
**All TSOs' proposal for classification methodology for
the activation purposes of balancing energy bids
pursuant to Article 29(3) of Commission Regulation
(EU) 2017/2195 establishing a guideline on electricity
balancing**

18 December 2018

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ALL TSOS, TAKING INTO ACCOUNT THE FOLLOWING:

Whereas

- (1) This document is a common proposal developed by all Transmission System Operators (hereafter referred to as “TSOs”) regarding the classification methodology for activation purposes of balancing energy bids. The activation purposes proposal is hereafter referred to as the “APP”.
- (2) APP takes into account the general principles and goals set in the Regulation (EC) 2017/2195 establishing a guideline on electricity balancing (hereafter referred to as the “EBGL”), the Regulation (EC) 2017/1485 establishing a guideline on electricity transmission system operation (hereafter referred to as the “SOGL”) as well as Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity (hereafter referred to as “Electricity Regulation”).
- (3) The goal of EBGL is the integration of balancing markets. To facilitate this goal, it is necessary to develop implementation frameworks for European platforms for balancing energy exchange from frequency restoration reserves with manual and automatic activation, replacement reserves and imbalance netting process. Article 29 of EBGL formulates the requirements regarding the activation of balancing energy bids from the common merit order list of these platforms.
- (4) Article 29(3) of EBGL constitutes the legal basis for this proposal:

“3. By one year after the entry into force of this Regulation, all TSOs shall develop a proposal for a methodology for classifying the activation purposes of balancing energy bids. This methodology shall:

 - (a) describe all possible purposes for the activation of balancing energy bids;*
 - (b) define classification criteria for each possible activation purpose.”*
- (5) Article 3 of APP defines activation purposes and provides the classification criteria for each possible activation purpose. Article 4 defines which standard balancing energy product may be activated for which purpose. The requirement of Article 29(3) is fulfilled by the date of submission of APP to all NRAs.
- (6) In the case that a TSO declares the balancing energy bids submitted to the activation optimisation function as unavailable for activation by other TSOs through the common merit order list, this TSO may use the respective bid volumes in accordance with national legislation, which means where applicable that it can be activated for balancing or system constraints.
- (7) The APP fulfils the objectives stated in Article 3 of the EBGL as follows:
 - (a) The APP fulfils the requirements of Article 29(3) of EB GL.
 - (b) As the foundation of the APP is the establishment of the European platforms for the exchange of balancing energy from RR, mFRR and aFRR its contribution to the efficiency, competition and integration of balancing markets must be considered in context of these platforms. The specific contribution of the APP is a harmonized definition of the activation purposes and the respective classification criteria.
 - (c) The APP sets non-discriminatory rules and principles as it applies the same rules for all TSOs and BSPs.

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- (d) The APP contributes to operational security and considers the agreed European standards and technical specification by fulfilling the SO GL and its supporting document.

SUBMIT THE FOLLOWING APP TO ALL REGULATORY AUTHORITIES:

Abbreviations

The list of abbreviations used in this APP is following:

- aFRR: frequency restoration reserves with automatic activation
- APP: Activation Purposes Proposal
- BSP: balancing Service Provider
- EBGL: guideline on electricity balancing
- EU: European Union
- mFRR: frequency restoration reserves with manual activation
- NRA: national regulatory authority
- RR: replacement reserve
- SOGL: guideline on electricity transmission system operation
- TSO: transmission system operator

Article 1

Subject matter and scope

- (1) The APP is the common proposal of all TSOs in accordance with Article 29(3) of the EBGL. This proposal defines the methodology for classifying the activation purposes solely of standard balancing energy product bids for frequency restoration reserves with automatic activation (hereafter referred to as “aFRR”), frequency restoration reserves with manual activation (hereafter referred to as “mFRR”) and replacement reserves (hereafter referred to as “RR”).
- (2) Where the APP defines different requirements for activation of standard RR, mFRR and aFRR balancing energy product bids, only the TSOs obliged to implement the European platforms for the exchange of balancing energy in accordance with Articles 19, 20 and 21 of the EBGL are required to comply with these requirements.

Article 2

Definitions and interpretation

- (1) For the purposes of APP, the terms used shall have the meaning given to them in Article 2 of Electricity Regulation, Article 3 of the SOGL and Article 2 of the EBGL.
- (2) In addition, in the APP the following terms shall apply:
 - (a) ‘standard aFRR balancing energy product’ means the standard product for balancing energy from frequency restoration reserves with automatic activation;
 - (b) ‘standard mFRR balancing energy product’ means the standard product for balancing energy from frequency restoration reserves with manual activation;
 - (c) ‘standard RR balancing energy product’ means the standard product for balancing energy from replacement reserves;
- (3) In the APP, unless the context requires otherwise:
 - (a) the singular indicates the plural and vice versa;
 - (b) headings are inserted for convenience only and do not affect the interpretation of the APP; and
 - (c) any reference to legislation, regulations, directives, orders, instruments, codes or any other enactment shall include any modification, extension or re-enactment of it when in force.
 - (d) any reference to an article without an indication of the document shall mean a reference to the APP.

Article 3

Activation Purposes and Classification Criteria

- (1) Each TSO in accordance with Article 1(1) of this APP shall use the following activation purposes for the bids from the common merit order list pursuant Article 29(4) of the EBGL:
 - (a) balancing;
 - (b) system constraints.
- (2) Each TSO in accordance with Article 1(1) of this APP activating the bid from the common merit order list are allowed to use all standard balancing energy product bids for balancing purposes, whereas TSOs are allowed to use standard RR and mFRR balancing energy product bids for balancing and system constraint purposes.

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- (3) Each TSO in accordance with Article 1(1) of this APP shall comply with following classification criteria for different balancing energy products when activating bids from the common merit order list for balancing purposes:
 - (a) standard RR balancing energy product bid: Activation aims to achieve the control target of the reserve replacement process in accordance with Article 144(1) of the SOGL;
 - (b) standard mFRR balancing energy product bid: Manual activation aims to achieve the control target of the frequency restoration process in accordance with Article 143(1) of the SOGL;
 - (c) standard aFRR balancing energy product bid: Automatic activation aims to achieve the control target of the frequency restoration process in accordance with Article 143(1) of the SOGL.
 - (4) Each TSO shall comply with following classification criteria for when activating bids from the common merit order list for system constraint purposes:
 - (a) activation to maintain voltage limits in accordance with Article 27 of the SOGL;
 - (b) activation to maintain power-flow limits in accordance with Article 32 of the SOGL;
 - (c) activation to maintain short-circuit current limits according to Article 30 of the SOGL and Article 31(3) of the SOGL;
 - (d) activation to maintain the dynamic stability limits in accordance with Article 39 of the SOGL;
 - (e) activation to maintain reactive power reserves in accordance with Article 29 of the SOGL;
 - (f) activation to maintain active power reserves in accordance with Article 152(1) of the SOGL;
 - (g) activation to maintain system margin ensuring that active and reactive power reserves, are sufficient in accordance with Article 18(1)(c) of the SOGL, to restore the normal state in accordance with Article 18(1) of the SOGL, to prevent an alert state in accordance with Article 18(2) of the SOGL and to prevent an emergency state in accordance with Article 18(3) of the SOGL.
 - (5) In accordance with Article 29(4) of the EBGL, when activating standard RR or mFRR balancing energy product bids from the common merit order list, the activation optimisation function shall identify the activation purpose for each selected bid as follows:
 - (a) The TSO may submit requests for bid activations due to system constraints for an interconnector, a border or a set of borders, as an additional input constraint to the activation optimisation function while complying with the list Article 3(4) of the APP.
 - (b) The activation optimisation function shall select the bids by performing an optimisation without considering the requests for system constraint purpose submitted in accordance to this paragraph 5 (a) of this article.
 - (c) The activation optimisation function shall select bids by performing an optimisation that takes into account the requests for system constraint purpose submitted in accordance to (a). If the optimization has a feasible solution the TSOs shall activate the selected bids. Otherwise, the TSOs shall activate the bids selected in this paragraph 5(b) of this Article.
 - (d) The bids which are selected in accordance with the optimisation of this paragraph 5(c) but not in (b) of this Article are selected for system constraint purpose.
 - (6) Submitting requests for system constraint purpose shall be coordinated with the concerned TSOs in accordance with Article 21(1)(b) of the SOGL.

Article 4 Implementation Timeline

Each TSO shall apply this APP for standard balancing energy products bids once the TSO is connected to the respective European balancing platform for the exchange of balancing energy in accordance with the Articles 19, 20 or 21 of the EBGL.

Article 5 Publication of the APP

The TSOs shall publish the APP without undue delay after all NRAs have approved the proposal or a decision has been taken by the Agency for the Cooperation of Energy Regulators in accordance with Article 5(7), Article 6(1) and Article 6(2) of the EBGL.

Article 6 Language

The reference language for the APP shall be English. For the avoidance of doubt, where TSOs need to translate the APP into their national language(s), in the event of inconsistencies between the English version published by TSOs in accordance with Article 29(3) of the EBGL and any version in another language, the relevant TSOs shall be obliged to dispel any inconsistencies by providing a revised translation of the APP to their relevant national regulatory authorities.

Explanatory document to all TSOs' proposal for classification methodology for the activation purposes of balancing energy bids pursuant to Article 29(1) of Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing

18 December 2018

DISCLAIMER

This document is submitted by all transmission system operators (TSOs) to all NRAs for information purposes only accompanying the all TSOs' proposal for classification methodology for the activation purposes of balancing energy bids pursuant to Article 29(3) of Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing.

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Definitions and Abbreviations



Definitions

List of definitions used in this document:

‘aFRR-Platform’	means European platform for the exchange of balancing energy from frequency restoration reserves with automatic activation
‘mFRR-Platform’	means European platform for the exchange of balancing energy from frequency restoration reserves with manual activation;
‘standard balancing energy product’	means the standard product for balancing energy from replacement reserves or frequency restoration reserves with automatic or manual activation
‘RR-Platform’	means European platform for the exchange of balancing energy from replacement reserves



Abbreviations

List of abbreviations used in this document:

AC	alternative current
aFRR	frequency restoration reserves with automatic activation
APP	activation purposes proposal
BRP	balance responsible party
EBGL	guideline on electricity balancing
EU	European Union
FRR	frequency restoration reserves
HVDC	high voltage direct current
mFRR	frequency restoration reserves with manual activation
RR	Replacement reserves
SOGL	guideline on electricity transmission system operation
TSO	transmission system operator

1 Introduction

This document gives background information and rationale for the all TSOs' proposal regarding the development of a proposal to further specify and harmonise activation purposes in accordance with Article 29(3) of the Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing (hereafter referred to as the "EBGL"). The common proposal developed by all TSOs regarding the classification methodology for activation purposes of balancing energy bids is hereafter referred to as "APP".

The APP contains

- a definition of activation purposes of balancing energy bids from common merit order lists and
- the respective classification criteria

In accordance with the scope of the APP set forth by Article 29(3) of EBGL, the APP neither treats pricing of balancing energy nor settlement of the balancing energy exchange between TSOs. These aspects are part of the proposals in accordance with Article 30(1) and Article 50(1) of EBGL. Moreover, the APP must be considered together with the implementation frameworks set forth in accordance with Article 19, Article 20 and Article 21 of EBGL.

Article 29(4) states that "*For each balancing energy bid activated from the common merit order list, the TSO activating the bid shall define the activation purpose based on the methodology pursuant to paragraph 3.*" At the same time, the TSOs may use the respective bid volumes through a local process (i.e. not through the respective platform and/or or by declaring them as unavailable). An example for such a process is activation of the respective flexibility for redispatch with the goal to maintain the (n-1) principle. In some countries, the balancing energy bid products are used not only for balancing but also for such remedial actions. In other countries, there is a strict separation between balancing energy products (including but not limited to remuneration) and flexibility activated for remedial actions. Since the harmonisation of processes related to locally activated (costly) remedial actions and the respective remuneration schemes is out of scope of EBGL, the local activation of bids or the volumes attached to this bids is part of national legislation (e.g. of the respective terms and conditions or provisions on remuneration of the remedial actions).

Hence, the proposal focuses on the classification of activation purposes of bids from the platform as required by Article 29(4) of EBGL. Moreover, the proposal defines the approach how to differentiate the different activation purposes. This explanatory document explains the activation purposes and the respective classification criteria.

2 The all TSOs' proposal for a methodology for classifying the activation purposes of balancing energy bids from common merit order lists

2.1 Definition and classification of activation purposes

2.1.1 Proposal for activation purposes list

The proposed list includes two main activation purposes categories, namely: Balancing and System constraints.

2.1.2 Classification criteria

The classification criteria for the activation purposes proposed in the list above relates to the issues identified, the associate timeframes and the respective market rules.

For balancing, the reason for activating a standard balancing energy product bid is the mismatch between the scheduled and the actual or forecasted position on system level. The total imbalance reflects the imbalances on BRP level.

When distinguishing between the three processes (RR, mFRR, aFRR), the criteria relate to timeframe and also the mode of activation. For standard RR product bid, activation aims to achieve the control target of the reserve replacement process in accordance with Article 144(1) of the SOGL. For standard FRR product bid, activation aims to achieve the control target of frequency restoration process in accordance with Article 143(1) of the SOGL.

When activating standard RR or mFRR balancing energy product for system constraint purpose, the TSO shall comply with the following classification criteria:

- (i) activate to maintain voltage limits which refers to the manual or automatic control actions at the generation node, at the end of the AC lines or HVDC systems, on transformers or other means, designed to set voltage level of the set value of reactive power in accordance with Article 27 of the SOGL ;
- (ii) activate to maintain power-flow limits which refers to the operational security limits linked to the congestion criteria and the current limits in terms of thermal rating on transmission lines in accordance with Article 32 of the SOGL;
- (iii) activate to maintain short-circuit current limits according to Article 30 of the SOGL
- (iv) activate to maintain dynamic stability limits which refers to permitted boundaries for the secure operation of the transmission system in terms of respecting the limits of voltage stability, rotor angle stability and frequency stability in accordance with Article 39 of the SOGL.
- (v) activate to ensure that active and reactive power reserves, which refer to procured balancing capacities and system margin, are sufficient in accordance with Article 18(1)(c) of the SOGL, to restore the normal state in accordance with Article 18(1) of the SOGL, to prevent an alert state in accordance with Article 18(2) of the SOGL and to prevent an emergency state in accordance with Article 18(3) of the SOGL.

For instance, the TSOs are allowed to submit a desired flow range as an additional constraint to RR-Platform or mFRR-Platform for a specific interconnection (for example for an HVDC line). The activation of bids in

accordance with the optimisation function for satisfying the controllability of interconnection, and more broadly for counter trading and cross-border redispatching, is performed for system constraints purpose.

2.2 Activation of balancing energy bids from common merit order lists

2.2.1 Activation purposes for the European platform for the exchange of balancing energy from replacement reserves

Each TSO participating in the RR-Platform shall activate standard RR balancing energy product bids via the activation optimisation function of the RR-Platform for the purpose of balancing or system constraints.

2.2.2 Activation purposes for the European platform for the exchange of balancing energy from frequency restoration reserves with manual activation

Each TSO participating in the mFRR-Platform shall activate standard mFRR balancing energy product bids via the activation optimisation function of the mFRR-Platform for the purpose of balancing or system constraints.

2.2.3 Activation purposes for the European platform for the exchange of balancing energy from frequency restoration reserves with automatic activation

Each TSO participating in the aFRR-Platform shall activate standard aFRR balancing energy product bids via the activation optimisation function of the aFRR-Platform for the purpose of balancing.

2.3 Identification of activation purposes

In accordance with Article 29(4) of the EBGL, when activating standard RR or mFRR balancing energy product bids from the common merit order list, the activation optimisation function shall identify the activation purpose for each selected bid.

The TSOs may submit for example a desired flow range for a specific border or set of borders as an additional constraint to the activation optimisation function.

The activation optimisation function shall select the bids by performing an optimisation

- (i) without considering the constraints resulting from the desired flow range submitted;
- (ii) taking into account the constraints resulting from the desired flow range submitted. If the optimization has a feasible solution, the TSOs shall activate the selected bids. Otherwise, the TSOs shall activate the bids selected in the run without considering the constraints on the desired flow.

The bid volumes which are selected in accordance with the optimisation with constraints but not without the constraints are selected for system constraint purposes.