Daily Imbalance and Neutrality Charge Calculation Methodology

issued by the Energy and Water Regulatory Commission, promulgated in SG No. 57 of 19.07.2019, effective as of 19.07.2019

Chapter One

GENERAL

Art. 1. This methodology determines the procedure, the terms and conditions for calculating the daily imbalance quantity and forming and applying the daily imbalance and neutrality charge.

Art. 2. The methodology's objective is to guarantee the formation of non-discriminatory imbalance charges for the users of the gas transmission networks by creating incentives for the users on the territory of the country to balance efficiently their balancing portfolios. Charges shall reflect the real costs incurred for balancing.

Art. 3. The methodology determines the main measures that the operator can take to manage the credit risk when balancing.

Art. 4. The methodology shall apply individually to balancing zones of the natural gas transmission networks on the territory of the Republic of Bulgaria.

Art. 5. **(1)** The applicable balancing model shall be the daily balancing model with financial settlement of occurred daily imbalances.

(2) The operator shall purchase and sell natural gas for balancing to cover the individual imbalances of users of gas transmission networks subject to balancing.

Art. 6. The operator shall keep separate accounting for the costs and assets used for the balancing activity.

Chapter Two

DAILY IMBALANCE QUANTITY CALCULATION

Art. 7. For each gas day D, the operator shall calculate the initial daily imbalance quantity (Δi), allocated to a user on the next day D+1, by subtracting the initially allocated quantities, off-taken at exit points of the balancing zone by the user from the initially allocated quantities, delivered at entry points of the balancing zone for the gas day D by the same user according to the formula:

$$\Delta i = \boldsymbol{Q}_i^{en} - [\boldsymbol{Q}_i^{ex}]$$

where:

$\boldsymbol{Q}_i^{en}$, - is the sum of initial allocated natural gas quantities to the user at all entry points of its balancing portfolio for the balancing zone during the gas day D;

$\boldsymbol{Q}_i^{ex}$ - is the sum of initial allocated natural gas quantities to the user at all exit points of its balancing portfolio for the balancing zone during gas day D;

Art. 8. The operator informs each user on the initial daily imbalance quantity for day D, no later than 1:00 pm on the following gas day D+1.

Art. 9. (1) At any time between 1:00 pm of day D+1 and 1:00 pm on the fourth day in the month following the month of the accounting day, the initially determined daily imbalance quantity of the user for each gas day of the month can be changed as a result of a change in the initially allocated daily quantities at entry and exit points from the balancing portfolio of the user for the respective gas day. Reasons for a change can be errors in IT - routine procedures, reporting protocols for allocation of the quantities between the users at entry and exit points, human error or discovered deviations from the permissible range of accuracy, found in the readings of the devices for commercial metering.

(2) The operator shall determine to each user final imbalance quantities for each gas day of the previous month, after the final allocations of inputs and off-takes for the balancing zone for the respective day are made according to the formula:

$$\Delta_{\boldsymbol{f}} = \boldsymbol{Q}_{\boldsymbol{f}}^{\boldsymbol{en}} - \boldsymbol{Q}_{\boldsymbol{f}}^{\boldsymbol{ex}},$$

where:

1. $\boldsymbol{Q}_{\boldsymbol{f}}^{\boldsymbol{en}}$ – the sum of the final allocated quantities to the user at entry points regarding gas day D, determined according to the formula:

   $\boldsymbol{Q}_{f}^{en} = \boldsymbol{Q}_{i}^{en} + \boldsymbol{q}^{en}$

   $\boldsymbol{Q}_{i}^{en}$ - the sum of the initial allocated quantities to the user at all entry points of its balancing portfolio for the balancing zone for the gas day D;

   $\boldsymbol{q}^{en}$– the adjustment in the daily allocated quantities at entry points following the procedure for reallocations (positive or negative) for gas day D;

2. $\boldsymbol{Q}_{i}^{ex}$– the sum of the final allocated quantities to the user at all exit points regarding gas day D determined according to the formula:

   $$\boldsymbol{Q}_{f}^{ex} = \boldsymbol{Q}_{i}^{ex} + \boldsymbol{q}^{ex}$$

   $\boldsymbol{Q}_{i}^{ex}$– the sum of the initial allocated quantities to the network user at all exit points of its balancing portfolio for the balancing zone for gas day D;

   $\boldsymbol{q}^{ex}$- the adjustment in daily allocated quantities at exit points following the procedure for reallocations (positive or negative) for gas day D.

Art. 10. (1) The operator provides the user with information on the final allocated daily imbalance quantities for each balancing zone no later than 5:00 pm on the fourth day of the gas month following the reporting month.

(2) If the initial daily imbalance quantities and the final daily imbalance quantities allocated to the user for each gas day are different, the calculated daily imbalance

charges for each balancing zone are recalculated and this recalculation is based on the determined final daily imbalance quantities.

Art. 11. All daily imbalances for the balancing zones are subject to financial settlement to the financial account of the respective user, and for each day of the month the balance of the financial account is changed by the amounts calculated according to the formulae:

1. if the daily imbalance is positive :

$$\boldsymbol{C^D = ABS(\Delta^D).P^P_{NGB}}$$

2. if the imbalance is negative:

$$\boldsymbol{C^D = -ABS(\Delta^D)P^N_{NGB}}$$

where:

$\boldsymbol{C^D}$ – the sum of daily imbalance clearance, in BGN;

$\boldsymbol{P^P_{NGB}}$– the price of natural gas for balancing in case of positive imbalance for the day D in BGN/MWh;
$\boldsymbol{P^N_{NGB}}$– the price of natural gas for balancing in case of negative imbalance for the day D in BGN/MWh;

$\boldsymbol{ABS}(\Delta^D)$ - absolute value of determined imbalance for the day D, MWh;

Chapter three

CALCULATING THE PRICE OF NATURAL GAS FOR BALANCING

Art. 12. (1) For each day of the month a natural gas price for balancing in case of positive imbalance $(\boldsymbol{P^P_{NGB}})$, and price for natural gas for balancing in case of negative imbalance $\boldsymbol{P^N_{NGB}}$) shall be determined in line with paragraphs 2 – 5.

(2) When there is a natural gas trading platform and the criteria under paragraph 5 are fulfilled for the reporting day:
1. Natural gas price for balancing in case of positive imbalance for the day D is equal to the lower of the following values:
a) the lowest price of all trades where the operator is a party for the relevant gas day;
b) the value generated according to the formulae:

$$\frac{\sum_i^n \boldsymbol{P_i.V_i}}{\sum_i^n \boldsymbol{V_i}} - \boldsymbol{SA}.\frac{\sum_i^n \boldsymbol{P_i.V_i}}{\sum_i^n \boldsymbol{V}}$$

where:
$\boldsymbol{P_i}$ – price reported as per the i[th] trade for the day BGN/MWh;
$\boldsymbol{V_i}$ - volume reported of the i[th] trade for the day, in MWh;
SA – small adjustment

2. Natural gas price for balancing in case of negative imbalance for the day D is equal to the higher of the following values:

a) the highest price of all trades where the operator is a party for the relevant gas day;
b) the value generated according to the formulae:

$$\frac{\sum_i^n P_i . V_i}{\sum_i^n V_i} + SA . \frac{\sum_i^n P_i . V_i}{\sum_i^n V}$$

where:
P_i – price reported as per the i[th] trade for the day BGN/MWh;
V_i volume reported of the i[th] trade for the day, in MWh;
SA – small adjustment

(3) In case of non-performance of the condition under paragraph 2, the prices shall be determined as follows:
1. Natural gas price for balancing in case of positive imbalance in line with the formulae:

$$P_{NGB}^{P} = P_{pp} - SA . P_{pp},$$

2. Natural gas price for balancing in case of negative imbalance

$$P_{NGB}^{N} = P_{pp} + SA . P_{pp}$$

where:
P_{pp} natural gas selling price as approved to the public provider to sell natural gas to end suppliers and clients, connected to the gas transmission network, applicable for the relevant day, where the capacity and commodity price is not included.
SM – small adjustment
(4) The small adjustment amounts to 3 % to 10 %.
(5) Within 1 month prior to the start of each gas year the operator shall announce criteria to apply the reached prices of buying and selling natural gas on the functioning natural gas trading platforms to calculate the price of the natural gas for balancing, valid for the next gas year.

Chapter Four

NEUTRALITY CHARGE FOR BALANCING

Art. 13. The operator shall keep a neutrality account for balancing and at the end of each neutrality account clearance period determines the financial balance for the balancing activity covering such period according to the formula:

$$FB_B = R_B - C_B \pm Co$$

where:

[R_b] – revenues generated by the balancing activity, including revenues from the sale of natural gas surpluses, resulting from carrying out the activity over the period of consideration of clearing the neutrality account;

[C_b] – costs for carrying out the balancing activity carried out over the period of consideration of clearing the neutrality account, including:

- costs for purchasing natural gas for physical balancing;

- costs for purchasing natural gas for commercial balancing;

- operational costs for carrying out the activity;

- yearly depreciations of assets, with which the balancing activity is performed;

Co – correction for overpayment/underpayment when clearing the neutrality account for balancing from the previous clearance period.

Art. 14. (1) The determined financial balance from the activity [FB_B] with positive or negative sign is aggregated in the neutrality account for balancing.

(2) The operator strives to achieve zero value of the neutrality account and prior to the start of each clearance period undertakes action for releasing the whole or part of the aggregated value.

(3) The operator releases/compensates part or all of the aggregated over each clearance period by charging a neutrality charge for balancing.

(4) The neutrality charge for balancing shall be charged at each entry and exit points/zone of the gas transmission system based on the allocated natural gas quantities. The neutrality charge can be positive or negative sign that will be opposite to the cleared sum of the neutrality account of balancing.

(5) The neutrality charge shall be calculated for each neutrality account clearance period using the formulae:

$$\boldsymbol{NCB = \frac{A_c}{2\ FQT}}$$

where:
NCB – neutrality charge for balancing, in BGN/MWh;
A_c – amount for clearance of the neutrality account for balancing during the respective period, in BGN;
FQT – Forecast quantities for transmission through the gas transmission system owned by the operator for the respective period in MWh.

(6) The operator determines the amount for clearance from the neutrality account for balancing so as the absolute amount of the neutrality charge for balancing shall be no greater than the applicable components of the transmission price without taking into account the component for covering the imposed public obligations.

(7) The charged sums (with positive or negative sign) clearing the balancing

neutrality account shall be shown in a separate line in the invoices issued by the operator for the access and transport services through the gas transmission networks.

Chapter Five

SETTLEMENT OF IMBALANCES. INVOICING AND PAYMENT

Art. 15. (1) The operator shall keep a financial balancing account for each network user where it aggregates the daily financial settlements of allocated imbalances for each balancing zone separately according to Art. 11. All imbalance charges, subject of the daily financial settlements, are entered in the financial balancing account.

(2) When calculating the final imbalance quantities, different from the initially determined for the gas day, the operator re-calculates the value of the financial balancing account taking into consideration the determined final imbalance quantities.

Art. 16. (1) The aggregated imbalance charges on the financial account shall be calculated on a monthly basis, where each Party shall issue an invoice for the natural gas sold for balancing over the previous month.

(2) At the beginning of each month, the financial account is reset to zero, and daily imbalance charges for the new month start to aggregate therein.

Art. 17. (1) The value of the monthly invoices is determined by all charges from the sale of natural gas for balancing to the daily allocated imbalance quantities for each balancing zone separately and the applied prices for imbalance on a daily basis.

(2) For calculating the value of the monthly invoices, the operator prepares summary for settlement of imbalances by days of the month and by balancing zones for each user of the natural gas transmission networks within 2-days term of the date of calculating the final imbalances and submits it to the user via the commercial dispatching platform.

(3) The user has the right to challenge the summary or part thereof and submit additional evidence that require a change in the summary. The user shall be obliged to accept or issue an invoice based on the summary irrespective of the challenge.

Chapter Six
CREDIT RISK MANAGEMENT MECHANISMS

Art. 18. The operator shall take all measures and impose specific contractual requirements with a view to managing and limiting the credit risk linked with the balancing.

Art. 19. Contractual requirements shall be imposed in line with the principles of transparency and equal treatment.

Art. 20. The operator can impose the following measures:

1. obligation to secure and maintain a financial collateral in one of the following forms:

a) guarantee deposit under bank account, indicated by the operator;

b) provision of irrevocable and unconditional bank guarantee in favour of the operator in line with a template, prepared by the operator;

c) corporate guarantee (a warranty), payable to the operator at his first written request in line with a template, prepared by the operator;

2. limitation in the volume of commercial transactions at a virtual trading point up to the size guaranteed with the financial collateral;

3. other measures that are to result in limiting the credit risk linked with the balancing.

Art. 21. The operator can have specific requirements towards banks and legal entities, providing the guarantee under article 20, item 1, letters „b" and „c".

Art. 22. The operator can appoint a group of users of the gas transmission system and natural gas traders in line with objective criteria by imposing specific requirements towards the size of the financial collateral to each of the individual groups.

Art. 23. In case the users and/or natural gas traders fail to meet their obligations to manage their credit risk, the operator shall have the right to limit or terminate the provision of natural gas access and transport service to limit the financial losses generated by the balancing.

Art. 24. The imposed measures shall be described in detail in the Contracts for the sale and purchase of natural gas for balancing.

Chapter Seven

PROCEDURE DETERMINING THE PRICE SETTING ELEMENTS THAT FORM THE IMBALANCE CHARGE

Art. 25. (1) Within 1 month prior to the start of each gas year, following public consultations with interested parties, the operator shall determine the amount of the small adjustment in percentage, the periods of clearing the neutrality account for balancing and the criteria under article 12, paragraph 5 valid for the next gas year.

(2) Immediately after the adoption of decision under paragraph 1, the operator shall send it to EWRC together with the materials received within the public consultations.

(3) The operator shall publish the decision under paragraph 1 in the mass media and on its webpage no later than 10 days prior to the start of the gas year.

Art. 26 Within 10 days prior to the start of each neutrality account clearance period for balancing in line with article 14, the operator shall determine the amount of the neutrality charge for balancing valid for the next clearance period and publish it on its webpage.

Art. 27 (1) Each day the operator shall announce on its webpage the price for natural gas for balancing calculated using this methodology.

(2) The operator shall update the information on its webpage regarding the elements of the daily imbalance charges, including the size of the small adjustment and the neutrality charge for balancing.

Art. 28(1) EWRC, exercising its powers, shall continuously monitor and control the activity of the operator on applying this methodology and in line with the applicable legislation.

(2) EWRC on its incentive can examine the application of this methodology in line with the effective legislation.

(3) The operator shall be obliged to perform the mandatory guidelines issued under a EWRC decision within the indicated deadline. The deadline shall be sufficient to allow the operator to implement the necessary actions.

Art. 29. The methodology may be amended on EWRC incentive or on a proposal of the operator.

ADDITIONAL PROVISION

§ 1. In the meaning of this methodology:

1) **Balancing account** means an account for each individual user of the gas transmission network, where the results of the daily quantities of imbalance (positive or negative), subject of financial settlement at the end of the gas day are aggregated and the prices of natural gas for balancing valid for the respective gas day.
2) **Balancing portfolio** means a grouping of a network user's inputs and off-takes
3) **Imbalance quantity** means the difference between the daily allocated quantities passed through entry points of the gas transmission network in the balancing portfolio of a user and the daily allocated quantities to the user at the exit points of the gas transmission network. The imbalance can be either negative or positive. The daily imbalance quantities are expressed in MWh.
4) **Small adjustment** is a correction in the price of natural gas for balancing, expressed in a percentage of it, applied with a positive or negative sign, depending on the imbalance sign in order to determine the daily imbalance charges.
5) **Neutrality balancing account** is a financial account kept by the operator to achieve neutrality on the revenues and costs for the balancing activity.
6) **Imbalance charge** is a sum of money calculated on a daily basis which the network user pays or receives depending on the amount of its daily imbalance;
7) **Neutrality balancing charge** is a charge with positive or negative sign charged on the allocated natural gas quantities at each entry/exit point/area of the gas transmission system, owned by Bulgartransgaz EAD, with a view to achieving neutrality from the balancing;

8) **Neutrality account clearance period** for balancing is a period with a duration of 3 to 12 months during which the amount of the neutrality charge for balancing set by the operator applies.

9) **The operator** is the gas transmission operator Bulgartransgaz EAD, operating on the territory of the Republic of Bulgaria, determined to carry out the balancing.

10) **Credit risk** is a potential risk from delay and/or failure of users of the gas transmission network to pay and natural gas traders of financial obligations linked with the balancing of the gas transmission network;

TRANSITIONAL AND FINAL PROVISIONS

§ 2. The sum accumulated in the balancing neutrality account determined in line with for the Daily Imbalance Charge Methodology (SG No.99/2016) as of the date of coming into force of this Methodology shall be transferred for clearance in line herewith.

§ 3. The calculation of the charge for neutrality for balancing in line herewith shall start no later than 1 October 2019.

§ 4. The criteria for setting the price of the natural gas for balancing for Gas Year 2019-2020 shall be: more than 3 (three) trades for purchase/sell of natural gas carried out and a total volume of such trades not less than 3000 MWh for the reporting day.

§ 5. This methodology is adopted by EWRC with a decision under Protocol No. 122/11.07.2019, item 5 based on article 11(3) of the Natural Gas Trading Rules, article 20(1) and article 30(2) of Commission Regulation EU 312/2014 of 26.03.2014 establishing a network code on gas balancing of transmission networks.

§6. This methodology shall repeal the Daily Imbalance Charge Methodology, adopted by EWRC (SG No.99/2016).

§7. This methodology shall enter into force as of the day of its publication in State Gazette.