ELECTRICITY MARKET MONITORING REPORT

FEBRUARY 2019

- This document represents an unauthorised translation of the Romanian document -

TABLE OF CONTENTS

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

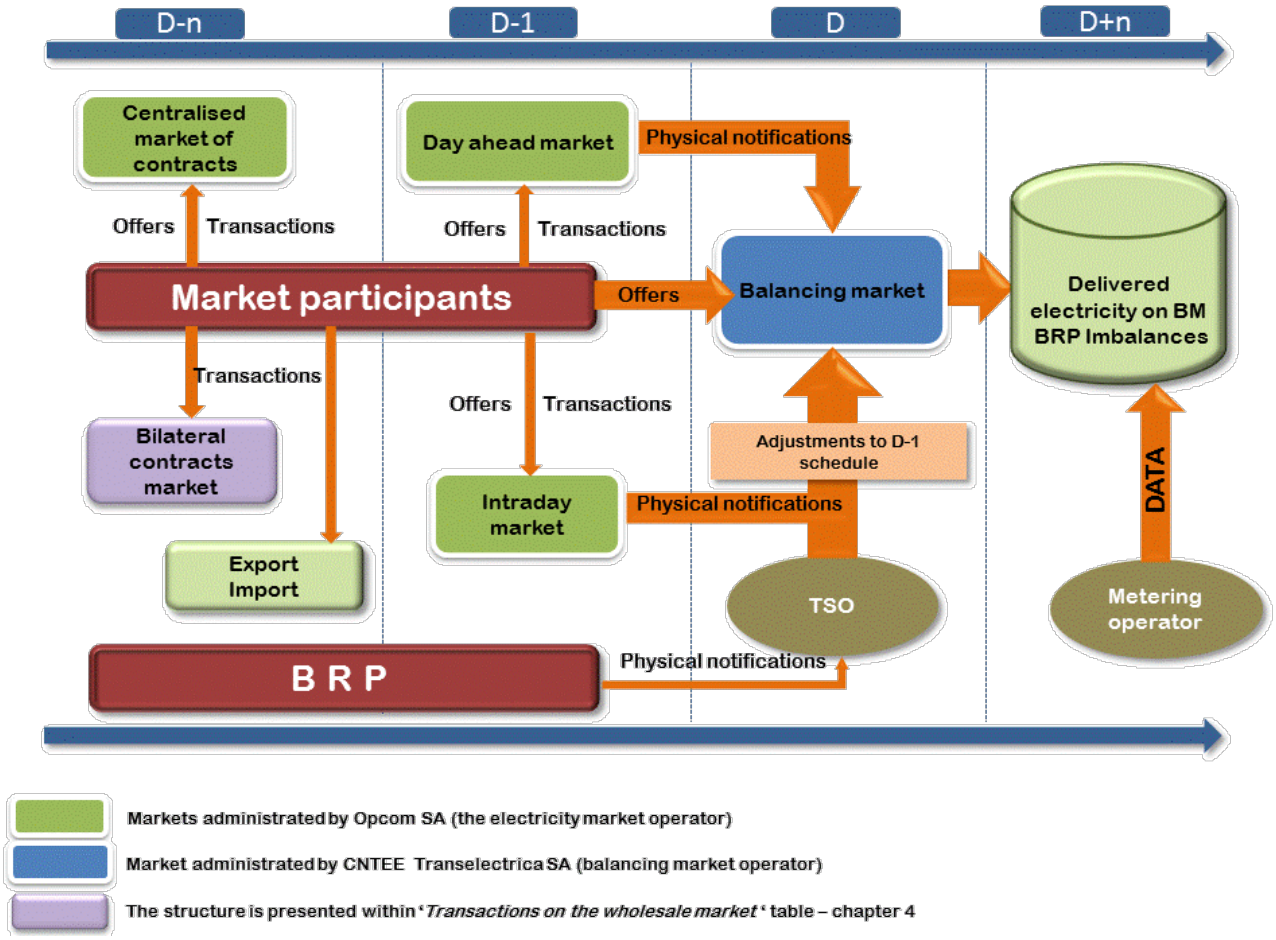
- **GD 365/1998** – vertically integrated monopol – RENEL – was split into separated distribution and supply companies (SC Electrica SA) and generation companies (SC Termoelectrica SA and SC Hidroelectrica SA) were established within a new company - CONEL SA. Two other electricity generators (SN Nuclearelectrica 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 opens at 10%;
- **GD 627/2000** – CONEL holding is disolved;
- **September 2000** – launch of the compulsory electricity spot market in Romania. administrated 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;
  - compulsory balancing market. with TSO as single counterparty;
  - financial responsibilities of the balancing are allocated to the BRP;
- **GD 644/2005** – electricity market opens 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 negociation;
- **GD 638/2007** – fully opening of electricity and gas markets;
- **July 2007** – rules for capacity market have been 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 has been concluded;
- **August/October 2010** – launch of bilateral coordinated auctions for capacity allocation on interconections with Hungary and Bulgaria;

  July 2011 - launch of the intraday market**;**
  - GD 930/2010 – SC Electrica Furnizare SA had been established through 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 obtaines the generation license and enters on the electricity market - Complexul Energetic Oltenia SA. established in a dual system through merger of the former SNLO Tg. Jiu, Complexul Energetic Turceni, Complexul Energetic Rovinari and Complexul Energetic Craiova (GD 1024/2011);
- **July 2012** – the Law of electricity and natural gas no. 123/2012 has enter into force;
- **September 2012** – the application of the first stage from the timetable of phasing out of regulated electricity tariffs to final customers 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** – the Law no. 160/2012 regarding the organisation and operation of the Romanian Energy Regulatory Authority has entered into force;
- **November 2012** - a new entity obtaines the generation license and enters on the electricity market - Complexul Energetic Hunedoara SA. established through merger of the former Electrocentrale Deva and Electrocentrale Paroseni (GD 1023/2011);
- **December 2012** – launch of the organised electricity market for the large customers;
- **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 Transelectrica SA as an independent transmission and system operator;
  - application of last stage of the phasing out calendar for removal the regulated tariffs applied to the final nonhousehold clients who do not use their eligibility rights;
- **August 2014** – CNTEE Transelectrica SA certification as NES transmission system operator following the „independent system operator" model;
- **October 2014** – entry into force of the Law no. 127/2014 for 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;
- **January 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 the Law no. 203/2016 amending the Law no. 123/2012 on electricity and natural gas.
- **July 2018** - entry into force of Law no. 167/2018 amending and supplementing Law on electricity and natural gas no. 123/2012.
- **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.

II. WHOLESALE ELECTRICITY MARKET

1. *Structure of the wholesale electricity market*



2. Wholesale electricity market participants

Market participants* active on the electricity market in February 2019 are presented below, split into categories:

No.	Category
A	***Electricity generators on classic sources operating dispatching units***
1	Bepco SRL
2	CET Arad SA
3	CET Govora SA
4	CE Hunedoara SA
5	CE Oltenia SA
6	Contour Global Solutions SRL
7	Ecogen Energy SA
8	Electrocentrale București SA
9	Electrocentrale Constanța SA
10	Electrocentrale Galați SA
11	Electro Energy Sud SRL
12	Enet Focsani SA
13	Lukoil Energy & Gaz Romania SRL
14	Modern Calor SA
15	OMV Petrom SA
16	Rulmenti SA
17	SNGN Romgaz SA
18	Termoficare Oradea SA
19	Veolia Energie Iași SRL
20	Veolia Energie Prahova SRL
21	Vest Energo SA
B	***Electricity generators on wind source operating dispatching units***
1	Alizeu Eolian SA
2	Arinna Development SRL
3	Blue Line Energy SRL
4	Blue Planet Investments SRL
5	Braila Winds SRL
6	Bridgeconstruct SRL
7	Catalan Electric SRL
8	Cernavoda Power SRL
9	Corni Eolian SRL
10	Crucea Wind Farm SRL
11	Dan Holding MGM SRL
12	Eco Power Wind SRL
13	Ecoenergia SRL
14	EDPR Romania SRL
15	Electrica Serv SRL
16	Electricom SA
17	Elektra Green Power SRL
18	Elektra Wind Power SRL
19	Enel Green Power Romania SRL
20	Energia Verde Ventuno SRL
21	Enex SRL
22	Eol Energy SRL
23	Eol Energy Moldova SRL
24	Eolian Center SRL
25	Eolica Dobrogea One SRL
26	EP Wind Project (ROM) SIX SA
27	Eviva Nalbant SRL
28	Ewind SRL
29	General Concrete Cernavoda SRL
30	Green Energy Farm SRL
31	Ground Investment Corp SRL
32	Holrom Renewable Energy SRL
33	Horia Green SRL
34	Intertrans Karla SRL
35	Kelavent Charlie SRL
36	Kelavent Echo SRL
37	Land Power SRL
38	LC Business SRL
39	M&M 2008 SRL
40	Mireasa Energies SRL
41	East Wind Farm SRL
42	Ovidiu Development SRL
43	Peștera Wind Farm SRL
44	Romconstruct Top SRL
45	Sibioara Wind Farm SRL
46	Smart Clean Power SRL
47	Smartbreeze SRL
48	Soft Grup SRL
49	Tomis Team SRL
50	Verbund Wind Power Romania SRL
51	Wind Park Invest SRL
52	Windfarm MV I SRL
53	VS Wind Farm SRL

No.	Category
C	***Electricity generators on biomass source operating dispatching units***
1	Bioenergy Suceava SRL

No.	Category
D	***Electricity generators on solar source operating dispatching units***
1	Blue Sand Investment SRL
2	Caracal Solar Alpha SRL
3	Casa Crang SRL
4	Clue Solar SRL
5	Corabia Solar SRL
6	Cujmir Solar SRL
7	Delta & Zeta Energy SRL
8	Ecosfer Energy SRL
9	Energo Proiect SRL
10	Eye Mall SRL
11	Fort Green Energy SRL
12	Foton Epsilon SRL
13	Gama & Delta Energy SRL
14	GPSB Solaris 48 SRL
15	Greenlight Solution SRL
16	Green Vision Seven
17	Kentax Energy SRL
18	Lemar Grup SRL
19	LJG Green Source Energy Alpha SA
20	LJG Green Source Energy Beta SRL
21	LJG Green Source Energy Gamma SRL
22	Long Bridge Milenium SRL
23	Mar-Tin Solar Energy SRL
24	Potelu Solar SRL
25	Power L.I.V.E. One SRL
26	RA-RA PARC SRL
27	Romkumulo SRL
28	Simico Prod Factory SRL
29	Skybase Energy SRL
30	Solar Electric Frasinet SRL
31	Solar Future Energy SRL
32	Solaria Green Energy SRL
33	Solprim SRL
34	Spectrum Tech SRL
35	Studina Solar SRL
36	Sun Energy Complet SA
37	Tis Energy SRL
38	Tinmar Green Energy SRL
39	Urdel Enery SRL
40	Vanju Mare Solar SRL
41	Varokub Energy Development SRL
42	VIR Company International SRL
43	VIS Solaris 2011 SRL
44	Vrish Pro Investments SRL
45	WDP Development RO SRL
46	Xalandine Energy SRL
47	XPV SRL
E	***Electricity generators on hydro source operating dispatching units***
1	Hidroelectrica SA
F	***Electricity generator on nuclear source operating dispatching units***
1	SN Nuclearelectrica SA
G	***Transmission System Operator***
1	CNTEE TRANSELECTRICA SA
H	***Market Operator for DAM, Intra-Day, Centralised Markets - CMBC-EA, CMBC-CN, CMBC-FP, CM-OTC, CMUS***
1	OPCOM SA
I	***Distribution operators***
1	Distributie Energie Oltenia
2	Delgaz Grid
3	E-Distributie Banat
4	E-Distributie Dobrogea
5	E-Distributie Muntenia
6	SDEE Muntenia Nord
7	SDEE Transilvania Nord
8	SDEE Transilvania Sud
J	***Suppliers of Last Resort***
1	CEZ Vanzare SA
2	ENEL Energie SA
3	E.ON Energie Romania SA
4	ENEL Energie Muntenia SA
5	Electrica Furnizare SA

No.	Category
K	***Electricity Suppliers acting exclusively on the wholesale market***
1	Axpo Energy Romania SRL
2	CEZ as
3	Danske Commoditiesa/s Aarhus
4	EDF Trading Limited
5	Energo-Pro Trading EAD
6	Elpetra Energy E.A.D.
7	Energi Danmark A/S
8	Energy Supply D.O.O
9	Eolian Project SRL
10	EVN Trading South East Europe
11	Ezpada AG
12	Ezpada SRO
13	Flavus Investiţii SRL
14	Freepoint Commodities Europe Ltd
15	GEN I trgovanje in prodaja elektricne energije doo
16	Interenergo Energetski, Inzeniring d.o.o.
17	Holding_ Slovenske_ Elektrarne
18	Lord Energy SRL
19	MVM Partner Zrt
20	Neptun SA
21	Nis Petrol SRL
22	OMV Gas Marketing & Trading GmbH
23	Petrol, Slovenska energetska druzba
24	Photovoltaic Green Project SRL
25	Ritam-4- TB OOD
26	Statkraft Markets GmbH
27	Unit Energy Trade SRL
28	Verbund Trading Romania SRL
L	***Electricity Suppliers acting also on the retail market***
1	Absolute Energy SRL
2	Aderro G.P. Energy SRL
3	A Energy Ind SRL
4	Alive Capital SRL
5	Alro SA
6	Aqua Energia SA
7	Anchor Grup SA
8	Apuron Energy SRL
9	Cotroceni Park SA
10	Crest Energy SRL
11	CYEB SRL
12	EFT Furnizare SRL
13	Energia Gas & Power SRL
14	Energy Trade Activ SRL
15	Elcata MHC SRL

No.	Category
	Electricity Suppliers acting also on the retail market
16	Electric Planners SRL
17	Electrificare CFR SRL
18	Elsid SA
19	Electrocarbon SA
20	Electromagnetica SA
21	Enel Trade Romania SRL
22	Energy Distribution Services SRL
23	Engie Romania SA
24	Enol Grup SA
25	Entrex Services SRL
26	Eolian Generator SRL
27	E.V.A. Energy SRL
28	GDM Logistic SRL
29	Getica 95 Com SRL
30	Grenerg SRL
31	Hermes Energy International SRL
32	ICCO Energ SRL
33	ICPE Electrocond Technologies SA
34	Imperial Development SRL
35	Industrial Energy SA
36	Izvor de Lumina SRL
37	Luxten LC SA
38	Menarom PEC SRL
39	MET Romania Energy SA
40	Monsson Trading SRL
41	Next Energy Parteners SRL
42	Nova Power&Gas SRL
43	P.C. Management & Consulting SRL
44	Plenerg SRL
45	Power Clouds SRL
46	QMB Energ SRL
47	RCS&RDS SA
48	Renovatio Trading SRL
49	Restart Energy One SRL
50	Romelectro SA
51	Met RO NRG
52	Stock Energy SRL
53	Tinmar Energy SA
54	Transenergo Com SA
55	Transformer Energy Supply SRL
56	Uzinsider General Contractor SA
57	Veolia Energie România SA
58	Werk Energy SRL

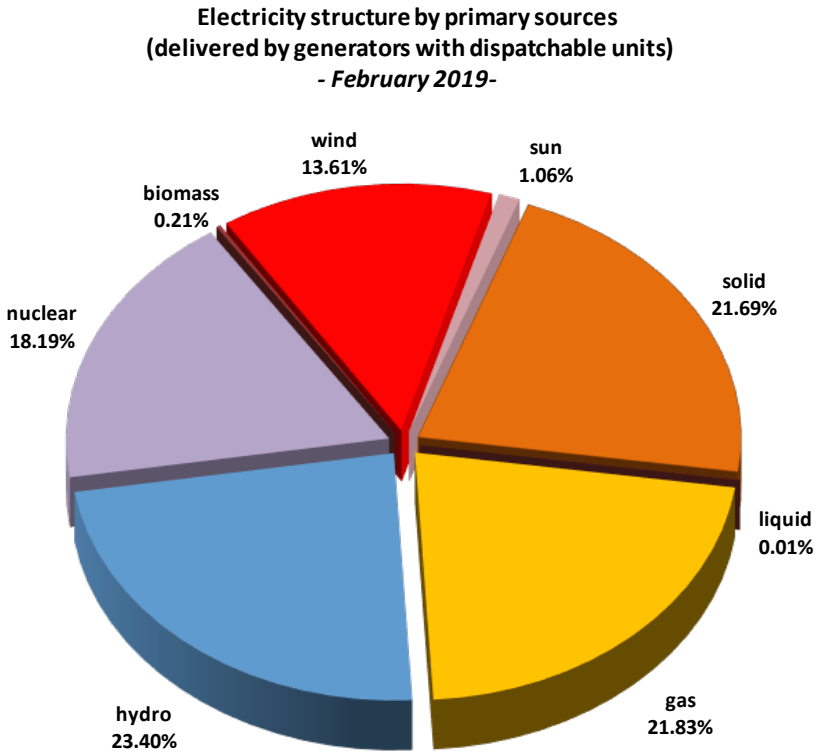
*The electricity market participants report to ANRE technical/commercial data according to the *Methodology for wholesale electricity market monitoring,* approved by ANRE Order no. 67/2018, as well as according to the *Methodology for retail electricity market monitoring*, approved by ANRE Order no. 60/2008, with subsequent amendments and additions. The table above does not include the Balancing Responsible Parties (BRP). The updated BRP list is published on the Balancing Market Operator website, CNTEE TRANSELECTRICA SA - www.transelectrica.ro.

The monitored electricity generation license holders are producers holding dispatchable groups, which, according to the Regulation for programming production units and dispatchable consumers, approved by the ANRE President Order no. 32/2013 are 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.

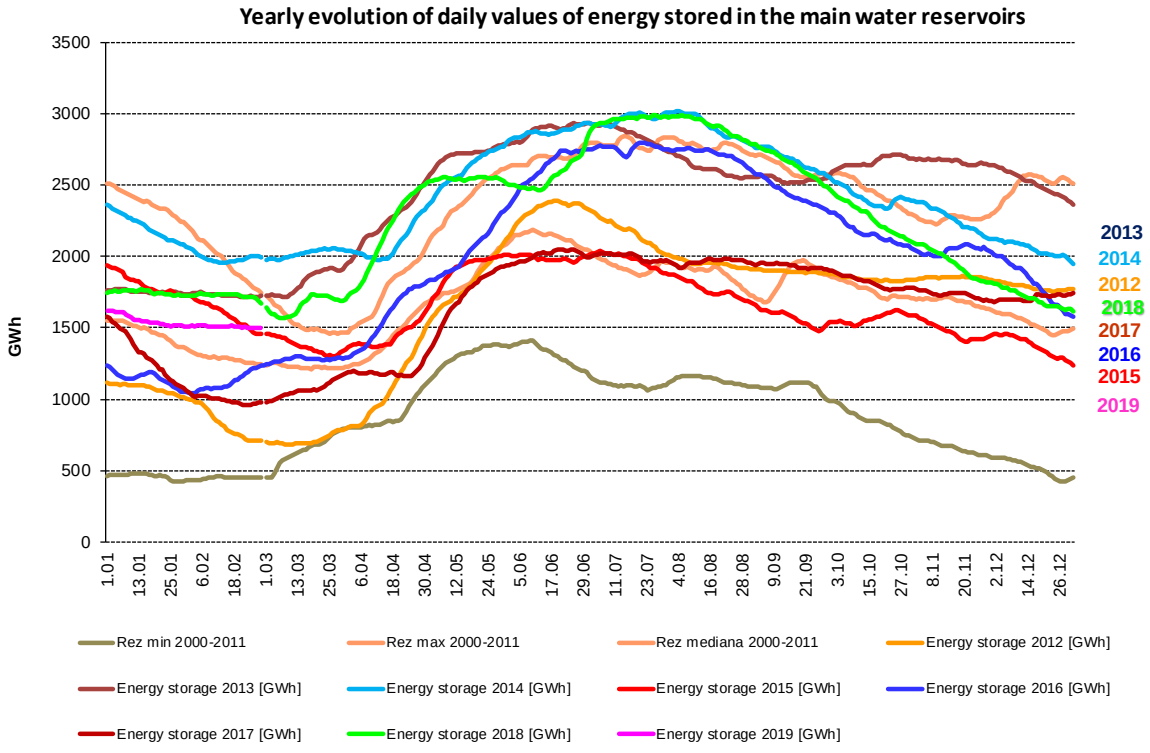
The category of electricity suppliers acting exclusively on the wholesale market includes electricity supply licensees that are active only on the wholesale market and electricity trading licensees with licenses issued according to ANRE Order no. 13/2015 for the approval of the „General conditions associated to the license for trading electricity".

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



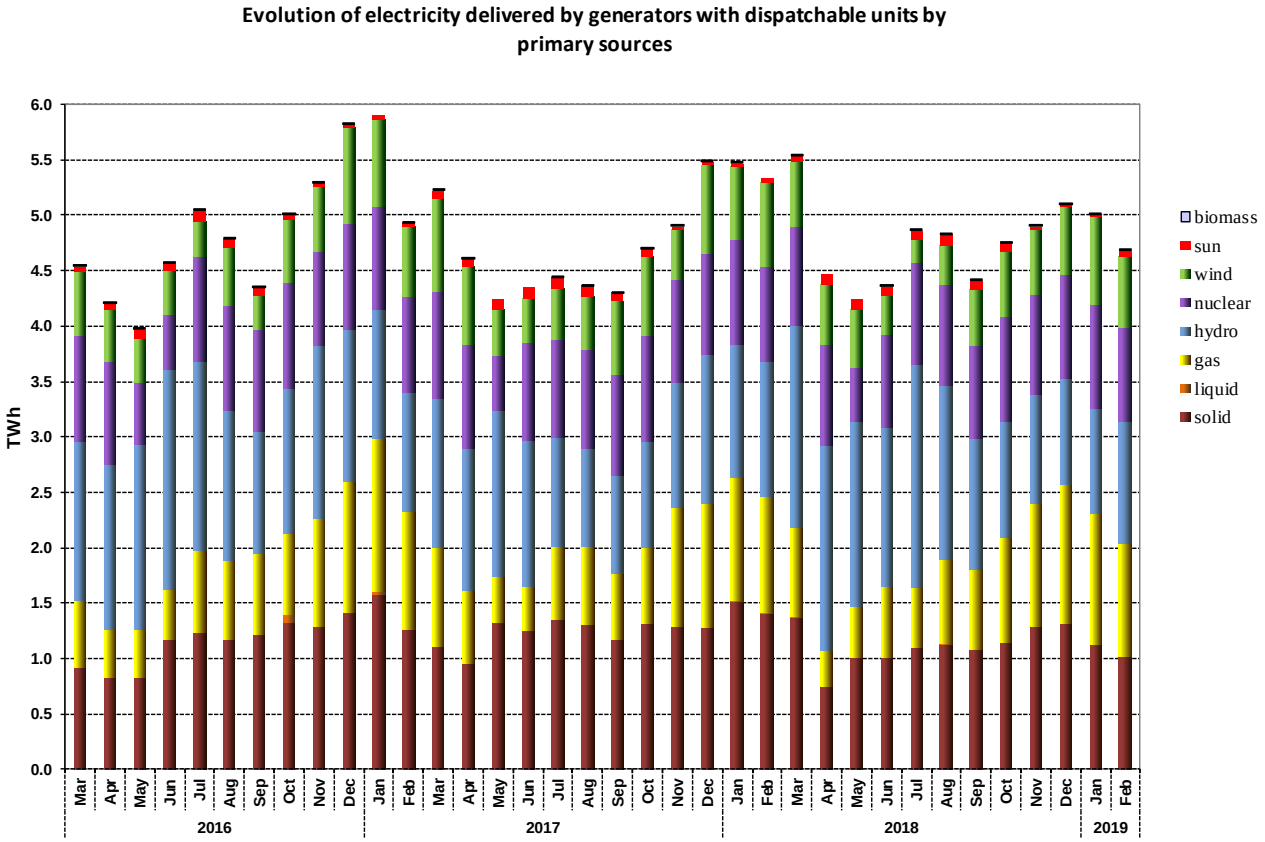
Source: Monthly reports of producers – Electricity Market Monitoring Unit assessment

The electricity generated from hydro resources 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 during February 2019 compared to the daily values of the last 7 years and compared to minimum, maximum and median values from 2000-2011.



Source: Monthly reports of S.C. Hidroelectrica S.A. – Electricity Market Monitoring Unit assessment

The evolution of the structure of the delivered electricity during the last 3 years is the following:



Source: Monthly reports of generators – Electricity Market Monitoring Unit assessment

The following table presents the main data regarding the physical balance of electricity for February 2019, compared to the data for the similar period of 2018:

Nr. crt.	INDICATOR	UM	Feb 2018	Feb 2019	%	Jan-Feb 2018	Jan-Feb 2019	%
0	1	2	3	4	5=4/3*100	6	7	8=7/6*100
1	Generated electricity	TWh	5.69	5.01	88.05	11.55	10.39	89.96
2	Delivered electricity	TWh	5.33	4.69	87.99	10.82	9.73	89.93
3	Import	TWh	0.15	0.30	200.00	0.41	0.84	204.88
4	Export	TWh	0.66	0.31	46.97	1.27	0.54	42.52
5	Internal consumption (2+3-4)	TWh	4.83	4.69	97.10	9.96	10.03	100.70
6	Consumption of household customers:	TWh	1.08	1.08	100.00	2.28	2.34	102.63
6.1	*- on Universal Service regime*	*TWh*	*0.88*	*0.72*	*81.82*	*1.87*	*1.58*	*84.49*
6.2	*- on the competitive market*	*TWh*	*0.20*	*0.36*	*180.00*	*0.41*	*0.76*	*185.37*
7	Consumption of non-household customers:	TWh	3.00*	3.02	100.67*	6.09*	6.21	101.97*
7.1	*- on universal service and last resort regime and inactive clients*	*TWh*	*0.09*	*0.09*	*100.00*	*0.19*	*0.18*	*94.74*
7.2	*- on the competitive market*	*TWh*	*2.91**	*2.93*	*100.69**	*5.90**	*6.03*	*102.20**
8	Transmission–Injection component	TWh	5.23	4.58	87.57	10.61	9.51	89.63
9	Transmission–Extraction component	TWh	4.76	4.66	97.90	9.84	9.90	100.61
10	Actual transmission grid losses	TWh	0.11	0.08	72.73	0.21	0.18	85.71
11	Heat generated for delivery	Tcal	1735.12	1538.07	88.64	3649.45	3451.02	94.56
12	Heat in co-generation	Tcal	1269.57	1226.76	96.63	2717.25	2545.74	93.69

Notes:

1. The produced energy and the delivered energy are presented in accordance with the reports sent by electricity generation licensees monitored - producers operating dispatchable electric groups, as defined in the Programming Regulation of Production Units and Dispatchable Consumers, approved by ANRE Order no. 32/2013 as amended;

2. The imported / exported quantities do not include transits and cross-border exchanges of electricity by CNTEE Transelectrica SA with neighboring power systems in order to balance the system;

3. The electricity for which a transport contract is concluded corresponds to the electricity delivered from the plants with installed capacity of more than 5 MW connected to the transmission and distribution networks; the electricity extracted from the network for which a transport contract is concluded coincides with the electricity for which the electricity extraction tariff is charged (according to ANRE Order no. 108/2018);

** The differences from the February 2018 Electricity Market Monitoring Report are determined by the corrections reported by the market participants that were included in the current report.*

4. The structure of trades on the wholesale electricity market

The size of wholesale market depends on the sum of all trades performed by the market players, exceeding the quantities physically transmitted from generation to consumption; the overall trades also includes resales made in order to adjust the contractual position and to obtain a financial benefit.

Starting with the moment of entering into force of Law no. 123/2012 on electricity and natural gas, the structure of wholesale energy market was significantly changed through the introduction of the obligation to conduct all trades on the competitive market in a transparent, public, centralized and non-discriminatory manner. Therefore, after the entry into force of the law, all new trades on the wholesale energy market have to be concluded on the centralized markets, organised by Opcom SA, the only ANRE licensee for the electricity market operation in Romania. The centralized markets which are presently functional are DAM (Day Ahead Market), CMBC (Centralized Market of Bilateral Contracts with Extended Auction mechanism - EA, with Continuous Negotiation mechanism-CN, with Fuel Processing mechanism - FP), ID (Intraday Market), CM-OTC – (Centralized Market with Double Continuous Negotiation for Electricity Bilateral Contracts), CM-LCM (Large Consumers Mechanism) and CMUS (Centralized Market for Universal Service).

Besides the existing centralized markets, which ensure the transparent, public, centralized and non-discriminatory legal requirements, there still are bilateral negotiated contracts concluded before the entering into force of the Law, still pending, and export and import contracts.

At the same time, as an exemption from the obligation of concluding all trades on the competitive electricity market, in a transparent, public, centralized and non-discriminatory manner, in accordance with Law no. 184/2018 for the approval of Emergency Government Ordinance (EGO) no. 24/2017 amending and supplementing Law no. 220/2008 establishing the system for promoting the production of electricity from renewable energy sources, non-dispatchable producers of electricity from renewable energy sources and public authorities holding power plants from renewable energy sources with installed capacity of no more than 3 MW per producer may still conclude direct negotiated bilateral contracts, but only with the suppliers of final consumers for the sale of electricity and/or green certificates.

The following table presents the volumes traded and the average prices on each type of contracts 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. The aggregated volumes and the average prices on negotiated contracts are those reported by market participants on their own responsibility and with the exception of the contracts concluded under the provisions of Law no. 220/2008, with subsequent amendments and supplementations, they should match the still ongoing contracts which had been concluded before Law no. 123/2012 entered into force.

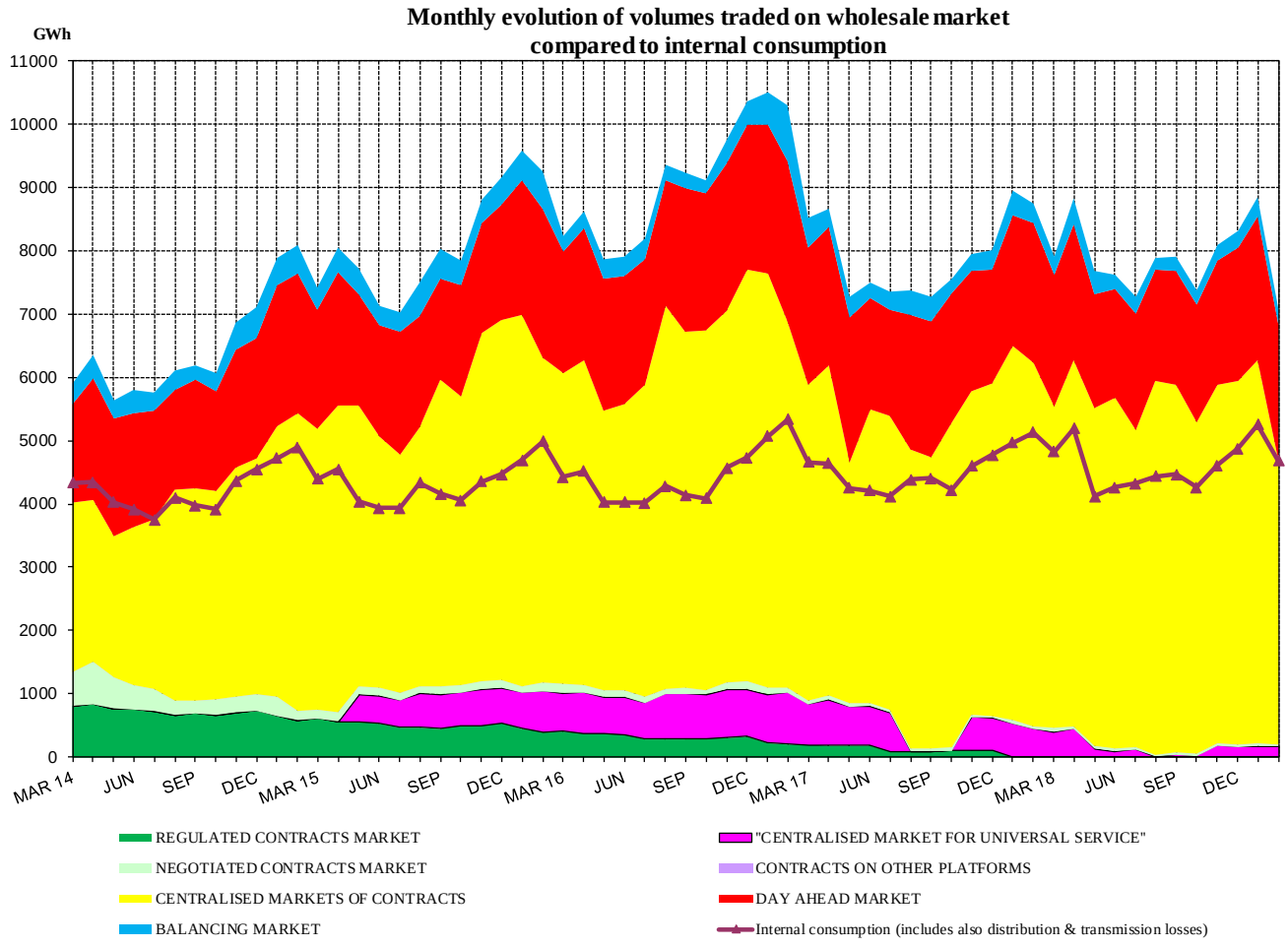
WHOLESALE MARKET TRADES	January 2019	February 2019	February 2018
1. BILATERAL CONTRACTS' MARKET			
traded volume (GWh)	**34**	**22**	**52**
average price (lei/MWh)	170.00	169.75	141.96
% from internal consumption (%)	0.6	0.5	1.1
1.1. Sales on regulated contracts			
traded volume (GWh)			
average price (lei/MWh)	-	-	-
% from internal consumption (%)			
1.2. Sales on negotiated contracts[1)]			
traded volume (GWh)	**34**	**22**	**52**
average price (lei/MWh)	170.00	169.75	141.96
% from internal consumption (%)	0.6	0.5	1.1
2. EXPORT			
traded volume (GWh) [2)]	**235**	**306**	**656**
average price (lei/MWh)	266.37	200.90	176.81
% from internal consumption (%)	4.4	6.5	13.6
3. CENTRALIZED MARKETS OF BILATERAL CONTRACTS			
traded volume (GWh)	**4968**	**4508**	**5090**
average price (lei/MWh)	246.06	245.53	199.25
% from internal consumption	93.0	96.1	105.5
3.1. Extended auction mechanism CMBC-EA[3)]			
traded volume (GWh)	**1688**	**1519**	**1904**
average price (lei/MWh)	233.01	232.54	182.18
% from internal consumption	31.6	32.4	39.4
3.2. Continuous negotiation mechanism CMBC-CN [3)]			
traded volume (GWh)	**1440**	**1308**	**1375**
average price (lei/MWh)	239.66	241.68	213.45
% from internal consumption	27.0	27.9	28.5
3.3. CM-OTC mechanism [3)]			
traded volume (GWh)	**1839**	**1682**	**1811**
average price (lei/MWh)	263.05	260.25	206.40
% from internal consumption	34.4	35.9	37.5
4. CENTRALIZED MARKET FOR UNIVERSAL SERVICE - CMUS			
traded volume (GWh)	**179**	**168**	**401**
average price (lei/MWh)	292.54	293.88	249.67
% from internal consumption	3.3	3.6	8.3
5. DAY AHEAD MARKET			
traded volume (GWh)	**2354**	**2139**	**2085**
average price (lei/MWh) [4)]	352.19	230.79	178.15
% from internal consumption	44.1	45.6	43.2
6. INTRADAY MARKET			
traded volume (GWh)	**31**	**38**	**25.3**
average price (lei/MWh) [5)]	199.28	153.91	119.44
% from internal consumption	0.6	0.8	0.5
7. BALANCING MARKET			
traded volume (GWh)	**302**	**256**	**285**
% from internal consumption	5.7	5.5	5.9
upward volume (GWh)	**142**	**59**	**183**
average price for negative imbalance (lei/MWh)	687.32	598.28	286.82
downward volume (GWh)	**160**	**197**	**102**
average price for positive imbalance (lei/MWh)	37.20	10.85	43.51
INTERNAL CONSUMPTION (GWh) (*distribution and transmission losses included*)	**5340**	**4689**	**4826**

Notes:

1) *Sales on negotiated contracts do not include supply contracts to final customers and export contracts, the latter being separately identified;*
2) *Export volumes and prices' information corresponding to export contracts are those reported monthly by wholesale market participants and include the volumes exported by CNTEE Transelectrica as shipper for the coupled DAM; export volumes are verified with the DAMAS platform notifications, some differences being noticed in some cases;*
3) *The monthly data is presented as reported by the market participants monitored for the electricity delivered in the respective month. The information refers both to trades concluded previously on CMBC and CMBC-NC (according to ANRE Order 6/2011) and to trades concluded on CMBC-EA and CMBC-NC (according to ANRE Order 78/2014);*
4) *The avereage monthly price presented in the table is calculated as the average of the hourly closing prices and is published by Opcom SA; the average monthly price calculated as an weighted average of the hourly closing prices with the traded volumes was 237.44 lei/MWh in February 2019, and it was published by Opcom SA;*
5) *The average monthly price is calculated based on monthly traded volumes and values, published by OPCOM SA.*

The percentage of electricity volumes traded form the internal consumption (see table above) offers a reference for assessing the size of each of the specified markets. Prices presented above include only the injection component of the transmission tariff, in this way being comparable within a month and making possible the comparison with the previous month.

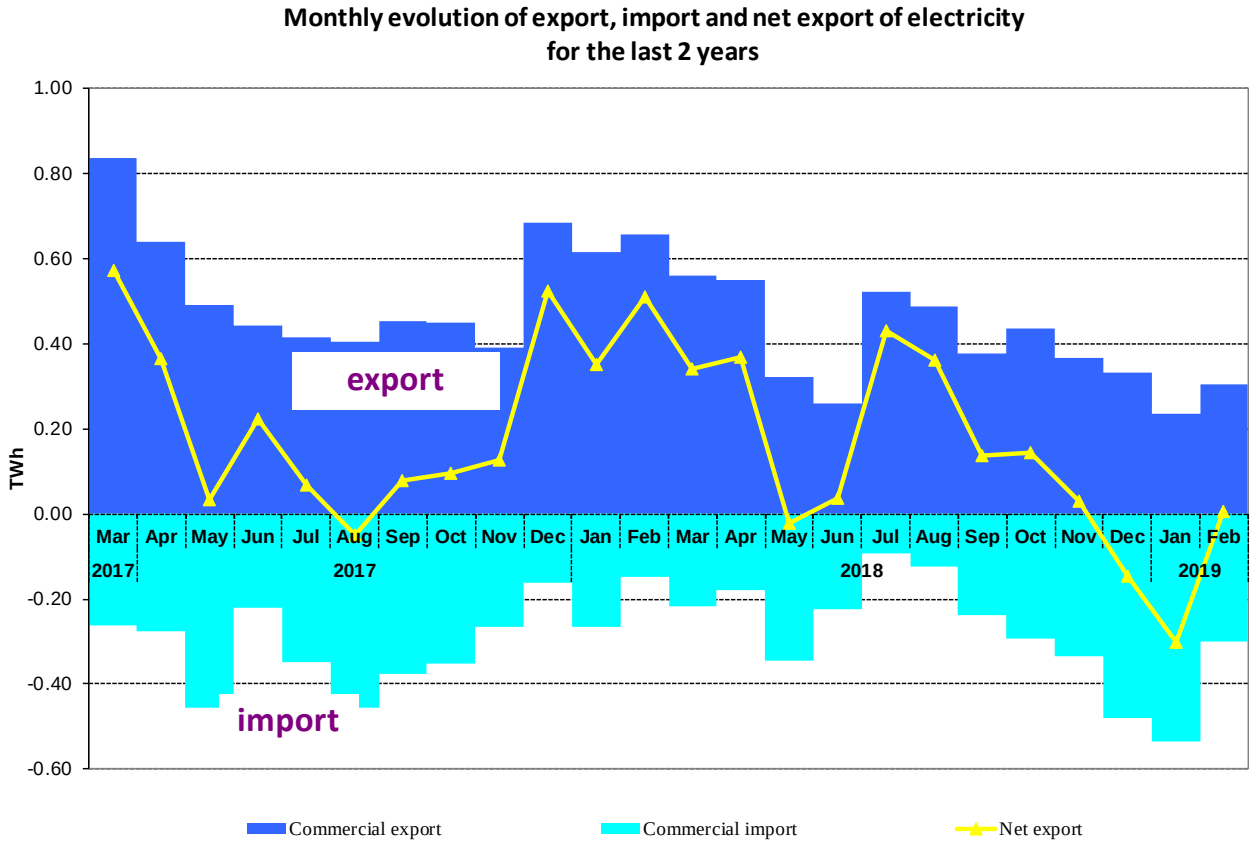
The following graph presents the evolution, starting with March 2014, of the relation between the volumes sold on each market and the estimated internal consumption.



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

Note: In the above graph, the volumes traded on negociated contracts' market do not include the export contract volumes.

The following graph presents the monthly values of commercial export and import, and the net export (export minus import) during the last 24 months:

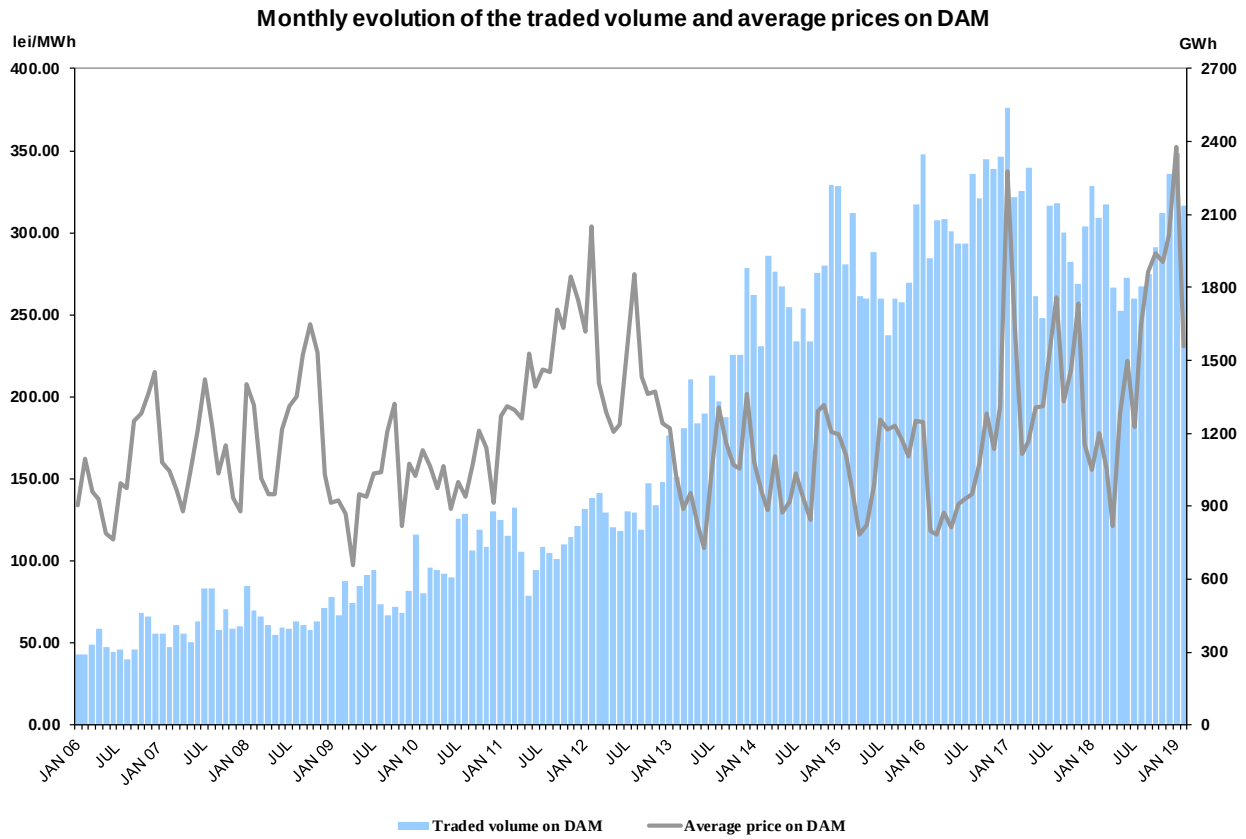


Source: Monthly reports of CNTEE Transelectrica SA – Electricity Market Monitoring Unit assessment

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

Import/Export Trades	January 2019	February 2019	February 2018
Export			
traded volume (GWh)	**235**	**306**	**656**
average price (lei/MWh)	266.37	200.90	176.81
% from internal consumption	4.4	6.5	13.6
of which, through coupled DAM			
traded volume (GWh)	**49**	**149**	**152**
average price (lei/MWh)	232.31	191.94	162.41
% from internal consumption	0.9	3.2	3.1
Import			
traded volume (GWh)	**535**	**301**	**147**
average price (lei/MWh)	388.70	253.51	199.50
% from internal consumption	10.0	6.4	3.0
of which, through coupled DAM			
traded volume (GWh)	**258**	88	**77**
average price (lei/MWh)	407.48	286.26	193.87
% from internal consumption	4.8	1.9	1.6

The following graph presents the monthly volume and average prices on DAM starting with January 2006:



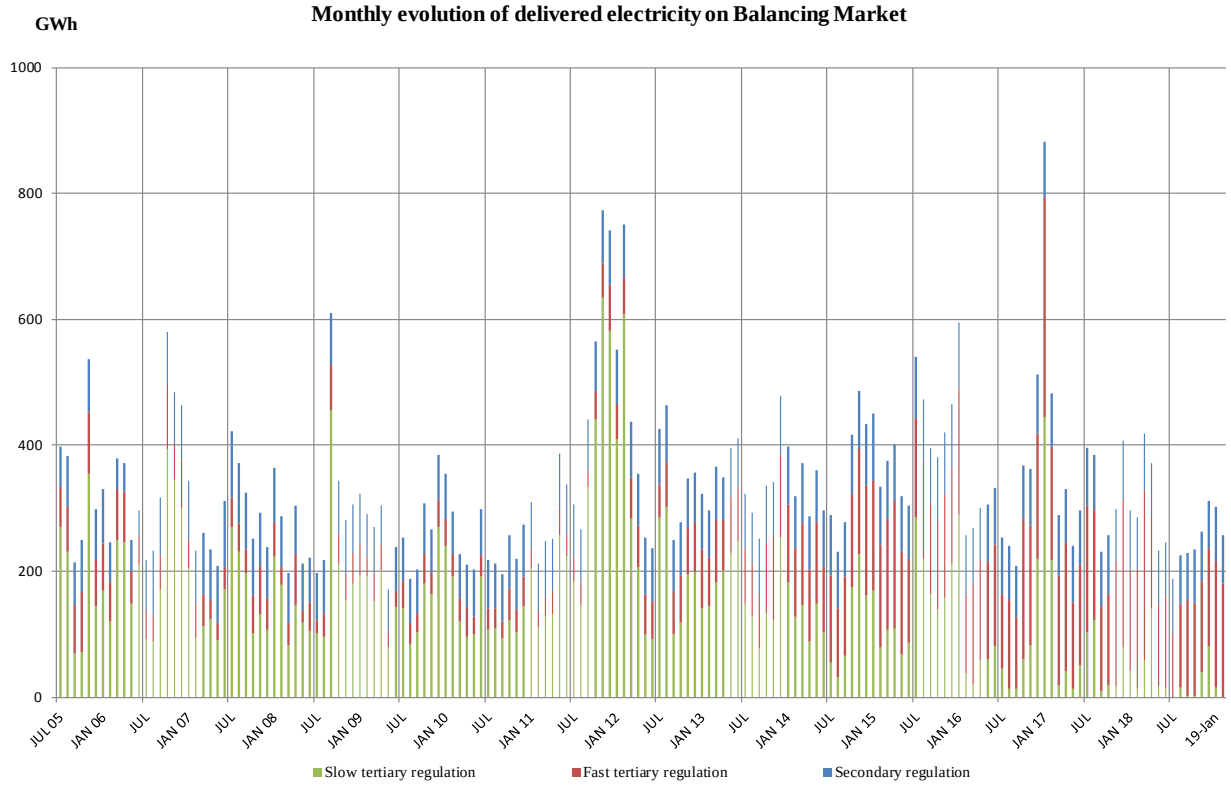
Source: Monthly reports of Opcom SA and CNTEE Transelectrica SA – Electricity Market Monitoring Unit assessment

Balancing electricity is determined by the dispatch orders (accepted offers) received by generators. After settlement, the actual electricity delivered by generators on the balancing market is determined based on the measured (approved) values; the relation between the selected and delivered electricity in February 2019 is presented in the following table:

February 2019	**Dispach order (GWh)**	**Delivered electricity (GWh)**	**Deviation (%)**
Secondary regulation	**76**	**76**	
upward	30	30	
downward	47	47	
Fast tertiary regulation	**187**	**180**	**4**
upward	30	30	3
downward	156	151	4
Slow tertiary regulation	**0**	**0**	**0**
upward	0	0	0
downward	0	0	0
TOTAL	**263**	**256**	
upward	60	59	
downward	203	197	
INTERNAL CONSUMPTION		**4682**	
% share of traded volumes from internal consumption		***5.5%***	

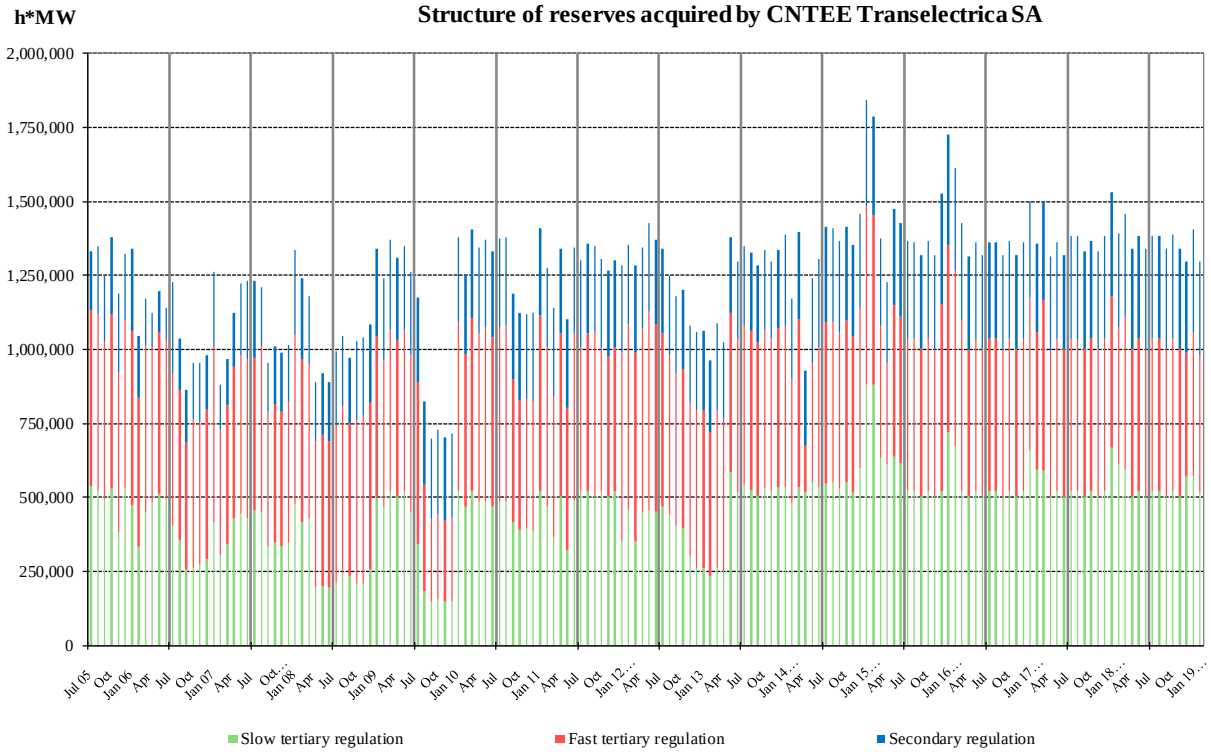
Source: Monthly reports of CNTEE Transelectrica SA – Electricity Market Monitoring Unit assessment

The structure of the balancing electricity delivered in the system on each type of regulation starting with July 2005 is presented in the graph below:



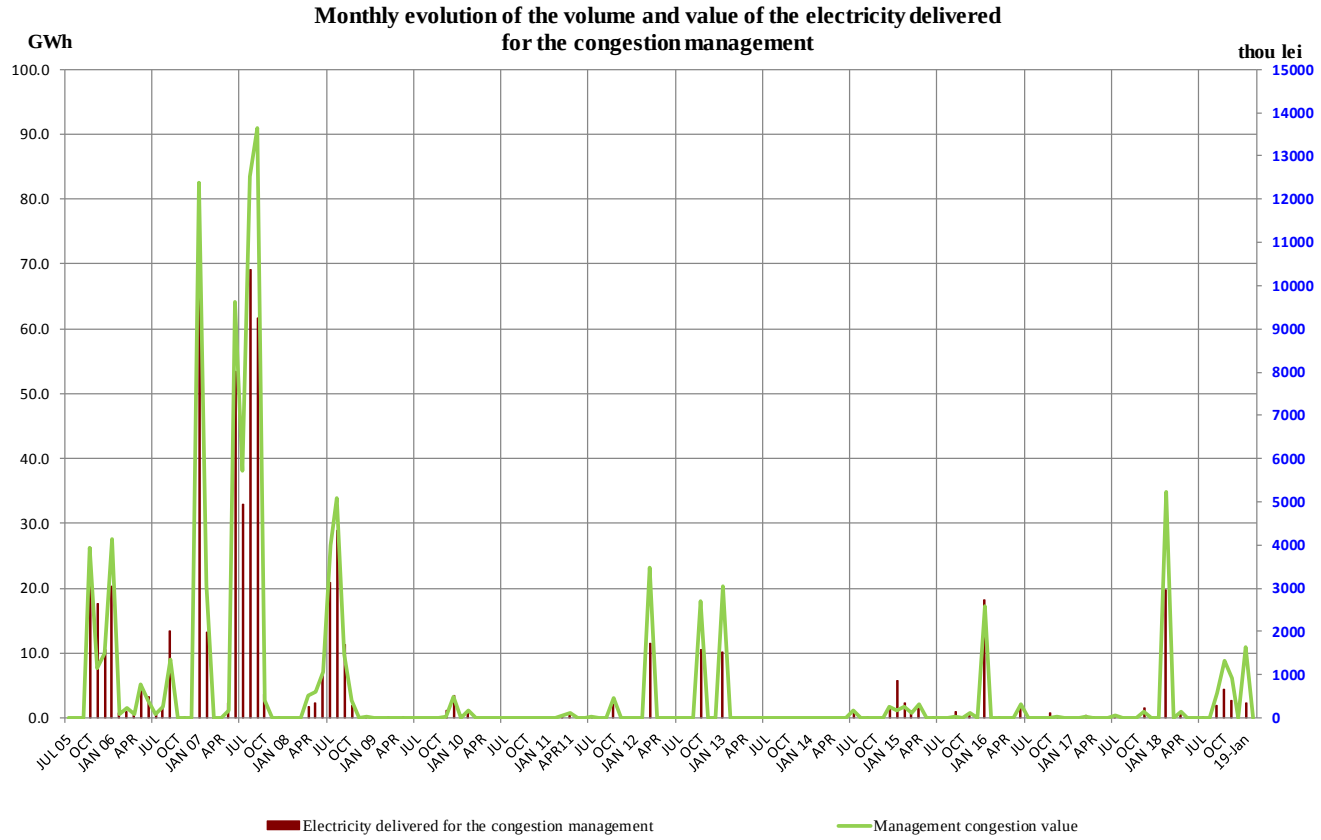
Source: Monthly reports of CNTEE Transelectrica SA – Electricity Market Monitoring Unit assessment

The following chart shows the evolution of the reserves (ancillary services representing obligations of the producers to keep available to the dispatcher or to offer on the balancing market the contracted capacities) bought/settled by CNTEE Transelectrica S.A. for the period July 2005 - February 2019:



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

The following graph presents the monthly evolution of the electricity traded by CNTEE Transelectrica SA on the Balancing Market for congestion management and the evolution of the values of these trades starting with July 2005.



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

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

Producers

In February 2019, compared with the similar period of 2018, the structure of electricity sale obligations contracted before the delivery interval by the electricity generators with dispatchable units was the following:

-GWh-

Trade type	February 2018	February 2019
Negotiated contracts, to suppliers	52.07	21.62
Contracts concluded on the Opcom centralized markets:	3262.97	2841.71
CMBC-EA	*1703.16*	*1435.55*
CMBC-CN	*859.23*	*825.95*
CM-OTC	*700.58*	*580.21*
CMUS	384.44	131.03
DAM	1630.38*	1748.51
ID	14.78	35.61
Supply contracts to final customers, from which:	445.38*	405.69
Households	*0.63*	*0.64*
Non-households	*444.75**	*405.05*
Total	**5790.04***	**5184.17**

Source: Monthly reports of generators – Electricity Market Monitoring Unit assessment

** The differences from the February 2018 Electricity Market Monitoring Report are determined by the corrections reported by the market participants that were included in the current report.*

Suppliers

In February 2019, on the electricity market there were active 91 undertakings having as the main activity that of electricty supply; out of these, 28 are suppliers that only operate on the wholesale electricity market (some of which have electricity trader license) and 63 are suppliers that are also active in the retail electricity market (including the last resort suppliers).

Suppliers acting exclusively on WEM

The following table shows the data for February 2019 compared with similar period of 2018 for the suppliers acting exclusively on WEM, acquisitions and sales being split by categories of markets and market participants:

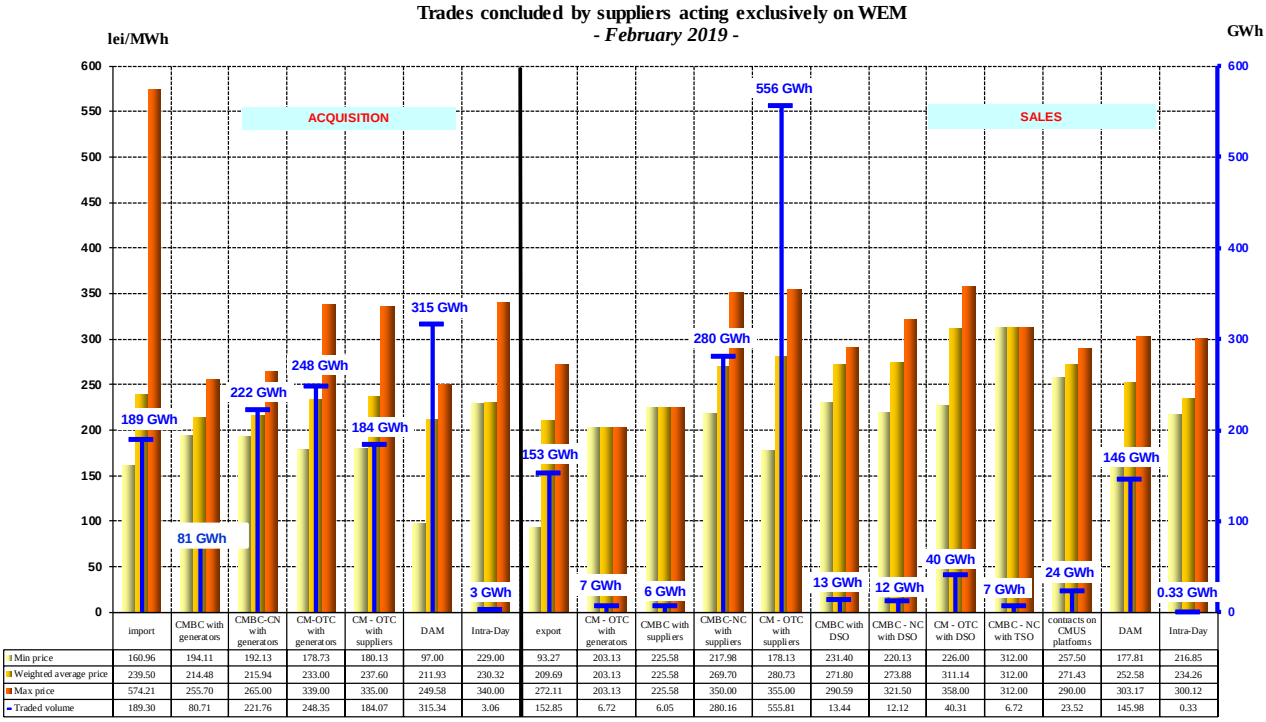
-GWh-

Structure of trades of suppliers acting exclusively on WEM	**February 2018**	**February 2019**
Buy		
Import	64.35	189.30
Contracts concluded on Opcom centralized markets, out of which:	925.95	734.88
- *on CMBC-EA with producers*	*72.87*	*80.71*
- *on CMBC-CN with producers*	*184.76*	*221.76*
- *on CM-OTC with producers*	*359.58*	*248.35*
- *on CMBC-EA with other suppliers*	*0.09*	*0.00067*
- *on CMBC-CN with other suppliers*	*26.87*	*0.00*
- *on CM-OTC with other suppliers*	*281.77*	*184.07*
DAM	*521.72**	*315.34*
ID	6.88	3.06
Sell		
Export	461.77*	152.85
Contracts concluded on Opcom centralized markets:	923.75	921.33
- *on CM-OTC with producers*	*0.00*	*6.72*
- *on CMBC-EA with suppliers*	*32.26*	*6.05*
- *on CMBC-NC with other suppliers*	*236.71*	*280.16*
- *on CM-OTC with other suppliers*	*580.81*	*555.81*
- *on CMBC-EA with DO*	*10.08*	*13.44*
- *on CMBC-CN with DO*	*63.89*	*12.12*
- *on CM-OTC with DO*	*0.00*	*40.31*
- *on CMBC-NC with TSO*	*0.00*	*6.72*
CMUS with last resort suppliers	16.80	23.52
DAM	115.46	145.98
ID	6.46	0.33

Source: Monthly reports of suppliers – Electricity Market Monitoring Unit assessment

*Note: * The differences from the February 2018 Electricity Market Monitoring Report are determined by the corrections reported by the market participants that were included in the current report.*

In addition to the data from the table above, the following graph presents the lowest, average and highest prices by categories of trades concluded by the suppliers acting exclusively on WEM (traders), in February 2019.



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

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

The following table presents aggregated data regarding the structure of acquisitions and sales on categories of markets/retail market participants, for February 2019 compared with the similar period of 2018:

-GWh -

Structure of trades of suppliers acting on REM (suppliers of last resort not included)	**February 2018**	**February 2019**
Buy		
Import	5.23	23.72
Negotiated contracts with producers	54.50	22.61
Contracts concluded on Opcom centralized markets:	1985.41	1646.12
- *on CMBC-EA with* producers	*976.46*	*637.81*
- *on CMBC-CN with* producers	*291.47*	*375.36*
- *on CM-OTC with* producers	*167.88*	*163.90*
- *on CMBC-EA with other suppliers*	*63.01*	*28.82*
- *on CMBC-CN with other suppliers*	*92.65*	*125.17*
- *on CM-OTC with other suppliers*	*393.96*	*315.06*
Negociated contracts with non-dispatchable producers (others than under Law 220/2008)*	8.25	4.37
Negociated contracts with non-dispatchable producers (amendments and additions to Law 220/2008)**	14.26	16.94
DAM	301.54***	409.44
ID	8.50	33.57

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;*

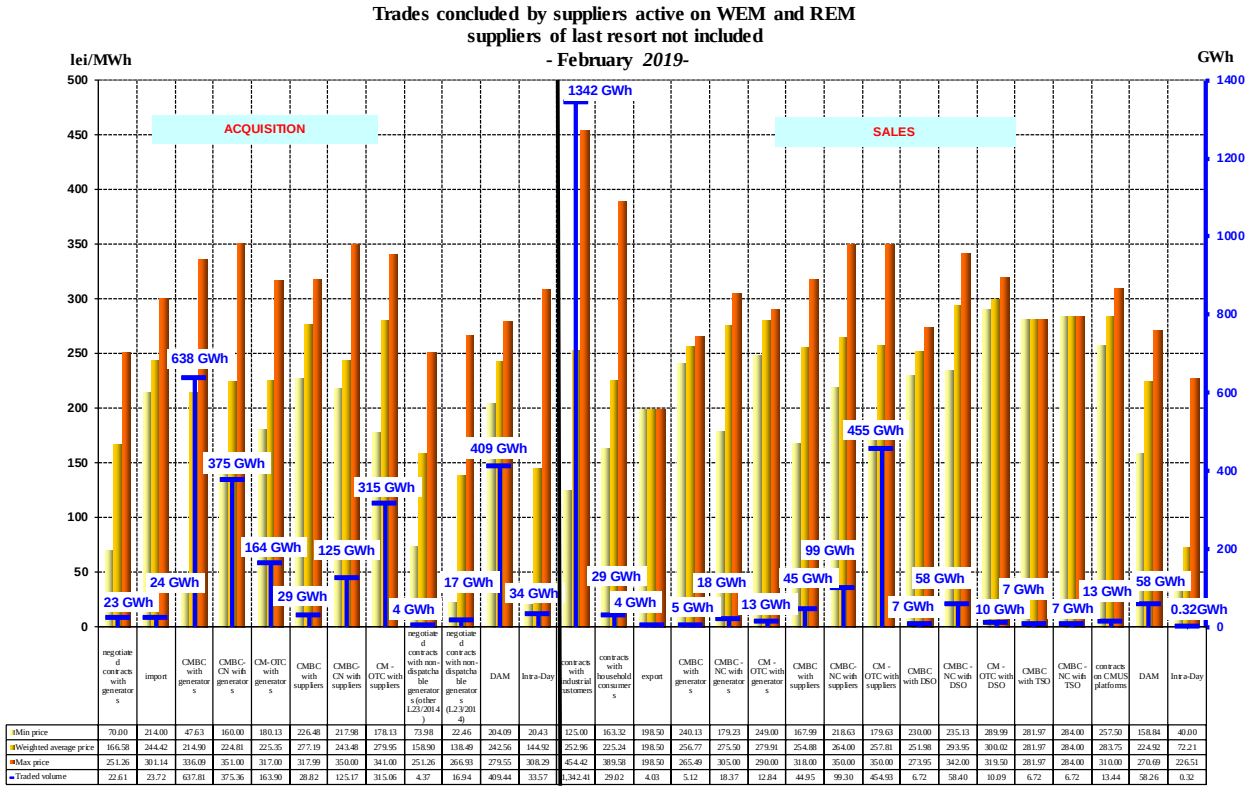
****The differences with February 2018 Electricity Market Monitoring Report are determined by the corrections reported by the market participants that were included in the current report.*

Structure of trades of suppliers acting on REM (not including suppliers of last resort)	February 2018	February 2019
Sell		
Export	42.66***	4.03
Contracts concluded on Opcom centralized markets:	860.12	724.15
- *on CMBC-EA with producers*	*8.61*	*5.12*
- *on CMBC-NC with producers*	*20.16*	*18.37*
- *on CM-OTC with producers*	*11.42*	*12.84*
- *on CMBC-EA with other suppliers*	*83.25*	*44.95*
- *on CMBC-NC with other suppliers*	*121.62*	*99.30*
- *on CM-OTC with other suppliers*	*475.51*	*454.93*
- *on CMBC-EA with DO*	*46.96*	*6.72*
- *on CMBC-NC with DO*	*73.30*	*58.40*
- *on CMBC-OTC with OD*	*0.00*	*10.09*
- *on CMBC-EA with TSO*	*19.29*	*6.72*
- *on CMBC-NC with TSO*	*0.00*	*6.72*
CMUS with last resort suppliers	0.00	*13.44*
DAM	173.86***	58.26
ID	1.84	0.32
Household customers	21.01	29.02
Non-household customers	1291.98***	1342.41

Source: Monthly reports of the competitive suppliers – Electricity Market Monitoring Unit assessment

****The differences with February 2018 Electricity Market Monitoring Report are determined by the corrections reported by the market participants that were included in the current report.*

The breakdown by source/destination of the volumes traded, the average and extreme prices (highest and lowest) for the month of February 2019, for suppliers active on the REM and WEM are shown in the following graph:



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

Suppliers of last resort

The structure of trades on the WEM of suppliers of last resort (made before the delivery interval) to supply final consumers that fall under the Universal Service regime (optional/obligated suppliers of last resort) and last resort regime (obligated suppliers of last resort) is shown in the table below for February 2019 compared with the similar period of 2018:

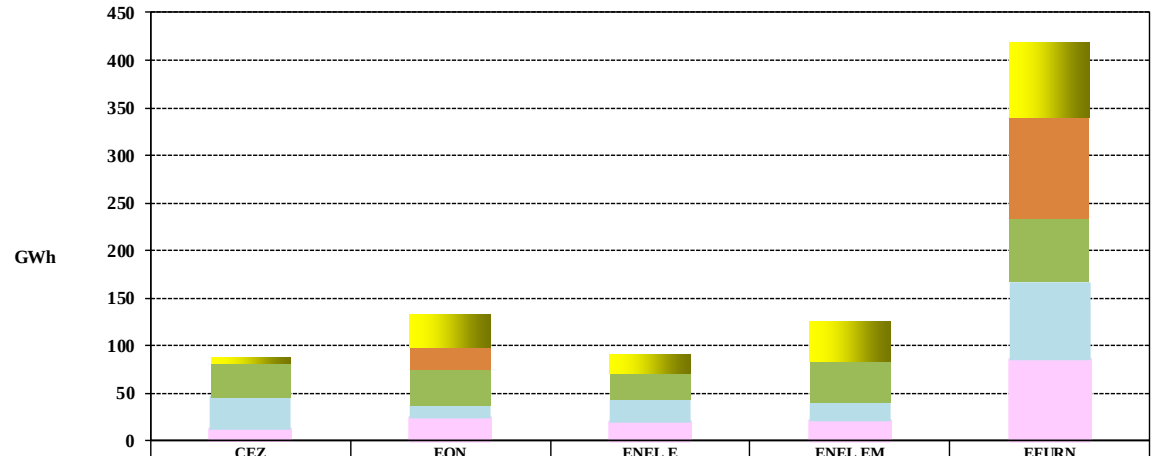
- GWh -

Structure of trades concluded by suppliers of last resort to supply final clients (Universal Service, last resort regime and inactive)	**February 2018**	**February 2019**
Negociated contracts with non-dispatchable producers (changes and additions to Law 220/2008)*	0.01	0.007
Contracts concluded on Opcom centralized markets:	471.79	522.77
- *contracts on CMBC-EA with producers*	26.05	*168.31*
- *contracts on CMBC-CN with producers*	*70.70*	*23.66*
- *contracts on CM-OTC with producers*	*11.95*	*33.89*
- *contracts on CMBC-EA with other suppliers*	*33.87*	*12.87*
- *contracts on CMBC-CN with other suppliers*	*155.50*	*105.93*
- *contracts on CM-OTC with other suppliers*	*173.71*	*178.10*
- *contract with prosumers*	-	0.0006
Centralized market for universal service:	401.24	167.99
- *contracts on CMUS with producers*	*384.44*	*131.03*
- *contracts on CMUS with suppliers*	*16.80*	*36.96*
Transactions concluded on DAM:	137.54	114.60
- *buy*	*162.09*	*162.33*
- *sell*	*24.55*	*47.73*
Transactions concluded on ID:	0.00	0.0006
- *buy*	*0.00*	*0.0006*
- *sell*	*0.00*	*0.00*

Note negotiated trades with non-dispatchable producers that fall under the provisions of Law no.184/2018 for the approval of EGO no. 24/2017 regarding the amendment and supplementation of Law no. 220/2008*

The structure of the electricity bought by the suppliers of last resort for the final consumers supplied under Universal Service and last resort regime for February 2019 is presented in the following graph:

Structure of trades made by suppliers of last resort to supply final clients (Universal Service, last resort regime and inactive clients)
- FEBRUARY2019 -



	CEZ	EON	ENEL E	ENEL EM	EFURN
Buy on CMBC -EA	7	34	20	41	79
Buy on CMBC -CN	0	23	0	0	106
Buy on CM -OTC	35	38	28	44	67
Buy on CMSU	34	13	22	18	81
Buy on DAM	12	24	20	21	85

Source: Monthly reports of the suppliers of last resort – Electricity Market Monitoring Unit assessment

Starting with 1 July 2018, according to the provisions of *The Regulation for the competitive selection of suppliers of last resort*, approved by the ANRE Order no. 26/2018, ANRE has designated as obligated suppliers of last resort for each network area until 30 June 2022, E.ON Energie Romania SA, Enel Energie SA, Enel Energie Muntenia SA, Electrica Furnizare SA and CEZ Vânzare SA, and, as optional supplier of last resort until 30 June 2019 – Enel Energie Muntenia SA (for the regions of Moldova, Oltenia, North Muntenia, Northern Transylvania and South Transylvania).

At the same time, starting with 1 July 2018, in accordance with the *Methodology for setting the calculation method and the conditions for approving prices applied by the obligated suppliers of last resort and the optional suppliers of last resort to the final customers* (approved by ANRE Order no. 39/2018), obligated and optional suppliers of last resort apply in the final customer invoices the final prices approved by ANRE for each network area and application period, as follows:

- obligated suppliers of last resort apply the price for Universal Service (to households and non-households that benefit of Universal Service) and, based on its multiplication with an increase coefficient, the price for inactive clients (non-households that did not use their eligibility rights and do not fulfill the conditions for Universal Service or did not request to be supplied under the Universal Service regime);
- optional suppliers of last resort apply the Universal Service price (to households and non-households that benefit of Universal Service), determined by applying a discount on the Universal Service price applied by the obligated supplier.

At the same time, the obligated suppliers of last resort determine and apply the last resort price to the non-household final customers supplied under the last resort regime, under the conditions stipulated by the *Methodology* approved by Order no. 39/2018.

On the date of entry into force of ANRE President Order no. 27/2018 for the approval of the *Regulation for organizing and conducting the auctions on the centralized market for the universal service*, the conditions of participation of suppliers of last resort to CMUS for the purchase of electricity to cover the consumption of final customers supplied under US regime were changed, the participation in the auction sessions becoming, thus, voluntary.

The structure of electricity trades of suppliers of last resort on the REM (made before the delivery interval) for Universal Service supply is presented in the following table for February 2019, compared with the similar period of 2018:

-GWh-

Structure of trades of suppliers of last resort for universal service supply (obligated/optional supplier of last resort)	**February 2018**		**February 2019**	
	Quantity [GWh]	**Average price [lei/MWh]**	**Quantity [GWh]**	**Average price [lei/MWh]**
Contracts concluded on Opcom centralized markets:	414.21	235.70	476.25	270.80
- *on CMBC-EA with producers*	*23.95*	234.37	*142.61*	*256.69*
- *on CMBC-CN with producers*	*32.68*	*228.42*	*23.52*	*220.04*
- *on CM-OTC with producers*	*11.10*	*234.09*	*26.88*	*282.00*
- *on CMBC-EA with other suppliers*	*33.60*	*234.18*	*12.77*	*228.68*
- *on CMBC-CN with other suppliers*	*151.91*	*236.51*	*103.66*	*271.40*
- *on CM-OTC with other suppliers*	*160.97*	*175.57*	*166.81*	*291.08*
- contracts with prosumers	-	-	0.0006	224.78
Contracts concluded on CMUS:	401.24	249.67	167.99	293.88
- contracts on CMUS with producers	*384.44*	*249.86*	*131.03*	*298.95*
- contracts on CMUS with other suppliers	*16.80*	*245.40*	*36.96*	*275.91*
Trades concluded on DAM:	116.47	218.92	*95.68*	314.21
- buy	*138.98*	*203.40*	*142.63*	*270.87*
- sell	*22.51*	*123.07*	*46.96*	*182.56*
TOTAL	**931.92**	**239.62**	**739.92**	**281.65**

The electricity trades structure on the WEM of suppliers of last resort (made before the delivery interval), for supplying electricity to inactive clients in February 2019 is shown in the following table:

- GWh -

Structure of trades of suppliers of last resort to supply inactive clients	**February 2019**	
	Quantity [GWh]	**Average price [lei/MWh]**
Negociated contracts with non-dispatchable producers (changes and additions to Law 220/2008)*	0.007	68.13
Contracts concluded on centralized contracts markets:	45.11	275.33
- *on CMBC-EA with producers*	*25.01*	*284.63*
- *on CMBC-CN with producers*	*0.14*	*237.76*
- *on CM-OTC with producers*	*6.87*	*262.72*
- *on CMBC-EA with other suppliers*	*0.10*	*203.20*
- *on CMBC-CN with other suppliers*	*2.27*	*265.85*
- *on CM-OTC with other suppliers*	*10.72*	*264.89*
Trades concluded on DAM:	*17.01*	267.59
- buy	*17.74*	*264.31*
- sell	*0.73*	*187.61*
TOTAL	**62.13**	**273.19**

** negotiated trades with non-dispatchable producers that fall under the provisions of Law no.184/2018 for the approval of EGO no. 24/2017 regarding the amendment and supplementation of Law no. 220/2008*

The following table presents the electricity acquisition structure of suppliers of last resort (before the delivery interval) corresponding to the competitive REM for February 2019, compared to the similar period of 2018:

-GWh-

Structure of trades made by suppliers of last resort for the competitive segment of REM	**February 2018**	**February 2019**
Buy		
Contracts concluded on centralized contracts markets:	1127.94	1202.48
- *on CMBC-EA with producers*	*400.25*	429.65
- *on CMBC-CN with producers*	*211.50*	*162.67*
- *on CM-OTC with producers*	*164.46*	*111.66*
- *on CMBC-EA with other suppliers*	*18.54*	*9.31*
- *on CMBC-CN with other suppliers*	*83.32*	*148.36*
- *on CM-OTC with other suppliers*	*249.88*	*340.83*
Negociated contracts with non-dispatchable producers (Law 220/2008)**	3.87	*6.91*
Negociated contracts with non-dispatchable producers (amendments and additions to Law 220/2008)*	10.25	*20.88*
Trades on DAM	252.53	315.18
Trades on ID	0.03	0.0009
Sell		
Contracts concluded on centralized contracts markets:	43.01	20.78
- *on CM-OTC with other suppliers*	*43.01*	*7.32*
- *on CMBC-OTC with DO*	*0.00*	*13.46*
Trades on DAM	11.72	2.74
Households	177.75***	332.13
Non-households	1170.08	1187.38

Note negotiated trades with non-dispatchable producers that fall under the provisions of Law no.184/2018 for the approval of EGO no. 24/2017 regarding the amendment and supplementation of Law no. 220/2008*

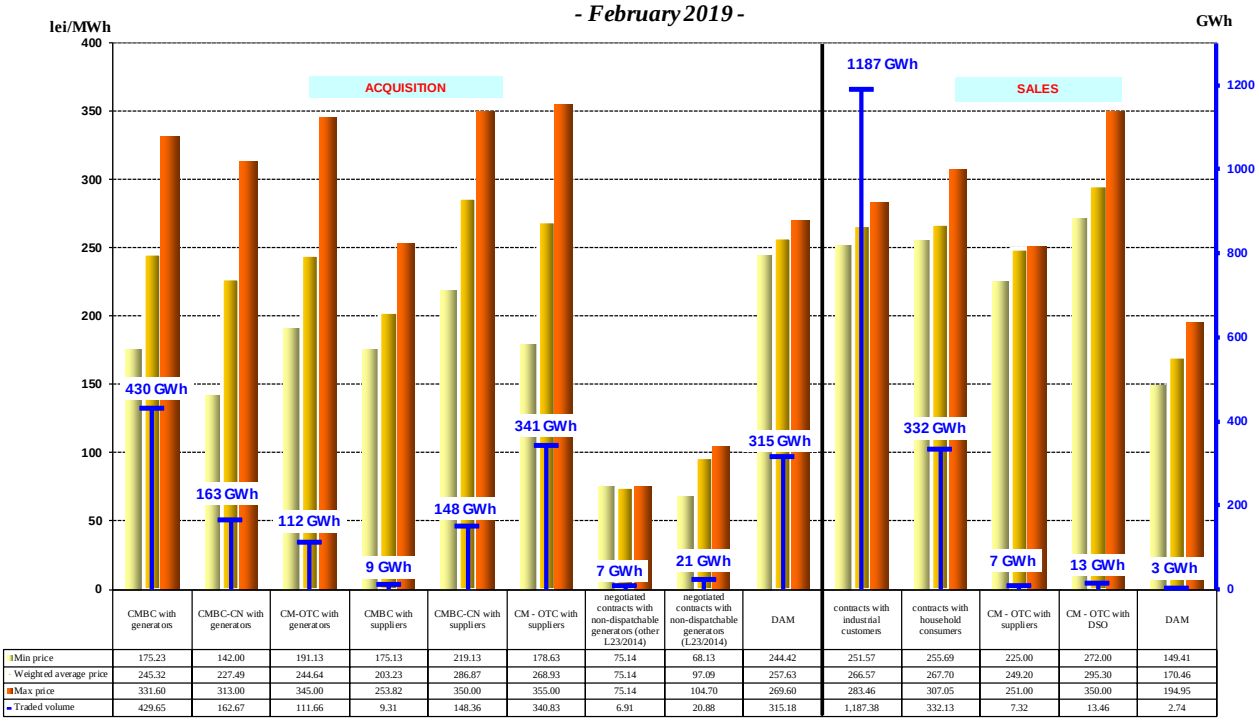
*** negotiated trades concluded with non-dispatchable producers that comply with the requirements of Law no.184/2018 for the approval of EGO no. 24/2017 regarding the amendment and supplementation of the Law no. 220/2008*

****The differences with February 2018 Electricity Market Monitoring Report are determined by the corrections reported by the market participants that were included in the current report.*

Source: Monthly reports of the suppliers of last resort – Electricity Market Monitoring Unit assessment

The structure by types of sources/destinations of the traded volumes and of the average prices of the suppliers of last resort on the competitive segment of REM is presented in the following graph for February 2019:

Trades made by suppliers of last resort for the REM - competitive segment
- February 2019 -



	CMBC with generators	CMBC-CN with generators	CM-OTC with generators	CMBC with suppliers	CMBC-CN with suppliers	CM - OTC with suppliers	negotiated contracts with non-dispatchable generators (other L.23/2014)	negotiated contracts with non-dispatchable generators (L.23/2014)	DAM	contracts with industrial customers	contracts with household consumers	CM - OTC with suppliers	CM - OTC with DSO	DAM
Min price	175.23	142.00	191.13	175.13	219.13	178.63	75.14	68.13	244.42	251.57	255.69	225.00	272.00	149.41
Weighted average price	245.32	227.49	244.64	203.23	286.87	268.93	75.14	97.09	257.63	266.57	267.70	249.20	295.30	170.46
Max price	331.60	313.00	345.00	253.82	350.00	355.00	75.14	104.70	269.60	283.46	307.05	251.00	350.00	194.95
Traded volume	429.65	162.67	111.66	9.31	148.36	340.83	6.91	20.88	315.18	1,187.38	332.13	7.32	13.46	2.74

Source: Monthly reports of the suppliers of last resort – Electricity Market Monitoring Unit assessment

Main distribution operators

The following table shows the electricity acquisition structure of the main distribution operators (before the delivery interval), for covering the distribution network losses, for February 2019 compared with the similar previous period:

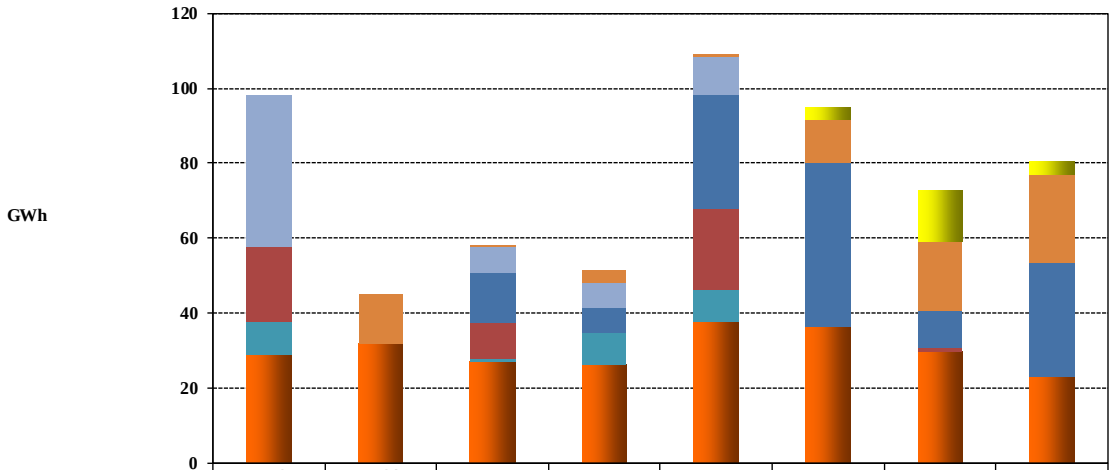
- GWh -

Structure of trades	**February 2018**	**February 2019**
Contracts concluded on centralized contracts markets:	499.75	367.52
- CMBC-EA with producers	*221.48*	*134.34*
- CMBC-CN with producers	*84.04*	*52.28*
- CM-OTC with producers	*0.00*	*26.37*
- CMBC-EA with suppliers	*57.04*	*20.16*
- CMBC-CN with suppliers	*137.19*	*70.52*
- CM-OTC with suppliers	*0.00*	*63.86*
Trades concluded on ID	0.08	0.16
- buy	*0.08*	*0.16*
- sell	*0.00*	*0.00*
Trades concluded on DAM:	133.75	241.54
- buy	*136.38*	*241.54*
- sell	*2.63*	*0.00*

Source: Monthly reports of the distribution operators – Electricity Market Monitoring Unit assessment

The electricity bought in order to cover network losses is presented in detail in the following graph, for February 2019:

Structure of electricity trades of distribution operators to cover distribution network losses
FEBRUARY 2019



	ENERGIE OLTENIA	DELGAZ GRID	ENEL-B	ENEL-D	ENEL-M	MND	TRN	TRS
Buy on CMBC-EA from suppliers	0	0	0	0	0	3	13	3
Buy on CMBC-NC from suppliers	0	13	0	3	1	11	18	24
Buy on CM-OTC from suppliers	40	0	7	7	10	0	0	0
Buy on CMBC-EA from generators	0	0	14	7	30	44	10	30
Buy on CMBC-NC from generators	20	0	9	0	22	0	1	0
Buy on CM-OTC from generators	9	0	1	8	8	0	0	0
Buy on DAM	29	32	27	26	38	36	30	23

Source: Monthly reports of the distribution operators – Electricity Market Monitoring Unit assessment

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

According to the economic theory, the following market concentration indicators may be defined:

- HHI, Herfindahl-Hirschman Index = sum of square market shares (%) of market participants:

  The indicator values signify:
  HHI < 1000 — non-concentrated market;
  1000 < HHI < 1800 — moderately concentrated market;
  HHI > 1800 — highly concentrated market.

- C1 = market share of the main market participant (%)

  The indicator values signify:
  C1>20% — alarming concentrated market;
  C1>40% — suggests the existence of a dominant position;
  C1>50% — cleary indicates a dominant position.

- C3 = sum of market shares of the three main market participants (%):

  The indicator values signify:
  40% < C3 < 70% — moderately concentrated market;
  C3 > 70% — highly concentrated market.

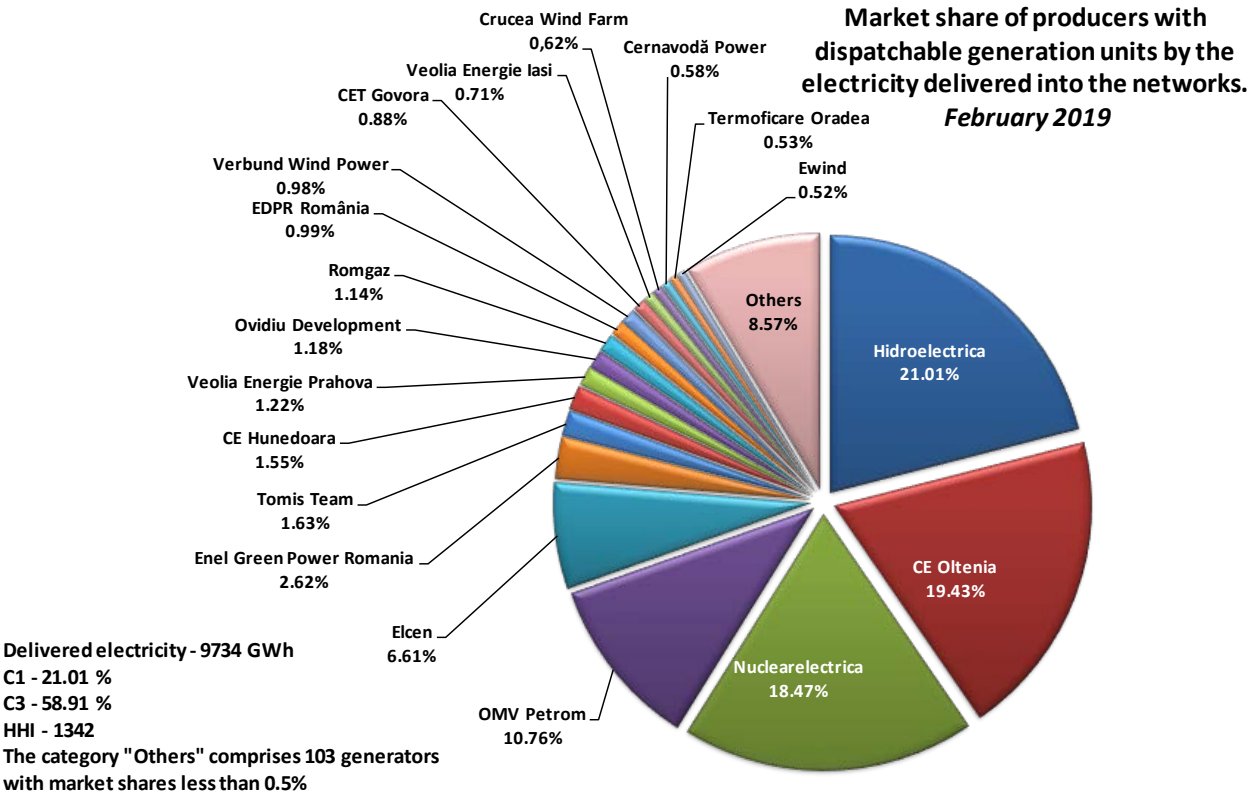
These concentration indicators may be defined for the en5tire wholesale market (electricity market or ancillary services market) or for each of its components where direct competition takes place.

Concentration indicators and market shares of electricity producers

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

The following table presents the concentration indicators of electricity generation for January 2019 and the graph presents the market shares of electricity producers with dispatchable generation units, on all the wholesale market segments, determined based on the electricity delivered into the networks.

Concentration indicators - February 2019 -	C1 (%)	C3 (%)	HHI
Value	23.30	60.58	1407



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

A component of the WEM on which direct competition between generators is displayed is the Balancing Market (BM). The values of concentration indicators on this market are determined based on effectively delivered electricity, for each type of regulation defined within the Commercial Code and they are presented in the following table for February 2019:

Structure/concentration indicators of BM - February 2019 -	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
C1 - % -	73	71	59	40	0	0
C3 - % -	99	99	88	100	0	0
HHI	5776	5505	3995	3593	0	0

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

The acquisition of the necessary ancillary services in order to maintain the operational safety of the National Power System in February 2019 was done both through competitive and regulated procurement.

Under Government Decision no. No 773/2018 and EGO no. 26/2018 adopting measures for the safety and security of power supply of the NPS, ANRE President Decision no. 1911/2018 was approved, regarding the acquisition at a regulated price for the period from 1 December 2018 to 31 March 2019 from the producer Electrocentrale Galati SA of an amount of ancillary services representing slow tertiary reserve for a capacity of 70 MW, and also ANRE President Decision no. 2047/2018 regarding the acquisition at a regulated price for the period 1 January to 31 December 2019 from the producer CE Hunedoara SA of an amount of ancillary services representing slow tertiary reserve for a capacity of 400 MW. In addition, CNTEE Transelectrica S.A. organized auctions to buy reserves on all types of regulation.

In the following table, the concentration indicators by types of reserves (secondary, fast tertiary and slow tertiary) are shown.

Concentration indicators on Ancillary Services Market - February 2019 -		**Secondary reserve**	**Fast tertiary reserve**	**Slow tertiary reserve**
regulated component	**contracted quantity (h*MW)**	**-**	**-**	**315840**
	C1 (%)	**-**	**-**	**85.1**
	C3 (%)	**-**	**-**	**100.0**
competitive component	**contracted quantity (h*MW)**	**316400**	**464800**	**201600**
	C1 (%)	**75.3**	**80.5**	**50.0**
	C3 (%)	**100.0**	**91.0**	**100.0**
	HHI	**6215**	**6562**	**4828**

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

Concentration Indicators for the Day Ahead Market

The Day Ahead Market (DAM) is a voluntary market opened for both buying and selling, for all licensees and for foreign economic operators who have been granted by ANRE Decision the confirmation of the right to perform the electricity supply or trading activity in Romania, under the conditions established by the applicable regulations.

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

Concentration indicators on DAM - February 2019 -	**C1 (%)**	**C3 (%)**	**HHI**
Selling	**22.84**	**50.69**	**1044**
Buying	**16.41**	**31.74**	**545**

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

7. Price evolution on wholesale electricity market

Starting with November 2014, the Romanian DAM is coupled with the spot markets from Hungary, Slovakia and the Czech Republic based on the price coupling mechanism, project known as 4M MC. This coordinated corelation mechanism uses an unique pan-European method for price coupling of regions (called Price Coupling of Regions - PCR-initiative) in order to fulfil the harmonization of national european markets and create the internal european electricity market. The functioning of these spot markets is based on the coupling algorithm recommended by ACER (Euphemia) and its goal is maximizing the social welfare of the entire area of the coupled markets.

The coupling mechanism is developed through the coupling operators OTE-Czech Republic, EPEX Spot (operating as services supplier for OKTE-Slovakia and HUPX-Hungary) and, from 17 January 2017, OPCOM-Romania (who became PCR member starting with 1 January 2016). After succesfully 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 are acting as *Coordinators* on a monthly rotation basis.

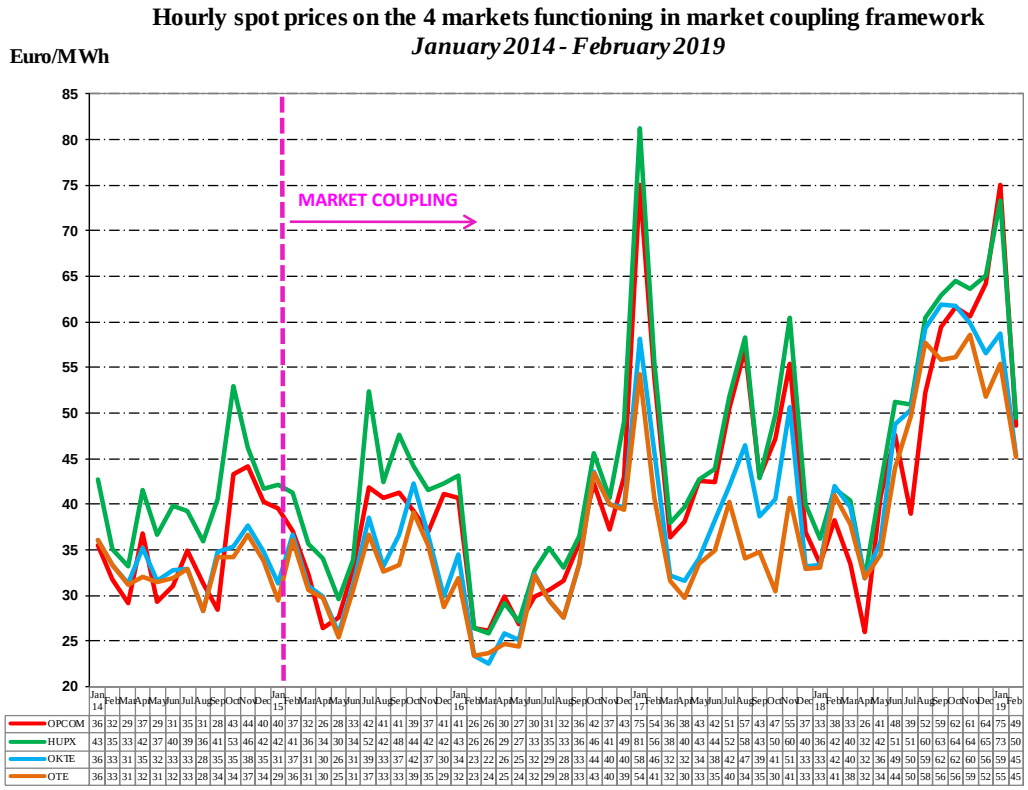
According to EU legislation, coordinated cross-border capacity allocation is under the governance of the TSOs from the 4 countries and the allocation model used is that of implict allocation on DAM of the available interconnection capacity.

To better meet the purpose of the DAM coupling mechanism, respectively the electricity transfer at the level and direction determined by the known conditions of generation and consumption and based on the coupled markets prices - starting with 1 January 2016, TSO operators 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, reserved capacity for DAM allocation is determined as a difference between available transmission capacity (ATC) calculated monthly for each subperiod and 80% from the lowest ATC value resulted for the subperiods of the respective month, plus the capacity allocated at the annual auction, returned to TSO.

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

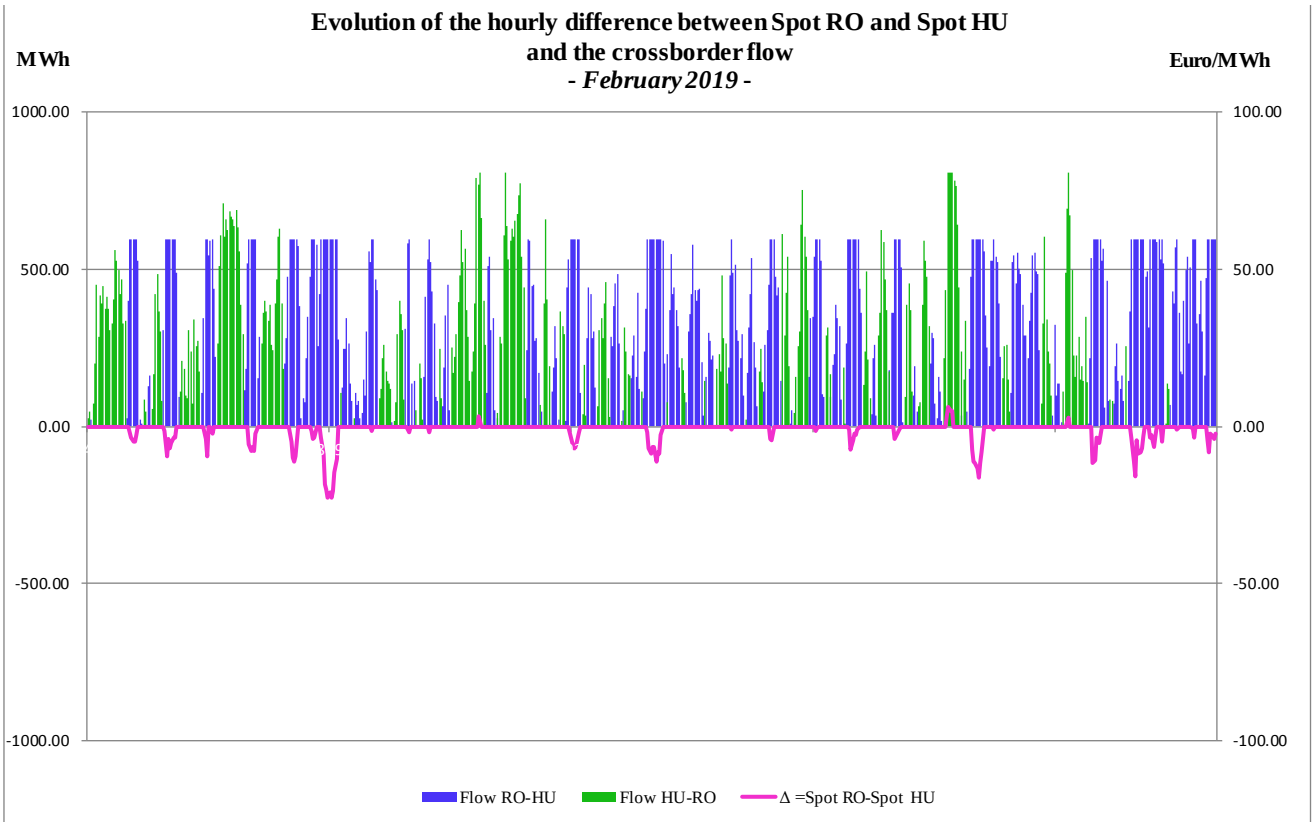
The next graph presents the monthly average spot prices of the 4 markets involved in the 4M MC coupling mechanism starting with 1 January 2014, before and after the onset of coupled operation.



	Jan 14	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 15	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 16	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 17	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 18	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 19	Feb
OPCOM	36	32	29	37	29	31	35	31	28	43	44	40	40	37	32	26	28	33	42	41	41	39	37	41	41	26	26	30	27	30	31	32	36	42	37	43	75	54	36	38	43	42	51	57	43	47	55	37	33	38	33	26	41	48	39	52	59	62	61	64	75	49
HUPX	43	35	33	42	37	40	39	36	41	53	46	42	42	41	36	34	30	34	52	42	48	44	42	42	43	26	26	29	27	33	35	33	36	46	41	49	81	56	38	40	43	44	52	58	43	50	60	40	36	42	40	32	42	51	51	60	63	64	64	65	73	50
OKTE	36	33	31	35	32	33	33	28	35	35	38	35	31	37	31	30	26	31	39	33	37	42	37	30	34	23	22	26	25	32	29	28	33	44	40	40	58	46	32	32	34	38	42	47	39	41	51	33	33	42	40	32	36	49	50	59	62	62	60	56	59	45
OTE	36	33	31	32	31	32	33	28	34	34	37	34	29	36	31	30	25	31	37	33	33	39	35	29	32	23	24	25	24	32	29	28	33	43	40	39	54	41	32	30	33	35	40	34	35	30	41	33	33	41	38	32	34	44	50	58	56	56	59	52	55	45

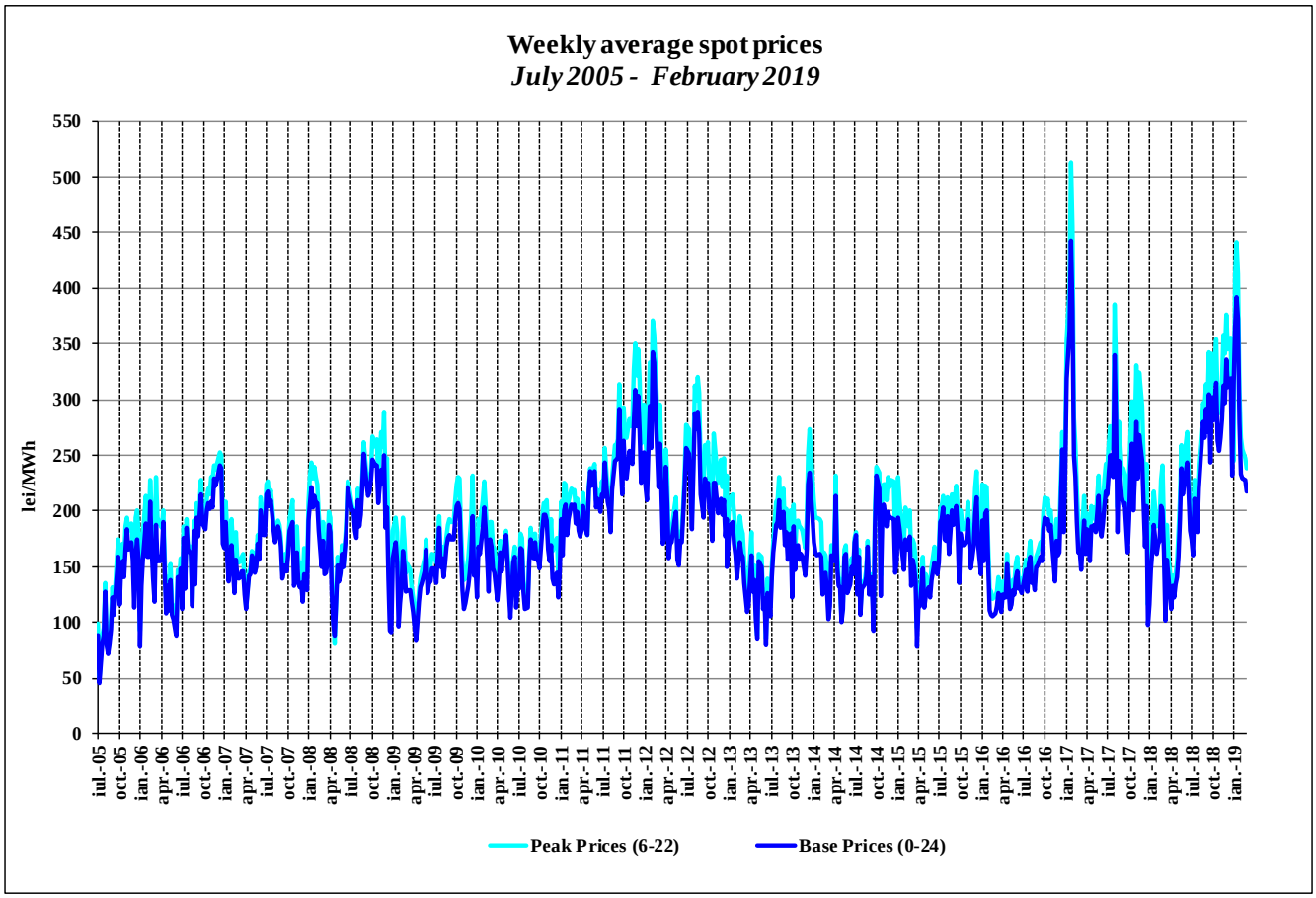
Source: Monthly reports of Opcom SA – Electricity Market Monitoring Unit assessment

Next, the following graph presents the hourly evolution of the difference between the closing prices of the coupled DAM on the Romanian and Hungarian area, correlated with the cross border flows on the Romanian – Hungarian border, on both directions, for the month of February 2019.



Source: Data published by Opcom SA – Electricity Market Monitoring Unit assessment

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



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

On Romania's borders with Hungary, Bulgaria and Serbia, interconnection capacity allocation is done through market mechanisms, coordinated bilaterally on both directions, for 100% of the allocation capacity through long and short term auctions.

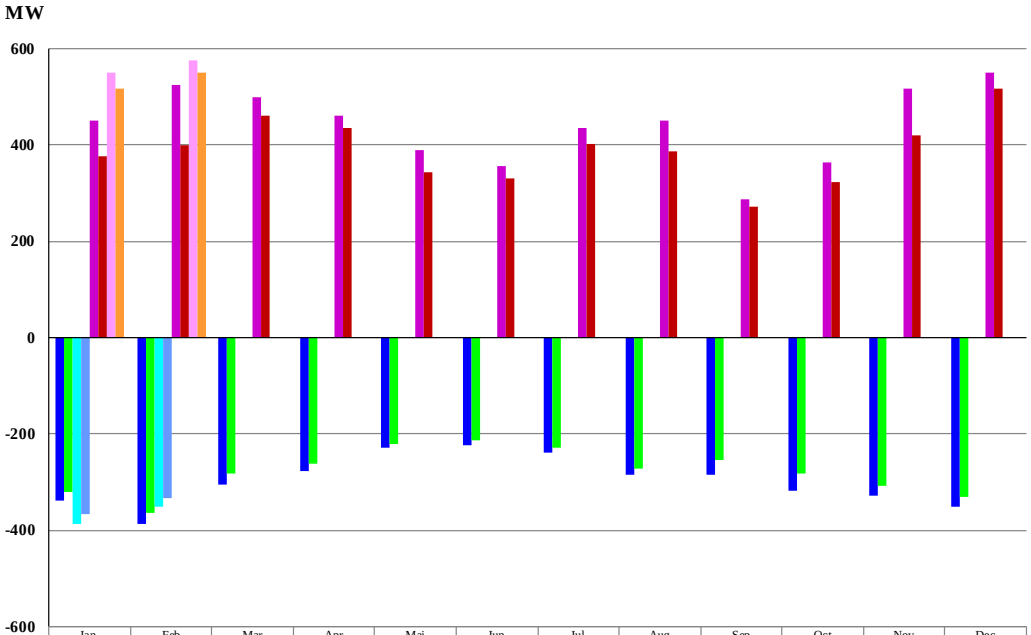
On the border with Serbia, the allocation is made through auctions organized by CNTEE Transelectrica SA for annual, monthly and intraday allocation, and through daily auctions organized by the EMS (Serbian TSO), in accordance with the agreements signed between the two TSOs.

On the border with Ukraine the allocation is made by CNTEE Transelectrica SA through auctions for annual and monthly allocation, the use of interconnection capacities being conditional on the written agreement of Ukrenergo (Ukraine TSO).

Starting with 2019, on the borders with Bulgaria and Hungary, the auctions for the annual and monthly allocation are made by the Joint Allocation Office (JAO), which has become, starting with 1 October 2018, the Single Allocation Platform (SAP) that organizes auctions for cross-border capacity allocation for all European TSOs. Daily auctions on the border with Bulgaria are organized by CNTEE Transelectrica SA.

The following chart shows the monthly average values of the net transfer capacity (NTC) of the NPS with the aforementioned neighboring 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 capacities allocated on long term auctions 2018-2019



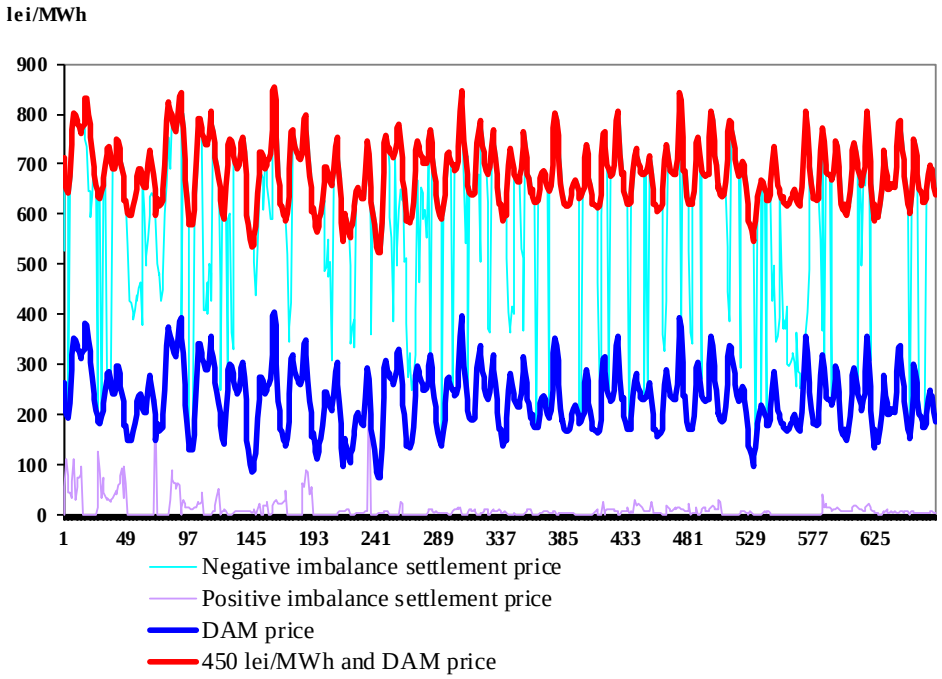
	Ian	Feb	Mar	Apr	Mai	Iun	Iul	Aug	Sep	Oct	Nov	Dec
NTC export 2018 (MW)	-338	-388	-306	-277	-228	-224	-240	-286	-285	-318	-328	-350
LT export allocation 2018 (MW)	-320	-364	-281	-262	-220	-214	-228	-272	-253	-282	-309	-330
NTC export 2019 (MW)	-388	-350										
LT export allocation 2019 (MW)	-367	-332										
NTC import 2018 (MW)	450	525	500	462	388	355	434	450	287	363	517	550
LT import allocation 2018 (MW)	376	400	461	434	343	331	401	387	271	323	419	518
NTC import 2019 (MW)	550	575										
LT import allocation 2019 (MW)	518	550										

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

In order to cover the differences between planned/contracted values of consumption and generation and their values in real time, the system operator (CNTEE Transelectrica SA) operates the balancing market (BM), ”buying” or "selling" electricity at prices determined by the merit order of dispatchable generators offers. The market participants generating imbalances, grouped in BRPs, have to bear the imbalances costs. For the negative imbalances, they have to pay the price resulting from the upward offers accepted on the BM, while for the positive imbalances they receive the price resulting from the downward offers accepted on the BM.

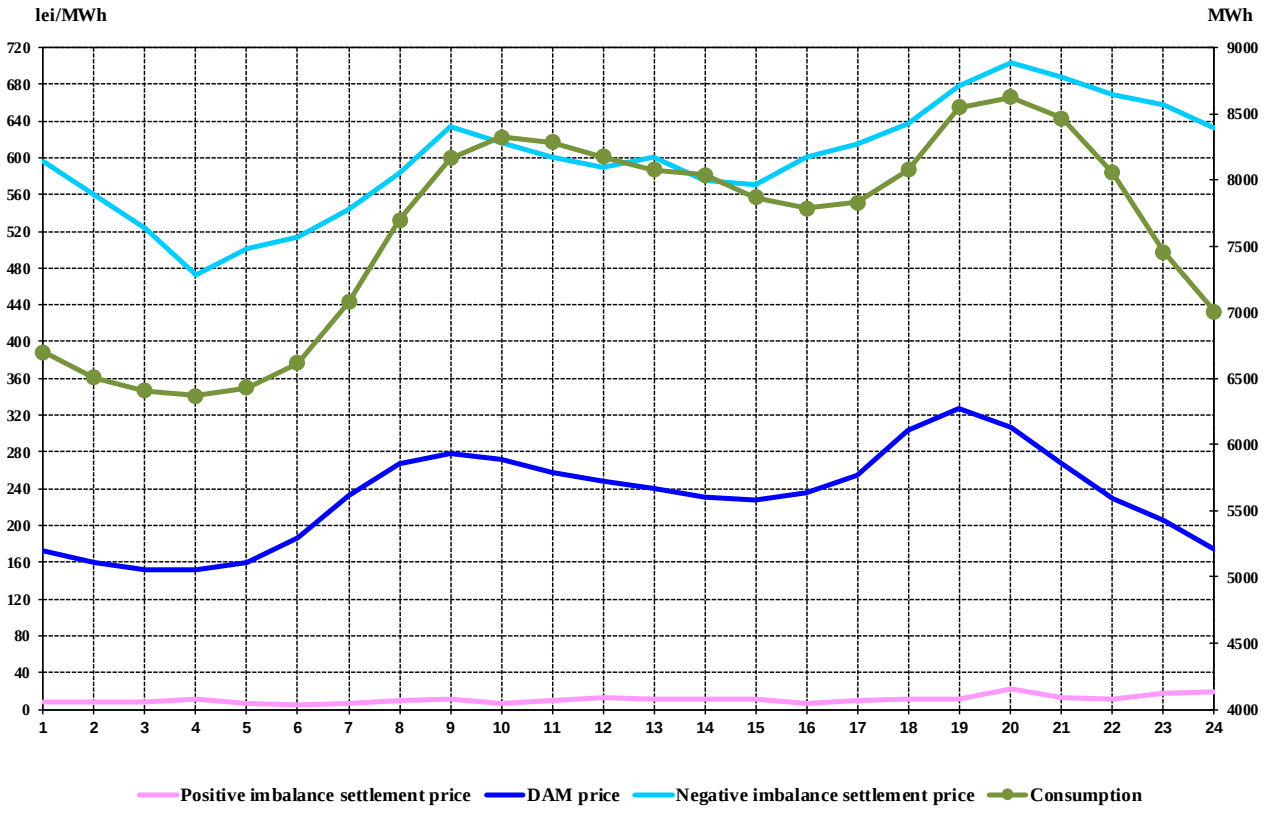
The settlement prices (market closing price on DAM, negative imbalance price and positive imbalance price) are represented on the same graph, thus showing the two markets correlation degree. In the first graph the settlement prices are expressed in hourly values, in the second graph in hourly average values compared to internal consumption, and in the last graph in average monthly values.

February 2019

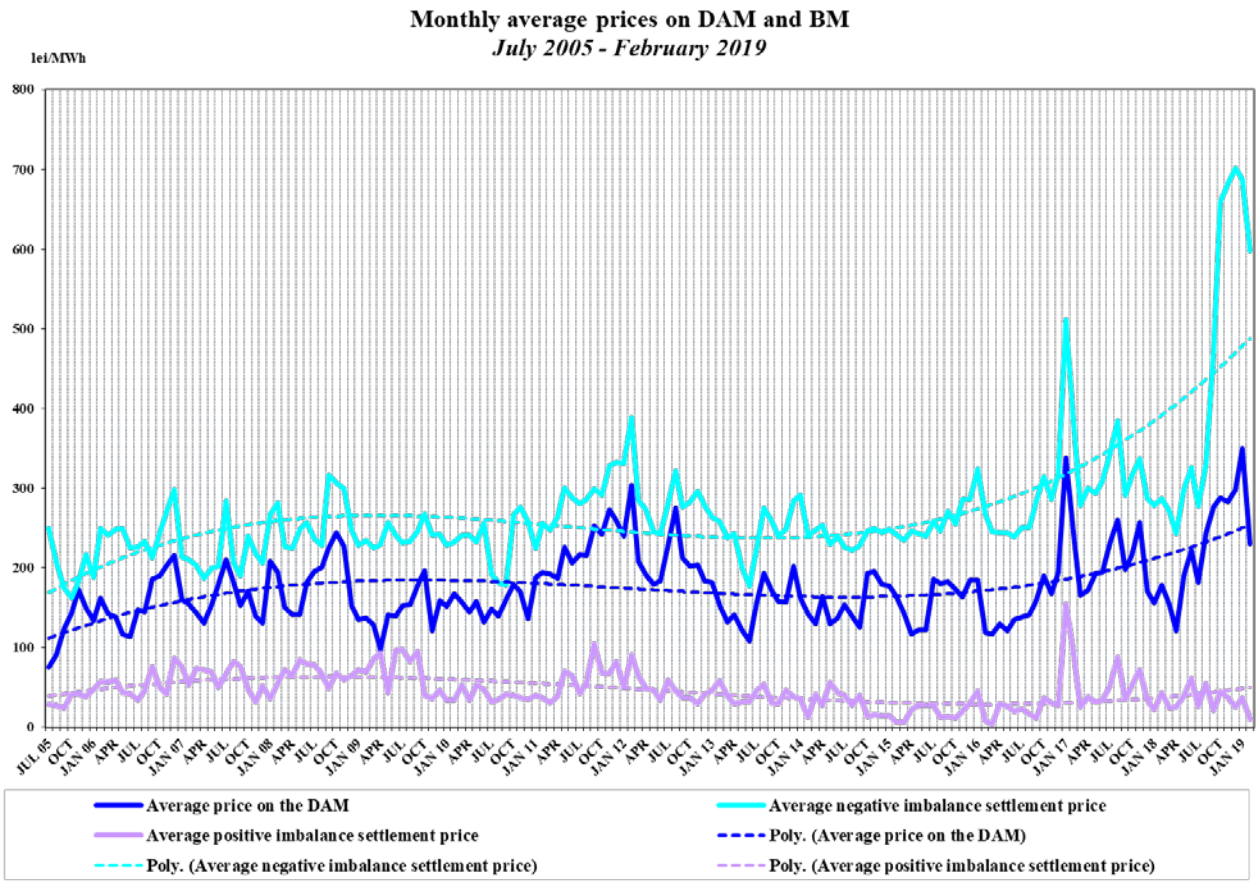


Source: Daily/monthly reports of Opcom SA – Electricity Market Monitoring Unit assessment

Hourly average settlement prices and internal consumption
February 2019



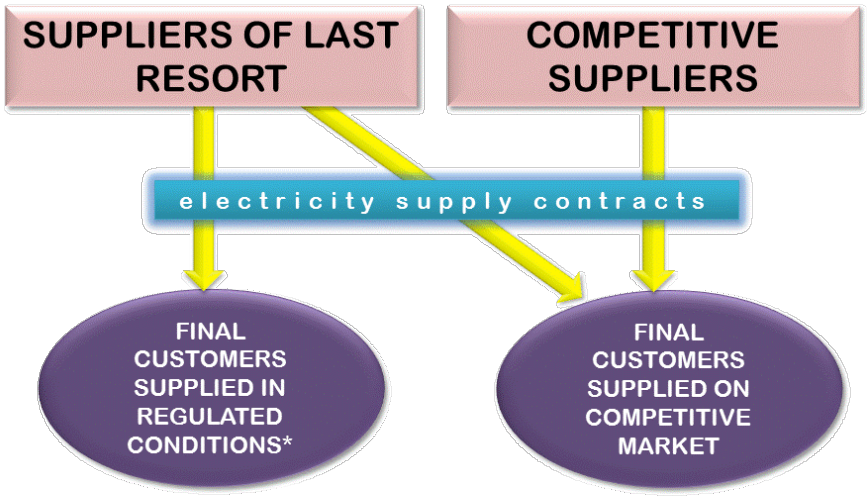
Source: Monthly reports of Opcom SA and CNTEE Transelectrica SA – Electricity Market Monitoring Unit assessment



Source: Monthly/daily reports of Opcom SA – Electricity Market Monitoring Unit assessment

III. RETAIL ELECTRICITY MARKET

1. Structure of the retail electricity market

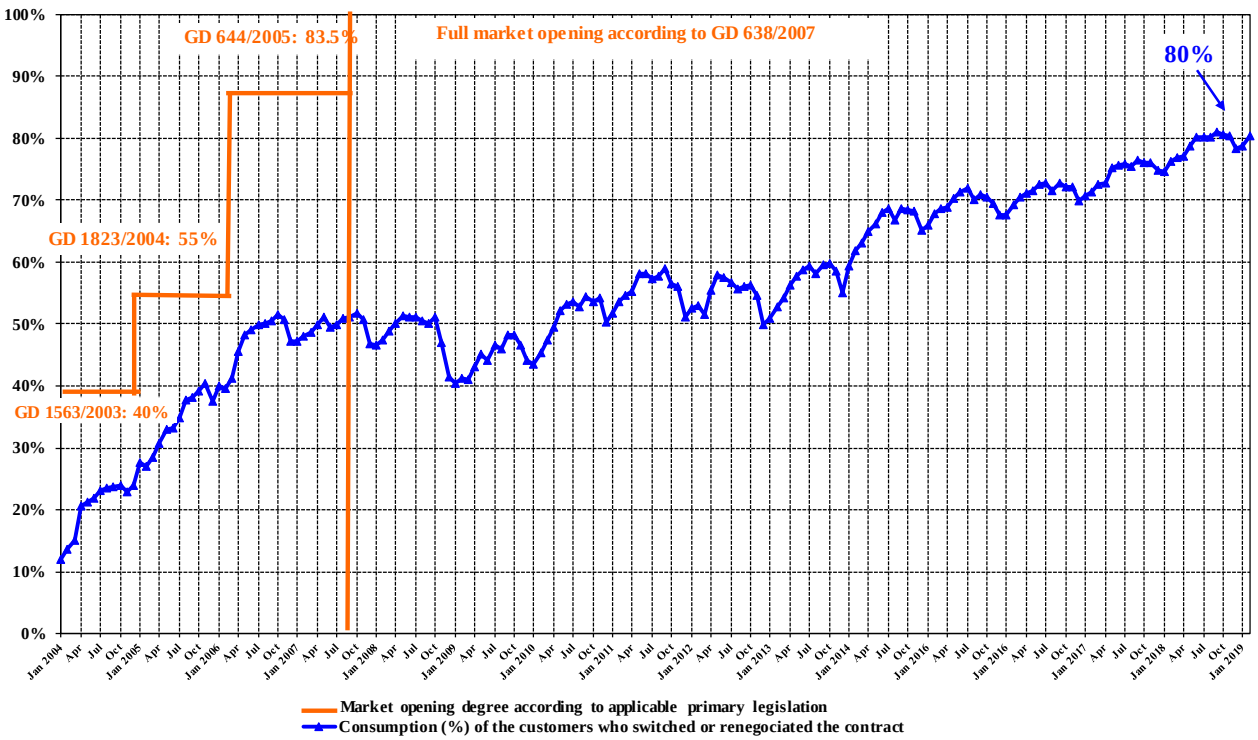


* according to art. 53 (2) and art. 55 (1) from Electricity and Gas Law no. 123/2012

2. Electricity market opening degree

The following graph contains the quota of the consumption (from total consumption) of the customers who switched their supplier or renegotiated their contracts with the suppliers operating on the regulated market, between January 2004 – February 2019. The values presented are cumulated from the beginning of the market opening process and are presented monthly:

Evolution of the opening degree of the electricity market
January 2004 - February 2019

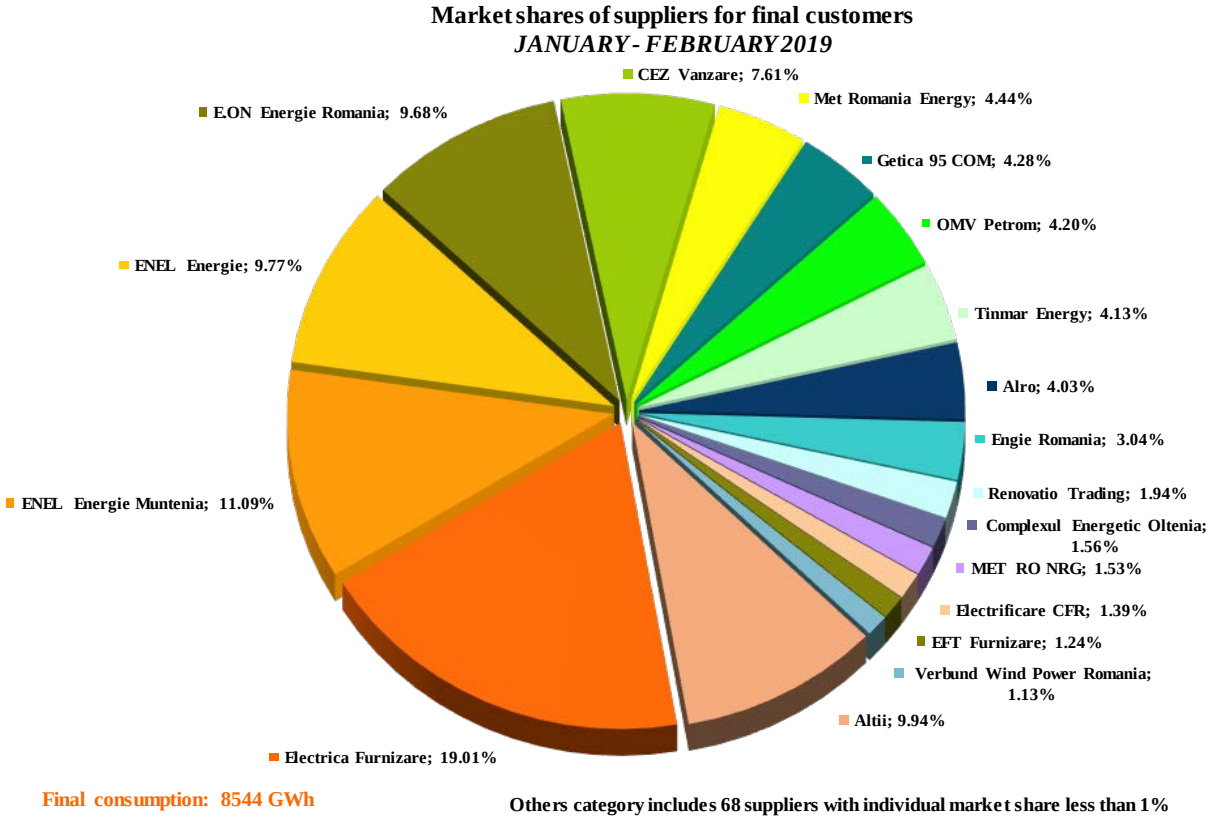


Source: Monthly reports of the final customers suppliers – Electricity Market Monitoring Unit assessment

3. Market shares of electricity suppliers

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

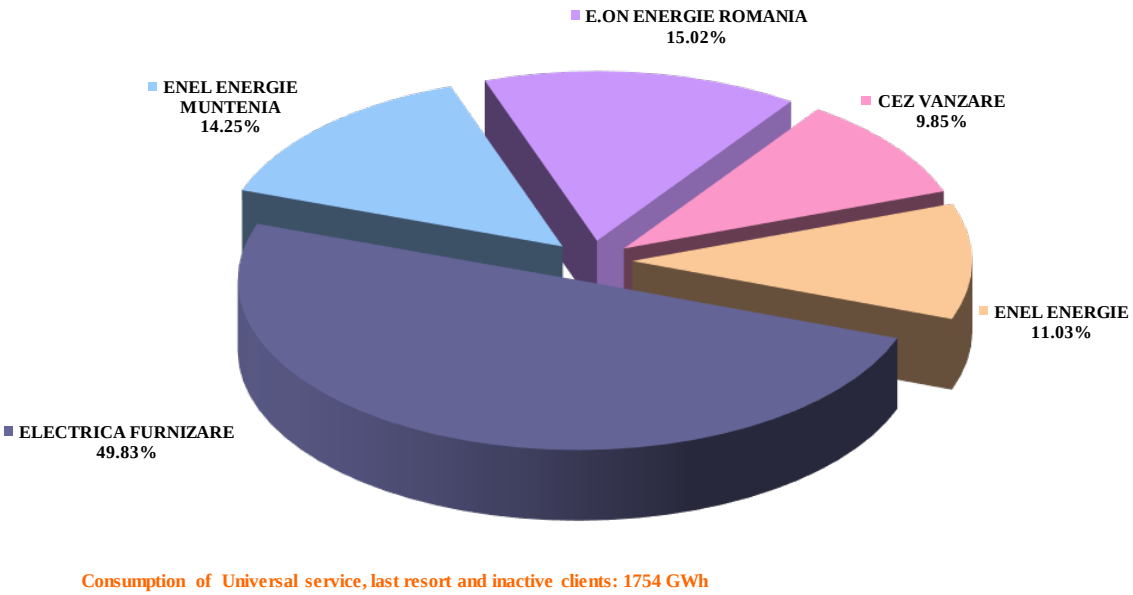
a) for all licensees monitored, suppliers and producers active on REM, including suppliers of last resort, in terms of electricity supplied to final consumers under US and last resort regime and to consumers who have switched their supplier or have negotiated their contract;



Source: Monthly reports of suppliers for final customers – Electricity Market Monitoring Unit assessment

b) for suppliers of last resort - based on the electricity supplied to final consumers under Universal service and last resort regime (including inactive consumers);

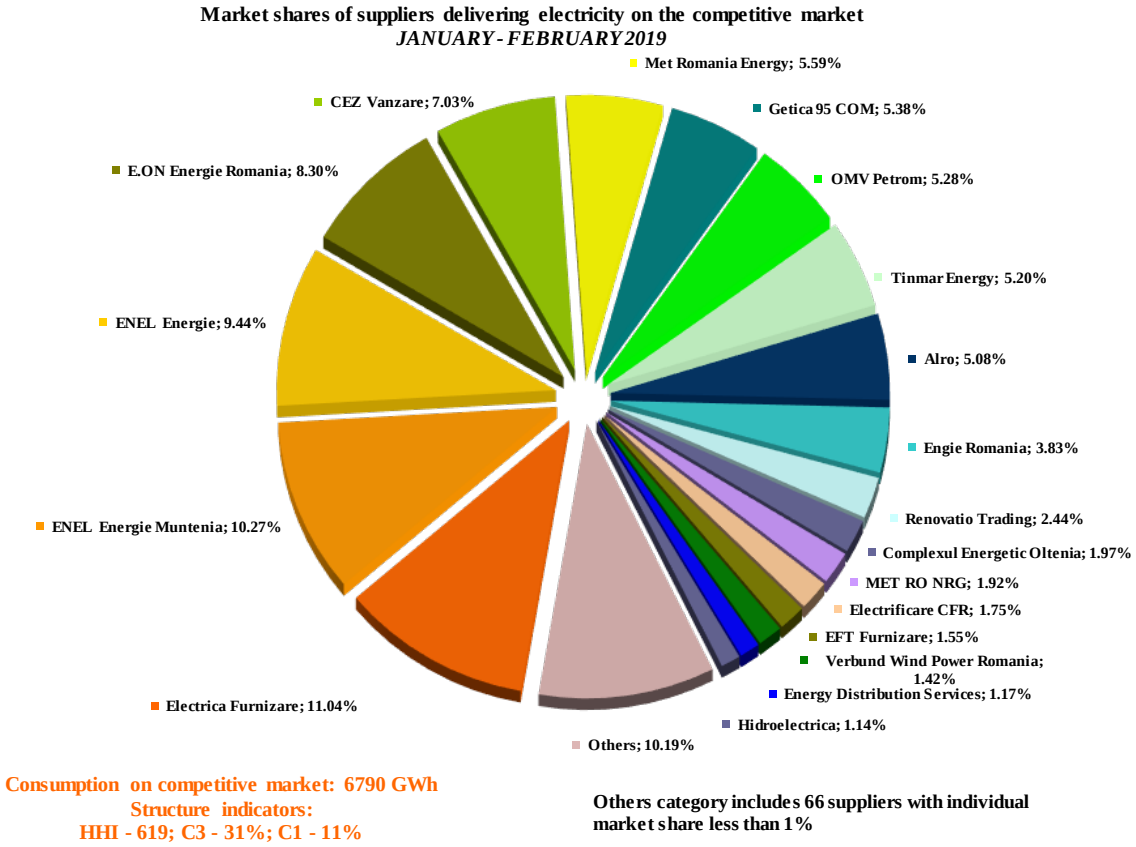
Market shares of suppliers of last resort for the electricity supplied to Universal service, last resort and inactive clients
JANUARY - FEBRUARY 2019



Consumption of Universal service, last resort and inactive clients: 1754 GWh

Source: Monthly reports of the suppliers of last resort – Electricity Market Monitoring Unit assessment

c) for all licensees monitored, suppliers and producers, active on the competitive segment of the REM, including suppliers of last resort - depending on the electricity supplied to consumers who have switched suppliers or negotiated their contracts.



Source: Monthly reports of the competitive suppliers – Electricity Market Monitoring Unit assessment

It is noted that in the calculation of the market indicator values the principle of dominance was not taken into account and the electricity supplied on the basis of which each supplier's market share was established includes the self-consumption of the large industrial consumers who also hold a supply license and who have decided to buy the necessary electricity on the wholesale market as competitive suppliers. Quantification of suppliers' activity within the competitive segment of REM compared to that on the WEM can be done by determining the share of sales to final consumers in total sales trades. Therefore, the following table shows the number of suppliers active on the REM, structured according to the size of the activity on this market in February 2019.

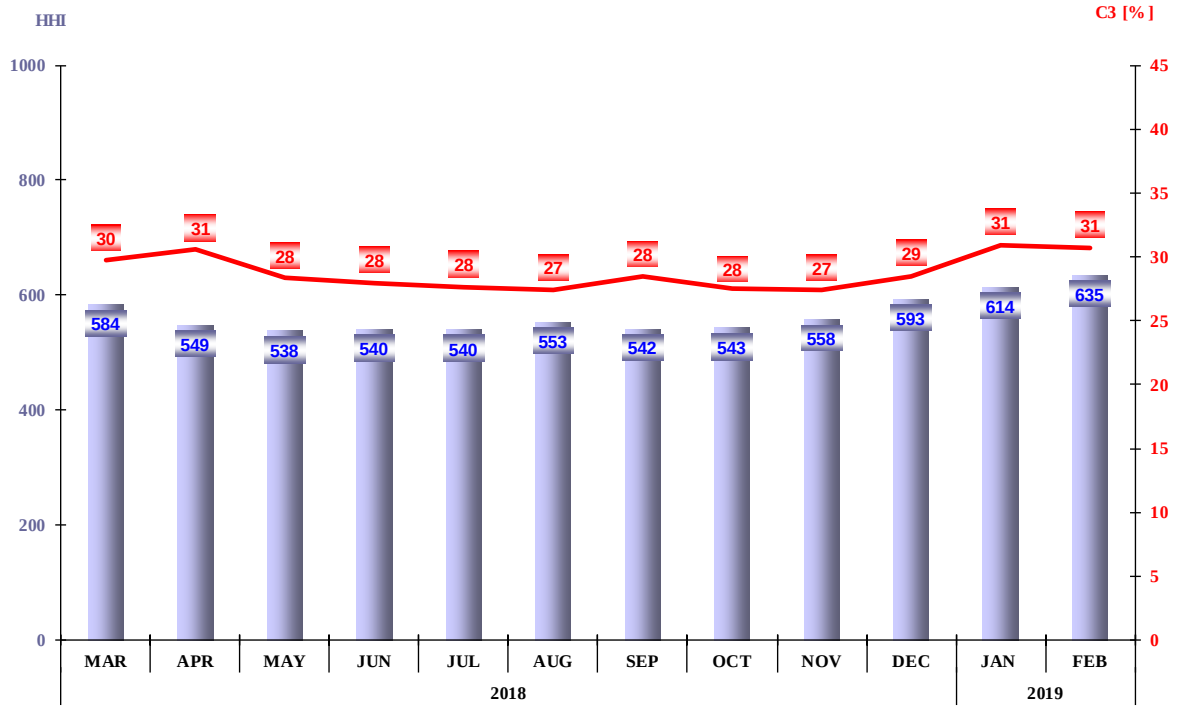
Number of suppliers	Share of sales to final customers from total sales trades			
	100%	75% - 100%	50% - 75%	<50%
Competitive	9	23	11	15
Of last resort	0	5	0	0

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

4. Concentration indicators of the competitive retail electricity market

The monthly evolution of the concentration indicators (C3, HHI) determined on the competitive component of the REM is presented for February 2019 in the following graph:

Herfindahl-Hirschman (HHI) and Concentration Ratio of the three main suppliers delivering electricity on competitive market (C3)



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

The tables below show the values of market structure indicators for the competitive component of REM and the number of active suppliers in February 2019, calculated for each consumption band defined by the Regulation (EU) 2016/1952, for households and non-households:

Indicators - Feb 2019	Consumption bands - Non-household customers							
	IA	IB	IC	ID	IE	IF	IG	Total
C1 - % -	32	19	21	11	14	12	20	**12**
C3 - % -	75	49	43	31	41	28	53	**29**
HHI	2116	1190	980	661	903	662	1182	**601**
Consumption - GWh -	153	385	322	677	407	224	767	**2935**
No. of SUPPLIERS	63	73	63	62	23	19	16	**84**
No. of suppliers of last resort	5	5	5	5	5	4	3	**5**
No. of competitive suppliers	43	52	45	46	13	11	7	**58**
No. of producers	15	16	13	11	5	4	6	**21**

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

Indicators -February 2019	Consumption bands - Household customers					
	DA	DB	DC	DD	DE	Total
C1 - % -	49	32	28	28	29	**35**
C3 - % -	90	79	75	70	65	**79**
HHI	3547	2244	2085	2015	1822	**2380**
Consumption - GWh -	119	115	65	45	17	**362**
No. of SUPPLIERS	38	38	40	39	37	47
No. of suppliers of last resort	5	5	5	5	5	**5**
No. of competitive suppliers	29	30	31	31	28	**36**
No. of producers	4	3	4	3	4	**6**

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

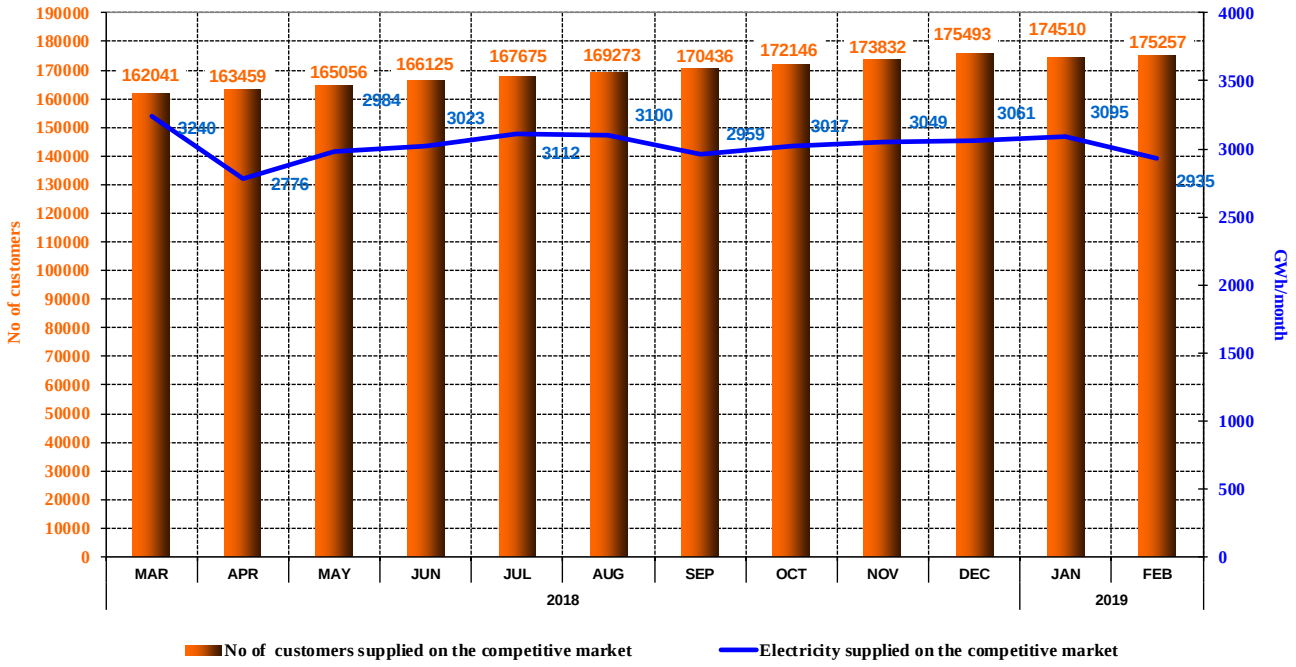
5. The evolution of the number of clients and of the electricity delivered

The number of final customers to whom electricity is supplied under competitive conditions is shown on a monthly basis over the last 12 months. Also, for February 2019 this number is split into customer's categories, according to the provisions of Regulation (EU) no. 2016/1952. The tables below present the consumption bands for each category of non-households and households:

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

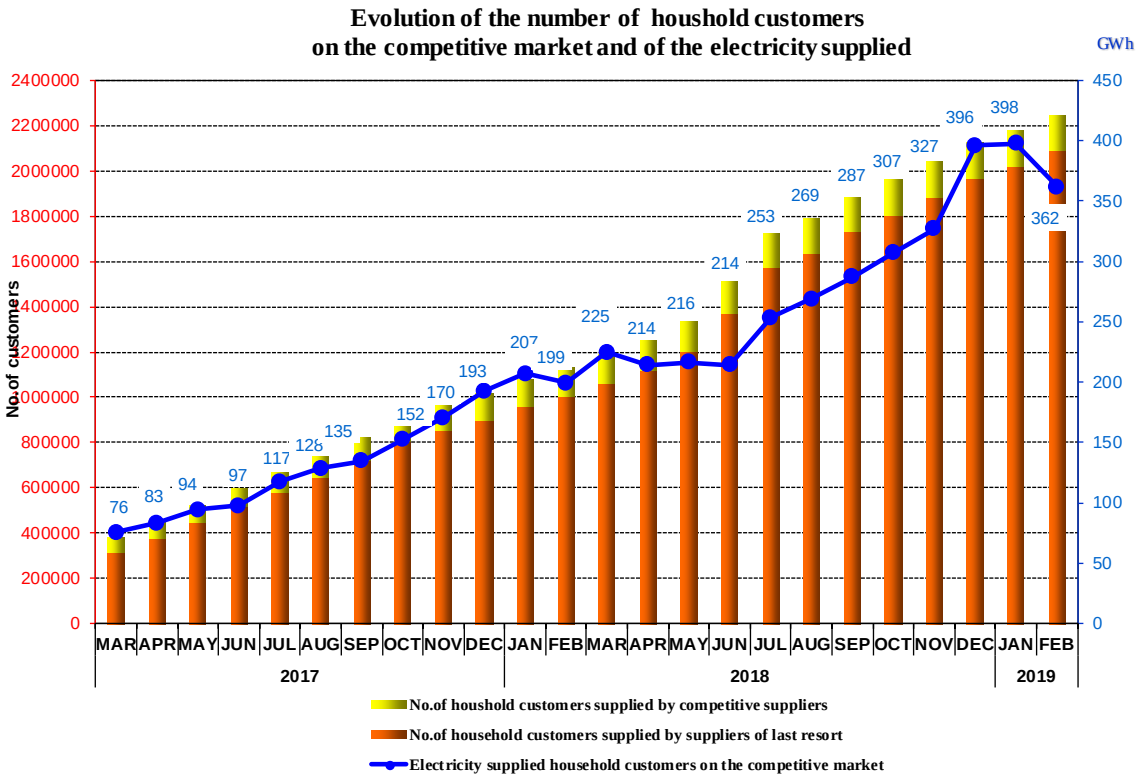
Household customers	Annual electricity consumption (kWh):	
DA		<1000
DB	>=1000	<2500
DC	>=2500	<5000
DD	>=5000	<15000
DE	>=15000	

Evolution of the number of non-household customers on the competitive market and of the electricity supplied

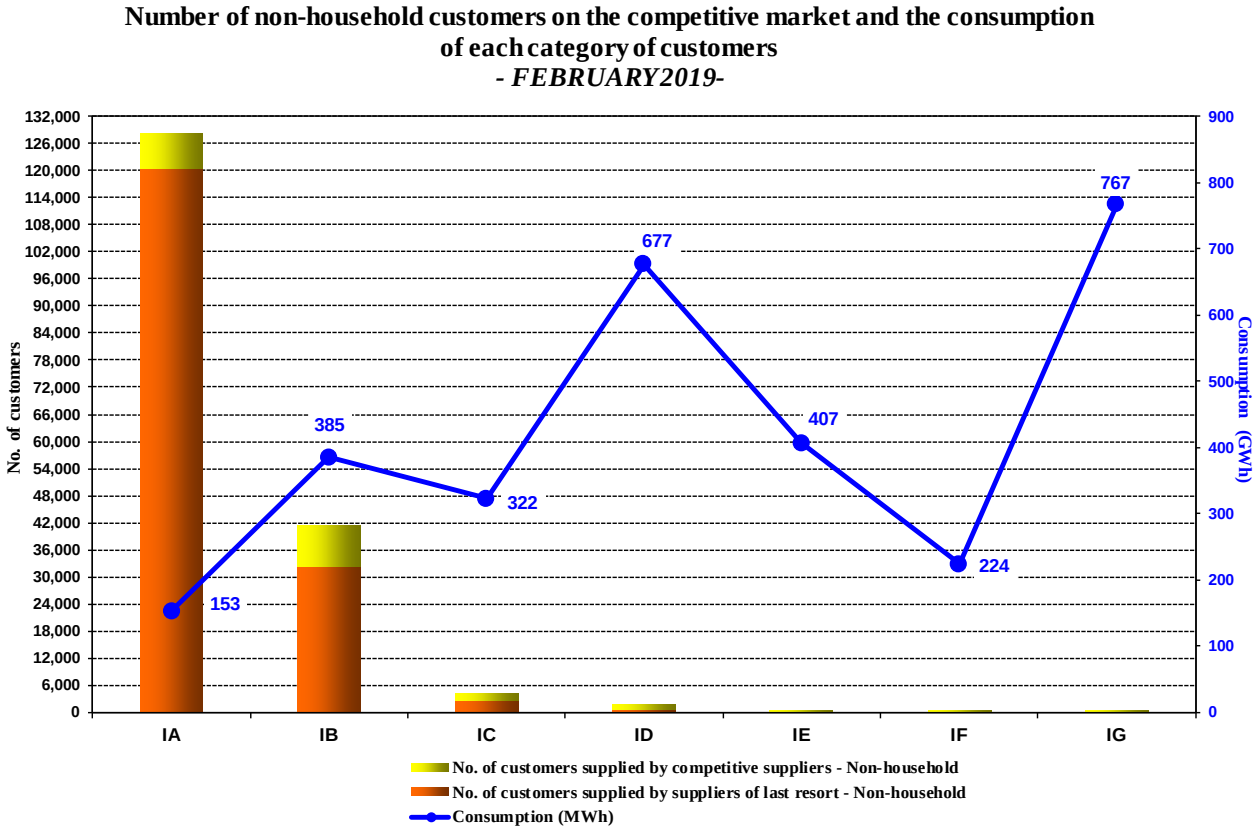


Source: Monthly reports of the competitive suppliers – Electricity Market Monitoring Unit assessment

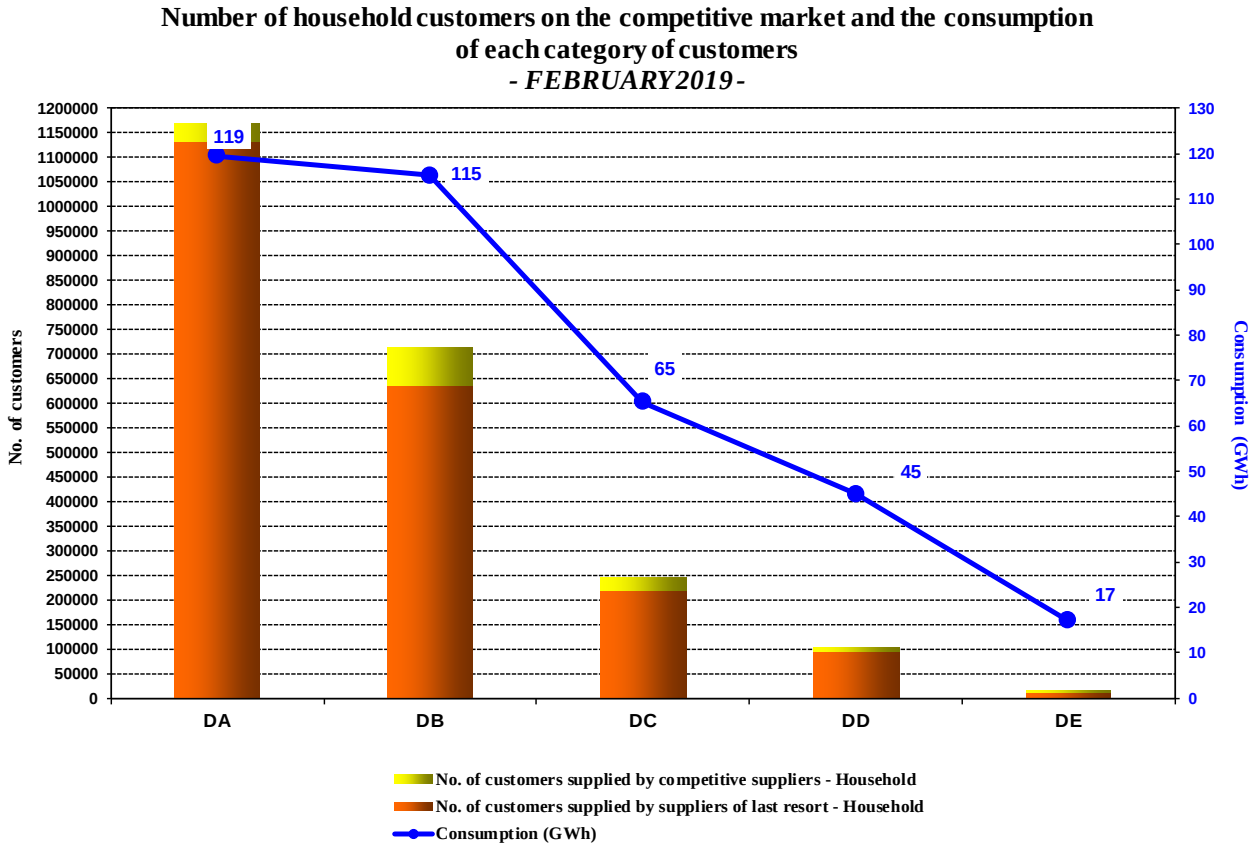
Electricity sales under competitive conditions to households between March 2017 and February 2019 are shown in the following graph:



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



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

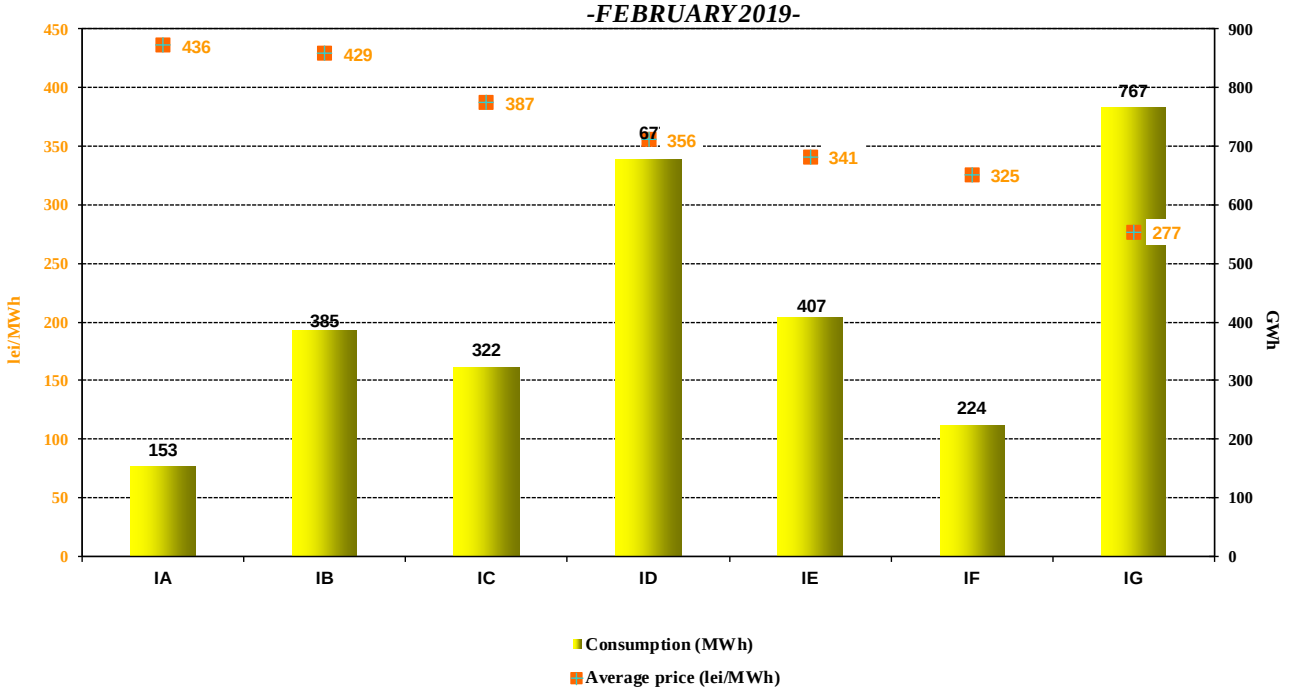


Source: Monthly reports of the suppliers – Electricity Market Monitoring Unit assessment

6. Average selling prices to customers on the competitive market

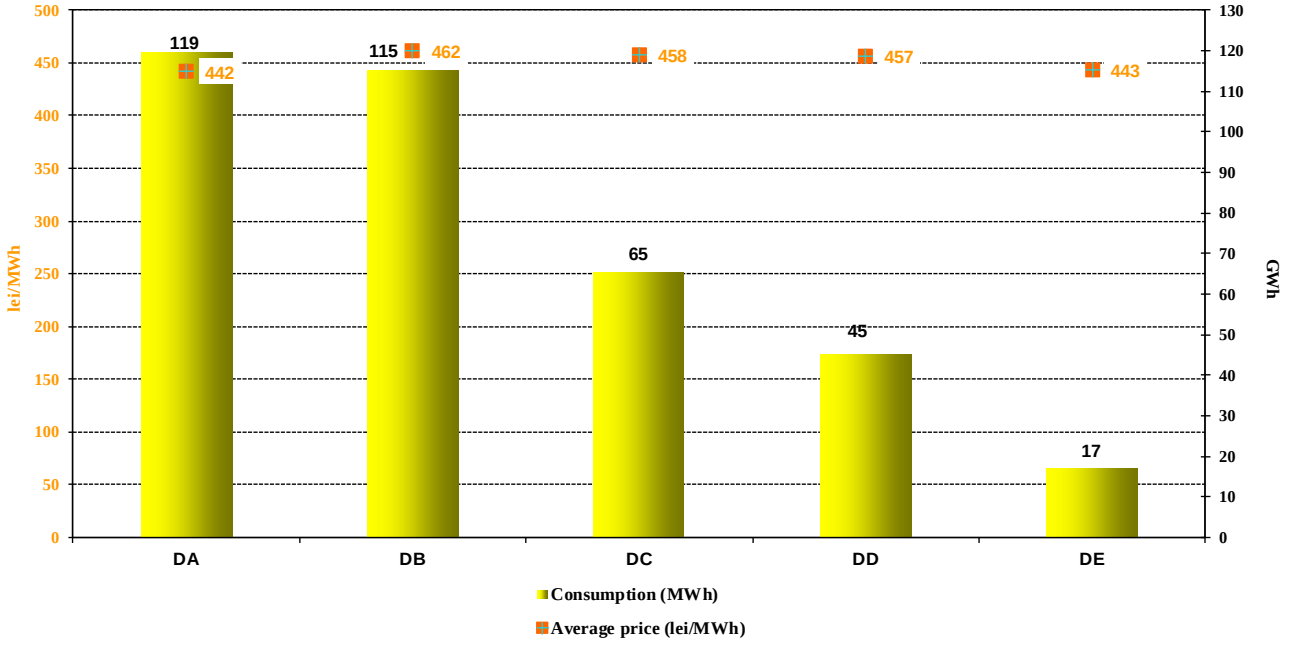
The following graphs present the average selling prices to household and non-household customers supplied on the competitive market, based on the structure defined according to the Regulation (EU) no. 2016/1952, for February 2019.

Average price and energy consumption for non-household customers on the competitive segment of REM
-FEBRUARY2019-



Source: Monthly reports of the competitive suppliers – Electricity Market Monitoring Unit assessment

Average price and energy consumption for household customers on the competitive segment of REM
- FEBRUARY2019 -



Source: Monthly reports of the competitive suppliers – Electricity Market Monitoring Unit assessment

***Specifications**: The average selling price for each consumption band was determined as an average of the prices applied by suppliers weighted with the quantities supplied by them to the respective consumption band in accordance with the provisions of Regulation (EU) 1952/2016. Prices do not include VAT, excise or other taxes, but include all related services (transport and distribution tariffs, system services, imbalances, BRP aggregation taxes, measurement). Breakdown of customers into consumption bands was based on their annual consumption forecast.*

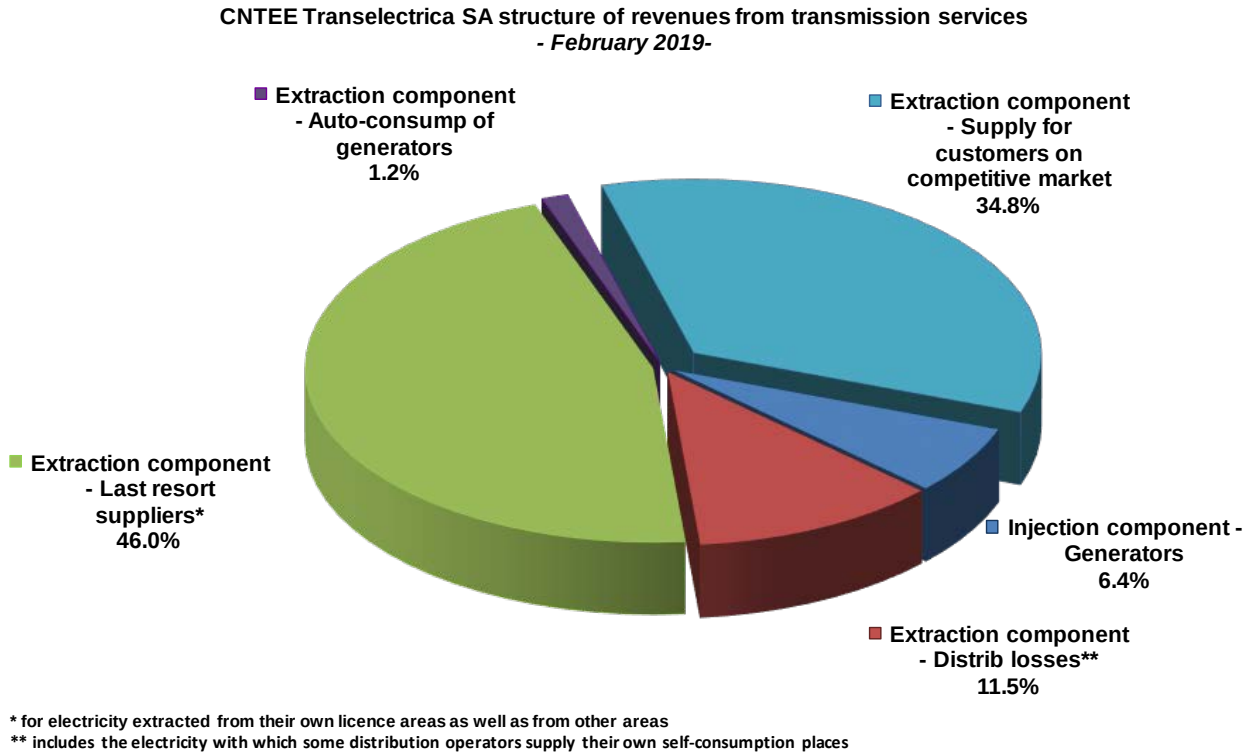
IV. TRANSMISSION AND SYSTEM OPERATOR CNTEE TRANSELECTRICA SA

TSO performs the electricity transmission service at regulated tariffs.

Starting with July 2017, the tariff setting methodological principles for the transmission service were modified, eliminating the zonal tariffs for the introduction or extraction of electricity in/out of the network, establishing a single NPS value for each of these tariffs.

Therefore, the injection tariff covers some of the network losses costs and the costs of eliminating congestion by redispatching, while the extraction tariff covers the average cost of the transmission service.

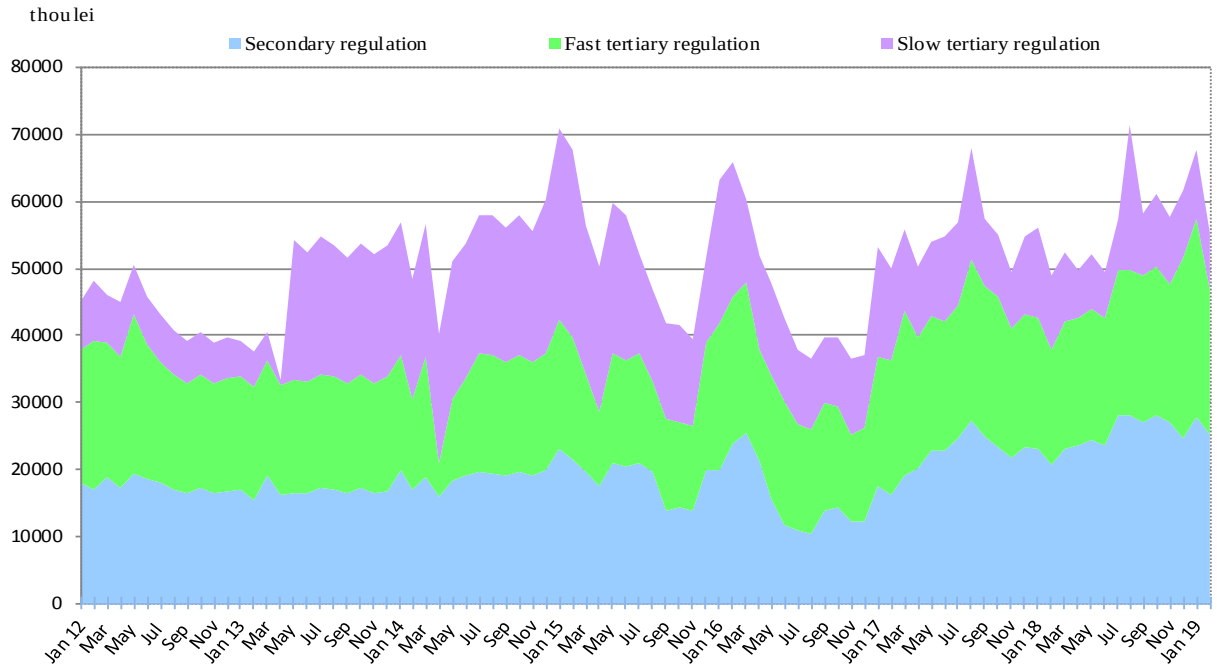
The following graph presents the structure of the revenues for February 2019, following the provision of the transmission service.



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

In order to perform the system operator tasks, CNTEE Transelectrica SA assesses and contracts reserves (ancillary services) from qualified participants, which are integrated on BM. The ancillary services which may be used are reserves for secondary, fast tertiary, slow tertiary and reactive energy. The following graph represents the evolution of the costs of the transmission and system operator, starting with January 2012, for the aquisition (regulated and/or through market mechanisms) of ancillary services. In order to cover the costs corresponding to the contracts for the provision of ancillary services, 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 – Electricity Market Monitoring Unit assessment

V. MARKET RULES EVOLUTION IN FEBRUARY 2019

In February 2019, ANRE issued the following regulations with an impact on the wholesale and retail markets:

- ANRE President Order no. 10/2019 approving the Methodology for setting the prices of electricity sold by producers on the basis of regulated contracts and the quantities of electricity from the regulated contracts concluded by the producers with suppliers of last resort;
- ANRE President Order no. 11/2019 approving the Methodology for setting the regulated tariffs and the prices applied by the suppliers of last resort to the final customers;
- ANRE President Order no. 12/2019 regarding the modification of the Methodology for setting and adjusting the prices for the electric and thermal energy produced and delivered from the cogeneration plants benefiting from the support scheme, respectively the bonus for high efficiency cogeneration, approved by the ANRE President Order no. 15/2015;
- ANRE President Order no. 13/2019 approving the regulated price for the electricity produced in high efficiency cogeneration benefiting from the bonus, sold on the basis of regulated contracts by the producers of electricity and heat in cogeneration, applicable between 01 March and 30 June 2019 ;
- ANRE President Order no. 17/2019 for the amendment of the Regulation for competitive selection for the designation of the suppliers of last resort, approved by Order of the ANRE President no. 26/2018 and amending Article 25 of the Methodology for setting the regulated tariffs and the prices applied by the suppliers of last resort to final customers, approved by ANRE President Order no.11/2019;
- ANRE President Order no. 19/2019 regarding the modification of ANRE President's Order no. 201/2018 regarding the approval of the specific tariffs for the electricity distribution service and the reactive electricity price for Delgaz Grid SA;

- ANRE President Order no. 20/2019 regarding the amendment of ANRE President's Order no. 201/2018 regarding the approval of the specific tariffs for the electricity distribution service and the price for the reactive electricity energy for Distribuţie Energie Oltenia SA;
- ANRE President Order no. 21/2019 regarding the modification of ANRE President Order no. 201/2018 regarding the approval of the specific tariffs for the electricity distribution service and the reactive electricity price for E-Distributie Muntenia SA;
- ANRE President Order no. 22/2019 regarding the modification of ANRE President Order no. 201/2018 regarding the approval of the specific tariffs for the electricity distribution service and the reactive electricity price for E-Distributie Dobrogea S.A.;
- ANRE President Order no. 23/2019 regarding the modification of ANRE President Order no. 201/2018 regarding the approval of the specific tariffs for the electricity distribution service and the reactive electricity price for E-Distributie Banat S.A.;
- ANRE President Order no. 24/2019 regarding the modification of ANRE President Order no. 201/2018 regarding the approval of the specific tariffs for the electricity distribution service and the reactive electricity price for SDEE Muntenia Nord SA;
- ANRE President Order no. 25/2019 regarding the modification of ANRE President Order no. 201/2018 regarding the approval of the specific tariffs for the electricity distribution service and the reactive electricity price for SDEE Transilvania Nord SA;
- ANRE President Order no. 26/2019 regarding the amendment of ANRE President Order no. 201/2018 regarding the approval of the specific tariffs for the electricity distribution service and the reactive electricity price for SDEE Transilvania Sud SA;
- ANRE President Order no. 27/2019 approving the regulated electricity tariffs applied to household customers by the obligated supplier of last resort Enel Energie S.A .;
- ANRE President Order no. 28/2019 approving regulated electricity tariffs applied to household customers by the obligated supplier of last resort Enel Energie Muntenia S.A .;
- ANRE President Order no. 29/2019 approving the regulated electricity tariffs applied to household customers by the obligated supplier of last resort E.ON Energie România S.A;
- ANRE President Order no. 30/2019 approving the regulated electricity tariffs applied to household customers by the obligated supplier of last resort Electrica Furnizare S.A.;
- ANRE President Order no. 31/2019 approving the regulated electricity tariffs applied to household customers by the obligated supplier of last resort CEZ Vanzare S.A .;
- ANRE President Order no. 32/2019 approving the regulated electricity tariffs applied to household customers by the suppliers of last resort whose designation decision entered into force before 1 March 2019 but which do not have household customers in their portfolio and by the suppliers of last resort whose designation decision entered into force after 1 March 2019;
- ANRE President Order no. 33/2019 regarding the establishment of the mandatory quota for the purchase of green certificates for the year 2018;
- ANRE President Decision no. 239/2019 regarding the approval of the quantities produced in high efficiency cogeneration units benefiting from the bonus scheme for January 2019;
- ANRE President Decision no. 324/2019 on the setting of regulated prices for delivered electricity and the quantities of electricity sold under regulated contracts during the period 1 March 2019 and 31 December 2019 by S.P.E.E.H. Hidroelectrica S.A .;
- ANRE President Decision no. 325/2019 on the setting of the regulated prices for delivered electricity and the quantities of electricity sold on the basis of regulated contracts during the period 1 March 2019 and 31 December 2019 by OMV Petrom SA;
- ANRE President Decision no. 326/2019 on the setting of the regulated prices for the supplied electricity and the quantities of electricity sold on the basis of regulated contracts between 1 March 2019 and 31 December 2019 by S.N. Nuclearelectrica;

- ANRE President Decision no. 327/2019 on the setting of the regulated prices for delivered electricity and the quantities of electricity sold on the basis of regulated contracts during the period 1 March 2019 and 31 December 2019 by the CE Hunedoara SA;
- ANRE President Decision no. 328/2019 on the setting of regulated prices for electricity supplied and the quantities of electricity sold under regulated contracts during the period 1 March 2019 and 31 December 2019 by Veolia Energie Iaşi S.A .;
- ANRE President Decision no. 329/2019 on the setting of regulated prices for delivered electricity and the quantities of electricity sold under regulated contracts between 1 March 2019 and 31 December 2019 by CET Govora SA;
- ANRE President Decision no. 330/2019 on the setting of the regulated prices for the supplied electricity and the quantities of electricity sold on the basis of regulated contracts during the period 1 March 2019 and 31 December 2019 by the Electrocentrale Bucureşti SA;
- ANRE President Decision no. 331/2019 on the setting of the regulated prices for delivered electricity and the quantities of electricity sold on the basis of regulated contracts during the period 1 March 2019 and 31 December 2019 by the CE Oltenia SA;
- ANRE President Decision no. 332/25 February 2019 on the setting of the regulated prices for the electricity supplied and the quantities of electricity sold on the basis of regulated contracts during the period 1 March 2019 and 31 December 2019 of Termoficare Oradea S.A.
- ANRE President Decision no. 333/28 February 2019 approving the designation of CEZ Vanzare S.A. as optional supplier of last resort;
- ANRE President Decision no. 334/28 February 2019 approving the designation of Electrica Furnizare S.A. as the optional supplier of last resort;
- ANRE President Decision no. 335/28 February 2019 approving the designation of Enel Energie S.A. as the optional supplier of last resort;
- ANRE President Decision no. 336/28 February 2019 approving the designation of Engie Romania S.A. as the optional supplier of last resort;
- ANRE President Decision no. 337/28 February 2019 approving the designation of E.ON Energie Romania S.A. as optional supplier of last resort;
- ANRE President Decision no. 338/28 February 2019 approving the designation of Getica 95 Com S.R.L. as optional supplier of last resort;
- ANRE President Decision no. 339/28 February 2019 approving the designation of S.P.E.E.H. Hidroelectrica S.A. as optional supplier of last resort;
- ANRE President Decision no. 340/28 February 2019 approving the designation of MET Romania Energy S.A. as optional supplier of last resort;
- ANRE President Decision no. 341/28 February 2019 approving the designation of Restart Energy One S.R.L. as optional supplier of last resort;
- ANRE President Decision no. 342/28 February 2019 approving the designation of Tinmar Energy S.A. as the optional supplier of last resort.

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 customers under universal service and last resort regime*** represents the consumption of customers supplied by the suppliers of last resort at CMC and last resort prices;
- ***Consumption of final customers on competitive market*** represents the consumption of customers supplied at negociated prices or defined by standard bids;
- **Fuel consumption** represents the fuel consumed for generating electricity and heat in the power plants of monitored generators;
- ***Self-consumption of generators*** (in the graph regarding the revenues of CN Transelectrica SA) the self-consumption exclusively represents the generators consumption at consumption places other than the generation sites;
- ***Electricity delivered into the grid*** includes the electricity sold by the generators through direct lines or consumed by themselves at other consumption sites;
- ***Electricity delivered into the grid according to the transport contract*** is the electricity for which the transport service (the grid input component) is provided corresponding to the electricity delivered from the power plants with installed capacity of more than 5 MW connected to the transmission and distribution electric grids (according to ANRE President Order No. 89/2013).

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
- MU – Monitoring Unit
- NPS – National Power System
- OU-NPD – Operational Unit-National Power Dispatch
- PCSU – Centralised Market of Universal Service (Romanian abbreviation)
- REM – Retail Electricty Market
- SLR – Supplier of last resort
- TG/TL – injection / extraction component of the transmission tariff

- US – Universal Service
- WEM – Wholesale Electricity Market
- NTC - Net Transfer Capacity