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**All TSOs' proposal for the implementation framework for a European platform for the exchange of balancing energy from frequency restoration reserves with manual activation in accordance with Article 20 of Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing**

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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 development of an implementation framework for a European platform for the exchange of balancing energy from frequency restoration reserves with manual activation (hereafter referred to as the “**mFRR-Platform**”) pursuant to Article 20(1) of the Regulation (EC) 2017/2195 establishing a guideline on electricity balancing (hereafter referred to as the “**EBGL**”). This proposal is hereafter referred to as the “**mFRRIF**”).
- (2) This mFRRIF takes into account the general principles, goals and other methodologies set in the EBGL, Regulation (EC) 2017/1485 establishing a guideline on electricity transmission system operation (hereafter referred to as the “**SOGL**”), the 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**”) as well as Regulation (EC) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council (hereafter referred to as the “**Transparency Regulation**”).
- (3) The goal of the EBGL is the integration of electricity balancing energy markets. The integration of balancing energy markets should be facilitated with the establishment of common European platforms for the exchange of balancing energy from frequency restoration reserves and replacement reserves, and for operating the imbalance netting process. To facilitate this goal, it is necessary to develop implementation frameworks for European platforms for balancing energy exchange from frequency restoration reserves with automatic and manual activation, replacement reserves and imbalance netting process. The Articles 20(1) and 20(2) of the EBGL constitute the legal basis for this proposal.
- (4) This mFRRIF lays down the design, functional requirements, governance and cost sharing of the mFRR-Platform, which shall be able to perform among others the activation optimisation function as described in the Article 20 of the EBGL. This mFRRIF takes note of the provisions listed in the recitals 5 to 8 of the EBGL.
- (5) Article 3(42) of the SOGL defines the frequency restoration process as *a process that aims at restoring frequency to the nominal frequency and, for synchronous areas consisting of more than one LFC area, a process that aims at restoring the power balance to the scheduled value.*
- (6) Article 145(5) of the SOGL requires that the mFRP shall be operated through instructions for manual FRR activation in order to fulfil the control target in accordance with Article 143(1) of the SOGL.
- (7) Article 145(3) of the SOGL specifies further, *if an LFC area consists of more than one monitoring area, all TSOs of the LFC area shall set out a process for the implementation of a mFRP in the LFC area operational agreement. Where an LFC block consists of more than one LFC area, all TSOs of the LFC areas shall set out a process for the implementation of an mFRP in the LFC block operational agreement.*
- (8) Article 20(1) of the EBGL defines the deadline for the submission of the mFRRIF: *by one year after entry into force of the EBGL, all TSOs shall develop a proposal for the implementation framework for the mFRR-Platform.* The requirement of this article is fulfilled by the date of submission of this mFRRIF to all NRAs.
- (9) Article 20(2) of the EBGL requires that *the mFRR-Platform, operated by TSOs or by means of an entity the TSOs would create themselves, shall be based on common governance principles and business*

*processes and shall consist of at least the activation optimisation function and the TSO-TSO settlement function. This mFRRIF fulfils these requirements by defining the common business processes of the TSO-TSO model in Article 3 of this mFRRIF as well as the activation optimisation function and the TSO-TSO settlement function in Article 6 of this mFRRIF. The common governance principles are set forth by Article 13 of this mFRRIF.*

(10) Article 20(2) of the EBGL states further that *this European platform shall apply a multilateral TSO-TSO model with common merit order lists to exchange all balancing energy bids from all standard products for mFRR, except for unavailable bids pursuant to Article 29(14). These common merit order lists are defined in Article 10 of this mFRRIF and include only available bids. The possibility to mark bids as unavailable is defined in Article 9(2) of this mFRRIF.*

(11) Article 20(3) of the EBGL defines further specific requirements to the content of the mFRRIF.

*The proposal in paragraph 1 shall include at least:*

- (a) the high level design of the European platform;*
- (b) the roadmap and timelines for the implementation of the European platform;*
- (c) the definition of the functions required to operate the European platform;*
- (d) the proposed rules concerning the governance and operation of the European platform, based on the principle of non-discrimination and ensuring equitable treatment of all member TSOs and that no TSO benefits from unjustified economic advantages through the participation in the functions of the European platform;*
- (e) the proposed designation of the entity or entities that will perform the functions defined in the proposal. Where the TSOs propose to designate more than one entity, the proposal shall demonstrate and ensure:
  - (i) a coherent allocation of the functions to the entities operating the European platform. The proposal shall take full account of the need to coordinate the different functions allocated to the entities operating the European platform;*
  - (ii) that the proposed setup of the European platform and allocation of functions ensures efficient and effective governance, operation and regulatory oversight of the European platform as well as, supports the objectives of this Regulation;*
  - (iii) an effective coordination and decision-making process to resolve any conflicting positions between entities operating the European platform;**
- (f) the framework for harmonisation of the terms and conditions related to balancing set up pursuant to Article 18;*
- (g) the detailed principles for sharing the common costs, including the detailed categorisation of common costs, in accordance with Article 23;*
- (h) the balancing energy gate closure time for all standard products for frequency restoration reserves with manual activation in accordance with Article 24;*
- (i) the definition of standard products for balancing energy from frequency restoration reserves with manual activation in accordance with Article 25;*
- (j) the TSO energy bid submission gate closure time in accordance with Article 29(13);*
- (k) the common merit order lists to be organised by the common activation optimisation function pursuant to Article 31;*

*(l) the description of the algorithm for the operation of the activation optimisation function for the balancing energy bids from all standard products for frequency restoration reserves with manual activation in accordance with Article 58.”*

- (12) Article 3 of this mFRRIF sets the specific requirements for the proposal, addresses the requirement to apply the TSO-TSO model and defines the high-level design of the mFRR-Platform required by Article 20(3)(a) of the EBGL. The high-level design includes basic principles of the optimisation function including the constraints.
- (13) Article 4 of this mFRRIF defines specific requirements for the calculation of the mFRR cross-border capacity limits. The initial value for these limits is the remaining transmission capacity after the allocation to the intraday market. This value will be updated, which means reduced or increased, depending, among others, on the reserve replacement power interchange, where applicable. The TSOs propose to use net transfer capacity based approach. Once the methodology for cross-zonal capacity calculation within the balancing timeframe in accordance with Article 37(3) of the EBGL is developed, approved and implemented, the respective values shall serve as initial values. Moreover, the Article 4 of this mFRRIF may require an update if the methodology in accordance with Article 37(3) of the EBGL also has an impact on the updating process or introduces other changes to the proposed approach.
- (14) Article 20(3)(b) of the EBGL foresees a proposal for the roadmap and timeline for the implementation of the mFRR-Platform. The deadlines for making the mFRR-Platform operational are defined in Article 20(6) of the EBGL. Due to the fact that the countries have different starting points with respect to the terms and conditions related to balancing, Article 5 of this mFRRIF proposes an implementation project approach.
- (15) Article 20(3)(c) of the EBGL requires the definition of functions required to operate the mFRR-Platform. Article 6 of this mFRRIF fulfils this requirement by defining the activation optimisation function and the TSO-TSO settlement function. The activation optimisation function takes, among others, mFRR demands, the common merit order lists and mFRR cross-border capacity limits as input and determines the amount of manual frequency restoration power interchange between the LFC areas or bidding zones which will result in the activation of the cost efficient bids. The TSO-TSO settlement function implements the settlement of intended energy exchange between the TSOs.
- (16) Article 20(3)(d) of the EBGL requires the definition of rules for governance and operation of the mFRR-Platform. Articles 13 and 14 of this mFRRIF define the governance and the decision-making process. A steering committee shall make the decisions regarding the mFRR-Platform pursuant to Article 14(1)(a) and 14(2) of this mFRRIF, in accordance with the principles of the decision-making process based on Article 4 of the EBGL.
- (17) Article 20(3)(e) of the EBGL requires to propose the entity or entities which will operate the functions defined in accordance with Article 20(3)(c) of the EBGL. Article 12 of this mFRRIF proposes a single entity to operate both the activation optimisation and the TSO-TSO settlement function.
- (18) Article 20(3)(f) of the EBGL requires that the mFRRIF includes a framework for harmonisation of terms and conditions related to balancing. Article 16 of this mFRRIF proposes a process to identify and consult harmonisation options.
- (19) Article 20(3)(g) of the EBGL requires detailed principles for sharing the common costs including the detailed categorisation of common costs. Article 15 of this mFRRIF provides these principles and categorisation.
- (20) Article 20(3)(h) of the EBGL requires that the mFRRIF includes the balancing energy gate closure time for all standard products for frequency restoration reserves with manual activation and Article

20(3)(j) of the EBGL requires that mFRRIF includes the TSO energy bid submission gate closure time. The respective gate closure times are defined in Articles 8 and 9 of this mFRRIF. The gate closure times also apply to specific products converted into standard mFRR balancing energy products according to Article 26(1)(d) of the EBGL. For avoidance of doubt, the gate closure times do not apply for specific products which are activated only locally.

- (21) Article 20(3)(i) of the EBGL requires the definition of standard products for balancing energy from mFRR in accordance with Article 25 of the EBGL. Article 7 of this mFRRIF defines all characteristics of a standard product for mFRR in accordance with Article 25(5) of the EBGL as well as several variable characteristics of a standard product for mFRR which shall be determined during the prequalification or when submitting the standard product bid in accordance with Article 25(4) of the EBGL. Article 7 further clarifies the possible specifications of the characteristics of the mFRR standard product to be defined in terms and conditions for BSPs.
- (22) Article 20(3)(k) of the EBGL requires that this mFRRIF includes the common merit order lists to be organised by the activation optimisation function pursuant to Article 31 of the EBGL. Article 10 of this mFRRIF provides this description.
- (23) Article 20(3)(l) of the EBGL requires a description of the algorithm for the operation of the activation optimisation function for the balancing energy bids from mFRR in accordance with Article 58 of the EBGL. Article 11 of this mFRRIF provides this description including the objective functions and the constraints. All TSOs consider that the proposed algorithm in Article 11 of this mFRRIF is the choice that best ensures the successful implementation of the algorithm and the activation optimisation function for the making the mFRR-Platform operational considering the nature and the level of complexity of the optimisation algorithm.
- (24) All TSOs shall aim at taking explicitly into account the agreements for sharing of reserves as input into the optimisation algorithm at least through the determination of TSO mFRR demands the participating TSOs submit to the mFRR-Platform, in order to give a priority access to the shared volumes for the TSOs that are parties to the agreement. In case the possibility to request more than the volume of submitted bids pursuant to Article 9(3) of this mFRRIF would be removed from this mFRRIF, all TSOs shall take into account the reserve sharing agreements in the optimisation algorithm in order to comply with Article 29(12)(c) of the EBGL
- (25) All TSOs shall aim at explicitly taking into account the cross-zonal capacity that has been allocated for the exchange of balancing capacity or sharing of reserves according to Article 38(1) of the EBGL into the optimisation algorithm in order to give a priority access to the allocated cross-zonal capacity to the TSOs that have allocated this cross-zonal capacity.
- (26) The mFRRIF fulfils the objectives stated in Article 3 of the EBGL as follows:
  - (a) The mFRRIF fulfils the requirements of Article 20 of the EBGL.
  - (b) The mFRRIF contributes to the efficiency, competition and integration of balancing markets by defining a standard mFRR balancing energy product including the respective bid parameters, establishing common merit order lists and ensuring that the available cross zonal capacity shall be used by an optimization algorithm with the goal to activate the most cost efficient standard mFRR balancing energy product bids to cover the mFRR demand.
  - (c) The mFRRIF is non-discriminatory as it applies the same rules for all TSOs and BSPs. In particular, the standard mFRR balancing energy product does not differ between technologies.
  - (d) The mFRRIF contributes to operational security and considers the agreed European standards and technical specification by fulfilling the SOGL and its supporting documents.



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## Abbreviations

The list of abbreviations used in this mFRRIF is following:

- BSP: balancing service provider
- CZC: cross-zonal capacity
- EBGL: guideline on electricity balancing
- ENTSO-E: European Network of Transmission System Operators for Electricity
- EU: European Union
- FRR: frequency restoration reserves
- HVDC: high-voltage direct current
- LFC: load-frequency control
- MARI: Manually Activated Reserves Initiative
- mFRR: frequency restoration reserves with manual activation
- mFRRIF: implementation framework for a European platform for the exchange of balancing energy from frequency restoration reserves with manual activation
- mFRR-Platform: European platform for the exchange of balancing energy from frequency restoration reserves with manual activation
- mFRP: frequency restoration process for the exchange of balancing energy from mFRR
- SOGL: guideline on electricity transmission system operation
- TSO: transmission system operator

**SUBMIT THE FOLLOWING mFRRIF TO ALL REGULATORY AUTHORITIES:**

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## **Article 1**

### **Subject matter and scope**

- (1) This mFRRIF is the common proposal of all TSOs in accordance with Article 20(1) of the EBGL.
- (2) The implementation, operation and usage of the mFRR-Platform is mandatory for all TSOs. Where an LFC area consists of more than one monitoring area, only the TSO appointed in the LFC area operational agreement as responsible for the implementation and operation of the mFRP according to Article 143(4) of the SOGL shall use the mFRR-Platform. For avoidance of doubt, all TSOs shall become participating TSOs, except where an LFC area consists of more than one monitoring area, in which case only the appointed TSO shall become a participating TSO.
- (3) This proposal applies solely for the exchange of standard balancing energy products from mFRR. The European platforms for imbalance netting process, exchange of balancing energy from frequency restoration reserves with automatic activation and exchange of balancing energy from replacement reserves are out of the scope of this mFRRIF.
- (4) The proposal for classification methodology for the activation purposes of balancing energy bids pursuant to Article 29 of the EBGL is out of the scope of this mFRRIF and will be treated in a separate document.
- (5) The proposal for a methodology for pricing balancing energy that results from the activation of balancing energy bids and cross-zonal capacity used for the exchange of balancing energy or for operating the imbalance netting process pursuant to Article 30 of the EBGL is out of the scope of this mFRRIF and will be treated in a separate document.
- (6) The proposal for common TSO-TSO settlement rules applicable to the mFRR-Platform pursuant to Article 50 of the EBGL is out of the scope of this mFRRIF and will be treated in a separate document.

## **Article 2**

### **Definitions and interpretation**

- (1) For the purposes of this mFRRIF, the terms used shall have the meaning given to them in Article 2 of the Electricity Regulation, Article 2 of the Transparency Regulation, Article 3 of the SOGL and Article 2 of the EBGL.
- (2) In addition, in this mFRRIF the following terms shall apply:
  - (a) 'availability status' means the condition of a bid being available or unavailable for cross-border activation;
  - (b) 'available standard mFRR balancing energy product bid' means a standard mFRR balancing energy product bid which was received by the connecting TSO and not marked as unavailable;
  - (c) 'balancing market time unit' means the longer of the two imbalance settlement periods on either side of an mFRR balancing border, except for where at least one of the two imbalance settlement periods are longer than 15 minutes, in which case the balancing market time unit means 15 minutes, starting right after 00:00 CET. The balancing market time units shall be consecutive and not overlapping;
  - (d) 'bidding zone border' means a set of physical transmission lines linking adjacent bidding zones;
  - (e) 'direct activatable bid' means a standard mFRR balancing energy product bid that can be activated at any point of time following the point of scheduled activation of the quarter hour for which the bid



is submitted and until the point of scheduled activation of the subsequent quarter hour. Every direct activatable bid is scheduled activatable bid as well, while no scheduled activatable bid is direct activatable bid;

- (f) 'divisible bid' means a standard mFRR balancing energy product bid, which can be activated partially in terms of power activation according to the bid activation granularity pursuant to Article 6(5) of this mFRRIF;
- (g) 'economic linking' means links between bids with the purpose of economic optimization, allowing BSPs to offer more flexibility, to reflect efficiently their underlying cost structure in their offered bids, and to maximize the opportunity of being activated;
- (h) 'economic surplus' means in the context of activation optimisation function, the total surplus of the participating TSOs that is obtained from satisfying their mFRR demand submitted to the mFRR-Platform and the total surplus of balancing service providers ("BSPs") resulting from the activation of their associated submitted standard mFRR balancing energy product bids. The curve consisting of the positive TSO mFRR demand and the downward BSP standard mFRR balancing energy product bids submitted to the mFRR-Platform constitutes the consumer curve, and therefore indicates the maximum price consumers (TSOs and BSPs) are willing to pay for consuming mFRR balancing energy. On the other hand, the curve consisting of the negative TSO mFRR demand and the upward BSP standard mFRR balancing energy product bids submitted to the mFRR-Platform constitutes the producer curve, and therefore shows the minimum price they are willing to receive for supplying mFRR balancing energy. Economic surplus is the total benefit from the mFRR balancing energy transaction, and therefore is made up of the area corresponding to the sum of the consumer and the producer surpluses;
- (i) 'elastic mFRR demand' is a TSO demand for activation of standard mFRR balancing energy product bid of which the satisfaction depends on the price of standard mFRR balancing energy product bids. A TSO can submit an elastic mFRR demand in a positive or a negative direction with the price it is willing to pay or receive for the activation of standard mFRR balancing energy product bid;
- (j) 'exclusive group orders' is a type of economic linking. Exclusive group orders means that only one specific bid can be accepted from the list of bids part of the exclusive group orders;
- (k) 'expert group' means the body composed of nominated experts of all member TSOs of the mFRR-Platform;
- (l) 'granularity' means the smallest increment in volume of a standard mFRR balancing energy product bid;
- (m) 'implementation of the mFRR-Platform' means implementing all necessary IT systems in order to operate the exchange of balancing energy from mFRR.
- (n) 'indivisible bid' means a standard mFRR balancing energy product bid, which cannot be activated partially in terms of power activation according to the bid activation granularity pursuant to Article 7(2) of this mFRRIF. Therefore, the volume of an indivisible bid is always activated altogether;
- (o) 'inelastic mFRR demand' is a TSO demand for activation of standard mFRR balancing energy product bid, which needs to be satisfied irrespective of the price of the activation of standard mFRR balancing energy product;
- (p) 'MARI' means "Manually Activated Reserves Initiative" and is the implementation project that shall evolve into the mFRR-Platform in accordance with Article 5(2) of this mFRRIF.;

- (q) 'member TSO' means any TSO who has joined the mFRR-Platform, including TSOs from multi-TSO LFC areas that are not appointed via their LFC area operational agreement to be responsible for implementing and operating the mFRP pursuant to Part IV of the SOGL, and in particular Articles 141 and 143;
- (r) 'mFRR balancing border' means a set of physical transmission lines linking adjacent bidding zones, where an LFC area consists of more than one bidding zone, or LFC areas of participating TSOs. The optimisation algorithm calculates the cross-border manual frequency restoration power interchange for each mFRR balancing border. For the purposes of the optimisation, each mFRR balancing border has a mathematically defined negative and positive direction for the manual frequency restoration power interchange;
- (s) 'mFRR cross-border capacity limits' means the limits for the manual frequency restoration power interchange in import or positive direction and export or negative direction for a mFRR balancing border or a set of mFRR balancing borders and serving as constraints for the optimisation algorithm;
- (t) 'mFRR demand' means a TSO demand for activation of standard mFRR balancing energy product bids. The sign convention for mFRR demand is: negative value where the LFC area or bidding zone is in power surplus and indicates that downward mFRR bids need to be activated; and positive value where the LFC area or bidding zone is in power deficit and indicates that upward mFRR bids need to be activated;
- (u) 'parent-child linking' is a type of economic linking. Parent-child linking means a bid (the child) that can only be activated if another specific bid (the parent) is activated as well, not vice-versa;
- (v) 'participating TSO' means any member TSO using the mFRR-Platform in order to exchange standard mFRR balancing energy products. By thirty months after the approval of this mFRRIF, all member TSOs shall be participating TSOs, except TSOs from multi-TSO LFC areas that are not appointed via their LFC area operational agreement to be responsible for implementing and operating the mFRP pursuant to Part IV of the SOGL, and in particular Articles 141 and 143. This is without prejudice to derogation in accordance with Article 62(2)(a) of the EBGL;
- (w) 'point of scheduled activation' means the point in time from which full activation time is measured for the scheduled activation and is 7.5 minutes before beginning of the quarter hour for which the BSPs place the respective standard mFRR balancing energy product bid. The BSP receives activation request 12.5 minutes before expected full activation;
- (x) 'scheduled activatable bid' means a standard mFRR balancing energy product bid that can only be activated at one specific point in time, i.e. the point of scheduled activation, with respect to the period of time for which the balancing energy bid is submitted;
- (y) 'standard mFRR balancing energy product' means the standard product for balancing energy from mFRR;
- (z) 'standard mFRR balancing energy product bid' means the balancing energy bid for a standard mFRR balancing energy product;
- (aa) 'steering committee' means the decision-making body of the mFRR-Platform consisting of nominated representatives from all member TSOs and the superior body of the expert group;
- (bb) 'technical linking' means links between bids in consecutive quarter hours or in the same quarter hour, needed to avoid the underlying asset performs unfeasible activations;

- (cc) 'usage of the mFRR-Platform' means exchanging mFRR energy between two or more LFC areas or bidding zones via the mFRR-Platform in order to operate the frequency restoration process for the exchange of balancing energy from mFRR, where the activation of balancing energy from mFRR follows the principle of a common merit order.
- (3) In this mFRRIF, unless the context requires otherwise:
- (a) the singular indicates the plural and vice versa;
  - (b) the table of contents and headings are inserted for convenience only and do not affect the interpretation of this mFRRIF;
  - (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 this mFRRIF.

### **Article 3** **High-level design of the mFRR-Platform**

- (1) The mFRR-Platform shall establish a cross-border mFRR activation process in accordance with Article 147 and Article 149 of the SOGL.
- (2) The mFRR-Platform includes all LFC areas or bidding zones of the participating TSOs according to Article 147 of the SOGL and the mFRR balancing borders.
- (3) The mFRR-Platform shall consist of the activation optimisation function and the TSO-TSO settlement function.
- (4) A TSO may use elastic mFRR demand when following conditions are met:
  - (a) the elastic mFRR demand can be only submitted for scheduled auction. Demand for direct activation shall be always inelastic.
  - (b) the high-level principles for applying elastic mFRR demand shall be communicated to the relevant regulatory authorities.
  - (c) the elastic mFRR demand shall not be used in such a way that it imposes a cap on balancing energy prices permanently.
- (5) The inputs to the activation optimisation function of the mFRR-Platform shall be:
  - (a) the mFRR demand of every LFC area or bidding zone, in case a LFC area consists of more than one bidding zone, of each participating TSO. Where a common mFRR demand is estimated for all LFC areas of an LFC block, the participating TSO responsible for the estimation of mFRR demand shall send the mFRR demand for the LFC block. The mFRR-Platform shall optimise the activation of standard mFRR balancing energy product bids located in all LFC areas of this LFC block;
  - (b) the mFRR cross-border capacity limits for the concerned mFRR balancing borders being continuously reported to the mFRR-Platform;
  - (c) the list of standard mFRR balancing energy product bids for the LFC area or bidding zone, in case an LFC area consists of more than one bidding zone, of each participating TSO, which shall include all standard mFRR balancing energy product bids from each bidding zone which belongs to the LFC area of the submitting TSO;

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- (d) the availability status of mFRR balancing energy product bids that become available or unavailable after the TSO energy bid submission gate closure time according to Article 9(2) of this mFRRIF;
  - (e) the operational security constraints provided by the participating TSOs or affected TSOs in accordance with Article 150 of the SOGL, where applicable;
  - (f) where applicable, requests for system constraint purpose submitted by the participating TSO(s) in accordance with the proposal pursuant Article 29(3) of the EBGL;
  - (g) other inputs of the activation optimisation function can be information that ensures safe and correct communication, the stability of the IT system, monitoring of the working of the systems and publication.
- (6) Participating TSOs applying a central dispatching model, pursuant to Article 27 of the EBGL, shall convert integrated scheduling process bids received from BSPs into standard mFRR balancing energy product bids and then submit the standard mFRR balancing energy product bids to the mFRR-Platform.
  - (7) The activation optimisation function shall merge the lists of standard mFRR balancing energy product bids for each LFC area or bidding zone of each participating TSO, provided in accordance with Article 10 of this mFRRIF, creating common merit order lists.
  - (8) The mFRR cross-border capacity limits shall be determined in accordance with Article 4 of this mFRRIF.
  - (9) The outputs of the activation optimisation function shall be:
    - (a) the manual frequency restoration power interchange on the mFRR balancing borders as defined in the Article 147 of the SOGL;
    - (b) the volume of activation of balancing energy from standard mFRR balancing energy products;
    - (c) the volume of satisfied mFRR balancing energy demand;
    - (d) the net position of each bidding zone or LFC area resulting from the mFRR-Platform;
    - (e) the prices for mFRR balancing energy determined using the methodology proposed in accordance with Article 30(1) of the EBGL;
    - (f) the prices for cross-zonal capacity used for the exchange of standard mFRR balancing energy products determined using the methodology proposed in accordance with Article 30(3) of the EBGL;
    - (g) other outputs of the activation optimisation function can be information that ensures safe and correct communication, the stability of the IT system, monitoring of the working of the systems and data relevant for the calculation of the performance indicators in accordance with Article 59(4) of the EBGL.
  - (10) The design of the mFRR-Platform shall ensure that each participating TSO shall have access at all times to the volume of the submitted bids if required by the TSO. Each participating TSO shall specify that a bid was made unavailable for this reason when declaring a bid as unavailable pursuant to Article 29(14) of the EBGL and publish this along with the information on whether the bid was declared as unavailable in accordance with Article 12(3)(b)(v) of the EBGL in order to ensure transparency.
  - (11) Each participating TSO may request the activation of a higher volume of standard mFRR balancing energy product bids from the common merit order lists than the total volume of balancing energy

- submitted by this TSO to the mFRR-Platform, in accordance with Article 29(13) of the EBGL and considering the process responsibility structure as described in Article 11(3) of this mFRRIF.
- (12) The inputs to the TSO-TSO settlement function shall be:
- (a) the manual frequency restoration power interchange on the mFRR balancing borders in accordance with Article 3(9)(a) of this mFRRIF;
  - (b) the prices required by the proposal for common settlement rules in accordance with Article 50(1) of the EBGL and provided by the activation optimisation function in accordance with Article 3(9)(e) and 3(9)(f) of this mFRRIF;
  - (c) other inputs of the TSO-TSO settlement function can be information that ensures robust and correct settlement process and financial data for invoicing.
- (13) The TSO-TSO settlement function shall determine the outputs using the methodology proposed in accordance with Article 50(1) of the EBGL. The outputs of the TSO-TSO settlement function shall be:
- (a) the intended exchange of mFRR balancing energy for settlement for each participating TSO per TSO-TSO settlement period;
  - (b) the settlement prices for the intended exchange of mFRR balancing energy as result of mFRP for each participating TSO per TSO-TSO settlement period;
  - (c) the calculation and distribution of financial amounts resulting from balancing energy price differences between the LFC areas or bidding zones;
  - (d) other outputs of the TSO-TSO settlement function can be information that ensures safe and correct communication, the stability of the IT system, monitoring of the working of the systems and data relevant for the calculation of the performance indicators in accordance with Article 59(4) of the EBGL.
- (14) The mFRR-Platform shall implement:
- (a) the pricing methodology defined by the proposal submitted in accordance with Article 30 of the EBGL;
  - (b) the activation purpose methodology in accordance with Article 29 of the EBGL;
  - (c) the common settlement rules proposed in accordance with Article 50 of the EBGL.
- (15) Each participating TSO shall implement and carry out the procedures for the settlement of intended exchange of energy from the cross-border mFRP in a proper and timely manner.
- (16) The mFRR-Platform shall be implemented via a TSO-TSO model, which means in particular:
- (a) the mFRR demand is calculated by each TSO for its LFC area(s) or its bidding zone(s) in accordance with Article 143 and Article 145 of the SOGL, without prejudice to Article 4(a) of this mFRRIF
  - (b) The connecting TSO is responsible for prequalification, TSO-BSP settlement, monitoring and other obligations related to procurement or activation of standard mFRR balancing energy product bids in accordance with the EBGL and the SOGL.
- (17) All TSOs may develop a proposal for modification of the mFRR-Platform in accordance with Article 20(5) of the EBGL. Stakeholders shall be consulted in accordance with Article 5(5) of this mFRRIF.



- (18) Each participating TSO shall publish the exchange of volumes and prices provided by the activation optimisation function as soon as possible and not later than 30 minutes after the relevant end of the relevant balancing market time unit.
- (19) The mFRR-Platform has a two-level governance structure, the steering committee as the decision-making body of the mFRR-Platform and the expert group as the expert body of the mFRR-Platform.

## Article 4

### Calculation of the mFRR cross-border capacity limits as input to the optimisation algorithm

- (1) All mFRR balancing borders between participating TSOs shall be included with their mFRR cross-border capacity limits calculated in accordance with Article 4(2) of this mFRRIF in the activation optimisation function of the mFRR-Platform.
- (2) Each TSO shall continuously calculate and provide the mFRR cross-border capacity limits to the optimisation algorithm for each of the relevant mFRR balancing border or set of mFRR balancing borders by applying the following process:
  - (a) First step:
    - i. If the mFRR balancing border or set of mFRR balancing borders correspond to a bidding zone border or set of bidding zone borders, the mFRR cross-border capacity limits are equal to the cross-zonal capacity remaining after the intraday cross-zonal gate closure time in accordance with Article 37(2) of the EBGL. Once the methodology pursuant Article 37(3) of the EBGL is approved and implemented, the mFRR cross-border capacity limits shall be equal to the respective calculated values.
    - ii. If the mFRR balancing border or set of mFRR balancing borders does not correspond to a bidding zone border or set of bidding zone borders and hence, no cross-zonal capacity between the respective LFC areas is defined, the cross-border capacity limits are equal to the respective technical IT limitation agreed by all member TSOs.
  - (b) Second step: The mFRR cross-border capacity limits obtained in Article 4(2)(a) of this mFRRIF are adjusted by the cross-border replacement reserve and manual frequency restoration reserve power interchange on each mFRR balancing border or set of mFRR balancing borders to which the given cross-border capacity limits are related to in accordance with Article 37(1) of the EBGL as follows:
    - i. The mFRR cross-border capacity limit in positive direction is reduced by the sum of the replacement reserve and manual frequency restoration reserve power interchanges in positive direction of the given mFRR balancing border or set of mFRR balancing borders.
    - ii. The mFRR cross-border capacity limit in positive direction is increased by the sum of the replacement reserve and manual frequency restoration reserve power interchanges in the negative direction of the given mFRR balancing border or set of mFRR balancing borders.
    - iii. The mFRR cross-border capacity limit in negative direction is reduced by the sum of the replacement reserve and manual frequency restoration reserve power interchanges in negative direction of the given mFRR balancing border or set of mFRR balancing borders.
    - iv. The mFRR cross-border capacity limit in negative direction is increased by the sum of the replacement reserve and manual frequency restoration reserve power interchanges in positive direction of the given mFRR balancing border or set of mFRR balancing borders.



- (c) Third step: In accordance with Article 37(1) of the EBGL, the mFRR cross-border capacity limits shall be updated whenever remedial actions pursuant to Article 22 of the SOGL lead to cross-border exchange on the mFRR balancing border or set of mFRR balancing borders to which the mFRR cross-border capacity limits are related.
  - (d) Fourth step: The mFRR cross-border capacity limits must not exceed additional limitations requested for operational security reasons by participating or affected TSOs in accordance with Article 146(3)(c), 147(3)(c), 148 (3)(c), 149(3) and 150(3)(b) of the SOGL. TSOs may also limit mFRR cross-border capacity in HVDC systems for operational security reasons, in accordance with Article 147(3)(c) of the SOGL and such limitations may limit the exchange on a single mFRR balancing border, set of mFRR balancing borders or on all mFRR balancing borders between two synchronous areas.
  - (e) Fifth step: The mFRR balancing borders, where one or more transmission lines linking the adjacent LFC areas are HVDC systems, can be permanently limited if the technology to implement mFRR exchange is not installed in accordance with Article 171 of the SOGL. The limitation may disable any exchange on these mFRR balancing borders when the mFRR balancing border is constituted only of HVDC interconnectors. The limitation of a given mFRR balancing border is allowed when duly justified by the relevant TSOs concerned by the mFRR balancing border. The concerned NRAs shall be notified of this limitation. The technical justification shall be published by the concerned TSOs.
- (3) The participating or affected TSOs requesting an additional limitation as described in Article 4(2)(d) of the mFRRIF, shall publish the request for additional limitations no later than 30 minutes after the end of the relevant balancing market time unit which corresponds to the validity period in which the additional limitations have been requested.
  - (4) The participating or affected TSOs requesting an additional limitation shall provide the justification for the additional limitation on request of any participating TSO to all participating TSOs.
  - (5) All member TSOs shall implement the process described in Article 4(2) of this mFRRIF as part of the mFRR-Platform.

## **Article 5**

### **The roadmap and timeline for the implementation of the mFRR-Platform**

- (1) By thirty months after the approval of this mFRRIF, the mFRR-Platform shall fulfil every requirement defined in this mFRRIF and further requirements according to Articles 29, 30 and 50 of the EBGL.
- (2) The implementation project MARI shall evolve into the mFRR-Platform. As a consequence, all TSOs that are members of the implementation project MARI may propose that a share of the costs incurred before the approval of this mFRRIF are considered as common costs in accordance with Article 23(6) of the EBGL. Costs incurred in the implementation project MARI prior to the 1<sup>st</sup> January 2018 shall not be considered.
- (3) Articles 20(4), 20(5) and 20(6) of the EBGL define the timeline for the implementation of the mFRR-Platform. The implementation project shall facilitate the fulfilment of the respective deadlines as follows:
  - (a) The TSOs shall endeavour to evolve the terms and conditions related to balancing proposed in accordance with Article 18 of the EBGL and in accordance with their national legislation.

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- (b) The early regional cooperation, exchanging balancing energy from mFRR, shall be superseded by the mFRR-Platform in accordance with the deadline of Article 20(6) of the EBGL requiring that all TSOs shall use the mFRR-Platform.
  - (4) The following steps and timeline shall be used as the roadmap for the implementation of the mFRR-Platform:
    - (a) all member TSOs shall designate the entity responsible for operating the functions of the mFRR-Platform within six months after the approval of this mFRRIF;
    - (b) all member TSOs shall develop new processes and amend existing ones related to mFRR exchange, activation purposes, pricing and settlement in accordance with this mFRRIF at the latest for the deadline of Article 20(6) of the EBGL.
    - (c) all member TSOs shall agree on an mFRR-Platform accession roadmap within 3 months after the approval of this mFRRIF and review it at least annually. The accession roadmap shall foresee timelines related to:
      - i. implementation and adaption of terms and conditions for BSPs by each member TSO;
      - ii. the development of the functions;
      - iii. interoperability tests between each TSO and the mFRR-Platform;
      - iv. operational tests;
      - v. connection of each TSO to the mFRR-Platform;
      - vi. making the mFRR platform operational;
      - vii. connection of all TSOs that have been granted a derogation by their respective regulatory authorities in accordance with Article 62 of the EBGL.
    - (d) The accession roadmap shall start after its finalisation by all member TSOs and end no later than the mFRR-Platform is used by all TSOs.
    - (e) TSOs shall consult stakeholders with any amendments to this mFRRIF after approval of this mFRRIF pursuant to Article 6(3) and Article 10 of the EBGL.

## **Article 6**

### **Functions of the mFRR-Platform**

- (1) The mFRR-Platform shall consist of the activation optimisation function and the TSO-TSO settlement function. If deemed efficient when implementing the methodology for CZC calculation within the balancing timeframe in accordance with Article 37(3) of the EBGL, a CZC calculation function may be added.
- (2) The purpose of the activation optimisation function shall be to coordinate the mFRP of the participating TSOs in accordance with the high-level design of the mFRR-Platform in Article 3 of this mFRRIF and the principles of the optimisation algorithm in accordance with Article 11 of this mFRRIF.
- (3) The main purpose of the TSO-TSO settlement function shall be the calculation of the settlement amount that each participating TSO has to bear for the intended exchange of energy from the cross-border mFRP in accordance with the high-level design of the mFRR-Platform in Article 3 of this mFRRIF.

- (4) If and when relevant, the purpose of the CZC calculation function shall be to implement the methodology for CZC calculation within the balancing timeframe in accordance with Article 37(3) of the EBGL.

### **Article 7** **Definition of the mFRR balancing energy product**

- (1) Each standard mFRR balancing energy product bid shall fulfil the following static characteristics:

Mode of activation	Manual
Activation type	Direct or scheduled
Full activation time (“FAT”)	12.5 minutes
Minimum quantity	1 MW
Bid granularity	1 MW
Maximum quantity	9,999 MW
Minimum duration of delivery period	5 minutes
Price resolution	0.01 €/MWh
Validity Period	A scheduled activation can take place at the point of scheduled activation only.  A direct activation can take place at any time during the 15 minutes after the point of scheduled activation.

*Table 1: Standard mFRR balancing energy product bids characteristics*

- (2) The variable characteristics of the standard mFRR balancing energy product bid to be determined by the BSPs, during prequalification or when submitting the standard mFRR balancing energy product bid shall be, at least:

- (a) defined by the following parameters:

Price	in €/MWh
Location	At least the smallest of LFC area or bidding zone.
Divisibility	BSPs are allowed to submit divisible bids with an activation granularity of 1 MW. BSPs are allowed to submit indivisible bids pursuant to Article 7(3) of this mFRRIF
Technical linking between bids	BSPs are required to provide information on technical linking between bids submitted in consecutive quarter hours and within the same quarter hour
Economic link	Child with parent and exclusive group orders will be allowed

*Table 2 : Standard mFRR balancing energy product bids characteristics*

- (b) the volume of the bid;  
 (c) the direction of the bid: upward or downward;  
 (d) the price of the bid, be it positive, zero or negative, shall be defined in accordance with Table 3:

Direction of the bid	Balancing energy price positive	Balancing energy price negative
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Upward	Payment from TSO to BSP	Payment from BSP to TSO
Downward	Payment from BSP to TSO	Payment from TSO to BSP

*Table 3: Sign conventions for bid prices*

- (3) The following standard mFRR balancing energy product bid characteristics shall be defined in the terms and conditions for BSPs, including, but not limited to:

Location	More detailed locational information, compared to what stated in Article 6(4), is defined in terms and conditions for BSPs
Preparation Period	Defined in terms and conditions for BSPs as long as it is compliant with the requirements set on the FAT in Article 7(1) of this mFRRIF
Ramping Period	Defined in terms and conditions for BSPs as long as it is compliant with the requirements set on the FAT in Article 7(1) of this mFRRIF
Deactivation Period	Defined in terms and conditions for BSPs as long as it is compliant with the requirements set on the FAT and on the minimum duration of delivery period in Article 7(1) of this mFRRIF
Maximum duration of delivery period	Defined in terms and conditions for BSPs due to different requirements on preparation period, ramping period and deactivation period
Indivisible Bids	Maximum size of indivisible bids is defined according to terms & conditions for BSPs
Minimum duration between the end of deactivation and the following activation	Defined in terms and conditions for BSPs

*Table 4: Standard mFRR balancing energy product bids characteristics defined in terms and conditions for BSPs*

- (4) In case of a central dispatching model, the variable characteristics of the standard mFRR balancing energy product bid may be determined by the connecting TSO based on integrated scheduling process bids submitted by BSPs following the rules for converting bids in a central dispatching model into standard mFRR balancing energy product bids pursuant to Article 27 of the EBGL.

### **Article 8**

#### **Balancing energy gate opening and gate closure times for the standard mFRR balancing energy product bids**

- (1) The balancing energy gate opening time for the submission of a standard mFRR balancing energy product bids to the connecting TSO by BSPs shall be no later than 12:00 CET for all validity periods of the next day.
- (2) The balancing energy gate closure time for the submission of a standard mFRR balancing energy product bids to the connecting TSO by BSPs shall be 25 minutes before the beginning of the quarter hour for which the BSPs place the respective standard mFRR balancing energy product bid. The

same balancing energy gate closure time applies for specific product bids converted into standard mFRR balancing energy product bids.

- (3) For TSOs applying a central dispatching model, the balancing energy gate closure time for integrated scheduling process bids shall be defined pursuant to Articles 24(5) and 24(6) of the EBGL.

### **Article 9**

#### **TSO energy bid submission gate closure time for the standard mFRR balancing energy product bids**

- (1) The TSO energy bid submission gate closure time for the submission of the available standard mFRR balancing energy product bids to the activation optimisation function of the mFRR-Platform by the connecting TSO shall be 12 minutes before the beginning of the quarter hour for which the BSPs place the respective standard mFRR balancing energy product bid.
- (2) The connecting TSO shall have the possibility at all time after the balancing energy gate closure time for the submission of a standard mFRR balancing energy product bid, including during the validity period, to modify the bid in accordance with Article 29(9) of the EBGL or to change the availability status of the bid in accordance with Article 29(14) of the EBGL.

### **Article 10**

#### **Common merit order lists to be organised by the activation optimisation function**

- (1) Each BSP shall submit the standard mFRR balancing energy product bids to the connecting TSO in accordance with Article 8 of this mFRRIF.
- (2) Each BSP connected to a TSO applying a central dispatching model shall submit integrated scheduling process bids to the connecting TSO.
- (3) The connecting TSO shall submit the standard mFRR balancing energy product bids to the mFRR-Platform in accordance with Article 9 of this mFRRIF in order to be included in the common merit order lists.
- (4) TSOs applying a central dispatching model, pursuant to Article 27 of the EBGL, will convert integrated scheduling bids received from the BSPs into standard mFRR balancing energy product bids and then submit these bids to the mFRR-Platform to be included in the common merit order lists.
- (5) The mFRR-Platform shall create two common merit order lists (one for bids in upward direction and one for bids in downward direction) for each quarter hour, that shall contain all the available standard mFRR balancing energy product bids submitted by the participating TSOs.
- (6) The two common merit order lists described in Article 10(7) of this mFRRIF shall be used for scheduled activation.
- (7) The two common merit order lists to be used in the scheduled activation shall be sorted based on the following criteria:
  - (a) the upward common merit order list shall contain all the available standard mFRR balancing energy product bids in upward direction submitted by the participating TSOs and shall be sorted in ascending order of price.

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- (b) the downward common merit order list shall contain all the available standard mFRR balancing energy product bids in a downward direction submitted by the participating TSOs and shall be sorted in descending order of price.
  - (8) For the direct activation, the two common merit order lists of Article 10(7) of this mFRRIF remain with all the available and not yet activated direct activatable bids submitted by each participating TSO.
  - (9) The common merit order lists of Article 10(8) of this mFRRIF shall be used in the direct activation, continuously updated and sorted based on the following criteria:
    - (a) the upward common merit order list shall contain all the available direct activatable bids in upward direction submitted by the participating TSOs and sorted in ascending order of price.
    - (b) the downward common merit order list shall contain all the available direct activatable bids in downward direction submitted by the participating TSOs and sorted in descending order of price.
  - (10) All available standard mFRR balancing energy product bids submitted to the mFRR-Platform by the participating TSOs shall be used in the common merit order lists for the activation.

## **Article 11**

### **Description of the optimisation algorithm**

- (1) The inputs of the optimisation algorithm for the scheduled activation are:
  - (a) the two common merit order lists in accordance with Article 10(6) of this mFRRIF;
  - (b) the mFRR demands to be satisfied by scheduled activation in accordance with Article 3(5) of this mFRRIF;
  - (c) the mFRR cross-border capacity limits in accordance with Article 4(2) of this mFRRIF.
- (2) The inputs of the optimisation algorithm for the direct activation are:
  - (a) in case of positive mFRR demand, the upward common merit order list in accordance with Articles 10(8) and 10(9)(a) of this mFRRIF and the mFRR positive demands to be satisfied by the direct activation;
  - (b) in case of negative mFRR demand, the downward common merit order list in accordance with Articles 10(8) and 10(9)(b) of this mFRRIF and the mFRR negative demands to be satisfied by the direct activation;
  - (c) the mFRR cross-border capacity limits in accordance with Article 4(2) of this mFRRIF.
- (3) The objective functions of the optimisation algorithm are:
  - (a) First priority: maximise the economic surplus for a given set of standard mFRR balancing energy product bids and mFRR balancing energy needs;
  - (b) Second priority: minimize the amount of manual frequency restoration power exchange on each mFRR balancing border.
- (4) The constraints of the optimisation algorithm are:
  - (a) the mFRR power balance equation of each bidding zone or LFC area must be satisfied.
  - (b) the sum of all manual frequency restoration power interchanges of all bidding zones or LFC area of the participating TSOs must be zero.



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- (c) the manual frequency restoration power interchange on an mFRR balancing border or set of mFRR balancing borders shall not exceed the mFRR cross-border capacity limits specified in accordance with Article 4 of this mFRRIF.
  - (d) constraints related to indivisibility, technical and economic links between bids as defined in Article 7(2)(a) of this mFRRIF.
  - (e) additional constraints related to activations for system constraint purpose.
- (5) The outputs of the optimisation algorithm are:
- (a) the manual frequency restoration power interchange on each mFRR balancing border as defined in Article 147 of the SOGL;
  - (b) the volume of activations of balancing energy from standard mFRR balancing energy products;
  - (c) the volume of satisfied mFRR balancing energy demands;
  - (d) the net position of each bidding zone or LFC area resulting from the mFRR-Platform;
  - (e) the prices for mFRR balancing energy determined using the methodology proposed in accordance with Article 30(1) of the EBGL;
  - (f) the prices for cross-zonal capacity used for the exchange of standard mFRR balancing energy products determined using the methodology proposed in accordance with Article 30(3) of the EBGL.

## **Article 12** **Proposal of entity**

- (1) All TSOs shall appoint one entity entrusted to operate all the functions of the mFRR-Platform.
- (2) The entity shall be a consortium of TSOs or a company owned by TSOs.

## **Article 13** **Governance**

- (1) The rules concerning the governance and operation of the mFRR-Platform shall ensure that no participating TSO benefits from unjustified economic advantage through the participation in the mFRR-Platform. Each member TSO has a representative in the steering committee and expert group. The member TSOs aim to make unanimous decisions. Where unanimity cannot be reached qualified majority voting according to Article 14 of this mFRRIF shall apply. The steering committee makes decisions according to Articles 14(1)(a), 14(2) and 14(3) of this mFRRIF.
- (2) Each member TSO shall carry out the common governance principles of the mFRR-Platform by means of:
  - (a) the steering committee of the mFRR-Platform, which is the decision-making body of the mFRR-Platform with the right to make any binding decision on any matter or question related to the mFRR-Platform and not covered by the Article 14(1)(b) of this mFRRIF. Thereto, each member TSO shall appoint at least one regular representative to the steering committee. It is a superior body to the expert group;
  - (b) the expert group of the mFRR-Platform, which is the expert body of the mFRR-Platform and prepares background materials for the steering committee (including, for example analyses, impact assessments, summaries) and evaluates and proposes concepts in relation to the development,

- governance and operation of the mFRR-Platform. Thereto, each member TSO shall appoint at least one regular representative to the expert group.
- (3) All member TSOs shall monitor, evaluate and report the following aspects of implementation and operation of the mFRR-Platform at least on a yearly basis:
- (a) the implementation progress and roadmap in accordance with Article 5 of this mFRRIF;
  - (b) the usage of elastic mFRR demand pursuant to Article 3(4) of this mFRRIF;
  - (c) the amount of mFRR balancing energy requested by each participating TSO in relation to the total volume of balancing energy pursuant to Article 29(12) of the EBGL;
  - (d) the bids which were marked as unavailable in accordance with Article 9(2) of this mFRRIF;
  - (e) the impact of activating simultaneously upward and downward bids as a result of the objective function as defined in Article 11(3) of this mFRRIF;
  - (f) the results of the survey conducted in accordance with Article 16(2)(a) of this mFRRIF.
- (4) All member TSOs shall conduct an annual public stakeholder workshop to report on implementation and operation of the mFRR-Platform. The first workshop shall take place at the latest 6 months after approval of this mFRRIF.

#### **Article 14** **Decision-making process**

- (1) Decisions leading to a proposal for a change of this mFRRIF or the approved methodologies submitted by all TSOs, in accordance with Articles 29, 30 or 50 of the EBGL shall be made according to the following process:
- (a) member TSOs' decision: all member TSOs shall approve in advance a proposal to be sent to all TSOs for decision;
  - (b) all TSOs' decision: shall be subject to the approval of all TSOs pursuant to the voting principles of Article 4(3) of the EBGL, where 'all TSOs' includes both all member TSOs and non-member TSOs in the framework of the steering committee of the mFRR-Platform and this decision-making process is independent from the member TSO's decision-making process.
- (2) Decisions concerning the mFRR-Platform not leading to a proposal for a change of this mFRRIF or the approved methodologies pursuant to Articles 29, 30 or 50 of the EBGL relative to mFRR but affecting all member TSOs shall be subject to approval of all member TSOs.
- (3) Decisions concerning the mFRR-Platform not leading to a proposal for a change of this mFRRIF and only affecting a geographical area of several member TSOs smaller than the geographical area of all member TSOs shall be subject to approval of the member TSOs of the concerned region.
- (4) In case of decisions according to Articles 14(1)(a), 14(2) and 14(3) of this mFRRIF, each member TSO of the concerned region is expected to take part in the decision-making process. The quorum for initiating a decision-making process is a majority (50 % + 1) of the member TSOs that are present or represented through another member TSO participating in the decision-making process.
- (5) The member TSOs shall implement a decision-making process, which ensures effective decision making with the aim to make decisions unanimously. Where unanimity cannot be reached, qualified majority voting shall apply.

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- (6) Decisions according to Articles 14(1)(a) and 14(2) of this mFRRIF where no consensus is reached shall, pursuant to the voting principles of Article 4(3) of the EBGL, require a majority of:
    - (a) member TSOs representing at least 55 % of the TSOs' countries concerned and present or represented in accordance with Article 14(4) of this mFRRIF; and
    - (b) member TSOs representing countries comprising at least 65 % of the population of countries concerned and present or represented in accordance with Article 14(4) of this mFRRIF.
  - (7) Decisions in accordance with Article 14(3) of this mFRRIF where no consensus is reached shall, pursuant to the voting principles of Article 4(4) of the EBGL, require a majority of:
    - (a) member TSOs representing at least 72 % of the member TSOs' countries of the concerned region; and present or represented according to Article 14(4); and
    - (b) member TSOs representing countries comprising at least 65 % of the population of member TSOs' countries of the concerned region and present or represented according to Article 14(4).
  - (8) Decisions in accordance with Article 14(3) in relation to regions concerned composed of five countries or less shall be decided based on consensus
  - (9) Voting on steering committee decisions can be made in physical meetings, conference calls or by circular resolution via e-mail.

## **Article 15**

### **Categorisation of costs and detailed principles for sharing the common and regional costs**

- (1) The costs of establishing, amending and operating the mFRR-Platform shall be broken down into:
  - (a) common costs resulting from coordinated activities of all member TSOs in the mFRR-Platform;
  - (b) regional costs resulting from activities of several but not all member TSOs in the mFRR-Platform;
  - (c) national costs resulting from activities of the participating TSOs of the mFRR-Platform.
- (2) Common costs shall include costs resulting from the steering committee decisions on proposals related to:
  - (a) common costs for establishing or amending the mFRR-Platform:
    - i. implementation of the mFRR-Platform or new functionalities in the activation optimisation function which have an impact on the intended or unintended exchange of energy and which is for the benefit of all member TSOs;
    - ii. implementation of new functionalities in the TSO-TSO settlement function which have an impact on the TSO-TSO settlement;
    - iii. commissioning of joint studies for the benefit of all member TSOs;
    - iv. costs required for external support to the project and the project management office.
  - (b) common costs for operating the mFRR-Platform:
    - i. operational costs related to the operation of the activation optimisation function which are agreed as common costs by member TSOs in accordance with the decision-making process according to Article 14 of this mFRRIF;

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- ii. operational costs related to the operation of the TSO-TSO settlement function which are agreed as common costs by member TSOs in accordance with the decision-making process according to Article 14 of this mFRRIF.
  - (3) The common costs for establishing or amending the mFRR-Platform in accordance with Article 15(2)(a) of this mFRRIF shall be shared among the member TSOs in accordance with Article 15(15) of this mFRRIF and in accordance with the following principles set out by Article 23 of the EBGL:
    - (a) one eighth of common costs shall be divided equally between countries whose TSOs are member TSOs;
    - (b) five eighths of common costs shall be divided proportionally to the consumption of countries whose TSOs are member TSOs;
    - (c) two eighths of common costs shall be divided equally between member TSOs.
  - (4) The common costs of operating the mFRR-Platform in accordance with Articles 15(2)(b) and 15(5) of this mFRRIF shall not be borne by member TSOs that are not participating TSOs in the mFRR-Platform.
  - (5) The common costs for operating the mFRR-Platform in accordance with Article 15(2)(b) of this mFRRIF shall be shared among the participating TSOs in accordance with Article 15(17) of this mFRRIF and in accordance with the following principles set out by Article 23 of the EBGL:
    - (a) one eighth of common costs shall be divided equally between countries whose TSOs are participating TSOs;
    - (b) five eighths of common costs shall be divided proportionally to the consumption of countries whose TSOs are participating TSOs;
    - (c) two eighths of common costs shall be divided equally between participating TSOs.
  - (6) Regional costs shall be borne by member TSOs of the concerned region and consist of:
    - (a) regional costs for establishing or amending the mFRR-Platform:
      - i. implementation of new functionalities in the activation optimisation function which have an impact on the intended or unintended exchange of energy and which are applicable only by the member TSOs of the concerned region;
      - ii. implementation of new functionalities in the TSO-TSO settlement function which have an impact on the TSO-TSO settlement of the member TSOs of the concerned region;
      - iii. commissioning of joint studies performed for the member TSOs of a concerned region.
    - (b) regional costs of operating the mFRR-Platform:
      - i. operational costs related to the operation of the activation optimisation function which are agreed as regional costs by member TSOs in accordance with the member TSOs' decision-making process according to Article 14 of this mFRRIF;
      - ii. operational costs related to the operation of the TSO-TSO settlement function which are agreed as regional costs by member TSOs in accordance with the decision-making process according to Article 14 of this mFRRIF.
  - (7) The regional costs for establishing or amending the mFRR-Platform in accordance with Article 15(6)(a) of this mFRRIF shall be shared among the member TSOs of the concerned region according with the following principles set out by Article 23 of the EBGL:

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- (a) one eighth of regional costs shall be divided equally between countries whose TSOs are member TSOs of the concerned region;
  - (b) five eighths of regional costs shall be divided proportionally to the consumption of countries whose TSOs are member TSOs of the concerned region;
  - (c) two eighths of regional costs shall be divided equally between member TSOs of the concerned region.
- (8) The regional costs for operating the mFRR-Platform in accordance with Article 15(9) of this mFRRIF shall not be borne by the member TSOs that are not participating TSOs in the mFRR-Platform.
  - (9) The regional costs for operating the mFRR-Platform in accordance with Article 15(6)(b) of this mFRRIF shall be shared among the participating TSOs of the concerned region in accordance with Article 15(17) of this mFRRIF and in accordance with the following principles set out by Article 23 of the EBGL:
    - (a) one eighth of regional costs shall be divided equally between countries whose TSOs are participating TSOs of the concerned region;
    - (b) five eighths of regional costs shall be divided proportionally to the consumption of countries whose TSOs are participating TSOs of the concerned region;
    - (c) two eighths of regional costs shall be divided equally between participating TSOs of the concerned region.
  - (10) National costs shall be the costs for using the mFRR-Platform, which consist of the costs of development, implementation, operation and maintenance of technical infrastructure and procedures as well as for the settlement process.
  - (11) Each member TSO shall bear its own national costs and is solely responsible (i.e. no joint and several liability) for the due payment of all the costs related to the technical infrastructure necessary for the successful usage of the mFRR-Platform.
  - (10) The cost sharing principle may apply to costs incurred since 1 January 2018 and shall apply to costs incurred after the approval of this mFRRIF.
  - (12) For the avoidance of doubt, all TSOs agree not to share any costs incurred before 1 January 2018. These costs shall not be considered as historical costs.
  - (13) Each member TSOs shall pay its share of costs pursuant to Articles 15(2)(a)(i) and 15(2)(a)(ii) of this mFRRIF also retrospectively in accordance with Article 15(12) of this mFRRIF.
  - (14) When sharing the common and regional costs for establishing and amending the mFRR-Platform according to Articles 15(3) and 15(7) of this mFRRIF, the TSO's share of the costs of the member TSOs shall consider only the member TSOs appointed in the LFC area operational agreement as responsible for implementing and operating the mFRP in this LFC area according to Article 143(4) of the SOGL. For the avoidance of doubt, the member TSOs that are not appointed as responsible for implementing and operating the mFRP will not have to bear costs related to Articles 15(3)(c) and 15(7)(c) of this mFRRIF.
  - (15) In case several member TSOs are active in a Member State, the Member State's share of the costs shall be distributed among those member TSOs proportionally to the consumption in the member TSOs' monitoring areas.

- (16) When sharing the common and regional costs for operating the mFRR-Platform in accordance with Articles 15(5) and 15(9) of this mFRRIF, the consumption share of the costs of a participating TSO shall consider respectively the consumption of the member TSOs which appointed the participating TSO to perform the mFRP according to Article 143(4) of the SOGL.

## **Article 16**

### **Framework for harmonisation of terms and conditions related to the mFRR-Platform**

- (1) Terms and conditions pursuant to Article 18 of the EBGL remain a responsibility of each TSO but have to respect a framework for harmonisation pursuant to Article 20(3)(f) of the EBGL.
- (2) The framework for harmonisation shall take into account differences between TSOs applying central and self-dispatching models and respect the following process:
  - (a) All TSOs shall continuously evaluate the terms and conditions for BSPs in order to identify harmonisation needs. A stakeholder survey shall be organised every year, with the first survey occurring during the first operational year of the common mFRR-Platform. This survey shall support the identification by all TSOs of a short list of prioritised harmonisation needs with close involvement of all relevant regulatory authorities.
  - (b) All TSOs shall then identify harmonisation options for each prioritised harmonisation need with close involvement of stakeholders and national regulatory authorities.
  - (c) All TSOs shall publicly consult the harmonisation options with the stakeholders for a period of two months.
  - (d) All TSOs shall evaluate the public consultation results and develop a common harmonisation proposal for the identified issues. The proposal shall also include the necessary implementation time for the amendment of terms and conditions for BSPs.
  - (e) The mFRRIF shall be amended with the common harmonisation proposal in accordance with Article 6(3) of the EBGL.
  - (f) All TSOs shall submit an amended mFRRIF including the common harmonisation proposal not later than 36 months after the mFRR-Platform becomes operational. The next mFRRIF amendment including the common harmonisation proposal shall be submitted not later than 36 months after the previous mFRRIF amendment.

## **Article 17**

### **Publication and implementation of this mFRRIF**

- (1) The TSOs shall publish this mFRRIF without undue delay after all NRAs have approved the proposed mFRRIF or a decision has been made 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.
- (2) The TSOs shall implement the mFRRIF in accordance with Article 5 of this mFRRIF.

## **Article 18**

### **Language**

The reference language for this mFRRIF shall be English. For the avoidance of doubt, where TSOs need to translate this mFRRIF into their national language(s), in the event of inconsistencies between the English version published by TSOs in accordance with Article 20 of the EBGL and any version in another



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language, the relevant TSOs shall be obliged to dispel any inconsistencies by providing a revised translation of this mFRRIF to their relevant national regulatory authorities.