
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

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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.