

Baltic balancing market rules

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I Objective and Scope

Elering AS, AS “Augstsprieguma tīkls”, LITGRID AB (hereinafter – Baltic TSOs), establish Baltic balancing market rules with objective to determine terms and conditions that are applicable for Balance service providers (hereinafter – BSP) in order to participate in the Baltic balancing market and provide balancing energy upon connecting Transmission system operator’s (hereinafter – TSO)s request and that are binding for each connecting TSO in order to ensure the participation of BSPs in the European exchange of balancing energy from frequency restoration reserves with manual activation pursuant to Article 20 of Commission Regulation (EU) regulation 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing (hereinafter – EB regulation).

All definitions and abbreviations used in this document must be applied and used as defined EB regulation including following definitions:

Area balancing price - the balancing energy market price that reflect the price of balancing energy that was activated from MARI AOF and local activation for normal activation purposes;

Area control error (ACE) - the difference between measured physical flow and final external schedules of coordinated balancing area during imbalance settlement period in MWh-s;

Baltic coordinated balancing area (Baltic CoBA) - a cooperation between TSOs of Estonia, Latvia and Lithuania with respect to the exchange of balancing services, sharing of reserves, operating the imbalance netting process and imbalance settlement;

Connecting TSO - means the TSO that operates the scheduling area in which balancing service provider’s resource is located;

Local marginal price - The price for locally activated mFRR standard product energy bids for normal activation locally;

Merit order list (MOL) - a list of balancing energy bids of a Connecting TSO’s control area by product sorted in order of their bid prices;

mFRR implementation framework - implementation framework for the European platform for the exchange of balancing energy from frequency restoration reserves with manual activation in accordance with Article 20 of EB regulation;

Nominated TSO - assigned TSO, who is responsible for initiating activation of balancing energy bids in normal system operation state with purpose to minimize Baltic ACE;

Normal activation - activation of balancing energy bids for Baltic CoBA balancing purposes with aim of minimizing the Baltic ACE;

Special activation - activation of balancing energy bids for other purposes than Baltic CoBA balancing purposes and can be specified as special activation countertrade or special activation other.

II Baltic balancing market framework

1. The Baltic TSOs shall organize and operate common Baltic balancing market. Baltic balancing market consist of Baltic manual frequency restoration reserve (hereinafter – mFRR) balancing energy market.
2. Baltic mFRR balancing energy market is part of European mFRR balancing energy market in accordance with article 20(6) of EB regulation.
3. Baltic TSOs share all available balancing energy bids for activation by Baltic TSOs pursuant these Rules in accordance with article 166 of Commission Regulation (EU)

regulation 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation.

4. In order to operate common Baltic balancing market and exchange balancing energy, Baltic TSOs shall apply TSO-TSO model pursuant to relevant European Commission regulations and guidelines, national legal framework of each Baltic country and mutual TSO-TSO agreements.
5. The Baltic TSOs are responsible to exchange the balancing energy in order to ensure the operational security and to maintain the balance in Baltic power systems. At the same time, each Baltic TSO remain responsible for maintaining operational security of its control area.
6. All Baltic TSOs shall cooperate to maintain balance within Baltic CoBA and minimize Baltic ACE.
7. Market time unit for Baltic balancing market is 15 minutes, there are 4 imbalance settlement periods for each hour – 0-15 minutes, 15-30 minutes, 30-45 minutes, 45-60 minutes. TSO-BSP settlement is performed for each respective quarter of the hour.
8. The Nominated TSO is responsible for balance control of the Baltic power systems in normal system operation state.
9. Each Connecting TSO shall be responsible for:
 - 9.1. maintaining operational security of its control area;
 - 9.2. initiating balancing energy bids for other purposes than balancing;
 - 9.3. ensuring BSP's energy bid compliance with the Baltic CoBA market requirements;
 - 9.4. ensuring information exchange with BSPs within its imbalance area;
 - 9.5. performing balancing settlement within each TSO's imbalance area.

III Baltic energy products

10. All Baltic TSOs shall use the following energy products in Baltic mFRR balancing energy market:
 - 10.1. Baltic mFRR standard product from BSPs within Baltic CoBA that is defined in accordance with mFRR implementation framework;
 - 10.2. Other products:
 - 10.2.1. mFRR specific product from the BSPs within the Baltic CoBA that is defined in accordance with article 26(1) of EB regulation;
 - 10.2.2. Other products that are provided from the BSPs within the Baltic CoBA to Connecting TSO in accordance to national legislation;
 - 10.2.3. Other products that are provided from neighboring TSOs for Baltic TSO(s) in accordance to bilateral agreements.
11. Baltic mFRR standard products shall comply with the requirements set out in Table 1.

Table 1. Common Baltic mFRR standard product characteristics

Parameter	mFRR standard product
Mode of activation	Manual. Electronic messages are used for communication of activation orders. Phone communication can be used for backup.
Activation type	Direct or scheduled Whereas direct could also be activated for scheduled, but not vice versa
Direction	Upward or downward

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Full activation time (“FAT”)	12,5 minutes Details provided in the appendix A
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
Price	in €/MWh no maximum price cap
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.
Location	Bidding zone with identification of exact power plant or aggregation of power plants
Divisibility	BSPs are allowed to submit divisible bids with an activation granularity of 1 MW. BSPs are allowed to submit indivisible or partly indivisible bids based on BSP prequalification. Maximum size of indivisible bids shall not be higher than the largest technical minimum production or consumption of the pre-qualified generation or load unit of the BSP.
Technical linking between bids	BSPs may submit information on technical linking between bids submitted in consecutive quarter hours and within the same quarter hour. Technical linking covers: 1. General technical linking 2. Conditional bids Details provided in the appendix A.
Economic link	BSPs may submit information on child with parent and exclusive group orders. Economic linking (also referred as “Complex bids”) covers: 1. Multipart bids 2. Exclusive bids Details provided in the appendix A.
Preparation Period	Not higher than 7 minutes. Details provided in the appendix A.
Ramping Period	Not higher than 12 minutes. Details provided in the appendix A.
Deactivation Period	Not higher than 10 minutes. Details provided in the appendix A.
Maximum duration of delivery period	Not higher than 20 minutes for scheduled activation and 35 minutes for direct activation. Details provided in the appendix A.
Minimum duration between the end of deactivation and the following activation	Not defined/not applicable for BSPs

12. Only BSPs approved by their connecting TSO can participate in Baltic balancing market by submitting their balancing energy bids to their connecting TSO and executing activated bids upon the connecting TSO’s request.
13. In case TSO applies specific mFRR product in accordance to Article 26(1) of EB regulation, the conversion process to mFRR standard product shall be established in accordance to Article 26(1) of EB regulation.

IV Balancing energy bid submission and MOL creation

14. BSPs submit and update mFRR standard balancing energy bids with static characteristic location in accordance with Table 1 requirements.
15. BSPs submit and update mFRR standard balancing energy bids with following variable characteristics in accordance with Table 1 requirements:
 - 15.1. Activation type: Direct and scheduled or scheduled only;
 - 15.2. Minimum Quantity;
 - 15.3. Maximum Quantity;
 - 15.4. Direction: upward or downward;
 - 15.5. Price;
 - 15.6. Technical linking;
 - 15.7. Economical linking.
16. Balancing energy gate closure time for a BSP to submit bids for its connecting TSO for all mFRR standard product bids for the respective validity period is 25 minutes before the start of validity period. After balancing energy gate closure time all submitted balancing energy bids become firm and no further bid updates are allowed.
17. If a mFRR standard product bid becomes unavailable due to technical issues, BSP shall inform its connecting TSO with undue delay but not later than 5 minutes before possible activation time. The connecting TSO with undue delay shall indicate all such bids as unavailable.
18. Connecting TSOs verify all bids (mFRR standard product and other products) received from BSPs:
 - 18.1. if the bid is verified, the connecting TSO shall include the bid in the respective merit order list (MOL);
 - 18.2. if the bid is rejected, the connecting TSO shall inform respective BSP without undue delay in accordance with the connecting TSO and BSP mutual agreement.
19. Each Baltic TSO shall submit all mFRR standard balancing energy bids received from BSPs to the MARI in accordance with mFRR implementation framework.
20. Each Baltic TSO shall share respective MOLs for local activation by Baltic TSOs pursuant these Rules.

V Balancing bid activation in Baltics

21. Bid activation in Baltic CoBA can be performed:
 - 21.1. in Baltic bidding zones as a result of activation optimisation function (hereinafter - AOF) of the MARI as defined in the mFRR implementation framework (normal activation);
 - 21.2. in Baltic and neighboring TSOs bidding zones as local activation of mFRR standard products and other products from MOLs of Baltic TSOs.
 - 21.2.1. by request of Nominated TSO for activation for balancing purposes (normal activation);
 - 21.2.2. by request of requesting TSO for activation for systems constraints purposes (special activation).
22. Activation orders are submitted to BSPs by connecting TSO.
23. Divisible balancing energy bids shall be activated in minimum quantity of 1 MW and the incremental steps of 1 MW, from the minimum quantity up to the maximum quantity of the bid.
24. Baltic TSOs being joined to the MARI in accordance with article 20(6) of EB regulation, balancing energy bid activations in Baltic bidding zones are executed in accordance with the results from AOF of the MARI and in accordance with the provisions as defined in the mFRR implementation framework.
25. In case of activation of bid in Baltic TSOs bidding zones, activation order from MARI is sent to Connecting TSO.

26. By request of the Nominated TSO, normal activations for balancing are performed by activation of standard mFRR products and other products locally in case balancing demand is not sufficiently satisfied in MARI or in case MARI platform or data exchange with the platform is not functional.
27. Activation of bids locally for balancing is secondary option for Nominated TSO in case objective for minimizing Baltic ACE can not be sufficiently reached using MARI.
28. By request of any Baltic TSO (Requesting TSO), Special activations for system constraints purpose in TSOs are performed by activation of standard mFRR products or other products locally. Special activations can be used to solve operational security issues, support for neighboring TSOs and for countertrading to solve congestion issues on borders in accordance with Baltic capacity calculation region TSOs' common methodology for coordinated redispatching and countertrading in accordance with Article 35 of the Commission Regulation (EU) 2015/1222 of 24 July 2015.
29. Local activations are executed with respect to:
 - 29.1. available cross-zonal capacity for the Market time unit (hereinafter – MTU) - balancing energy bids can only be activated, if there is available cross-zonal capacity within the balancing timeframe and activation of these bids do not create congestion during the particular MTU;
 - 29.2. submitted bid characteristics for the MTU – to extent it is technically feasible, bid activation follows most advantageous price criteria.
 - 29.3. Available balancing energy bids for activation for relevant validity period at point in time of decision for local activation.
30. When executing normal activation locally, the Nominated TSO shall initiate to activate:
 - 30.1. available mFRR standard balancing energy bid with the lowest price for upward activation, in case such bid is not available – other product bid with the lowest price for upward activation;
 - 30.2. available mFRR standard balancing energy bid with the highest price for downward activation, in case such bid is not available – other product bid with the highest price for downward activation;
 - 30.3. available other product bid located within Baltic area prior to bid located in non-Baltic area in case these bids are with the same price;
 - 30.4. all available bids with the same price in accordance with pro-rata principle (proportionally to the volume of the bid) for cases when the most advantageous price criteria is fulfilled by multiple bids within Baltic area.
31. Normal and special activation of bids locally can be performed not following most advantageous price criteria listed in paragraph 30 in following cases:
 - 31.1. when the most price advantageous bid cannot be activated due to cross-zonal capacity within the balancing timeframe constraints;
 - 31.2. when the most price advantageous bid is an indivisible bid, which exceeds the activation needs. The indivisible bid shall be skipped, and the next available bid shall be activated in required volume. The indivisible bid can still be activated, if activation does not compromise system security and contributes to minimizing the balancing costs during a particular MTU;
 - 31.3. when the most price advantageous bid is linked with another bid that has a lower price advantage. The linked bids can still be activated, if activation does not compromise system security and contributes to minimizing the balancing costs during a particular MTU;
 - 31.4. when the most price advantageous bid for special activation purposes does not contribute towards the objective of the special activation;
 - 31.5. during alert state, emergency state, blackout state and restoration state of power system state, when the most price advantageous bid would not mitigate the severity of the current system state.

32. Balancing energy bids shall not be activated or reserved before the corresponding balancing energy GCT and the intraday cross-zonal GCT, except cases of alert system state or emergency system state to mitigate the severity of these system states.

VI Cross-zonal capacity within the balancing timeframe

33. Calculation of cross-zonal capacity within the balancing timeframe is performed for cross-borders Estonia-Finland, Estonia-Latvia, Latvia-Lithuania, Lithuania-Poland and Lithuania-Sweden by taking into account Net Transmission Capacities of the designated cross-border interconnections, already allocated capacities and planned physical flows on these interconnections.
34. Cross-zonal capacities within the balancing timeframe are calculated separately for each cross-border and for each direction in accordance with Baltic Capacity Calculation Region methodology pursuant to Article 37.3 of EB regulation.
35. Cross-zonal capacities within the balancing timeframe are used as an input for MARI AOF in accordance with mFRR implementation framework as well as for balancing energy activations outside MARI.
36. The cross-zonal capacity for the balancing energy exchange resulting from MARI AOF is priced as difference between the Cross border marginal price (hereinafter – CBMP) of the respective areas in accordance with methodology for pricing balancing energy and cross-zonal capacity used for the exchange of balancing energy or operating the imbalance netting process in accordance with Article 30(1) of EB regulation (hereinafter – Methodology for pricing).
37. The price for cross-zonal capacity for the balancing energy exchange resulting from local activations is equal to difference between the Local marginal price of respective areas,
38. TSOs on each side of the border split equally the congestion income which is equal to price of cross-zonal capacity multiplied by balancing energy exchange.

VII Balancing price determination

39. CBMP is used for balancing energy bids activated as a result of AOF of the European mFRR balancing energy platform MARI as defined in the mFRR implementation framework. CBMP is determined by the MARI, according to Methodology for pricing.
 - 39.1. Separate CBMP for each activation type direct and scheduled is determined;
 - 39.2. Separate CBMP for each activation direction upward and downward is determined.
40. The pricing of mFRR standard product energy bids for normal activation locally shall be based on Local marginal price.
 - 40.1. Local marginal price for upward activation shall be determined by the most expensive locally activated upward energy bid for normal activation for respective MTU;
 - 40.2. Local marginal price for downward activation balancing energy bids shall be determined by the least expensive locally activated downward energy bid for normal activation for respective MTU.
41. The pricing of other product energy bids for normal activation locally shall be based on pay-as-bid principle.
42. The Local marginal prices in paragraph 40 are determined for each uncongested area separately:
 - 42.1. if during the MTU there was no congestion of cross-zonal capacity within the balancing timeframe, all BSPs which bids were activated via normal activation

- locally in the same direction during the MTU shall be entitled to the same Local marginal price.
- 42.2. if during the MTU congestion of cross-zonal capacity within balancing timeframe occurs, separate Local marginal price areas shall be defined. Local marginal price for each uncongested area is defined according to principles in paragraph 39.
43. Area balancing price is determined for each Baltic balance area based on marginal pricing via normal activation from Baltic MOLs for each MTU, using prices determined in paragraphs 39 and 40:
- 43.1. if without activation within the MTU the Baltic coordinated balancing area would have had energy shortage, the Area balancing price is the highest price of the upward balancing energy (standard mFFR or other product) bid activated via normal activation locally or activated from AOF of MARI;
- 43.2. if without activation within the MTU the Baltic coordinated balancing area would have had energy surplus, the Area balancing price is the lowest price of the downward balancing energy (standard mFFR or other product) bid activated via normal activation locally or activated from AOF of MARI.
44. Local marginal price may be higher than the price of the most expensive upward activation bid or lower than cheapest downward activation bid in Baltic MOLs in the case of balancing energy exchange with other non-Baltic TSO where Local marginal price is defined after the respective MTU.
45. Price for bid activated via special activation is settled on Area balancing price or pay-as-bid price whichever is more economically advantageous for BSP. Special activation does not set the Area balancing price.

VIII Market information and transparency

46. After the end of an Imbalance settlement period all Baltic TSOs ensure that all information regarding activation orders is complete and publicly available on Baltic balancing market dashboard and/or Baltic TSOs websites and on the central ENTSO-E information transparency platform.
47. As the result of an operational hour the following information is available at Baltic transparency dashboard:
- 47.1. current balancing state:
- 47.1.1. preliminary Baltic ACE;
- 47.1.2. preliminary open-loop ACE (ACE without activations).
- 47.2. the volumes of aggregated balancing energy bids – CMOLs;
- 47.3. cross zonal capacities within the balancing timeframe;
- 47.4. the volumes of aggregated activated balancing energy bids:
- 47.4.1. activated volumes of Baltic BSPs within MARI;
- 47.4.2. activations for balancing purposes (satisfied demand from MARI);
- 47.4.3. local activations for balancing purposes;
- 47.4.4. activations for system constraints.
- 47.5. prices:
- 47.5.1. CBMP;
- 47.5.2. Local marginal price;
- 47.5.3. Area Balancing price;
- 47.5.4. Weighted average price for special activation in Baltic area.

VIII Implementation

48. Baltic TSOs shall implement these Rules when Baltic TSOs join the European mFRR balancing energy exchange platform, but no later than 2024 Q2.
49. Baltic TSOs shall align timescale for joining to the European mFRR balancing energy exchange platform with Nordic TSOs.
50. Baltic TSOs shall apply for derogation from requirements of Article 20(6) of the EB Regulation in accordance to the Article 62 of the EB Regulation by submitting request to the Baltic NRAs.