

April 2025

# **Annual Gas Balancing Planning for the Year 2026**



#### 1. Introduction

The present plan is developed in terms of Paragraph 2,γ of article 68 of the Law 4001/2011 according to which the Operator of National Natural Gas System (DESFA S,A,) (hereinafter 'Operator') is responsible for balancing of the National Natural Gas System (NNGS) as defined in the NNGS Network Code (hereinafter 'Code') and the provisions of article 46 regarding the Annual Gas Balancing Planning

In terms of paragraph 1 of article 46 of the Code, the Operator submits to the Regulatory Authority for Energy, Waste and Water (RAAEY) the Annual Gas Balancing Planning for the next Year, which, as well as each modification thereof shall be approved by RAAEY and published at the Operator's responsibility.

Within the framework of its above-mentioned competence and in accordance with the provisions of Chapter 8 of the Code, the Operator shall undertake Balancing Actions through (a) the purchase and sale of Balancing Gas in the form of Short Term Standardized Products (hereinafter STSPs) carried out on the Operator's Trading Platform, either through continuous negotiations or through auctions; and/or (b) use of Balancing Services through Balancing Services Agreements that may be concluded by the Operator, either following a relevant tender, either in accordance with the provision of paragraph 1 of article 91 of the Law 4001/2011, with Users or third parties concerning the supply and delivery of Balancing Gas Quantities to the NNGS, following the approval of the Annual Gas Balancing Planning by RAAEY.

According to paragraph 2 of article 46 of the Code, the Annual Gas Balancing Planning includes in particular: (a) The Operator's forecast for the evolution of the demand in Natural Gas per category of Customers in relation to the existing Transmission Capacity of the Transmission System, (b) a forecast regarding the necessary Quantities of Balancing Gas, such as the total annual Quantity of Balancing Gas for purchase and/or sale, its estimated allocation during the Year, as well as an estimation for the part of said Quantity that is expected to be covered through the use of Balancing Services, (c) a determination of the necessary characteristics of the agreement or combination of agreements that the Operator must conclude, at its discretion, to procure Balancing Services and (d) an estimate regarding the part of the NNGS Capacity which may be used by the Operator for Gas Balancing.

In accordance with paragraph 3 of article 46 of the Code, for the development of the Annual Gas Balancing Planning the Operator takes into consideration particularly the NNGS Development Plan, the total demand for Natural Gas served via the National Natural Gas Transmission System (NNGTS), the geographical distribution of consumption, the elimination of technical limitations affecting the operation of the System and, especially, each event that has led to, or may lead to, in

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its estimation, congestion or Emergency Level Crises, the maintenance requirements of the NNGS sections, the existing Gasification Capacity and Transmission Capacity at Entry and Exit Points, relevant historical data, as well as the criteria of the provision of paragraph 2 of article 8 of Regulation (EU) No 312/2014.

### 2. Gas Balancing

Balancing Gas is the Natural Gas required for the gas balancing of the NNGTS. The Balancing Gas Quantity is injected to / received from the NNGTS over a specific period of time in order to balance the Natural Gas Deliveries with Receptions (during the same period of time) in order to ensure in each case, the reliable, safe and efficient operation of the NNGS.

The Operator undertakes Balancing Actions, taking into account the operational limits of the NNTGS, to ensure the cost-effective and efficient operation of the NNGTS during a Day.

When performing Balancing Actions, the Operator considers at least the following:

- 1. its estimations about the Natural Gas demand;
- the most recent data on Confirmed Natural Gas Delivery and Reception Quantities of the Transmission Users at the NNGTS Entry and Exit Points, respectively;
- 3. the most recent measurement data;
- 4. the prevailing NNGTS pressure at any given time; and
- 5. the possibility of storing Natural Gas in the NNGTS.

#### 3. Estimation of Natural Gas demand for the Year 2026

According to the updated Demand Forecast Study, the Natural Gas consumption will reach the level of **7,356 mil. Nm³** in the Year 2026. The estimated Natural Gas demand per consumer category is presented in more detail in Table 1 on the next page.

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2026	Power Production (Nm³)	Other Consumers (Nm³)	Exports (Nm³)	Total Consumption (Nm³)
January	487,543,086	360,806,482	112,449,315	960,798,883
February	336,235,332	288,662,519	101,567,123	726,464,974
March	282,723,429	245,249,232	112,449,315	640,421,976
April	163,188,228	174,946,546	108,821,918	446,956,692
May	260,379,940	146,997,012	112,449,315	519,826,267
June	294,120,262	147,122,597	108,821,918	550,064,777
July	500,558,422	150,031,248	112,449,315	763,038,985
August	298,532,522	127,599,778	99,778 112,449,315	
September	285,239,362	2 130,581,824 108,821,		524,643,103
October	214,712,274	133,081,692	112,449,315	460,243,281
November	234,639,474	179,132,850	108,821,918	522,594,242
December	329,191,397	260,864,041	112,449,315	702,504,753
Total	3,687,063,728	2,345,075,822	1,324,000,000	7,356,139,548

Table 1: Forecast of Natural Gas demand per consumer category for the Year 2026

# 4. Balancing Gas Quantities

In accordance with paragraph 2, article 44A of the NNGS Code, the Operator executes Balancing Actions through (a) the purchase and sale of Balancing Gas in the form of STSPs and/or (b) the use of Balancing Services.

Considering the above, and in order for the Operator to extract as reliably as possible an estimation of the necessary Balancing Gas Quantities for purchase ( $BG_{M,2026}^{P}$ ) and sale ( $BG_{M,2026}^{S}$ ) required for each Month of the Year 2026, the Operator used the historical data of the period 01/2024 – 03/2025 and applied the following methodology:

$$BG_{M,2026}^{P}=ar{X}^{P}{}_{M,2026}*ER_{M,2026},$$
 and

$$BG_{M,2026}^S = \bar{X}_{M,2026}^S * ER_{M,2026},$$

where:

- $\bar{X}^P_{M,2026}$ : The average participation rates of the Balancing Gas Quantities for purchase during the Month M of the period 01/2024 03/2025 to the Natural Gas Receptions of the same Month (see Appendix 2);
- $\bar{X}_{M,2026}^{S}$ : The average participation rates of the Balancing Gas Quantities for sale during the

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Month M of the period 01/2024 - 03/2025 to the Natural Gas Receptions of the same Month (see Appendix 2);

- ER<sub>M,2026</sub>: Estimated monthly NNGTS Natural Gas Receptions for the Year 2026 (see Table 1 above); and
- M : Month of a Year

For the calculation of the above value  $\overline{X}^P$  for every Month of the Year 2026, the Operator took into account:

- i. the Balancing Gas Quantities injected to the NNGTS through the Entry Point 'Agia Triada' during the same Months within the period 01/2024 – 03/2025; and
- ii. the historical data of the purchased Balancing Gas Quantities through STSPs in the Trading Platform, for the same Months within the period 01/2024 03/2025.

Furthermore, for the calculation of the above value  $\overline{X}^S$  for every Month of the Year 2026, the Operator considered the historical data of Balancing Gas Quantities sales through STSPs in the Trading Platform, for the same Months within the period 01/2024 – 03/2025.

In Diagram 1 below the following are presented:

- The Monthly Balancing Gas Quantities for purchase during the period 01/2024 03/2025, through STSPs or via Balancing Services; and
- The Monthly Balancing Gas Quantities for sale during the period 01/2024 03/2025, through STSPs,

as a percentage of the respective Monthly Natural Gas Receptions.

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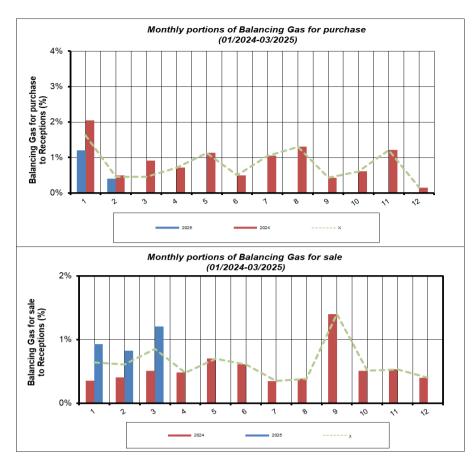


Diagram 1: Monthly portions of Balancing Gas Quantities to Natural Gas Receptions for the period 01/2024 - 03/2025

The results of the calculations in case of Balancing Gas purchase and sale are presented separately in Table 2 below.

Month of the Year	Balancing Gas Purchase	Balancing Gas Sale	
2026	$(\overline{\mathrm{X}}^{\scriptscriptstyle P})$ %	$(\overline{\mathbf{X}}^S)$ %	
January	1.62	0.64	
February	0.45	0.61	
March	0.45	0.85	
April	0.71	0.48	
May	1.13	0.70	
June	0.50	0.61	
July	1.05	0.35	
August	1.30	0.38	
September	0.43	1.40	
October	0.61	0.51	
November	1.21	0.53	
December	0.15	0.40	

Table 2

Taking into consideration the above methodology, the Operator's estimations for the Monthly distribution of Balancing Gas purchase and sale for the Year 2026 are presented in Table 3¹ below – an overall Table with the Operator's estimation of the Monthly Natural Gas demand per consumption category and the estimation of the Balancing Gas purchase and sale for the Year

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<sup>&</sup>lt;sup>1</sup>For the conversion of the volume units (Nm³) to energy units (kWh), the weighted (flow) average of the Gross Calorific Value of the Exit Points of the NNGTS for Year 2024 was used, i.e.11.579 kWh / Nm³.

Month of the Year 2026	Balancing Gas Purchase (kWh)	Balancing Gas Sale (kWh)
January	180,761,776	70,994,463
February	37,566,748	51,678,604
March	33,643,985	63,328,570
April	36,955,756	24,937,267
May	68,019,818	42,146,243
June	31,847,443	38,911,541
July	92,962,071	30,675,689
August	81,140,576	23,840,843
September	26,168,673	84,814,395
October	32,765,920	26,925,117
November	73,287,529	32,193,980
December	12,248,317	32,161,721
Total	707,368,611	522,608,432

Table 3: Estimation of the Monthly distribution of Balancing Gas purchase and sale for the Year 2026

In accordance with the provisions of article 44A of the Network Code, the Operator undertakes Balancing Actions through:

- The purchase and sale of Balancing Gas in the form of Short-term Standardized Products (STPSs) carried out on the Operator's Trading Platform, either through continuous negotiations or through auctions; and/or
- 2. The use of Balancing Services when the following reasons are met:
  - it was not possible to purchase/sell the required Balancing Gas Quantity through Shortterm Standardized Products; and/or
  - in its estimation, it is unlikely to purchase/sell the required Balancing Gas Quantity through Short-term Standardized Products; and/or
  - in its estimation, the use of these products is not, or is not likely to provide, the necessary response to maintain the Transmission System within its operational limits; and/or
  - due to the urgent need for safe, cost-efficient and effective operation of the NNGS, an auction cannot be conducted.

Based on the above and taking into account the period of the last 15 Months, i.e. 01/2024 - 03/2025, the Operator calculated the percentage Z% of the estimated Balancing Gas Quantities expected to be covered through the use of Balancing Services, for the Year 2026, on the basis of the following methodology:

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$$Z\% = \frac{\sum_{i=1}^{n} BG^{service}}{\sum_{j=1}^{k} BG^{P}} *100$$

where:

- $\sum_{i=1}^{n} BG^{service}$ : The sum of Balancing Gas Quantities injected into the NNGTS through the Entry Point 'Agia Triada', via usage of Balancing Services for each Day (i) for the period 01/2024 03/2025:
- $\sum_{j=1}^{k} BG^{p}$ : The sum of Balancing Gas Quantities purchased through STSPs in the Trading Platform and/or via usage of Balancing Services for each Day (j) for the period 01/2024 03/2025:
- n: The number of Days of the period 01/2024 03/2025 during which Balancing Gas
   Quantities were injected into the NNGTS via usage of Balancing Services; and
- k: The number of Days of the period 01/2024 03/2025 during which the Operator purchased Balancing Gas Quantities through STSPs in the Trading Platform and/or via usage of Balancing Services.

Based on the above, it appears that during the period 01/2024 - 03/2025, 16% of the Balancing Gas Quantities for purchase was covered through the use of Balancing Services, which is also adopted as an estimate of the percentage of the Balancing Gas Quantities for purchase that will be covered through the use of Balancing Services by the Operator for the Year 2026, in relation to the total estimated Balancing Gas Quantities for purchase for the same Year.

# 5. Balancing Services Agreement

Taking into consideration the provision of article 47 of the Code, aiming firstly at the proper, cost-efficient and effective operation of the NNGS, the Operator will enter into Balancing Services framework agreement with Natural Gas suppliers, which will be chosen after an international bid, according to paragraph 2,c of article 68 of the Law 4001/2011, for the supply of Balancing Gas during the period 01.01.2026 07:00 – 01.01.2029 07:00 (three (3) Years), with the possibility of extension for one (1) Year.

The selection of a more than one year duration is due to the maturity now achieved in the Natural Gas market, as no new suppliers are expected to enter the Balancing Gas procurement process in the immediate future - it should be noted that there is already a high number of selected suppliers in the current Balancing Services Agreements for the Year 2025. This approach aims to maximize efficiency,

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minimize administrative costs, and align with the evolution of the Natural Gas market, given that the need for Balancing Services is expected to continue in the next years. It is noted that the estimated quantities of Natural Gas for Balancing Services purposes will be updated annually and submitted for approval to RAAEY through the Annual Balancing Services Planning according to the provisions of article 46 of the Code.

The procurement of Balancing Gas will take place within the framework of fulfilling relevant Procurement Requests issued by the System Operator to preselected suppliers, according to the respective needs for Balancing Services. The selection of the supplier will be based on criteria specified in the framework contracts, relating to the lowest offered procurement price and the satisfaction of the Operator's request regarding the quantity of Balancing Gas and its delivery date.

The unit procurement price will follow the EEX Day European Gas Spot Index (EEX Day EGSI) for Natural Gas delivery at the Title Transfer Facility (TTF), as published on the European Energy Exchange (EEX) Group website. For each procurement request from the Operator, the maximum price that suppliers will be able to offer will be limited to the aforementioned TTF index on the day the Procurement Request is issued for the required quantity of Gas for Balancing Services, increased by a coefficient which will be precisely defined in the framework contracts and which will not be subject to any price increase or periodic adjustment throughout the duration of the aforementioned framework contracts.

Furthermore, taking into consideration:

- i. The NNGTS topology and construction features;
- ii. The NNGTS Technical, Booked and Available Capacity at the Entry Points;
- iii. The NNGTS geographical Natural Gas Receptions allocations; and
- iv. The current framework regulating the Greek Natural Gas market;

the supplied Balancing Gas Quantities will relate solely to Liquefied Natural Gas (LNG), delivered to the Operator at Revithoussa LNG Facility.

Also, taking into consideration:

- the Revithoussa LNG Facility Storage;
- the requirements of the Code and particularly Chapter 11 regarding the terms of access to the Revithoussa LNG Facility (Temporary LNG Storage Period, Minimum Re-gasification Capacity); and
- the size of LNG vessels that are available in the Liquefied Natural Gas market;

the Balancing Services framework agreement will provide the authority to the Operator to specify, in each request to suppliers, the LNG quantity and the delivery date, so that the smooth operation of the greek Natural Gas market is not upset, in accordance with the requirements of the Code.

Given the impossibility to confirm the Operator's estimations regarding the required Natural Gas Quantities for balancing purposes for the next Years, the abovementioned framework agreement will

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not contain imposing restrictions such as minimum supply quantity or payment clauses, irrespective of LNG deliveries.

## 6. Part of the NNGS Capacity for Gas Balancing for the Year 2026

The Operator, taking into account the significant variation of the required Daily Balancing Gas Quantity during a Year, proposes the methodology of determining the part of the NNGS capacity - which according to Section 5 above refers to part of the LNG Facility Re-Gasification Capacity and the Transmission Capacity for Delivery at the NNGTS Entry Point 'Agia Triada' - which can be used for Balancing Actions through the use of Balancing Services by the Operator during the Year 2026, aiming to the effective and cost-efficient operation of the NNGS and to improving the level of Transmission and LNG Facility services to Users.

The Operator, taking into account the historical data from the period 01/2024-03/2025 (see Annex 3) and correlating the maximum Daily Balancing Gas Quantity that was injected in the NNGTS per Month with the corresponding sum of the Users' Booked Transmission Capacity for Reception, proposes the application of the following methodology for the calculation of the Monthly NNGS Capacity estimated to be required for Balancing Services by the Operator during the Year 2026:

$$\Delta E_{M_{2026}} = OA_{M,2026} * E\Delta M_{M,2026},$$

where:

• 
$$OA_{M,2026} = \frac{\frac{AQ_{E\Xi(max)_{M,2025}}}{\Delta M_{M,2025}} + \frac{AQ_{E\Xi(max)_{M,2024}}}{\Delta M_{M,2024}}}{2}$$
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- AQ<sub>EE(max)<sub>M,Y</sub></sub>: the maximum Daily Balancing Gas Quantity (kWh/Day) of Month M of Year Y, that was purchased through Balancing Services;
- $\Delta M_{M,Y}$ : the sum of the Booked Transmission Capacity for Reception (kWh/Day) that was booked by all Users, during the Day of the injection to the NNGTS of the maximum Daily Balancing Gas Quantity of the Month M of the Year Y; and

• 
$$E\Delta M_{M,2026} = \frac{(\Delta M_{M,2025} + \Delta M_{M,2024})}{2}$$

Based on the above methodology, the Operator's Monthly estimation of the NNGS Capacity

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<sup>&</sup>lt;sup>2</sup> For the calculation of the Monthly Capacity of the NNGS, for the Year 2025 only historical data for the first quarter of Year 2025 were used

that will be required for Gas Balancing is shown in Table 4.

Month of the Year 2026	NNGS Capacity for gas balancing (kWh/Day)
January	9,369,782
February	2,577,422
March	0
April	11,680,588
May	5,176,258
June	7,009,098
July	3,759,345
August	9,961,073
September	2,130,752
October	2,417,534
November	9,901,529
December	3,044,222

Table 4

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ANNEX 1

Monthly Estimation of Natural Gas Demand per Consumption Category and Estimation of Balancing Gas Quantities

2026	Power Production	Other Consumers	Exports	Total consumption		Balancing	Gas (kWh)
	Nm³	Nm³	Nm³	Nm³	kWh	Purchase	Sale
January	487,543,086	360,806,482	112,449,315	960,798,883	11,125,090,266	180,761,776	70,994,463
February	336,235,332	288,662,519	101,567,123	726,464,974	8,411,737,934	37,566,748	51,678,604
March	282,723,429	245,249,232	112,449,315	640,421,976	7,415,446,060	33,643,985	63,328,570
April	163,188,228	174,946,546	108,821,918	446,956,692	5,175,311,537	36,955,756	24,937,267
May	260,379,940	146,997,012	112,449,315	519,826,267	6,019,068,346	68,019,818	42,146,243
June	294,120,262	147,122,597	108,821,918	550,064,777	6,369,200,053	31,847,443	38,911,541
July	500,558,422	150,031,248	112,449,315	763,038,985	8,835,228,407	92,962,071	30,675,689
August	298,532,522	127,599,778	112,449,315	538,581,615	6,236,236,520	81,140,576	23,840,843
September	285,239,362	130,581,824	108,821,918	524,643,103	6,074,842,490	26,168,673	84,814,395
October	214,712,274	133,081,692	112,449,315	460,243,281	5,329,156,951	32,765,920	26,925,117
November	234,639,474	179,132,850	108,821,918	522,594,242	6,051,118,728	73,287,529	32,193,980
December	329,191,397	260,864,041	112,449,315	702,504,753	8,134,302,535	12,248,317	32,161,721
Total	3,687,063,728	2,345,075,822	1,324,000,000	7,356,139,548	85,176,739,826	707,368,611	522,608,432

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ANNEX 2
Historical data of Balancing Gas Quantities for the period 01/2024 – 03/2025

Year	Month	Injected Balancing Gas Quantity (kWh)	Balancing Gas Quantity for purchase via STPSs (kWh)	Balancing Gas Quantity for sale via STPSs (kWh)	Total Natural Gas Reception (kWh)
2024	January	8,685,399	115,000,000	21,149,000	6,037,648,319
2024	February	0	24,000,000	19,863,000	4,884,380,562
2024	March	0	48,000,000	26,730,000	5,289,822,342
2024	April	18,965,007	11,000,000	20,220,000	4,196,321,884
2024	May	8,218,590	48,000,000	34,834,000	4,974,778,635
2024	June	7,009,098	20,000,000	33,000,000	5,401,574,922
2024	July	11,874,722	53,817,000	21,677,000	6,243,421,270
2024	August	21,228,400	53,647,000	22,000,000	5,754,712,709
2024	September	2,130,752	18,850,000	68,000,000	4,870,509,200
2024	October	2,417,534	26,650,000	23,886,000	4,727,639,316
2024	November	18,372,767	66,083,000	37,100,000	6,973,244,750
2024	December	3,044,222	8,000,000	29,000,000	7,334,644,059
2025	January	13,163,806	81,000,000	72,600,000	7,840,094,857
2025	February	2,577,422	29,000,000	64,600,000	7,858,284,982
2025	March	0	0	64,000,000	5,321,325,530

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ANNEX 3

Historical data of Maximum Balancing Gas Quantity and Booked Transmission Capacity for Reception by Users

Month	Year	Maximum Balancing Gas Quantity (kWh/Day)	Sum of all Users' Booked Transmission Capacity for Reception on the Day of the Maximum Balancing Gas Quantity (kWh/Day)
January	2025	10,079,540	273,664,470
January	2024	8,685,399	256,819,770
February	2025	2,577,422	296,922,990
reblualy	2024		
March	2025		
IVIAICII	2024		
April	2024	11,680,588	248,547,840
May	2024	5,176,258	220,730,382
June	2024	7,009,098	236,037,634
July	2024	3,759,345	217,398,474
August	2024	9,961,073	226,153,486
September	2024	2,130,752	201,691,228
October	2024	2,417,534	201,362,358
November	2024	9,901,529	248,895,916
December	2024	3,044,222	273,019,254

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