



ROMANIAN ENERGY REGULATORY AUTHORITY

MONITORING AND INVESTIGATIONS DEPARTMENT



ELECTRICITY MARKET MONITORING REPORT

OCTOBER 2021

- This document represents an unofficial translation of the Romanian version of the document -

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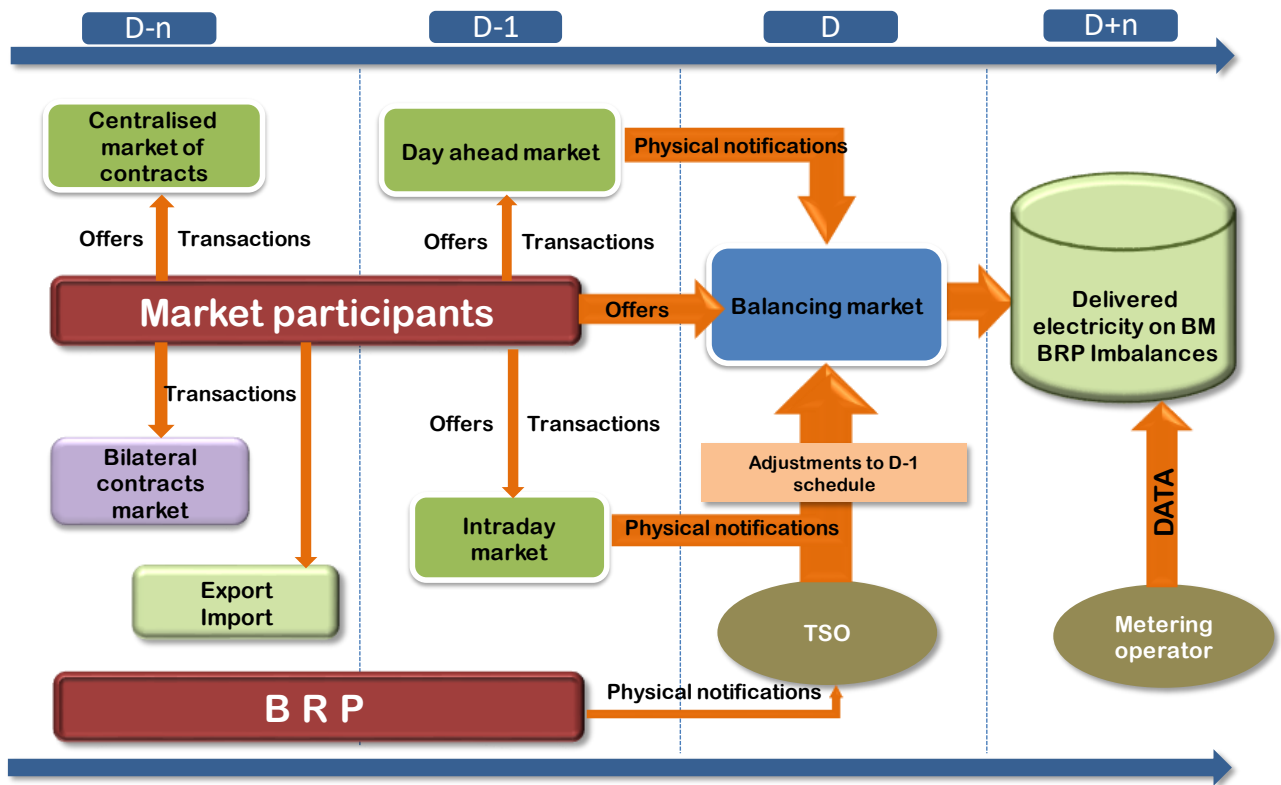
I. MAIN EVENTS IN THE DEVELOPMENT OF THE ROMANIAN ELECTRICITY MARKET

- **GD 365/1998** – vertically integrated monopoly – RENEL – was split into separated distribution and supply companies (SC Electrica SA) and generation companies (SC Termoelectrica SA and SC Hidroelectrica SA) were established within a new company - CONEL SA. Two other electricity generators (SN Nuclearelectrica SA and RAAN) were separately established;
- Transmission, system services and market administration were separately organised, within CONEL SA; the relationships between parties within the electricity sector were settled based on contracts;
- **GD 122/2000** – electricity market opening at 10%;
- **GD 627/2000** – CONEL holding is dissolved;
- **September 2000** – launch of the compulsory electricity spot market in Romania, operated by OPCOM and organized based on pool model;
- **GD 1342/2001** – SC Electrica SA splits in 8 subsidiaries for electricity distribution and supply;
- **GD 1524/2002** – SC Termoelectrica SA reorganizes in several separate legal entities for generation;
- **July 2005** – launch of the new market model, based on:
 - voluntary spot market, with both sides offers and bilateral settlement;
 - mandatory balancing market, with TSO as single counterparty;
 - financial responsibilities for balancing are allocated to the BRP;
- **GD 644/2005** – electricity market opening at 83.5%;
- **November 2005** – launch of the green certificates market;
- **December 2005** – launch of the centralized market for bilateral contracts;
- **March 2007** – launch of the centralized market for partially standardized bilateral contracts with continuous negotiation;
- **GD 638/2007** – fully opening of electricity and gas markets;
- **July 2007** – rules for capacity market established;
- **July 2008** – launch of the mechanism of direct debit and guarantee for electricity transactions on the day-ahead market (OPCOM as central counterparty);
- **August 2008** – process of legal unbundling of distribution and supply companies concluded;
- **August/October 2010** – launch of bilateral coordinated auctions for capacity allocation on interconnections with Hungary and Bulgaria;
- **July 2011** - launch of the intraday market;
 - GD 930/2010** – SC Electrica Furnizare SA established through the merger of the former last resort suppliers Electrica Furnizare Muntenia Nord, Electrica Furnizare Transilvania Nord and Electrica Furnizare Transilvania Sud;
- **June 2012** – a new entity obtains the generation license and enters on the electricity market - Complexul Energetic Oltenia SA, established in a dual system through the merger of the former SNLO Tg. Jiu, Complexul Energetic Turceni, Complexul Energetic Rovinari and Complexul Energetic Craiova (GD 1024/2011);
- **July 2012** – Law no. 123/2012 on electricity and natural gas enters into force;
- **September 2012** – the application of the first stage of the timetable of phasing out regulated electricity tariffs to final clients who choose not to exercise their eligibility rights, in accordance with the obligations assumed by the Romanian Government in relation with the IMF, World Bank and European Commission;
- **October 2012** – Law no. 160/2012 on the organisation and functioning of the Romanian Energy Regulatory Authority entered into force;
- **November 2012** - a new entity obtains the generation license and enters the electricity market - Complexul Energetic Hunedoara SA, established through the merger of the former Electrocentrale Deva and Electrocentrale Paroseni (GD 1023/2011);
- **December 2012** – launch of the organised electricity market for large clients;
- **July 2013** – launch of centralized market trading with continuous double negotiation of bilateral contracts for electricity;
- **August 2013** – removal of injection transmission tariff for the imported and respectively of the extraction transmission tariff for the exported quantities, and of the corresponding system services;
- **December 2013** – removal of the export tariffs applied by the electricity market operator;

- certification with conditions for CNTEE Tranelectrica SA as an independent transmission and system operator;
- application of last stage of the phasing out calendar for removal of the regulated tariffs applied to the final non-household clients who do not use their eligibility rights;
- **August 2014** – CNTEE Tranelectrica SA certification as NPS transmission system operator following the „independent system operator” model;
- **October 2014** – entry into force of Law no. 127/2014 amending the Law no. 123/2012;
- **November 2014** – the launch of the CZ-SK-HU-RO market coupling project, that encompasses the DAM markets from the Czech Republic, Slovakia, Hungary and Romania;
- **February 2015** – entry into force of the new centralized market for bilateral contracts with its components: Extended Auctions Mechanism (CMBC–EA), Continuous Negotiation Mechanism (CMBC–CN), Fuel Processing Mechanism (CMBC–FP);
- **February 2015** – implementing the centralized market for universal service;
- **November 2016** - entry into force of Law no. 203/2016 amending Law no. 123/2012 on electricity and natural gas;
- **July 2018** - entry into force of Law no. 167/2018 amending and supplementing Law no. 123/2012 on electricity and natural gas;
- **December 2018** – EGO no. 114/2018 regarding the introduction of some measures in the field of public investments and some fiscal-budgetary measures, the modification and completion of some normative acts and the extension of some deadlines;
- **March 2019** – EGO no. 19/2019 amending and supplementing EGO no. 114/2018 on establishing measures in the field of public investment and some fiscal-budgetary measures, the modification and completion of some normative acts and the extension of some deadlines;
- **July 2019** – introduction of the centralized market for electricity from renewable sources supported by green certificates.
- **November 2019** – launch of the Single Intraday Coupling (SIDC) through continuous trading of the Intraday electricity markets of Romania, Bulgaria, Hungary, Croatia, The Czech Republic, Poland, Slovenia, Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Latvia, Lithuania, Norway, Sweden, Holland, Portugal and Spain.
- **January 2020** – EGO no. 1/2020 regarding some fiscal-budgetary measures and for the modification and supplementation of some normative acts.
- **April 2020** - Introduction of the Centralized Market for Electricity Bilateral Contracts – Extended Auctions Mechanism (CMBC-EA-flex).
- **July 2020** – publication of Law no. 155/2020 on the modification and revision of Law no. 123/2012 on electricity and natural gas and on the modification and revision of other legislative acts;
- **September 2020** – introduction of the centralised market for long term contracts for electricity which aims to ensure the transparency of transactions through contracts for the sale and purchase of electricity for long delivery periods and equal opportunities for market participants.
- **June 2021** – go-live of the Interim Coupling project by extending the 4M MC market coupling project, respectively the connection of the day-ahead electricity markets from The Czech Republic, Slovakia, Hungary and Romania with those of Austria, Germany and Poland, an integral part of the pan-European SDAC project.
- **October 2021** – completion of RO-BG border coupling operations in SDAC, enabling Greek and Bulgarian DAM integration into SDAC.

II. WHOLESALE ELECTRICITY MARKET

1. Structure of the wholesale electricity market



- Markets administrated by Opcom SA (the electricity market operator)
- Market administrated by CNTEE Tranelectrica SA (balancing market operator)
- The structure is presented within 'Transactions on the wholesale market' table – chapter 4

J	Electricity Suppliers acting exclusively on the wholesale market²	K	Electricity Suppliers acting also on the retail market
1	Absolute Energy SRL	10	Crest Energy SRL
2	AIK Energy Ltd	11	EFT Furnizare SRL
3	Alegfurnizorul Consulting SRL	12	Egger Romania SRL
4	Axpo Bulgaria EAD	13	Elcata MHC SRL
5	CEZ as	14	Electric Planners SRL
6	Danske Commodities/s Aarhus	15	Electricitare CFR SRL
7	EDF Trading Limited	16	Electrocarbon SA
8	Electro Holding SRL	17	Electromagnetica SA
9	Energi Danmark A/S	18	Elsid SA
10	Energo-Pro Energy Services EAD	19	Energia Gas & Power SRL
11	Energovia EOOD	20	Energiataverde.RO Furnizare SRL
12	Energy Deta SRL	21	Energy Distribution Services SRL
13	Energy Supply EOOD	22	Energy Core Development SRL
14	Energy Trading System OOD	23	Energy Grid SRL
15	Eolian Project SRL	24	Energy Trade Activ SRL
16	EVN Trading South East Europe	25	Engie România SA
17	Ezpada AG	26	Enol Grup SA
18	Freepoint Commodities Europe Ltd	27	Entrex Services SRL
19	General Energetic SA	28	Evobits Information Technology SRL
20	GEN I trgovanje in prodaja elektricne energije doo	29	Getica 95 Com SRL
21	Grand Energy Distribution EOOD	30	Grenerg SRL
22	Holding_ Slovenske_ Elektrane	31	Hermes Energy International SRL
23	Imperial Development SRL	32	ICCO Energ SRL
24	Interenergo Energetski, Inzeniring d.o.o.	33	ICPE Electrocond Technologies SA
25	Izvor de Lumina SRL	34	Industrial Energy SA
26	Lord Energy SRL	35	Liberty Galați SA
27	MFT Energy A/S	36	Luxten LC SA
28	MVM Partner Zrt	37	Mazarine Energy Romania SRL
29	Neptun SA	38	MET Romania Energy SA
30	Nis Petrol SRL	39	MVM Energy Trade Plus SRL
31	OMV Gas Marketing & Trading GmbH	40	Next Energy Parteners SRL
32	Petrol, Slovenska energetska druzba	41	Nova Power&Gas SRL
33	Statkraft Markets GmbH	42	Photovoltaic Green Project SRL
34	Trade Motion SRL	43	Plenerg SRL
		44	QMB Energ SRL
		45	RCS&RDS SA
		46	RES Energy Solutions SA
		47	Restart Energy One SRL
		48	Romelectro SA
		49	Stock Energy SRL
		50	Sun Wave Energy SRL
		51	Transenergo Com SA
		52	Transformer Energy Supply SRL
		53	Uzinsider General Contractor SA
		54	Veolia Energie România SA
		55	Werk Energy SRL
K	Electricity Suppliers acting also on the retail market		
1	A Energy Ind SRL		
2	Aderro G.P. Energy SRL		
3	AIK Energy Romania SRL		
4	Alro SA		
5	Anchor Grup SA		
6	Aqua Energia SA		
7	Axpo Energy Romania SRL		
8	Conarg Real Estate SRL		
9	Cotroceni Park SA		

¹ also uses renewable sources for producing electricity;

² includes traders and foreign legal persons established in other EU Member States, who obtained from ANRE the approval to be market participants on the Romanian electricity markets

Electricity market participants report to ANRE technical/commercial data (as the case may be) according to the *Methodology for wholesale electricity market monitoring*, approved by ANRE Order no. 67/2018, as well as according to the *Methodology for retail electricity market monitoring*, approved by ANRE Order no. 167/2019, with subsequent amendments and additions.

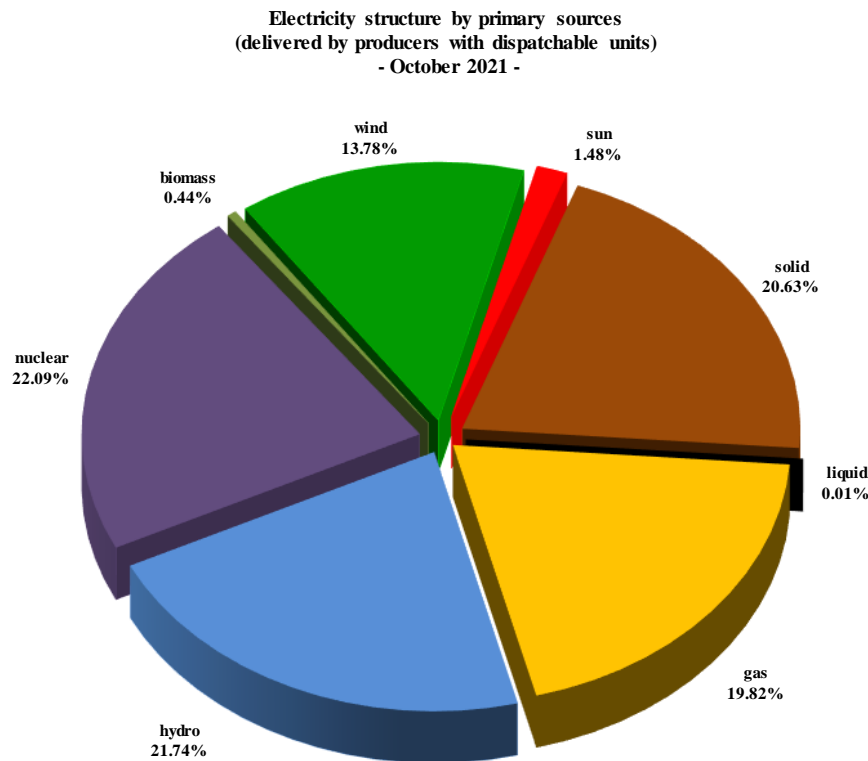
The table above does not include Balancing Responsible Parties (BRPs). The updated BRP list is published on the Balancing Market Operator website, CNTEE TRANSELECTRICA SA - www.transelectrica.ro.

Holders of licenses for the commercial exploitation of electricity generation capacities and, where applicable, of thermal energy produced in cogeneration, monitored under ANRE president orders no. 67/2018 and no. 167/2019, are producers holding dispatchable groups who on 31 August 2020 fulfilled the conditions set by CNTEE TRANSELECTRICA SA for participating in the Balancing Market, classified under the following power categories:

- hydro generation group with an installed power higher than 10 MW;
- thermal generation group (including biomass and nuclear) with installed power higher than 20 MW;
- wind, photovoltaic or internal combustion engine with installed power higher than 5 MW.

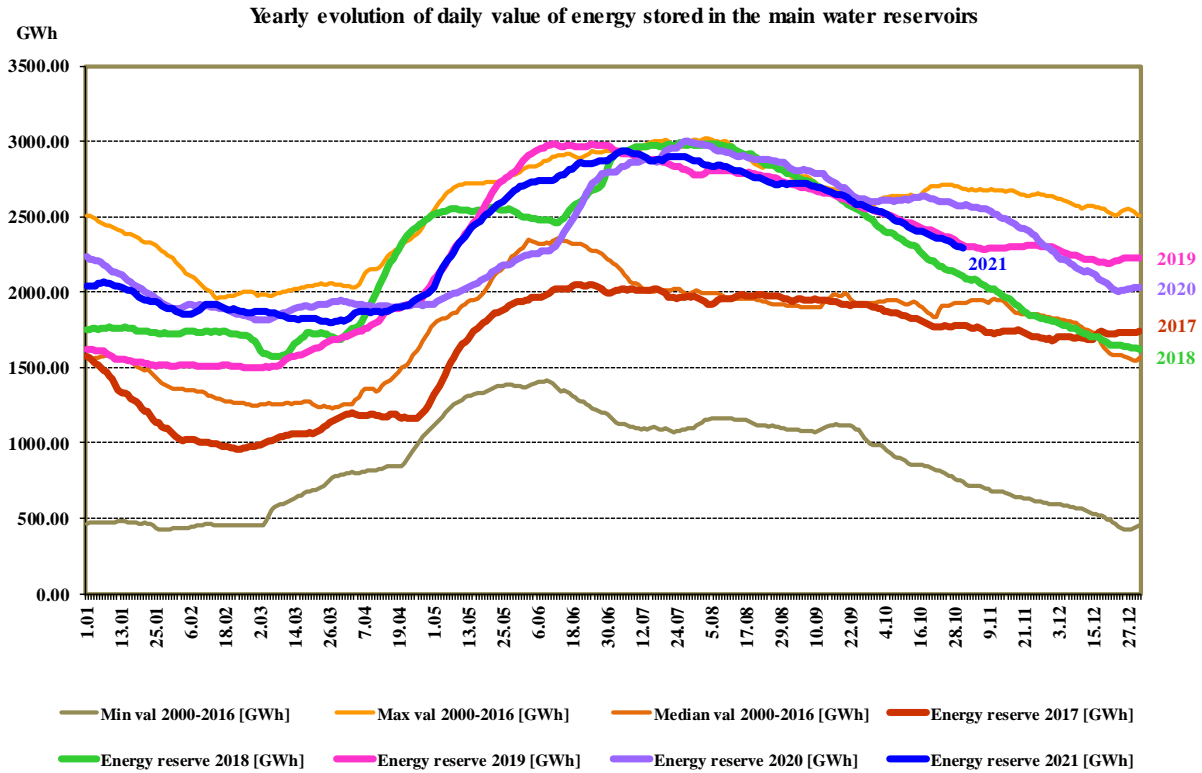
In accordance with the provisions of the *Regulation on the programming of dispatchable production units, dispatchable consumers and dispatchable storage facilities*, approved by ANRE President Order no. 61/2020, with subsequent amendments and additions, CNTEE TRANSELECTRICA SA develops appropriate procedures for establishing the qualification conditions for dispatching.

3. Generation structure of the National Power System by types of resources



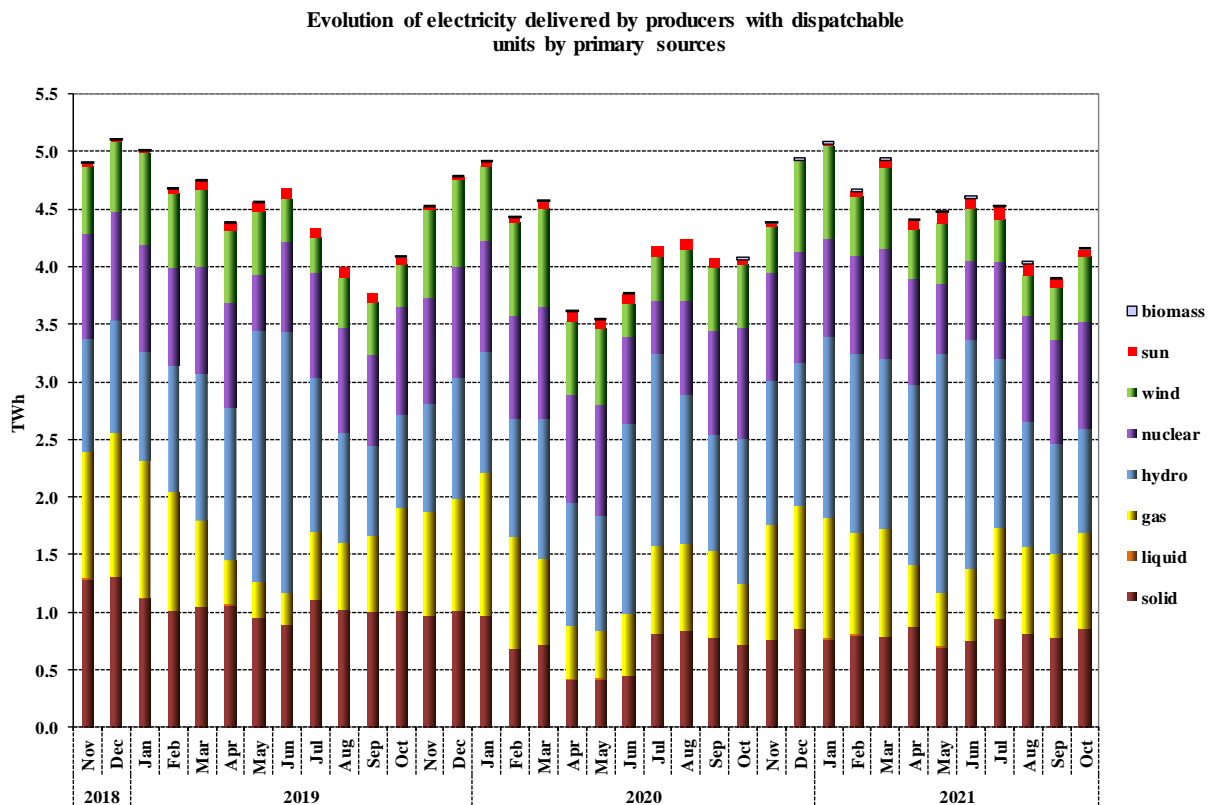
Source: Monthly reports of producers – Electricity Market Monitoring Unit analysis

The electricity generated from hydro sources depends on the energy reserve in the main water reservoirs and at the same time it is influenced by it. The following graph presents the evolution of the daily amounts of energy stored in water reservoirs in 2021 compared to the daily values of the last 4 years and to the minimum, maximum and median values from 2000 – 2016:



Source: Monthly reports of Hidroeléctrica S.A. – analysed by the Electricity Market Monitoring Unit

Evolution of the structure of the electricity delivered in the last 3 years is the following:



Source: Monthly reports of producers – data analysed by Electricity Market Monitoring Unit

The following table presents the main data regarding the physical balance of electricity for October 2021, compared with the data for the similar period of 2020:

No.	INDICATOR	UM	October 2020	October 2021	%	Jan-Oct 2020	Jan-Oct 2021	%
0	1	2	3	4	5=4/3*100	6	7	8=7/6*100
1	Generated electricity	TWh	4.30	4.40	102.32	43.83	47.40	108.14
2	Delivered electricity	TWh	4.08	4.17	102.20	41.46	44.88	108.24
3	Import	TWh	0.86	0.78	90.69	6.11	6.24	102.12
4	Export	TWh	0.39	0.29	74.35	3.90	4.81	123.33
5	Internal consumption (2+3-4)	TWh	4.56	4.66	102.19	43.67	46.31	106.04
6	Consumption of households:	TWh	1.13	1.16	102.65	11.14*	11.78	105.74
6.1	- on US/ regulated and last resort regime	TWh	0.70	0.42	60.00	6.88	5.20	75.58
6.2	- on the competitive market	TWh	0.43	0.74	172.09	4.26*	6.58	154.46
7	Consumption of non-household clients:	TWh	3.01	3.12	103.65	28.52*	30.57	107.18
7.1	- on US, last resort and inactive regime	TWh	0.07	0.06	85.71	0.72	0.69	95.83
7.2	- on the competitive market	TWh	2.94	3.06	104.08	27.80*	29.88	107.48
8	Transmission–Injection component	TWh	4.00	4.07	101.75	40.49	43.83	108.24
9	Transmission–Extraction component	TWh	4.55	4.64	101.97	44.06*	46.60	105.76
10	Transmission grid losses	TWh	0.09	0.08	88.88	0.76*	0.88	115.78
11	Heat generated for delivery	Tcal	591.57	715.65	120.97	7384.77	7649.65	103.58
12	Heat in co-generation	Tcal	331.11	500.69	151.21	5461.20	5519.60	101.06

Notes:

1. The electricity produced and the electricity delivered are presented in accordance with the reports of the monitored production license holders;
 2. The imported/exported quantities do not include transits and cross-border exchanges of electricity of CNTEE Tranelectrica SA with neighbouring power systems in order to balance the system;
 3. The electricity for which a transmission contract is concluded matches the electricity delivered from the plants with an installed capacity of more than 5 MW connected to the transmission and distribution networks; the electricity extracted from the network for which a transmission contract is concluded coincides with the electricity for which the electricity extraction tariff is charged (according to ANRE Order no. 214/2020, with subsequent amendments and additions);
 4. The consumption of households is ensured under a US/regulated and last resort regime by suppliers of last resort for the year 2020, respectively under US and last resort regime for the year 2021;
- *Differences with October 2020 Electricity Market Monitoring Report are determined by the corrections reported by market participants.

4. The structure of trades on the wholesale electricity market

The size of the market is determined by the sum of all trades with wholesale energy products made by market participants, in which are included the resales made in order to adjust the contractual position or to obtain financial benefits, thus exceeding the amount of electricity physically transmitted from production to consumption.

With the entry into force of Law no. 123/2012 on electricity and natural gas, the structure of the wholesale energy market was significantly transformed through the introduction of the obligation to conduct all trades on the competitive market in a transparent, public, centralized and non-discriminatory manner. The trades concluded between wholesale electricity market participants, the competitive component, result mainly from the participation in one of the centralized markets operated by the electricity market operator (Opcom SA), who has an ANRE license for that activity.

The centralized markets currently functional are the Day Ahead Market (DAM), Intraday Market (ID), Centralized Market of Bilateral Contracts with Extended Auction mechanism (CMBC-EA-flex), with Continuous Negotiation mechanism (CMBC-CN), Centralized Market with Double Continuous Negotiation for Electricity Bilateral Contracts (CM-OTC), Centralized Market of Bilateral Contracts with Fuel Processing mechanism (CMBC-FP), Electricity Market for Large Consumers (LCM), Centralized Market for Universal Service (CMUS), Centralized market for electricity from renewable

sources supported by green certificates (CME-RES-GC) and the Centralized Market for awarding Long Term Electricity Contracts (CMLT).

Besides the existing centralized markets, which ensure the transparent, public, centralized and non-discriminatory legal requirements, there are still pending export and import contracts and bilateral directly negotiated contracts concluded before the Law entered into force. At the same time, by Law no. 155/2020 for the amendment of Law no. 123/2012 on electricity and natural gas and regarding the amendment of other normative acts, a natural/legal person is allowed to contract, as a producer, the electricity produced in a new energy unit, even if at the time of trading the natural/legal person does not yet have a production license.

By derogation from the obligation of transparent, public, centralized and non-discriminatory trading on the competitive electricity market, in accordance with Law no. 155/2020, market participants that mix the electricity produced by several energy sources or the loads of several clients may conclude bilateral contracts with the owners of those sources, respectively with the suppliers of the clients whose loads they mix.

The same law stipulates the possibility of concluding negotiated bilateral contracts between producers or public authorities holding power plants producing electricity from renewable energy sources with installed capacities of up to 3 MW per producer and the suppliers of final consumers for the sale of electricity and/or green certificates.

In accordance with the provisions of art. VII of ANRE President Order no. 65/2020 with subsequent amendments, long-term supply contracts between electricity market participants are also allowed.

Given the removal from 1 January 2021 of regulated tariffs for electricity supplied to households by suppliers of last resort, the regulated component of the wholesale electricity market has been abolished.

The following table presents the electricity volumes traded for sale and the average prices on each type of contract and on the main components of the wholesale market, in the month under review compared to the previous month and the similar month from the previous year. Referencing the quantities of electricity traded to the domestic consumption provides an assessment of their size.

The data presented correspond to the markets on which trades were reported in at least one of the analysed months. For comparability reasons, data are reported in RO hours. The presented prices include only the injection component of the transmission tariff, in this way being comparable within a month and allowing the comparison with the previous month.

WHOLESALE MARKET TRADES	September 2021	October 2021	October 2020
1. BILATERAL CONTRACTS MARKET			
traded volume (GWh)	72	80	673
average price (lei/MWh)	441.99	624.81	185.74
% from internal consumption	1.7	1.7	14.8
1.1. Sales on regulated contracts			
traded volume (GWh)	-	-	655
average price (lei/MWh)	-	-	185.00
% from internal consumption	-	-	14.4
1.2. Sales on negotiated contracts¹⁾			
traded volume (GWh)	6	4	17
average price (lei/MWh)	262.24	262.29	213.64
% from internal consumption	0.2	0.1	0.4
1.3. Sales on negotiated contracts within Aggregated entity			
traded volume (GWh)	66	76	-
average price (lei/MWh)	459.51	644.26	-
% from internal consumption	1.5	1.6	-
2. EXPORT			
traded volume (GWh) ²⁾	368	290	389
average price (lei/MWh)	593.21	805.86	199.94
% from internal consumption	8.6	6.2	8.5
3. CENTRALIZED MARKETS OF BILATERAL CONTRACTS			
traded volume (GWh)	3960	4004	4522
average price (lei/MWh)	294.32	308.11	255.96
% from internal consumption	92.4	86.0	99.3
3.1. Extended auction mechanism CMBC-EA³⁾			
traded volume (GWh)	292	299	1028
average price (lei/MWh)	268.43	267.98	268.62
% from internal consumption	6.8	6.4	22.6
3.2. Extended auction mechanism CMBC-EA-Flex³⁾			
traded volume (GWh)	1251	1278	80
average price (lei/MWh)	266.76	266.52	244.12
% from internal consumption	29.2	27.5	1.8
3.3. Continuous negotiation mechanism CMBC-CN³⁾			
traded volume (GWh)	539	558	895
average price (lei/MWh)	295.70	323.51	264.11
% from internal consumption	12.6	12.0	19.7
3.4. CM-OTC mechanism			
traded volume (GWh)	1817	1802	2491
average price (lei/MWh)	320.18	341.36	249.03
% from internal consumption	42.4	38.7	54.7
3.5. CME-RES-GC			
traded volume (GWh)	61	67	28
average price (lei/MWh)	200.64	257.72	180.75
% from internal consumption	1.4	1.4	0.6
4. DAY AHEAD MARKET			
traded volume (GWh)	1763	1926	1984
average price (lei/MWh) ⁴⁾	667.88	977.68	210.31*
% from internal consumption	41.1	41.4	43.5
5. INTRADAY MARKET			
traded volume (GWh)	104	102	52
average price (lei/MWh) ⁵⁾	659.61	960.81	201.30*
% from internal consumption	2.4	2.2	1.1

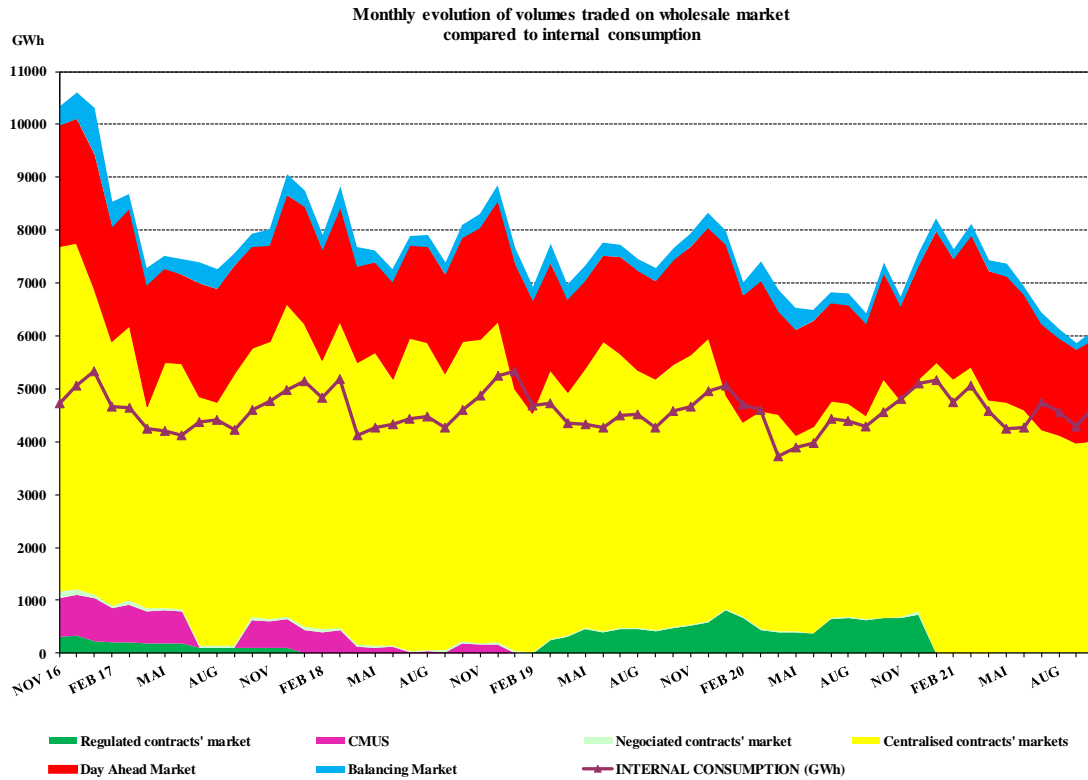
6. BALANCING MARKET			
traded volume (GWh)	138	189	208
% of internal consumption	3.2	4.1	4.6
upward volume (GWh)	49	123	40
average deficit price (lei/MWh) ⁶⁾	449.90	1006.28	658.52
downward volume (GWh)	90	66	168
average surplus price (lei/MWh) ⁶⁾	327.04	787.34	-14.23
INTERNAL CONSUMPTION (GWh) (distribution and transmission losses included)	4288	4656	4555

- 1) The sell – buy electricity contracts concluded before the entry into force of Law no. 123/2012 on electricity and natural gas, contracts that are still pending in the reporting month; the aggregated volumes and average prices result from the statements on their own responsibility of the economic operators involved;
- 2) Volumes and prices' information related to export contracts is reported by wholesale market participants and includes the volumes exported through CNTEE Transelectrica as the shipper agent for the coupled DAM and ID; export volumes are verified with the DAMAS platform notifications, some differences being identified in some cases;
- 3) The monthly data are presented as reported by the market participants that are monitored, for the electricity delivered in the respective month and refer both to trades concluded previously on CMBC and CMBC-CN (according to ANRE president Order no. 6/2011, with subsequent amendments and additions) and to trades concluded on CMBC-EA and CMBC-CN (according to ANRE president Order no. 78/2014, with subsequent amendments and additions); in May 2020, CMBC-EA was replaced with the Centralized Market for Electricity Bilateral Contracts – Extended Auctions Mechanism CMBC-EA-flex (according to ANRE President Order no. 64/2020); trading data specific to CMCB-EA and CMBC-EA-flex are highlighted separately as of May 2020, since CMBC-EA-flex became operational;
- 4) The DAM average monthly price is calculated as an arithmetic average of the hourly closing prices (RO hours) from that month; DAM average price published by Opcom SA for October 2021 is 951.30 lei/MWh (CET hours). Opcom SA also publishes the monthly weighted average price on DAM calculated as a weighted average of the hourly market closing prices with the hourly volumes from the respective month, and in September 2021 it was 977.77 lei/MWh (CET hours);
- 5) The ID weighted average price is calculated as a weighted average of the hourly market closing prices with the hourly traded volumes (RO hours) in a month; October 2021, the ID weighted average monthly price published by Opcom SA was 960.28 lei/MWh (CET hours);
- 6) The average deficit and surplus price is the arithmetic average of the settling prices on the BM; for the intervals with single settling price the value was allocated both as deficit and as surplus.

*Differences with October 2020 Electricity Market Monitoring Report are determined both by the processing of reports corrected and resent by economic operators and by the publication of the weighted average trading prices on DAM and ID in RO hours.

** By applying the provisions of Article 116(4) of ANRE Order no.33/2021, for July 2021, OPCOM recalculated the BM settlement, resulting in the following values: the average deficit price of 711.30 lei/MWh and the price average surplus of 587.60 lei/MWh.

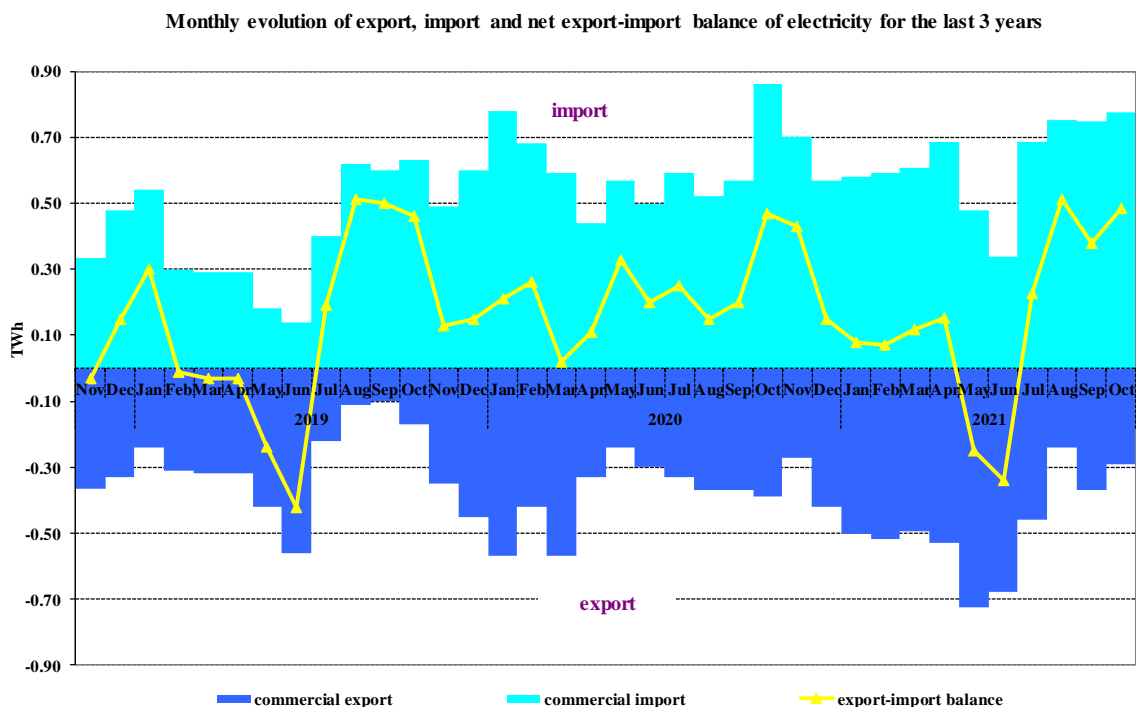
The following graph presents the evolution of the relation between the volumes traded on each segment of the wholesale market and the internal consumption for the period November 2016 – October 2021:



Source: Monthly reports of wholesale market participants, Opcom SA and CNTEE Tranelectrica SA – Analysis of Electricity Market Monitoring Unit

Note: The volumes traded on the bilateral negotiated contracts market correspond to the buy – sell electricity contracts concluded before the entry into force of Law no. 123/2012 on electricity and natural gas, but still pending in the reporting month.

The following graph presents the monthly values of commercial export and import, and the export-import balance for the last 36 months:



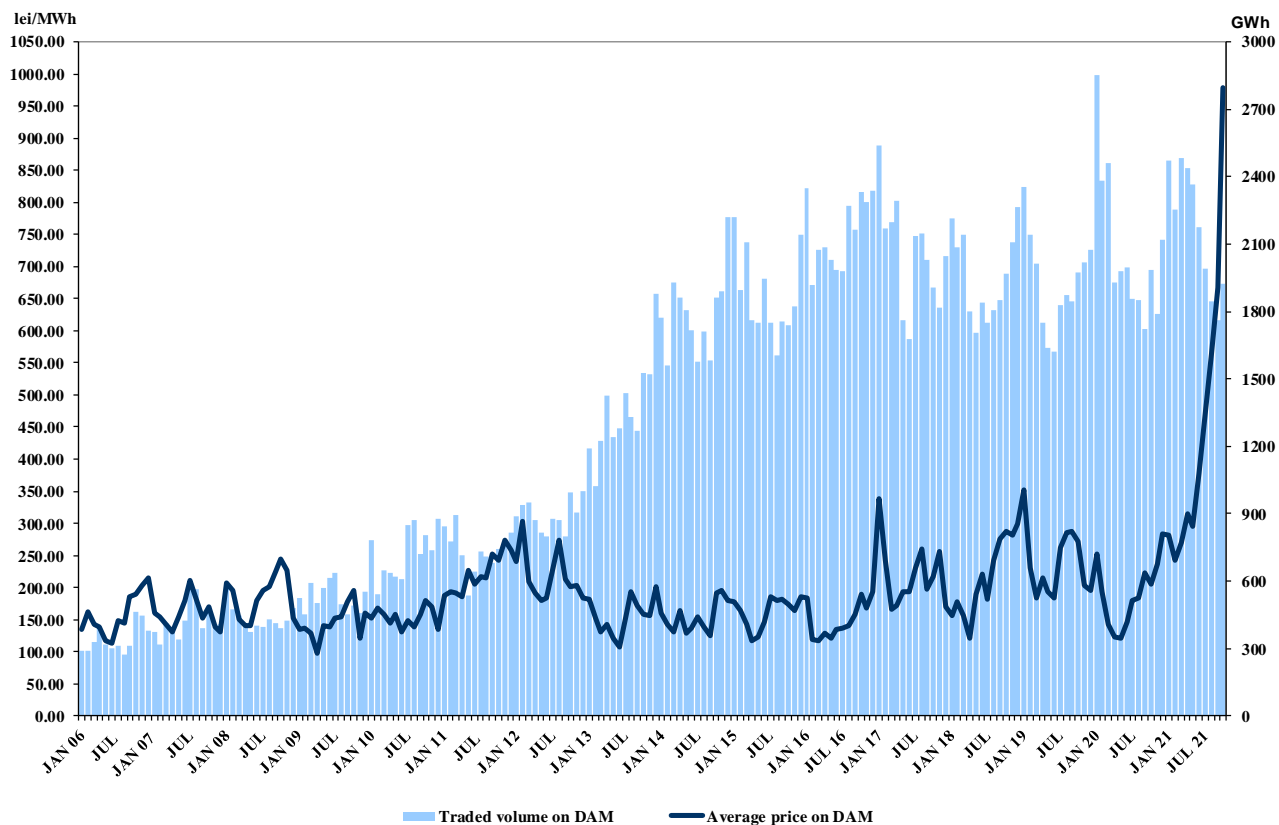
Source: Monthly reports of CNTEE Tranelectrica SA – analysis by Electricity Market Monitoring Unit

The following table presents the commercial export and import trades for the electricity extracted/injected from/in the transmission network. These trades include the trades concluded by CNTEE Transelectrica SA as the shipper agent in the price coupling mechanism of DAM and ID. Shipper agent role is reflected in the physical and commercial transfer of electricity for import/export on the interconnections between Romania and Hungary.

IMPORT/EXPORT TRADES	September 2021	October 2021	October 2020
EXPORT			
traded volume (GWh)	368	290	389
average price (lei/MWh)	593.21	805.86	199.94
% from internal consumption	8.6	6.2	8.5
of which, through coupled DAM			
traded volume (GWh)	144	80	45
average price (lei/MWh)	582.30	750.85	206.54
% from internal consumption	3.4	1.7	1.0
of which, through coupled ID			
traded volume (GWh)	56	37	22
average price (lei/MWh)	615.87	859.76	210.55
% from internal consumption	1.3	0.8	0.5
IMPORT			
traded volume (GWh)	747	776	864
average price (lei/MWh)	641.80	954.70	215.87
% from internal consumption	17.4	16.7	19.0
of which, through coupled DAM			
traded volume (GWh)	98	221	186
average price (lei/MWh)	733.29	1066.07	213.12
% from internal consumption	2.3	4.8	4.1
of which, through coupled ID			
traded volume (GWh)	41	56	27
average price (lei/MWh)	715.66	1012.39	192.10
% from internal consumption	1.0	1.2	0.6

The following graph presents the monthly volumes and average prices of trades concluded on DAM starting with January 2006:

Monthly evolution of the traded volume and average price on DAM



Source: Monthly reports of Opcom SA and CNTEE Tranelectrica SA – analysed by Electricity Market Monitoring Unit

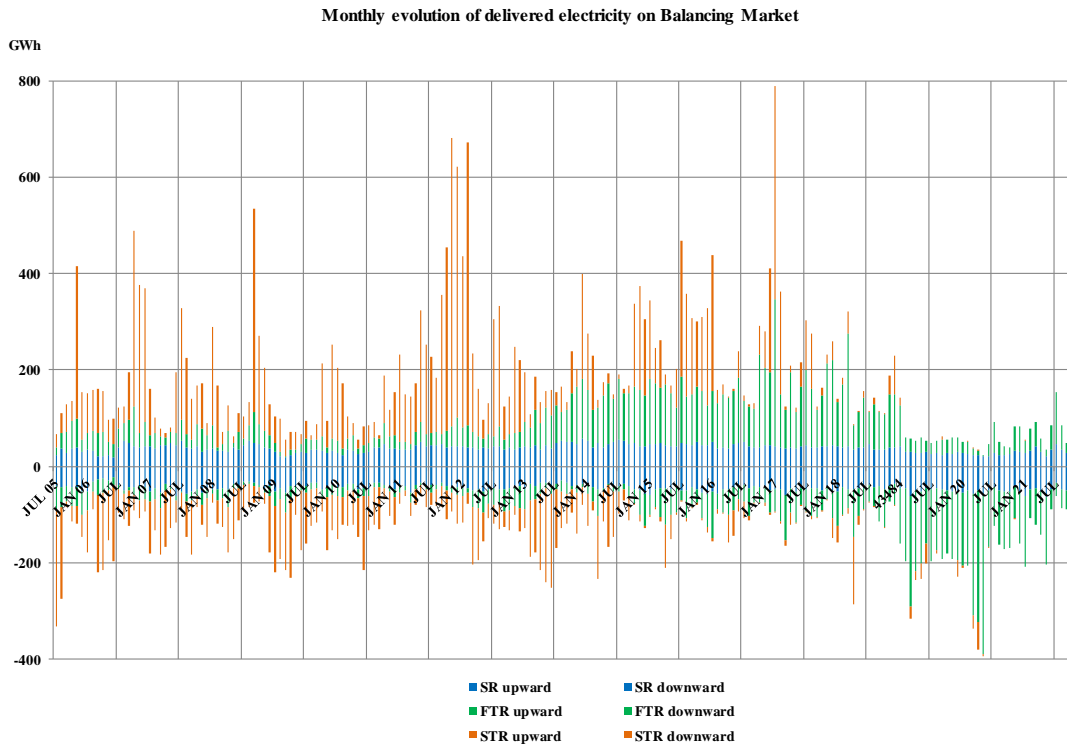
Dispatch orders (accepted offers) received by generators determine the committed electricity on the Balancing Market. After settlement, based on the measured (approved) values, the actual electricity delivered by generators on the Balancing Market is determined; the relation between the committed and delivered electricity in October 2021 is presented in the following table:

OCTOBER 2021	Dispatch order (GWh)	Delivered electricity (GWh)	Deviation (%)
Secondary regulation	86	86	
upward	44	44	
downward	42	42	
Fast tertiary regulation	106	103	3
upward	81	80	2
downward	25	23	6
Slow tertiary regulation	0	0	0
upward	0	0	0
downward	0	0	0
TOTAL	192	189	
upward	125	123	
downward	67	66	
INTERNAL CONSUMPTION		4656	
<i>% share of traded volumes from internal consumption</i>		<i>4.1%</i>	

Source: Monthly reports of CNTEE Tranelectrica SA – Electricity Market Monitoring Unit assessment

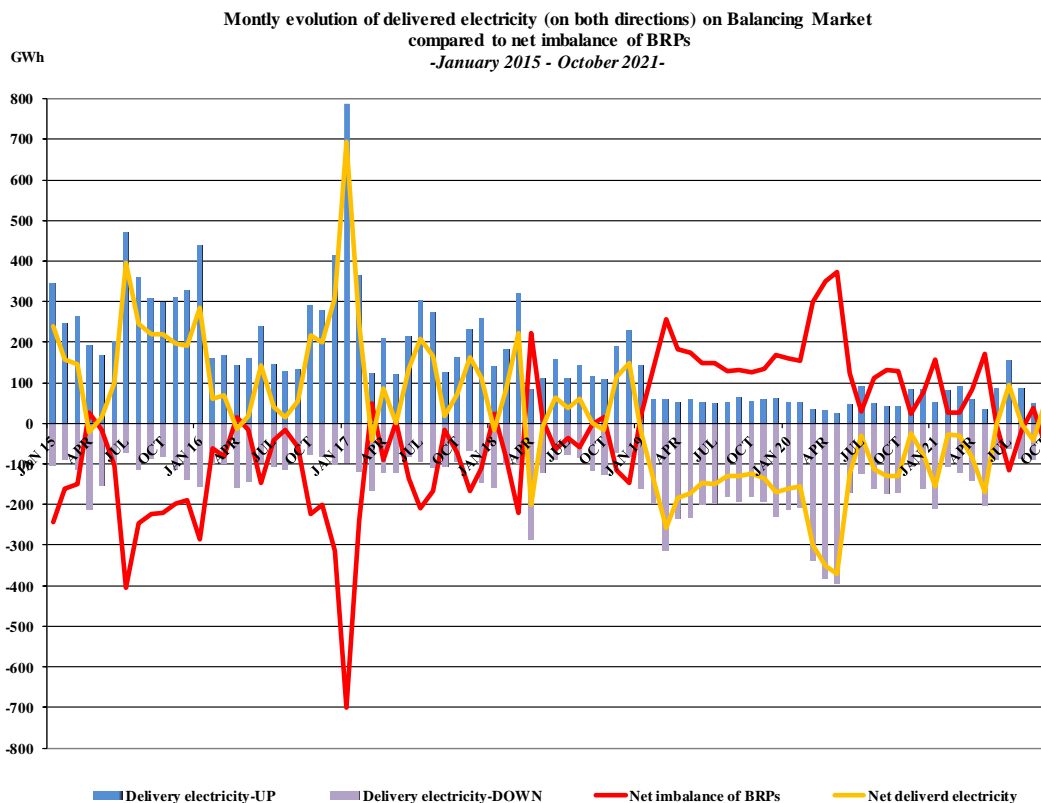
Note: the committed and the delivered electricity include the electricity related to trades with financial compensation outside the BM resulting from dispatch orders (upward/downward) for resolving network restrictions, ensuring the security of the system by redispatching or by trading in a coordinated counterparty (according to the provisions of ANRE president Order no.152/2020), with the following balances: electricity committed **0 GWh** and electricity delivered **0 GWh**.

The structure of the balancing electricity delivered in the system on each type of regulation is presented in the following figure, in evolution, for the period July 2005 - October 2021:



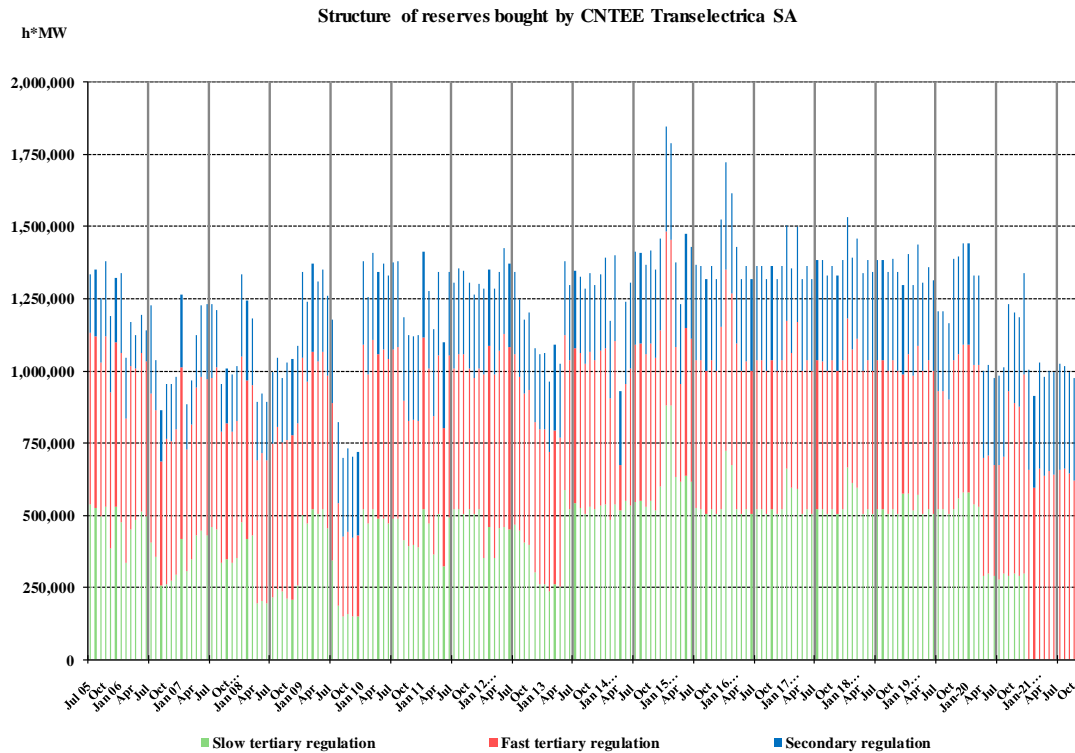
Source: Monthly reports of CNTEE Transelectrica SA – analysed by the Electricity Market Monitoring Unit

The evolution of the balancing electricity actually delivered on the BM and the balance of imbalances recorded by the BRPs are shown in the following graph:



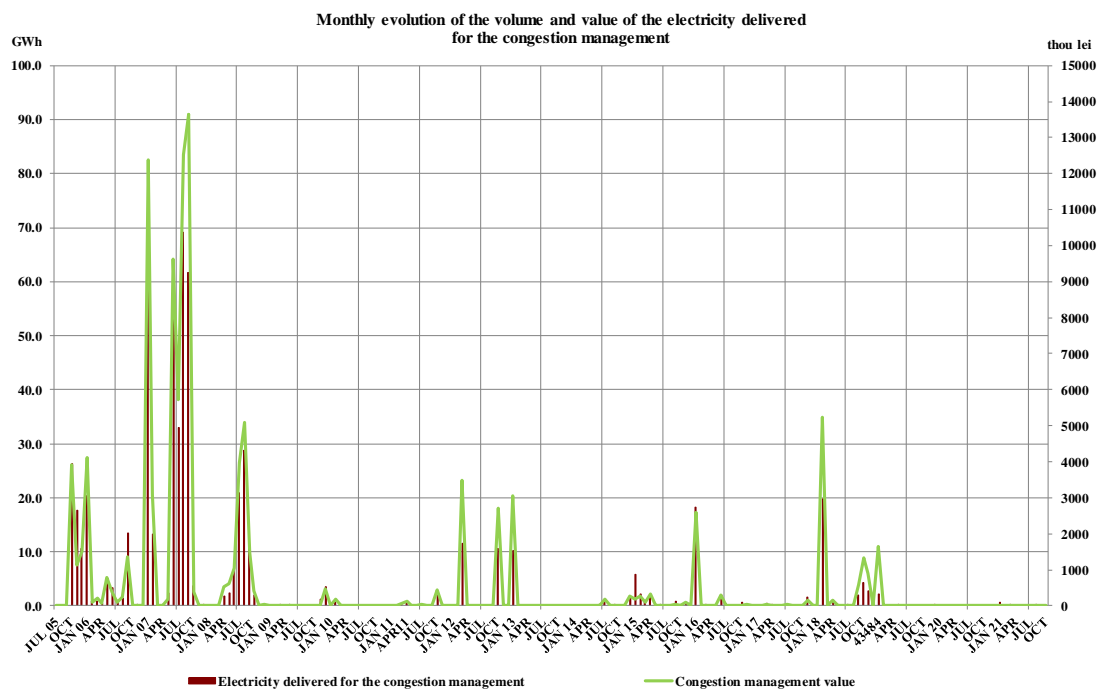
Source: Monthly reports of CNTEE Transelectrica SA and OPCOM SA – analysed by the Electricity Market Monitoring Unit

The following chart shows the evolution of the reserves bought by CNTEE Tranelectrica S.A., for the period July 2005 – October 2021 (representing obligations of the producers to keep available to the dispatcher or to offer on the balancing market the contracted capacities):



Source: Monthly reports of CNTEE Tranelectrica SA – analysed by the Electricity Market Monitoring Unit

The following graph presents the monthly evolution of the electricity used for congestion management (the electricity volume traded by the TSO on the BM for transmission system’s congestion management), starting with July 2005, and the value of these trades made by CNTEE Tranelectrica S.A.



Source: Monthly reports of CNTEE Tranelectrica SA – analysed by the Electricity Market Monitoring Unit

5. Structure of trades on the wholesale electricity market of different market participant categories

Generators

In October 2021 compared with the previous similar period, the structure of electricity sale obligations contracted before the delivery interval by the electricity generators with dispatchable units was the following:

	-GWh-	
Trades type	October 2020	October 2021
Regulated to last resort suppliers and thermal, hydro and nuclear producers	655.31	-
Negotiated to suppliers	17.48	4.09
Negotiated within Aggregators	-	76.18
Trades on the Opcom centralized markets, of which:	2591.55	2988.90
- CMBC-EA	843.77	286.17
- CMBC-EA-flex	48.38	1241.67
- CMBC-CN	555.00	345.90
- CM-OTC	1116.24	1048.43
- CME-RES-GC	28.16	66.73
DAM	1223.69	1062.39
ID	17.89	29.55
Supply contracts to final clients, of which:	426.26	498.56
Households	0.41	5.52
Non-households	425.85	493.04
Total	4932.18	4659.66

Source: Monthly reports of producers – analysed by the Electricity Market Monitoring Unit

Suppliers

In October 2021, on the electricity market were active 95 undertakings having as the main activity that of electricity supply; of these, 34 are suppliers that only operate on the wholesale electricity market (some of which have a license for electricity trading or are foreign legal entities with the right to participate in the Romanian electricity market) and 61 are suppliers that are also active on the retail electricity market (including last resort suppliers that are active both on the universal service and last resort segment and on the competitive segment of the REM).

Suppliers acting exclusively on WEM

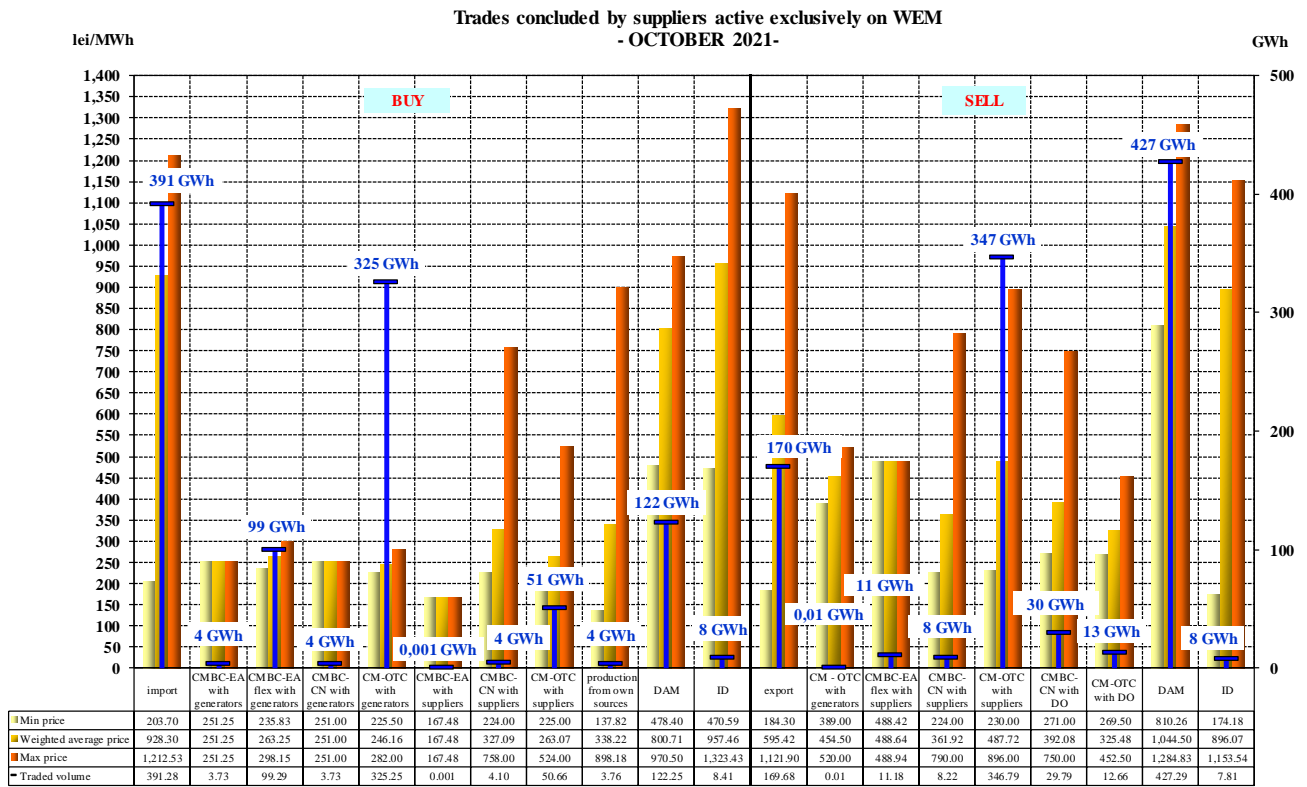
The following table shows the activity of suppliers active only on WEM (including traders and foreign legal entities with the ANRE confirmed right to participate in the Romanian electricity market), presenting the structure by market segments/contractual partners of the total acquisitions and sales on the WEM made by these suppliers in October 2021, compared to the similar period in 2020:

-GWh-

Structure of trades of suppliers acting exclusively on WEM	October 2020	October 2021
Buy		
Import	499.63	391.28
Trades on Opcom centralized markets, of which:	621.50	486.73
- on CMBC-EA with producers	61.16	3.73
on CMBC-EA-Flex with producers	3.72	99.29
- on CMBC-CN with producers	20.85	3.73
- on CM-OTC with producers	250.47	325.25
- on CMBC-EA with other suppliers	0.001	0.001
- on CMBC-CN with other suppliers	34.27	4.10
- on CM-OTC with other suppliers	251.03	50.66
production from own sources	4.10	3.76
DAM	493.99	122.25
ID	13.44	8.41
Sell		
Export	316.87	169.68
Trades on Opcom centralized markets, of which:	957.97	408.64
- on CMBC-CN with producers	43.90	0.00
- on CM-OTC with producers	206.18	0.01
- on CMBC-EA with other suppliers	32.79	0.00
- on CMBC-EA-Flex with other suppliers	2.23	11.18
- on CMBC-CN with other suppliers	80.29	8.22
- on CM-OTC with other suppliers	510.88	346.79
- on CMBC-EA with DO	11.17	0.00
- on CMBC-CN with DO	40.75	29.79
- on CM-OTC with DO	11.91	12.66
- on CMBC-EA with TSO	11.18	0.00
- on CMBC-EA Flex with TSO	2.98	0.00
- on CMBC-CN with TSO	3.73	0.00
DAM	354.92	427.29
ID	5.27	7.81

Source: Monthly reports of suppliers – analysed by the Electricity Market Monitoring Unit

The breakdown by type of sources/destinations of the volumes traded and delivered in the reporting month, of the average, highest and lowest prices in October 2021 of suppliers acting exclusively on WEM is presented graphically below:



Source: Monthly reports of suppliers – analysed by the Electricity Market Monitoring Unit

Suppliers active on REM (suppliers of last resort not included)

The table below presents the aggregated data regarding the structure by market segments/contractual partners of total acquisitions and sales made by these market participants in October 2021, compared with the similar period of 2020:

Structure of trades of suppliers active on the REM (suppliers of last resort not included)	October 2020	October 2021
- GWh -		
Buy		
Import	152.16	97.92
Negotiated trades with producers	17.70	0.00
Trades on Opcom centralized markets, of which:	1514.66	1088.30
- on CMBC-EA with producers	268.09	149.48
- on CMBC-EA-Flex with producers	14.99	311.26
- on CMBC-CN with producers	176.77	64.85
- on CM-OTC with producers	408.27	291.70
- on CME-RES-GC with producers	28.30	17.98
- on CMBC-EA with other suppliers	97.41	3.12
- on CMBC-EA-Flex with other suppliers	16.39	8.18
- on CMBC-CN with other suppliers	53.73	48.19
- on CM-OTC with other suppliers	450.72	193.54
production from own sources	22.90	22.15
Negotiated trades with non-dispatchable producers (others than under Law 220/2008) *	1.84	5.12
Negotiated trades with non-dispatchable producers (amendments, additions to Law 220/2008) **	16.78	10.04
Trades with prosumers	0.02	0.14
DAM	853.05	508.94
ID	1.15	11.62

Sell		
Export	4.75	4.15
Trades on Opcom centralized markets, of which:	900.62	504.38
- on CMBC-EA-Flex with producers	3.23	0.07
- on CMBC-CN with producers	37.07	10.31
- on CM-OTC with producers	147.55	13.02
- on CMBC-EA with other suppliers	98.08	6.77
- on CMBC-EA-Flex with other suppliers	14.15	11.90
- on CMBC-CN with other suppliers	77.78	98.85
- on CM-OTC with other suppliers	416.68	311.87
- on CMBC-EA with DO	20.92	2.24
- on CMBC-EA – Flex with DO	8.93	6.97
- on CMBC-CN with DO	36.29	20.14
- on CMBC-OTC with DO	26.07	15.64
- on CMBC-EA with TSO	10.16	0.00
- on CMBC-EA-flex with TSO	0.00	6.59
- on CMBC-CN with TSO	3.73	0.00
DAM	75.19	130.35
ID	0.36	2.48
Households	27.98***	40.04
Non-households	1529.22***	1074.61

Source: Monthly reports of suppliers – analysed by Electricity Market Monitoring Unit

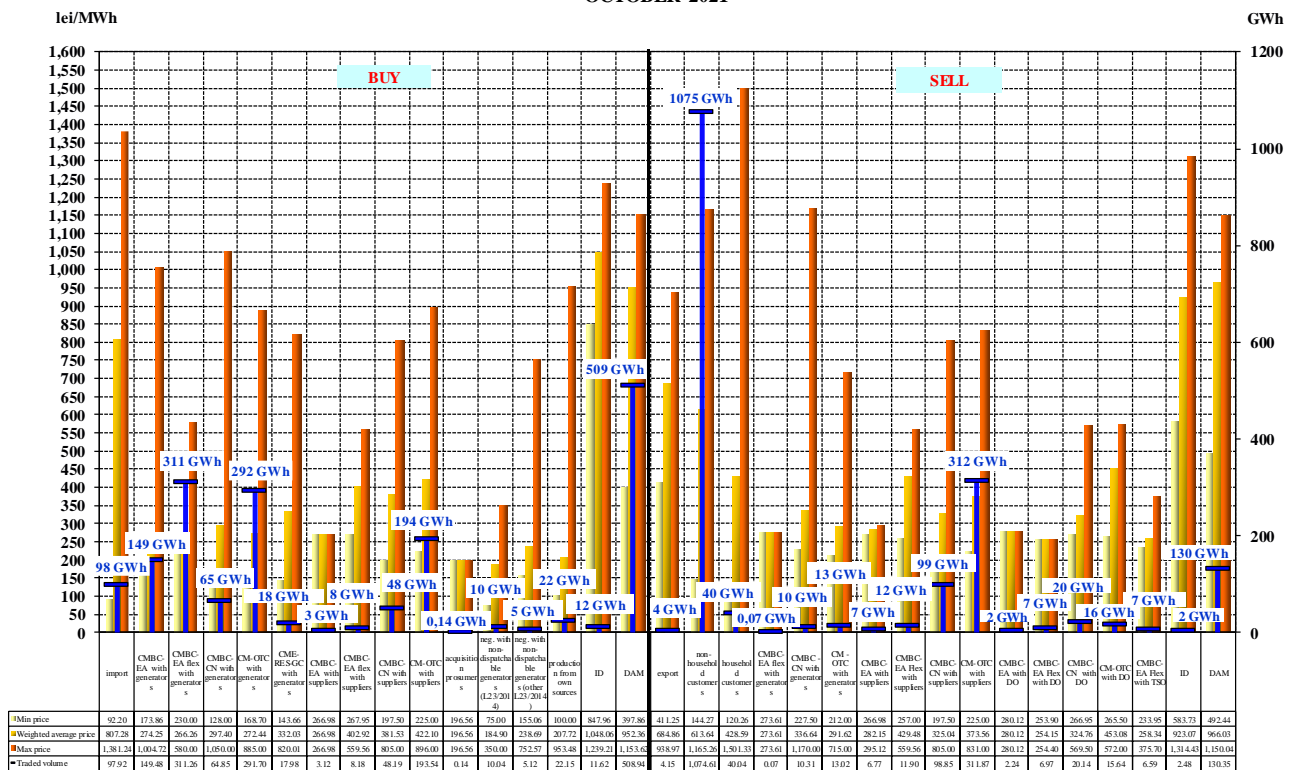
Notes: *negotiated trades with non-dispatchable producers that **do not** fall under Law no. 220/2008, with subsequent modifications and additions.

** Negotiated trades with non-dispatchable producers that fall under Law no. 220/2008, with subsequent modifications and additions.

***Differences with the October 2020 Electricity Market Monitoring Report are determined by the processing of corrections reported by market participants.

The analysis by types of sources/destinations of the volumes traded and delivered in the reporting month, of the average, highest and lowest prices in October 2021, for suppliers active on the REM and WEM are shown in the following graph:

Trades concluded by suppliers active on WEM and REM
- OCTOBER 2021-



Source: Monthly reports of the suppliers – analysed by the Electricity Market Monitoring Unit

Suppliers of last resort

Starting with 1 January 2021, ANRE has designated CEZ Vanzare SA, Enel Energie SA, Enel Energie Muntenia SA, E.ON Energie Romania SA, Tinmar Energy SRL and Electrica Furnizare SA as suppliers of last resort for all network areas, according to the provisions of the *Regulation on the designation of electricity suppliers of last resort*, approved by ANRE President Order no. 188/2020, with subsequent amendments.

For final clients who did not have the electricity supply ensured from other sources in October 2021, Electrica Furnizare SA was designated as the supplier of last resort.

The supply of electricity to the final clients in the portfolio is made by the suppliers of last resort based on the contracts concluded in accordance with:

- the provisions of the framework contract of electricity supply to households, approved by ANRE Order no. 88/2015, with subsequent amendments and additions (format valid from 1 January 2021) - for **households**;
- the provisions of the framework contract of electricity supply to non-household clients of suppliers of last resort, approved by ANRE Order no. 88/2015, with subsequent amendments and additions (format valid from 1 January 2021) - for **non-household clients who benefit of universal service (US) and for those supplied because they do not have the electricity supply ensured from any other source**;
- electricity supply contracts with clauses established between the parties for **households and non-household clients using eligibility**, respectively for **non-household clients from their own portfolio who have not used the eligibility right and do not meet the conditions or have not requested to benefit from universal service**; the electricity price is established by each supplier of last resort for each network area, on competitive criteria.

As a result of the expiry of the applicability of the regulated tariffs for the electricity supply to households according to Article 22(11) of *Law no. 123/2012 on electricity and natural gas*, with subsequent amendments and additions, starting with 1 January 2021 households may conclude supply contracts in a competitive manner with the suppliers (of last resort or competitive) by:

- direct negotiation of the price and the commercial conditions;
- accepting a proposed offer.

The price applied to the final clients benefiting of US is established by each supplier of last resort on competitive criteria, so that it is reasonable, competitive, easily comparable, transparent and non-discriminatory. This price includes tariffs for network services.

The price applied to non-household final clients supplied under last resort regime is determined by the sum of the average purchase price set by each supplier of last resort and the supply component of the supplier of last resort (which includes the cost of the supply activity and the cost of participation in the centralized wholesale markets).

The data reported by the suppliers of last resort include the tariffs for the network services dedicated to the clients from their own portfolio.

In the case of households and non-household final clients with universal service rights who request to benefit from this rights, supplied by a supplier of last resort because they did not have the electricity supply ensured from any other source, the price for last resort regime valid at takeover date is applied.

In addition to the participation on the wholesale electricity market components, the supplier of last resort can also ensure the consumption needs of its clients by acquisition contracts concluded with prosumers.

ANRE Order no. 27/2018 for the approval of the *Regulation on the organization and conduct of auctions on the centralized market for universal service* has amended the conditions of suppliers of last resort participation in the CMUS in order to buy the electricity necessary to cover the consumption of final clients supplied under US regime, the participation in the auction sessions becoming thus voluntary. In October 2021, no electricity trades took place on this market.

The structure of electricity trades on the WEM of suppliers of last resort, trades made before the delivery interval, to supply final clients under the US, last resort, inactive and competitive regime is shown in the table below for October 2021, compared with the similar period of 2020:

-GWh -

Structure of trades concluded by suppliers of last resort on REM (US, last resort, inactive and competitive regime)	October 2020	October 2021
Buy		
Regulated with producers	655.31	-
import	-	9.68
Negotiated with producers	-	4.09
Trades on Opcom centralized markets, of which:	1419.95	2043.84
- <i>CMBC-EA with producers</i>	407.32	64.64
- <i>CMBC-EA Flex with producers</i>	18.62	805.30
- <i>CMBC-CN with producers</i>	183.03	160.17
- <i>CM-OTC with producers</i>	415.57	406.76
- <i>CME-RES-GC from producers</i>	20.61	61.42
- <i>CMBC-EA with other suppliers</i>	33.45	3.65
- <i>CMBC-EA Flex with other suppliers</i>	0.00	14.90
- <i>CMBC-CN with other suppliers</i>	70.06	73.79
- <i>CM-OTC with other suppliers</i>	271.28	453.21
Production from own sources	0.00	2.13
Negotiated with non-dispatchable producers (others than under Law 220/2008)*	0.00	1.56
Negotiated with non-dispatchable producers (changes, additions to Law 220/2008)**	25.61	31.95
prosumers	0.19	4.45
DAM	191.10	707.78
ID	0.01	12.76

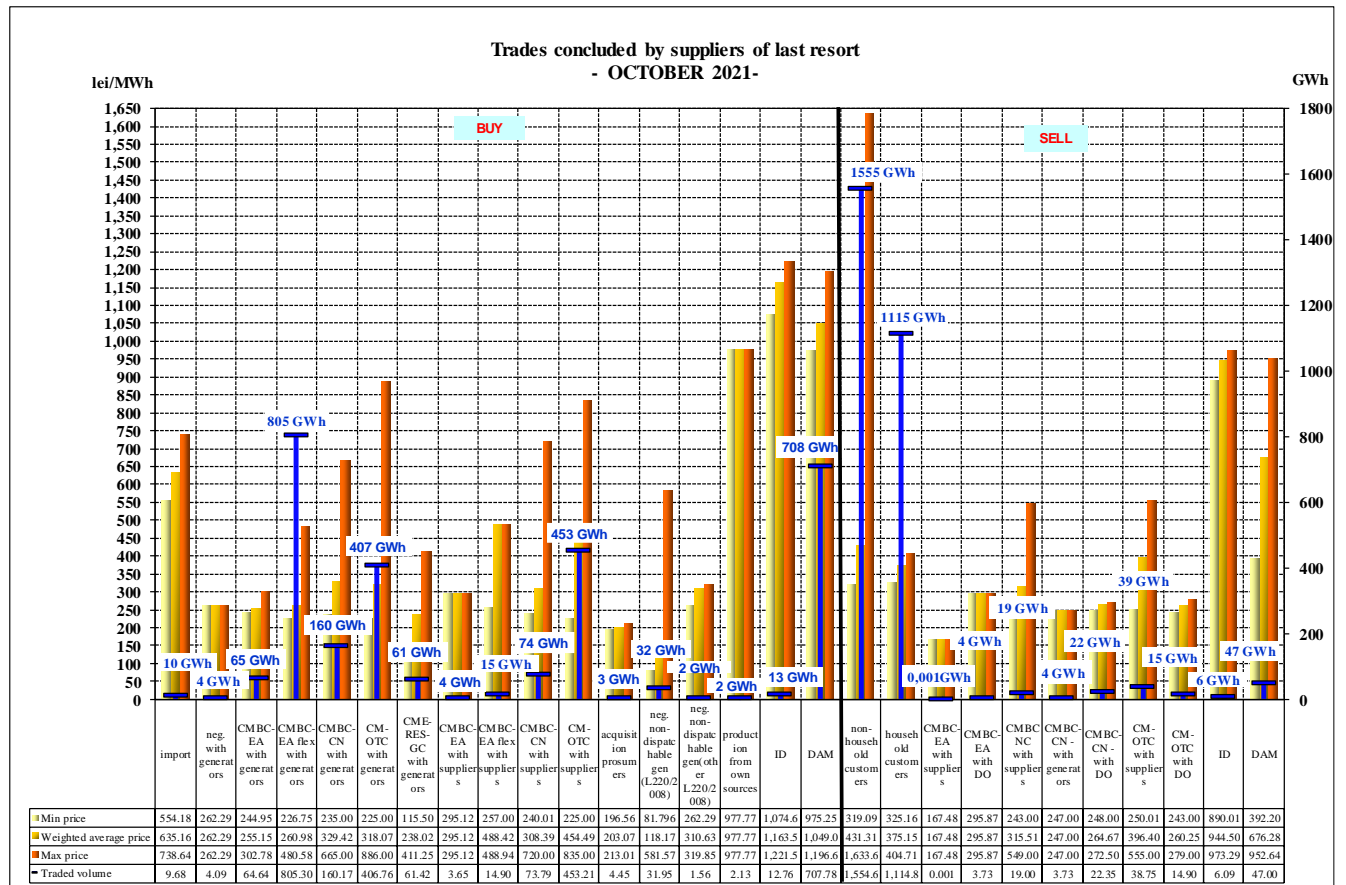
Sell		
Trades on Opcom centralized markets, of which:	71.53	102.45
- CMBC-CN with producers	16.39	3.73
- CM-OTC with producers	3.72	0.00
- CMBC-EA with other suppliers	0.00	0.001
- CMBC-CN with other suppliers	0.00	19.00
- CM-OTC with other suppliers	45.46	38.75
- CMBC-EA with DO	0.00	3.73
- CMBC-CN with DO	0.00	22.35
- CM-OTC with DO	5.96	14.90
DAM	83.03	47.00
ID	0.13	6.09
Households	1103.62	1114.87
Non-household clients	1058.89	1554.69

Source: Monthly reports of suppliers of last resort – analysis done by the Electricity Market Monitoring Unit

Note: *negotiated trades with non-dispatchable producers that do not fall under the provisions of Law no. 220/2008, with subsequent amendments and additions.

** negotiated trades with non- dispatchable producers that fall under the provisions of Law no. 220/2008, with subsequent amendments and additions.

The structure of the electricity trades concluded by the suppliers of last resort to supply final consumers (US, last resort, inactive and competitive regime) for October 2021 is presented in the following graph:



Source: Monthly reports of the suppliers of last resort – analysis done by the Electricity Market Monitoring Unit

The structure of electricity trades on the WEM of suppliers of last resort (made before the delivery interval) to supply electricity to households and non-household final clients under the US regime is shown in the table below for October 2021:

Structure of trades concluded by suppliers of last resort to supply final clients under US /regulated regime	October 2020		October 2021	
	Quantity [GWh]	Average price [lei/MWh]	Quantity [GWh]	Average price [lei/MWh]
Buy				
Regulated from producers	655.31	185.00	-	-
Negotiated with non-dispatchable producers (changes and additions to Law no. 220/2008)	0.0002	182.66*	0.06	307.15
Trades on Opcom centralized markets, of which:	9.49*	267.15	376.51	300.70
- CMBC-EA with producers	3.84*	248.78*	12.52	251.57
- CMBC-EA Flex with producers	-	-	192.59	264.13
- CMBC-CN with producers	0.81*	263.11*	29.73	394.17
- CM-OTC with producers	1.64	264.56	58.01	309.73
- CME-RES-GC from producers	-	-	3.43	229.99
- CMBC-EA with other suppliers	0.01	290.12*	0.66	295.12
- CMBC-CN with other suppliers	2.24	292.16	17.73	272.43
- CM-OTC with other suppliers	0.94	290.43*	61.84	383.20
prosumers	0.06	251.21*	0.19	196.56
DAM	52.98	230.88	81.72	1124.11
ID	0.00001	377.03*	4.05	1153.09
Sell				
DAM	18.76	195.33	30.48	742.31
ID	0.0042	11.78	1.41	929.17
Households	700.94	251.95	417.96	374.90
Non-household clients	9.62	406.24	9.03	458.86

Source: Monthly reports of the suppliers of last resort – analysis done by the Electricity Market Monitoring Unit

*Differences with October 2020 Electricity Market Monitoring Report are caused by the corrections reported by market participants

The structure of trades on the WEM of suppliers of last resort (made before the delivery interval) to supply inactive clients is presented in the following table for October 2021, compared with the similar period of 2020:

Structure of trades of suppliers of last resort to supply electricity to inactive clients	October 2020		October 2021	
	Quantity [GWh]	Average price [lei/MWh]	Quantity [GWh]	Average price [lei/MWh]
Buy				
Negotiated with non-dispatchable producers (changes and additions to Law no. 220/2008)*	0.0009**	182.66**	0.002	307.15
Trades on Opcom centralized markets, of which:	53.25**	270.86**	46.40	410.83
- CMBC-EA with producers	11.66**	257.85**	0.05	252.62
- CMBC-EA Flex with producers	0.00	0.00	16.00	255.47
- CMBC-CN with producers	4.34	258.74**	0.25	261.48
- CM-OTC with producers	21.05**	273.13**	7.70	549.99
- CMBC-EA with other suppliers	0.04	290.12**	0.03	295.12
- CMBC-CN with other suppliers	15.68**	280.86	0.11	420.44
- CM-OTC with other suppliers	0.48**	269.18**	22.27	476.47
prosumers	0.01	251.21**	0.01	196.56
DAM	9.97**	244.85	17.96	1074.53
ID	0.0001	377.03**	0.61	1140.94
Sell				
DAM	5.53	177.79	2.46	664.15
ID	0.004	11.76	0.33	923.14
Inactive clients	58.14	425.78	50.63	487.59

Source: Monthly reports of the suppliers of last resort – analysis done by the Electricity Market Monitoring Unit

Note: *negotiated trades with non-dispatchable producers that fall under the provisions of Law no. 220/2008 with subsequent amendments and additions

**Differences with the October 2020 Electricity Market Monitoring Report are caused by the corrections reported by market participants

The following table shows the structure of suppliers of last resort electricity trades made before the delivery interval, corresponding to the competitive segment of REM, in October 2021, compared to the similar period of 2020:

Structure of trades concluded by suppliers of last resort to supply final clients under competitive regime	-GWh-	
	October 2020	October 2021
Buy		
import	-	9.68
Negotiated with producers	-	4.09
Trades on Opcom centralized markets, of which:	1356.79***	1620.93
- CMBC-EA with producers	391.82***	52.06
- CMBC-EA Flex with producers	18.62	596.72
- CMBC-CN with producers	177.88***	130.19
- CM-OTC with producers	392.47***	341.05
- CME-RES-GC from producers	20.61	57.99
- CMBC-EA with other suppliers	33.40	2.96
- CMBC-EA-Flex with other suppliers	0.00	14.90
- CMBC-CN with other suppliers	52.13	55.95
- CM-OTC with other suppliers	269.86***	369.10
Production from own sources	0.00	2.13
Negotiated with non-dispatchable producers (others than under Law no. 220/2008) *	0.00***	1.56
Negotiated with non-dispatchable producers (changes and additions to Law no. 220/2008) **	25.61***	31.89
Prosumers	0.13	4.25
DAM	126.92	603.33
ID	0.01	8.10
Sell		
Trades on Opcom centralized markets, of which:	71.53	102.45
- CMBC-CN with producers	16.39	3.73
- CM-OTC with producers	3.72***	0.00
- CMBC-EA with other suppliers	0.00	0.001
- CMBC-CN with other suppliers	0.00	19.00
- CM-OTC with other suppliers	45.46	38.75
- CMBC-EA with DO	0.00	3.73
- CMBC-CN with DO	0.00	22.35
- CM-OTC with DO	5.96	14.90
DAM	58.65	14.07
ID	0.12	4.35
Households	402.68	696.91
Non-household clients	990.95***	1489.84

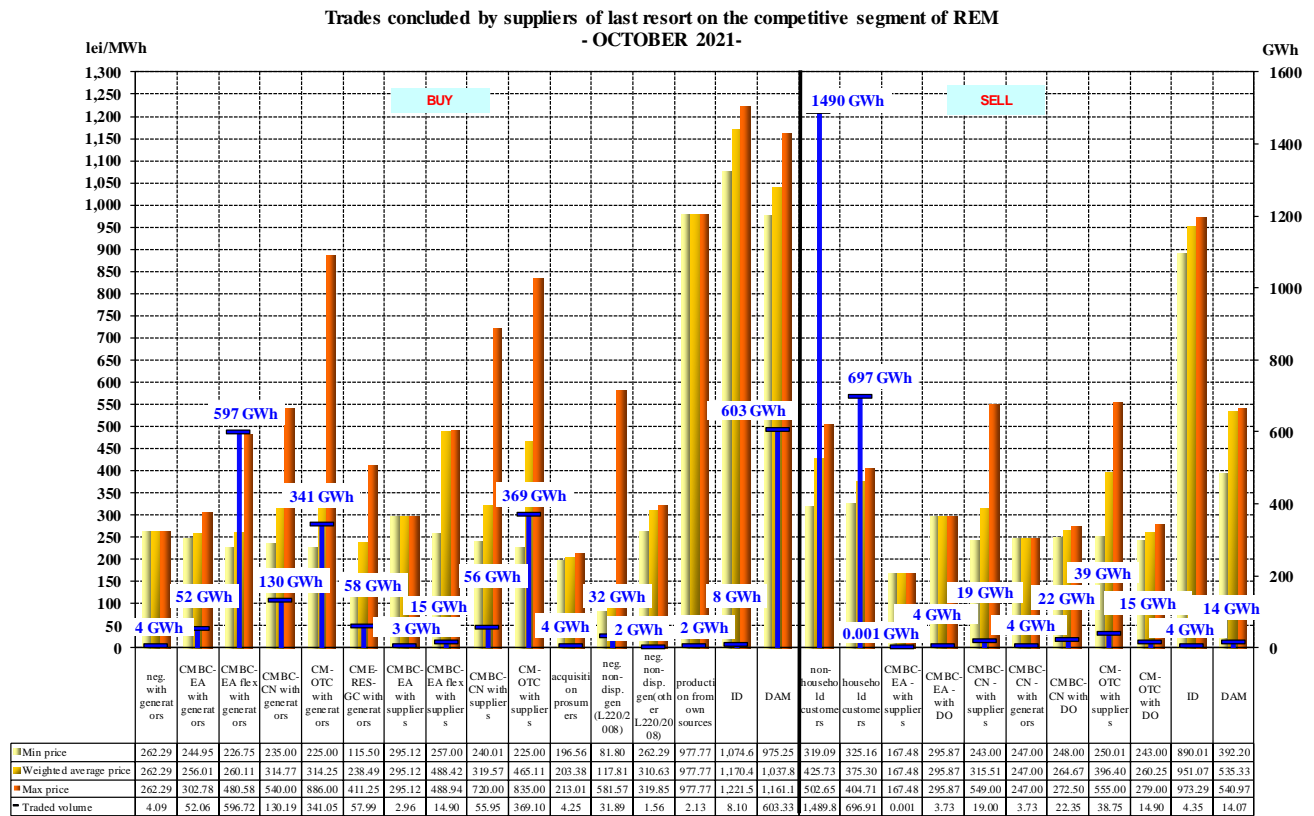
Source: Monthly reports of the suppliers of last resort – analysis done by the Electricity Market Monitoring Unit

Notes: * negotiated trades with non-dispatchable producers that **do not** fall under the provisions of Law no. 220/2008 with subsequent amendments and additions.

** negotiated trades with non-dispatchable producers that fall under the provisions of Law no. 220/2008 with subsequent amendments and additions.

*** The differences with the October 2020 Electricity Market Monitoring Report are determined by the processing of the corrected reports sent by economic operators.

The breakdown by types of sources/destinations of the traded volumes and the average prices of trades made in October 2021 by suppliers of last resort on the competitive segment of REM is presented in the following graph:



Source: Monthly reports of suppliers of last resort – analysed by Electricity Market Monitoring Unit

Main distribution operators

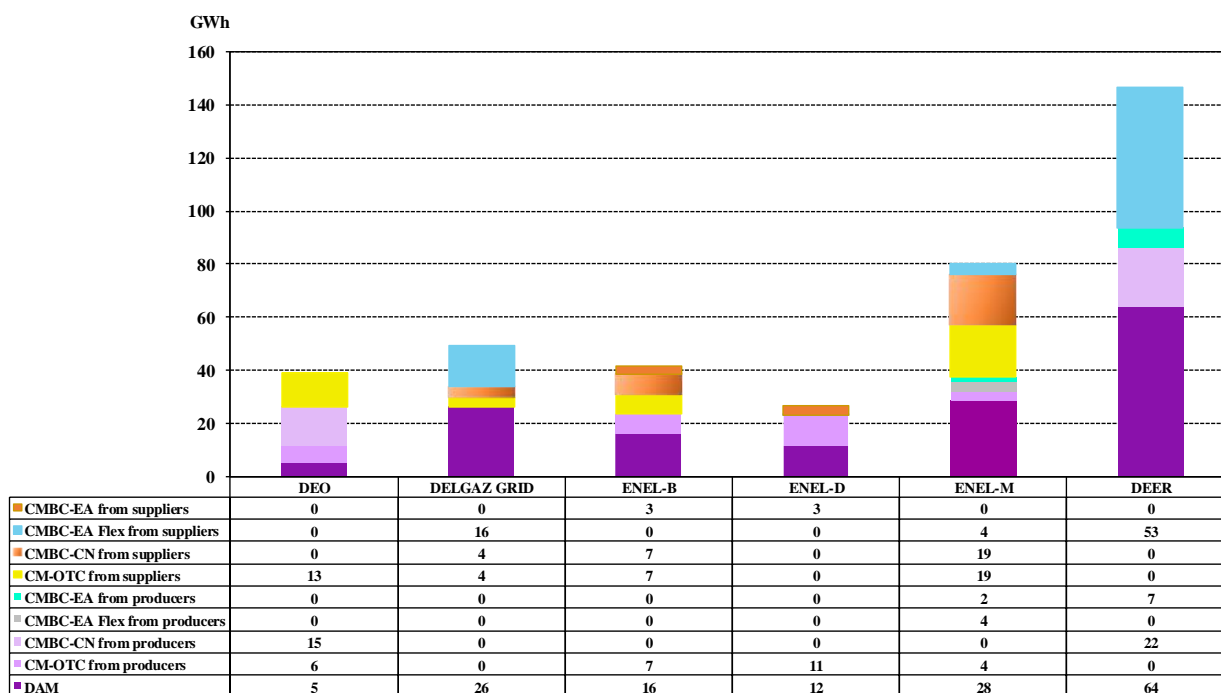
The following table shows the structure of electricity trades of the main distribution operators made before the delivery interval for distribution networks losses in October 2021, compared with the similar previous period of 2020:

Structure of trades	- GWh -	
	October 2020	October 2021
Trades on centralized contracts markets:	322.78	206.74
- CMBC-EA with producers	37.25	9.13
- CMBC-EA- flex with producers	0.00	3.73
- CMBC-CN with producers	110.97	37.24
- CM-OTC with producers	12.65	28.31
- CMBC-EA with suppliers	32.02	5.96
- CMBC-EA- flex with suppliers	8.93	6.97
- CMBC-CN with suppliers	77.03	72.21
- CM-OTC with suppliers	43.93	43.20
DAM, of which	79.80	151.89
- buy	82.39	151.74
- sell	2.59	0.15
ID, of which	0.09	0.56
- buy	0.09	0.47
- sell	0.00	0.09

Source: Monthly reports of the main distribution operators – analysed by Electricity Market Monitoring Unit

Electricity acquisition structure of the main distribution operators in October 2021 is shown in the following graph:

Structure of electricity acquisitions of distribution operators to cover distribution network losses - OCTOBER 2021 -



Source: Monthly reports of the main distribution operators – analysed by Electricity Market Monitoring Unit

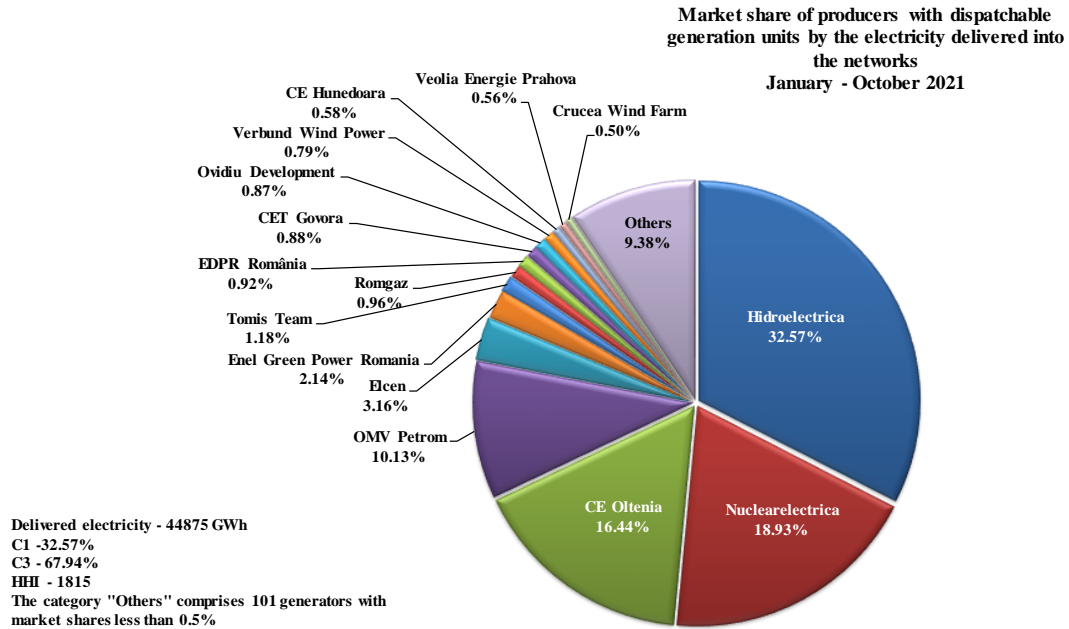
6. Concentration indicators for the wholesale electricity market and its components

Concentration indicators and market shares of electricity producers

The market structure of electricity generation offers an initial basis for the analysis of the degree of competitiveness that is possible on the electricity market.

The following table presents the concentration indicators in October 2021 and the graph presents the market shares of electricity producers with dispatch-able generation units, determined based on the electricity delivered into the networks.

Concentration indicators -October 2021 -	C1 (%)	C3 (%)	HHI
Value	22.09	63.27	1554



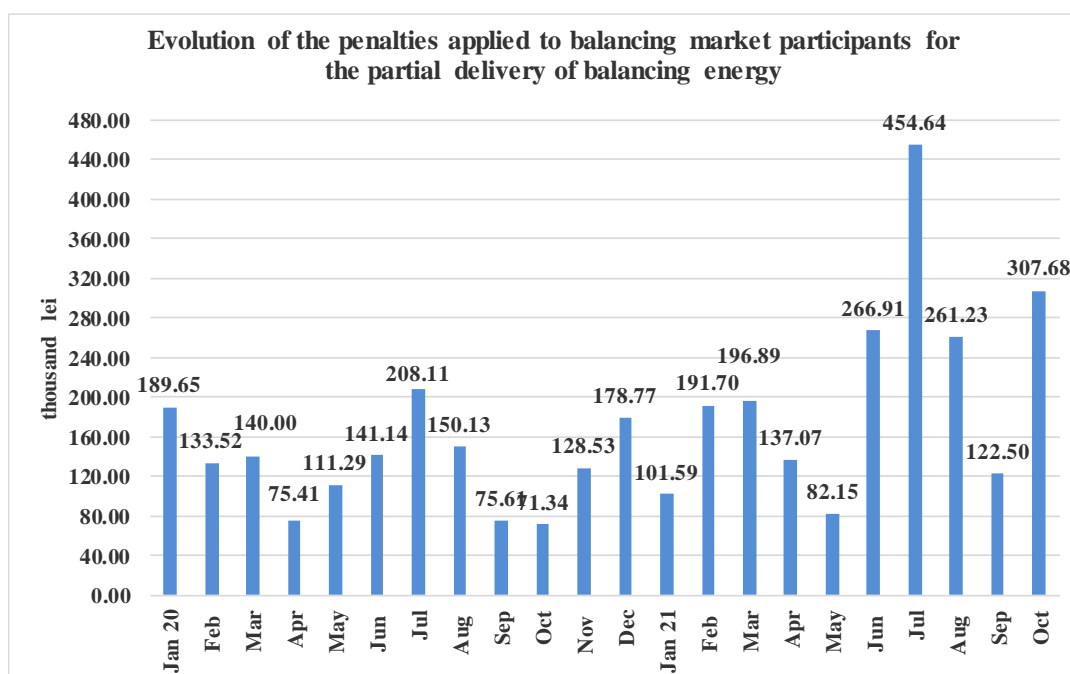
Source: Monthly reports of producers – analysed by the Electricity Market Monitoring Unit

A component of the WEM on which direct competition between producers is shown is the Balancing Market (BM). The values of concentration indicators on this market for October 2021, determined based on the actually delivered electricity, for each of the 3 types of regulation, are presented in the following table:

Structure/concentration indicators of BM October 2021	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
C1-%	65	68	87	54	0	0
C3 -%	100	100	92	96	0	0
HHI	4891	5227	7578	4238	0	0

Source: Monthly reports of CNTEE Transelectrica SA – analysed by Electricity Market Monitoring Unit

The following graph shows the evolution of the penalties applied to BM participants for the partial delivery of balancing energy starting with January 2020:



Source: Monthly reports of OPCOM

In the following table are shown the concentration indicators by types of reserves bought by CNTEE Transelectrica S.A. from the qualified producers, following the organization of auctions for October 2021 for secondary reserve, upward and downward fast tertiary reserve. For slow tertiary reserve (upward) no auctions were organised.

Concentration indicators on the Ancillary Services Market - October 2021 -		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve
competitive component	contracted quantity (h*MW)	352310	621626	-
	C1 (%)	66.1	70.1	-
	C3 (%)	100.0	96.8	-
HHI		5099	5418	-

Source: Monthly reports of CNTEE Transelectrica SA – analysed by the Electricity Market Monitoring Unit

Concentration Indicators on the Day Ahead Market

The Day Ahead Market (DAM) is a voluntary market, open for both buying and selling for all license holders and for foreign undertakings who have been granted by ANRE Decision the confirmation of the right to supply electricity in Romania, under the conditions established by the applicable regulations.

The concentration indicators on this market reflect the level of competition between sellers and between buyers respectively, the dynamics of both influencing the price level. The following table presents C1, C3 and HHI for the buying and for the selling side of DAM, based on quantities traded by participants on this market.

Concentration indicators on DAM - October 2021 -	C1 (%)	C3 (%)	HHI
Sell	13.37	26.97	445
Buy	14.37	29.83	525

Source: Monthly reports of Opcom SA

7. Prices evolution on the wholesale electricity market

Starting with 19 November 2014, the Romanian DAM is coupled with the spot markets from Hungary, Slovakia and the Czech Republic in the 4M MC project – the price coupling mechanism of the day-ahead markets. This coordinated correlation mechanism uses a unique Pan-European method for the price coupling of regions (*Price Coupling of Regions* – PCR initiative) in order to harmonize the national European markets and create the internal European electricity market. The coupled functioning is based on the coupling algorithm recommended by ACER (Euphemia) and its goal is to maximize the social welfare of the entire coupled markets area.

The coupling mechanism is developed through the coupling operators OTE-Czech Republic, EPEX Spot (operating as a service supplier for OKTE-Slovakia and HUPX-Hungary) and, from 17 January 2017, OPCOM-Romania (PCR member from January 2016). After successfully implementing the changes and tests performed, OPCOM operates in its own name the coupling solution implemented in the 4M MC operational mechanism, all processes being performed under the security conditions of the coupled functioning of the day-ahead markets. Coupling operators act as *Coordinators* on a monthly rotation basis.

Coordinated calculation of cross - border allocation capacity is under the governance of the TSOs from the 4 countries, according to EU legislation, and the allocation model used is that of implicit allocation on DAM of the available interconnection capacity.

To better meet the purpose of the DAM coupling mechanism, respectively the electricity transfers at the level and the direction determined by the known conditions of generation and consumption and based on the coupled markets prices - starting with 1 January 2016, TSOs from Romania and Hungary, CNTEE Transelectrica SA and Mavir ZRt, under the recommendations of the regulators from both countries, ANRE and MEKH, agreed to reserve a quota of the interconnection capacity for DAM allocation. The same rule was adopted for interconnection capacity allocation on the Bulgarian border.

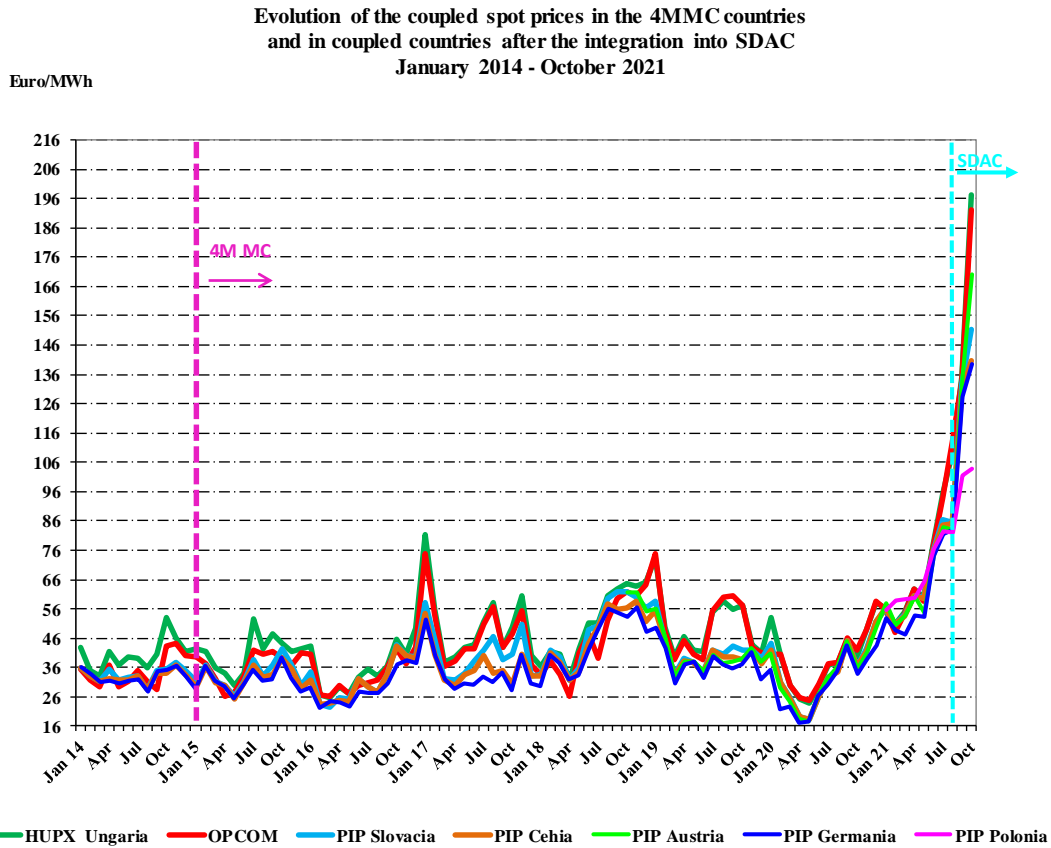
Therefore, for each month of the year, the reserved capacity for DAM allocation is determined as a difference between the available transmission capacity (ATC) calculated monthly for each sub-period and 80% of the lowest ATC value resulted for the sub-periods of the respective month, plus the capacity allocated at the annual auction, returned to the TSO.

Particularly, for the Hungarian border, if 80% of the lowest value of the ATC calculated monthly on sub-periods is lower than 80 MW, interconnection capacity for monthly allocation will be 80% from the ATC calculated for each sub-period, to which is added the allocated capacity at the yearly auction returned to the TSO.

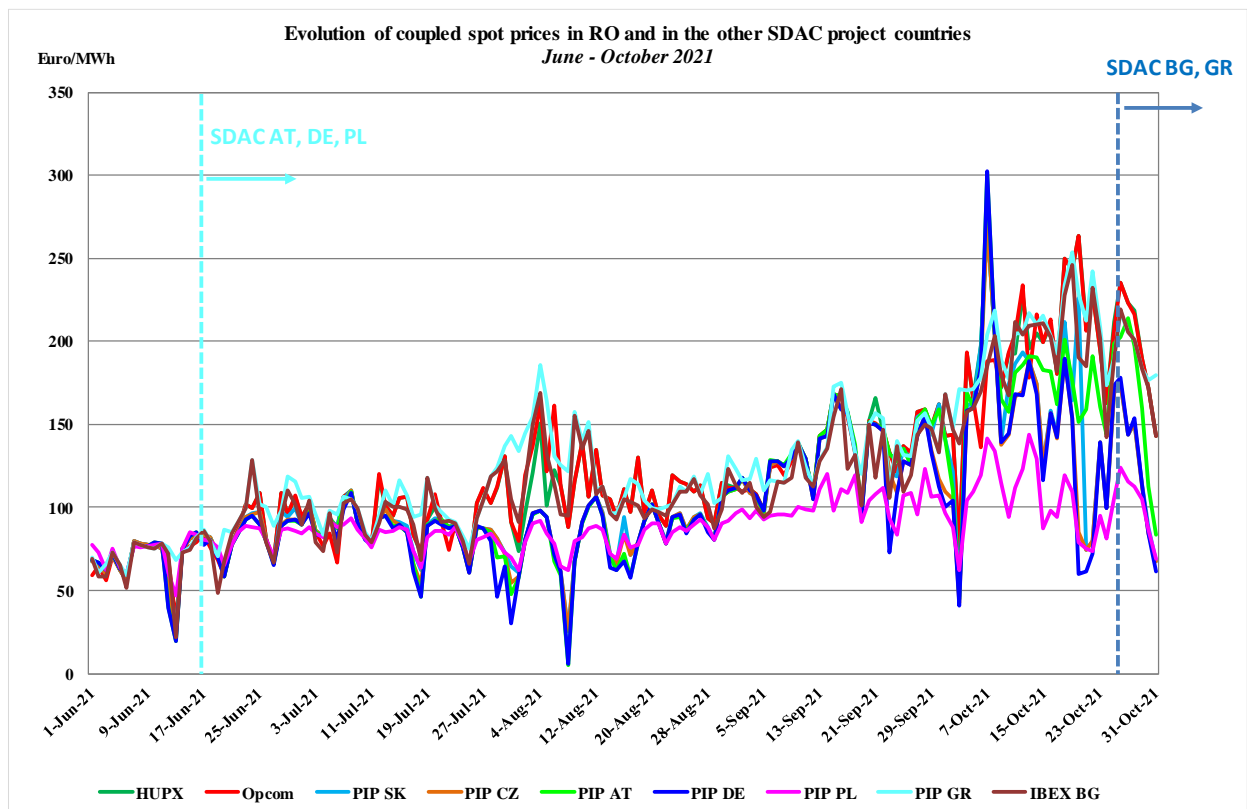
On 18 June 2021 the Interim Coupling Project became operational. DAM in the 4M MC regional project coupled by price with the multiregional coupling markets MRC by introducing the implicit allocation of net transmission capacity (NTC) on 6 new borders (PL-DE, PL-CZ, PL-SK, CZ-DE, CZ-AT, HU-AT). As a result of the expansion of the coupling mechanism, the spot markets in the Czech Republic, Slovakia, Hungary and Romania have been coupled with those in Poland, Germany and Austria, now being part of the pan-European SDAC project.

On 27 October 2021, the RO-BG border coupling operations in SDAC were completed, thus allowing the connection of the DAM from Greece and Bulgaria to SDAC, with the first delivery day on 28 October 2021.

The next graphs present the evolution of the monthly average spot prices (first graph), respectively the daily average spot prices on the DAM of the states members of the Interim Coupling Project before and after the coupling in the SDAC pan-european project (second graph).



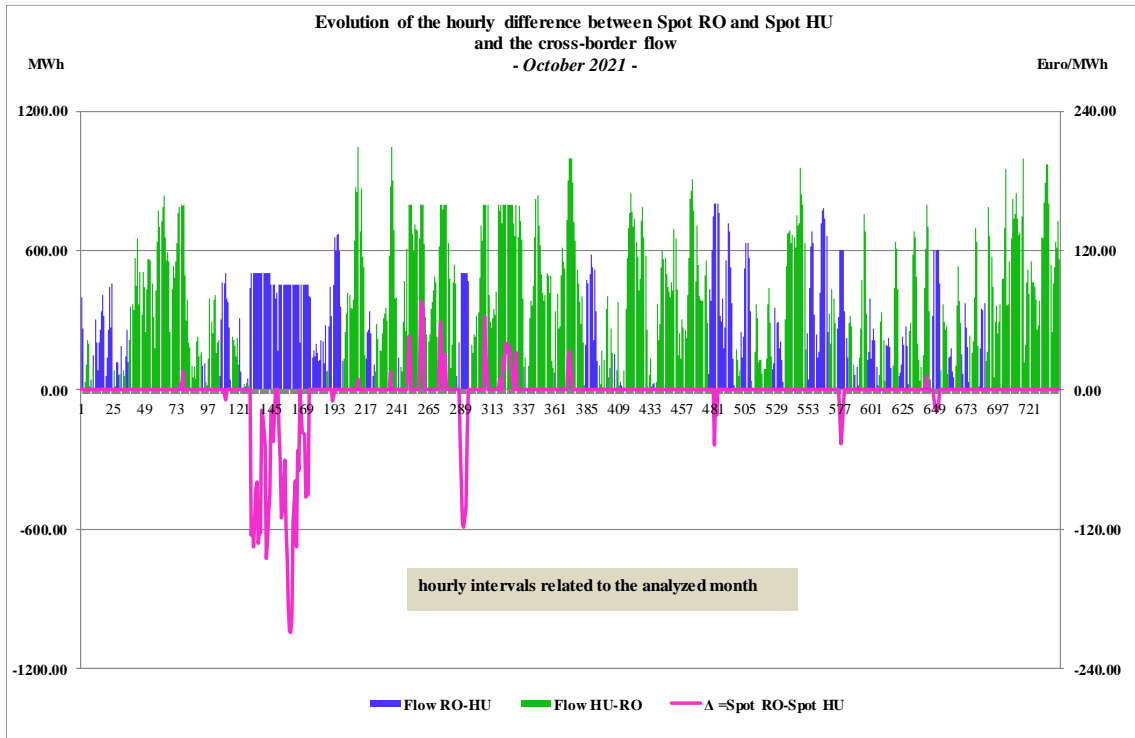
Source: Information published on the ENTSO-E Transparency Platform – analysed by the Electricity Market Monitoring Unit



Source: Information published on the ENTSO-E Transparency Platform – analysed by the Electricity Market Monitoring Unit

Next, the following graph presents the evolution at hourly level of the difference between the closing prices of the coupled DAM on the Romanian and respectively the Hungarian area, correlated with the

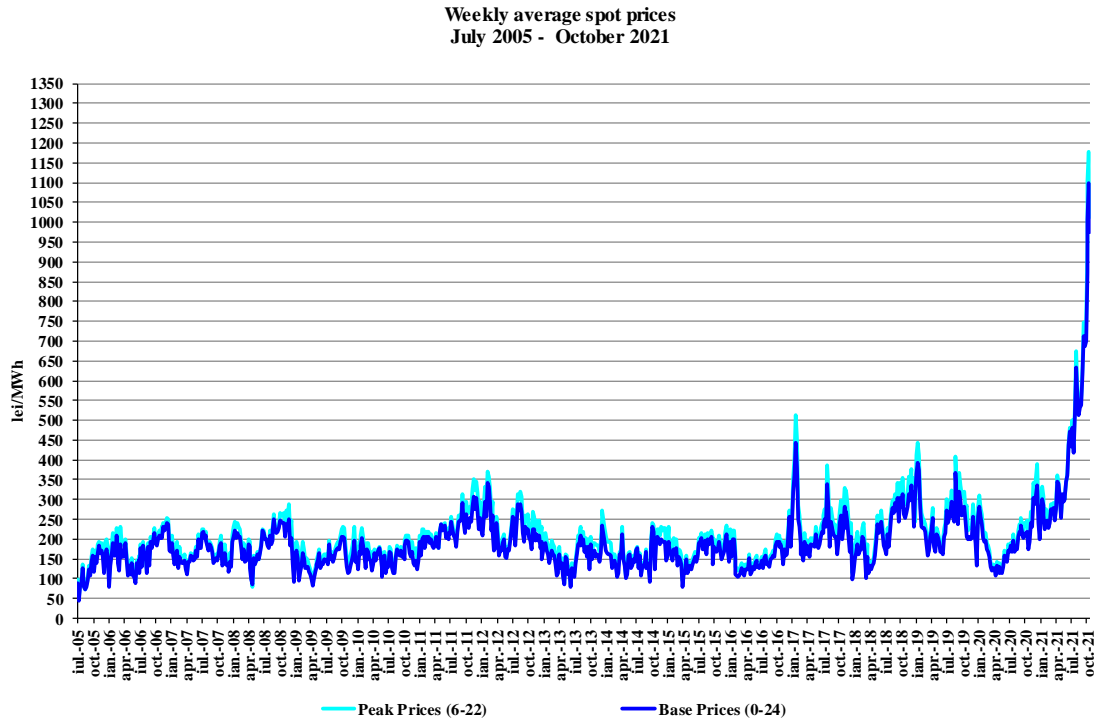
cross-border flows on the Romanian – Hungarian border, on both directions, in October 2021, and the next table presents the evolution of the cross-border flow and ATC on coupled DAM on the border with Bulgaria, starting with the first day of delivery.



Source: Opcom SA public data – analysed by the Electricity Market Monitoring Unit

Analysed period	Cross-border flow (MWh)		Cross-border ATC (MWh)		Use of ATC	
	RO_BG	BG_RO	RO_BG	BG_RO	RO_BG	BG_RO
Total 28-31 October, of which:	9,547	24,210	120,170	68,310	8%	35%
Maximum hourly values	653	621	1,322	864		

The following graph presents the evolution of weekly average spot prices starting with July 2005:



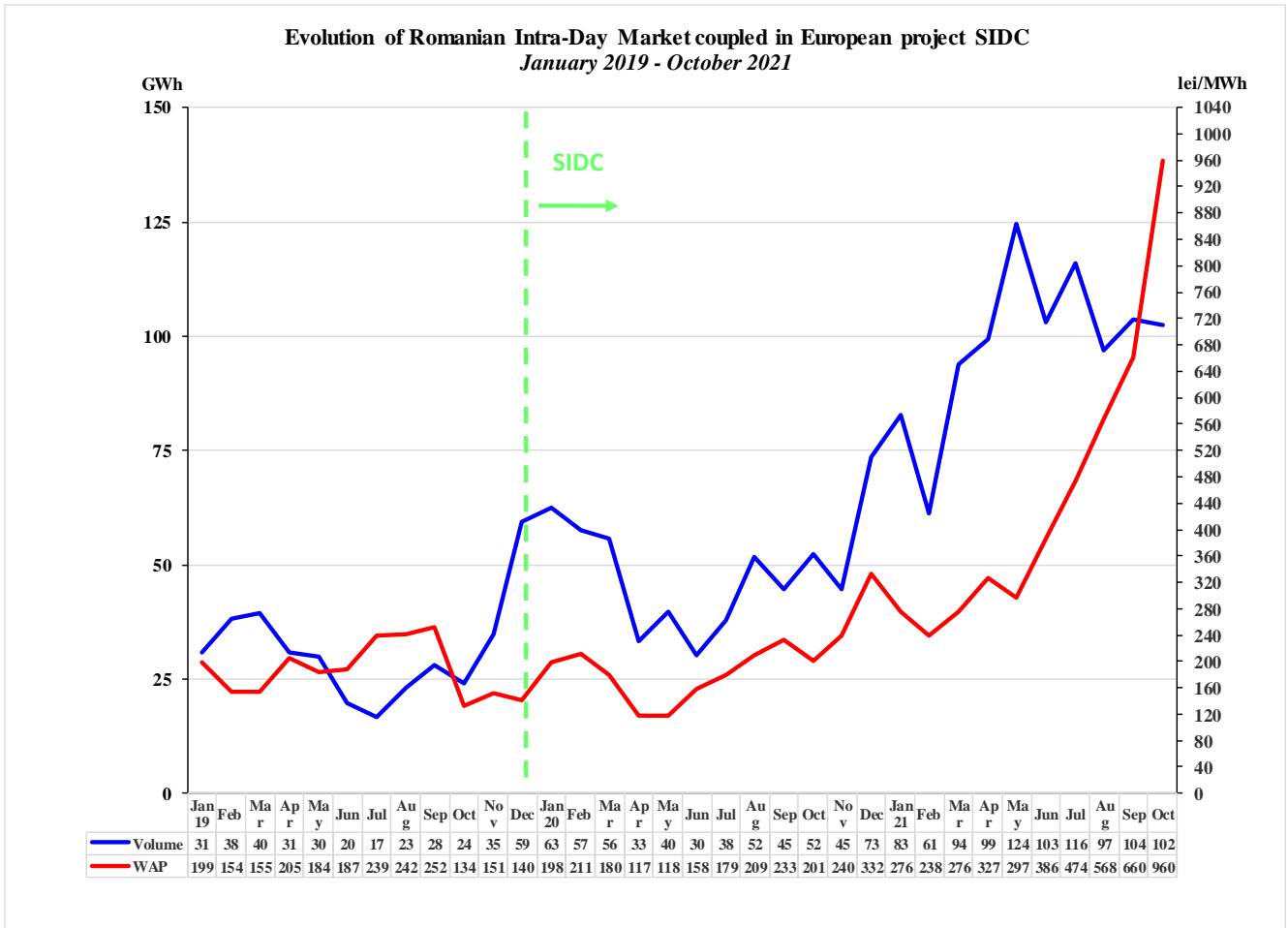
Source: Daily reports of Opcom SA – analysed by Electricity Market Monitoring Unit

After entry into force of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (*CACM Regulation*), the development and approval by all the regulatory authorities or by ACER of its subsequent documents has started, allowing the Single Day-ahead price coupling and the correlation by continuous trading of the Intra-day markets.

New ID trading rules are in line with EU legislation (*CACM Regulation*) and with the subsequent secondary legislation approved by ACER decisions: no. 05/14 November 2017 (applying the provisions of Article 54 - harmonised highest and lowest clearing prices for all bidding zones participating in the single intra-day coupling), no. 4/24 April 2018 (applying Article 59 - setting the intra-day cross-zonal gate opening and closure time) and no. 8/26 July 2018 (applying the provisions of Article 37 – adopting the methodology and the common set of requirements for the price coupling algorithm and for the matching algorithm by continuous trading).

By Romania's accession to the European SIDC Project (Single Intra-Day Coupling), formerly known as XBID, designed to implement the Pan-European cross-border trading on the Intra-Day horizon, as of 15:00 CET of the trading day 19 November 2019, Romanian ID functions in coupled mode with the markets from the other 20 countries participating in the European project, respectively Bulgaria, Hungary, Croatia, Czech Republic, Poland, Slovenia, Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Latvia, Lithuania, Norway, Sweden, Holland, Portugal and Spain.

The following graph presents the monthly traded volume and the weighted average price (WAP) on the Intra-day market starting with 1 January 2019, before and after Romania joined the SIDC European project.



Source: Opcom SA public data – analysed by Electricity Market Monitoring Unit

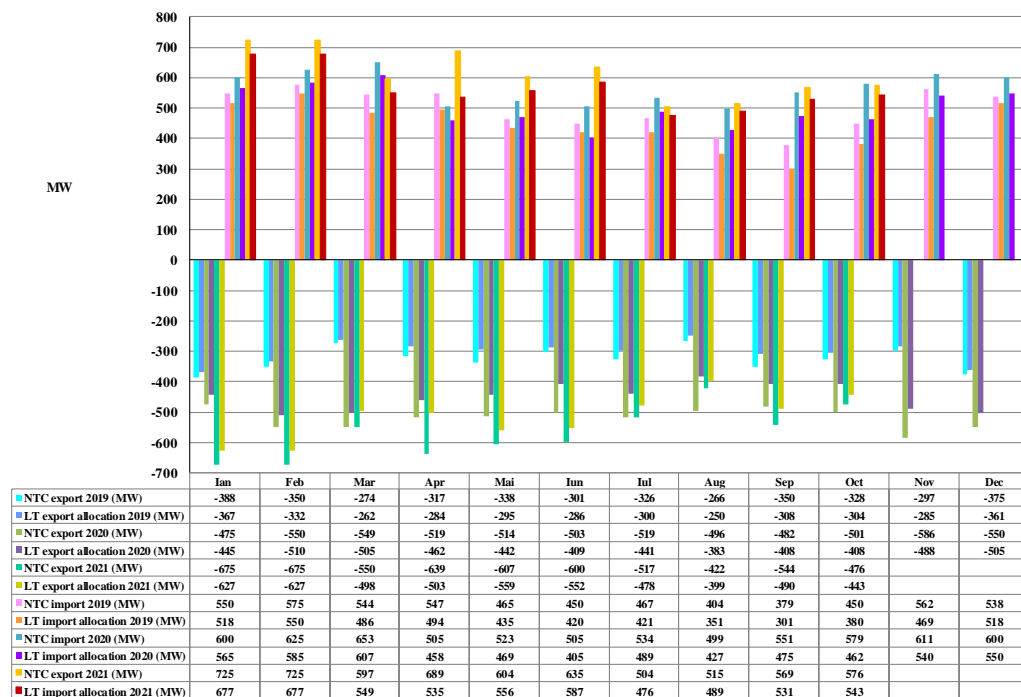
On the Romanian borders with Hungary and Bulgaria, the intra-day coupling is made through implicit allocation, with a continuous correlation trading algorithm, using a common IT system, with a single capacity management module, cross-border transfer module and a single trading order book.

On the borders with Bulgaria and Hungary, the auctions for the annual and monthly allocation are organized by the Joint Allocation Office (JAO), which has become, as of 1 October 2018, the Single Allocation Platform (SAP) that organizes auctions for cross-border capacity allocation for all European TSOs.

On the border with Serbia the allocation is still made through coordinated bilateral auctions for 100% of the capacity. The auctions for cross-border capacity allocation on the annual, monthly and intra-day horizons are organized by CNTEE Transelectrica SA, and the daily auctions are organized by EMS (the Serbian TSO), according to the agreements signed between the two TSOs. On the border with Ukraine the allocation is done by CNTEE Transelectrica SA through auctions for annual and monthly allocation, the use of interconnection capacities depending on the written agreement of Ukrenergo (Ukrainian TSO).

The following chart shows the monthly average values of the net transfer capacity (NTC) of the NPS with the aforementioned neighbouring energy systems and the average transfer capacity allocated at long-term export and import auctions.

Evolution of the average NTC and the average cross - border transfer capacities allocated on long - term auctions
2019-2021



Source: Monthly reports of CNTEE Tranelectrica SA – analysed by the Electricity Market Monitoring Unit

In order to cover the differences between planned/contracted values of consumption and generation and respectively their values in real time, the system operator (CNTEE Tranelectrica SA) operates the balancing market (BM),” buying” or "selling" electricity at prices determined by the merit order of dispatch-able producers offers. Market participants generating imbalances, grouped in BRPs, have to bear the imbalances costs.

As of 1 February 2021, changes came into force regarding the functioning of the balancing market and the settlement of imbalances, thus introducing the following:

- the 15-minutes time interval is the settlement interval;
- the single imbalance price as a method of settling the imbalances of the balancing responsible parties, but also of a calculation method for dual imbalance prices (deficit price and surplus price), for settlement intervals in which the imbalance area is almost balanced and for which it has been considered that the single imbalance price method is not the most economically efficient method of settling the imbalances of the balancing responsible parties.

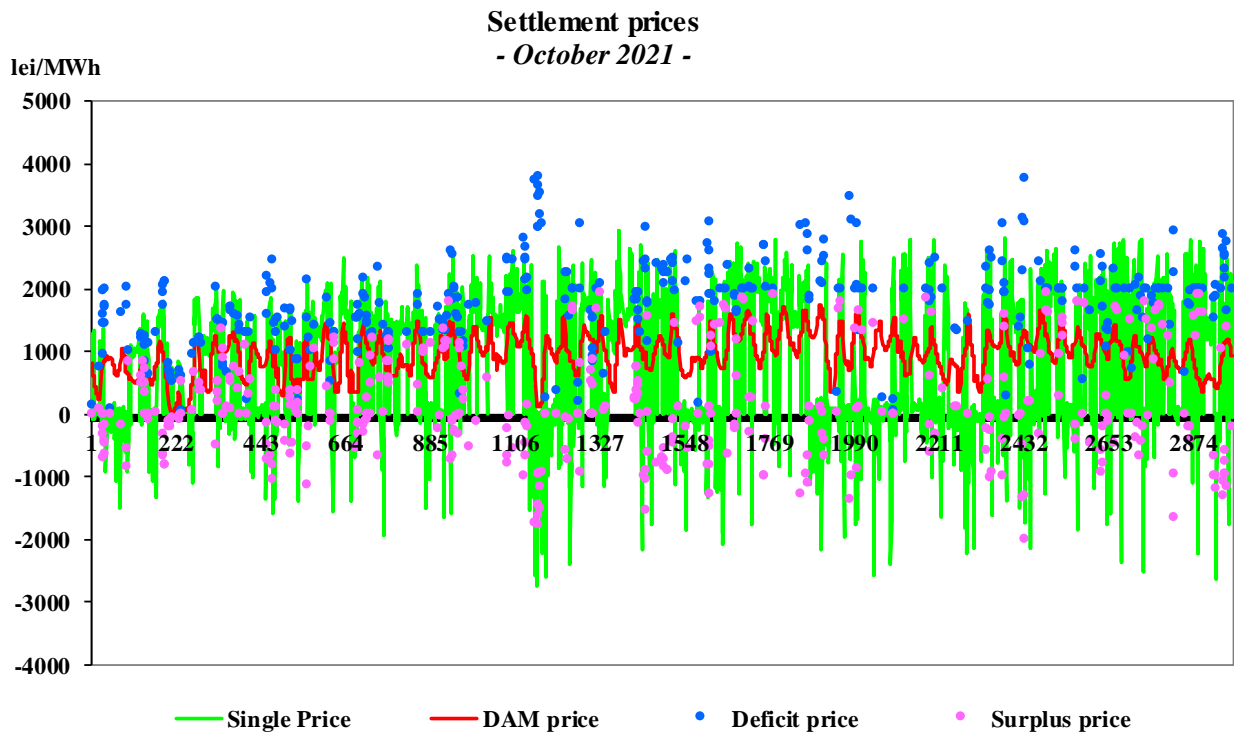
Adjacent representation of settlement prices (DAM market closing price, single imbalance price, deficit price and surplus price resulting from BM operation), as well as the settlement prices together with the NPS imbalance provide the overview of the correlated functioning of these markets. Settlement prices are for the 15-minute settlement interval (first and second graph).

From February 2021, in order to ensure the comparability of information over longer periods of time, in the intervals in which the single imbalance price was applied for settlement, its values were attributed to both the surplus and the deficit price.

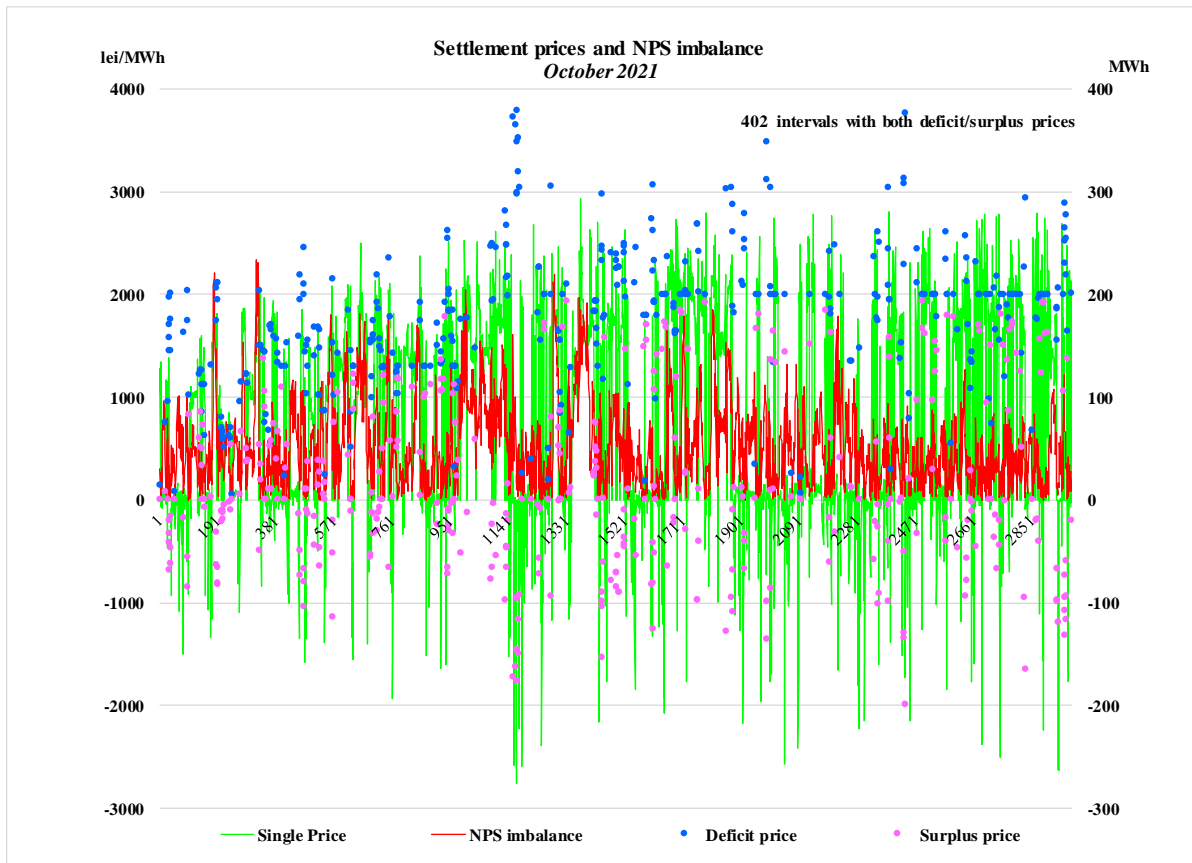
The values of surplus and deficit settlement prices were used to present the evolution of average values and domestic consumption recorded in the current month by settlement intervals (third graph), as well as the evolution of the average monthly prices on the BM compared with the DAM closing price (last graph).

Along with the DAM closing price, the prices on the BM are also presented as hourly average values resulting from the weighting of the volumes related to the NPS imbalance with the single imbalance price or with the dual imbalance prices, as the case may be (fourth graph).

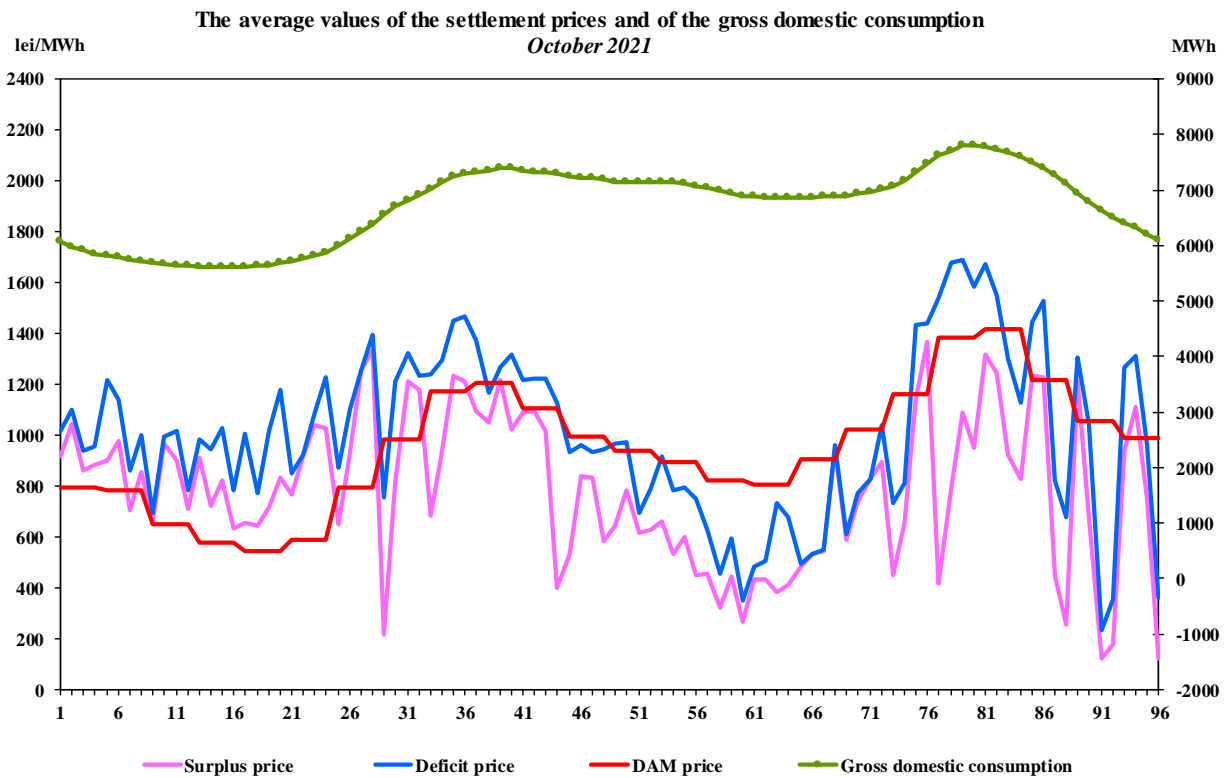
In October 2021, dual imbalance prices were calculated for 355 settlement intervals, in all other settlement intervals the value of the single imbalance price being different from zero.



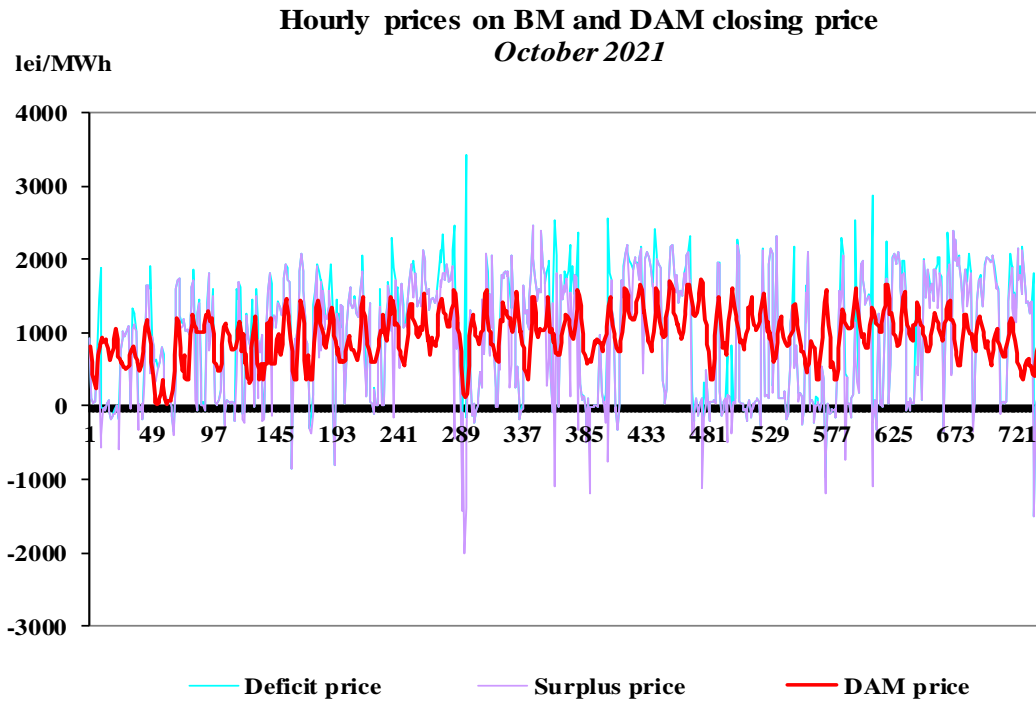
Source: Daily/monthly reports of OPCOM SA – analysed by the Electricity Market Monitoring Unit



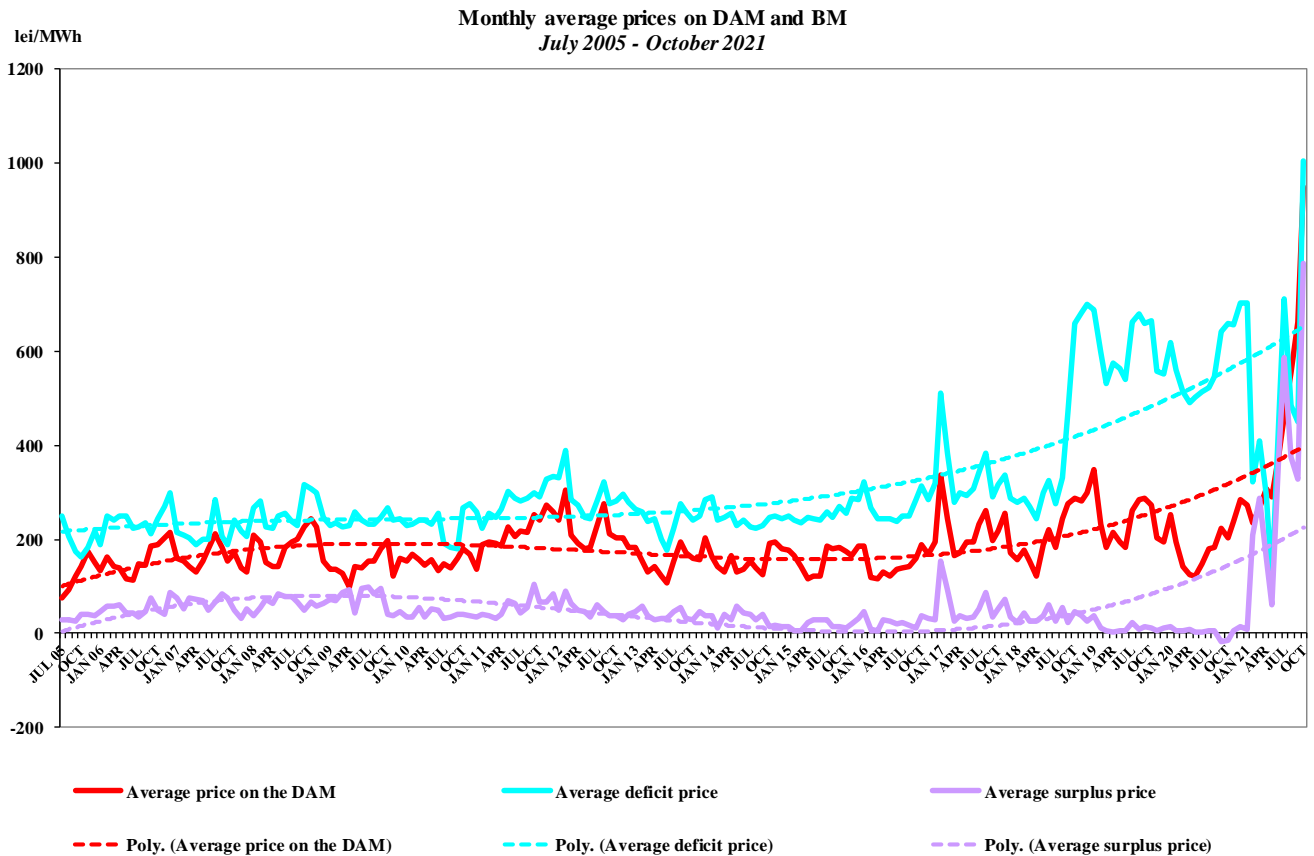
Source: Monthly reports of OPCOM SA and the information published by CNTEE Tranelectrica SA on the ENTSO-E Transparency Platform - analysed by the Electricity Market Monitoring Unit



Source: Monthly reports of Opcom SA and information published by CNTEE Tranelectrica SA on the ENTSO-E Transparency Platform – analysed by the Electricity Market Monitoring Unit



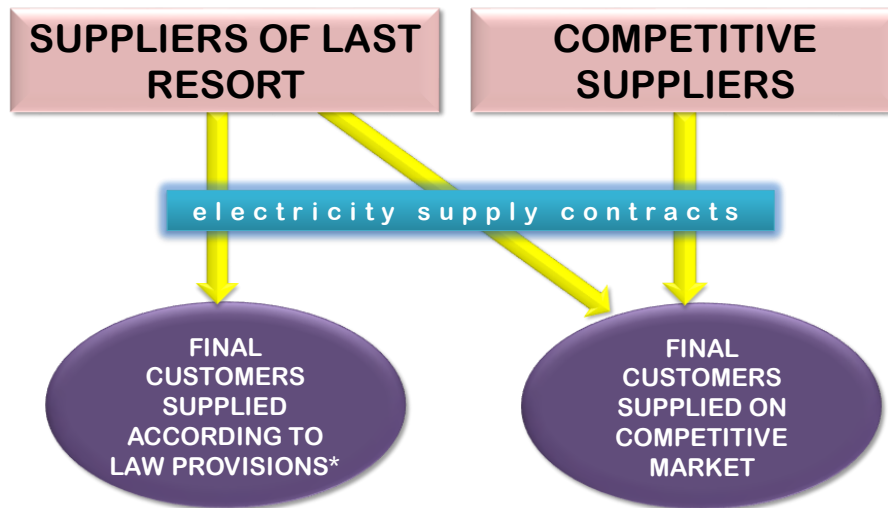
Source: Monthly reports of Opcom SA and information published by CNTEE Transelectrica SA on the ENTSO-E Transparency Platform – analysed by the Electricity Market Monitoring Unit



Source: Monthly/daily reports of Opcom SA – analysed by the Electricity Market Monitoring Unit

III. RETAIL ELECTRICITY MARKET

1. Structure of the retail electricity market

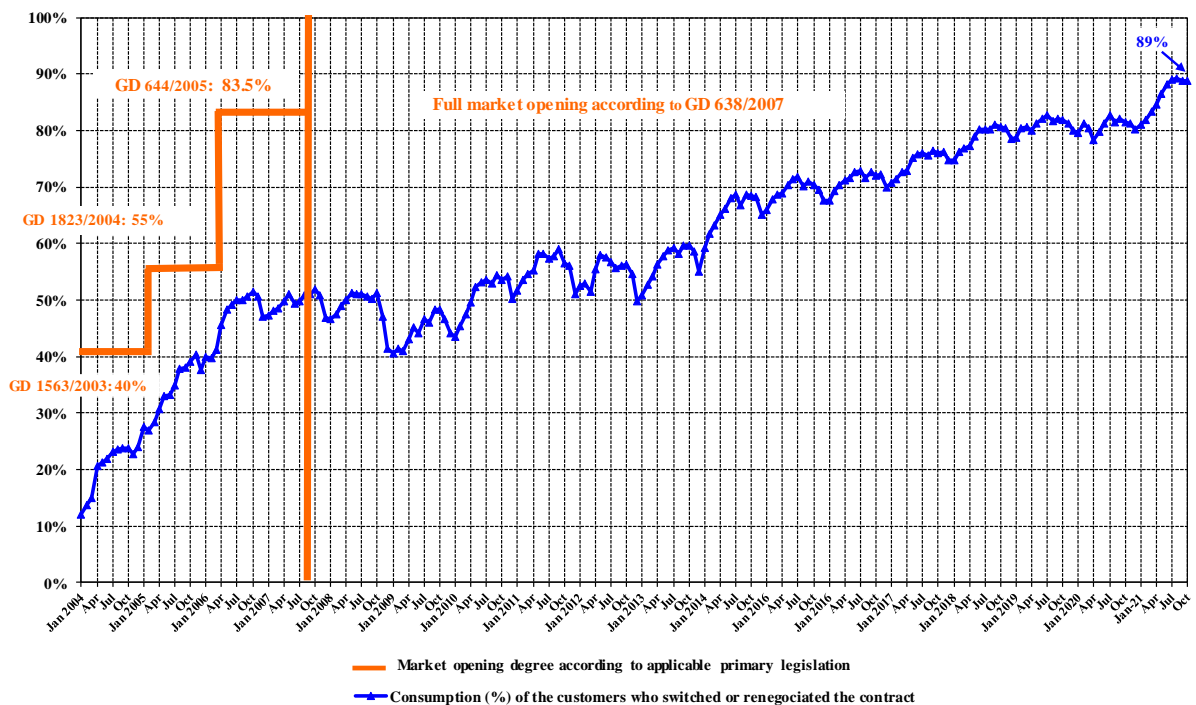


* art. 53 point (2) and art. 55 point (1) from Electricity and Gas Law no. 123/2012 with subsequent amendments and completions

2. Electricity market opening degree

Between January 2004 and October 2021, the consumption of final consumers who switched their supplier or negotiated on a competitive basis the contracts with the suppliers of last resort, in relation to the total consumption, evolved according to the figure below. The values presented are cumulate values from the beginning of the market opening process and are presented monthly.

Evolution of the opening degree of the electricity market
January 2004 - October 2021

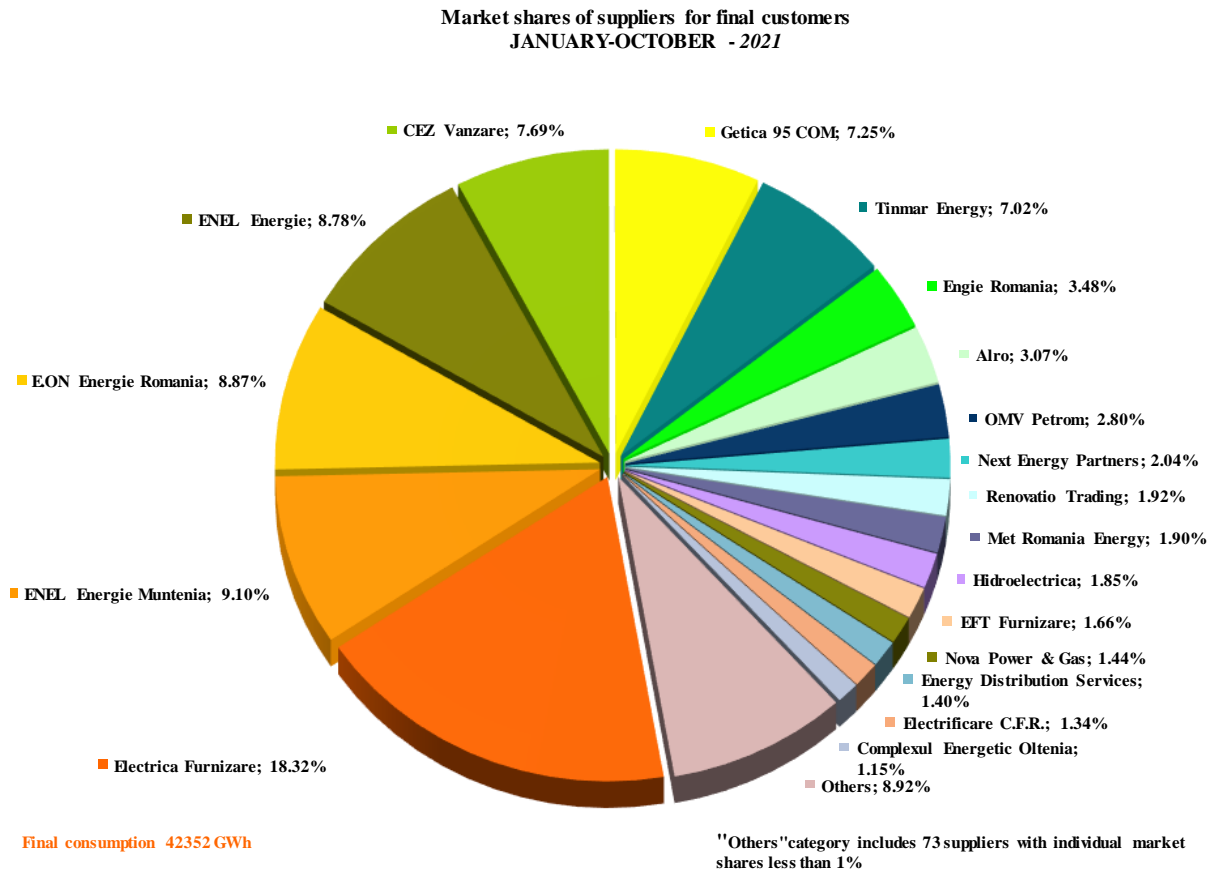


Source: Monthly reports of suppliers of final clients– analysed by the Electricity Market Monitoring Unit

3. Market shares of electricity suppliers

In the following three graphs are presented the market shares of electricity suppliers on the retail market, calculated:

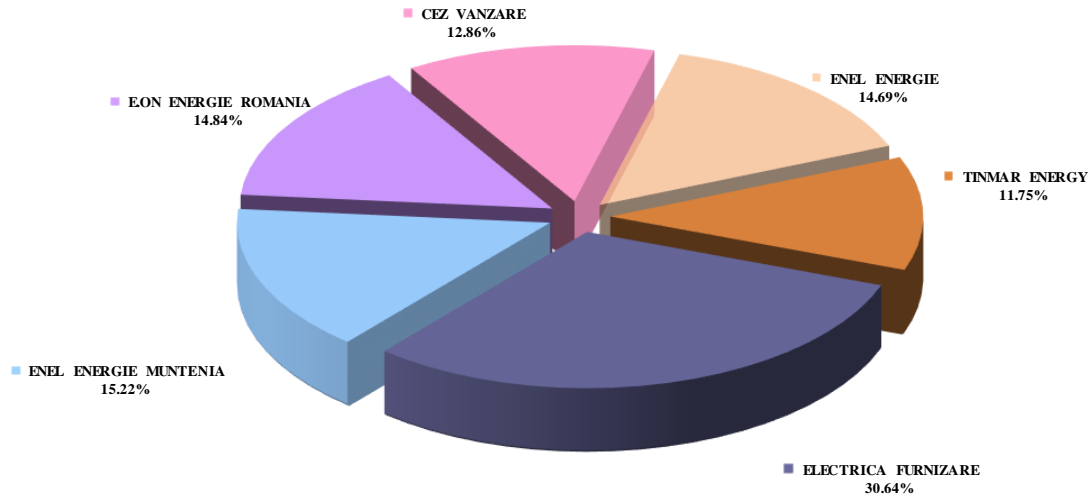
- a) for all licensees monitored, active on the REM (producers, competitive suppliers and suppliers of last resort), in terms of electricity supplied to all households and non-household clients under Universal Service, last resort, inactive and competitive regime;



Source: Monthly reports of suppliers of final clients – analysed by the Electricity Market Monitoring Unit

b) for suppliers of last resort - based on the electricity supplied to final clients under competitive, Universal Service, last resort and inactive regime;

Market shares of suppliers of last resort based on the electricity supplied to consumers under competitive, US, last resort and inactive regimes
JANUARY- OCTOBER - 2021

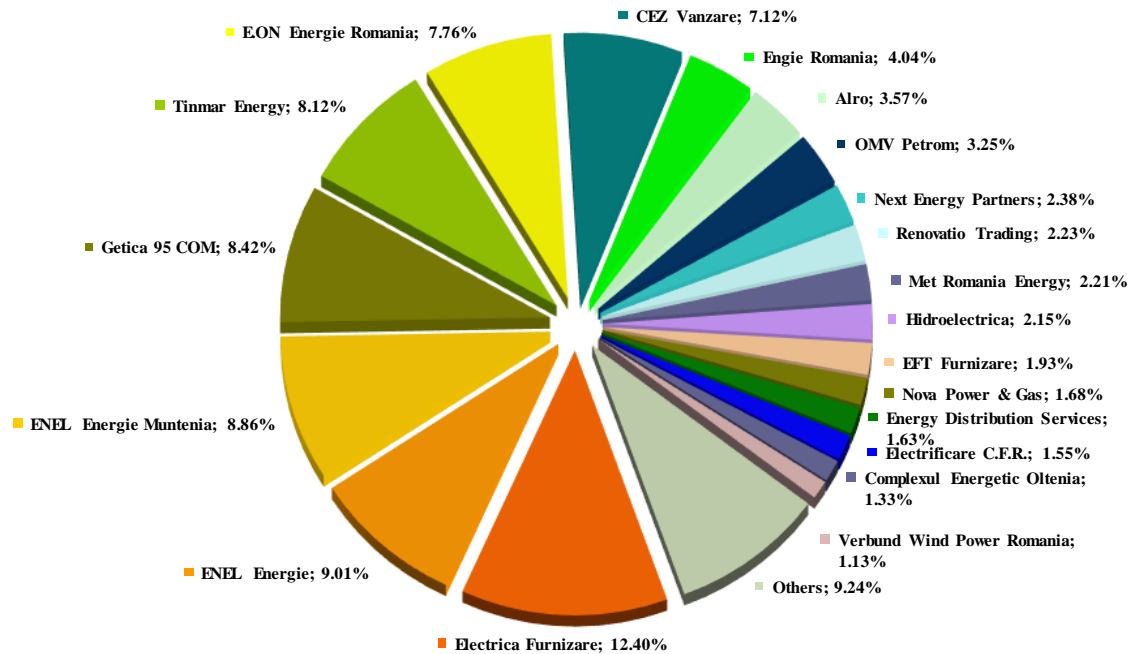


Consumption of final clients supplied under competitive, US, last resort and inactive regime: 25316 GWh

Source: Monthly reports of suppliers of last resort– analysed by Electricity Market Monitoring Unit

- c) For all licensees monitored active on the REM (producers, competitive suppliers and suppliers of last resort), depending on the electricity supplied on the competitive market to households and non-household clients.

Market shares of suppliers on the competitive market
JANUARY-OCTOBER 2021



Consumption on competitive market 36456 GWh
Concentration indicators:
HHI -639; C3 - 30%; C1 - 12%

"Others" category includes 71 suppliers with individual market shares less than 1%

Source: Monthly reports of suppliers of final clients – analysed by the Electricity Market Monitoring Unit

It is noted that in the calculation of the market indicator values the principle of dominance was not considered and the electricity supplied on the basis of which the market share of each supplier was established includes the self-consumption of the large industrial consumers who also hold a supply license and who have decided to buy the electricity on the wholesale market as competitive suppliers.

4. Concentration indicators on the retail electricity market

The tables below show the values of structure indicators on the REM and the number of active suppliers in October 2021, calculated for each consumption band:

Indicators – October 2021	Consumption bands – Non-household clients							TOTAL
	IA	IB	IC	ID	IE	IF	IG	
C1 -%-	25	20	17	15	25	23	17	13
C3 -%-	64	53	41	36	46	49	38	31
HHI	1857	1308	911	724	1090	1120	879	608
Consumption - GWh -	201	444	303	689	366	269	850	3122
No. of suppliers	65	73	64	58	22	17	18	86
No. of suppliers of last resort	6	6	6	6	5	4	4	6
No. of competitive suppliers	39	45	40	37	10	8	8	54
No. of producers	20	22	18	15	7	5	6	26

Source: Monthly reports of suppliers of final clients – analysed by the Electricity Market Monitoring Unit

Indicators – October 2021	Consumption bands – Households					TOTAL
	DA	DB	DC	DD	DE	
C1 -%-	22	34	41	49	62	36
C3 -%-	64	67	71	77	83	69
HHI	1937	2102	2439	2963	4092	2198
Consumption - GWh -	239	452	278	143	47	1160
No. of suppliers	35	38	38	33	34	46
No. of suppliers of last resort	6	6	6	6	6	6
No. of competitive suppliers	22	25	24	20	22	30
No. of producers	7	7	8	7	6	10

Source: Monthly reports of the suppliers of final clients – analysed by the Electricity Market Monitoring Unit

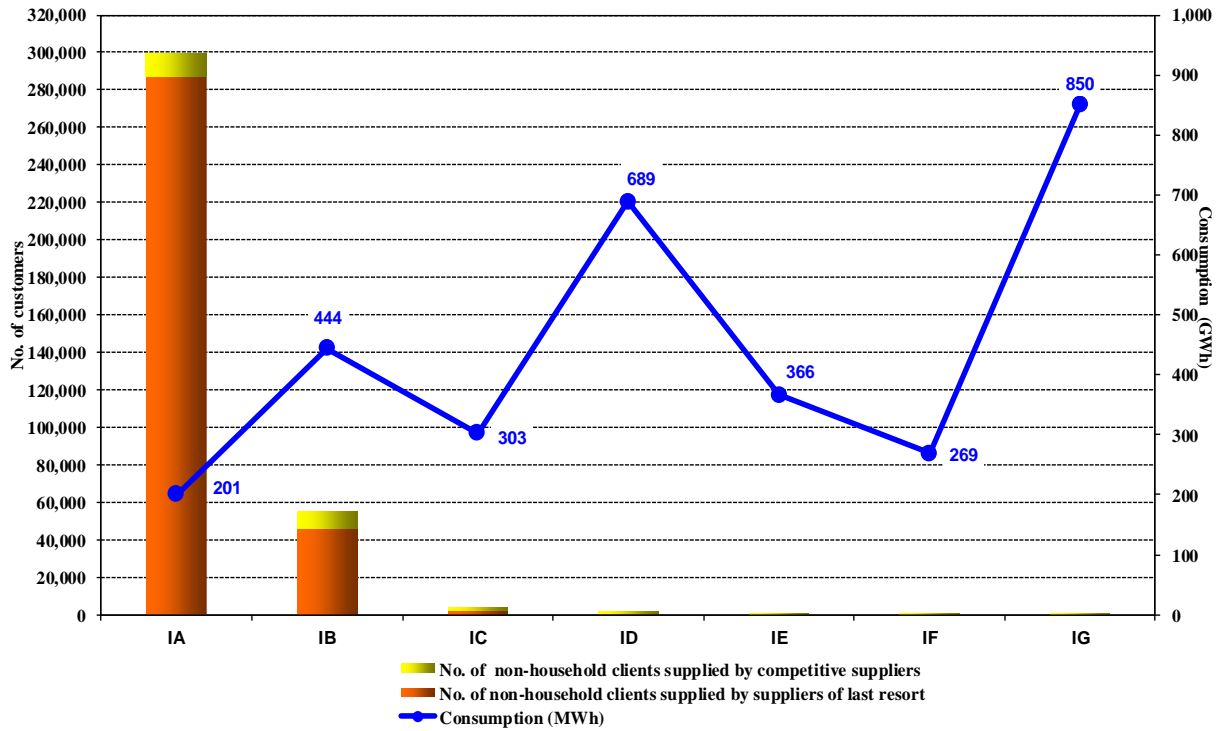
The structure on consumption bands on client categories is set according to the annual consumption ranges provided for each band in the Regulation (EU) no. 2016/1952 of the European Parliament and of the Council:

Non-household clients	Annual electricity consumption (MWh)	
Band - IA		<20
Band - IB	>=20 MWh	<500
Band - IC	>=500	<2000
Band - ID	>=2000	<20000
Band - IE	>=20000	<70000
Band - IF	>=70000	<150000
Band - IG	>=150000	

Households	Annual electricity consumption (kWh)	
Band - DA		<1000
Band - DB	>=1000	<2500
Band - DC	>=2500	<5000
Band - DD	>=5000	<15000
Band - DE	>=15000	

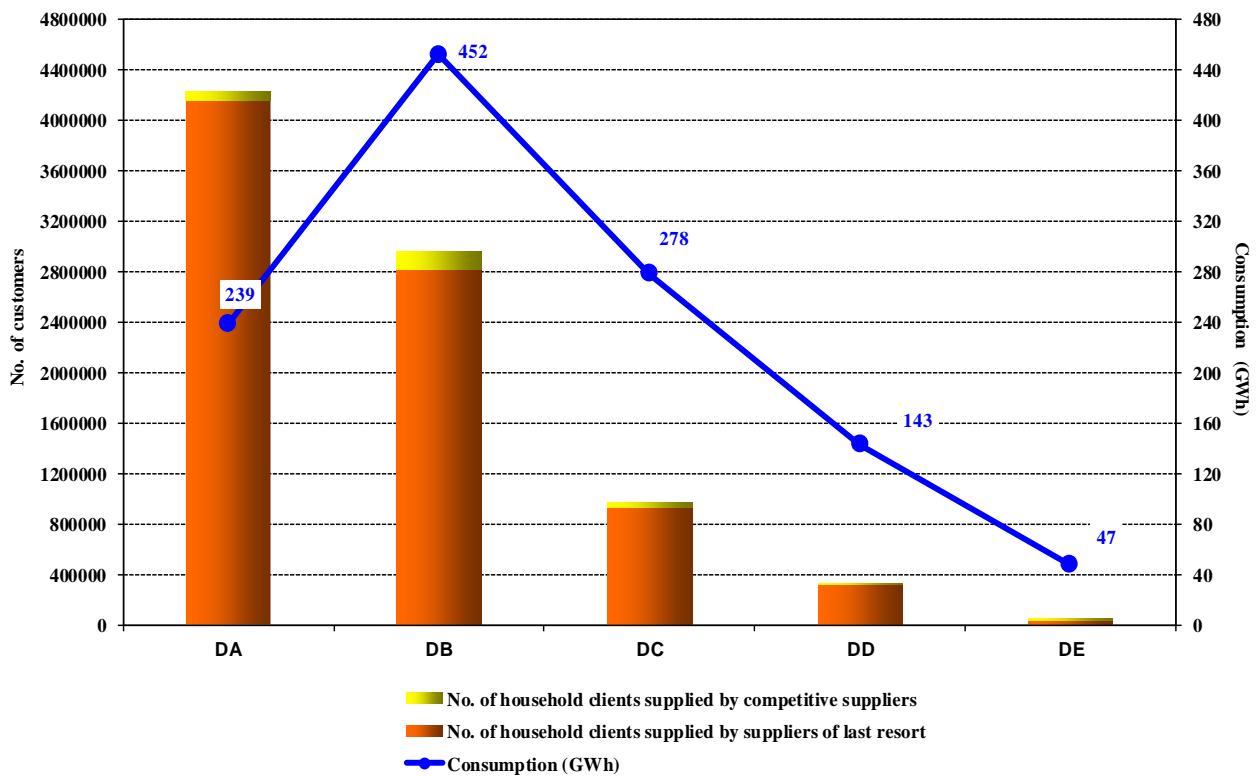
The classification of clients in consumption bands was made based on their annual consumption forecast. The following graphs present the number of households and non-household final clients who are supplied with electricity on REM, structured by consumption bands and by categories of final clients for October 2021.

Number of non-household clients and their consumption broken down into consumption bands and type of supplier
- OCTOBER 2021 -



Source: Monthly reports of suppliers of final clients – analysed by Electricity Market Monitoring Unit

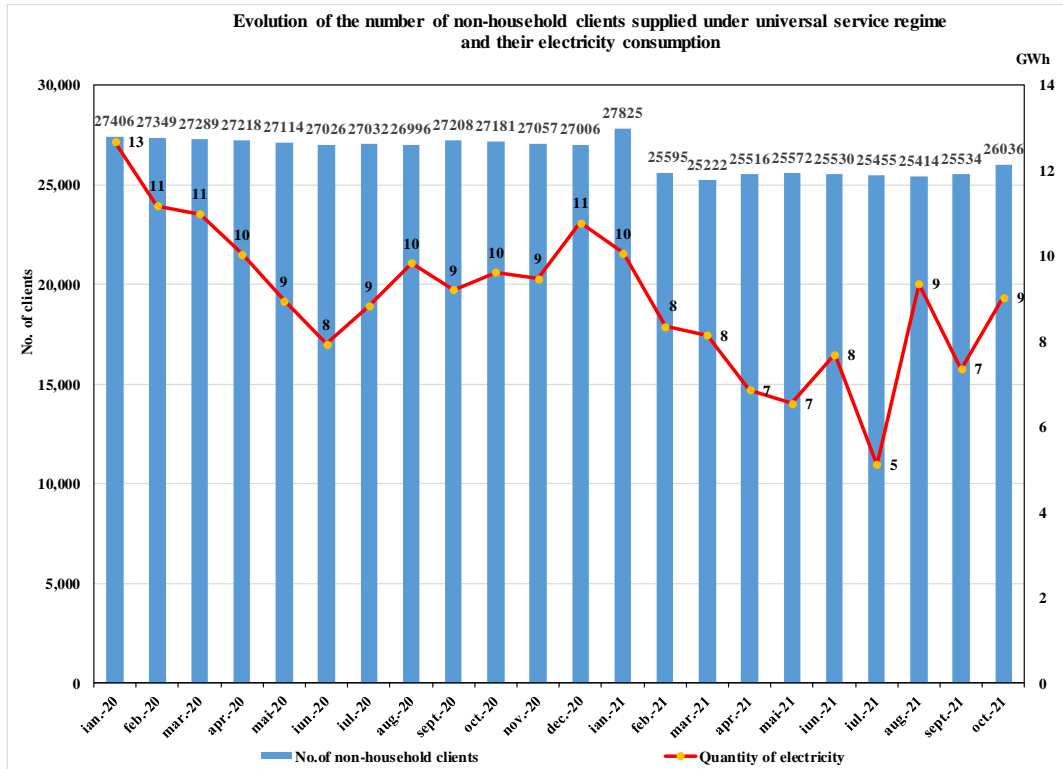
Number of households and their consumption broken down into consumption bands and type of supplier
- OCTOBER 20201 -



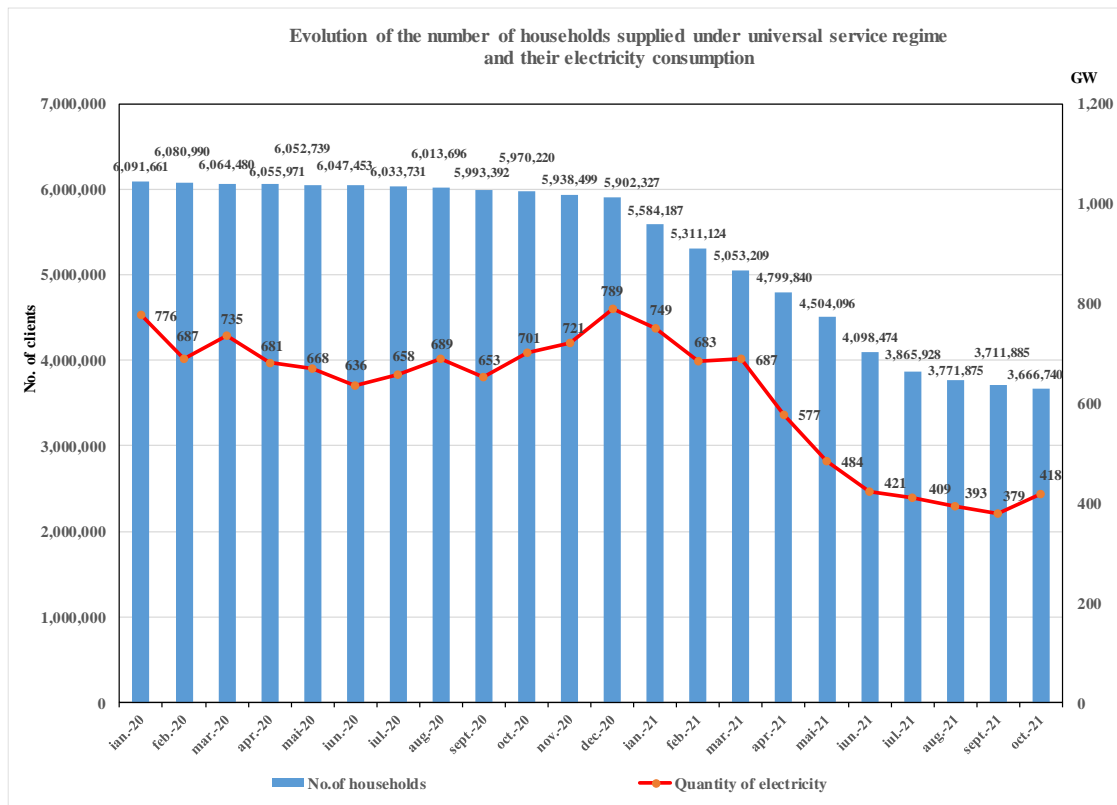
Source: Monthly reports of suppliers of final clients – analysed by Electricity Market Monitoring Unit

5. Evolution of the number of clients supplied under universal service regime

The evolution of the number of final clients supplied under Universal Service regime and of their electricity consumption ensured by suppliers of last resort for the period January 2020 - October 2021 is presented in the following graphs:



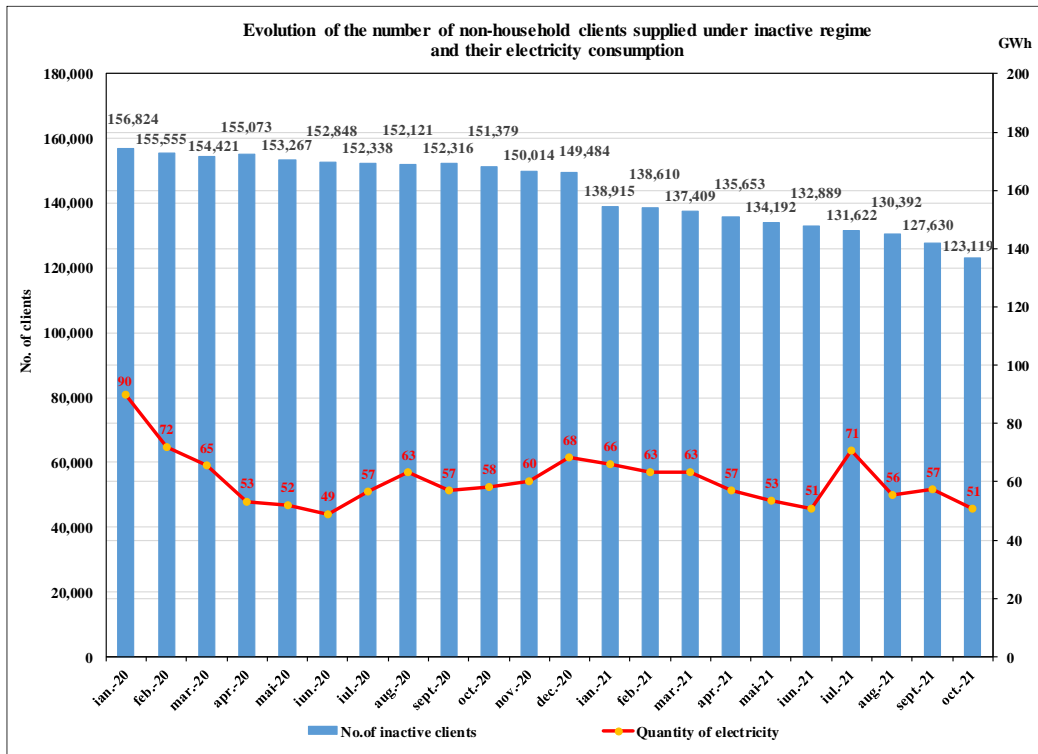
Source: Monthly reports of suppliers of last resort – analysed by Electricity Market Monitoring Unit



Source: Monthly reports of suppliers of last resort – analysed by Electricity Market Monitoring Unit

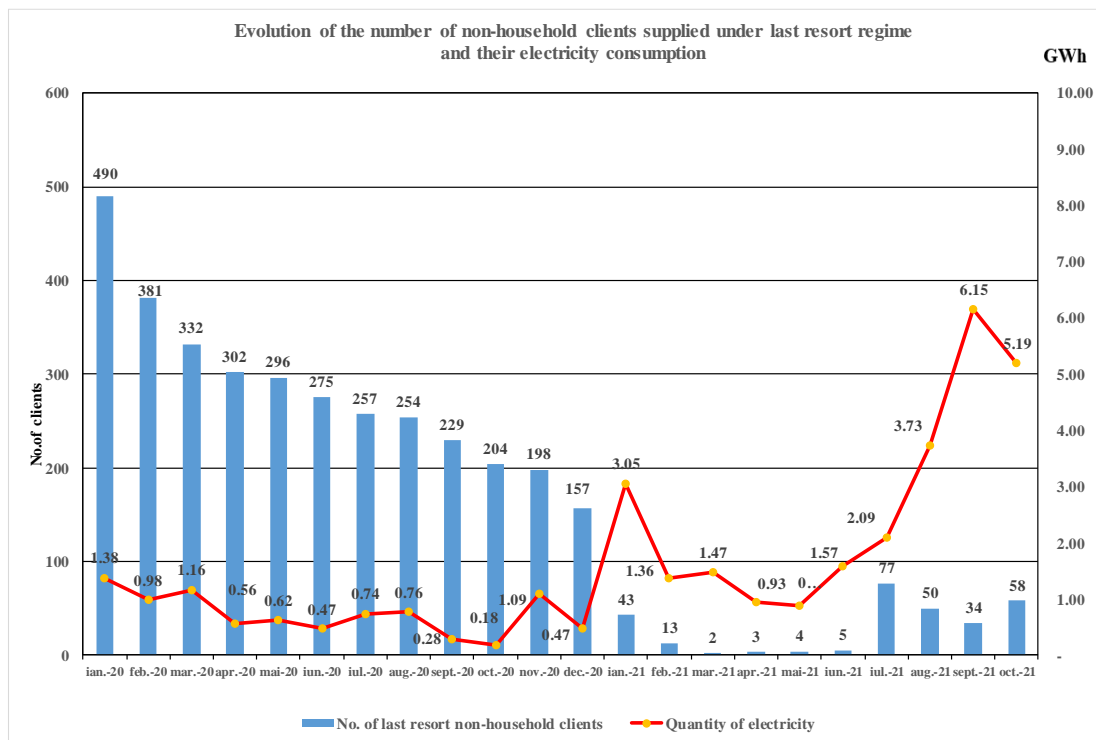
6. Evolution of the number of non-household clients supplied under inactive and last resort regime

The evolution of the number of non-household clients supplied under inactive regime and of their electricity consumption ensured by suppliers of last resort for the period January 2020 - October 2021 is presented in the following graph:



Source: Monthly reports of suppliers of last resort – analysed by Electricity Market Monitoring Unit

The evolution of the number of non-household clients supplied under last resort regime and of their electricity consumption ensured by suppliers of last resort for the period January 2020 - October 2021 is presented in the following graph:



Source: Monthly reports of suppliers of last resort – analysed by Electricity Market Monitoring Unit

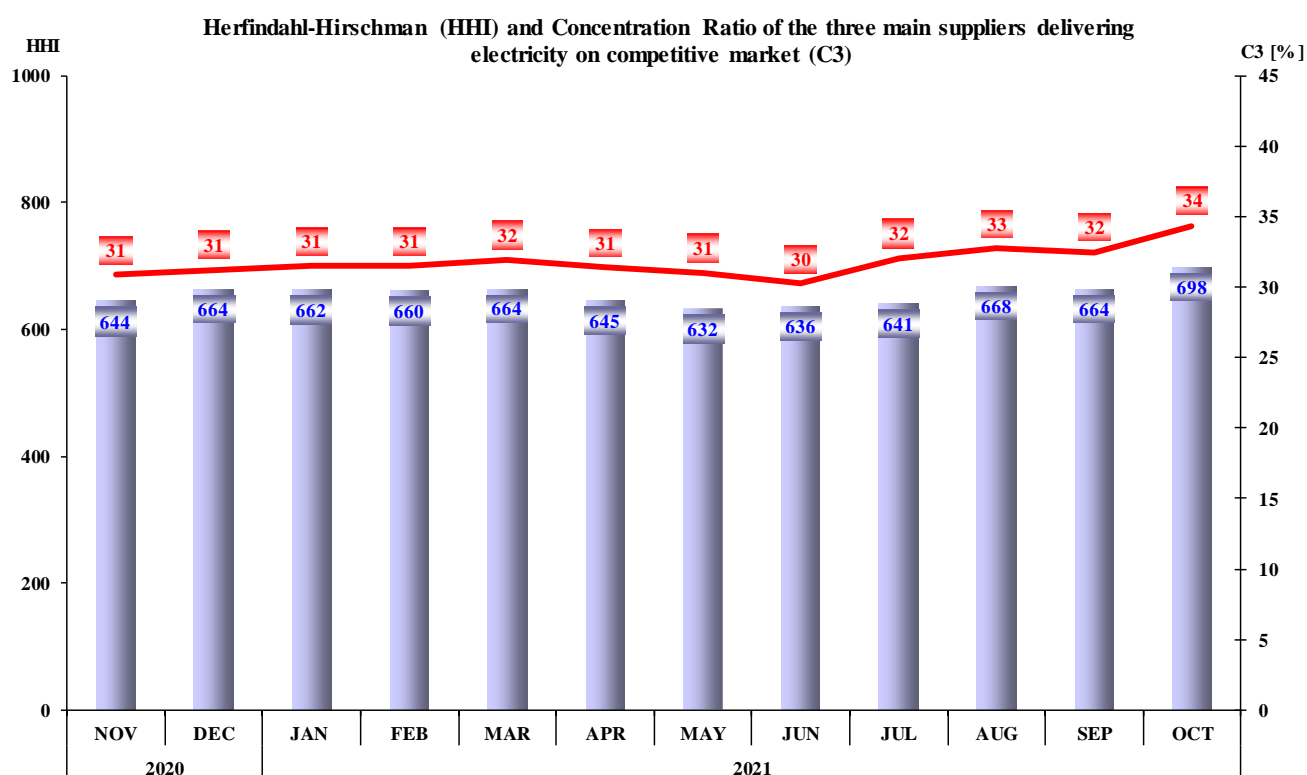
7. Concentration indicators of the competitive retail electricity market

The quantification of the activity carried out by the suppliers within the competitive segment of REM compared to the one on WEM can be done by determining the share of sales to final clients in the total of sales transactions. The following table contains the number of suppliers active on REM, structured according to the size of the activity carried out on this market in October 2021.

Number of suppliers	Share of sales to final clients in total sale trades			
	100%	75% - 100%	50% - 75%	<50%
Competitive	17	18	6	14
Of last resort	0	6	0	0

Source: Monthly reports of suppliers of final clients - analysed by Electricity Market Monitoring Unit

The monthly evolution of the concentration indicators (C3, HHI) determined on the competitive component of the REM is presented for the period November 2020 - October 2021 in the following graph:



Source: Monthly reports of the suppliers of final clients – analysed by Electricity Market Monitoring Unit

The tables below show the values of the market structure indicators of the competitive component of REM and the number of active suppliers in October 2021 calculated for each consumption band defined by Regulation (EU) 1952/2016 of the European Parliament and of the Council for non-household clients, respectively for households:

Indicators – October 2021	Consumption bands – Non-household clients							
	IA	IB	IC	ID	IE	IF	IG	TOTAL
C1 -%-	26	18	17	15	25	23	17	12
C3 -%-	72	52	41	36	46	49	38	30
HHI	1919	1266	908	721	1090	1120	879	591
Consumption - GWh -	161	426	301	684	366	269	850	3057
No. of suppliers	65	73	64	58	22	17	18	86
No. of suppliers of last resort	6	6	6	6	5	4	4	6
No. of competitive suppliers	39	45	40	37	10	8	8	54
No. of producers	20	22	18	15	7	5	6	26

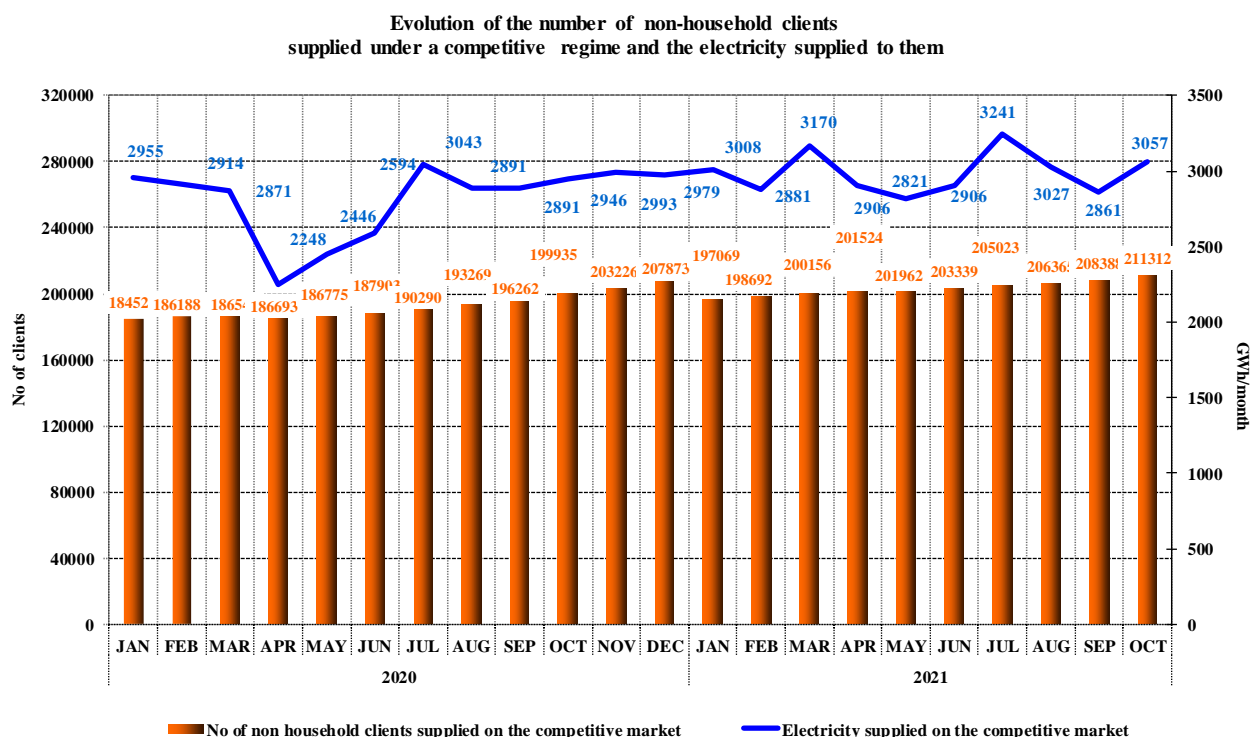
Source: Monthly reports of the suppliers of final clients – analysed by Electricity Market Monitoring Unit

Indicators – October 2021	Consumption bands – Households					
	DA	DB	DC	DD	DE	TOTAL
C1 -%-	28	22	27	40	61	25
C3 -%-	72	65	72	78	84	69
HHI	2096	1819	2010	2489	4076	1915
Consumption - GWh -	144	268	184	104	42	742
No. of SUPPLIERS	35	38	38	33	34	46
No. of suppliers of last resort	6	6	6	6	6	6
No. of competitive suppliers	22	25	24	20	22	30
No. of producers	7	7	8	7	6	10

Source: Monthly reports of the suppliers of final clients – analysed by Electricity Market Monitoring Unit

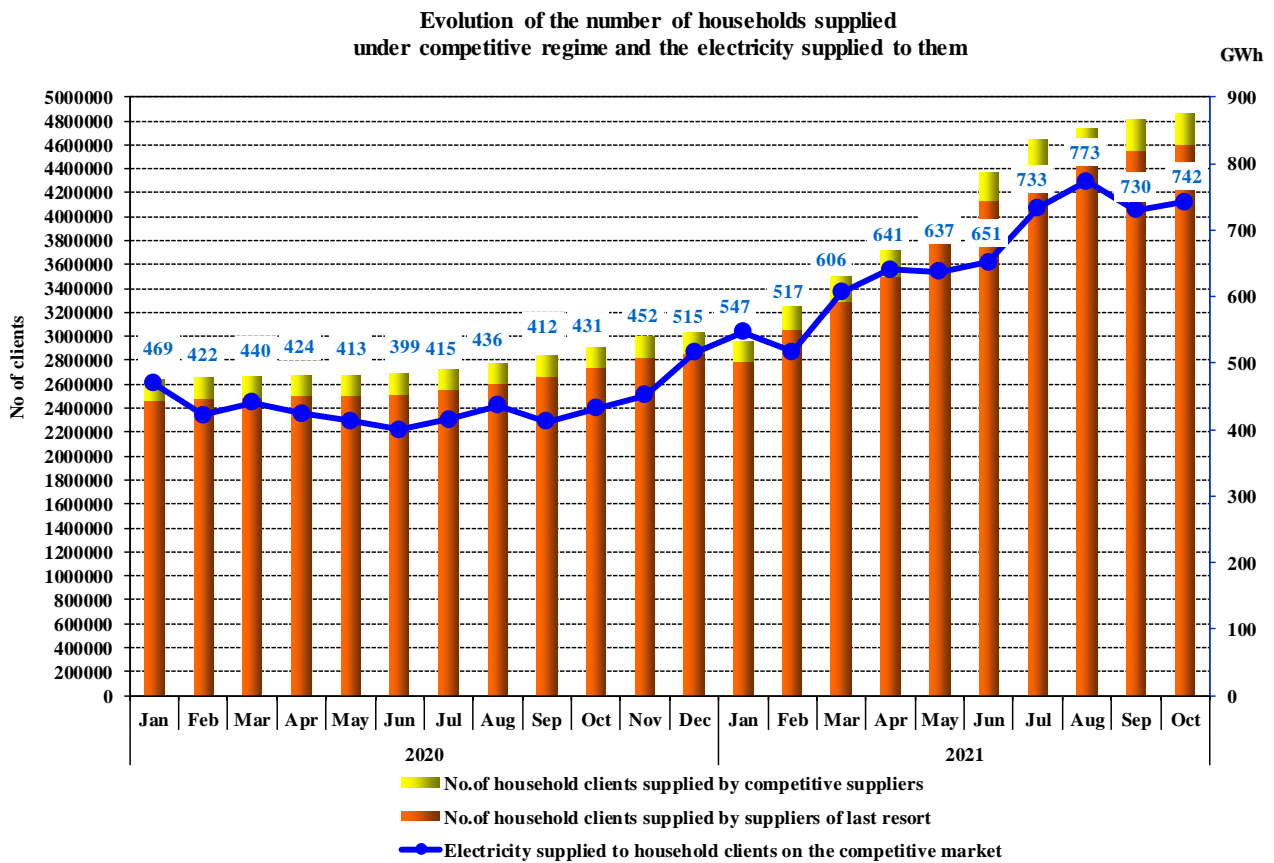
8. Evolution of the number of final clients supplied under competitive regime

The evolution of the number of non-household clients supplied under a competitive regime and of the electricity supplied to them is presented in the graph below:



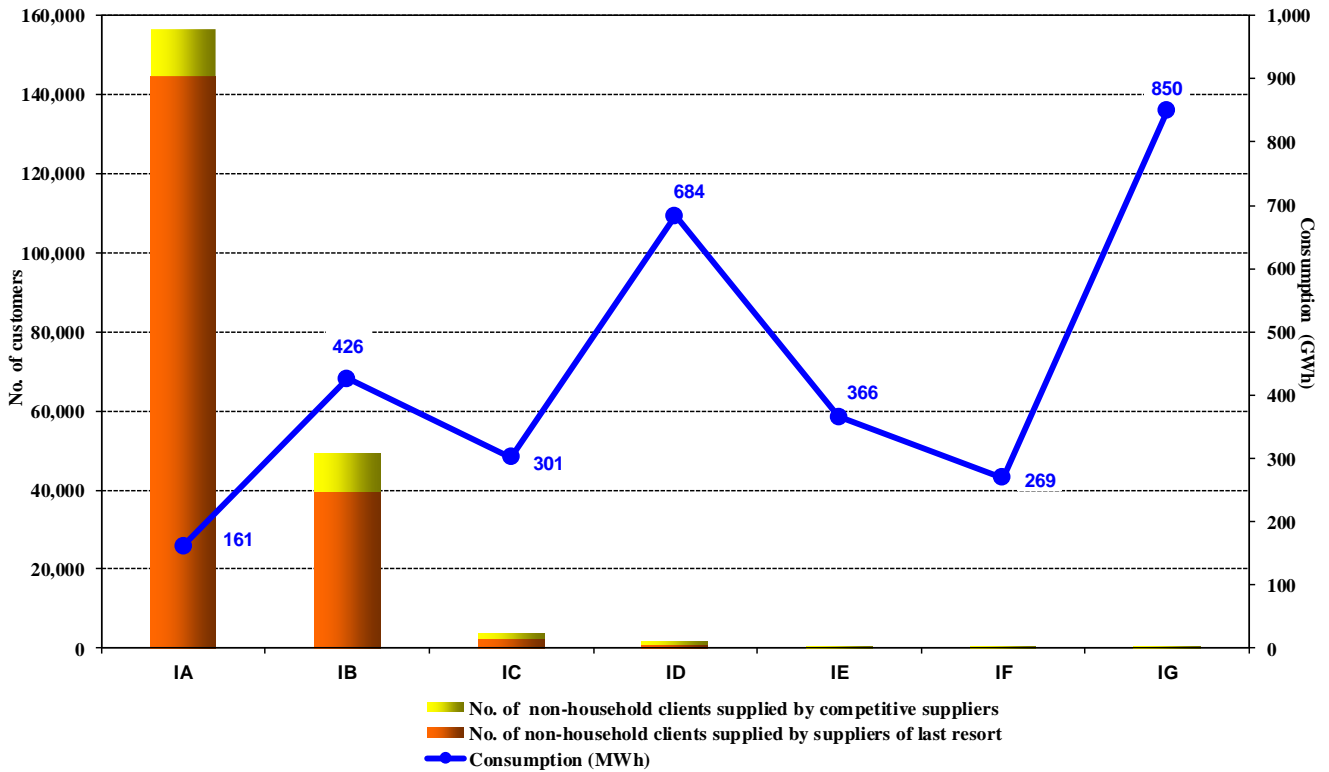
Source: Monthly reports of the suppliers of final clients – analysed by Electricity Market Monitoring Unit

The evolution of the number of households on the competitive market and of the related electricity supplied for the period January 2020 - October 2021 is presented in the following graph:



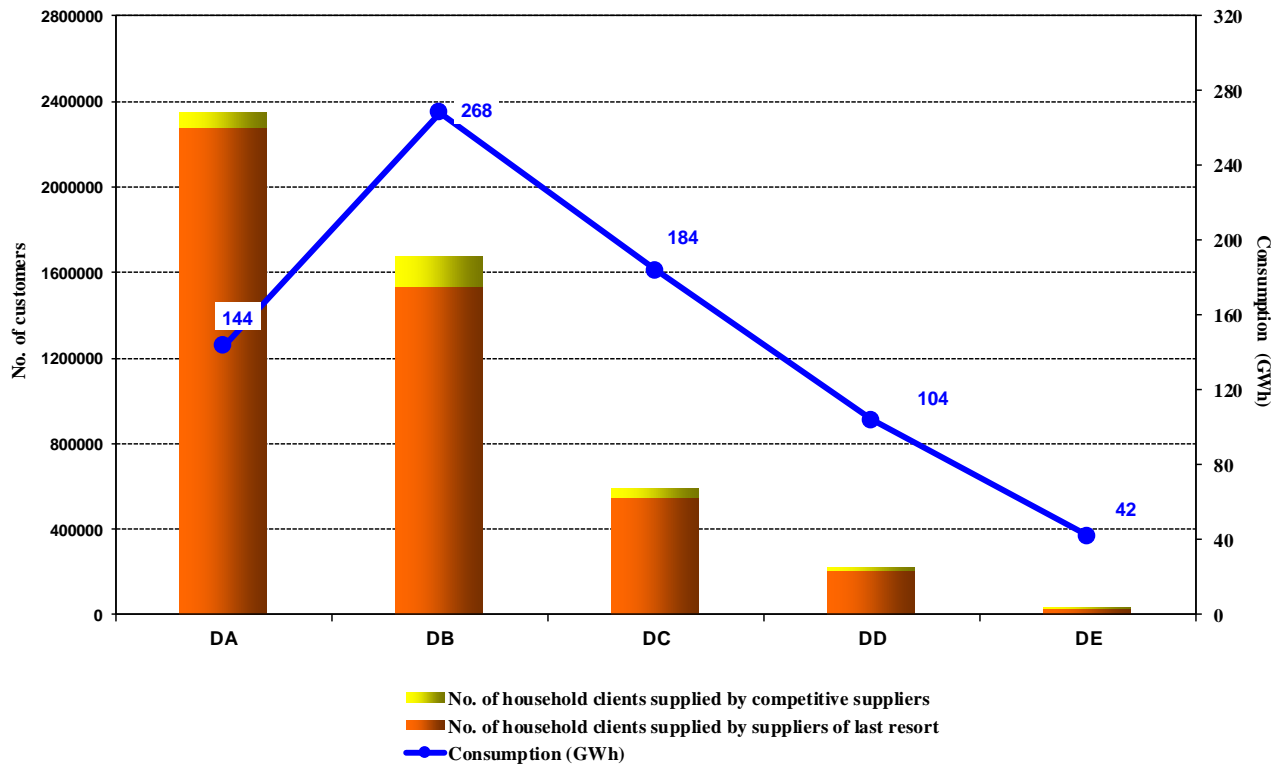
Source: Monthly reports of suppliers of final clients – analysed by Electricity Market Monitoring Unit

Number of non-household clients on the competitive market and their consumption broken down into consumption bands and type of supplier
 - OCTOBER 2021 -



Source: Monthly reports of suppliers of final clients – analysed by Electricity Market Monitoring Unit

Number of households and their consumption broken down into consumption bands and type of supplier
 - OCTOBER 2021 -



Source: Monthly reports of suppliers of final clients – analysed by Electricity Market Monitoring Unit

9. Average selling prices to final clients

The average selling price for each consumption band was calculated as an average of the prices applied by suppliers weighted with the quantities supplied by them to the respective consumption band in accordance with the provisions of Regulation (EU) 1952/2016. Prices do not include VAT, excise or other taxes, but include all related services (transmission and distribution tariffs, system services, imbalances, BRP aggregation taxes, measurement).

The average selling prices and the consumption of non-household final clients on the REM in October 2021 are presented aggregated on consumption bands and supply regimes in the following table:

Consumption band / MU	REM of which:		US		Inactive		Last resort		competitive	
	Qy	Average price	Qy	Average price	Qy	Average price	Qy	Average price	Qy	Average price
	GWh	lei/MWh	GWh	lei/MWh	GWh	lei/MWh	GWh	lei/MWh	GWh	lei/MWh
IA	200.81	614.00	4.67	646.64	34.73	692.63	0.01	1066.74	161.39	596.11
IB	444.14	604.95	4.09	692.83	14.09	685.99	0.25	867.75	425.72	601.27
IC	303.07	562.89	0.27	537.95	1.51	574.05			301.29	562.85
ID	688.98	568.17			0.30	617.28	4.93	1610.40	683.75	560.63
IE	365.73	606.64							365.73	606.64
IF	269.40	556.06							269.40	556.06
IG	850.20	591.88							850.20	591.88

Source: Monthly reports of suppliers of final clients - analysed by Electricity Market Monitoring Unit

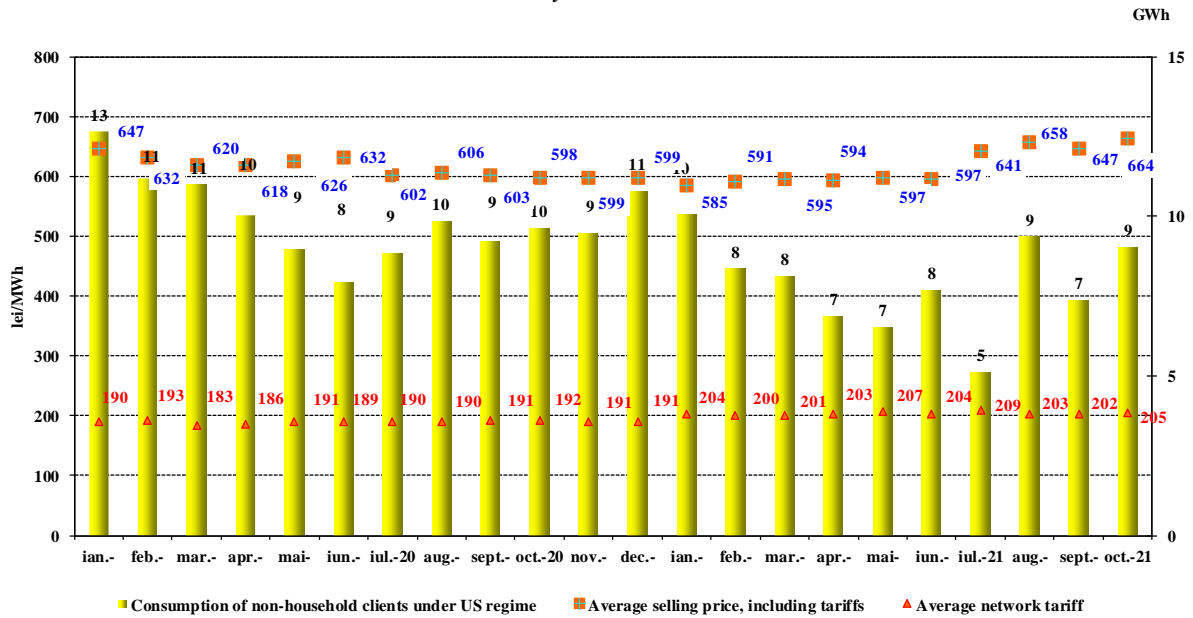
The average selling prices and the consumption of households on the REM for October 2021 are presented aggregated on consumption bands and supply regimes in the following table:

Consumption band / MU	REM of which:		US		Inactive		last resort		competitive	
	Qy	Average price	Qy	Average price	Qy	Average price	Qy	Average price	Qy	Average price
	GWh	lei/MWh	GWh	lei/MWh	GWh	lei/MWh	GWh	lei/MWh	GWh	lei/MWh
DA	239.05	589.54	95.15	585.56					143.89	592.18
DB	452.15	592.43	183.83	587.21					268.32	596.00
DC	278.41	579.32	94.49	590.64					183.92	573.50
DD	143.35	569.62	39.37	588.28					103.99	562.56
DE	47.46	549.35	5.12	586.85					42.34	544.81

Source: Monthly reports of suppliers of final clients - analysed by Electricity Market Monitoring Unit

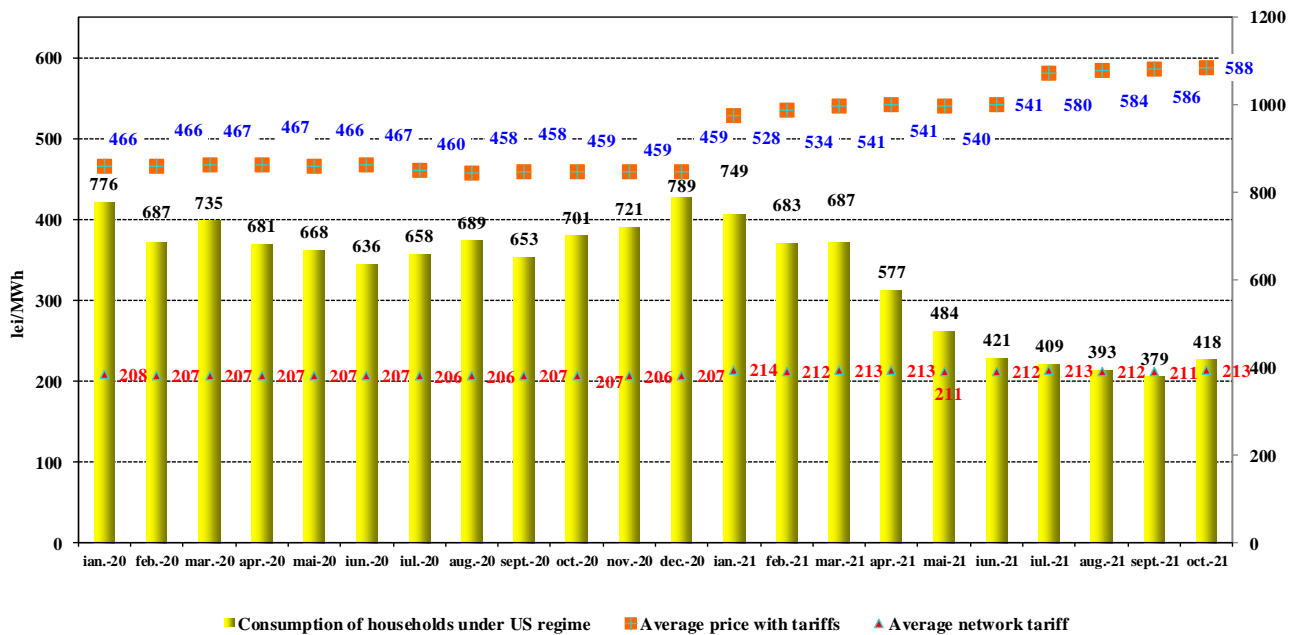
The monthly evolution of the electricity quantities supplied by suppliers of last resort to the final clients under universal service, inactive and last resort regime, of the average selling prices of electricity and of the average network tariffs is presented in the following graphs:

Evolution of the average selling price, average network price and electricity consumption for non-household clients under US regime - January 2020 - October 2021 -



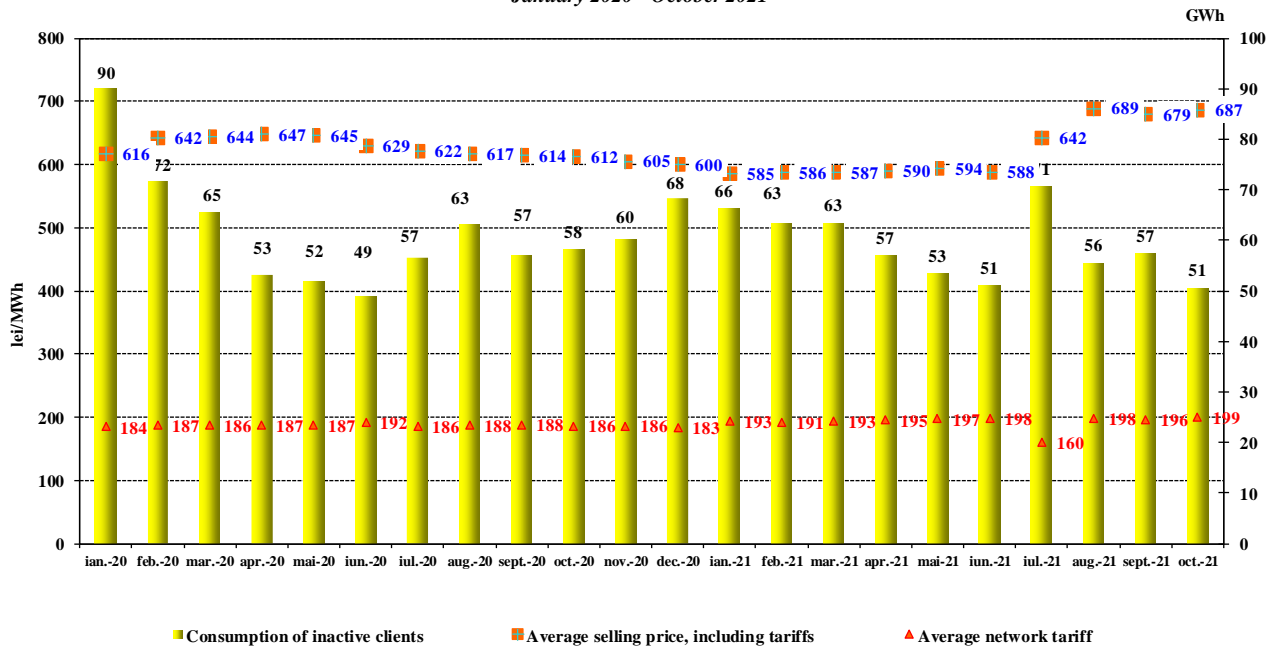
Source: Monthly reports of suppliers of last resort – analysed by Electricity Market Monitoring Unit
 Note: the data reported by some of the suppliers of last resort do not include the BM al values.

Evolution of the electricity average selling price, average network tariff and electricity consumption for households under US regime January 2020 - October 2021



Source: Monthly reports of suppliers of last resort – analysed by Electricity Market Monitoring Unit

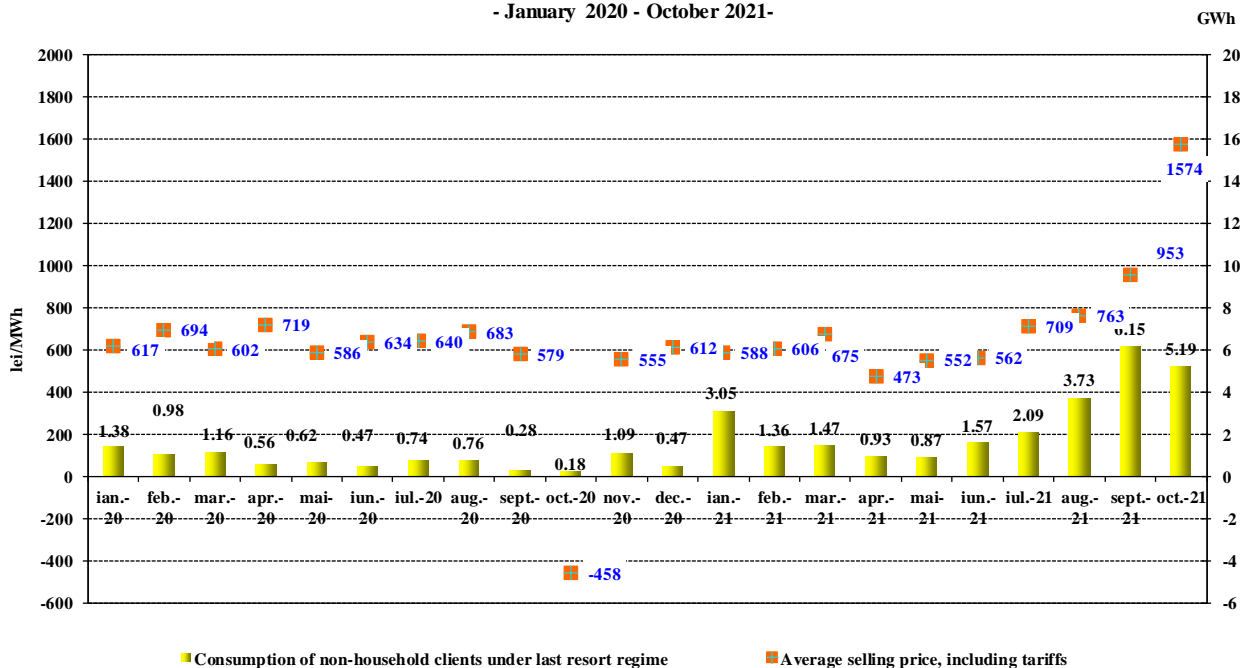
Evolution of the electricity average selling price, average network tariff and electricity consumption for inactive clients - January 2020 - October 2021 -



Source: Monthly reports of suppliers of last resort – analysed by Electricity Market Monitoring Unit

Note: the data reported by a supplier of last resort for the electricity supplied to inactive clients in July were affected by the identification of an error in the informatic billing system.

Evolution of the electricity average selling price and electricity consumption for non-household clients under last resort regime - January 2020 - October 2021 -



Source: Monthly reports of suppliers of last resort – analysed by Electricity Market Monitoring Unit

Note: The average selling price value for October 2020 was affected by corrections made by one of the suppliers of last resort.

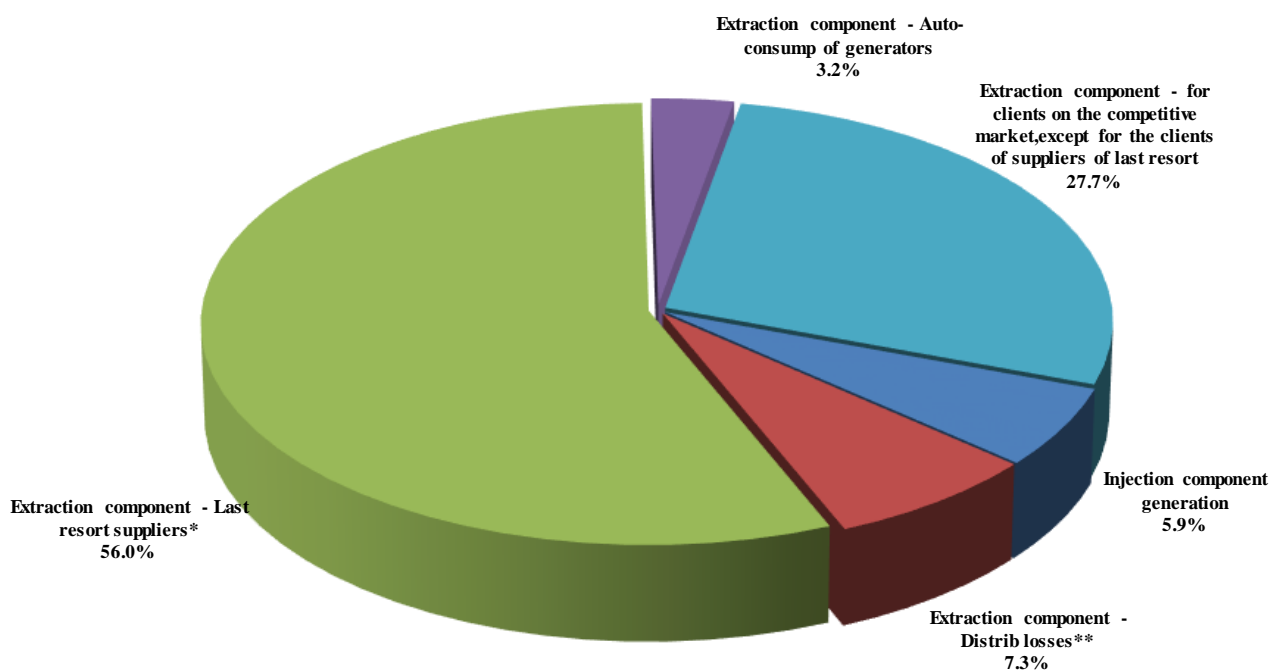
IV. TRANSMISSION AND SYSTEM OPERATOR CNTEE TRANSELECTRICA SA

The Transmission and system operator (TSO) performs the electricity transmission service at regulated tariffs. Therefore, the electricity injection tariff covers some of the network losses costs and the costs of eliminating congestion by re-dispatching, while the extraction tariff covers the average cost of the transmission service.

According to the regulation framework in place, no transmission tariffs are charged for the electricity injected/extracted in/from the national electricity grid through import/export trades. Starting with 1 January 2020, the TSO applies the self-supplying regime for the electricity consumed at its own consumption points other than grid losses.

The following graph presents the structure of the revenues for October 2021 after providing the transmission service.

CNTEE Transelectrica SA structure of revenues from transmission services
- OCTOBER 2021 -



* for electricity extracted from their own licence areas as well as from other areas

** includes the electricity with which some distribution operators supply their own self-consumption place

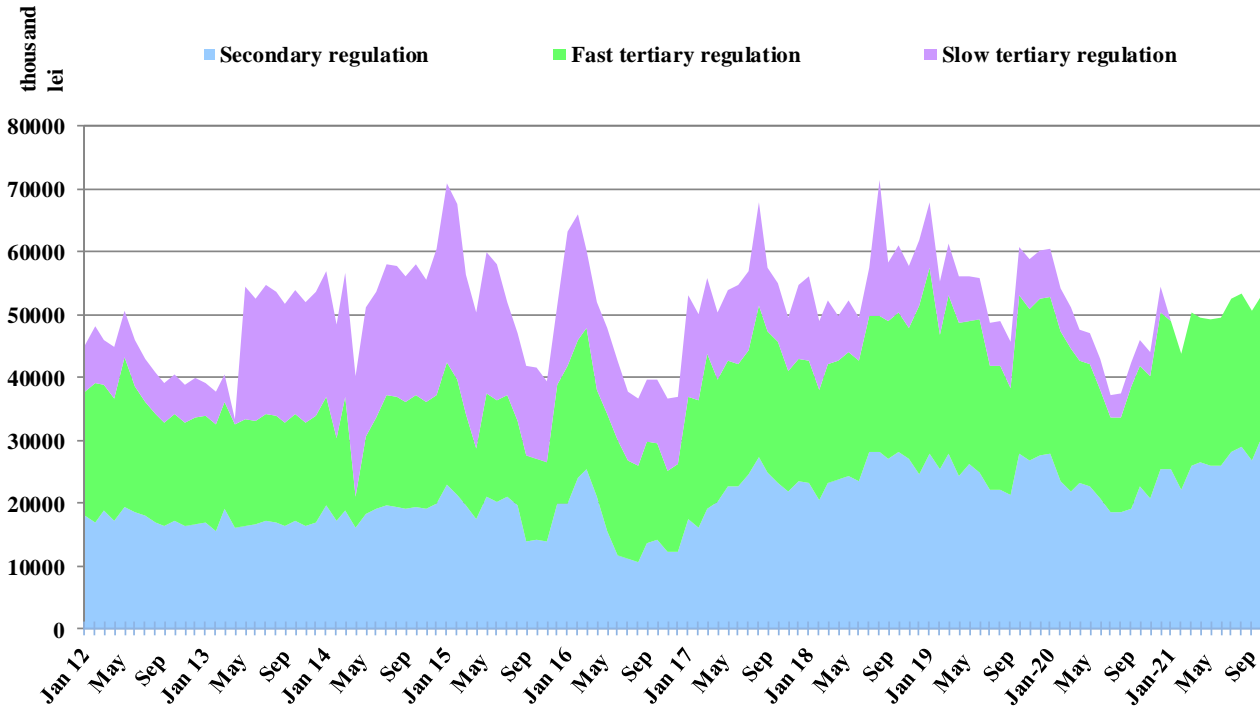
Source: Monthly reports of CNTEE Transelectrica SA – analysed by Electricity Market Monitoring Unit

In order to perform the system operator tasks, CNTEE Transelectrica SA provides and contracts reserves (named ancillary services according to the amendment introduced by Law no. 155/2020) from qualified market participants, which it uses by integrating them on the balancing market. These are: reserves for secondary, fast tertiary, slow tertiary and reactive energy necessary for the electricity transmission network.

The following graph presents the evolution of the costs supported by CNTEE Transelectrica SA, starting with January 2012, for the acquisition of ancillary services. From that date on, the acquisition of all ancillary services has been ensured only through auctions organised by the TSO. To cover the costs

corresponding to the contracts for the provision of ancillary services concluded as a result of the auctions, as well as to cover its own operating costs, the TSO applies the regulated tariff for the system service.

Structure of CNTEE Transelectrica SA costs with ancillary services acquired from qualified generators



Source: Monthly reports of CNTEE Transelectrica SA – analysed by the Electricity Market Monitoring Unit

V. MARKET RULES EVOLUTION IN OCTOBER 2021

In October 2021, ANRE issued the following regulations with an impact on the wholesale and retail markets:

- ANRE president Order no. 102/ 6 October 2021 on amending and supplementing the Methodology for setting and adjusting the prices for electricity and heat produced and delivered from cogeneration plants benefiting from the support scheme, respectively the bonus for high efficiency cogeneration, approved by ANRE president Order no. 15/2015;
- ANRE president Order no. 104/ 13 October 2021 approving the reference price of electricity produced in high-efficiency cogeneration benefiting from the bonus scheme;
- ANRE president Order no. 105/ 13 October 2021 approving the values of the reference bonuses for the electricity produced in high-efficiency cogeneration and the reference prices for the heat produced in cogeneration, applicable in 2022;
- ANRE president Order no. 106/ 13 October 2021 on amending and supplementing the Methodology for setting prices for thermal energy delivered in SACET from plants with cogeneration units that do not benefit from support schemes to promote high-efficiency cogeneration, approved by ANRE president Order no. 111/2014;
- ANRE president Order no. 109/ 20 October 2021 regarding the modification and completion of the Methodology for establishing the tariffs for the electricity transmission service, approved by the ANRE president Order no. 171/2019;
- ANRE president Order no. 110/ 20 October 2021 on the approval of the values of reference prices for thermal energy delivered in SACET from plants with cogeneration units that do not benefit from

support schemes for the promotion of high-efficiency cogeneration, applicable between November-December 2021 and the first semester of 2022;

- ANRE president Order no. 111/ 27 October 2021 on amending ANRE president Order no. 123/2017 on the approval of the contribution for high efficiency cogeneration and of some provisions regarding its invoicing method;
- ANRE president Decision no. 1935/ 20 October 2021 on the approval of the quantities produced in high-efficiency cogeneration units benefiting from the support scheme for September 2021;
- ANRE president Decision no. 1970/ 27 October 2021 on the approval of bonuses for electricity produced in high-efficiency cogeneration and delivered in the NPS and the regulated price for thermal energy delivered in SACET between November - December 2021 and in 2022 – period January - March from CET Metrom, CET Noua, CET Nord 1 and for the period between November and December 2021 and in 2022 from the CET Nord 2 plant, belonging to SC Bepco S.R.L.;
- ANRE president Decision no. 1971/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS and the regulated price for thermal energy delivered in SACET between November-December 2021 and in 2022 – the period January-March from CET Craiova II belonging to Complexul Energetic Oltenia S.A.;
- ANRE president Decision no. 1972/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS and the regulated price for thermal energy delivered in SACET between November-December 2021 and in 2022 – the period January-March from the power plant belonging to S.C. CET Arad S.A.;
- ANRE president Decision no. 1973/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS and the regulated price for thermal energy delivered in SACET between November-December 2021 and in 2022 – the period January-March from the CET Govora plant belonging to S.C. CET Govora S.A.;
- ANRE president Decision no. 1978/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS between November-December 2021 and in 2022 – the period January-March from the power plant belonging to S.C. Contour Global Solutions S.R.L.;
- ANRE president Decision no. 1979/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS and the regulated price for thermal energy delivered in SACET between November-December 2021 and in 2022 from the power plant from Gourgiu belonging to S.C. Electro Energy Sud S.R.L.;
- ANRE president Decision no. 1981/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS and the regulated price for thermal energy delivered in SACET between November-December 2021 and in 2022 – the period January-March from the power plant belonging to S.C. Enet S.A. Focșani;
- ANRE president Decision no. 1982/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS and the regulated price for thermal energy delivered in SACET between November-December 2021 and in 2022 – the period January-March from the power plant CET Botoșani belonging to S.C. Modern Calor S.A. Botoșani;
- ANRE president Decision no. 1983/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS between November-December 2021 and in 2022 from the power plant CET Petrom City belonging to S.C. OMV Petrom S.A.;
- ANRE president Decision no. 1984/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS between November-December 2021 and in 2022 from the power plant CET Petrotel Lukoil belonging to Petrotel - Lukoil S.A.;
- ANRE president Decision no. 1988/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS and the regulated price for thermal energy delivered in SACET between November-December 2021 and in 2022 – the period January-March from the cogeneration power plant on the site in 23rd Calea Borșului - Oradea, in the the commercial operation of S.C. Termadicare Oradea S.A.;

- ANRE president Decision no. 1993/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS and the regulated price for thermal energy delivered in SACET between November-December 2021 and in 2022 – the period January-March from the cogeneration power plant belonging to S.C. Rulmeņi S.A. Bârlad;
- ANRE president Decision no. 1994/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS between November-December 2021 and in 2022 – the period January-March from the CET Brazi power plant belonging to Veolia Energie Prahova S.R.L.;
- ANRE president Decision no. 1995/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS and the regulated price for thermal energy delivered in SACET between November-December 2021 and in 2022 – the period January-March from the CET Militari power plant belonging to S.C. Vest-Energo S.A. București;
- ANRE president Decision no. 1996/ 27 October 2021 approving the regulated price for thermal energy delivered in SACET in the period between November-December 2021 and in the first semester of 2022 from the aggregate unit with cogeneration generating modules belonging to the company CET Arad S.A. .;
- ANRE president Decision no. 2000/ 27 October 2021 approving the bonus for the electricity produced in high-efficiency cogeneration and delivered in the NPS and the regulated price for thermal energy delivered in SACET between November-December 2021 and in 2022 – the period January-March from the power plants CET Bucuresti Sud, CET Bucuresti Vest, CET Progresu and CET Grozavesti belonging to S.C. Electrocentrale Bucuresti S.A. .

VI. EXPLANATIONS AND ABBREVIATIONS

1. Explanations

- **Internal consumption** is calculated, in this document, as the sum of electricity delivered into the grid (described below) and the balance of trades made on the basis of the import and export contracts of the wholesale market participants;
- **Consumption of final clients supplied under US and last resort regime** is the consumption of final clients supplied by suppliers of last resort at regulated tariffs, US price, last resort price and inactive client's price;
- **Consumption of final clients on competitive market** represents the consumption of clients supplied at negotiated prices or defined by standard bids;
- **Fuel consumption** represents the fuel consumed for generating electricity and heat in the power plants of monitored generators;
- **Self-consumption of generators** (in the graph regarding the revenues of CN Transelectrica SA) the self-consumption exclusively represents the generators consumption at consumption places other than the generation sites;
- **Electricity delivered into the grid** includes the electricity sold by the generators through direct lines or consumed by themselves at other consumption sites;
- **Electricity delivered into the grid according to the transport contract** is the electricity for which the transport service (the grid input component) is provided corresponding to the electricity delivered from the power plants with installed capacity of more than 5 MW connected to the transmission and distribution electric grids.

2. Abbreviations

- ATC – Available Transmission Capacity
- BM – Balancing Market
- BRP – Balancing Responsible Party
- CMBC – Centralised Market of Bilateral Contracts

- CMC – Competitive Market Component
- DAM – Day Ahead Market
- DO – Distribution operator
- ID – Intraday Market
- LT – Long Term
- MCP – Market Clearing Price
- 4M MC – Price coupling mechanism for spot markets from Romania, Hungary, Slovakia and Czech Republic
- NPS – National Power System
- OU-NPD – Operational Unit-National Power Dispatch
- CME-RES-GC – Centralized market for electricity from renewable energy sources supported by green certificates
- CMUS – Centralised Market of Universal Service
- REM – Retail Electricity Market
- TG/TL – injection / extraction component of the transmission tariff
- US – Universal Service
- WEM – Wholesale Electricity Market
- ACER – The Agency for the Cooperation of Energy Regulators
- NTC - Net Transfer Capacity