



**Transelectrica®**  
Societate Administrată în Sistem Dualist

# **MARKET MONITORING REPORT**

## **Balancing Market**

### **June 2024**

ANRE - Romanian Energy Regulatory Authority  
HHI - Herfindahl-Hirschman Index  
BRP - Balance Responsible Party  
BMP - Balancing Market Participant  
BM - Balancing Market  
DAM - Day Ahead Market  
TSO - Transmission System Operator  
DU – Dispatchable Unit  
PN – Physical Notification  
NDC - National Dispatching Center  
C1 – The market share of the largest market participant  
C3 – Total market share of top 3 market participants  
NPS – Minimum number of residual generators  
TTC – Total Transfer Capacity  
NTC – Net Transfer Capacity  
ATC – Available Transfer Capacity  
NRA – National Regulatory Authority

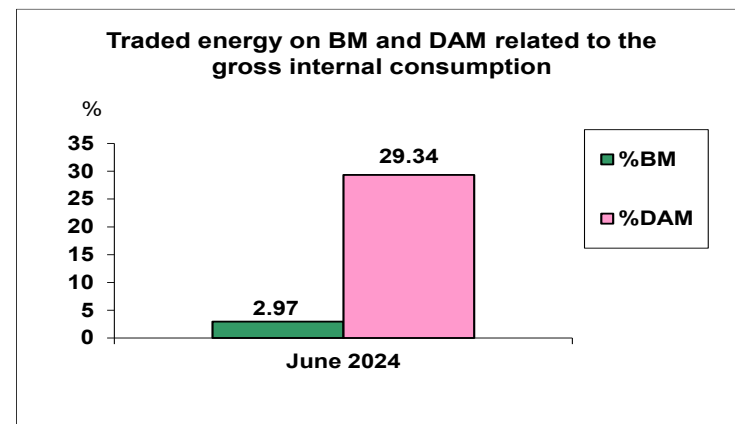
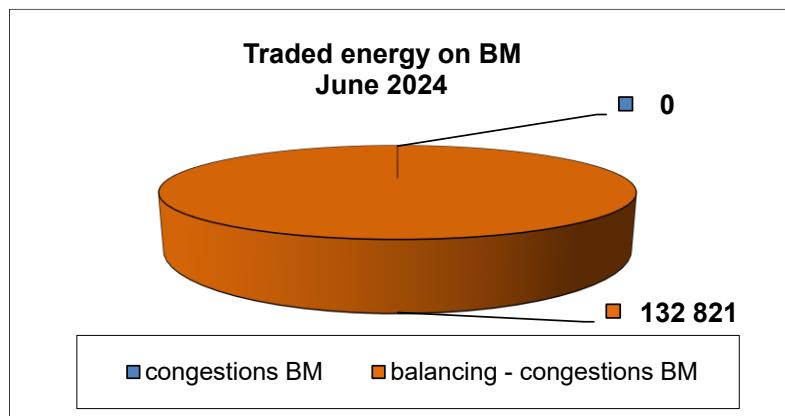
According to the Commercial Code, Transelectrica, the Romanian Transmission System Operator, operates and monitors the activity of 3 types of markets: Balancing Market, Ancillary Services Market and Market for Allocation of Cross-Border Capacities.

Using the records from the markets data bases, Transelectrica prepares daily, weekly and monthly monitoring reports. A part of the data included in these reports (those data which are not confidential) are published on the website [www.transelectrica.ro](http://www.transelectrica.ro) (section Transparency).

- At the beginning of the month on the Balancing Market operated 149 BRPs, 89 market participants, holding 178 commercially operating dispatchable units. According to the provisions of ANRE Order no. 213/2020, as subsequently amended and supplemented during the month, the following changes were made:
  - were registered in the BM during the probationary period, the following BRPs:
    - ✓ COLINA SOLAR (PROBE) (30XROCOLINAS---E) (10.06) following the start of the trial period for the solar production unit COLINA\_PROBE;
    - ✓ HORECO SERVICE (PROBE) (30XROHOSE-----B) (10.06), following the start of the trial period for the solar production unit HORECO\_PROBE;
    - ✓ DACIA ENERGY GREEN (PROBE) (30XRODEGREEN--PE) (17.06), following the start of the trial period for the solar production unit HOREZU\_PROBE;
    - ✓ OLT PIESSE (PROBE) (30XROOLTPIESS-PY) (17.06), following the start of the trial period for the solar production unit OPORELU\_PROBE;
    - ✓ MEX DEJ LOGISTIC (PROBE) (30XROMEXDEJ---P1) (22.06), following the start of the trial period for solar production unit TULCEA\_PROBE;
    - ✓ APOLD GREEN ENERGY (PROBE) (28.06) following the start of the trial period for the solar production unit APOLD\_PROBE;
  - During the month, the following changes were made to the BM platform:
    - ✓ starting with 10<sup>th</sup> of June, GREENLIGHT SOLUTIONS (30XROGREENSOL--7) was removed from the BMP list and dispatchable unit BABAANA was registered to BMP VATECH CONSULTING (30XRO-VATECH---J) and BRP ENERGY DISTRIBUTION SERVICES (30XRODISTRIB---W);
    - ✓ starting with 10<sup>th</sup> of June, the non-dispatchable solar production unit BALTESTI was transferred from BRP MET ROMANIA ENERGY SA (30XROREFURO----E) to BRP CINTAENERGY (30XROCINTAEN---N);
    - ✓ starting with 15<sup>th</sup> of June, non-dispatchable hydrocarbon production unit RACARI was registered as a dispatchable unit with BMP ENERGY INNOVATIVE SOLUTIONS (30XRO-EIS-----S) and BRP ENEL-CIGA (30XROENEL-CIGA-Z).

## The Balance Generation/Consumption

- The average monthly value of generated power was 5 681 MW and the actual internal gross consumption was de 6 219 MW.
- The NDC consumption forecast was close to the actual consumption, the standard deviation being 3.03%. Bigger differences were registered in case of consumption values resulted as the sum between notified production and total scheduled exchanges with the neighbouring power systems. In this case the standard monthly deviation value was **6.51%**. The greatest daily deviation regarding the notifications was registered on the 15<sup>th</sup> of June (**10.56%**).
- The energy used in June 2024 for balancing the power system and congestion management was 132 821 MWh (with an average power of 184 MW, which means 2.97% from the internal gross consumption). There were no transactions for network congestion management.
- The actual energy delivered corresponding to transactions outside the balancing market (with financial compensation) was 129 MWh. There were no transactions with financial compensation for network congestion management.
- The energy used in June 2024 on Day Ahead Market was de 1 313 553 MWh (with an average power of 1 824 MW, which means 29,34% from the internal gross consumption). Data are shown in EET hours.
- The total cost of the energy traded on the Balancing Market was 428 916 704 lei (with an average weighted price of 3 229,29 lei/MWh).
- The cost for network congestion management, paid by CNTEE Transelectrica S.A. was 0 lei



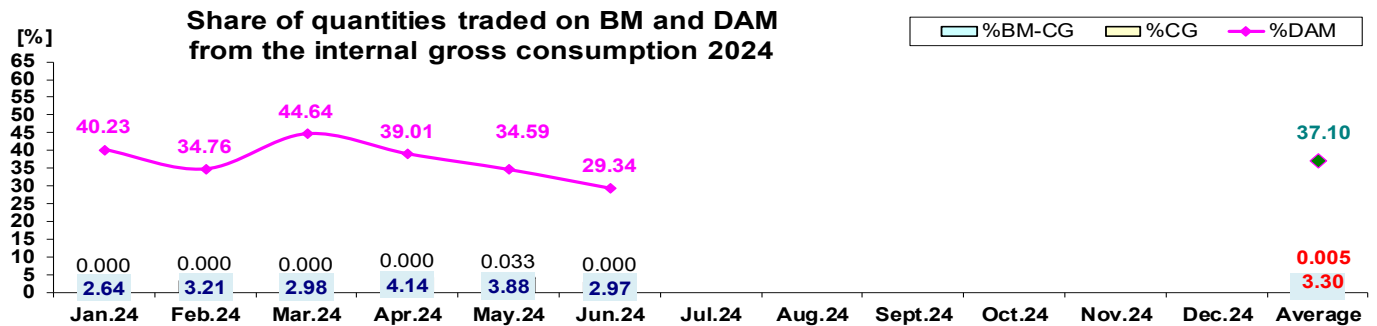
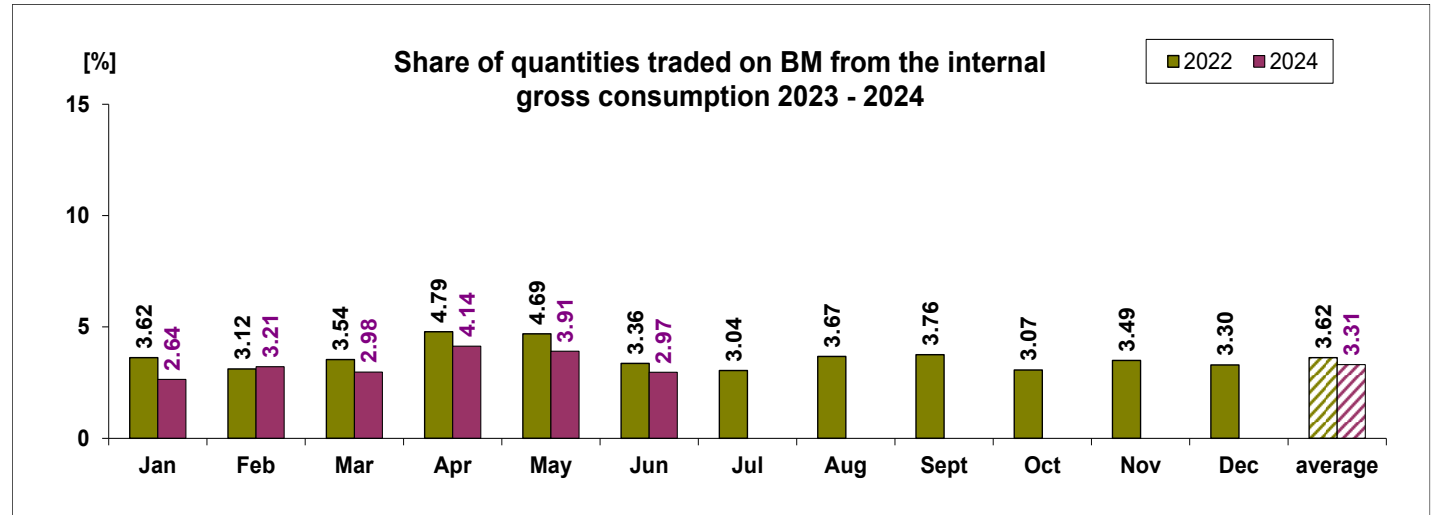


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# Balancing Market

## The Balance Generation / Consumption

• Monthly percentage values resulted are calculated as ratio between traded volumes on BM / outside BM with financial compensation and gross internal consumption. The annual average value was calculated as average of monthly values. (BM – Balancing Market, DAM – Day Ahead Market, BM-CG – difference between Balancing Market and traded volume on congestion).



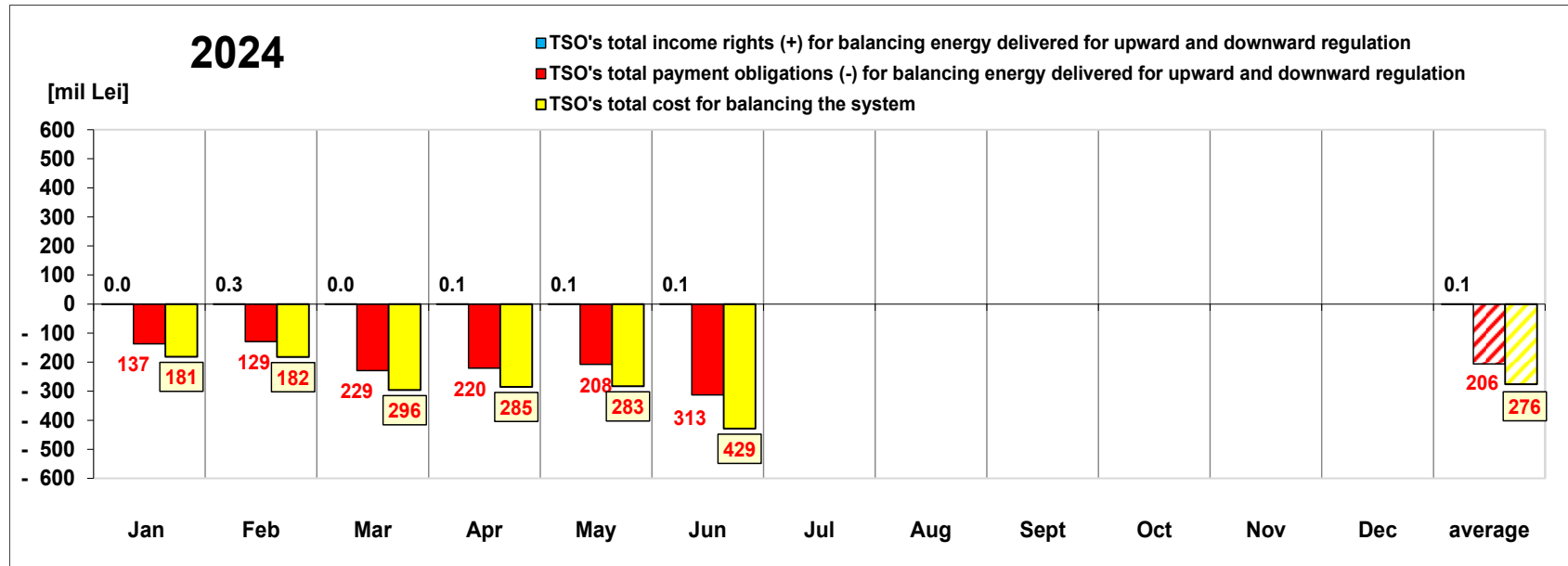
2024													
	Jan.24	Feb.24	Mar.24	Apr.24	May.24	Jun.24	Jul.24	Aug.24	Sept.24	Oct.24	Nov.24	Dec.24	Average
%BM	2.64	3.21	2.98	4.14	3.91	2.97							3.31
%DAM	40.23	34.76	44.64	39.01	34.59	29.34							37.10
%CG	0.000	0.000	0.000	0.000	0.033	0.000							0.0054
%BM-CG	2.644	3.215	2.977	4.139	3.879	2.966							3.303
% outside BM	0.00	0.00	0.03	0.18	0.00	0.00							0.03



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# Balancing Energy Market Transactions



[Lei]		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	average	Sum
TSO's income rights / payment obligations for balancing energy delivered for downward regulation	incomes (+) prices ≥ 0	18 140	278 638	35 910	87 468	69 205	70 393							93 293	559 755
	payments (-) prices < 0	-35 668 475	-76 223 402	-173 433 646	-119 087 479	-99 218 257	-109 076 158							-102 117 903	- 612 707 417
TSO's payment obligations / income rights for balancing energy delivered for upward regulation	payments (-) prices ≥ 0	-101 648 720	-52 902 529	-55 602 939	-101 391 184	-108 501 984	-204 015 595							-104 010 492	- 624 062 951
	incomes (+) prices < 0	0	0	0	0	0	0							0	0
TSO's total income rights (+) for balancing		18 140	278 638	35 910	87 468	69 205	70 393							93 293	559 755
TSO's total payment obligations (-) for		-137 317 196	-129 125 931	-229 036 585	-220 478 663	-207 720 241	-313 091 753							-206 128 395	-1 236 770 368
TSO's total cost for balancing the system		-181 297 377	-182 475 562	-296 213 092	-284 999 109	-283 192 354	-428 916 704							-276 182 366	-1 657 094 197
Value of transactions outside BM (with		0	0	0	0	0	0							0	0
Congestion Cost on BM		0	0	0	0	- 107 222	0							- 17 870	- 107 222
Congestion Cost outside BM		0	0	0	0	0	0							0	0

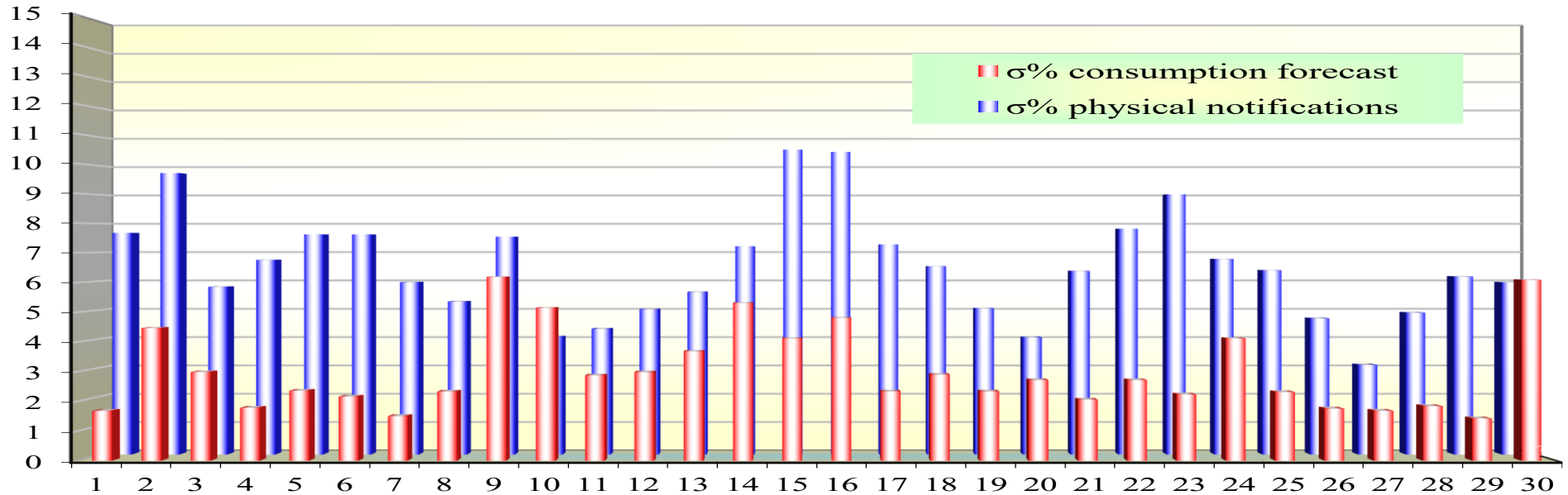
\* The annual average value was obtained as arithmetic average of the monthly values.



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# Balancing Market

Standard deviation of physical notifications and consumption forecast against the actual consumption in June 2024



June 2024

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
σ% consumption forecast	1.68	4.47	2.99	1.78	2.36	2.16	1.50	2.33	6.19	5.15	2.87	2.98	3.68	5.31	4.12	4.81	2.33	2.90	2.33	2.72	2.05	2.72	2.23	4.12	2.31	1.75	1.68	1.84	1.42	6.09
σ% physical notifications	7.68	9.75	5.81	6.74	7.62	7.62	5.97	5.30	7.54	4.08	4.35	5.03	5.63	7.21	10.56	10.48	7.27	6.51	5.05	4.05	6.35	7.82	9.01	6.77	6.38	4.71	3.10	4.91	6.16	5.96

**σ<sub>average</sub>% consumption forecast = 3.03**

**σ<sub>average</sub> % physical notifications = 6.51**

$$\sigma_{average\%consumptionforecast} = \frac{\sqrt{\frac{1}{n} \sum_{i=1}^n (R - P)^2}}{\bar{R}} \cdot 100$$

$$\sigma_{average\%notifications} = \frac{\sqrt{\frac{1}{n} \sum_{i=1}^n (R - N)^2}}{\bar{R}} \cdot 100$$

**Public**

**R = Realized Consumption;**

**N = Physical Notifications;**

**P = Consumption Forecast.**





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# Balancing Market

## Balancing energy – Selected prices and quantities in June 2024

**June 2024**

### Downward Regulation

Downward Regulation	Prices			Quantities			Participants						
	Weighted				Actually								
	Average	Maximum	Minimum	Selected	Delivered	Deviation	C1	C3	C1	C3	HHI	HHI	
	[lei/MWh]	[lei/MWh]	[lei/MWh]	[MWh]	[MWh]	[%]	Number	(selected)	(actually delivered)	(selected)	(actually delivered)		
Secondary	-6562.78	0.10	-7000.00	16294.41	16294.41	0.00%	4	66.11%	98.33%	66.11%	98.33%	5166	5166
Fast Tertiary	-70.73	255.00	-987.60	30693.26	29593.15	3.58%	15	46.12%	88.96%	45.68%	89.10%	3309	3310
Slow Tertiary	-	-	-	0.00	-	-	0	-	-	-	-	-	-
				46987.66	45887.56	2.34%							

### Upward Regulation

	<div>Weighted Average</div>			<div>Actually Delivered</div>									
	Maximum	Minimum		Selected	Deviation		C1	C3	C1	C3	HHI	HHI	
	[lei/MWh]	[lei/MWh]	[lei/MWh]	[MWh]	[MWh]	[%]	Number	(selected)	(actually delivered)	(selected)	(selected)	(actually delivered)	
Secondary	6367.91	7000.00	2000.00	20448.84	20448.84	0.00%	4	68.12%	98.15%	68.12%	98.15%	5380	5380
Fast Tertiary	1109.35	2550.00	451.75	68650.37	66484.20	3.16%	6	77%	94.67%	77.55%	94.57%	6112	6184
Slow Tertiary	-	-	-	0.00	-	-	0	-	-	-	-	-	-
				89099.21	86933.04	2.43%							

**June 2024**

### Downward Regulation

	Transactions outside BM (financial compensation)			Participants
	Selected [MWh]	Actually Delivered [MWh]	Deviation [%]	Number
Fast Tertiary	149.50	128.63	13.96%	1



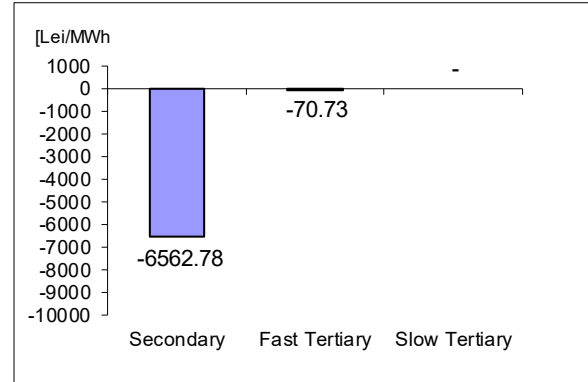
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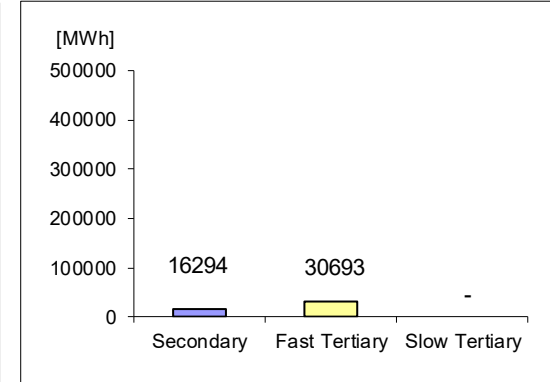
# Balancing Market

## Balancing energy – Selected prices and quantities in June 2024

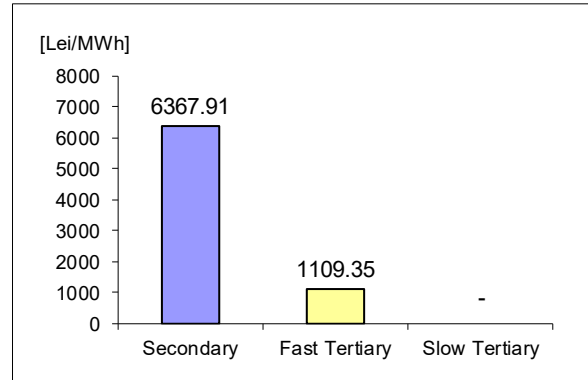
Downward regulation - average price [lei/MWh]



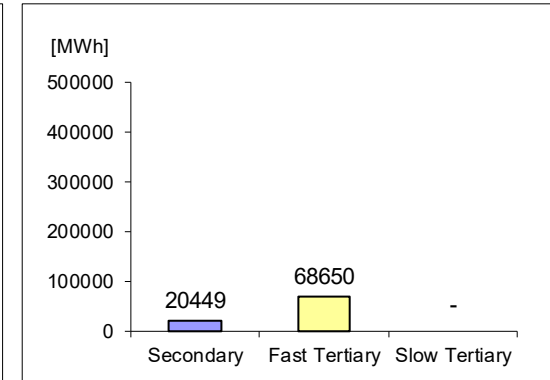
Downward regulation - selected quantities



Upward regulation - average price [lei/MWh]



Upward regulation - selected quantities



$$\text{Price}_{\text{average weighted, regulation type, direction}} = \frac{\sum (Q_{i,j} * P_{i,j})}{\sum Q_{i,j}},$$

where  $Q_{i,j}$ ,  $P_{i,j}$  represents the quantity, respectively the price of the energy selected, corresponding to the selected transaction  $j$  in the dispatching interval  $i$ .

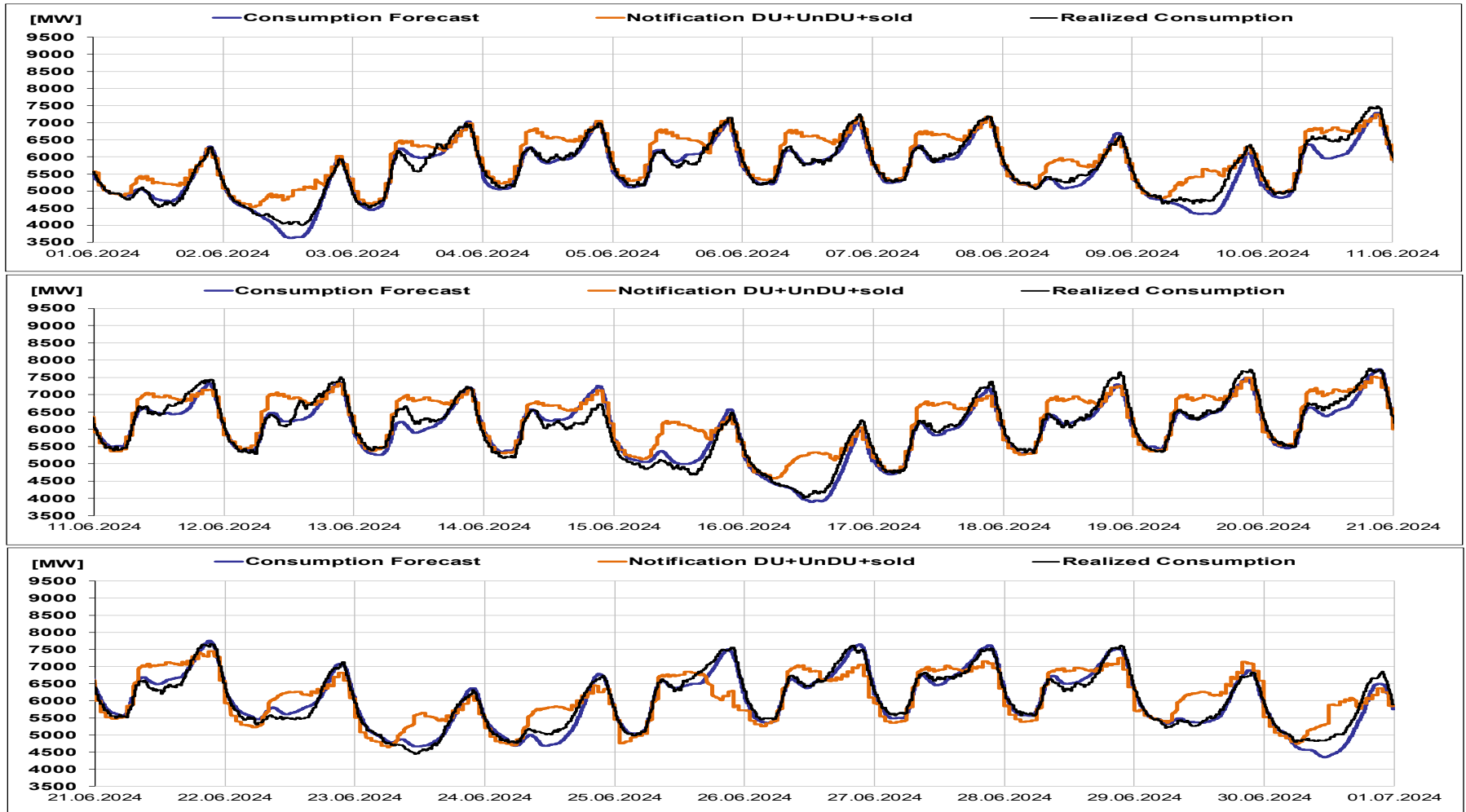


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# Balancing Market

## Realized consumption, forecast, notifications in D-1



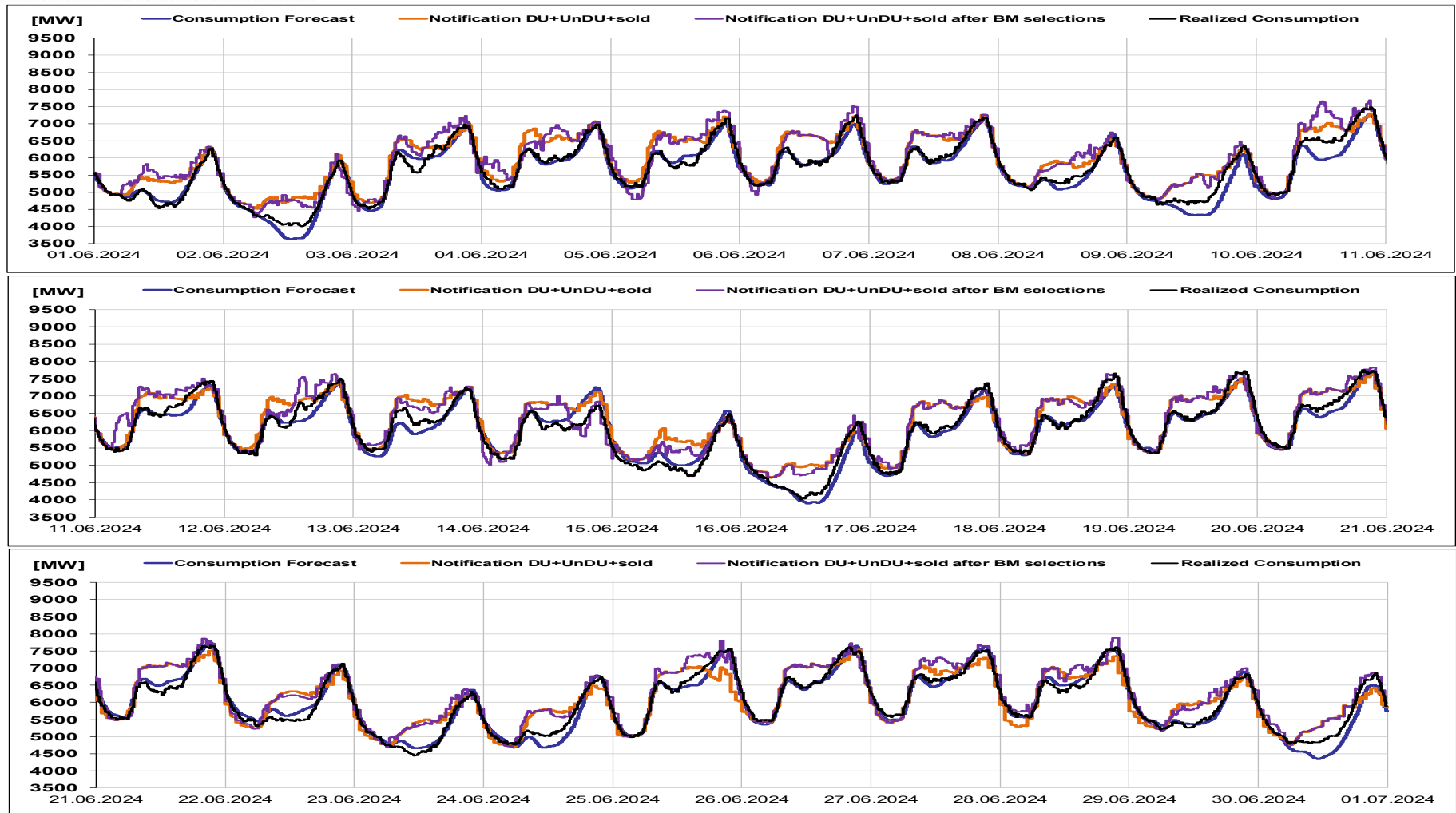


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# Balancing Market

Realized consumption, forecast, notifications, notifications after BM selections in D (end of delivery day)

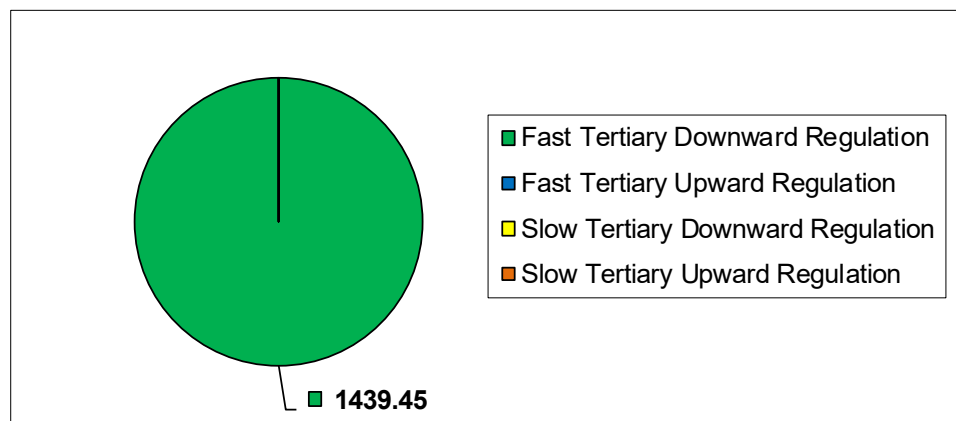


May 2024

Fast Tertiary Downward Regulation  
Fast Tertiary Upward Regulation  
Slow Tertiary Downward Regulation  
Slow Tertiary Upward Regulation

Quantities [MWh]		Participants
Selected [MWh]	Actually Delivered [MWh]	Number
1439.45	1388.77	4
0.00	-	0
0.00	-	0
0.00	-	0
1439.45	1388.77	

Selected energy [MWh]



Note: the value of selected/delivered energy related to final transactions for internal congestion management (which induces costs for internal congestion management) is the one resulting after applying the algorithm for determining costs for system balancing and for internal congestion management from the settlement stage on the balancing market.



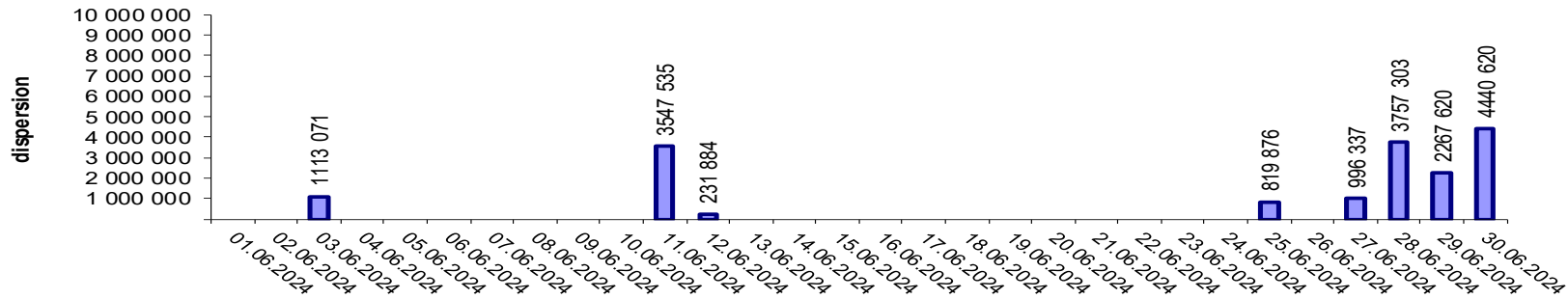
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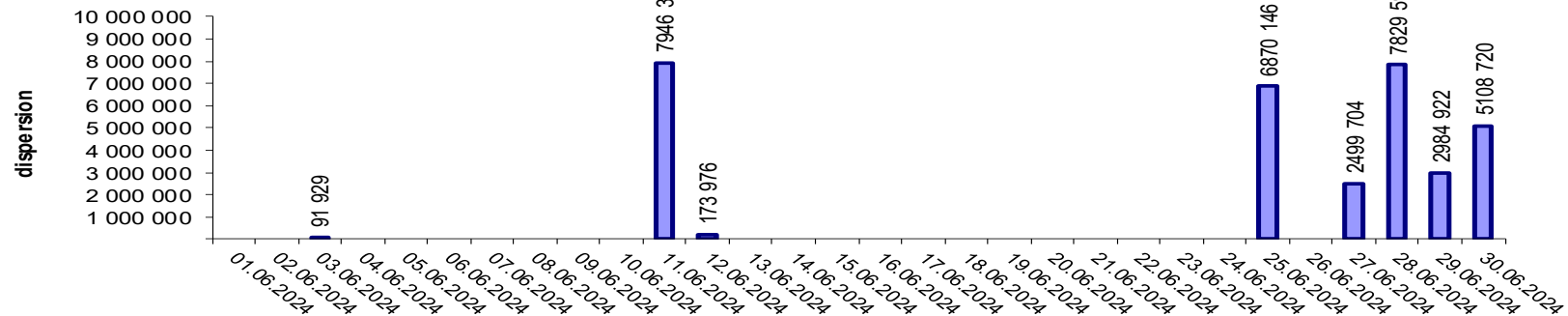
# Balancing Market

## Indicators – Price Volatility for Secondary Regulation

Price Volatility for Secondary Upward Regulation



Price Volatility for Secondary Downward Regulation



Volatility = price dispersion on studied interval:

$$\frac{1}{n-1} \sum_{i=1}^n (x_i - \bar{x})^2$$

Public



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