both directions occur. According to these RAs, this is mainly because bids for different activation directions provide a different service to TSOs and are not in competition with each other. The fact that a TSO needs these different services in the same pricing period is not a sufficient basis to remunerate them at the same price as if it is the same service.

### **Arguments in favour of defining a single CBMP for both positive and negative balancing energy**

Other RAs support the principle of one CBMP for both activation directions as the result of a one-step optimization in which upward / downward needs and bids are cleared all together at the same time, enabling this implicit netting and the maximization of economic surplus. These RAs also consider this to be in line with articles 47 and 48 of the EBGL which do not preclude that the prices defined for each direction can be identical.

### **Determination of the settlement price for balancing energy (article 3)**

Some RAs are of the opinion that the price at which to settle balancing energy does not leave sufficient room to provide incentives to BSPs. These RAs are in favour of allowing to provide additional incentivizing components to BSPs in addition to the CBMPs as calculated by the platforms. Other RAs consider the CBMP as calculated by the platforms as providing sufficient incentives to BSPs.

#### **Arguments in favour of adding incentivising components to the settlement price for balancing energy**

Some RAs are of the opinion that the definition of BSP settlement prices for balancing energy products within one ISP, as described in article 3(5) and article 3(6) of the PP, does not leave sufficient room to give appropriate incentives to market participants, as should be possible according to article 30.1(d) of the EBGL. These RAs point out that room for such additional incentives is also supported by article 20.3 of the Clean Energy Package which foresees the possibility to include a shortage pricing function for balancing energy in case a resource adequacy concern exists. These RAs are of the opinion that the PP should take into account the possible application of such incentives as an additional national component in determining the price at which to settle the balancing energy.

#### **Arguments in favour of a cross product price for FRR balancing energy**

Some RAs consider that the PP – together with the proposed setup of the ISHP – leads to a difference between the BRP imbalance settlement price and BSP balancing energy settlement price. These RAs are of the opinion that higher prices for BSPs than for BRPs should as much as possible be avoided as it creates undesired behaviour. Although BSPs provide different balancing (energy) services, these services all reflect the same marginal value of producing an extra MW and these MW needed to balance the system are equal in volume and value to the imbalance caused by BRPs. Equalizing the balancing energy price and imbalance price is according to these RAs therefore the best approach to create a full level playing field for competition between all BSPs and BRPs as this would function as a real time market. These RAs consider that such a market has been proven to be able to balance the system at low costs for consumers as both providing BE bids and supporting system imbalance is incentivised.

These RAs in addition also refer to article 30.1(a) and article 47 of the EBGL, which supports one price for the FRR process, which is only distinguished per direction and per ISP.

#### **Arguments in favour of the settlement price for balancing energy as defined in the PP**

Other RAs are of the opinion that differences in prices between the BSPs and BRPs is unavoidable as the price to BSPs depend on the products they provide and the position of a BRP could be fulfilled by different bids from different products. Moreover, in any market relying on only one product to balance the system, the similar situations would also occur, which is currently not proposed by those in favour of cross-product pricing of FRR products. Also in markets relying on mainly one product (RR, mFRR or aFRR balancing energy) a similar situation would occur.

These RAs are also of the opinion that it is efficient to price different products (aFRR versus mFRR) differently depending on the product characteristics and the clearing prices. These RAs believe that the cross-product pricing, by remunerating aFRR and mFRR at the same price, would not give the appropriate incentives to BSP to submit and to deliver each product.

Additionally, cross-product pricing would result in increased inframarginal rents which would lead to higher costs for consumers while the same result can be achieved with the marginal price for each product. In addition,

not all markets have to implement aFRR, and as a result it would be unreasonable to require those markets to pay balancing energy at the price of a service they do not use.

Further, these RAs do not consider cross-product pricing to be in line with article 30.1(a) of the EBGL which requires a pay-as-cleared pricing method.

### Impact of system constraint purposes on pricing balancing energy for mFRR (article 8)

The PP proposes to use the prices calculated by the algorithm without considering system constraints as the balancing energy prices. RAs disagree whether the balancing energy price should equal the prices calculated by the algorithm including additional system constraints, or those calculated without those system constraints as proposed by the TSOs in the PP.

#### **Arguments in favour of considering system constraints when determining the CBMPs**

Some RAs do not support calculating CBMPs independent from the selected volumes. These RAs support a calculation of CBMPs and volumes from the same optimization. They differ however on how system constraints are taken into account when calculating CBMPs: either the system constraints are included in the optimization run, or two optimization runs are carried out, one for balancing purposes and one for system constraint purposes.

##### *Single optimisation of system constraints*

Some RAs have concerns with the proposed pricing rule for system constraint purposes, which uses a two-runs approach for pricing system constraints activations, in which prices and activations are outputs of two different optimization problems. These RAs fear that the proposed rule, where bids activated for system constraint purposes are remunerated pay-as-bid and differently from the bids selected for balancing purposes could lead to wrong incentives to BSPs and a welfare transfer between BRPs and BSPs, because the balancing energy price determined does not correspond to the clearing price of the optimization that determines the volumes activated.

Further, these RAs argue that since the bids selected for the two different purposes have the same qualities, and that in a multi-LFC area optimisation it is not possible to clearly identify which bids actually serve a balancing purpose and which bid serve a (local) system constraint purpose, it would be discriminatory to remunerate bids differently. This is especially true since the optimisation does not contain any geographical information other than the LFC area.

These RAs therefore consider that the efficient setup would be to apply the same remuneration of balancing energy bids activated for balancing purposes and balancing energy bids activated for system constraint purposes, with the unique cross border marginal price resulting from the optimization with all the cross-border system constraints enforced (the optimization that defines the volumes activated). This would ensure coherence between prices and volumes.

These RAs also consider that a two-run-approach still could be used for distributing costs between TSOs for the request for system constraints, e.g. by comparing the total costs with or without system constraints being binding and make a redistribution of costs based on this.

#### **Arguments in favour of not considering system constraints when determining the CBMPs**

Other RAs support the proposed two-runs approach for pricing system constraints as it ensures that activations of bids for system constraints purposes do not affect the CBMP for balancing energy. In doing so, TSOs comply with the requirement from article 30 (1)(b) EBGL that specifies that “at least the activation of balancing energy bids activated for purposes of internal congestion management shall not set the marginal price of balancing energy”.

Some RAs also have the argument that, by maintaining a higher CBMP through the system constraint run and performing cost allocation through a second run, the requesting TSO would incur costs that are higher than the actual cost the system incurs following their request. This would again give the incentive to the TSO to be very conservative on the capacity that it makes available in the forward market timeframes because any adjustment of flows in the balancing timeframe would carry a negative incentive as the payment is higher than the system cost. This would go against the following objectives of EBGL (Article 3(1)(b,c,d)). These RAs believe that this is not in the best interest of the European consumer, and would not lead to reasonable, efficient, and proportionate costs to be incurred by TSOs.

By not including system constraints to determine the CBMP for balancing energy, TSOs follow the general principles of the EBGL that focus on enhancing and promoting the exchange of balancing services while not mentioning the improvement of solving system constraints. Thus, the price for balancing energy should not include bids activated for system constraints in order to mirror the actual value of the balancing service.

#### *Separate optimisation of system constraints*

Some RAs think it would be more efficient to organise the two runs sequentially. In the first run, balancing energy bids are selected for balancing purposes. The second run selects balancing energy bids for system constraint purposes. The price and volumes for balancing should be established in the first run; in the second one the price and volumes for the system constraints are determined. As a consequence any system constraints are solved by additionally activating bids selected in the second run on top of the bids already selected in the first run.

Both should comply with the pay-as-cleared obligation to create appropriate bidding incentives for BSPs. Consequently, the obligation in article 30.1(b) is clearly applied. If a clear separation exists between system constraints for internal congestion management and other system constraints, it might be a possibility to include these other system constraints in the first run.

### **Multiple prices within one uncongested area (Article 3)**

Article 3(2) of the PP mentions the conditions when multiple CBMPs can occur within one uncongested area. RAs are divided on whether the definition of uncongested area should be adapted in order to reflect congestions following from the modelling of system constraints and network losses in the AOF.

Some RAs are of the opinion that - apart from prices per direction and product - multiple different CBMPs cannot exist in one uncongested area under the marginal pricing (pay-as-cleared) obligation. These RAs wish to see reflected in the definition of “uncongested area” restrictions of the exchange of balancing energy or the netting of demand because of system constraints or network losses as long as at least balancing energy bids activated for internal congestion management do not set the marginal price of balancing energy, as required by article 30(1)(b) of the EBGL, or alternatively apply a concept of market congestion as in CACM.

Other RAs do not object the definition of “uncongested area” and the concept of allowing for multiple CBMPs in one uncongested area following the modelling of system constraints and network losses in the AOF.

All RAs are concerned that the algorithm might cause different CBMPs in one uncongested area, as described in article 3(2)(b) i of the PP. TSOs confirmed, during their meetings with RAs, that having only one CBMP in one uncongested zone will be enforced at least for mFRR. All RAs support this decision and therefore request further justification on the need to keep article 3.2(b)(i) in the PP.

## **IV. Topics of agreement between Regulatory Authorities**

## Consistent use of terminology

RAs question why TSOs do not use the terminology used in chapter 2 of Title V. RAs ask TSOs to use as much as possible the definitions in the EBGL, for example “positive balancing energy” and “negative balancing energy” as defined pursuant to article 45(2)(c) instead of the term “activation direction”. RAs question why TSOs cannot define explicitly how the price for positive balancing energy and the price for negative balancing energy are determined based on activated balancing energy bids, in order for every TSO to use these prices in accordance with table 1 of EBGL. RAs ask TSOs to explicitly use these definitions in the final proposal or to provide an explanation for why this is not needed. The reference to “upward” and “downward” aFRR balancing energy should be replaced by “positive” and “negative” balancing energy in order to align the wording with those applied in discussions on sign convention.

RAs ask also to make terminology consistent with the other proposals. For example, the definition of “direct activation” is in the current PP not in line with the proposal for the European platform for the exchange of balancing energy from mFRR. RAs also ask to include definitions from other proposals where necessary. For example, “scheduled activation”, “activated bid” or “cross-border marginal price” are not defined in the current PP while they are used in the body of the PP. RAs also ask to be consistent throughout the proposal on the use of the term in full or its abbreviation. For example, in article 4 “cross-border marginal price” and “CBMP” are both used.

RAs request to amend the definition of “economic surplus”. As the term “economic surplus” has also been used in the aFRR IF proposal dated 18 December 2018, RAs refer to the request as elaborated in section IV.b) of the aFRR referral paper.

## Definition of the cross-border marginal price (article 3, article 4 and article 5)

Additionally, RAs are of the opinion that article 4(3) of the PP needs to be further elaborated. RAs request a precise definition regarding the determination of the CBMP. RAs request to specify more accurately which two of the eight prices are used as bounds to determine the middle point. RAs also request to accurately specify each option indicated from i. to iv. In order to remove any ambiguity as to what price they correspond.

## Specific remarks

RAs consider the report in article 3(8) to be sent to RAs and to be made publicly available by TSOs.

RAs consider that the timing of the BEPP in articles 4, 5, 6, and 7 should be clarified to be in line with market time as defined in the transparency regulation.

RAs note that the PP does not contain a proposal for harmonized maximum and minimum balancing energy prices, including bidding and clearing prices, to be applied in all scheduling areas. TSOs may propose such harmonization in case they identify that technical price limits are needed for efficient functioning of the market pursuant article 30(2) of the EBGL. RAs question why TSOs do not identify technical price limits as needed for an efficient functioning of the market, as they prevent the occurrence of erroneous prices. RAs therefore request to include in the PP technical price limits. RAs stress however that these technical price limits should not limit prices that are the result of a normal functioning of the platforms.

## V. Conclusions and actions

All Regulatory Authorities have assessed, consulted, closely cooperated and coordinated in order to reach an agreement. All Regulatory Authorities have not been able to reach an agreement within the period of six months following the receipt of the Proposal according to Article 30(1) and Article 30(3) of the EBGL.

According to Article 5(7) of the EBGL, All Regulatory Authorities hereby jointly request the Agency to adopt a decision concerning the Proposal according to Article 30(1) and Article 30(3) of the EBGL. The decision shall take into account All Regulatory Authorities' assessment in the topics of agreement stated above. Besides these considerations, All Regulatory Authorities inform the Agency on the topics of disagreement which prevented an agreement to be reached among All Regulatory Authorities. The Agency shall adopt its decision by no later than six months after the day of referral, in accordance with Article 8(1) of Regulation (EC) No 713/2009.