Baltic CoBA Imbalance Settlement Rules

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Elering AS

AS "Augstsprieguma tīkls"

LITGRID AB

Contents

CHAPTER I
GENERAL PROVISIONS

Article 1 – Objective and scope

(1) The Baltic transmission system operators– Elering AS, AS "Augstsprieguma tīkls", LITGRID AB (hereinafter: Baltic TSOs) apply harmonized imbalance settlement rules for their respective imbalance areas. Rules are in line with Methodology for the harmonisation of the main features of imbalance settlement (hereinafter: MHMI) adopted by the Decision[1] of the Agency for the Cooperation of Energy Regulators (ACER).

(2) Baltic TSOs have agreed to harmonized imbalance settlement framework that complies with the following principles:

   (a) TSOs shall not incur neither economic gains nor losses with regards to the financial outcome of the imbalance settlement;

   (b) imbalance price fully reflects costs and income from balancing services;

   (c) imbalance price does not include costs for imbalance settlement administration.

(3) All definitions and abbreviations used in this document must be applied and used as defined in Annex 1 of Baltic TSOs' Agreement on the operation and settlement of the Baltic coordinated balancing area. Annex 1 is publicly available.

Article 2 – Imbalance settlement framework

(1) The Baltic TSOs shall apply the settlement mechanism for calculating a position, an allocated volume, an imbalance adjustments, imbalance and imbalance price in accordance with the MHMI.

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[1] ACER Decision on the imbalance settlement harmonisation methodology: Annex I:
https://acer.europa.eu/en/Electricity/MARKET-CODES/ELECTRICITY-BALANCING/10%20ISH/Action%205%20-%20ISH%20ACER%20decision%20annex%20I.pdf

(2) The Baltic TSOs shall apply the single BRP portfolio model, where for the purposes of imbalance settlement calculation, production and consumption are included within the same portfolio.

(3) Each Baltic TSO within its imbalance area shall calculate the position, allocated volume, imbalance adjustment, and imbalance:

(a) for each BRP;

(b) for each ISP.

(4) The Baltic TSOs shall apply a single imbalance price model meaning that BRP imbalances shall be settled with the same imbalance price regardless of the direction of their imbalance.

(5) The balancing energy reference price is used as one of the main components for the determination of imbalance price and shall be based on area balancing price or the value of avoided activation.

(6) The calculation of the area balancing price shall follow the rules for calculating the balancing price in accordance with the Baltic balancing market rules.

(7) Imbalance settlement of balancing area shall be excluded from the common Baltic imbalance settlement, if according to requirements of the Agreement on the operation and settlement of Baltic coordinated balancing area TSO has informed the Nominated TSO and other Baltic TSOs to exclude its area from Baltic CoBA operation and TSO has performed balance control of relevant balance area separately from Baltic CoBA in following events:

(a) upon decision of TSO;

(b) in accordance with terms and conditions set by the national legislation.

(8) The single imbalance price shall be determined:

(a) for each ISP;

(b) for each Baltic imbalance area;

(c) for each imbalance direction.

(9) Each Baltic TSO shall apply separate settlement mechanism and administrative processes for:

(a) imbalance administration cost allocation;

(b) collateral handling;

(c) information exchange;

(d) settlement deadlines.

CHAPTER II

SPECIFICATION ON THE IMBALANCE CALCULATION

Article 3 – The calculation of a position, allocated volume, imbalance adjustment and the imbalance

(1) Each Baltic TSO shall calculate within its imbalance area, for each ISP, a single final position for each BRP equal to the net sum of its external and internal commercial trade schedules, whereas:

   (a) the external commercial trade schedules refer to transactions carried out on organised markets such as the day-ahead and intra-day;

   (b) the internal commercial trade schedules refer to bilateral transactions between BRPs within an imbalance area.

(2) Each Baltic TSO shall calculate within its imbalance area, for each ISP, the total allocated volume for each BRP, covering the injections and withdrawals for which this BRP is financially responsible in. The allocated volume shall be calculated as the netted aggregated value of:

   (a) the volumes that are metered with a granularity of the ISP for the connections to a TSO grid;

   (b) the volumes that are metered with a granularity of the ISP or in other granularity than ISP for the connections to a DSO grid;

   (c) where applicable, the volumes that are calculated in accordance to a national baseline due to activities related to flexibility service provider, in accordance with the terms and conditions for BRPs.

(3) Each Baltic TSO shall calculate within its imbalance area, for each ISP, the imbalance adjustment to the concerned BRP, as the netted volume of all activated volumes of balancing energy from all activated bids in that imbalance area that have been assigned to this BRP.

(4) Each Baltic TSO shall calculate within its imbalance area, for each ISP, an imbalance to the concerned BRP, as the energy volume representing the difference between:

    (a) the final position of that BRP, calculated in accordance with paragraph 1;

    (b) the allocated volume of that BRP, calculated in accordance with paragraph 2;

    (c) the imbalance adjustment of that BRP, calculated in accordance with paragraph 3.

(5) The following formula depicts the calculation of an imbalance for a BRP:

$$E_{imb_t} = E_{alc_t} - E_{fp_t} - E_{adj_t}, \text{ whereas}$$

E_{alc_t} - allocated volume for BRP in ISP_t. E_{alc_t} reflects metered net volume of actual physical generation and consumption within ISP_t over the metering points within BRP's imbalance area (MWh). For calculation purposes generation volume is assigned positive sign and consumption volume is assigned negative sign.

E_{fp_t} - final position of BRP in ISP_t. E_{fp_t} reflects BRP's declared scheduled net energy volume of commercial transactions on organised markets or between BRPs within a given ISP_t (MWh). For calculation purposes generation volume is assigned positive sign and consumption volume is assigned negative sign.

E_{adj_t} - imbalance adjustment of the BRP in ISP_t. E_{adj_t} reflects the imbalance adjustment applied to that BRP, within a given ISP_t (MWh). For calculation purposes, relative injection (increase of production and/or decreased of consumption) is assigned a positive sign and relative withdrawal (decrease of production and/or increase of consumption) is assigned a negative sign.

(6) Each Baltic TSO shall report to the concerned BRP without undue delay the calculated position, the allocated volume, the imbalance adjustment, and the calculated imbalance.

(7) The final position, the allocated volume, the imbalance adjustment, and the imbalance of a BRP shall be finalised for the previous accounting period no later than set by each Baltic TSOs terms and conditions for BRPs in accordance with Article 18(6)(h) of the EB Regulation.

(8) Each Baltic TSO shall set up the rules for claiming the recalculation of the imbalance by a BRP in accordance with Article 54(4)(e) of the EB Regulation.

CHAPTER III

SPECIFICATION ON THE IMBALANCE PRICE CALCULATION

Article 4 – Main components used in the determination of the balancing energy reference price

(1) The Baltic TSOs shall use the following components for the determination of the balancing energy reference price for each ISP:

(a) the area balancing price for positive or negative balancing energy in each respective imbalance price area calculated according to the Baltic balancing market rules.

(b) the value of avoided activation determined pursuant to Article 5 and the direction of the total netted system imbalances of the three Baltic areas - Estonia, Latvia, and Lithuania - (hereinafter: the Baltic total system imbalance) pursuant to Article 6.

(2) The Baltic TSOs shall set the balancing energy reference price for all imbalances for each ISP and in their respective imbalance price area in one of the following ways depending on the activation of balancing energy for normal activation purposes:

(a) in case only positive balancing energy has been activated, the balancing energy reference price for this ISP shall be equal to the area balancing price for positive balancing energy.

(b) in case only negative balancing energy has been activated, the balancing energy reference price for this ISP shall be equal to the area balancing price for negative balancing energy.

(c) in case both positive and negative balancing energy has been activated, the balancing energy reference price for this ISP shall be determined based on the direction of the Baltic total system imbalance, in accordance with Article 6, and:

    i. in case the direction of the Baltic total system imbalance is short, the balancing energy reference price for this ISP shall be equal to the area balancing price for positive balancing energy;

    ii. in case the direction of the Baltic total system imbalance is long, the balancing energy reference price this ISP shall be equal to the area balancing price for negative balancing energy.

(d) in case of no positive or negative balancing energy has been activated, the balancing energy reference price for this ISP shall be equal to the value of avoided activation as determined in Article 5.

Article 5 – Value of Avoided Activation

(1) The Baltic TSOs shall calculate the value of avoided activation for each ISP during which there has been no activation of balancing energy for normal activation purposes, in accordance with Article 6 of the MHMI.

(2) The Baltic TSOs shall determine the value of avoided activation from either the lowest priced bid for positive balancing energy or highest priced bid for negative balancing energy offered by Baltic BSPs that would have been available for activation from the Baltic CMOL, depending on the direction of the Baltic total system imbalance:

(a) in the event the direction of the Baltic total system imbalance is short, the lowest priced bid for positive balancing energy;

(b) in the event the direction of the Baltic total system imbalance is long, the highest priced bid for negative balancing energy.

(3) The value of avoided activation shall be identical in all Baltic imbalance price areas during the respective ISP.

(4) Balancing energy bids, which originate from the power station(s) that are in the ownership of a TSO will not participate in the determination of the VoAA.

(5) In the event that during an ISP there are no available bids in the Baltic CMOL, the value of avoided activation shall be zero.

Article 6 – Direction of the Baltic total system imbalance

(1) The Baltic TSOs shall establish the direction of the Baltic total system imbalance, which shall be used to determine the balancing energy reference price during those ISPs where:

(a) both positive and negative balancing energy has been activated for normal activation; or

(b) neither positive nor negative balancing energy has been activated for normal activation.

(2) The direction of the Baltic total system imbalance for the ISP shall be established by determining the dominating direction from the following volumes:

(a) the aggregated volumes of all positive and negative balancing energy, per direction, activated for normal activation purposes;

(b) the total Baltic net volume of unintended exchanges of energy resulting from the settlement within the synchronous area between the TSOs and the Baltic open balance provider, per direction, whereas:

      i. the positive volume of unintended exchange of energy shall be regarded as the sale of energy by the open balance provider to the TSOs, in order to balance the Baltic imbalance shortage; and

      ii. the negative volume of unintended exchange of energy shall be regarded as the sale of energy by the TSOs to the open balance provider, in order to balance the Baltic imbalance surplus.

(3) For the determination of the dominating direction:

(a) the aggregated volume for positive direction shall be comprised of the volumes of positive activated balancing energy and positive volume of unintended exchange of energy.

(b) the aggregated volume for negative direction shall be comprised of the volumes of negative activated balancing energy and negative volume of unintended exchange of energy.

(4) The direction of the Baltic total system imbalance shall be considered as:

(a) short, when the total sum of positive activated balancing energy and positive volume of unintended exchange of energy is greater than the total sum of negative activated balancing energy and negative volume of unintended exchange of energy – in absolute value;

(b) long, when the total sum of negative activated balancing energy and negative volume of unintended exchange of energy – in absolute value – is greater than the total sum of positive balancing energy and positive volume of unintended exchange of energy.

Article 7 – Additional components used in the calculation of the imbalance price

(1) The Baltic TSOs shall use an additional component (hereinafter: neutrality component) in the calculation of the imbalance prices in order to ensure the financial neutrality of the Baltic TSOs in accordance with Article 44(1)(i) of the EBGL.

(2) The neutrality component shall be the same value for each ISP and each imbalance price area within the accounting period.

(3) The neutrality component shall be calculated by dividing the net volume – in absolute value - of all Baltic BRP imbalances from which the system imbalance volumes resulting from over activation have been deducted, within the accounting period from the total sum of the following incomes and expenses:

(a) total income and expenses resulting from the settlement of balancing energy activated via normal activation with BSPs, and TSO-TSO settlement within the European mFRR platform within the accounting period;

(b) total income and expense resulting from the settlement of the unintended exchanges of energy with the open balance provider within the accounting period;

(c) total income and expense that the TSOs otherwise would have incurred from the settlement of imbalances with the BRPs based on the balancing energy reference price, within the accounting period.

(4) The following formula depicts the calculation of the neutrality component:

$$P_{ntc_t} = \frac{\sum_{t=1}^{T}(C_{bal_t}+C_{OBP_t})+\sum_{t=1}^{T}\sum_{n=1}^{N}(E_{imb_{t,n}}*P_{bal_{t,n}})}{\sum_{t=1}^{T}\left|\sum_{n=1}^{N}E_{imb_{t,n}}\right|-(\sum_{t=1}^{T}\left|\sum_{n=1}^{N}O_{imb_{t,n}}\right|*2)}, \text{ whereas}$$

C_{bal_t} - Total costs (+)/ revenue (-) of activated balancing energy incurred by Baltic TSOs in the ISP$_t$ (EUR);

C_{OBP_t} - Total costs (+)/ revenue (-) of energy delivered by/ to open balance provider in the ISP$_t$ (EUR);

E_{imb_t} - BRP's imbalance in ISP$_t$ (MWh). A negative sign indicates BRP's energy shortage and BRP shall procure shortage energy from the TSO at the imbalance price. A positive sign, indicates BRP's surplus and BRP shall sell the energy surplus to TSO at the imbalance price;

O_{imb_t} - System imbalance resulting from over activation in ISP_t (MWh), which is equal to the net BRP imbalance volume. The Baltic TSOs define over activation as the occurrence in which due to unforeseeable changes in the real-time portfolios of the Baltic BRPs, the direction of the Baltic total system imbalance has changed in an opposite direction compared to which the TSOs had activated balancing energy. In case of no over-activation, the system imbalance resulting from over activation shall be zero.

P_{bal_t} - Balancing energy reference price during ISP_t (EUR/MWh);

N - Total number of BRPs in CoBA;

n - Particular BRP.

(5) The neutrality component shall be published no later than the publication of the imbalance prices.

Article 8 – Calculation of the imbalance price

(1) The Baltic TSOs shall calculate a single imbalance price in accordance with Article 55 of the EBGL.

(2) The imbalance price shall be calculated from the balancing energy reference price and the neutrality component taking into account the boundary conditions set out in Articles 55(4) and 55(5) of the EBGL.

(3) The imbalance price shall be calculated by applying the neutrality component to the balancing energy reference price depending on the activation of balancing energy for normal activation:

    (a) in the event that during an ISP, the Baltic TSOs have activated only positive balancing energy, the neutrality component shall be added to the balancing energy reference price of the respective imbalance price area;

    (b) in the event that during an ISP, the Baltic TSOs have activated only negative balancing, the neutrality component shall be deducted from the balancing energy reference price of the respective imbalance price area;

    (c) in the event that during an ISP there is both positive and negative balancing energy activated for normal activation, or that during an ISP there is no balancing energy activated for normal activation, the neutrality component shall be applied to the

balancing energy reference price based on the direction of the Baltic total system imbalance:

i. in case the direction of the Baltic total system imbalance is short, the neutrality component shall be added to the balancing energy reference price of the respective imbalance price area;

ii. in case the direction of the Baltic total system imbalance is long, the neutrality component shall be deducted from the balancing energy reference price of the respective imbalance price area.

	Calculation if imbalance price depending on the activation of balancing energy.			
	Positive balancing energy	Negative balancing energy	Both positive and negative balancing energy or neither positive nor negative balancing energy	
			System is in deficit	System is in surplus
BRP in deficit	$P_{imb_t} = P_{bal_t} + P_{ntc_t}$	$P_{imb_t} = P_{bal_t} - P_{ntc_t}$	$P_{imb_t} = P_{bal_t} + P_{ntc_t}$	$P_{imb_t} = P_{bal_t} - P_{ntc_t}$
BRP in surplus				

CHAPTER IV
FINAL PROVISIONS

Article 9 – information publication

(1) The Baltic TSOs ensure that information relevant to imbalance price calculations is available on the Baltic Transparency Dashboard and on the central ENTSO-E Transparency platform;

(2) At least the following information shall be made available on the Baltic Transparency Dashboard:

   (a) The current balancing state depicted as the open-loop ACE with one minute resolution as the sum of Baltics and for each Baltic area;

   (b) The aggregated volumes incl. the minimum and maximum prices thereof, of balancing energy bids offered by Baltic BSPs as the sum of Baltics and for each Baltic area;

   (c) The aggregated volumes of activated balancing energy separately per activation reason and origin;

   (d) The cross-zonal capacities within the balancing timeframe in Baltic areas and on HVDC links;

   (e) The balancing energy reference prices in each Baltic area;

   (f) Total BRP imbalance volume in Baltic area and areas;

   (g) The imbalance prices in each Baltic area for the previous accounting period;

   (h) The neutrality component for the previous accounting period;