



ELECTRICITY MARKET MONITORING REPORT

DECEMBER 2021

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

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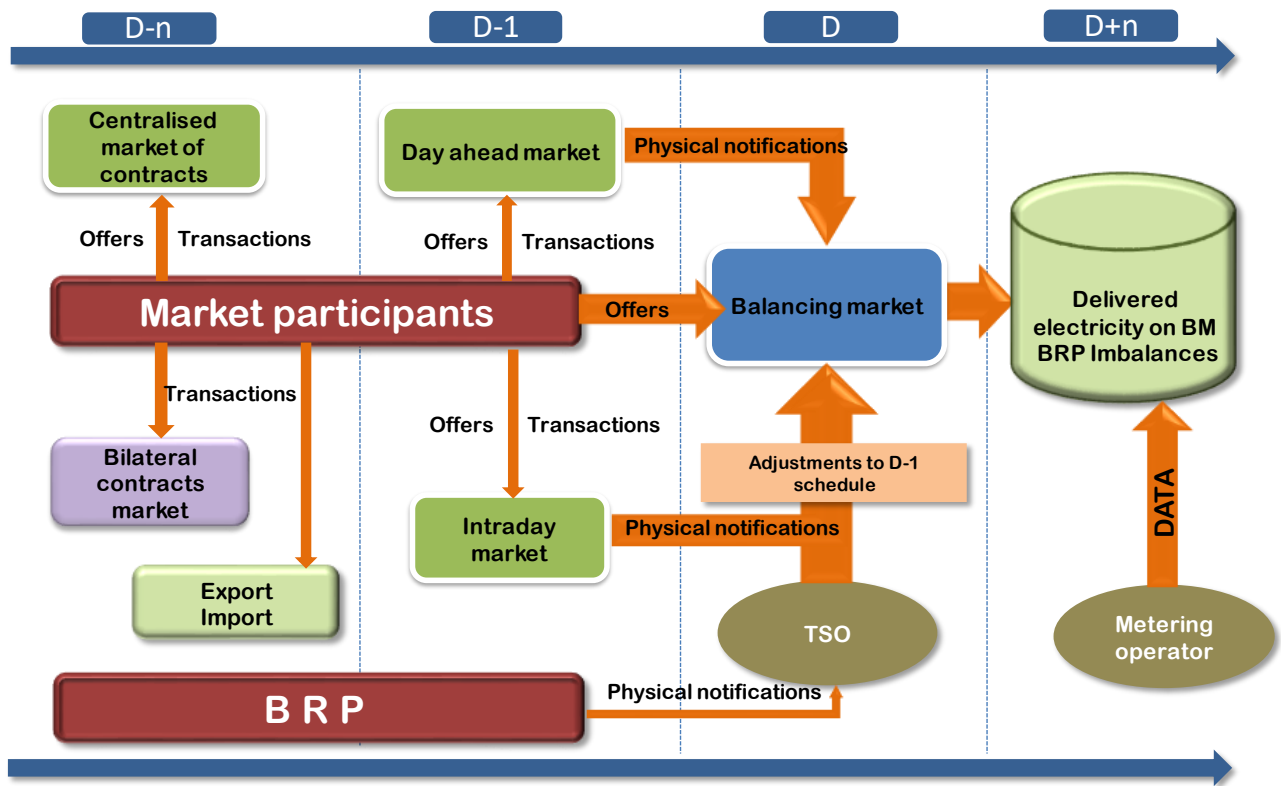
I. MAIN EVENTS IN THE DEVELOPMENT OF THE ROMANIAN ELECTRICITY MARKET

- **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

2. Wholesale electricity market participants

Market participants active on the electricity market in December 2021 are presented below, split into categories:

A	Electricity generators on classic sources operating dispatching units	B	Electricity generators on renewable sources operating dispatching units
1	Bepco SRL	50	Kentax Energy SRL
2	CET Arad SA	51	Land Power SRL
3	CET Govora SA	52	Lemar Grup SRL
4	CE Hunedoara SA	53	LJG Green Source Energy Alpha SA
5	CE Oltenia SA1	54	LJG Green Source Energy Beta SRL
6	Contour Global Solutions SRL	55	LJG Green Source Energy Gamma SRL
7	Electrocentrale București SA	56	Mar-Tin Solar Energy SRL
8	Electro Energy Sud SRL	57	Mireasa Energies SRL
9	Enet Focsani SA	58	NRX Wind SRL
10	Modern Calor SA	59	Ovidiu Development SRL
11	Municipiul Iași SA	60	Power L.I.V.E. One SRL
12	OMV Petrom SA	61	Renovatio Trading SRL
13	Petrotel-Lukoil SA ¹	62	Romkumulo SRL
14	Rulmenti SA	63	Simico Prod Factory SRL
15	SNGN Romgaz SA	64	Skybase Energy SRL
16	Termoficare Oradea SA	65	Smart Clean Power SRL
17	Veolia Energie Prahova SRL	66	Smartbreeze SRL
B	Electricity generators on renewable sources operating dispatching units	67	Soft Grup SRL
1	Alizeu Eolian SA	68	Solar Electric Frasinet SRL
2	Arinna Development SA	69	Solar Future Energy SRL
3	Bioenergy Suceava SRL	70	Solaria Green Energy SRL
4	Blue Line Energy SRL	71	Solprim SRL
5	Blue Sand Investment SRL	72	Spectrum Tech SRL
6	Braila Winds SRL	73	Sun Energy Complet SA
7	Caracal Solar Alpha SRL	74	Tinmar Green Energy SRL
8	Casa Crang SRL	75	Tis Energy SRL
9	Catalan Electric SRL	76	Tomis Team SRL
10	Clue Solar SRL	77	Urdel Energy SRL
11	Corabia Solar SRL	78	Varokub Energy Development SRL
12	Corni Eolian SRL	79	Verbund Wind Power Romania SRL
13	Crucea Wind Farm SRL	80	Veroniki Wind SRL
14	Dan Holding MGM SRL	81	VIR Company International SRL
15	Delta & Zeta Energy SRL	82	VIS Solaris 2011 SRL
16	East Wind Farm SRL	83	Vrsh Pro Investments SRL
17	Eco Power Wind SRL	84	Warehouses de Paw Romania
18	Ecoenergia SRL	85	Wind Park Invest SRL
19	Ecosfer Energy SRL	86	Windfarm MV I SRL
20	EDPR Romania SRL	87	Xalandine Energy SRL
21	Electica Energie Verde 1 SRL	88	XPV SRL
22	Electrica Serv SRL	C	Electricity generators on hydro sources operating dispatching units
23	Electricom SA	1	Hidroelectrica SA
24	Elektra Green Power SRL	D	Electricity generators on nuclear sources operating dispatching units
25	Elektra Wind Power SRL	1	SN Nuclearelectrica SA
26	Enel Green Power Romania SRL	E	Transmission System Operator
27	Energia Verde Venturo SRL	1	CNTEE TRANSELECTRICA SA
28	Energo Project SRL	F	Electricity market operator
29	Energy Tech Entera SRL	1	OPCOM SA
30	Enex SRL	G	Distribution operators
31	Eol Energy Moldova SRL	1	Delgaz Grid
32	Eol Energy SRL	2	Distribuție Energie Electrică România
33	Eolica Dobrogea One SRL	3	Distribuție Energie Oltenia
34	EP Wind Project (ROM) SIX SA	4	E-Distribuție Banat
35	Eviva Nalbant SRL	5	E-Distribuție Dobrogea
36	Ewind SRL	6	E-Distribuție Muntenia
37	Eye Mall SRL	H	Suppliers of Last Resort
38	Fort Green Energy SRL	1	CEZ Vanzare SA
39	Gama & Delta Energy SRL	2	E.ON Energie Romania SA
40	General Concrete Cernavoda SRL	3	Electrica Furnizare SA
41	GPSB Solaris 48 SRL	4	Enel Energie SA
42	Green Energy Farm SRL	5	Enel Energie Muntenia SA
43	Green Vision Seven	6	Tinmar Energy SA
44	Greenlight Solution SRL	I	Aggregated entity / Aggregator
45	Ground Investment Corp SRL	1	Alive Capital SA*
46	Holrom Renewable Energy SRL	2	EDPR Romania SRL
47	Horia Green SRL	3	Kompact Grid SRL- Agregator
48	Kelavent Charlie SRL	4	Monsson Trading SRL
49	Kelavent Echo SRL	5	Romkumulo SRL

J	Electricity Suppliers acting exclusively on the wholesale market²	K	Electricity Suppliers acting also on the retail market
1	AIK Energy Ltd	11	EFT Furnizare SRL
2	Alegfurnizorul Consulting SRL	12	Egger Romania SRL
3	Axpo Bulgaria EAD	13	Elcata MHC SRL
4	CEZ as	14	Electric Planners SRL
5	Danske Commodities/s Aarhus	15	Electrificare CFR SRL
6	EDF Trading Limited	16	Electrocarbon SA
7	Electrogrup(CJ) SA	17	Electromagnetica SA
8	Electro Holding SRL	18	Elsid SA
9	Enel Trade Energy SRL	19	Energia Gas & Power SRL
10	Energi Danmark A/S	20	Energiataverde.RO Furnizare SRL
11	Energy Deta SRL	21	Energy Distribution Services SRL
12	Energy Gate SRL	22	Energy Core Development SRL
13	Energovia EOOD	23	Energy Grid SRL
14	Energy Supply EOOD	24	Energy Trade Activ SRL
15	Eolian Project SRL	25	Engie România SA
16	Ezpada AG	26	Enol Grup SA
17	Freepoint Commodities Europe Ltd	27	Entrex Services SRL
18	General Energetic SA	28	Evobits Information Technology SRL
19	GEN I trgovanje in prodaja elektricne energije doo	29	Getica 95 Com SRL
20	Holding_ Slovenske_ Elektrane	30	Grenerg SRL
21	Imperial Development SRL	31	Hermes Energy International SRL
22	Interenergo Energetski, Inzeniring d.o.o.	32	ICCO Energ SRL
23	Izvor de Lumina SRL*	33	ICPE Electrocond Technologies SA
24	Lord Energy SRL	34	Industrial Energy SA
25	MFT Energy A/S	35	Liberty Galati SA
26	MVM Partner Zrt	36	Luxten LC SA
27	Neptun SA	37	Mazarine Energy Romania SRL
28	Nis Petrol SRL	38	MET Romania Energy SA
29	OMV Gas Marketing & Trading GmbH	39	MVM Energy Trade Plus SRL
30	Petrol, Slovenska energetska druzba	40	Next Energy Parteners SRL
31	Statkraft Markets GmbH	41	Nova Power&Gas SRL
32	Trade Motion SRL	42	Photovoltaic Green Project 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
		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		
10	Crest Energy SRL		

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 participants on the Romanian electricity markets

*Alive Capital SA was a competitive supplier during January – March 2021 and Participant in the Aggregated Entity during April – December 2021

*Izvor de Lumină SA was a competitive supplier during January – August 2021 and a trader during September - December 2021;

Note: Absolute Energy SRL was a competitive supplier during January – September 2021, and starting with October 2021 it was no longer active on WEM and REM.

Electricity market participants report to ANRE technical/commercial data (as the case may be) according to the *Wholesale electricity market monitoring Methodology*, approved by ANRE Order no. 67/2018, as well as according to the *Retail electricity market monitoring Methodology*, 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.

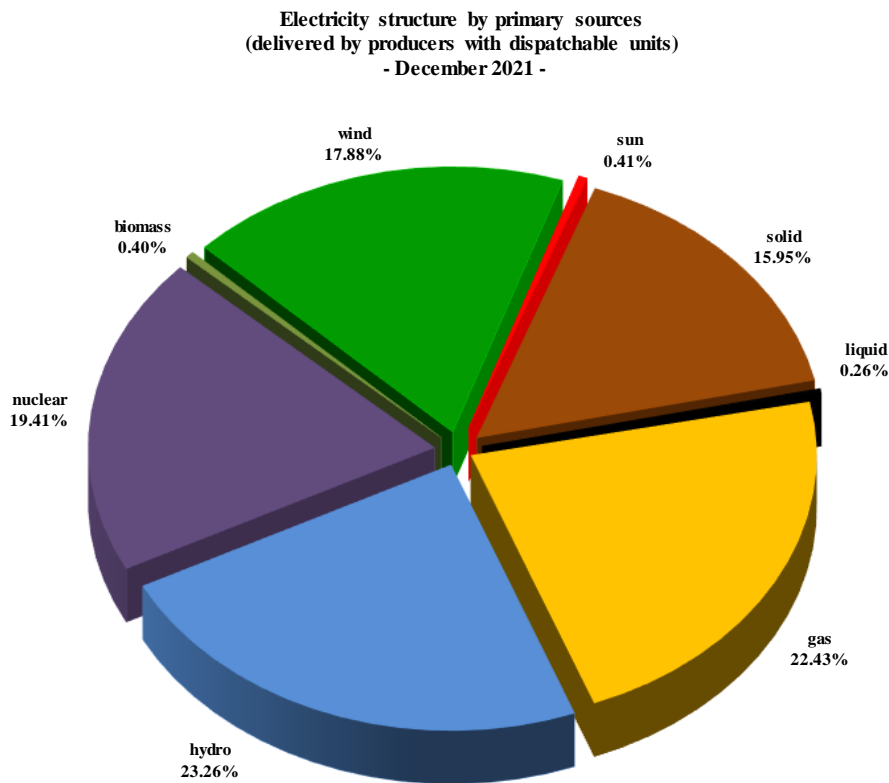
Holders of licenses for the commercial operation of electricity generation capacities and, where applicable, of thermal energy produced in cogeneration, monitored under ANRE president orders no.

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:

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

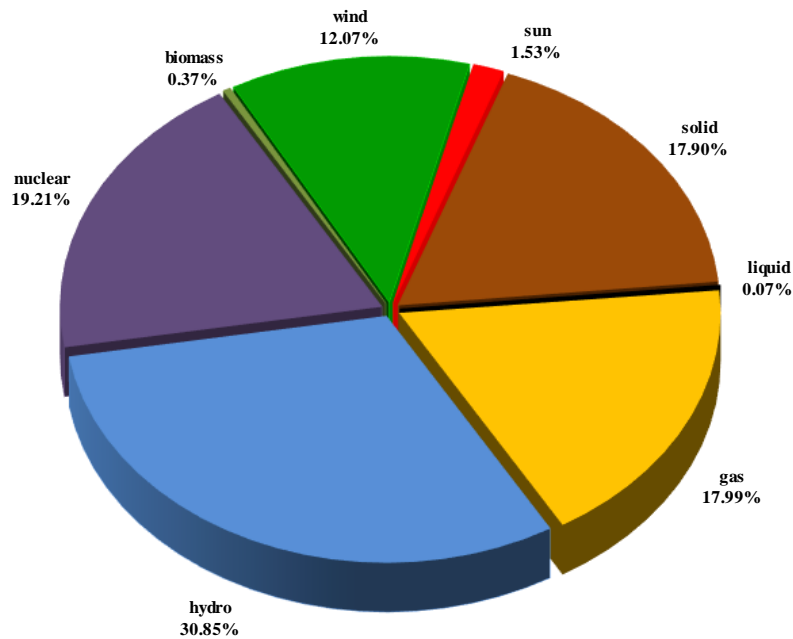
In accordance with the provisions of the *Regulation on the programming of dispatchable production units, dispatchable consumers and dispatchable storage facilities*, approved by ANRE President Order no. 61/2020, with subsequent amendments and additions, CNTEE TRANSELECTRICA SA develops appropriate procedures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

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

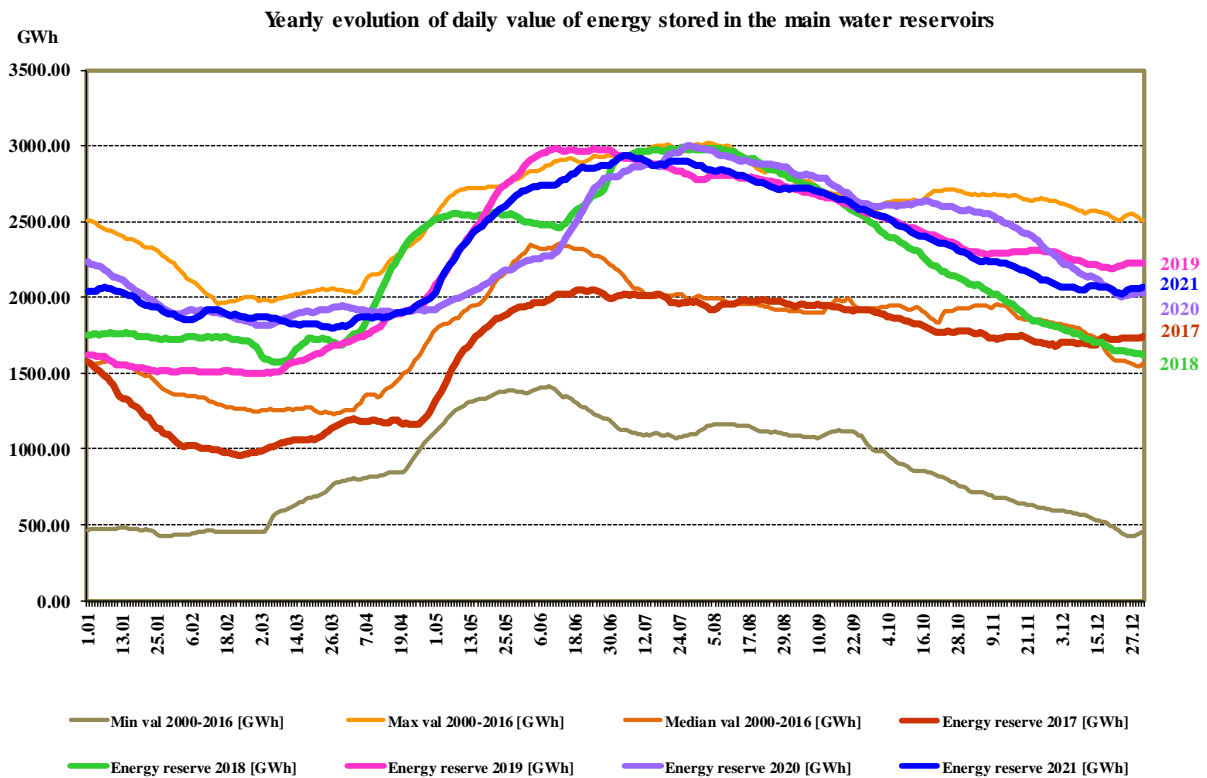


Source: Monthly reports of producers – Electricity Market Monitoring Unit analysis

Electricity structure by primary sources
(delivered by producers with dispatchable units)
- YEAR 2021-

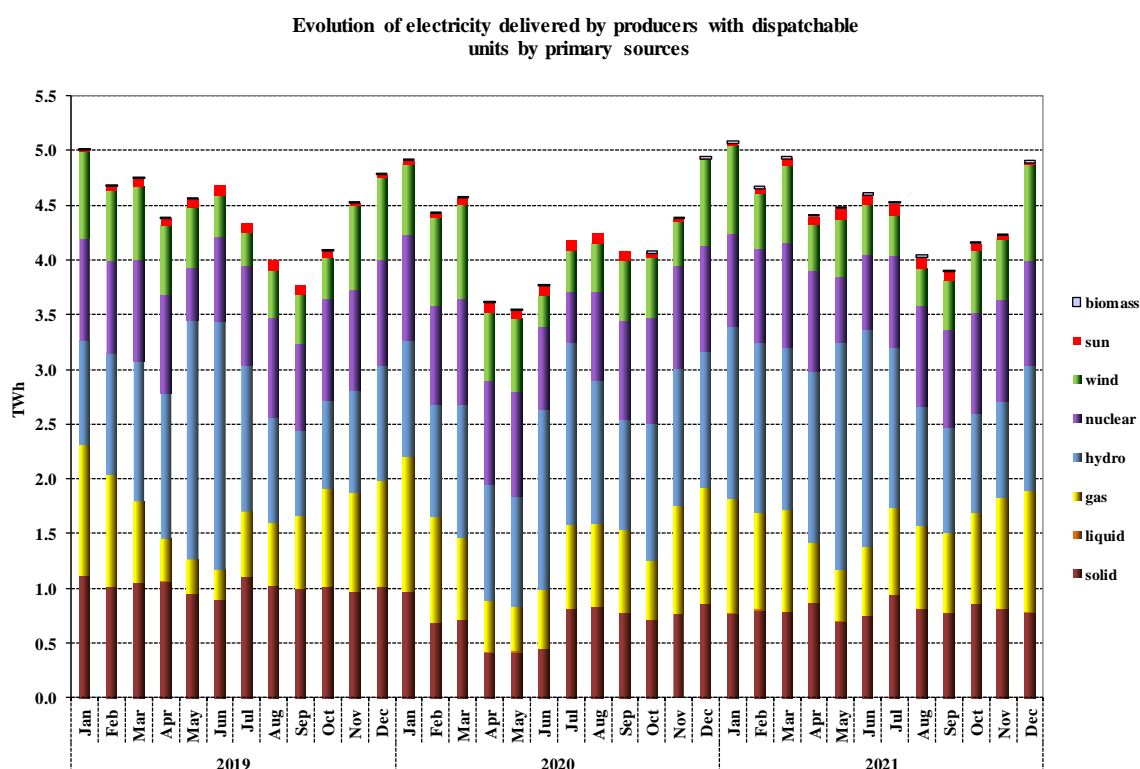


The electricity generated from hydro sources depends on the energy reserve in the main water reservoirs and at the same time it is influenced by it. The following graph presents the evolution of the daily amounts of energy stored in water reservoirs in 2021 compared to the daily values of the last 4 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 December 2021 and the whole year 2021, compared with the data for the similar period of 2020:

No.	INDICATOR	UM	December 2020	December 2021	%	Year 2020	Year 2021	%
0	1	2	3	4	$5=4/3*100$	6	7	$8=7/6*100$
1	Generated electricity	TWh	5.24	5.17	98.66	53.74	57.05	106.16
2	Delivered electricity	TWh	4.94	4.91	99.39	50.79	54.02	106.36
3	Import	TWh	0.57	0.64	112.28	7.38	7.62	103.25
4	Export	TWh	0.42	0.40	95.24	4.58	5.43	118.56
5	Internal consumption (2+3-4)	TWh	5.10	5.15	100.98	53.59	56.22	104.91
6	Consumption of households:	TWh	1.30	1.29	99.23	13.62	14.25	104.63
6.1	- on US/ regulated and last resort regime	TWh	0.79	0.45	56.96	8.40	6.08	72.38
6.2	- on the competitive market	TWh	0.51	0.84	164.71	5.22	8.17	156.51
7	Consumption of non-household clients:	TWh	3.06	3.12	101.96	34.65	36.74	106.03
7.1	- on US, last resort and inactive regime	TWh	0.08	0.06	75.00	0.87	0.81	93.10
7.2	- on the competitive market	TWh	2.98	3.06	102.68	33.78	35.93	106.36
8	Transmission–Injection component	TWh	4.85	4.81	99.18	49.63	52.79	106.37
9	Transmission–Extraction component	TWh	5.05	5.09	100.79	53.89	56.40	104.66
10	Transmission grid losses	TWh	0.09	0.12	133.33	0.94*	1.09	115.96
11	Heat generated for delivery	Tcal	1341.08	1284.51	95.78	9805.93	9910.11	101.06
12	Heat in co-generation	Tcal	844.32	898.92	106.47	6997.07	7127.08	101.86

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 Transelectrica 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); for contract-based imported/exported quantities of electricity no transmission tariff is applied;
 4. The consumption of households is ensured by suppliers of last resort under a US/regulated and last resort regime for the year 2020, respectively under US and last resort regime for the year 2021;
- *Differences with December 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 this 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 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 eliminated.

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 prices presented include only the injection component of the transmission tariff, being comparable within the month and allowing the comparison with the previous month.

WHOLESALE MARKET TRADES	November 2021	December 2021	December 2020
1. BILATERAL CONTRACTS MARKET			
traded volume (GWh)	74	28	756
average price (lei/MWh)	735.01	167.77	187.13
% from internal consumption	1.6	0.6	14.8
1.1. Sales on regulated contracts			
traded volume (GWh)	-	-	736
average price (lei/MWh)	-	-	186.70
% from internal consumption	-	-	14.4
1.2. Sales on negotiated contracts¹⁾			
traded volume (GWh)	3	2	20
average price (lei/MWh)	262.30	262.28	203.16
% from internal consumption	0.1	0.03	0.4
1.3. Sales on negotiated contracts within the Aggregated Entity			
traded volume (GWh)	70	26	-
average price (lei/MWh)	758.15	159.48	-
% from internal consumption	1.5	0.5	-
1.4. Sales on long-term negotiated contracts, according to ANRE Order no. 65/2020			
traded volume (GWh)	0.7	0.7	0
average price (lei/MWh)	239.0	239.0	0.00
% from internal consumption	0.02	0.01	0.0
2. EXPORT			
traded volume (GWh) ²⁾	222	396	417
average price (lei/MWh)	895.67	961.67	235.18
% from internal consumption	4.7	7.7	8.2
3. CENTRALIZED MARKETS OF BILATERAL CONTRACTS			
traded volume (GWh)	4142	4358	4409
average price (lei/MWh)	361.16	374.42	259.68
% from internal consumption	87.1	84.6	86.5
3.1. Extended auction mechanism CMBC-EA³⁾			
traded volume (GWh)	292	302	1134
average price (lei/MWh)	268.43	268.50	271.89
% from internal consumption	6.1	5.9	22.2
3.2. Extended auction mechanism CMBC-EA-Flex³⁾			
traded volume (GWh)	1346	1452	166
average price (lei/MWh)	296.99	323.24	239.11
% from internal consumption	28.3	28.2	3.3
3.3. Continuous negotiation mechanism CMBC-CN³⁾			
traded volume (GWh)	540	576	899
average price (lei/MWh)	345.76	367.83	263.29
% from internal consumption	11.4	11.2	17.6
3.4. CM-OTC mechanism			
traded volume (GWh)	1896	1963	2188
average price (lei/MWh)	427.87	434.45	254.26
% from internal consumption	39.9	38.1	42.9

3.5. CME-RES-GC			
traded volume (GWh)	67	64	21
average price (lei/MWh)	291.66	254.27	174.57
% from internal consumption	1.4	1.2	0.4
4. DAY AHEAD MARKET			
traded volume (GWh)	1910	2240	2118
average price (lei/MWh) ⁴⁾	1087.29	1173.91	296.08*
% from internal consumption	40.2	43.5	41.6
5. INTRADAY MARKET			
traded volume (GWh)	99	116	73
average price (lei/MWh) ⁵⁾	1094.36	1300.29	331.89*
% from internal consumption	2.1	2.2	1.4
6. BALANCING MARKET			
traded volume (GWh)	163	257	243
% of internal consumption	3.4	5.0	4.8
upward volume (GWh)	97	171	82
average deficit price (lei/MWh) ⁶⁾	1127.29	1411.77	702.63
downward volume (GWh)	66	86	161
average surplus price (lei/MWh) ⁶⁾	891.80	1051.97	13.74
INTERNAL CONSUMPTION (GWh) <i>(distribution and transmission losses included)</i>	4755	5149	5096

- 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 weighted average of the hourly market closing prices with the corresponding hourly volumes from the respective month (RO hours); DAM weighted average monthly price published by Opcom SA (calculated as an average of the hourly market closing prices with the hourly volumes from the respective month) for December 2021 is 1173.64 lei/MWh (CET hours); average DAM price (arithmetic average of the hourly market closing prices) published by Opcom SA for December 2021 is 1139.30 lei/MWh (CET hours);
 - 5) The ID weighted average monthly price is calculated as an average of the market closing prices with the traded volumes in the trading intervals in a month (RO hours); ID weighted average monthly price published by Opcom SA for December 2021 is 1298.64 lei/MWh (CET hours);
 - 6) The average deficit price, respectively the surplus price is the arithmetic average of the settling prices on the BM; for the intervals with a single settling price, its value was allocated both as deficit and as surplus.
- *Differences with December 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 October and November 2021, OPCOM recalculated the BM settlement, resulting in the following values: in October 2021, the average deficit price of 1006.23 lei/MWh and the average surplus price of 787.29 lei/MWh, and in November 2021 the average deficit price of 1127.27 lei/MWh and the average surplus price of 891.80 lei/MWh.

WHOLESALE MARKET TRADES	2019	2020	2021
1. BILATERAL CONTRACTS MARKET			
traded volume (GWh)	4585	7271*	659
average price (lei/MWh)	180.78	167.98*	387.90
% from internal consumption	8.3	13.6	1.2
1.1. Sales on regulated contracts			
traded volume (GWh)	4317	7018	
average price (lei/MWh)	180.84	166.55	-
% from internal consumption	7.8	13.1	
1.2. Sales on negotiated contracts¹⁾			
traded volume (GWh)	268	254*	61
average price (lei/MWh)	179.70	207.64*	261.06
% from internal consumption	0.5	0.5	0.1
1.3. Sales on negotiated contracts within the Aggregated Entity			
traded volume (GWh)			597
average price (lei/MWh)	-	-	401.16
% from internal consumption			1.1
1.4. Sales on long-term negotiated contracts, according to ANRE Order no. 65/2020			
traded volume (GWh)			1
average price (lei/MWh)	-	-	239.00
% from internal consumption			0.003
2. EXPORT			
traded volume (GWh) ²⁾	3550*	4584	5425
average price (lei/MWh)	195.62*	181.80*	424.97
% from internal consumption	6.4	8.6	9.7
3. CENTRALIZED MARKETS OF BILATERAL CONTRACTS			
traded volume (GWh)	59799	48616	55013
average price (lei/MWh)	240.00	257.5*	283.82
% from internal consumption	108.4	90.7	97.9
3.1. Extended auction mechanism CMBC-EA³⁾			
traded volume (GWh)	18907	13898	4123
average price (lei/MWh)	237.30	268.33	271.94
% from internal consumption	34.3	25.9	7.3
3.2. Extended auction mechanism CMBC-EA-Flex³⁾			
traded volume (GWh)		438	15208
average price (lei/MWh)	-	240.26	269.15
% from internal consumption		0.8	27.0
3.3. Continuous negotiation mechanism CMBC-CN³⁾			
traded volume (GWh)	15832	8917	6536
average price (lei/MWh)	232.95	267.09	288.01
% from internal consumption	28.7	16.6	11.6
3.4. CM-OTC mechanism			
traded volume (GWh)	25060	25209	28333
average price (lei/MWh)	246.49	248.96	294.54
% from internal consumption	45.4	47.0	50.4
3.5. CME-RES-GC			
traded volume (GWh)	0.8	153	813
average price (lei/MWh)	253.3	176.04	211.14
% from internal consumption	0.001	0.3	1.4
4. CENTRALIZED MARKETS UNIVERSAL SERVICE			
traded volume (GWh)	612		
average price (lei/MWh) ⁴⁾	287.92	-	-
% from internal consumption	1.1		

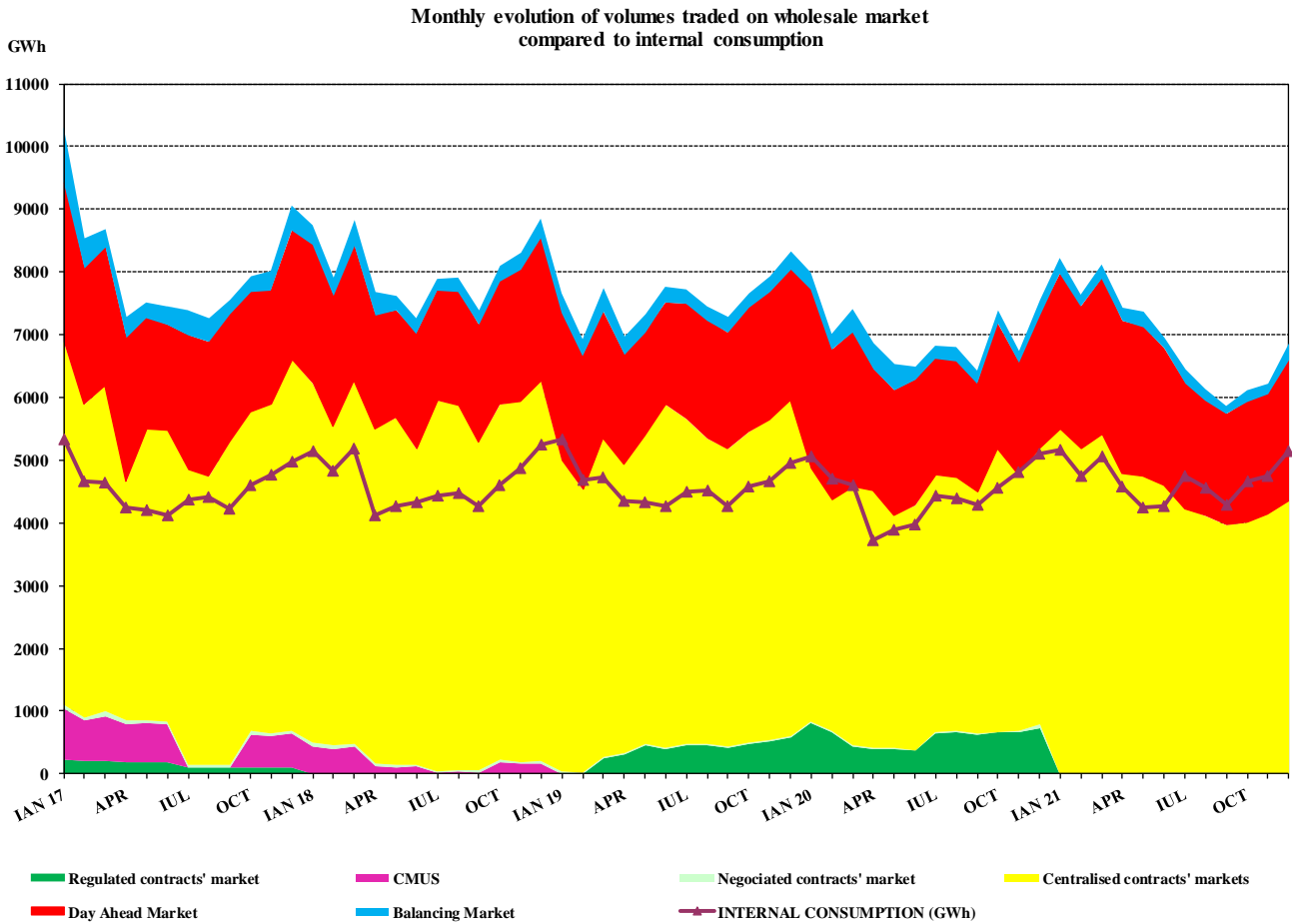
5. DAY AHEAD MARKET			
traded volume (GWh)	23133	24924	25861
average price (lei/MWh) ⁴⁾	251.21*	196.56*	538.99
% from internal consumption	41.9	46.5	46.0
6. INTRADAY MARKET			
traded volume (GWh)	375	583	1199
average price (lei/MWh) ⁵⁾	178.85*	208.23*	590.95
% from internal consumption	0.7	1.1	2.1
7. BALANCING MARKET			
traded volume (GWh)	3280	3223	2411
% of internal consumption	5.9	6.0	4.3
upward volume (GWh)	762	630	1082
average deficit price (lei/MWh) ⁶⁾	605.54	577.35*	623.07
downward volume (GWh)	2517	2593	1329
average surplus price (lei/MWh) ⁶⁾	11.67	3.0	426.33
INTERNAL CONSUMPTION (GWh) <i>(distribution and transmission losses included)</i>	55152*	53586	56216

- 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 yearly price is calculated as a weighted average of the monthly average prices with the monthly volumes (RO hours); Opcom SA publishes the weighted average yearly price calculated as an average of the hourly closing prices with the hourly volumes from the year, which for the year 2021 is 539.00 lei/MWh (CET hours); average price on DAM (arithmetic average) published by Opcom SA for the year 2021 is 549.52 lei/MWh (CET hours);
- 5) The ID average yearly price is calculated as a weighted average of the monthly average prices with the monthly traded volumes in a year (RO hours); the ID weighted average price for the year 2021, published by Opcom SA, is 591.01 lei/MWh (CET hours);
- 6) The average deficit price, respectively the surplus price is the arithmetic average of the settling prices on the BM; for the intervals with a single settling price, its value was allocated both as deficit and as surplus.

*Differences with December 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 October and November 2021, OPCOM recalculated the BM settlement, resulting in the following values: in October 2021, the average deficit price of 1006.23 lei/MWh and the average surplus price of 787.29 lei/MWh, and in November 2021 the average deficit price of 1127.27 lei/MWh and the average surplus price of 891.80 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 January 2017 – December 2021:

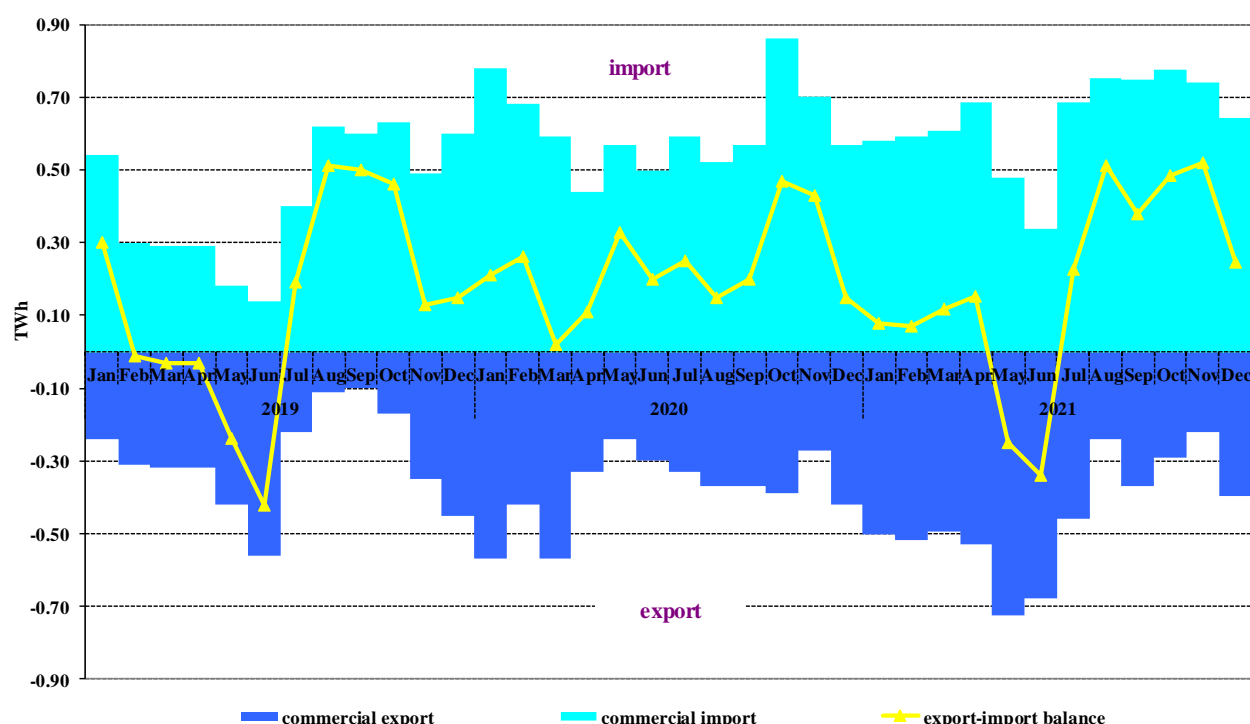


Source: Monthly reports of wholesale market participants, Opcom SA and CNTEE Tranelectrica SA – Analysis by Electricity Market Monitoring Unit

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:

Monthly evolution of export, import and net export-import balance of electricity for the last 3 years



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

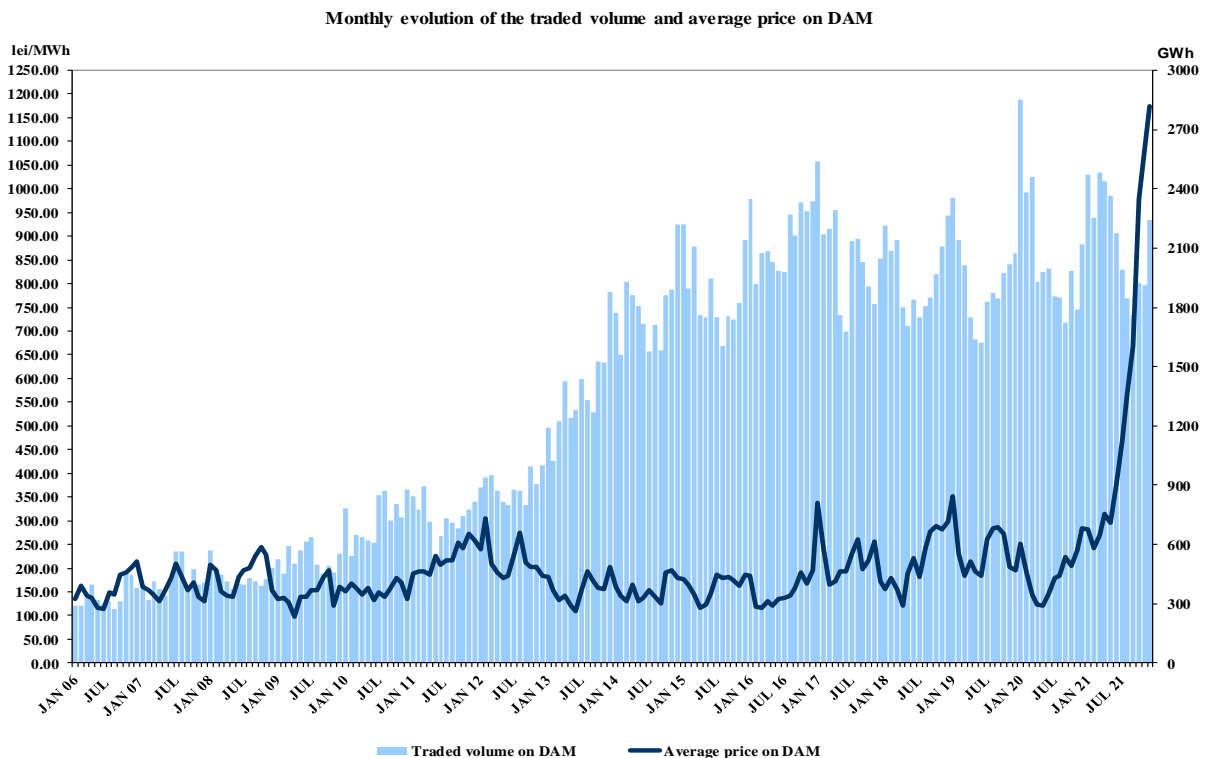
The following table presents the commercial export and import trades for the electricity extracted/injected from/in the transmission network. These trades include the trades concluded by CNTEE Transselectrica SA as the shipper agent in the price coupling mechanism of DAM and ID. Shipper agent role is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

IMPORT/EXPORT TRADES	November 2021	December 2021	December 2020
EXPORT			
traded volume (GWh)	222	396	417
average price (lei/MWh)	895.67	961.67	235.18
% from internal consumption	4.7	7.7	8.2
of which, through coupled DAM			
traded volume (GWh)	30	85	139
average price (lei/MWh)	616.70	568.97	223.97
% from internal consumption	0.6	1.6	2.7
of which, through coupled ID			
traded volume (GWh)	42	36	26
average price (lei/MWh)	1069.96	1145.54	354.05
% from internal consumption	0.9	0.7	0.5
IMPORT			
traded volume (GWh)	740	641	569
average price (lei/MWh)	1126.21	1316.74	312.13
% from internal consumption	15.6	12.4	11.2
of which, through coupled DAM			
traded volume (GWh)	483	354	133
average price (lei/MWh)	1202.57	1494.68	324.92
% from internal consumption	10.2	6.9	2.6
of which, through coupled ID			
traded volume (GWh)	49	70	41
average price (lei/MWh)	1112.67	1403.67	314.23
% from internal consumption	1.0	1.4	0.8

IMPORT/EXPORT TRADES	2019	2020	2021
EXPORT			
traded volume (GWh)	3550*	4584	5425
average price (lei/MWh)	195.62*	181.80*	424.97
% from internal consumption	6.4	8.6	9.7
of which, through coupled DAM			
traded volume (GWh)	990	1194	1513
average price (lei/MWh)	179.13	178.30	366.96
% from internal consumption	1.8	2.2	2.7
of which, through coupled ID			
traded volume (GWh)	10	200	490
average price (lei/MWh)	203.47	219.03	523.45
% from internal consumption	0.02	0.4	0.9
IMPORT			
traded volume (GWh)	5068	7377	7624
average price (lei/MWh)	273.07	223.01	600.59
% from internal consumption	9.2	13.8	13.5
of which, through coupled DAM			
traded volume (GWh)	1733	1399	2333
average price (lei/MWh)	285.58	199.13	796.48
% from internal consumption	3.1	2.6	4.2
of which, through coupled ID			
traded volume (GWh)	20	240	614
average price (lei/MWh)	196.09	212.30	642.59
% from internal consumption	0.04	0.4	1.1

*Differences with the December 2020 Electricity Market Monitoring Report (yearly data) are determined by the processing of reports corrected and resent by economic operators

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



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 December 2021 and the year 2021 is presented in the following table:

DECEMBER 2021	Dispatch order (GWh)	Delivered electricity (GWh)	Deviation (%)
Secondary regulation	80	80	
<i>upward</i>	37	37	
<i>downward</i>	43	43	
Fast tertiary regulation	181	177	2
<i>upward</i>	136	134	1
<i>downward</i>	46	43	5
Slow tertiary regulation	0	0	0
<i>upward</i>	0	0	0
<i>downward</i>	0	0	0
TOTAL	261	257	
<i>upward</i>	173	171	
<i>downward</i>	89	86	
INTERNAL CONSUMPTION		5149	
<i>% share of traded volumes from internal consumption</i>		<i>5.0%</i>	

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

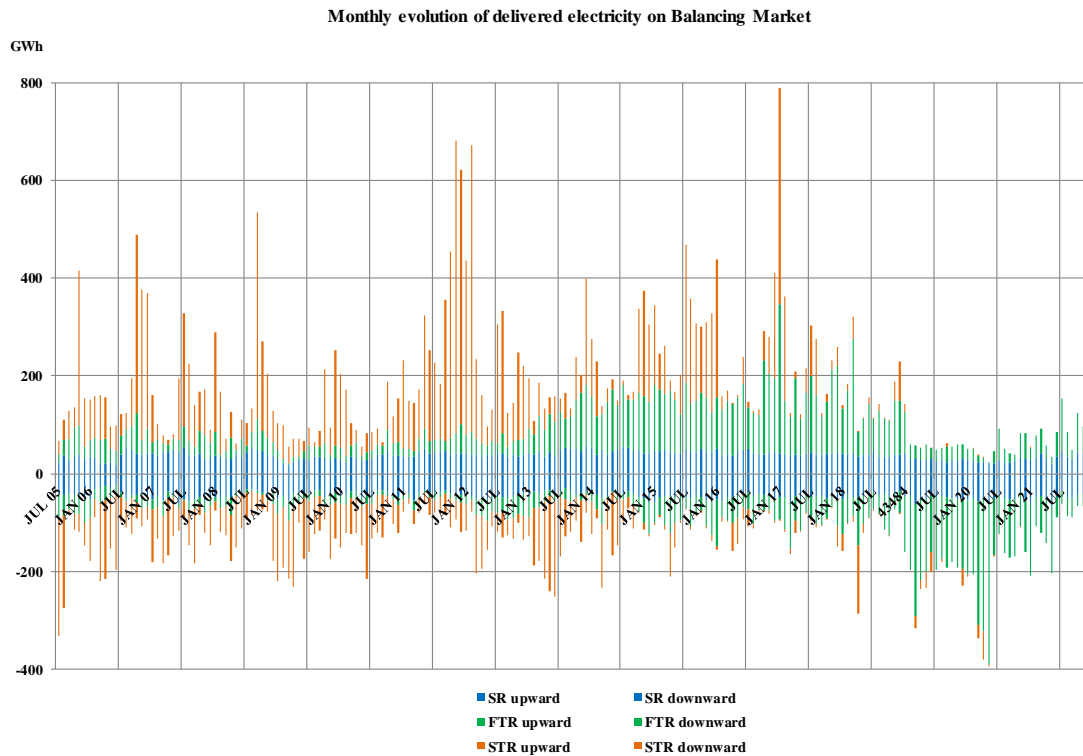
Note: the committed and the delivered electricity include the electricity related to trades with financial compensation outside the BM resulting from dispatch orders (upward/downward) for resolving network restrictions, ensuring the security of the system by redispatching or by trading in a coordinated 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.

YEAR 2021	Dispatch order (GWh)	Delivered electricity (GWh)	Deviation (%)
Secondary regulation	998	998	
<i>upward</i>	419	419	
<i>downward</i>	579	579	
Fast tertiary regulation	1469	1413	4
<i>upward</i>	685	663	3
<i>downward</i>	785	750	4
Slow tertiary regulation	0	0	0
<i>upward</i>	0	0	0
<i>downward</i>	0	0	0
TOTAL	2468	2411	
<i>upward</i>	1104	1082	
<i>downward</i>	1364	1329	
INTERNAL CONSUMPTION		56216	
<i>% share of traded volumes from internal consumption</i>		<i>4.3%</i>	

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

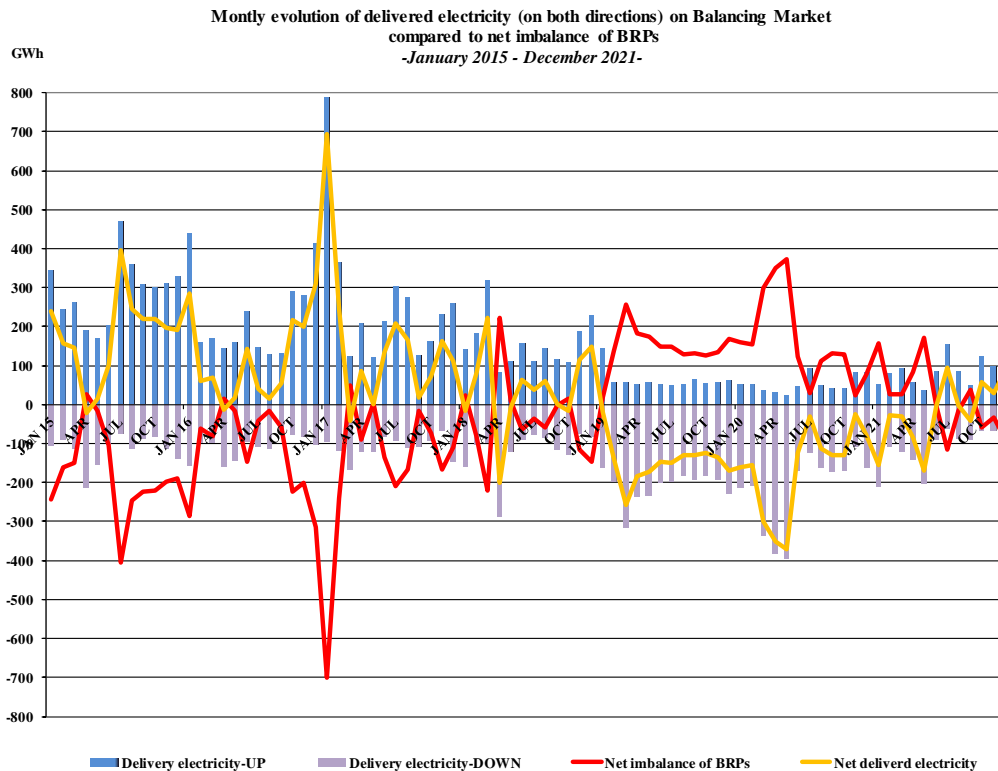
Note: the committed and the delivered electricity include the electricity related to trades with financial compensation outside the BM resulting from dispatch orders (upward/downward) for solving network restrictions, ensuring the security of the system by redispatching or by trading in a coordinated counterparty (according to the provisions of ANRE president Order no.152/2020), with the following balances: electricity committed 0.956 GWh and electricity delivered 0.945 GWh (from January 2021).

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 - December 2021:



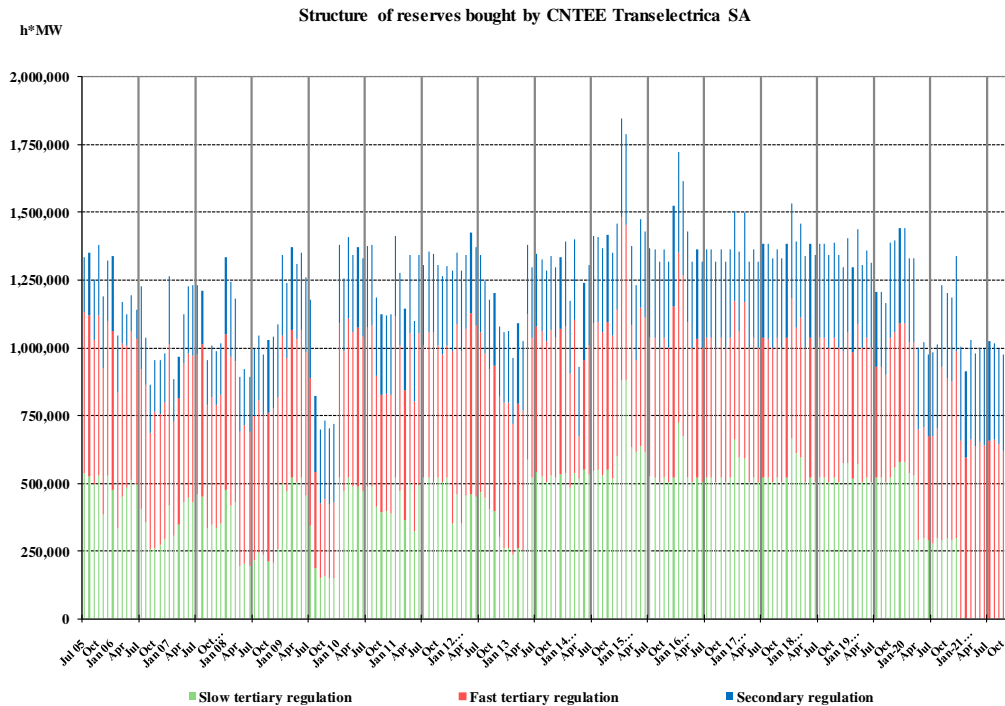
Source: Monthly reports of CNTEE Tranelectrica SA – analysed by the Electricity Market Monitoring Unit

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:



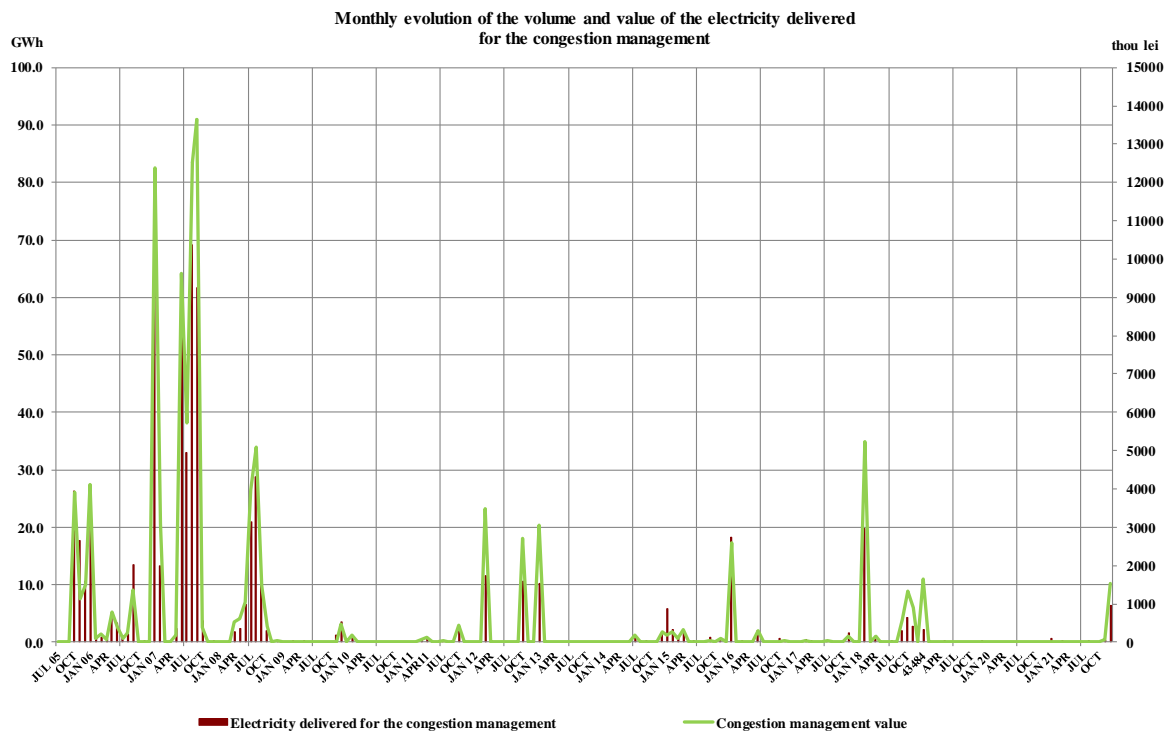
Source: Monthly reports of CNTEE Tranelectrica SA and OPCOM SA – analysed by the Electricity Market Monitoring Unit

The following chart shows the evolution of the reserves bought by CNTEE Tranelectrica S.A., for the period July 2005 – December 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

Producers

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

Type of trades	-GWh-			
	December 2020	December 2021	Year 2020	Year 2021
Regulated to last resort suppliers and to thermal, hydro and nuclear producers	736.07	-	7017.52	-
Negotiated to suppliers	19.61	1.72	253.92	60.66
Negotiated within Aggregated Entity	-	25.98	-	597.10
Trades on the Opcom centralized markets, of which:	2830.66	3232.25	28121.87	39615.06
- CMBC-EA	938.45	289.68	11720.66	3701.51
- CMBC-EA-flex	98.69	1420.11	247.13	14709.43
- CMBC-CN	548.95	348.00	4540.03	3720.90
- CM-OTC	1223.22	1110.20	11460.72	16670.68
- CME-RES-GC	21.35	64.27	153.33	812.55
DAM	1455.91	1409.29	17292.06	15006.02
ID	25.58	30.92	268.91	377.42
Supply contracts to final clients, of which:	404.01	519.91	4436.56	5625.43
Households	0.44	7.05	5.50	38.11
Non-households	403.56	512.86	4431.06	5587.32
Total	5471.83	5220.07	57390.85	61281.69

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

Suppliers

In December 2021, on the electricity market were active 93 operators having as the main activity that of electricity supply; of these, 32 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 on 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 December 2021 and Year 2021 compared to the similar period in 2020:

-GWh-

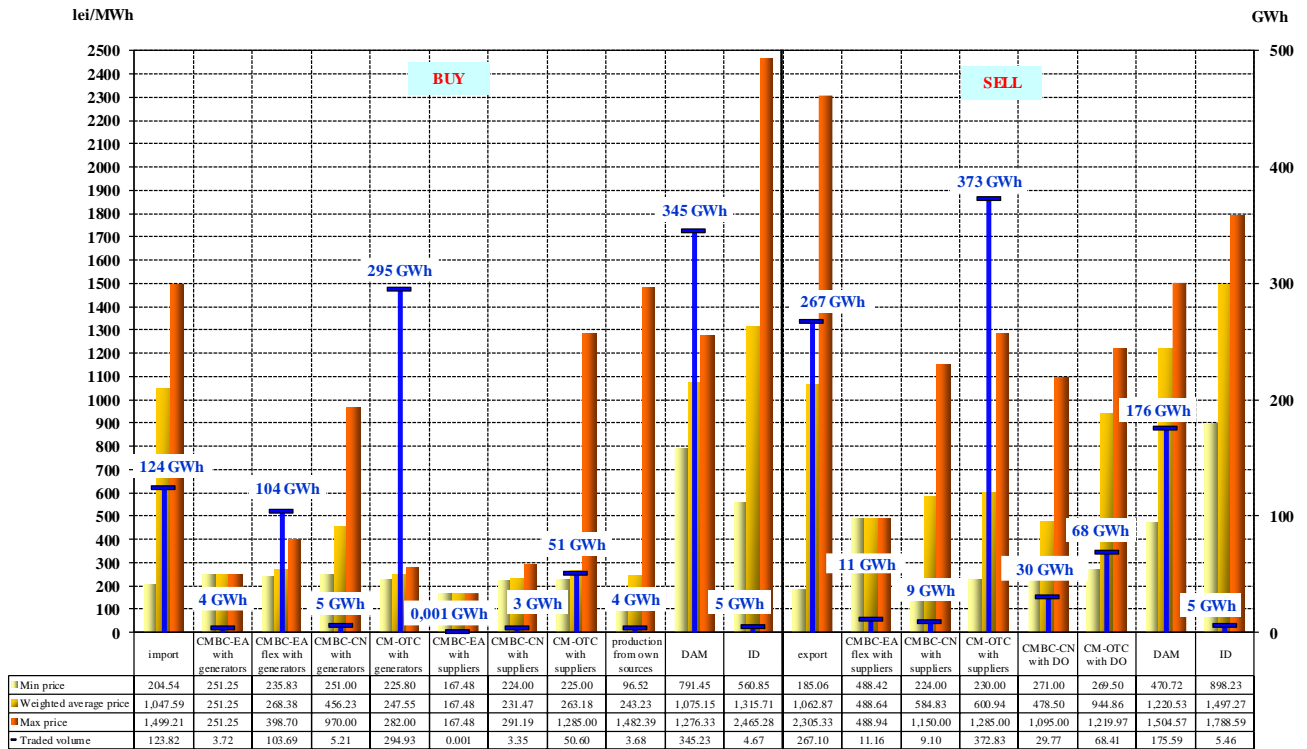
Structure of trades of suppliers acting exclusively on WEM	December 2020	December 2021	Year 2020	Year 2021
Buy				
Import	270.03	123.82	4365.76	3630.33
Trades on Opcom centralized markets, of which:	660.62	461.48	6131.69	7649.04
- on CMBC-EA with producers	61.08	3.72	975.30	43.88
on CMBC-EA-Flex with producers	3.72	103.69	12.72	1101.00
- on CMBC-CN with producers	22.55	5.21	166.43	45.30
- on CM-OTC with producers	394.16	294.93	2950.10	5243.89
- on CMBC-EA with other suppliers	0.001	0.001	0.15	0.01
- on CMBC-CN with other suppliers	34.22	3.35	408.75	38.74
- on CM-OTC with other suppliers	144.88	50.60	1618.24	1176.22
production from own sources	3.47	3.68	51.17	40.16
Negotiated trades with non-dispatchable producers (others than under Law 220/2008) *	0.75	0.00	5.66	0.00
DAM	309.49	345.23	4986.01*	2444.08
ID	7.47	4.67	69.32	67.90
Sell				
Export	242.75	267.10	3058.92	3322.27
Trades on Opcom centralized markets, of which:	625.96	491.26	8820.86	5354.63
- on CMBC-CN with producers	35.72	0.00	411.80	12.67
- on CM-OTC with producers	20.83	0.00	437.85	295.19
- on CMBC-EA with other suppliers	32.74	0.00	473.05	0.03
- on CMBC-EA-Flex with other suppliers	0.0001	11.16	7.32	64.15
- on CMBC-CN with other suppliers	76.85	9.10	984.85	121.20
- on CM-OTC with other suppliers	349.76	372.83	5528.93	4121.25
- on CMBC-EA with DO	11.16	0.00	157.22	0.01
- on CMBC-EA-Flex with DO	2.24	0.00	9.43	10.80
- on CMBC-CN with DO	40.88	29.77	397.27	304.66
- on CM-OTC with DO	37.93	68.41	219.82	454.66
- on CMBC-EA with TSO	11.16	0.00	131.75	0.02
- on CMBC-EA Flex with TSO	2.98	0.00	17.66	0.003
- on CMBC-CN with TSO	3.72	0.00	43.92	0.01
DAM	377.00	175.59	3700.04*	5077.47
ID	3.78	5.46	26.92	86.54

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

* Differences with the December 2020 Electricity Market Monitoring Report are determined by the processing of reports corrected and resent by economic operators.

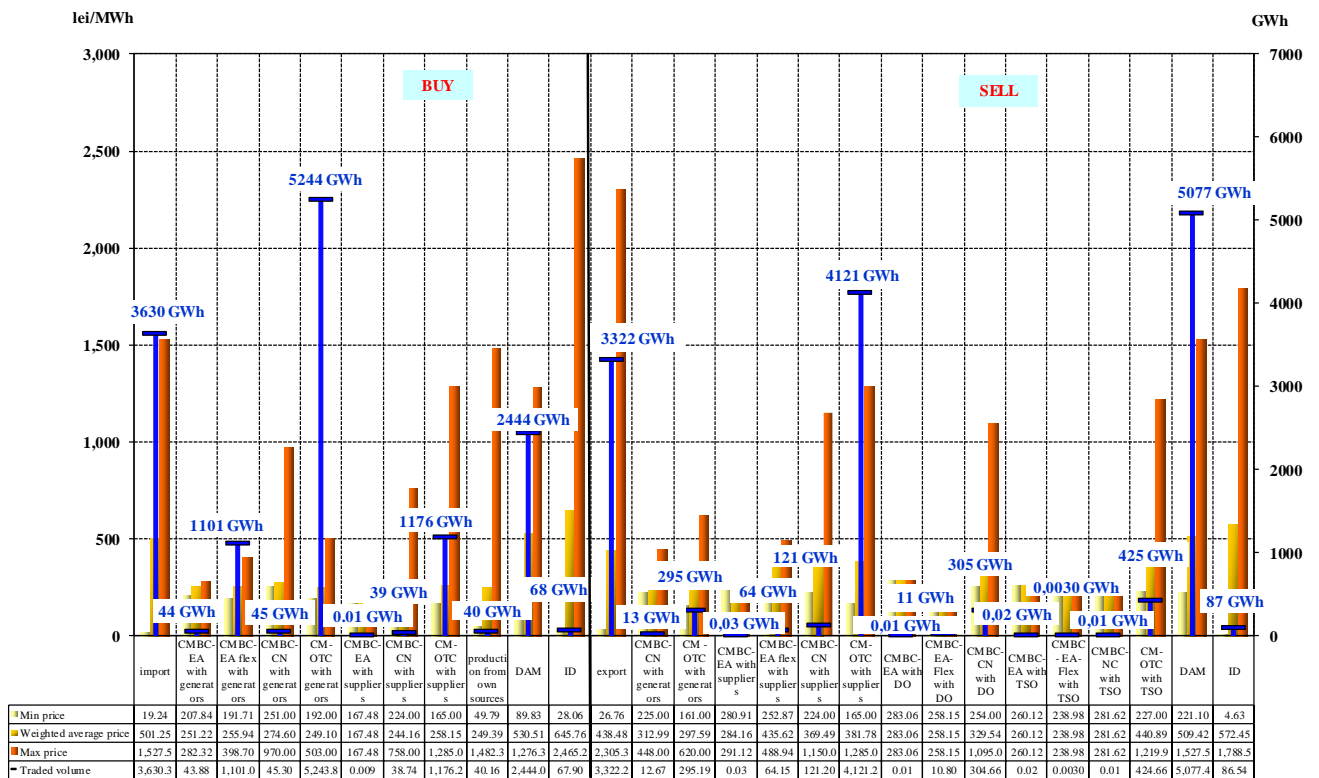
The breakdown by type of sources/destinations of the volumes traded and delivered in the reporting month, of the average, highest and lowest prices in December 2021 and year 2021 of suppliers acting exclusively on WEM is presented graphically below:

Trades concluded by suppliers active exclusively on WEM
- DECEMBER 2021-



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

Trades concluded by suppliers active exclusively on WEM
- YEAR 2021-



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 December 2021 and Year 2021, compared with the similar period of 2020:

- GWh -

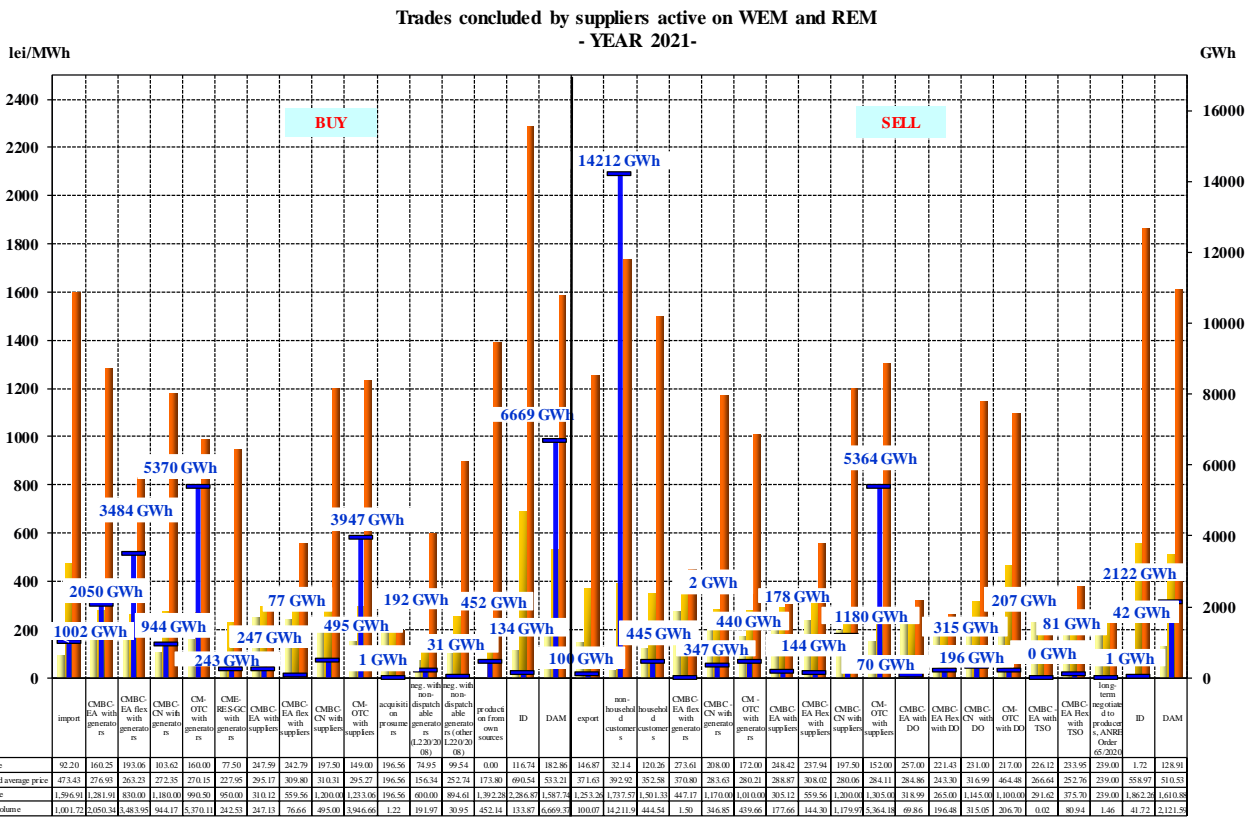
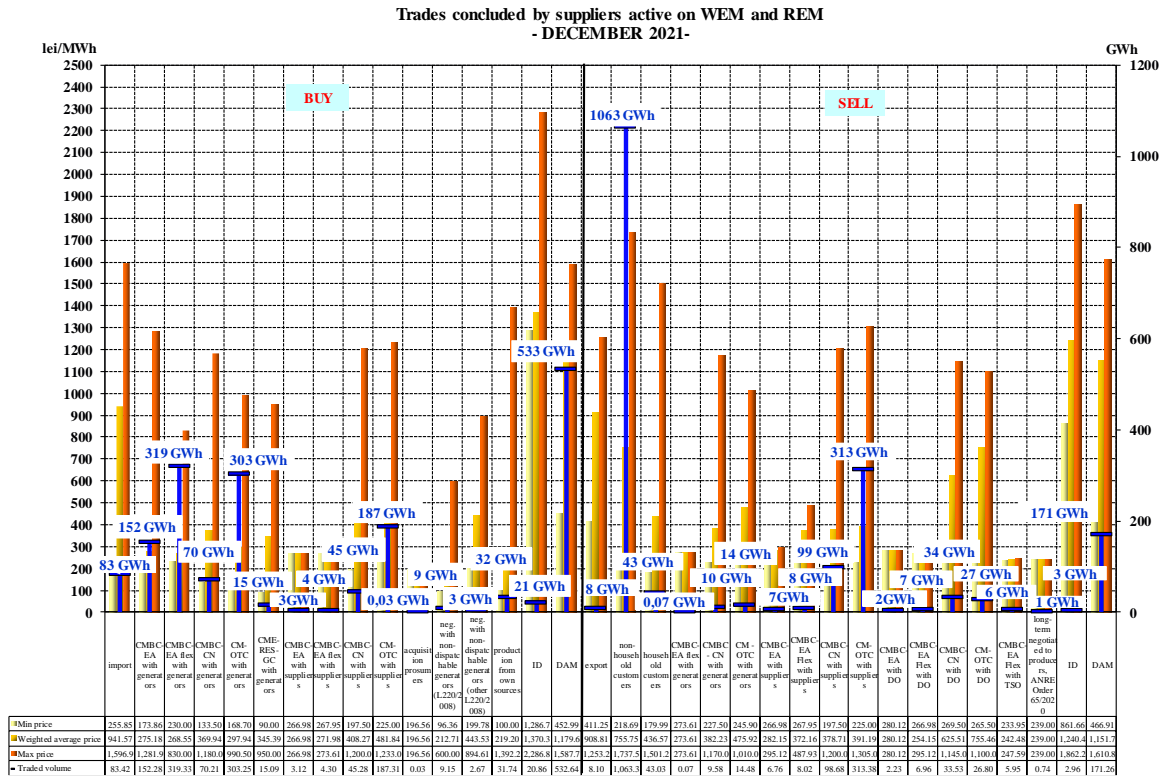
Structure of trades of suppliers active on the REM (suppliers of last resort not included)	December 2020	December 2021	Year 2020	Year 2021
Buy				
Import	125.74	83.42	1371.92	1001.72
Negotiated trades with producers	19.68	0.00	252.96	0.00
Trades on Opcom centralized markets, of which:	1522.37	1100.16	18007.61	16856.54
- on CMBC-EA with producers	307.37	152.28	3924.34	2050.34
- on CMBC-EA-Flex with producers	49.66	319.33	84.26	3483.95
- on CMBC-CN with producers	173.00	70.21	1626.14	944.17
- on CM-OTC with producers	364.18	303.25	4050.76	5370.11
- on CME-RES-GC with producers	38.25	15.09	158.66	242.53
- on CMBC-EA with other suppliers	100.98	3.12	1006.94	247.13
- on CMBC-EA-Flex with other suppliers	14.14	4.30	75.26	76.66
- on CMBC-CN with other suppliers	66.32	45.28	964.55	495.00
- on CM-OTC with other suppliers	408.48	187.31	6116.70	3946.66
production from own sources	29.30	31.74	305.82	452.14
Negotiated trades with non-dispatchable producers (others than under Law 220/2008) *	1.66	2.67	34.95	30.95
Negotiated trades with non-dispatchable producers (amendments, additions to Law 220/2008) **	12.02	9.15	253.96	191.97
Trades with prosumers	0.008	0.03	0.19	1.22
DAM	730.94	532.64	9796.99	6669.37
ID	4.62	20.86	138.16	133.87
Sell				
Export	10.13	8.10	131.98	100.07
Long-term negotiated from producers (ANRE Order no. 65/2020)	-	0.74	-	1.46
Trades on Opcom centralized markets, of which:	868.14	526.44	11020.31	8523.17
- on CMBC-EA-with producers	0.00	0.00	2.18	0.00
- on CMBC-EA-Flex with producers	4.46	0.07	13.69	1.50
- on CMBC-CN with producers	31.90	9.58	284.58	346.85
- on CM-OTC with producers	46.13	14.48	732.45	439.66
- on CMBC-EA with other suppliers	101.65	6.76	972.35	177.66
- on CMBC-EA-Flex with other suppliers	14.14	8.02	71.54	144.30
- on CMBC-CN with other suppliers	97.35	98.68	1421.56	1179.97
- on CM-OTC with other suppliers	405.48	313.38	5890.90	5364.18
- on CMBC-EA with DO	28.34	2.23	313.59	69.86
- on CMBC-EA – Flex with DO	43.86	6.96	71.55	196.48
- on CMBC-CN with DO	43.85	33.53	479.90	315.05
- on CMBC-OTC with DO	37.19	26.80	529.56	206.70
- on CMBC-EA with TSO	10.06	0.00	127.03	0.02
- on CMBC-EA-flex with TSO	0.00	5.95	0.00	80.94
- on CMBC-CN with TSO	3.72	0.00	109.43	0.00
DAM	51.98	171.26	874.80	2121.59
ID	1.38	2.96	16.00	41.72
Households	33.30	43.03	340.37	444.54
Non-households	1490.87	1063.39	17456.30	14211.52

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.

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 December 2021 and year 2021, for suppliers active on the REM and WEM are shown in the following graph:



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 December 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 end 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 September 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 December 2021 and year 2021 (the data reported by some suppliers of last resort do not include the final settlement values on the BM), compared with the similar period of 2020:

-GWh -

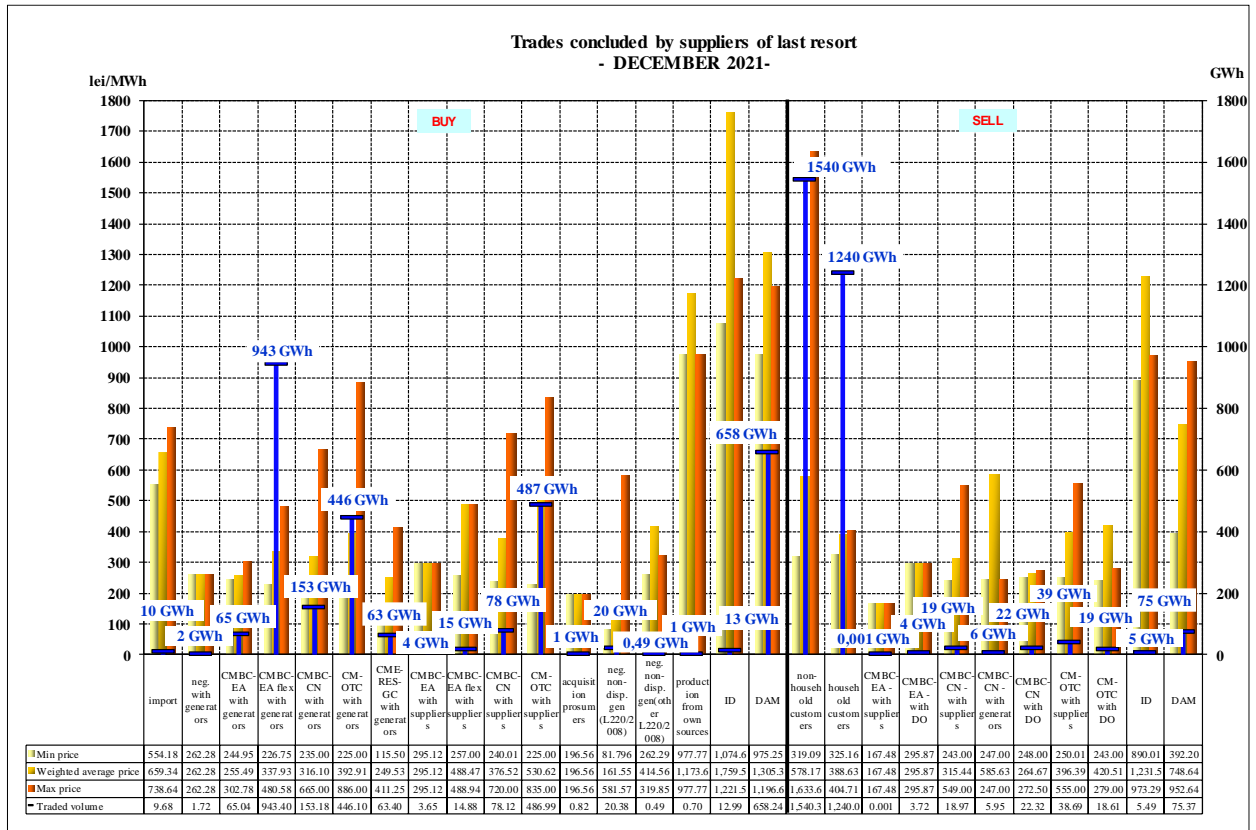
Structure of trades concluded by suppliers of last resort on REM (US, last resort, inactive and competitive regime)	December 2020	December 2021	Year 2020	Year 2021
Buy				
Regulated with producers	736.07	-	7017.52	-
import	0.00	9.68	0.00	43.10
Negotiated with producers	0.0004	1.72	5.72	60.66
Trades on Opcom centralized markets, of which:	1456.39	2254.74	17127.78	24323.79
- CMBC-EA with producers	429.68	65.04	5651.09	785.41
- CMBC-EA Flex with producers	33.52	943.40	103.24	9801.33
- CMBC-CN with producers	180.41	153.18	1420.14	1543.71
- CM-OTC with producers	433.62	446.10	4265.52	5375.72
- CME-RES-GC from producers	12.19	63.40	161.42	780.88
- CMBC-EA with other suppliers	33.41	3.65	438.30	60.74
- CMBC-EA Flex with other suppliers	0.00	14.88	3.60	131.80
- CMBC-CN with other suppliers	73.66	78.12	1053.37	977.44
- CM-OTC with other suppliers	259.91	486.99	4031.10	4866.76
Production from own sources	0.00	0.70	0.00	21.89
Negotiated with non-dispatchable producers (others than under Law 220/2008)*	0.00	0.49	13.49	20.36
Negotiated with non-dispatchable producers (changes, additions to Law 220/2008)**	11.77	20.38	475.10	514.92
prosumers	0.08	0.82	2.24	23.53
DAM	372.01	658.24	3049.51	8024.31
ID	4.51	12.99	6.70	96.58
Sell				
Trades on Opcom centralized markets, of which:	84.06	108.26	652.77	1519.98
- CMBC-CN with producers	16.37	5.95	212.15	61.43
- CM-OTC with producers	3.72	0.00	11.04	117.01
- CMBC-EA with other suppliers	0.00	0.001	0.00	130.19
- CMBC-CN with other suppliers	0.00	18.97	20.25	210.02
- CM-OTC with other suppliers	58.02	38.69	346.21	504.21
- CMBC-EA with DO	0.00	3.72	0.00	43.80
- CMBC-CN with DO	0.00	22.32	11.16	263.62
- CM-OTC with DO	5.95	18.61	51.96	189.70
- CMBC-EA with TSO	0.00	0.00	0.00	0.00
- CMBC-CN with TSO	0.00	0.00	0.00	0.01
DAM	43.19	75.37	839.34	652.36
ID	0.08	5.49	1.21	64.30
Households	560.92	1540.36	13275.87	13761.65
Non-household clients	1872.76	1240.05	12762.74	16944.96

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

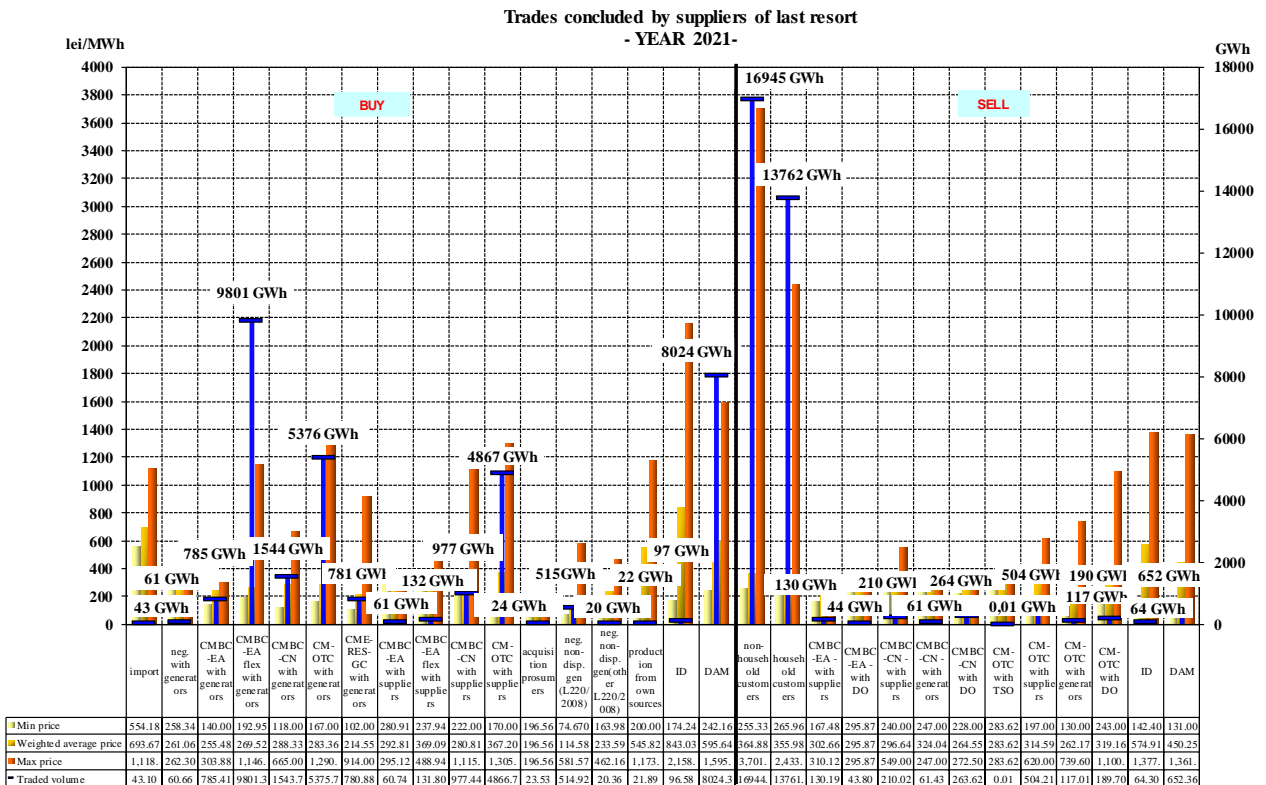
Note: *negotiated trades with non-dispatchable producers that do not fall under the provisions of Law no. 220/2008, with subsequent amendments and additions.

** 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 December 2021 and year 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 clients under the US regime is shown in the table below for December 2021 and year 2021, compared to the similar period of 2020:

Structure of trades concluded by suppliers of last resort to supply clients under US/regulated regime	December 2020		December 2021		Year 2020		Year 2021	
	Quantity [GWh]	Average price [lei/MWh]	Quantity [GWh]	Average price [lei/MWh]	Quantity [GWh]	Average price [lei/MWh]	Quantity [GWh]	Average price [lei/MWh]
Buy								
Regulated from producers	736.07	186.70	-	-	7017.52	166.55	-	-
Import	-	-	3.72	800.86			7.32	956.97
Negotiated with non-dispatchable producers (changes and additions to Law no. 220/2008)	0.00004	162.00	0.03	309.72	0.002	181.90	0.44	262.85
Trades on Opcom centralized markets, of which:	11.00	266.96	448.23	345.77	982.49	242.91	5598.41	275.97
CMBC-EA with producers	3.82	248.56	27.42	248.12	184.82	262.86	258.84	251.34
CMBC-EA Flex with producers	0.00	-	227.36	303.14	0.00	-	2604.50	265.09
CMBC-CN with producers	2.28	264.70	26.17	314.43	63.21	220.24	323.58	285.53
CM-OTC with producers	1.61	264.33	57.08	392.07	176.26	228.26	1009.11	272.73
CME-RES-GC from producers	0.00	-	3.69	230.45	8.80	173.47	53.73	215.32
CMBC-EA with other suppliers	0.01	290.29	0.68	295.12	7.64	280.84	18.27	289.56
CMBC-EA Flex with other suppliers	0.00001	258.00	0.00	-	0.008	237.52*	45.65	268.78
CMBC-CN with other suppliers	2.25	291.90	21.49	418.56	137.33	258.44	280.22	262.60
CM-OTC with other suppliers	1.04	289.56	84.36	457.73	404.42	239.25	1004.51	317.76
prosumers	0.03	251.11	0.06	196.56	0.71	251.20	1.58	196.56
DAM	73.12	320.55	66.15	1295.56	789.79	198.13	1107.43	536.50
ID	0.21	623.97	2.82	1521.88	0.31	562.27	34.76	731.30
Sell								
DAM	17.40	252.48	41.68	838.64	177.46	192.43	408.83	457.73
ID	0.02	95.19	2.32	1166.50	0.02	78.42	28.67	484.73
Households	788.51	252.14	453.91	375.21	8393.94	462.56	6077.34	344.11
Non-household clients	10.78	408.40	9.09	442.28	119.51	615.95	95	417.58

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

*Differences with December 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 December 2021 and Year 2021, compared with the similar period of 2020:

Structure of trades concluded by suppliers of last resort to supply clients under inactive regime	December 2020		December 2021		Year 2020		Year 2021	
	Quantity [GWh]	Average price [lei/MWh]	Quantity [GWh]	Average price [lei/MWh]	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)*	0.0004	183.11	0.007	309.72	0.01	183.03	0.02	269.59
Trades on Opcom centralized markets, of which:	63.49	271.29	36.16	407.78	661.43	272.16	422.13	321.10
CMBC-EA with producers	12.23	259.60	0.03	252.62	214.96	259.55	0.63	252.73
CMBC-EA Flex with producers	0.00	-	15.89	256.14	0.00	-	254.08	255.39
CMBC-CN with producers	5.73	263.71	0.17	261.56	46.78	260.68	3.22	255.48
CM-OTC with producers	25.55	271.74	7.61	553.20	120.66	267.58	42.16	446.52

<i>CMBC-EA with other suppliers</i>	0.09	290.13	0.02	295.12	11.84	316.29	0.39	293.98
<i>CMBC-EA Flex with other suppliers</i>	0.0001	252.00	0.00	-	0.07	237.51	0.09	237.94
<i>CMBC-CN with other suppliers</i>	15.80	280.60	0.07	420.50	189.28	287.22	0.99	309.60
<i>CM-OTC with other suppliers</i>	4.10	277.72	12.36	515.64	77.85	277.67	120.55	418.09
prosumers	0.002	251.24	0.002	196.56	0.08	251.28	0.09	196.56
DAM	19.87	273.31	7.31	1132.83	150.10	217.94	256.72	466.50
ID	0.04	673.93	0.15	1477.49	0.09	533.62*	7.04	545.05
Sell								
DAM	5.74	271.27	4.18	852.98	76.48	164.61	32.16	514.20
ID	0.00	0.00	0.54	1217.82	0.004	11.76	3.81	662.73
Non-household clients	68.21	416.85	37.63	487.64	744.75	623.93	671.71	437.50

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

*Differences with the December 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 December 2021 and year 2021:

Structure of trades concluded by suppliers of last resort to supply final clients under competitive regime	-GWh-			
	December 2020	December 2021	Year 2020	Year 2021
Buy				
import	0.00	5.96	0.00	35.79
Negotiated with producers	0.00	1.72	5.71	60.66
Trades on Opcom centralized markets, of which:	1381.45	1770.35	15476.24	18302.20
- <i>CMBC-EA with producers</i>	413.63	37.59	5249.10	525.93
- <i>CMBC-EA Flex with producers</i>	33.52	700.15	103.24	6941.88
- <i>CMBC-CN with producers</i>	172.40	126.85	1309.87	1216.91
- <i>CM-OTC with producers</i>	406.02	381.41	3965.37	4324.45
- <i>CME-RES-GC from producers</i>	12.19	59.71	152.62	727.15
- <i>CMBC-EA with other suppliers</i>	33.31	2.95	418.82	42.08
- <i>CMBC-EA-Flex with other suppliers</i>	0.005	14.88	3.52	86.05
- <i>CMBC-CN with other suppliers</i>	55.61	56.55	726.38	696.23
- <i>CM-OTC with other suppliers</i>	254.77	390.27	3547.32	3741.52
Production from own sources	0.00	0.70	0.00	21.89
Negotiated with non-dispatchable producers (others than under Law no. 220/2008) *	0.00	0.49	13.49	20.36
Negotiated with non-dispatchable producers (changes and additions to Law no. 220/2008) **	11.77	20.35	475.10	514.46
Prosumers	0.04	0.76	1.44	21.86
DAM	278.79	581.06	2105.05	6626.33
ID	4.27	10.02	6.30	54.77
Sell				
Trades on Opcom centralized markets, of which:	84.06	108.26	652.77	1519.98
- <i>CMBC-CN with producers</i>	16.37	5.95	212.15	61.43
- <i>CM-OTC with producers</i>	3.72	0.00	11.04	117.01
- <i>CMBC-EA with other suppliers</i>	0.00	0.001	0.00	130.19
- <i>CMBC-CN with other suppliers</i>	0.00	18.97	20.25	210.02
- <i>CM-OTC with other suppliers</i>	58.02	38.69	346.21	504.21
- <i>CMBC-EA with DO</i>	0.00	3.72	0.00	43.80
- <i>CMBC-CN with DO</i>	0.00	22.32	11.16	263.62
- <i>CM-OTC with DO</i>	5.95	18.61	51.96	189.70
- <i>CMBC-CN with TSO</i>	0.00	0.00	0.00	0.01
DAM	19.95	29.51	583.73	211.20
ID	0.06	2.64	1.19	31.82
Households	481.46	786.08	4881.93	7683.92
Non-household clients	1084.25	1484.30	11889.79	16136.93

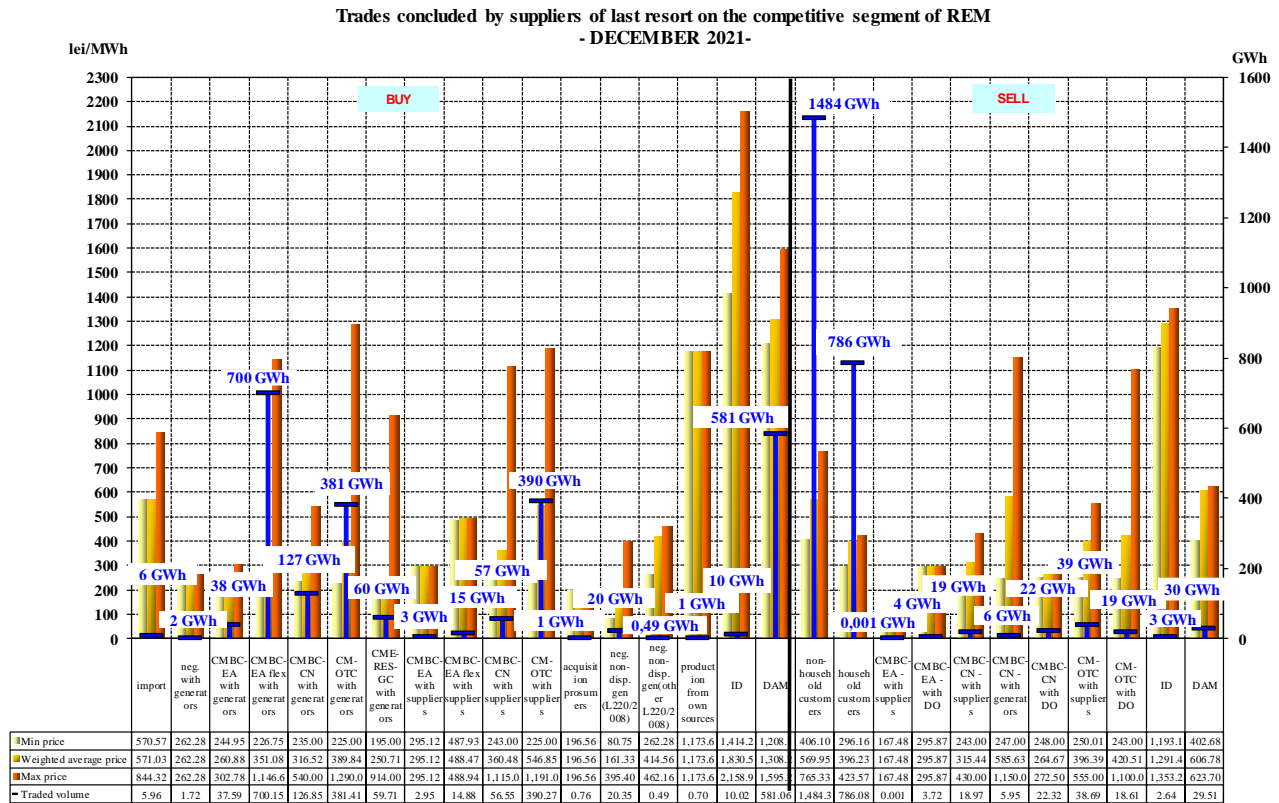
Source: Monthly reports of the suppliers of last resort – analysis done by the Electricity Market Monitoring Unit

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.

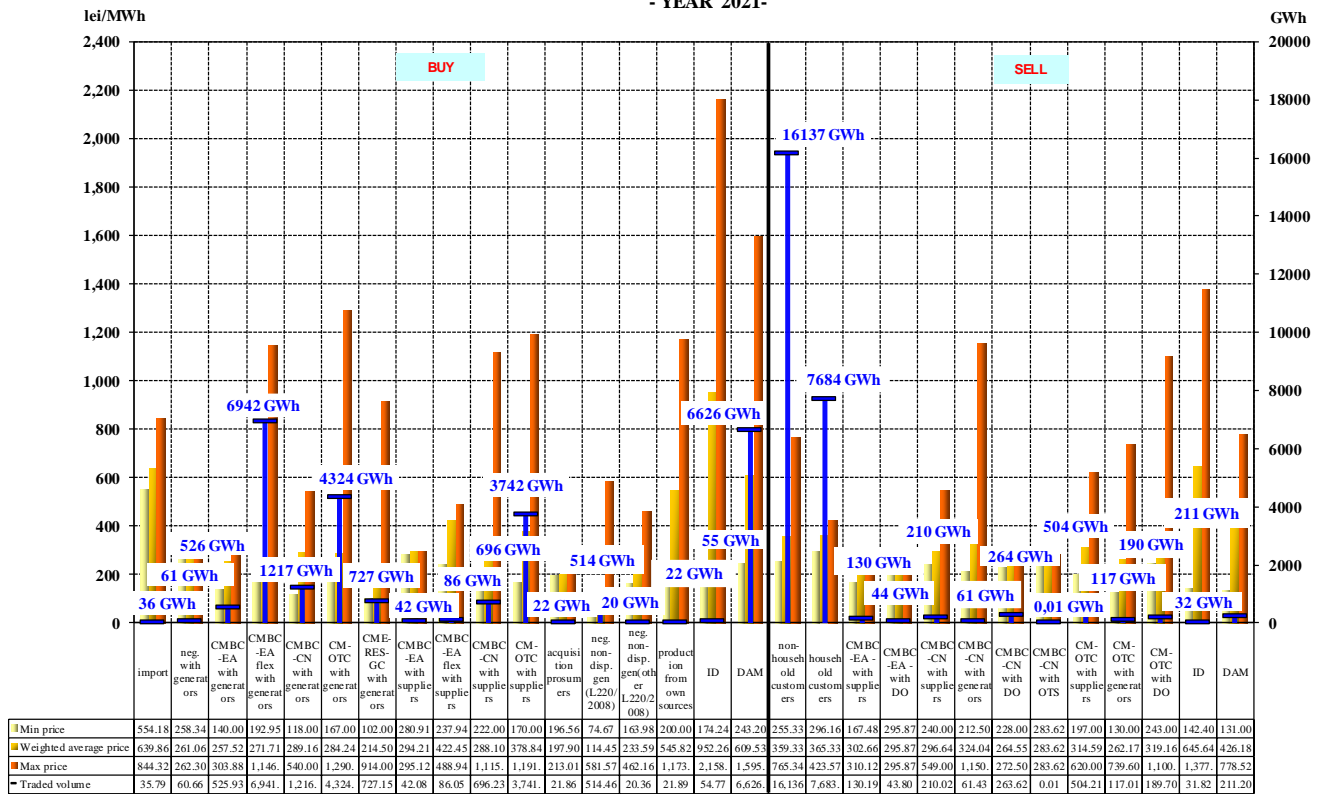
*** The differences with the December 2020 Electricity Market Monitoring Report are determined by the processing of the corrected reports sent by economic operators.

The breakdown by types of sources/destinations of the traded volumes and the average prices of trades made in December 2021 and year 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

Trades concluded by suppliers of last resort on the competitive segment of REM
- YEAR 2021-



Main distribution operators

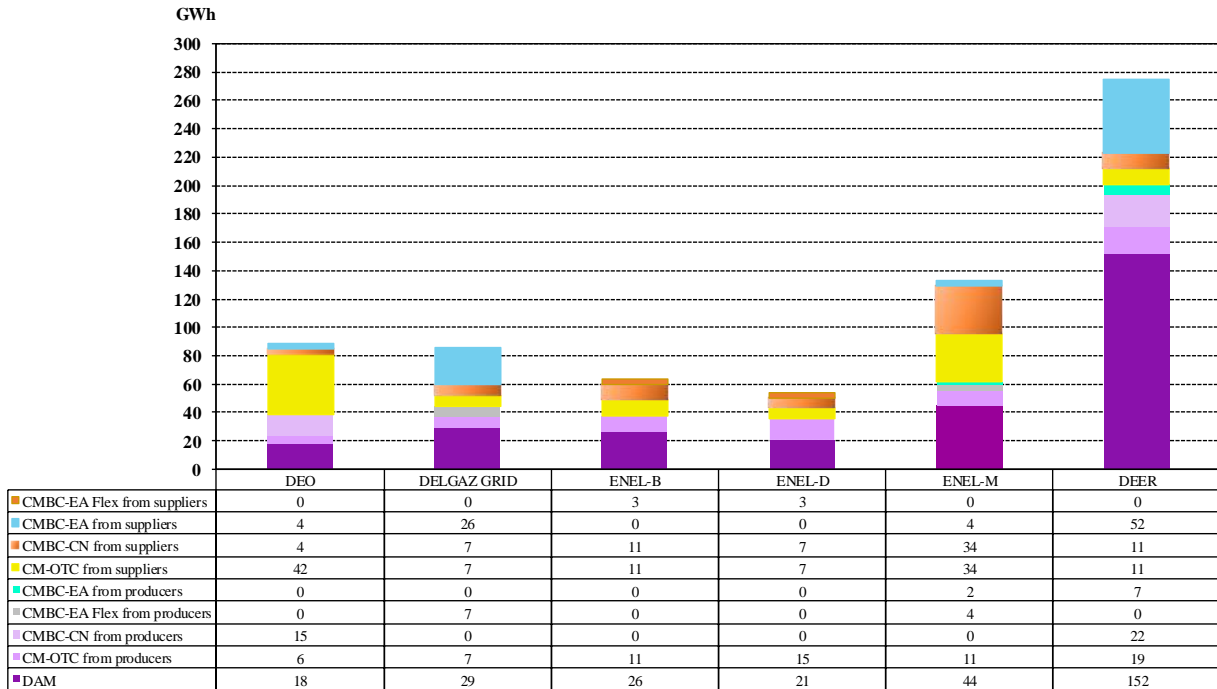
The following table shows the structure of electricity trades of the main distribution operators made before the delivery interval for distribution networks losses in December 2021 and year 2021, compared with the similar previous period of 2020:

Structure of trades	- GWh -			
	December 2020	December 2021	Year 2020	Year 2021
Trades on centralized contracts markets:	452.90	339.62	4080.60	3100.15
- CMBC-EA with producers	70.64	9.28	694.66	108.57
- CMBC-EA flex with producers	0.00	11.23	0.00	119.12
- CMBC-CN with producers	110.86	37.20	1020.82	397.18
- CM-OTC with producers	20.08	69.63	124.14	450.71
- CMBC-EA with suppliers	39.42	5.95	470.32	113.31
- CMBC-EA flex with suppliers	46.10	6.96	80.97	207.71
- CMBC-CN with suppliers	84.73	85.55	888.34	882.93
- CM-OTC with suppliers	81.08	113.82	801.34	821.07
DAM, of which	202.25	290.41	1236.42	2159.47
- buy	205.54	290.61	1281.71	2161.17
- sell	3.29	0.20	45.29	2.69
ID, of which	1.45	3.21	2.002	5.48
- buy	1.45	3.30	2.006	7.27
- sell	0.003	0.09	0.004	1.79

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

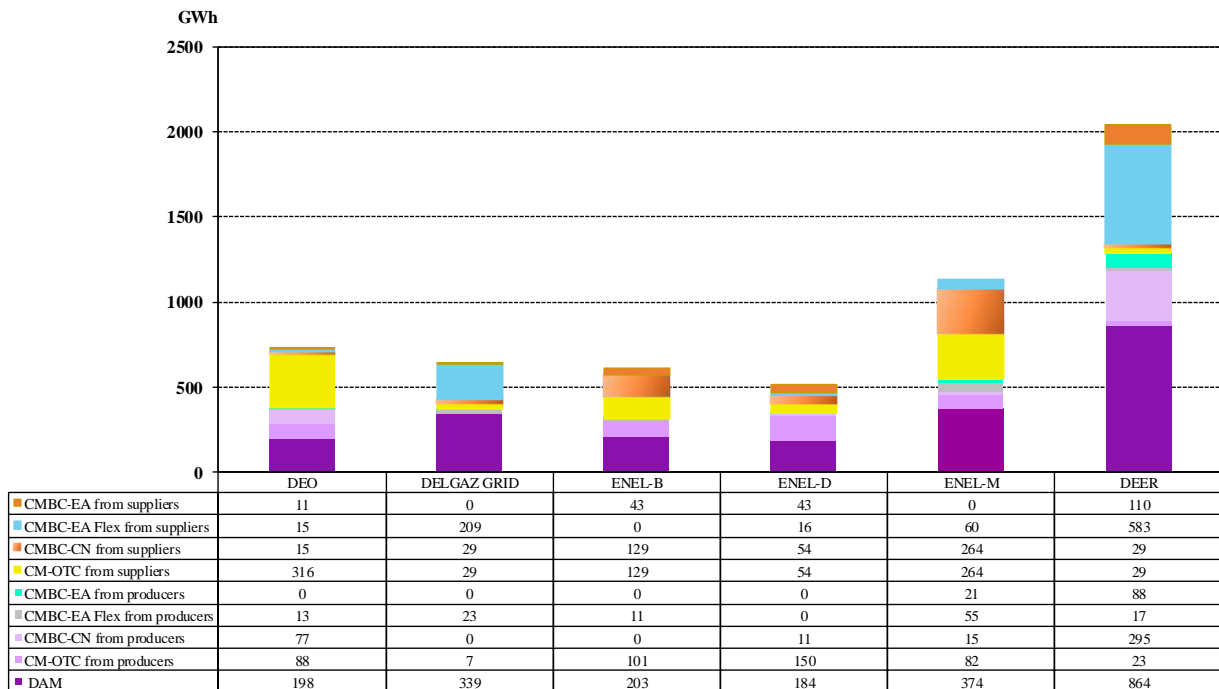
Electricity acquisition structure of the main distribution operators in December 2021 and year 2021 is shown in the following graphs:

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



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

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



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

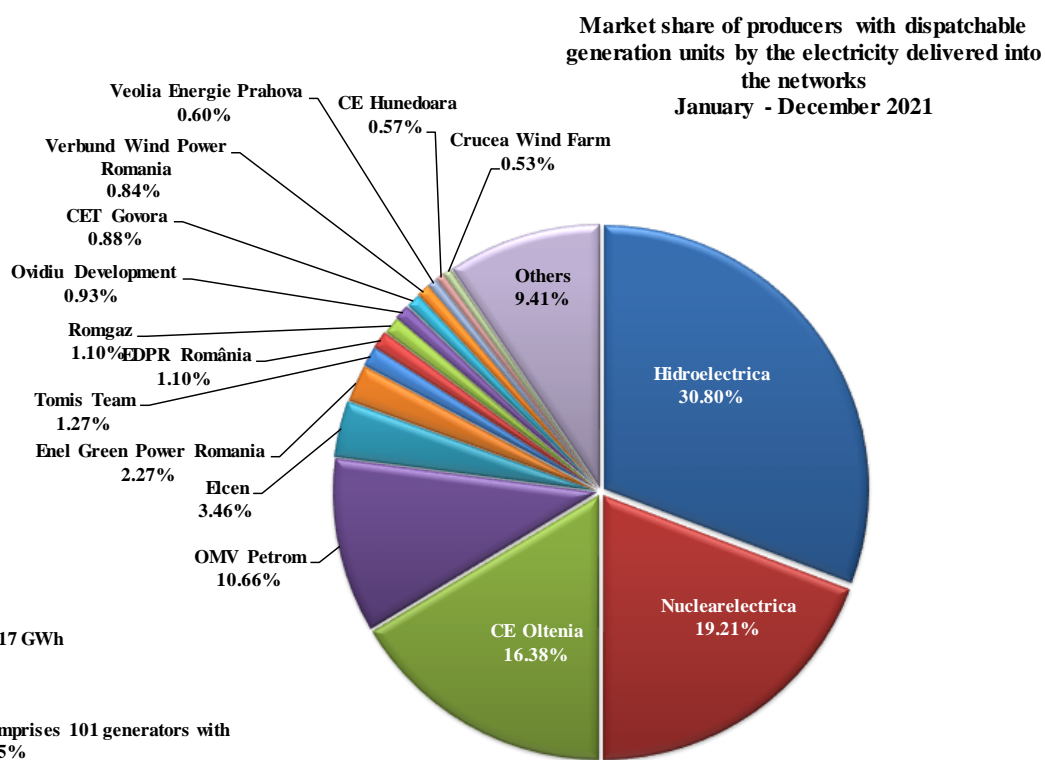
6. Concentration indicators for the wholesale electricity market and its components

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 December 2021 and the graph presents the market shares of electricity producers with dispatchable generation units, determined based on the electricity delivered into the networks.

Concentration indicators - December 2021 -	C1 (%)	C3 (%)	HHI
Value	23.23	57.19	1339



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

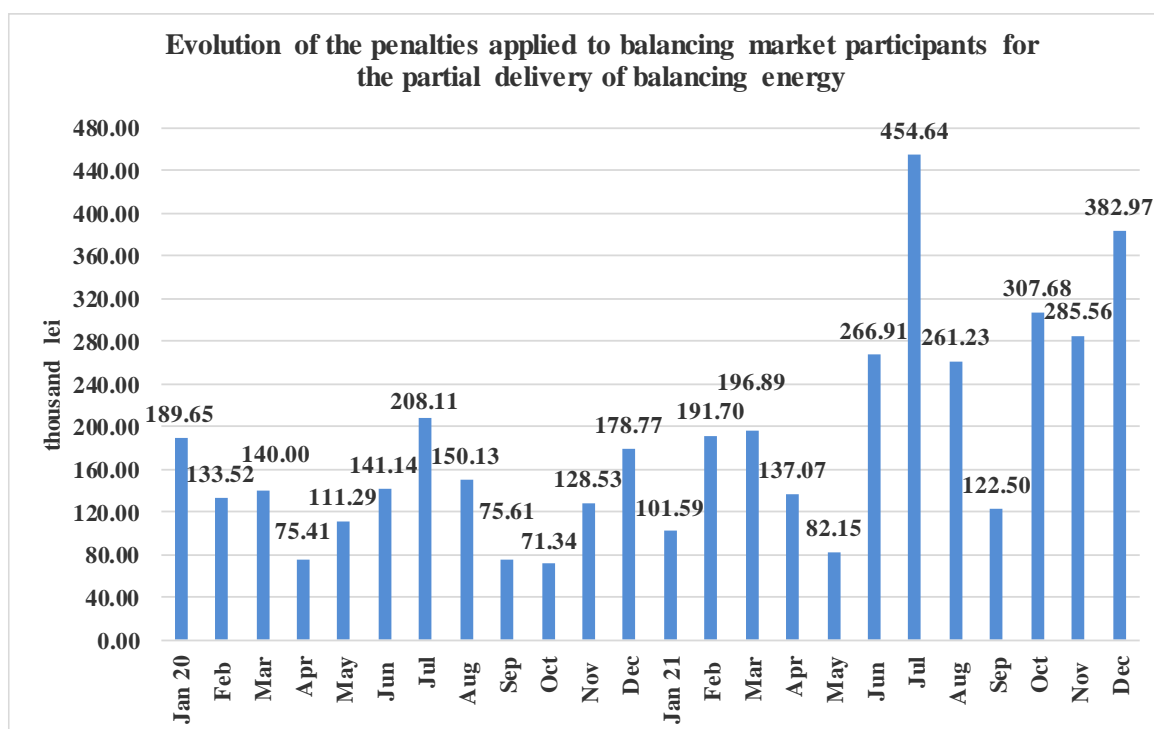
A component of the WEM on which direct competition between producers is shown is the Balancing Market (BM). The values of concentration indicators on this market for December 2021 and year 2021, determined based on the actually delivered electricity, for each of the 3 types of regulation, are presented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

Structure/concentration indicators of BM December 2021	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
C1-%	73	69	85	37	0	0
C3-%	100	100	92	84	0	0
HHI	5776	5237	7200	2948	0	0

Structure/concentration indicators of BM Year 2021	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
C1-%	61	61	70	37	100	0
C3 -%	100	100	91	95	100	0
HHI	4538	4461	5165	3087	10000	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 December 2021 and year 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 -December 2021 -		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve
competitive component	contracted quantity (h*MW)	312770	641504	-
	C1 (%)	70.4	73.0	-
	C3 (%)	100.0	97.2	-
	HHI	5502	5713	-

Concentration indicators on the Ancillary Services Market -Year 2021 -		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve
competitive component	contracted quantity (h*MW)	4153690	7697748	-
	C1 (%)	60.4	64.3	-
	C3 (%)	99.1	93.7	-
	HHI	4450	4759	-

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 the indicators 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 - December 2021 -	C1 (%)	C3 (%)	HHI
Sell	11.03	27.77	435
Buy	9.32	23.56	451

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.

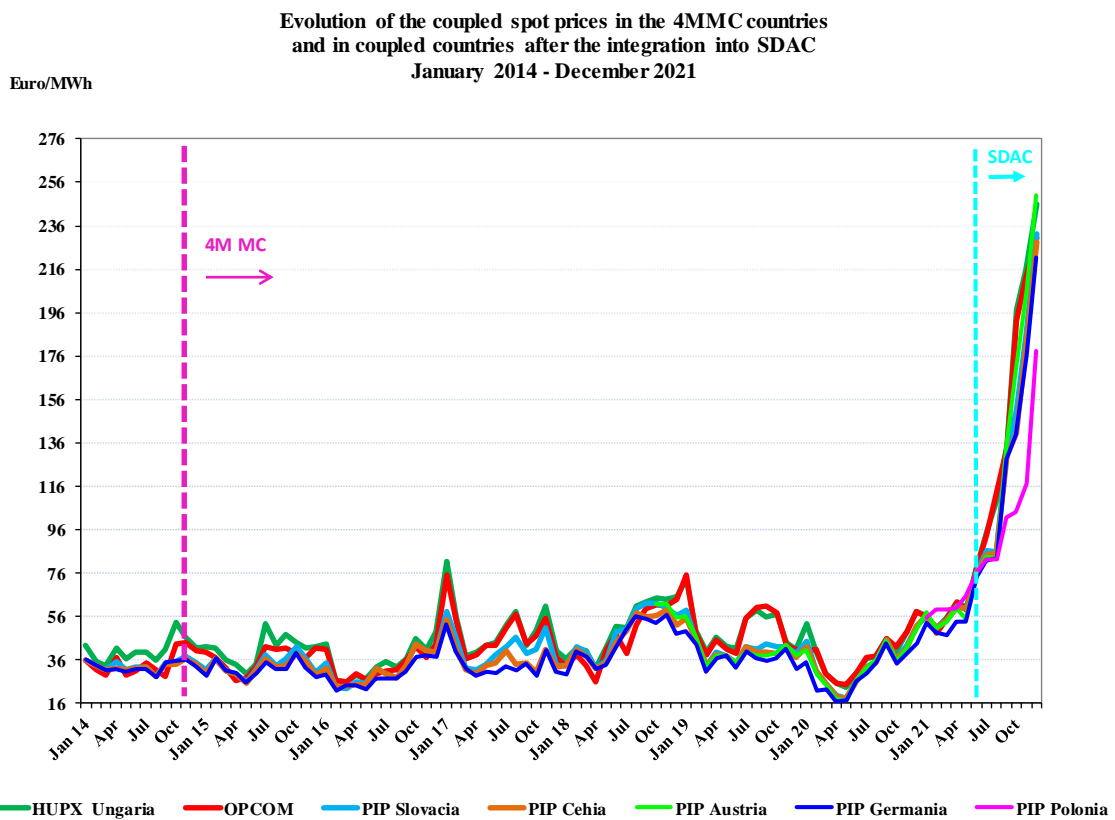
Therefore, for each month of the year, the reserved capacity for DAM allocation is determined as a difference between the available transmission capacity (ATC) calculated monthly for each sub-period and 80% of the lowest ATC value resulted for the sub-periods of the respective month, plus the capacity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

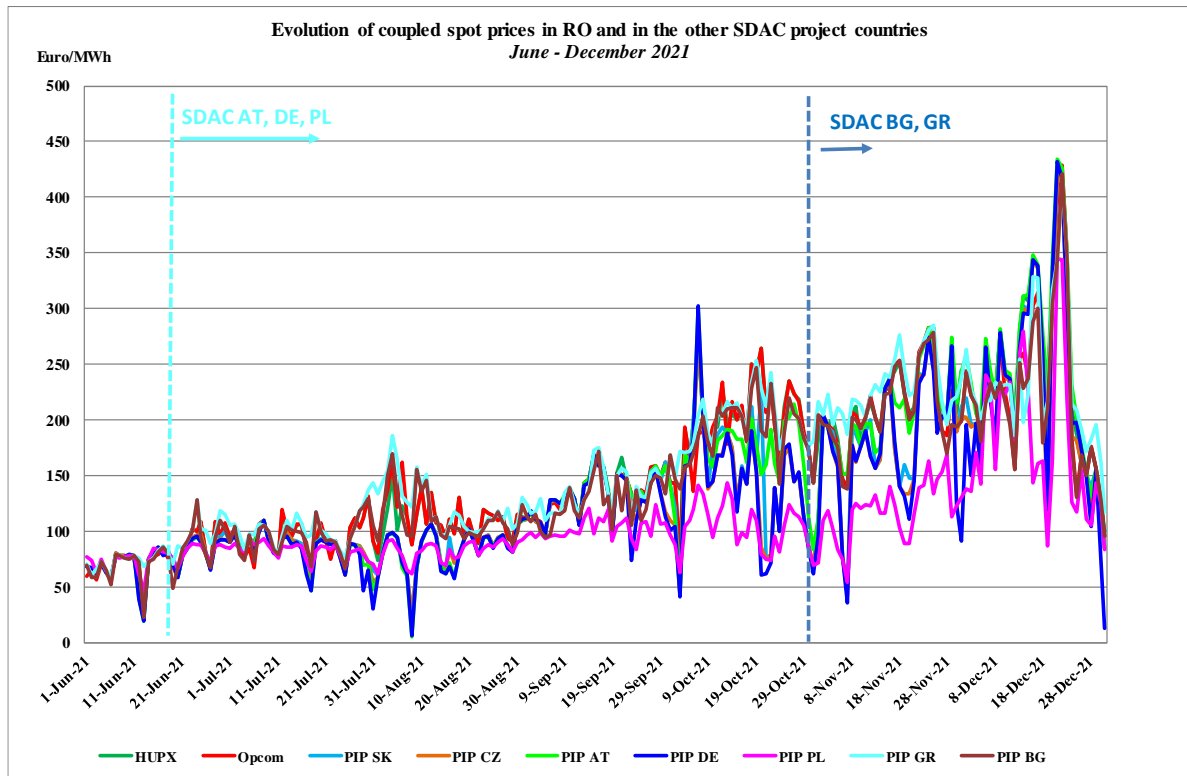
On 18 June 2021 the Interim Coupling Project became operational. DAM in the 4M MC regional project coupled by price with the multiregional coupling markets MRC by introducing the implicit allocation of net transmission capacity (NTC) on 6 new borders (PL-DE, PL-CZ, PL-SK, CZ-DE, CZ-AT, HU-AT). As a result 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).

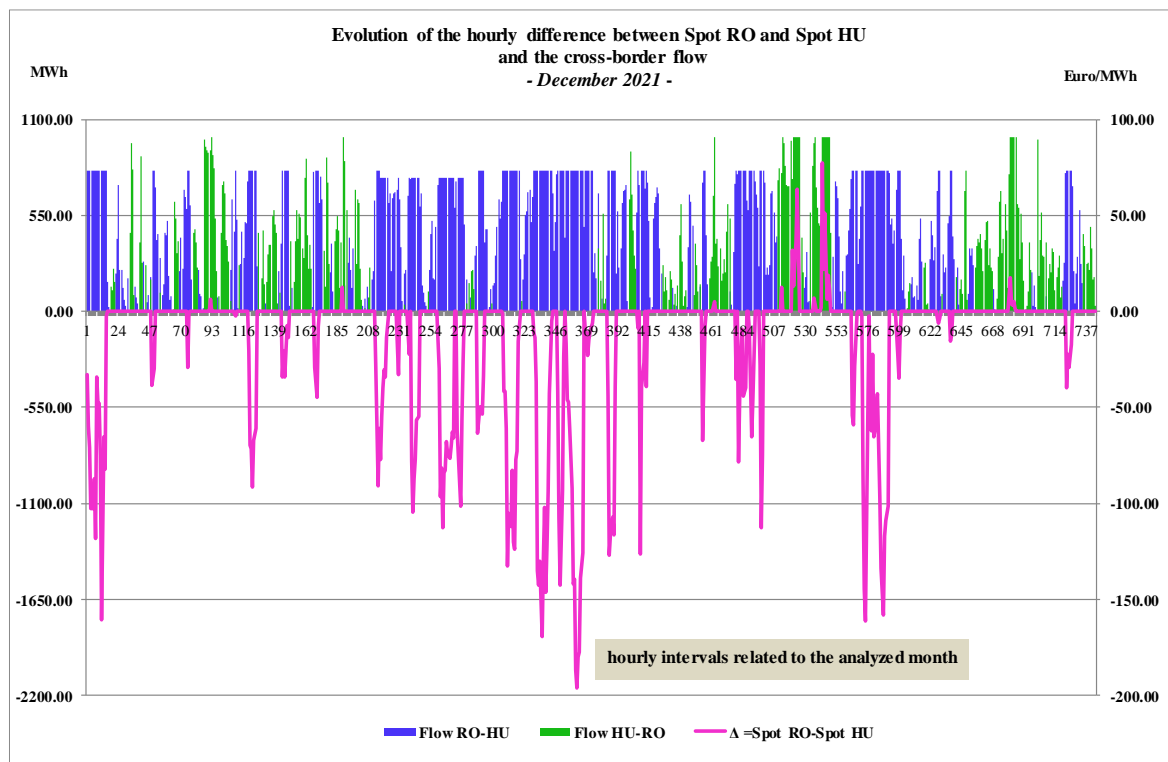


Source: Information published on the ENTSO-E Transparency Platform – analysed by the Electricity Market Monitoring Unit



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 December 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.



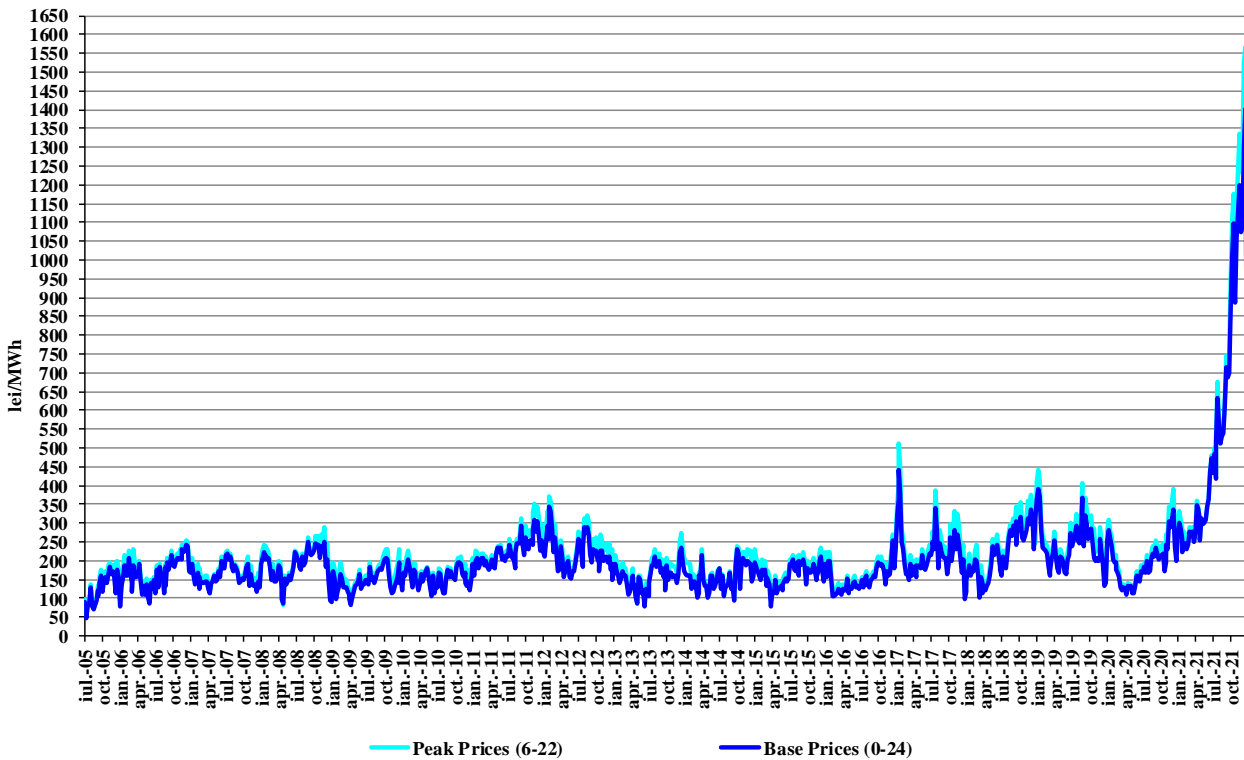
Source: Opcom SA public data – analysed by the Electricity Market Monitoring Unit

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		
Total 1-30 November, of which:	6.510	411.568	830.412	632.909	1%	55%
Maximum hourly values	663	924	1.280	924		
Total 1-31 December, of which:	14.300	418.500	1.009.319	766.060	1%	55%
Maximum hourly values	1.351	1.085	1.384	1.085		

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

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

Weekly average spot prices
July 2005 - December 2021

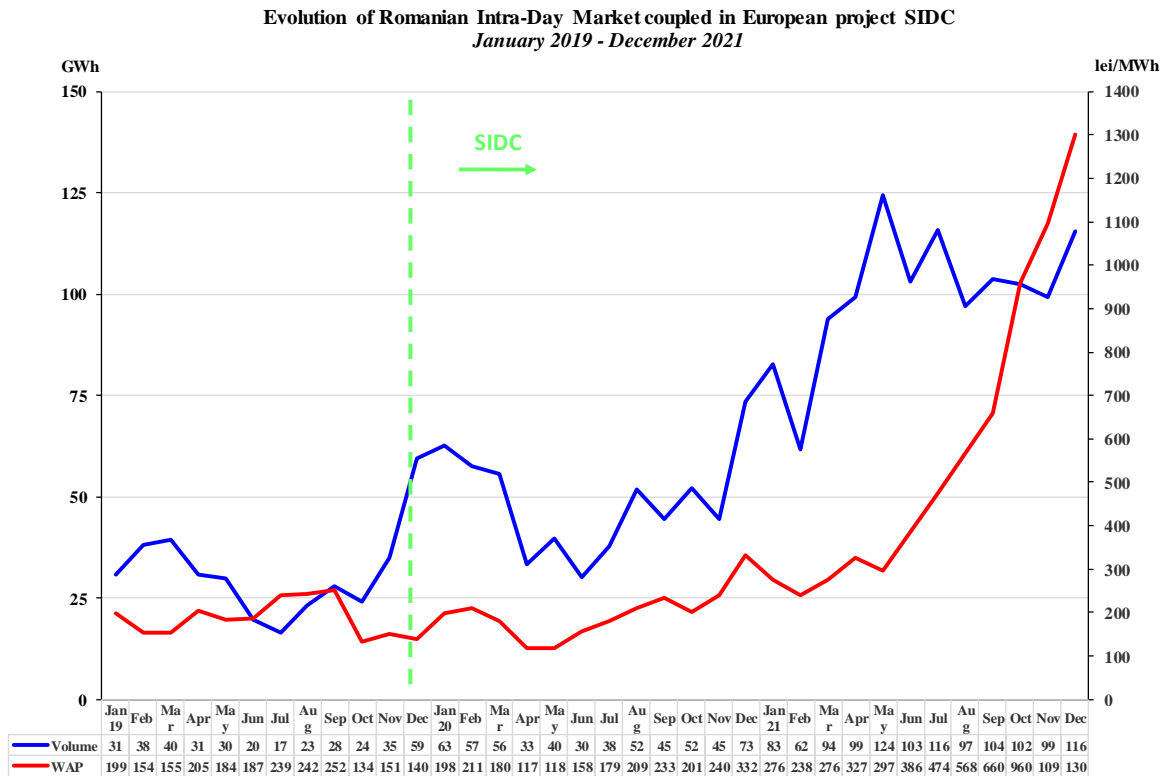


After entry into force of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (*CACM Regulation*), the development and approval by all the regulatory authorities or by ACER of its subsequent documents has started, allowing the 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.



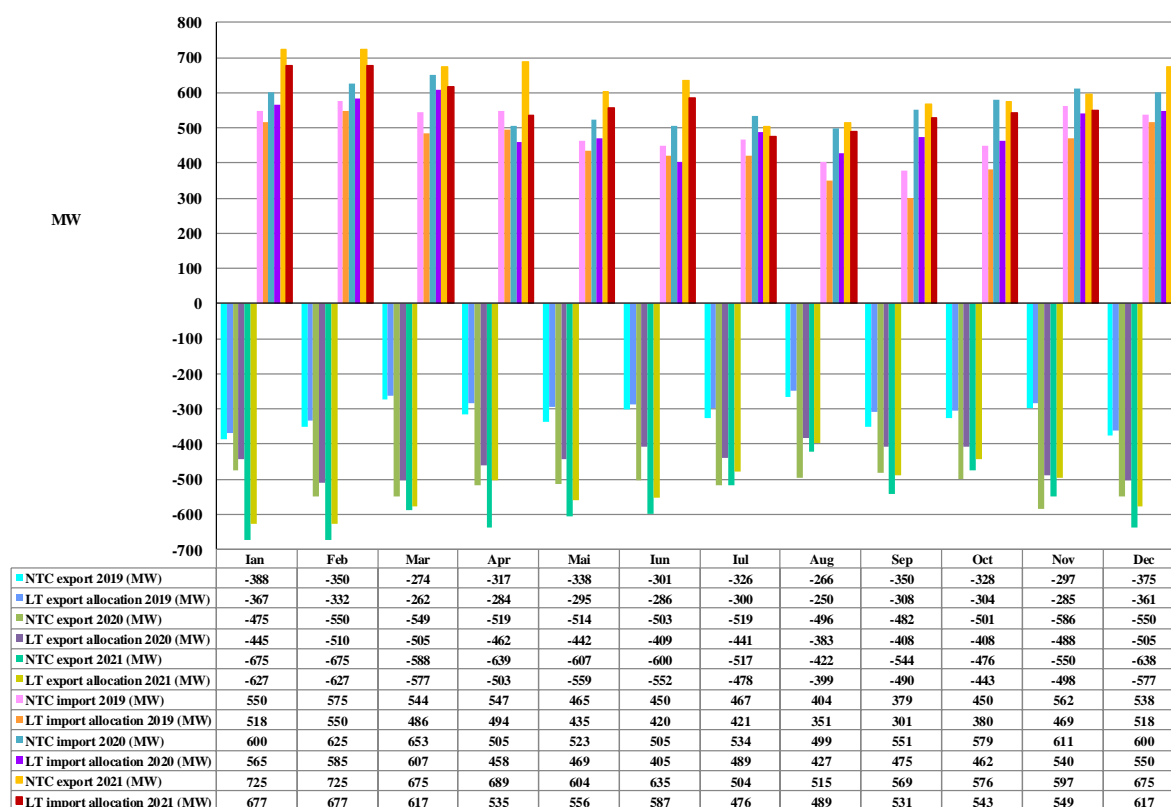
Source: Opcom SA public data – analysed by Electricity Market Monitoring Unit

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 Tranelectrica 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 Tranelectrica 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).

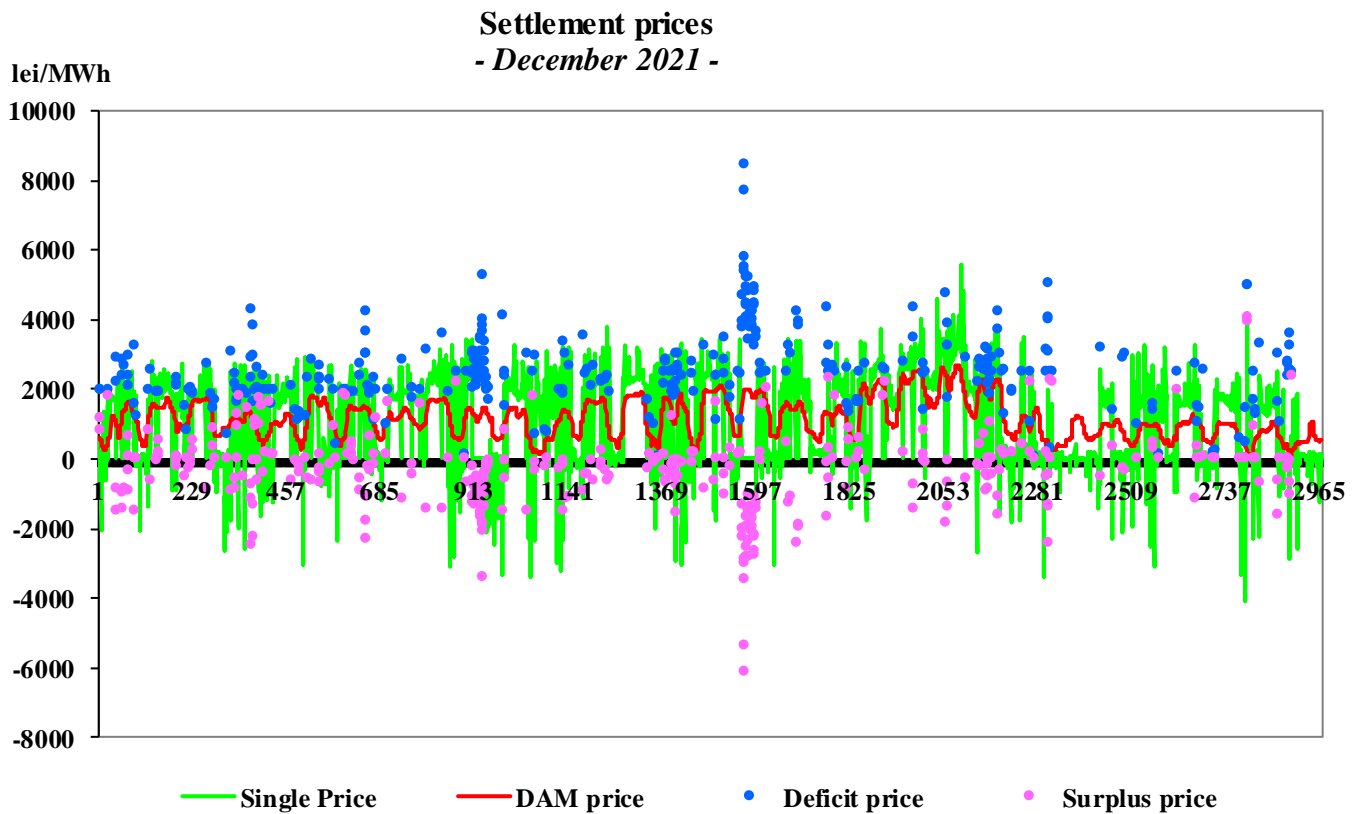
From February 2021, in order to ensure the comparability of information over longer periods of time, in the intervals in which the single imbalance price was applied for settlement, its values were attributed to both the surplus and the deficit price.

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

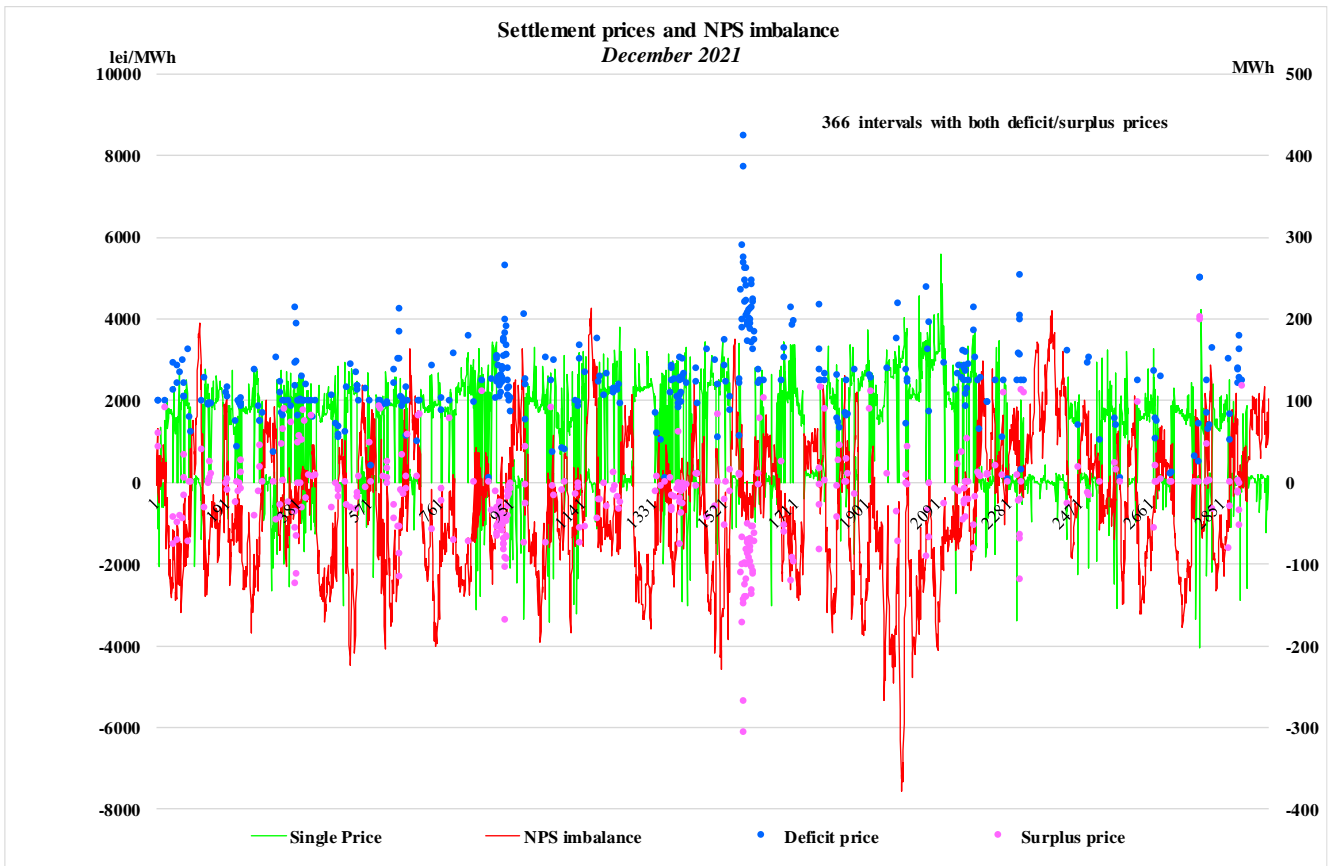
as the evolution of the average monthly prices on the BM compared with the DAM closing price (last graph).

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).

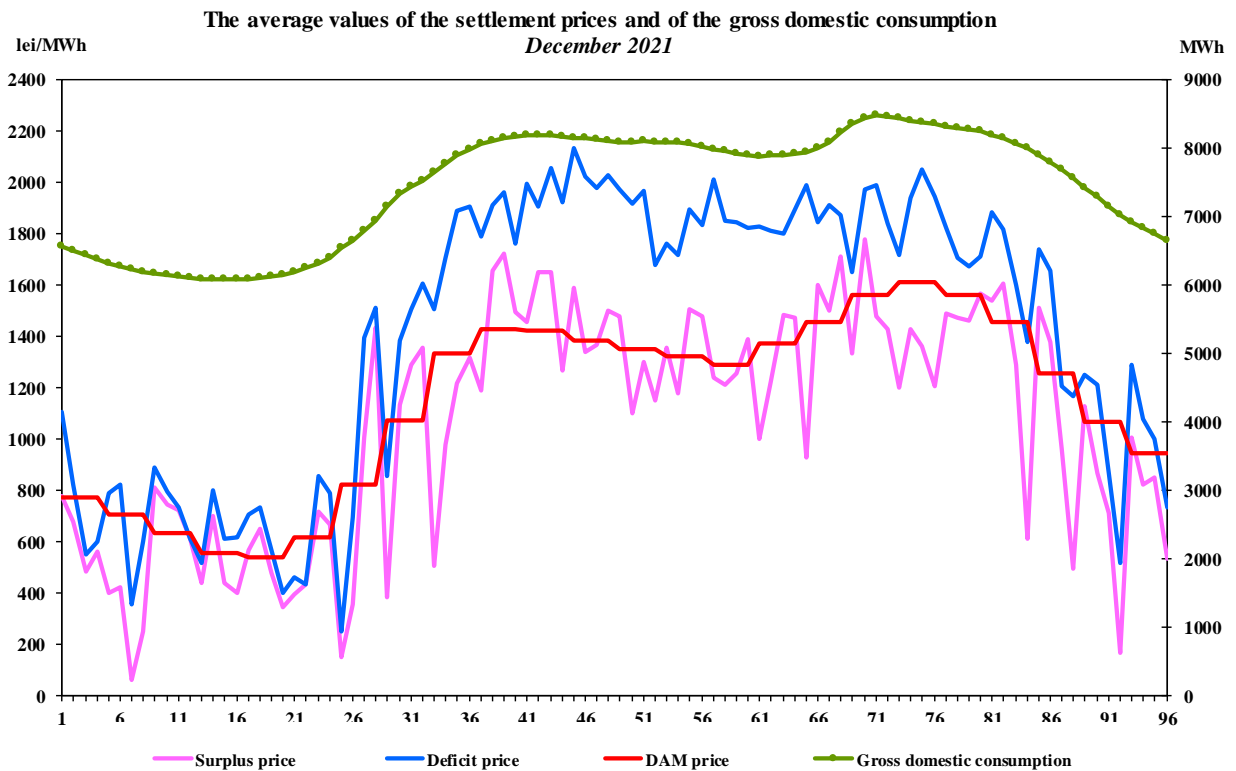
In December 2021, dual imbalance prices were calculated for 384 settlement intervals, in all other settlement intervals the value of the single imbalance price being different from zero.



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

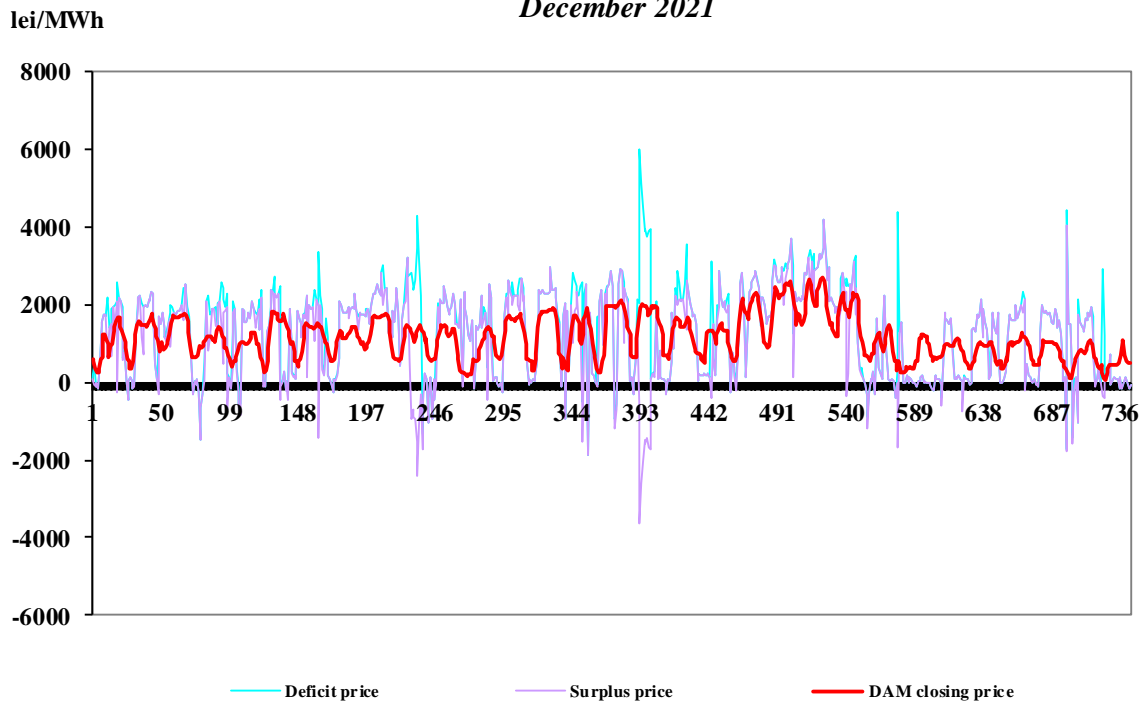


Source: Monthly reports of OPCOM SA and the information published by CNTEE Transselectrica SA on the ENTSO-E Transparency Platform - analysed by the Electricity Market Monitoring Unit



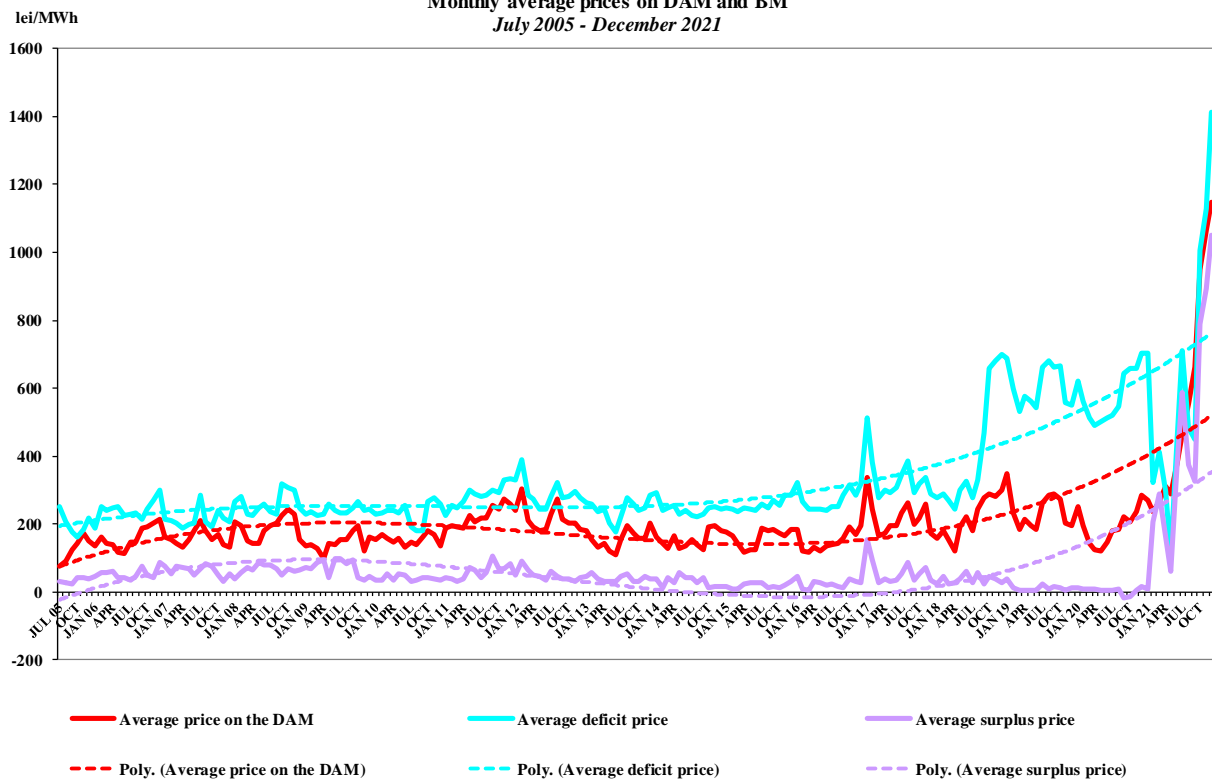
Source: Monthly reports of Opcom SA and information published by CNTEE Transselectrica SA on the ENTSO-E Transparency Platform – analysed by the Electricity Market Monitoring Unit

Hourly prices on BM and DAM closing price
December 2021



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

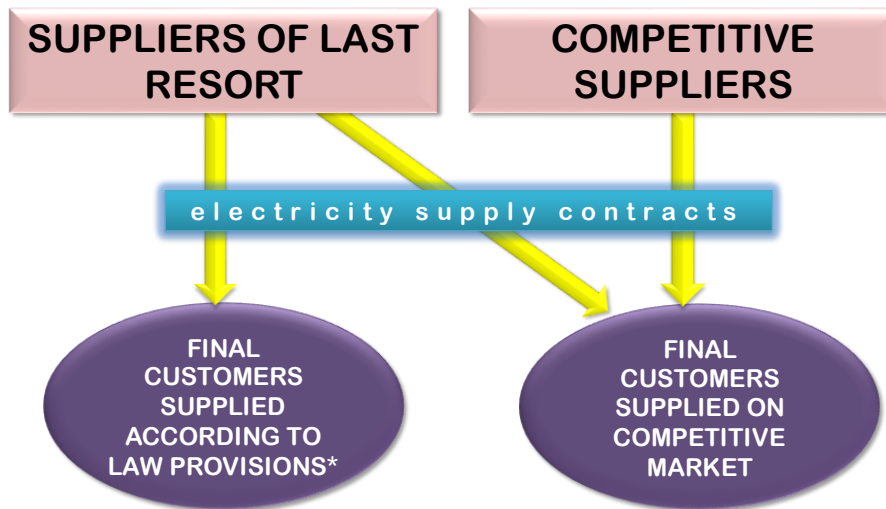
Monthly average prices on DAM and BM
July 2005 - December 2021



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

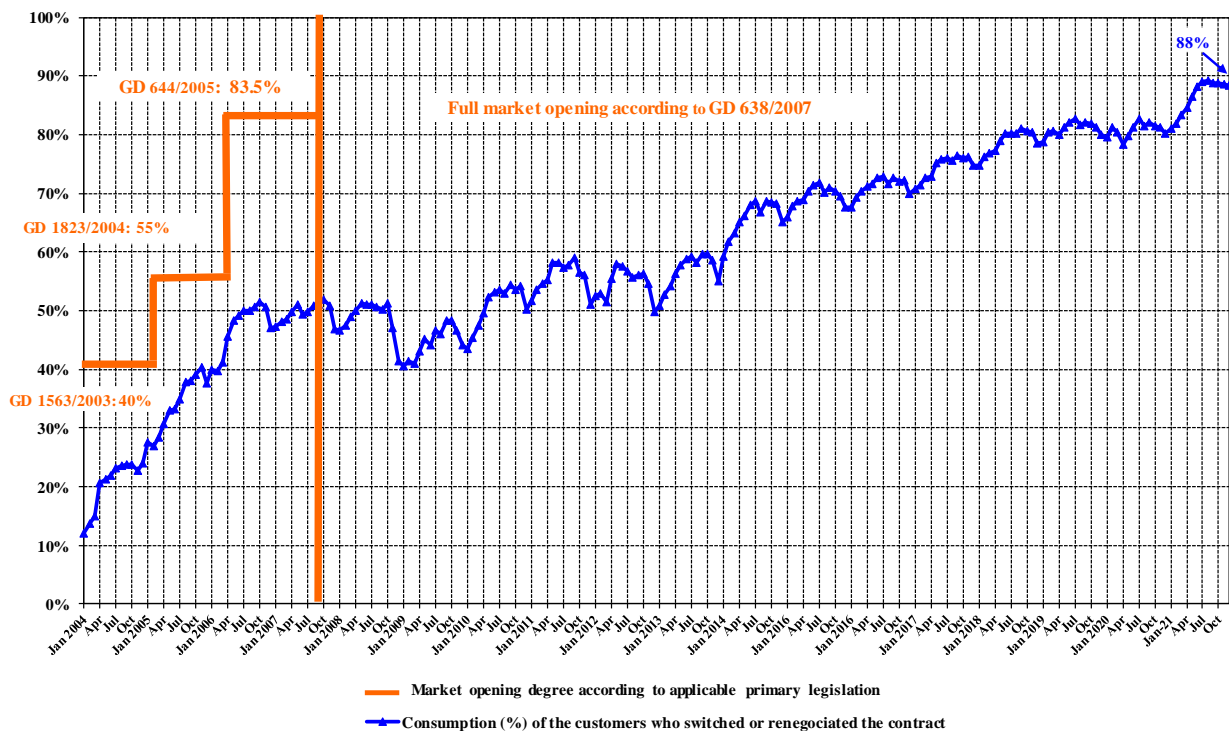


* art. 53 point (2) and art. 55 point (1) from Electricity and Gas Law no. 123/2012 with subsequent amendments and completions

2. Electricity market opening degree

Between January 2004 and December 2021, the consumption of final clients 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 aggregated from the beginning of the market opening process and are presented monthly.

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

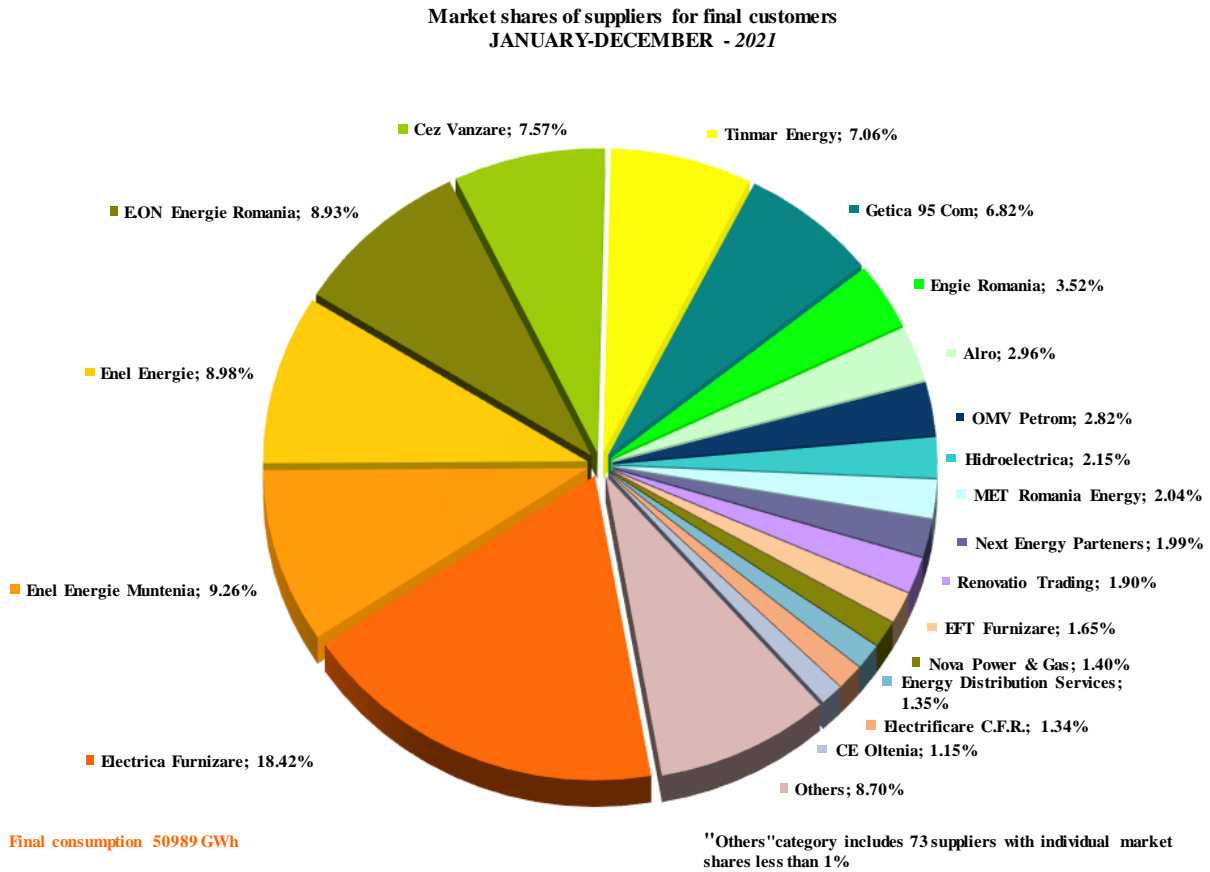


Source: Monthly reports of suppliers of final clients– analysed by the Electricity Market Monitoring Unit

3. Market shares of electricity suppliers

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

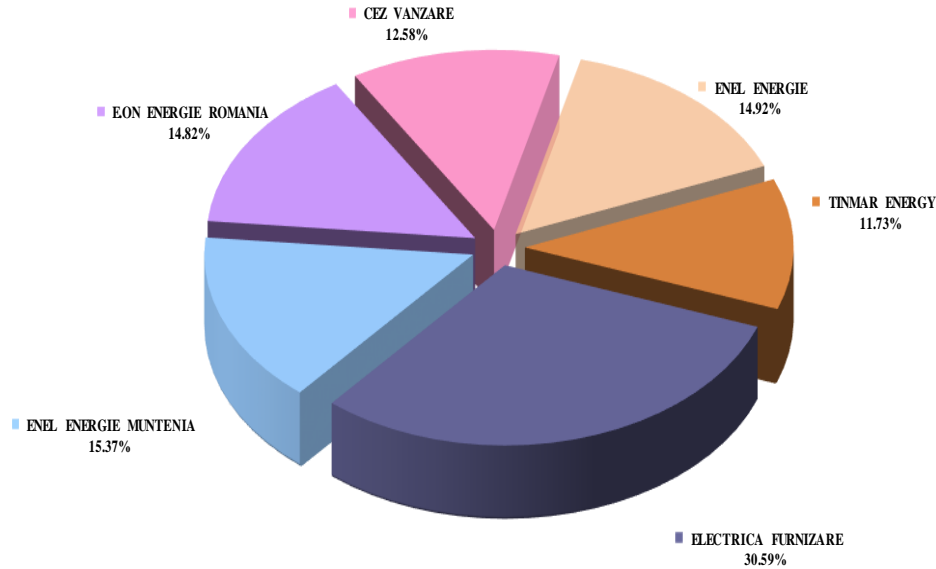
- a) for all licensees monitored, active on the REM (producers, competitive suppliers and suppliers of last resort), in terms of electricity supplied to all households and non-household clients under Universal Service, last resort, inactive and competitive regime;



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;

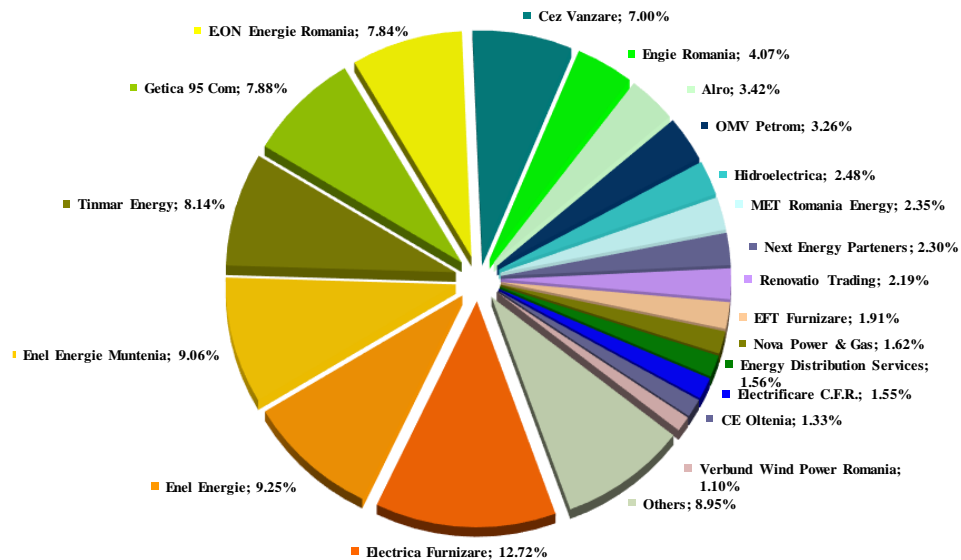
Market shares of suppliers of last resort based on the electricity supplied to consumers under competitive, US, last resort and inactive regimes
JANUARY-DECEMBER - 2021



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-DECEMBER 2021



Consumption on competitive market 44103 GWh
Structure indicators:
HHI -646; C3 - 31%; C1 - 13%

"Others" category includes 72 suppliers with individual market shares less than 1%

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

In the calculation of the market indicators, 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 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 tables below show the values of structure indicators on the REM and the number of active suppliers in December 2021 and year 2021 calculated for each consumption band:

Indicators – December 2021	Consumption bands – Non-household clients							
	IA	IB	IC	ID	IE	IF	IG	TOTAL
C1 -%-	29	18	17	14	27	21	18	12
C3 -%-	69	52	39	35	46	46	37	30
HHI	1934	1298	897	715	1154	1019	858	599
Consumption - GWh -	206	465	298	667	367	279	836	3117
No. of suppliers	65	73	64	58	23	17	18	87
No. of suppliers of last resort	6	6	6	6	5	4	4	6
No. of competitive suppliers	39	45	39	36	11	8	8	54
No. of producers	20	22	19	16	7	5	6	27

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

Indicators – Year 2021	Consumption bands – Non-household clients							
	IA	IB	IC	ID	IE	IF	IG	TOTAL
C1 -%-	25	20	17	14	22	18	16	12
C3 -%-	65	49	37	32	47	39	38	31
HHI	1783	1208	823	654	1062	871	824	586
Consumption - GWh -	2098	5147	3566	8159	4463	3355	9957	36744
No. of suppliers	70	76	71	65	27	18	21	90
No. of suppliers of last resort	6	6	6	6	5	4	4	6
No. of competitive suppliers	44	48	46	43	15	9	9	57
No. of producers	20	22	19	16	7	5	8	27

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

Indicators – December 2021	Consumption bands – Households					
	DA	DB	DC	DD	DE	TOTAL
C1 -%-	22	33	41	48	59	36
C3 -%-	64	68	72	77	80	70
HHI	1952	2114	2444	2881	3826	2200
Consumption - GWh -	267	495	308	165	55	1290
No. of suppliers	36	38	39	34	36	46
No. of suppliers of last resort	6	6	6	6	6	6
No. of competitive suppliers	22	25	25	21	23	30
No. of producers	8	7	8	7	7	10

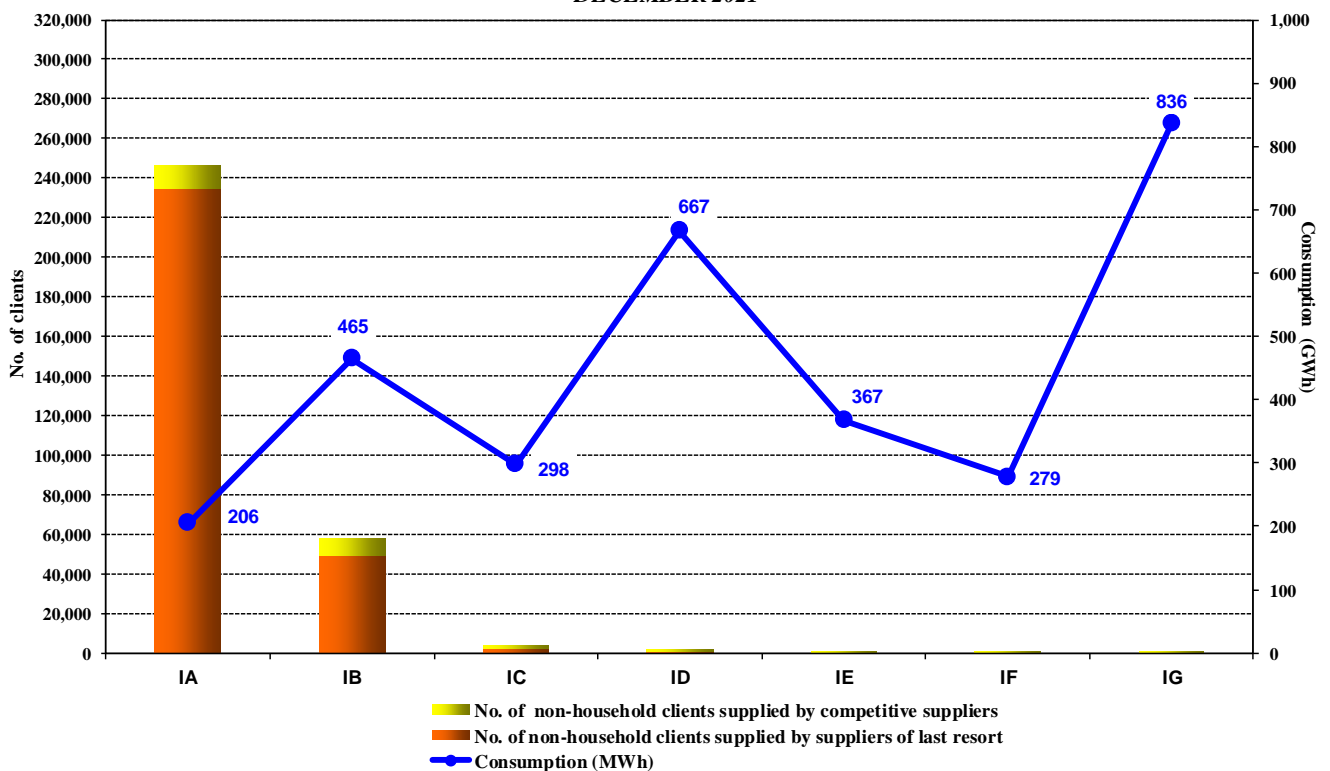
Source: Monthly reports of the suppliers of final clients – analysed by the Electricity Market Monitoring Unit

Indicators – Year 2021	Consumption bands – Households					
	DA	DB	DC	DD	DE	TOTAL
C1 -%-	25	34	39	43	54	35
C3 -%-	68	69	71	76	79	71
HHI	2016	2135	2383	2597	3374	2211
Consumption - GWh -	2708	5623	3499	1840	574	14244
No. of suppliers	39	40	40	39	38	49
No. of suppliers of last resort	6	6	6	6	6	6
No. of competitive suppliers	25	27	26	25	25	32
No. of producers	8	7	8	8	7	11

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

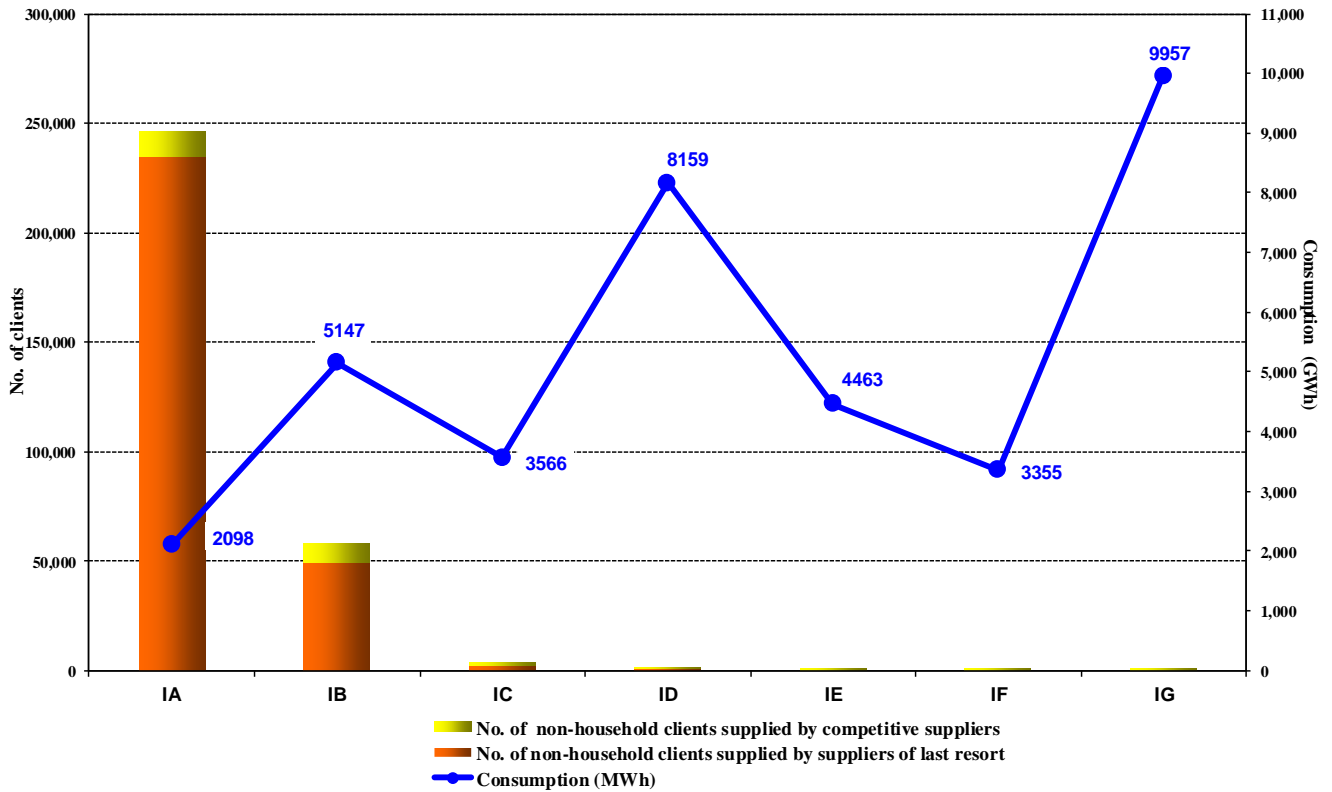
The classification of clients in consumption bands was made based on their annual consumption forecast. The following graphs present the number of households and non-household final clients who are supplied with electricity on REM, structured by consumption bands and by categories of final clients for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

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

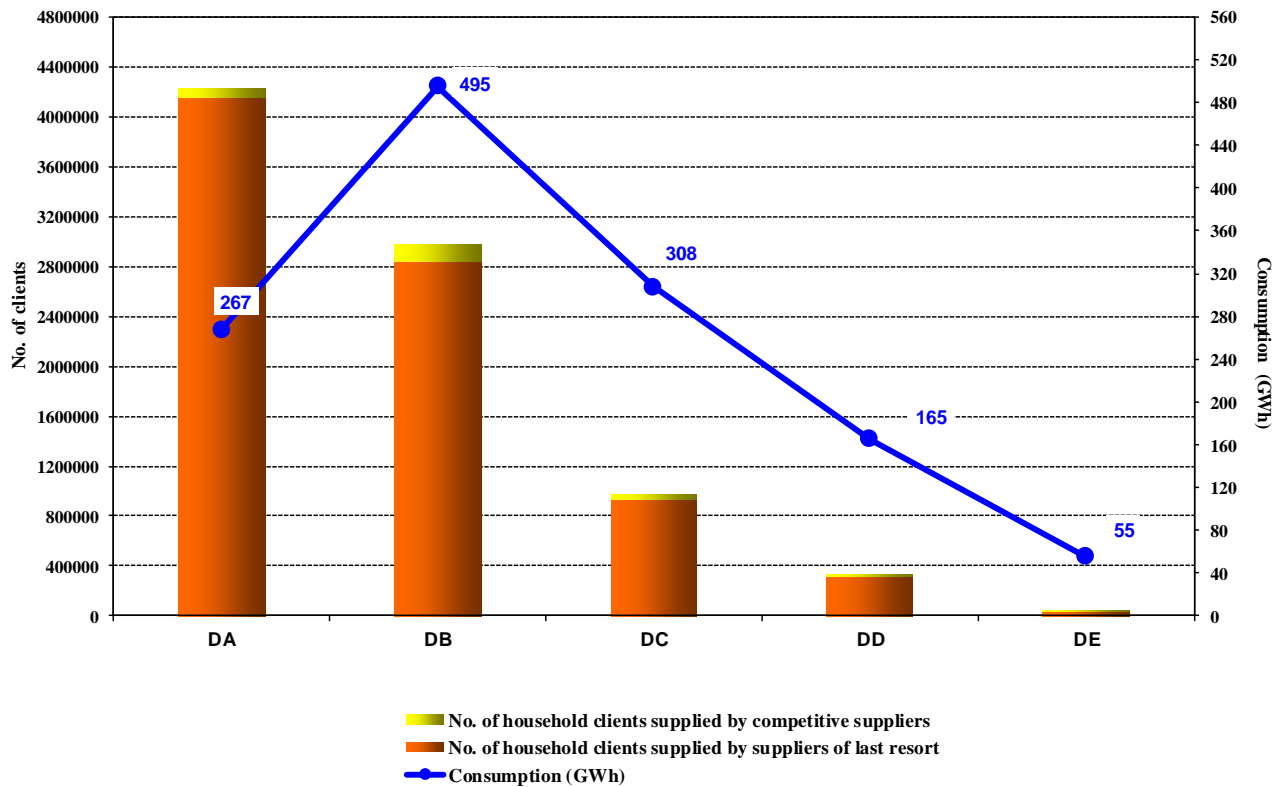


Source: Monthly reports of suppliers of final clients – analysed by Electricity Market Monitoring Unit

**Number of non-households and their consumption
broken down into consumption bands and type of supplier
- YEAR 2021 -**

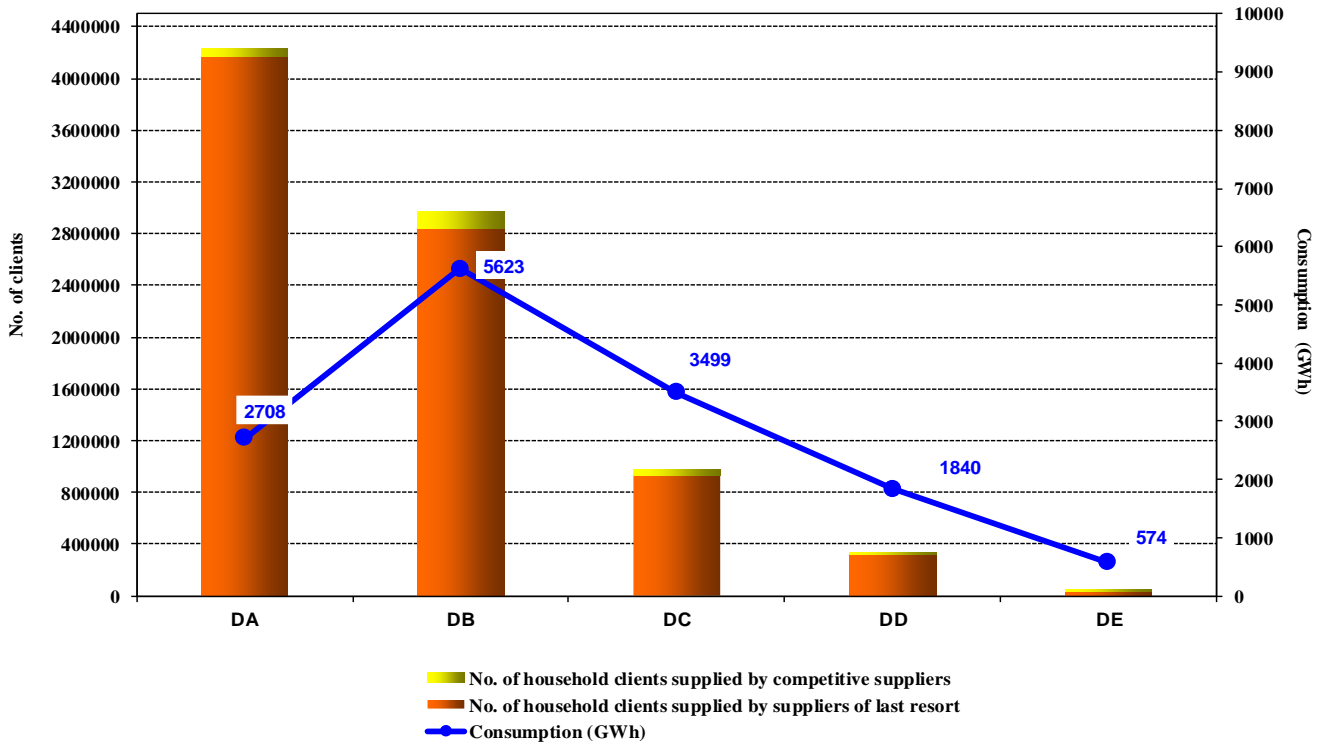


**Number of households and their consumption broken down into
consumption bands and type of supplier
- DECEMBER 2020 -**



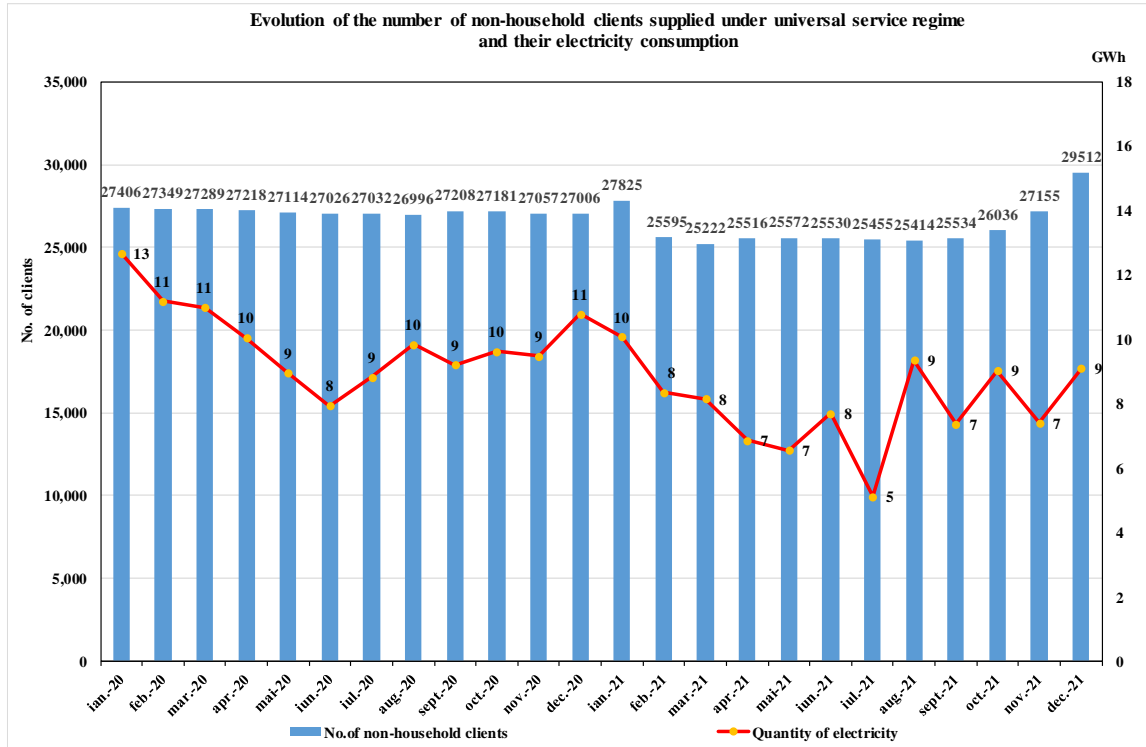
Source: Monthly reports of suppliers of final clients – analysed by Electricity Market Monitoring Unit

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

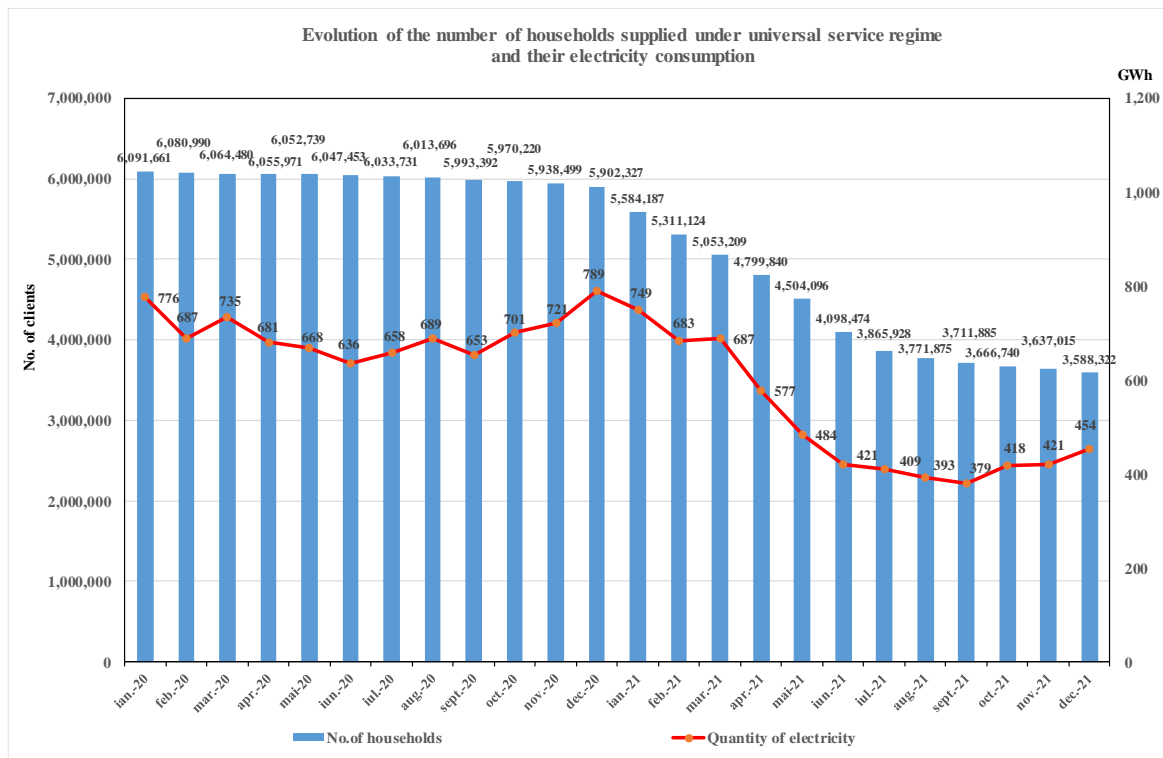


5. Evolution of the number of clients supplied under universal service regime

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 - December 2021 is presented in the following graphs:



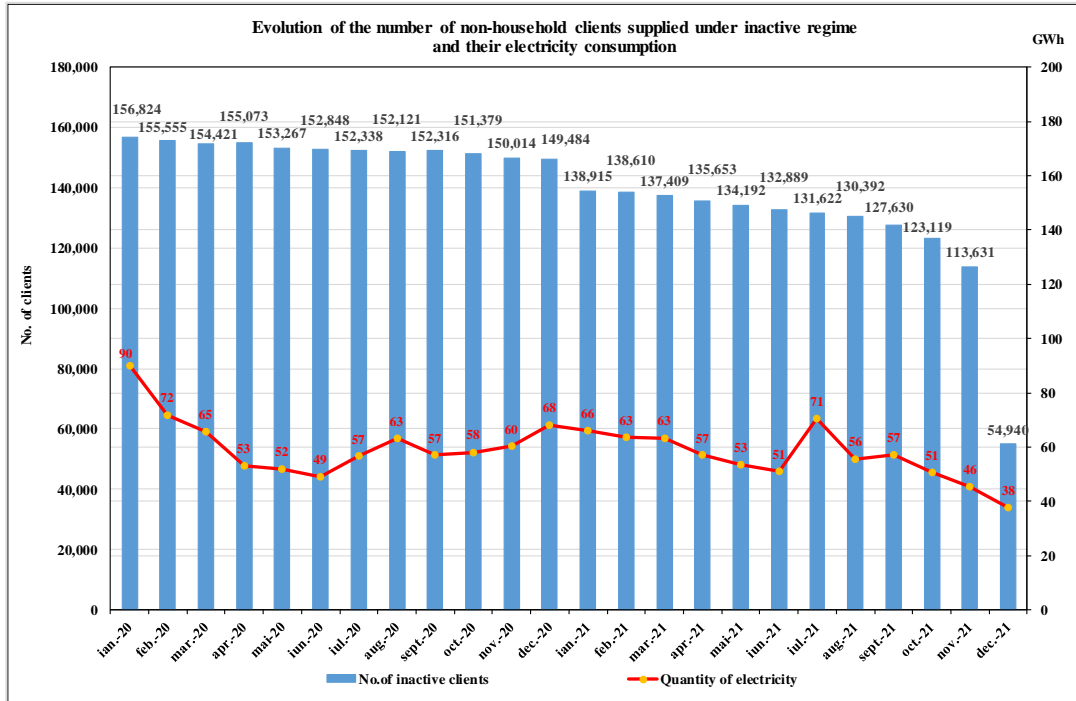
Source: Monthly reports of suppliers of last resort – analysed by Electricity Market Monitoring Unit



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

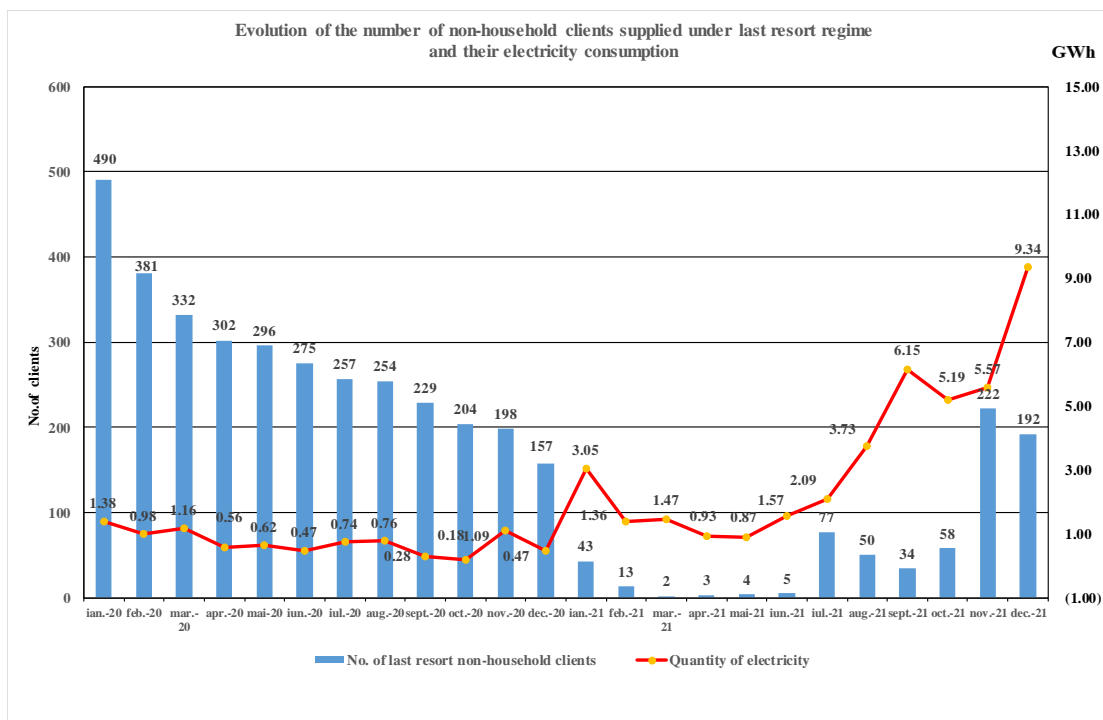
6. Evolution of the number of non-household clients supplied under inactive and last resort regime

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 - December 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 - December 2021 is presented in the following graph:



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

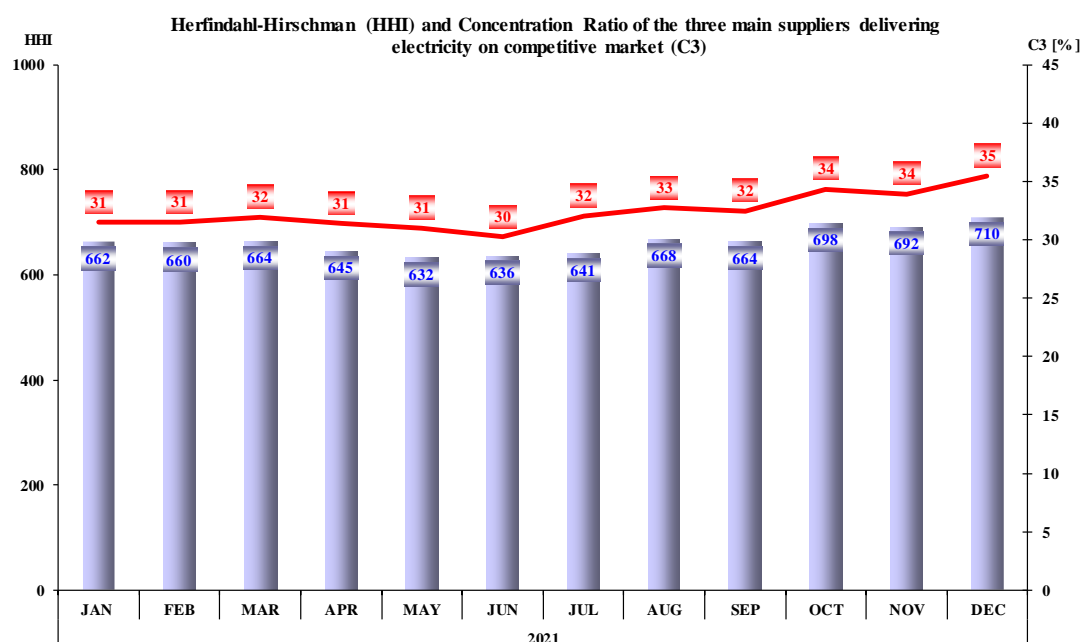
7. Concentration indicators of the competitive retail electricity market

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 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 December 2021.

Number of suppliers	Share of sales to final clients in total sale trades			
	100%	75% - 100%	50% - 75%	<50%
Competitive	18	16	8	13
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 in the following graph for each month of the year 2021:



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 December 2021, respectively the year 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 – December 2021	Consumption bands – Non-household clients							
	IA	IB	IC	ID	IE	IF	IG	TOTAL
C1 -%-	29	19	17	15	27	21	18	11
C3 -%-	73	51	39	35	46	46	37	29
HHI	1987	1275	894	713	1154	1019	858	587
Consumption - GWh -	174	450	296	659	367	279	836	3061
No. of suppliers	65	73	64	58	23	17	18	87
No. of suppliers of last resort	6	6	6	6	5	4	4	6
No. of competitive suppliers	39	45	39	36	11	8	8	54
No. of producers	20	22	19	16	7	5	6	27

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

Indicators – Year 2021	Consumption bands – Non-household clients							
	IA	IB	IC	ID	IE	IF	IG	TOTAL
C1 -%-	25	18	17	13	22	18	16	11
C3 -%-	67	47	37	32	47	39	38	31
HHI	1738	1158	820	652	1062	871	824	571
Consumption - GWh -	1577	4923	3539	8124	4461	3355	9957	35936
No. of suppliers	70	76	71	65	27	18	21	90
No. of suppliers of last resort	6	6	6	6	5	4	4	6
No. of competitive suppliers	44	48	46	43	15	9	9	57
No. of producers	20	22	19	16	7	5	8	27

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

Indicators – December 2021	Consumption bands – Households					
	DA	DB	DC	DD	DE	Total
C1 -%-	28	23	27	39	59	25
C3 -%-	73	67	72	78	81	70
HHI	2135	1867	2006	2394	3768	1929
Consumption - GWh -	162	299	205	121	49	836
No. of SUPPLIERS	36	38	39	34	36	46
No. of suppliers of last resort	6	6	6	6	6	6
No. of competitive suppliers	22	25	25	21	23	30
No. of producers	8	7	8	7	7	10

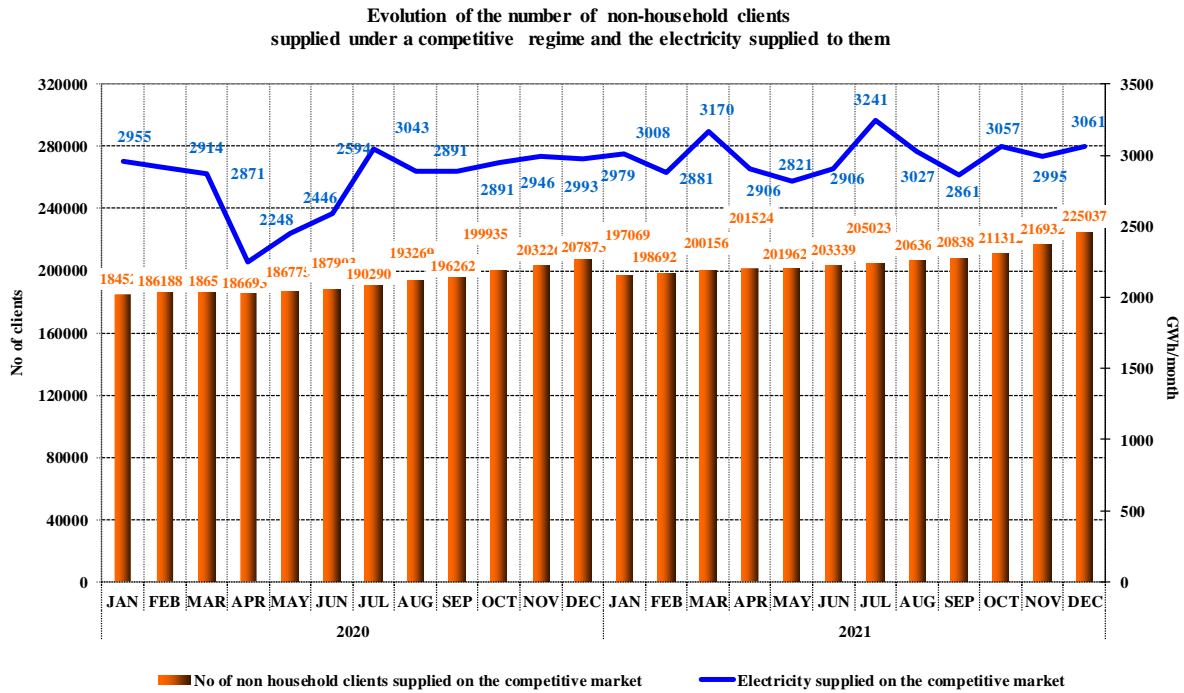
Source: Monthly reports of the suppliers of final clients – analysed by Electricity Market Monitoring Unit

Indicators – Year 2021	Consumption bands – Households					
	DA	DB	DC	DD	DE	TOTAL
C1 -%-	29	25	28	31	52	25
C3 -%-	73	67	72	78	81	70
HHI	2197	1883	2037	2213	3188	1959
Consumption - GWh -	1373	2966	2110	1240	478	8167
No. of SUPPLIERS	39	40	40	39	38	49
No. of suppliers of last resort	6	6	6	6	6	6
No. of competitive suppliers	25	27	26	25	25	32
No. of producers	8	7	8	8	7	11

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

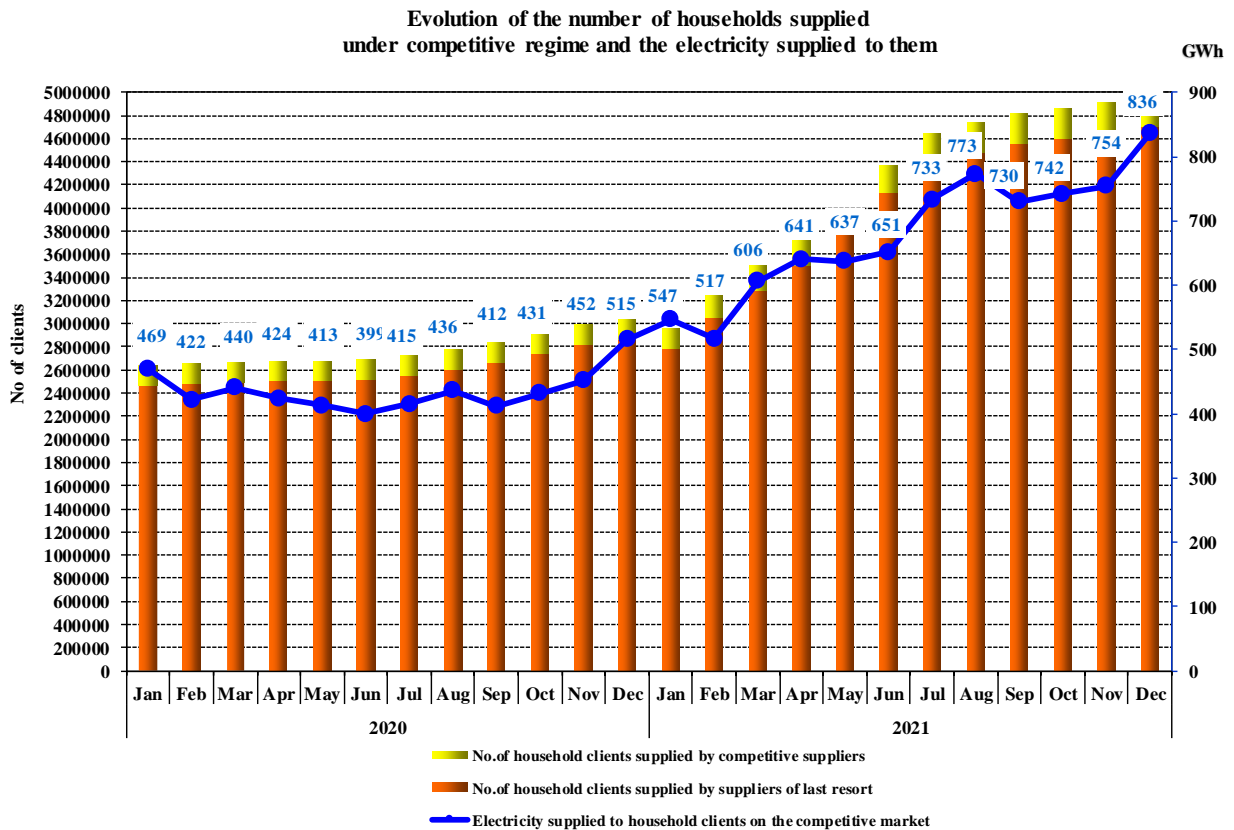
8. Evolution of the number of final clients supplied under competitive regime

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:



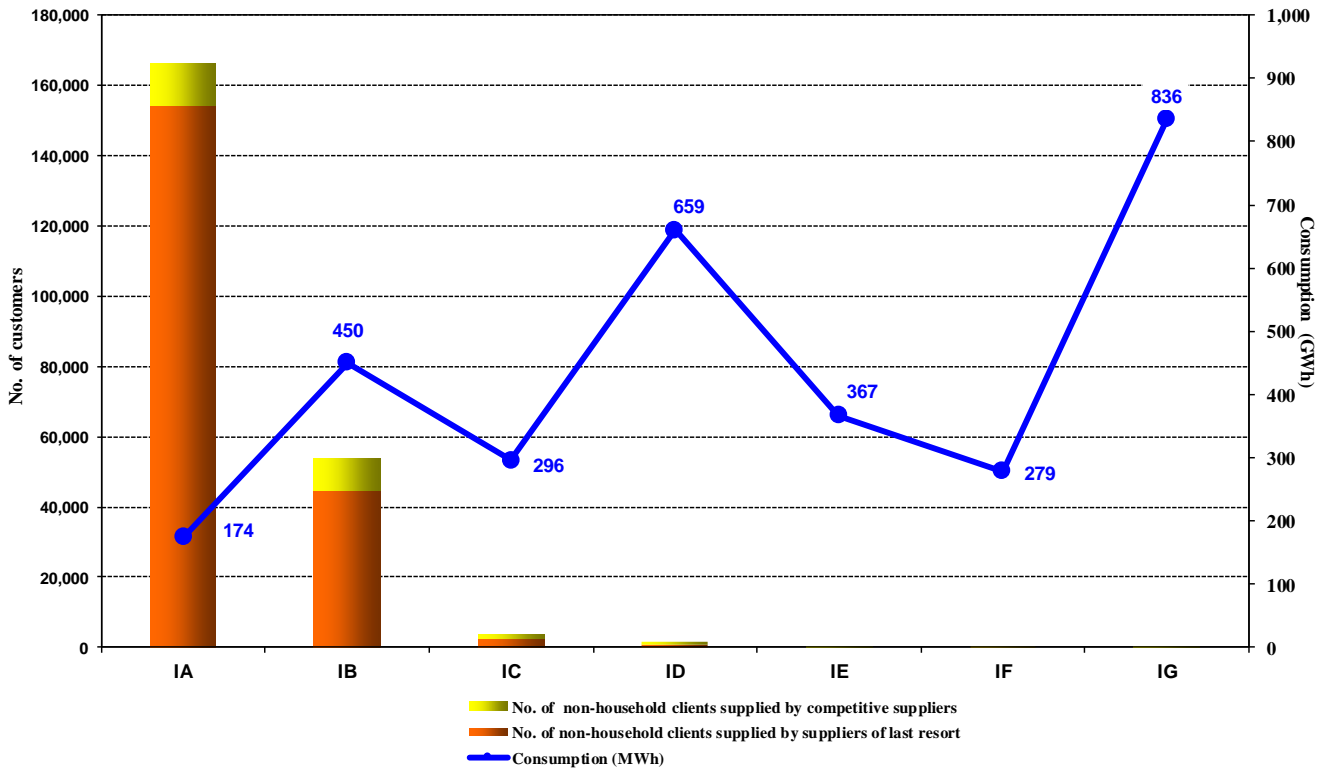
Source: Monthly reports of the suppliers of final clients – analysed by Electricity Market Monitoring Unit

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



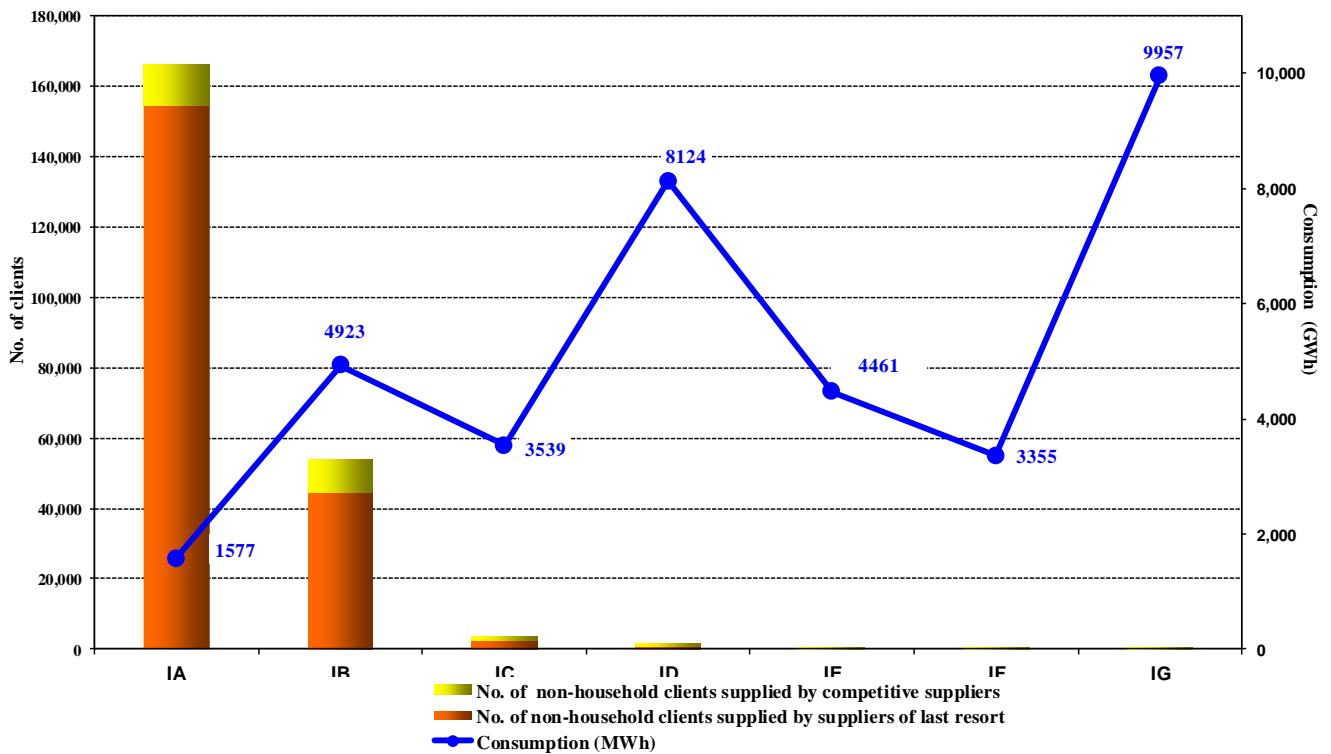
Source: Monthly reports of suppliers of final clients – analysed by Electricity Market Monitoring Unit

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

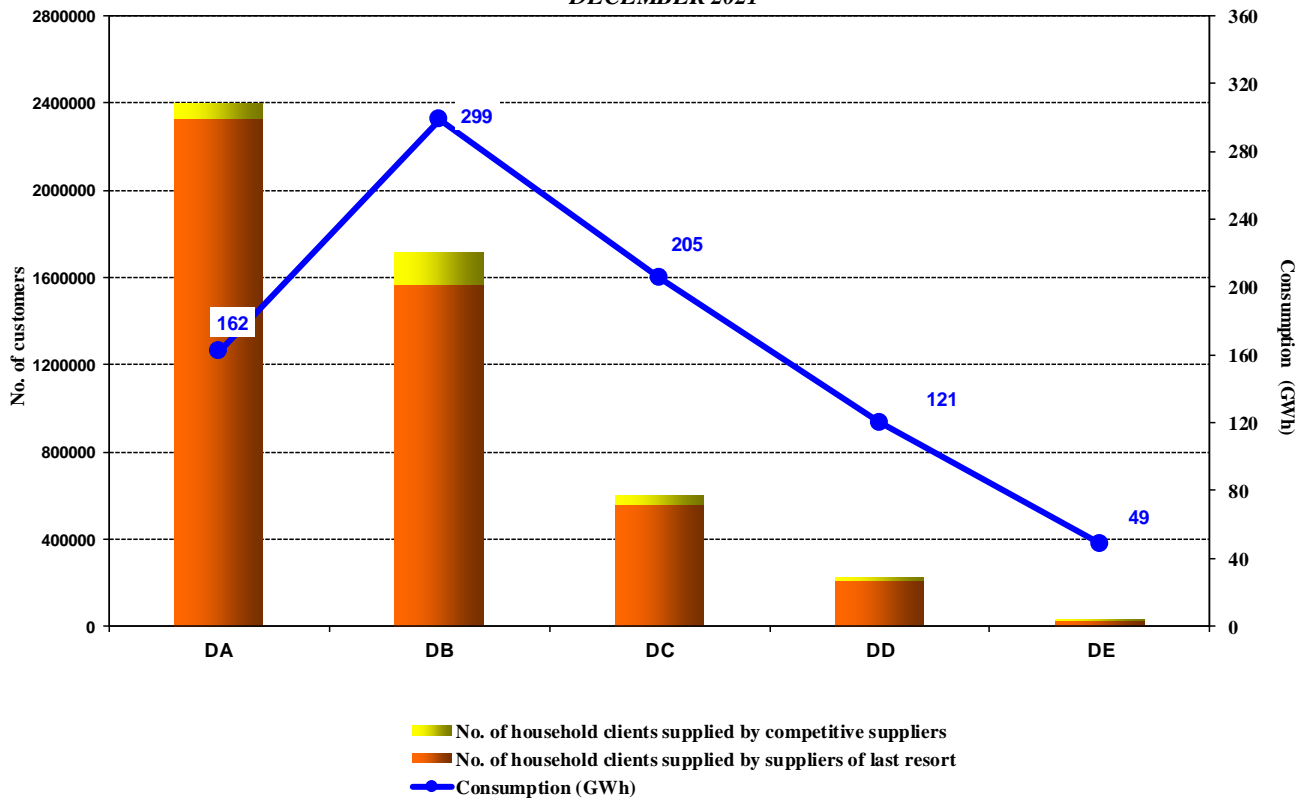


Source: Monthly reports of suppliers of final clients – analysed by Electricity Market Monitoring Unit

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

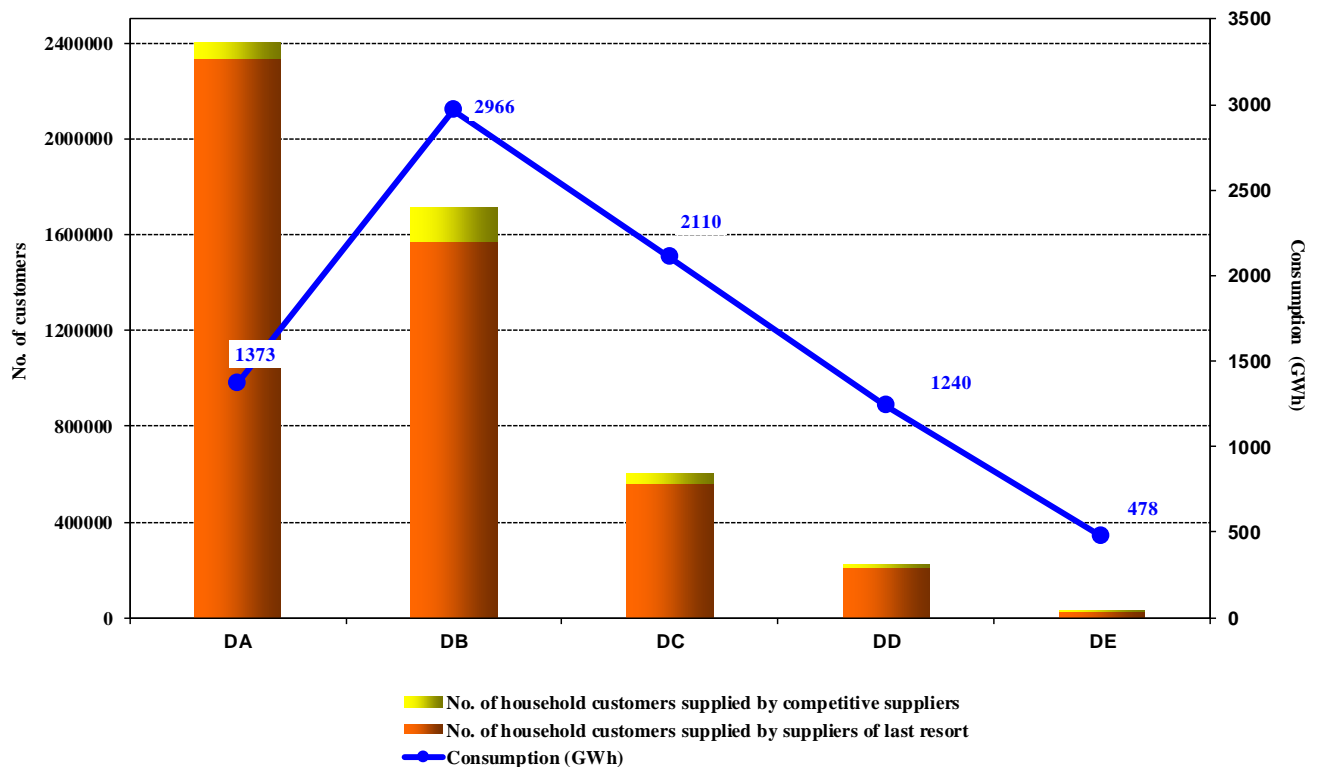


Number of households and their consumption broken down into consumption bands and type of supplier
- DECEMBER 2021 -



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

Number of households on the competitive market and their consumption broken down into consumption bands and type of supplier
- YEAR 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, excises 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 December 2021 and year 2021 are presented aggregated on consumption bands and supply regimes in the following tables:

December 2021

Consumption band	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	205.58	710.82	5.99	641.49	24.84	687.55	0.67	3163.09	174.08	707.15
IB	464.50	711.60	2.79	638.25	10.57	687.50	1.50	2522.31	449.64	706.57
IC	298.08	698.00	0.31	554.36	1.83	567.63			295.94	698.95
ID	667.03	721.44			0.39	615.39	7.17	2515.55	659.47	701.99
IE	366.88	785.05							366.88	785.05
IF	278.59	662.20							278.59	662.20
IG	835.95	701.55							835.95	701.55

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

Year 2021

Consumption band	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	2097.75	571.27	59.25	621.45	459.40	633.49	2.42	1937.55	1576.68	549.17
IB	5146.58	542.09	33.83	622.08	184.41	632.16	5.17	1371.65	4923.17	537.30
IC	3565.94	485.48	1.91	531.81	22.23	536.65	2.42	806.85	3539.37	484.91
ID	8159.18	467.15			3.92	606.11	31.33	1404.03	8123.93	463.47
IE	4462.79	462.96			1.74	465.71			4461.05	462.96
IF	3354.83	440.92							3354.83	440.92
IG	9957.14	411.16							9957.14	411.16

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 December 2021 and year 2021 are presented aggregated on consumption bands and supply regimes in the following table:

December 2021

Consumption band	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	267.23	605.55	105.04	586.28			0.05	2724.42	162.14	617.37
DB	494.91	604.07	195.77	587.65			0.003	2152.47	299.13	614.80
DC	307.64	592.44	102.35	590.71			0.001	2411.30	205.29	593.29
DD	165.01	578.20	44.45	587.62			0.003	1491.36	120.56	574.70
DE	55.35	558.65	6.31	581.35					49.04	555.73

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

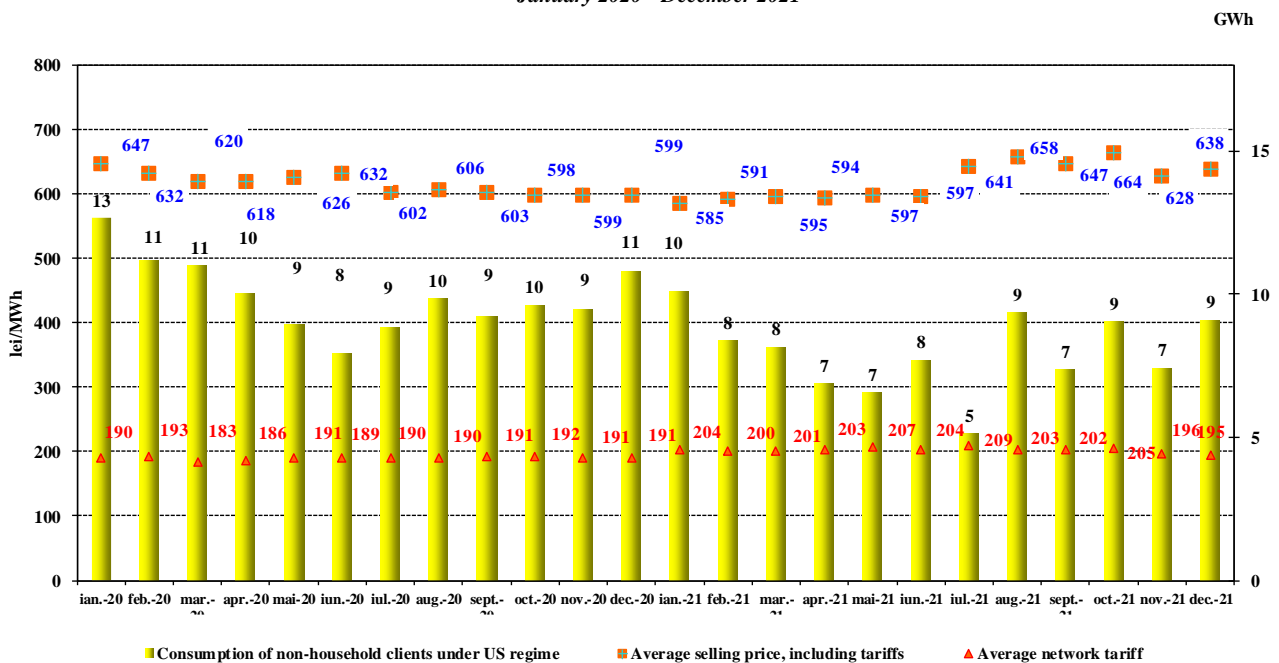
Year 2021

Consumption band	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	2707.91	573.63	1334.90	555.87			0.18	1809.13	1372.83	590.74
DB	5623.15	570.61	2656.48	556.21			0.18	732.71	2966.49	583.49
DC	3498.94	561.13	1389.14	558.69			0.01	934.12	2109.79	562.74
DD	1839.92	549.95	600.33	557.46			0.01	898.41	1239.58	546.31
DE	574.38	531.54	96.48	552.26			0.02	716.20	477.88	527.35

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

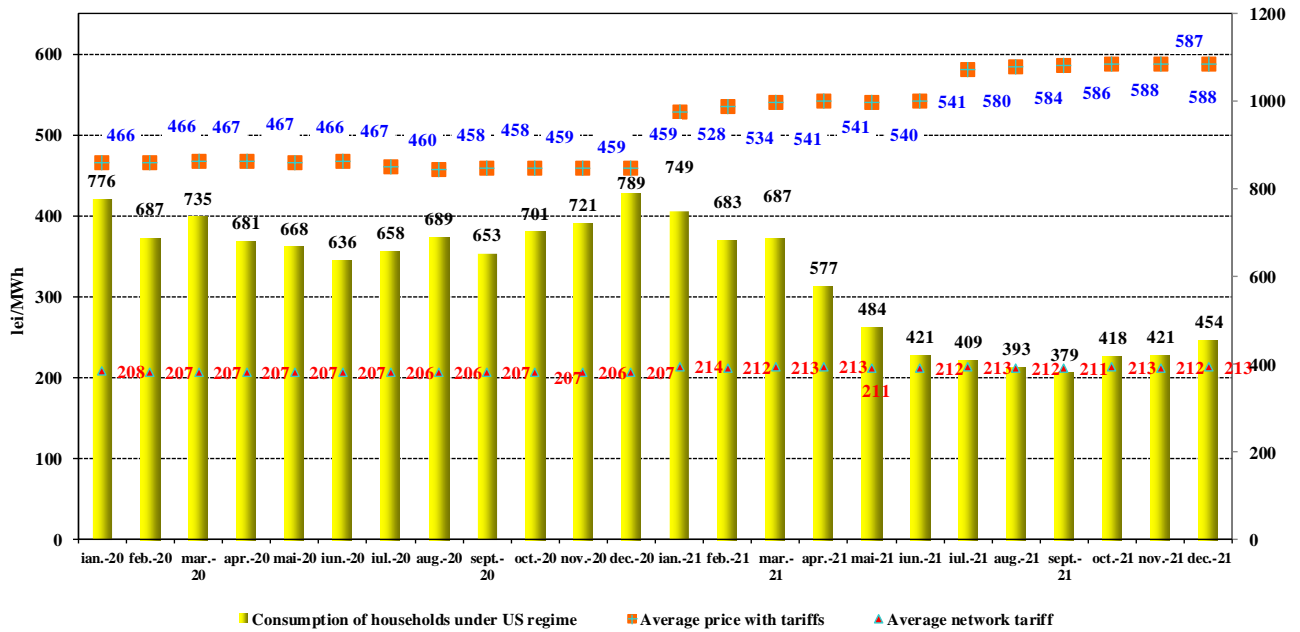
The monthly evolution of the electricity quantities supplied by suppliers of last resort to final clients under universal service, inactive and last resort regime, of the average selling prices of electricity and of the average network tariffs is presented in the following graphs:

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



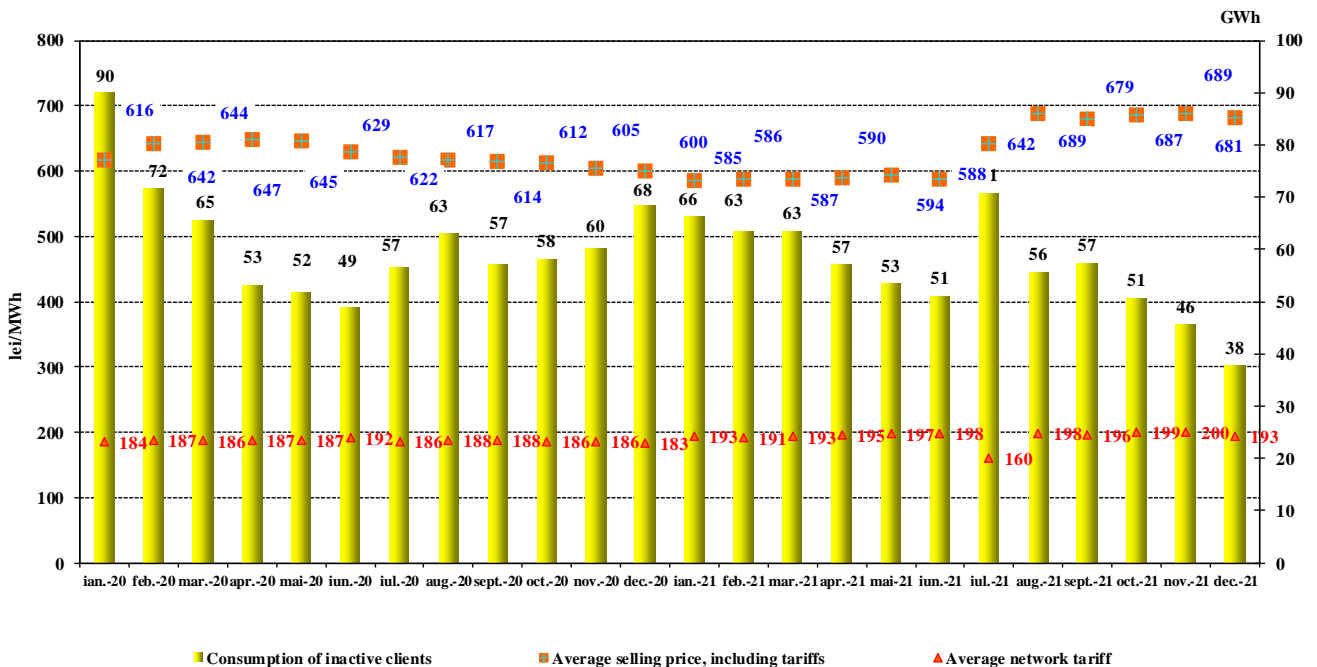
Source: Monthly reports of suppliers of last resort – analysed by Electricity Market Monitoring Unit

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



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

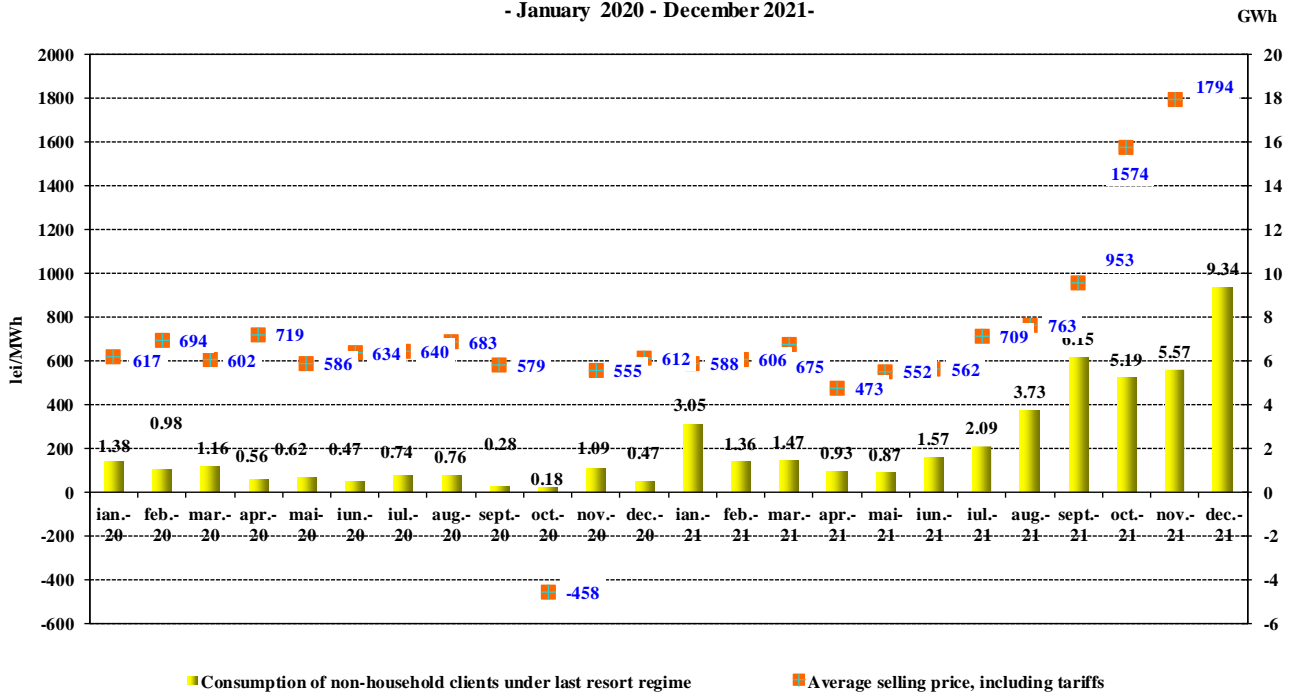
Evolution of the electricity average selling price, average network tariff and electricity consumption for inactive clients
- January 2020 - December 2021 -



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 - December 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.

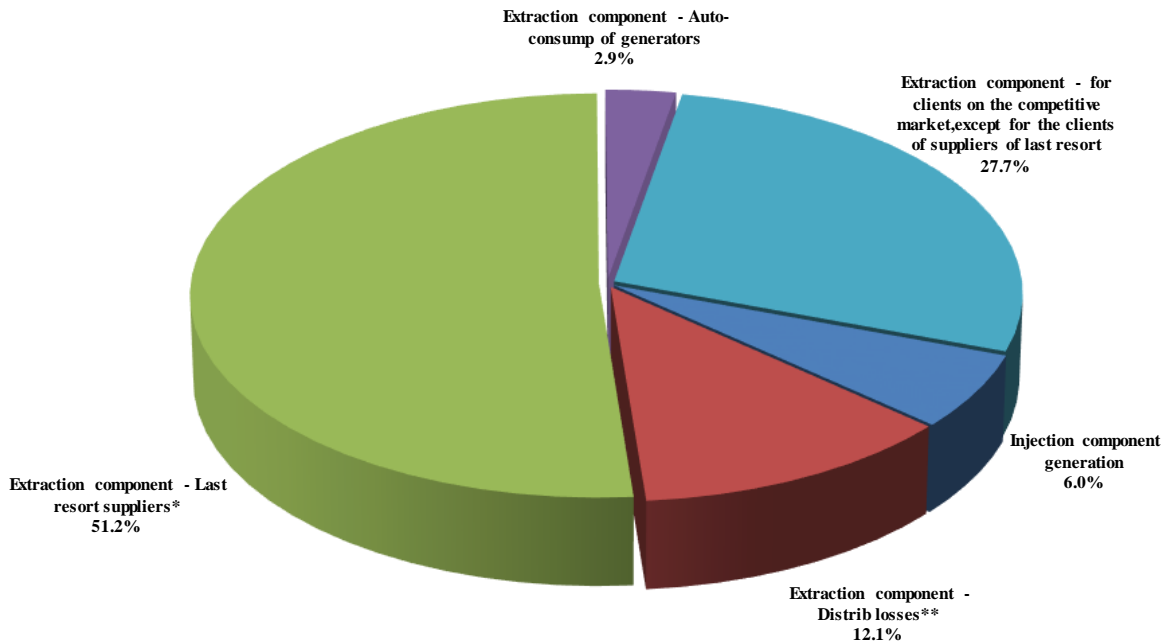
IV. TRANSMISSION AND SYSTEM OPERATOR CNTEE TRANSELECTRICA SA

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 December 2021 and Year 2021 after providing the transmission service.

CNTEE Tranelectrica SA structure of revenues from transmission services
- DECEMBER 2021 -

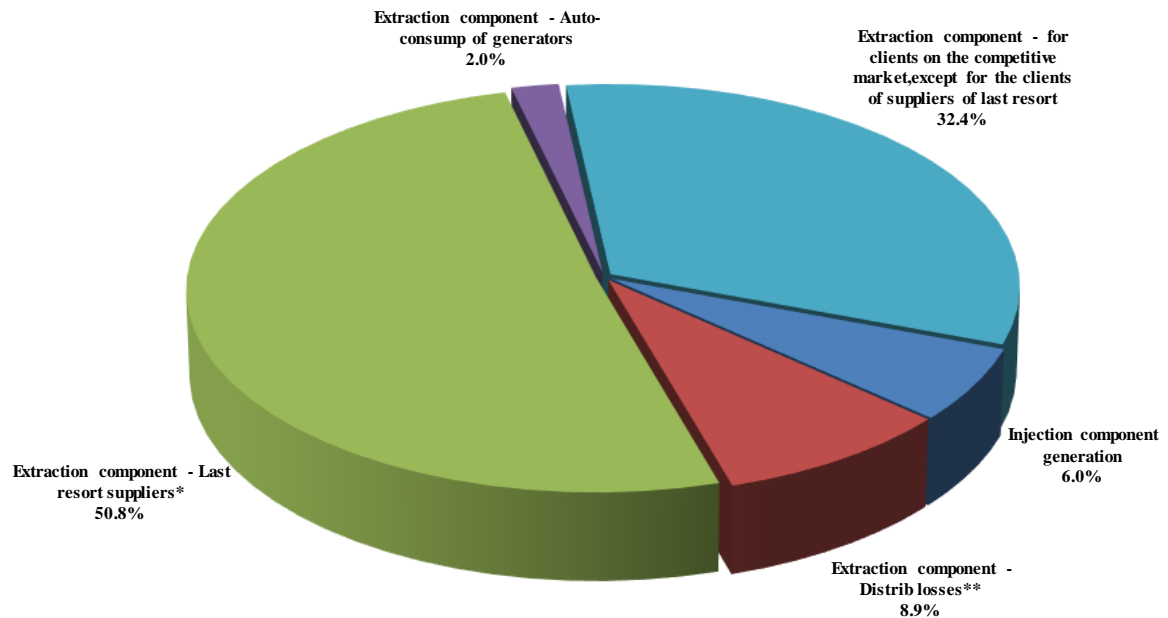


* for electricity extracted from their own licence areas as well as from other areas

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

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

CNTEE Tranelectrica SA structure of revenues from transmission services
- YEAR 2021 -



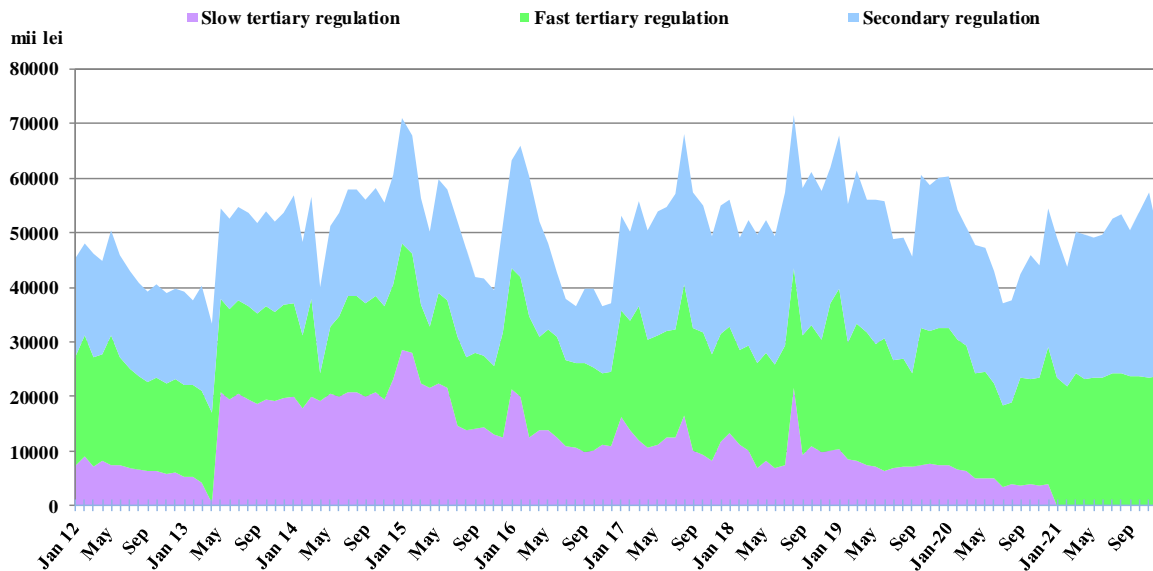
* for electricity extracted from their own licence areas as well as from other areas

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

In order to perform the system operator tasks, CNTEE Tranelectrica 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

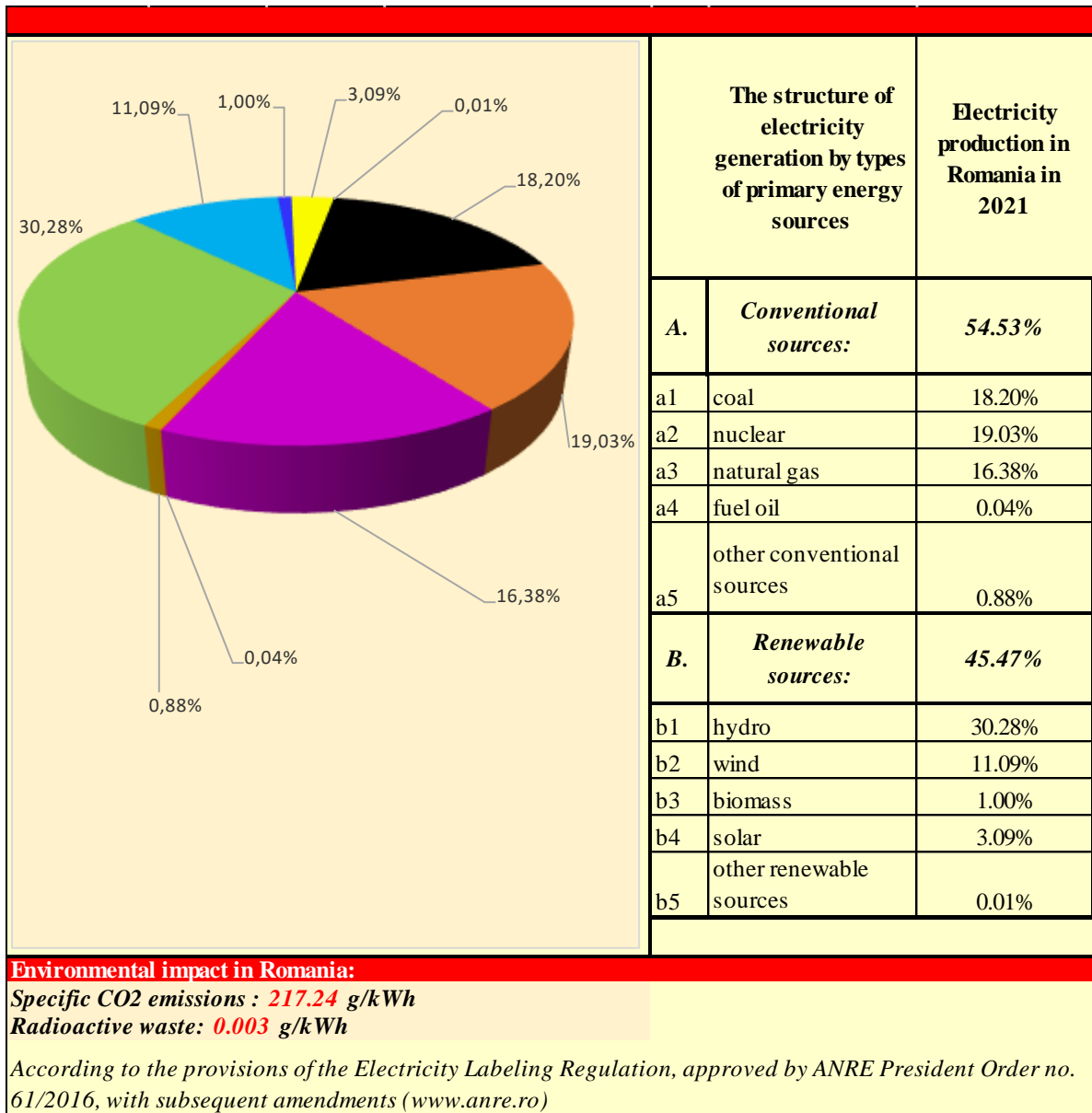


Source: Monthly reports of CNTEE Transelectrica SA – analysed by the Electricity Market Monitoring Unit

V. THE STRUCTURE OF ELECTRICITY GENERATION IN ROMANIA BY TYPES OF PRIMARY ENERGY SOURCES AND THE VALUES OF ENVIRONMENTAL INDICATORS ASSOCIATED WITH THE ELECTRICITY GENERATED ON NATIONAL LEVEL, ON EACH TYPE OF PRIMARY SOURCE

According to the provisions of the *Electricity Labelling Regulation*, approved by ANRE President Order no. 61/2016, with subsequent amendments and additions, on the basis of the reports of electricity producers regarding the total amount of electricity produced, the structure of electricity generation in Romania by types of primary sources was calculated and is presented below.

In 2021, the national average specific values of CO₂ emissions and radioactive waste resulting from electricity generation were of 217.24 g/kWh, respectively of 0.003 g/kWh. By referring to these values, electricity suppliers will specify in the labels they will develop if the electricity they delivered to final clients in 2021 had an environmental impact *below/above* the national average.



The average specific values of CO₂ emissions by type of primary energy sources, presented in the following table, are determined as weighted averages of the specific emission with the electricity produced by each producer on each type of primary source.

<i>Primary energy source</i>	<i>Specific CO₂ emissions [g/kWh]</i>
Coal	823.18
Natural gas	384.19
Fuel oil	529.58
Other conventional sources	485.42
Renewable sources	0
Sector average	217.24

V. MARKET RULES EVOLUTION IN DECEMBER 2021

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

- ANRE president Order no. 127/8 December 2021 approving the Regulation on terms and conditions for balancing service providers and frequency stabilization reserve providers and the Regulation on terms and conditions for balancing responsible parties and amending and repealing some orders of the President of ANRE;
- ANRE president Order no. 128/8 December 2021 approving the rules on the suspension and reinstatement of market activities and the applicable settlement rules;
- ANRE president Order no. 129/15 December 2021 modifying and supplementing ANRE president Order no. 1/2015 regarding the establishment of the National Register of wholesale energy market participants and approving the Procedure for the registration of wholesale energy market participants;
- ANRE president Order no. 130/15 December 2021 approving the regulated income related to the regulated activity of the electricity market operator;
- ANRE president Order no. 131/15 December 2021 on the establishment of the mandatory estimated quota for the acquisition of green certificates of 2022;
- ANRE president Order no. 134/15 December 2021 on the approval of the Regulation for the certification of economic operators who design, execute and verify electrical installations;
- ANRE president Order no. 137/22 December 2021 on the approval of the Procedure for determining the capacity available in electricity networks for the connection of new electricity generation installations;
- ANRE president Order no. 138/22 December 2021 on the amendment of some ANRE president orders;
- ANRE president Order no. 143/21 December 2021 approving the tariffs and monetary contributions charged by the National Energy Regulatory Authority in 2022;
- ANRE president Decision no. 2260/15 December 2021 on the “Specific regional annex for CCR Core to the harmonized allocation rules for long-term transmission rights, in accordance with Article 52 of Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline for the allocation of long-term capacity;
- ANRE president Decision no. 2261/15 December 2021 on the approval of quantities produced in high-efficiency cogeneration units benefiting from the bonus scheme for November 2021;
- ANRE president Decision no. 2268/22 December 2021 for the approval of the allocation of expenditures forecast for 2022 for the achievement of the priority objectives set out in Regulation (EU) no. 943/2019 of the European Parliament and of the Council of 5 June 2019 on the internal market in electricity, from revenues from the allocation of cross-border interconnection capacity

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 Tranelectrica 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