



ROMANIAN ENERGY REGULATORY AUTHORITY

DEPARTMENT OF MONITORING, REMIT



REPORT ON RESULTS OF MONITORING THE ROMANIAN ELECTRICITY MARKET MARCH 2018

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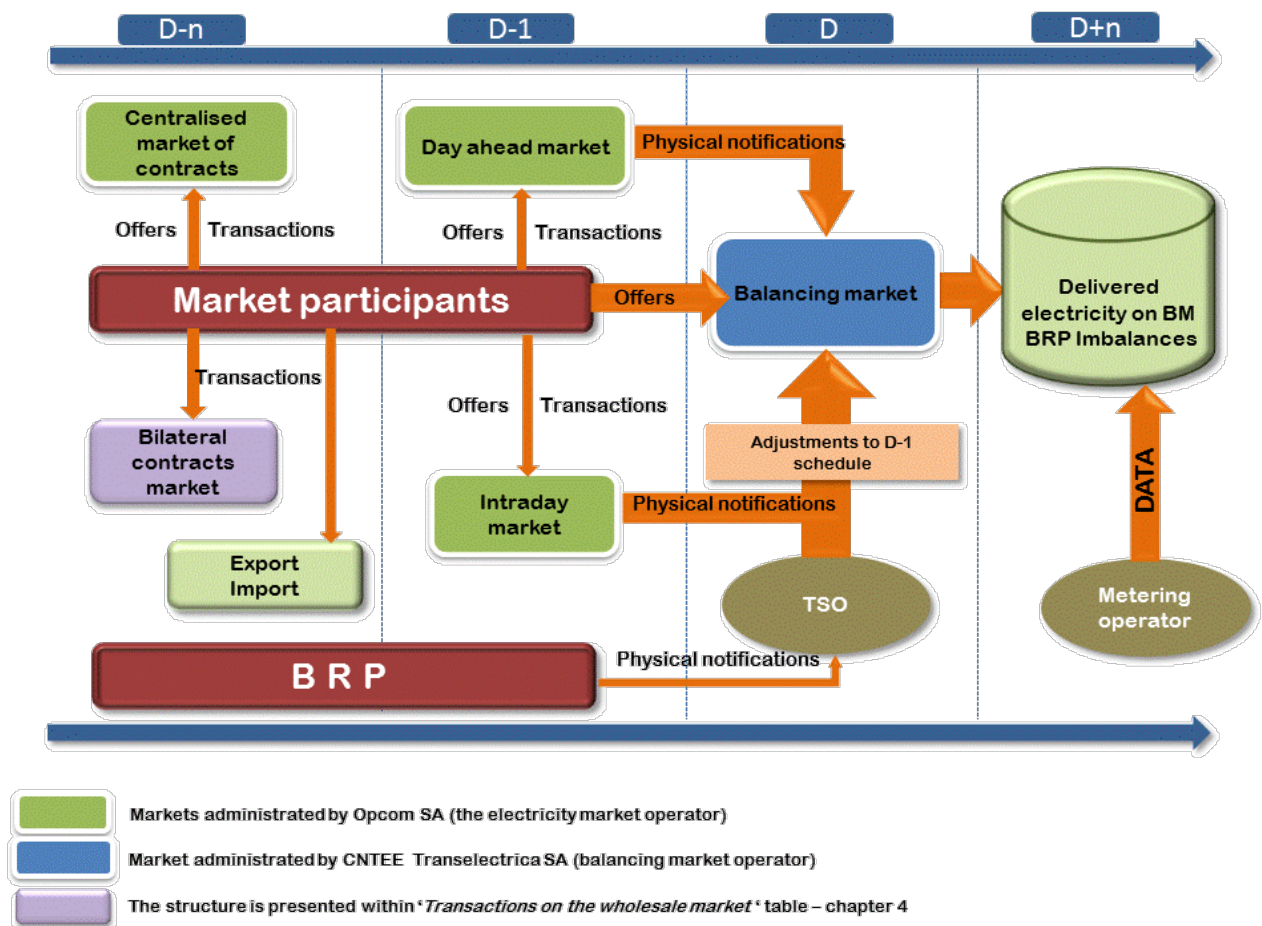
I. MAIN EVENTS IN THE DEVELOPMENT OF THE ROMANIAN ELECTRICITY MARKET

- 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 dissolved;
- 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%;
- December 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 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/December 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 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 obtains 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 obtains 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 Tranelectrica 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 Tranelectrica 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.

II. WHOLESALE ELECTRICITY MARKET

1. Structure of the wholesale electricity market



2. Participants on the wholesale electricity market

The market participants^{*)} acting on the electricity market in March 2018 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 Bucuresti SA
9	Electrocentrale Constanta SA
10	Electrocentrale Galati SA
11	Electro Energy Sud SRL
12	Enet Focsani SA
13	Gas Energy Ecotherm SA
14	Lukoil Energy & Gaz Romania SRL
15	Modern Calor SA
16	OMV Petrom SA
17	Rulmenti SA
18	SNGN Romgaz SA
19	Termoficare Oradea SA
20	Veolia Energie Iasi SRL
21	Veolia Energie Prahova SRL
22	Vest Energo SA
B Electricity generators on wind source operating dispatching units	
1	Alizeu Eolian SA
2	Ariina 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	Chae Solar SRL
5	Corabia Solar SRL
6	Cujmir Solar SRL
7	Delta & Zeta Energy SRL
8	Ecosfer Energy SRL
9	Energoproiect 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	Izvor de Lumina SRL
18	Kentax Energy SRL
19	Lemar Grup SRL
20	LJG Green Source Energy Alpha SA
21	LJG Green Source Energy Beta SRL
22	LJG Green Source Energy Gamma SRL
23	Long Bridge Milenium SRL
24	Mar-Tin Solar Energy SRL
25	Potelti Solar SRL
26	Power L.I.V.E. One SRL
27	RA-RA PARC SRL
28	Romkumulo SRL
29	Simco Prod Factory SRL
30	Skybase Energy SRL
31	Solar Electric Frasinet SRL
32	Solar Future Energy SRL
33	Solaria Green Energy SRL
34	Solprim SRL
35	Spectrum Tech SRL
36	Studina Solar SRL
37	Sun Energy Complet SA
38	Tis Energy SRL
39	Timmar Green Energy SRL
40	Urdel Energy SRL
41	Vanju Mare Solar SRL
42	Varokub Energy Development SRL
43	VIR Company International SRL
44	VIS Solaris 2011 SRL
45	Vrsh Pro Investments SRL
46	WDP Development RO SRL
47	Xalandine Energy SRL
48	XPV SRL
E Electricity generators on hydro source operating dispatching units	
1	Hydroelectrica 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	No.	Category
K	Electricity Suppliers acting exclusively on the wholesale market		Electricity Suppliers acting also on the retail market
1	Alpiq Energy SE	18	EFE Energy SRL
2	CEZ as	19	EFT Furnizare SRL
3	Danske Commodities/s Aarhus	20	Energia Gas & Power SRL
4	EDF Trading Limited	21	Energy Trade Activ SRL
5	Ergo-Pro Trading EAD	22	Electric Planners SRL
6	Elpetra Energy E.A.D.	23	Electricitare CFR SRL
7	Energi Danmark A/S	24	Elsid SA
8	Energy Supply & Trade D.O.O	25	Electrocarbon SA
9	Eolian Project SRL	26	Electromagnetica SA
10	EVN Trading South East Europe	27	Enel Trade Romania SRL
11	Ezpada SRO	28	Energy Distribution Services SRL
12	Flavus Investitii SRL	29	Engie Romania SA
13	Freepoint Commodities Europe Ltd	30	Enol Grup SA
14	General Energetic	31	Entrex Services SRL
15	GEN I trgovanje in prodaja elektricne energije doo	32	Eolian Generator SRL
16	Holding Slovenske Elektrane	33	E.V.A. Energy SRL
17	Interenergo Energetski, Inzeniring d.o.o.	34	GDM Logistic SRL
18	JAS Energy Trading s.r.o.	35	Getica 95 COM SRL
19	Lord Energy SRL	36	Grenerg SRL
20	MVM Partner Zrt	37	Hermes Energy International SRL
21	Neptun SA	38	ICCO Energy SRL
22	Nis Petrol SRL	39	ICPE Electrocond Technologies SA
23	OMV Gas Marketing & Trading GmbH	40	Imperial Development SRL
24	Petrol, Slovenska energetska druzba	41	Industrial Energy SA
25	Photovoltaic Green Project SRL	42	Luxten LC SA
26	Statkraft Markets GmbH	43	Menarom PEC SRL
27	Transenergo Com SA	44	MET Romania Energy SA
28	Unit Energy Trade SRL	45	Midas&CO SRL
29	Verbund Trading Romania SRL	46	Monsson Trading SRL
		47	Next Power SRL
L	Electricity Suppliers acting also on the retail market	48	Next Energy Parteners SRL
1	Absolute Energy SRL	49	Nova Power&Gas SRL
2	Aderro G.P. Energy SRL	50	P.C. Management & Consulting SRL
3	A Energy Ind SRL	51	Plenerg SRL
4	Alive Capital SRL	52	Power Clouds SRL
5	Alpiq RomIndustries SRL	53	QIA Energy SRL
6	Alro SA	54	QMB Energy SRL
7	Aqua Energia SA	55	RCS&RDS SA
8	Anchor Grup SA	56	Renovatio Trading SRL
9	Axpo Energy Romania SRL	57	Restart Energy One SRL
10	Apuron Energy SRL	58	Romelectro SA
11	Ciga Energy SA	59	RWE Energie SRL
12	Cotroceni Park SA	60	Stock Energy SRL
13	Crest Energy SRL	61	Tinmar Energy SA
14	Curent Alternativ SRL	62	Transformer Energy Supply SRL
15	CYEB SRL	63	Unistil SRL
16	E.ON Flash SA	64	Uzinsider General Contractor SA
17	Eco2Energy Choice SRL	65	Werk Energy SRL

*) The electricity market participants report to ANRE technical/commercial data according to the *Methodology of wholesale electricity market monitoring for assessing the competition level on market and preventing the abuse of dominant position*, approved by ANRE Order no. 35/2006 as well as to the *Methodology of retail electricity market monitoring*, approved by ANRE Order no. 60/2008. The table does not include the Balancing Responsible Parties (BRP). The BRP updated list is published on the Balancing Market Operator website - www.transelectrica.ro.

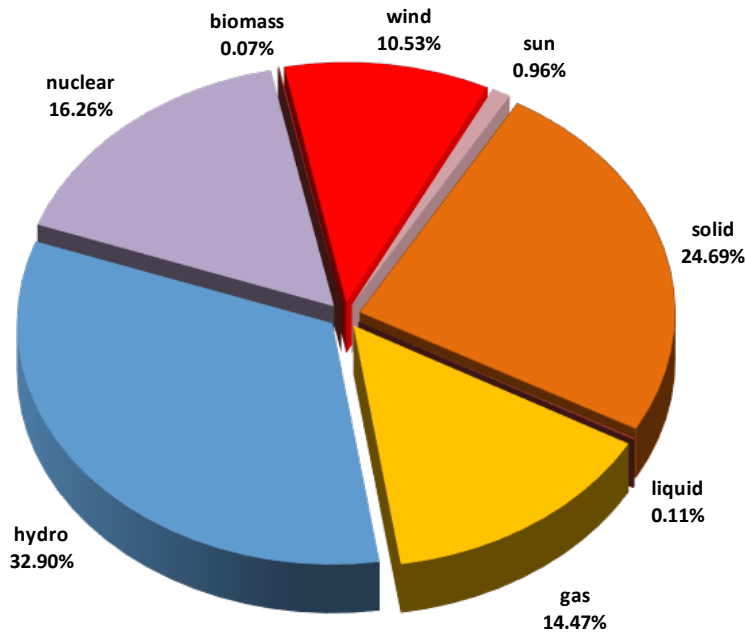
ANRE monitors the market activity of the generators with dispatchable units. According to the Regulation of scheduling the dispatchable generation units and consumption units, the considered generation units are:

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

Electricity Suppliers acting exclusively on the wholesale market category include supplying license owners who act only on wholesale market and owners of a trading license issued according ANRE Order no. 13/2015 for approval the. General conditions associated to trading electricity license”.

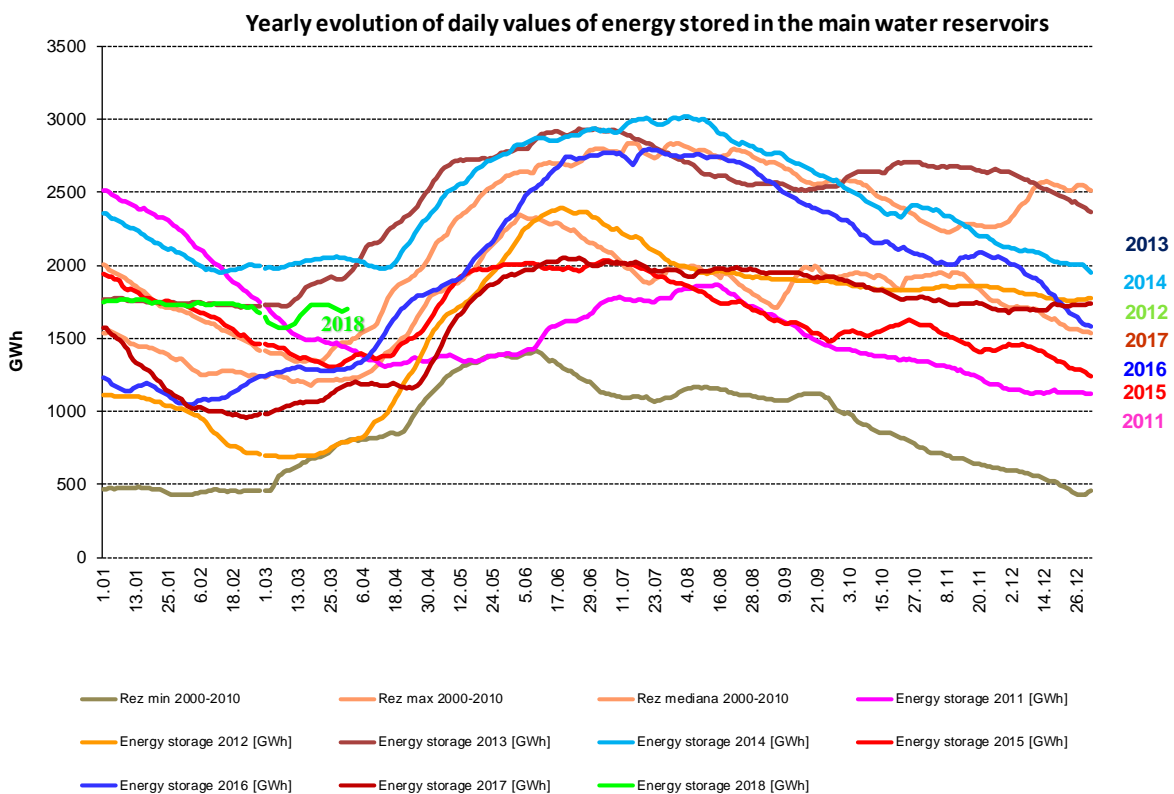
3. Generation structure of National Energy System on resources types

Electricity structure by primary sources
(delivered by generators with dispatchable units)
- March 2018 -



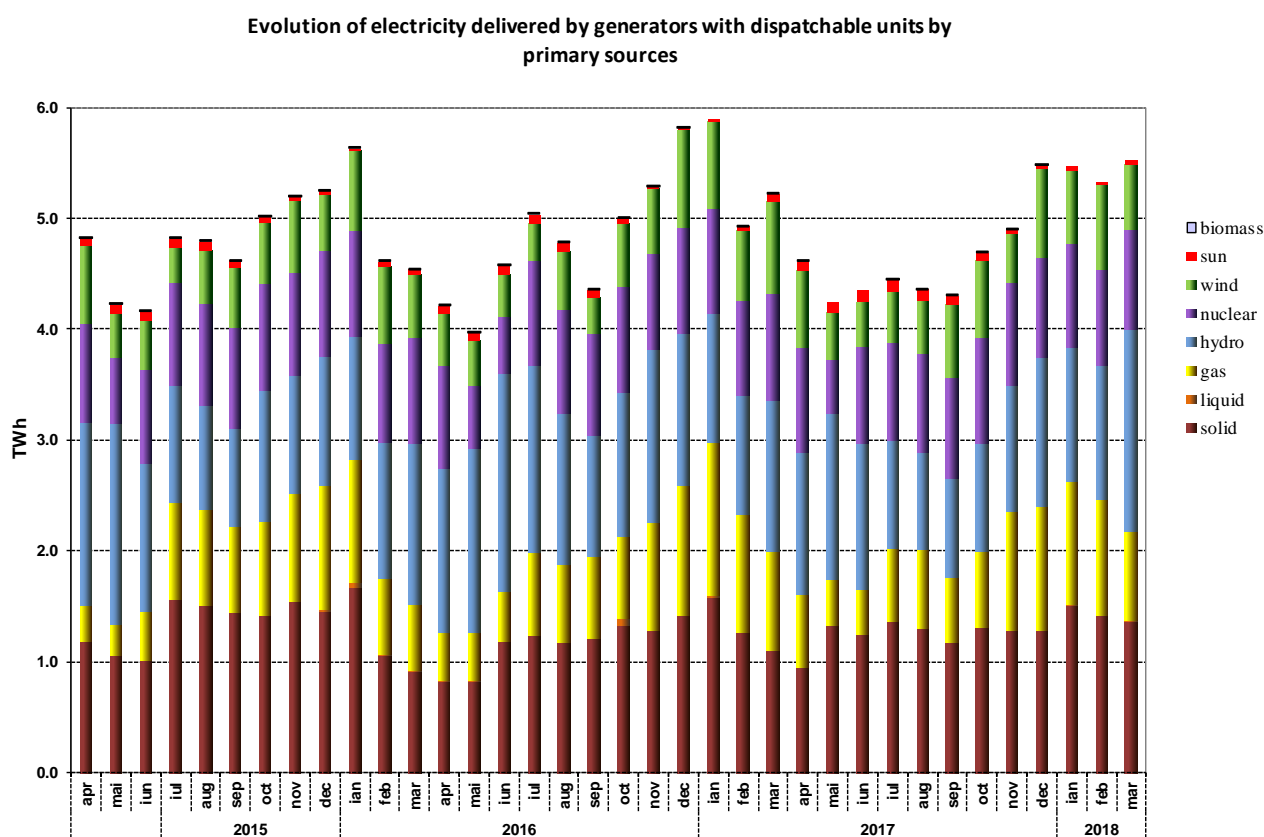
Source: Monthly reports of generators – processed by MU

The electricity generated from hydro resources and the energy stored in the main water reservoirs is directly correlated. The following graph presents the evolution of daily amounts of energy storage during March 2018 compared to the daily values of the last 7 years and compared to minimum, maximum and median values from 2000-2009.



Source: Monthly reports of S.C. Hidroelectrica S.A. – processed by MU

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



Source: Monthly reports of generators – processed by MU

The following table presents the main data regarding the physical balance of electricity for March 2018 compared to data for the similar period of 2017:

Nr. Crt.	INDICATOR	UM	Mar 2017	Mar 2018	%	Jan-Mar 2017	Jan-Mar 2018	%
0	1	2	3	4	$5=4/3*100$	6	7	$8=7/6*100$
1	Generated electricity	TWh	5.54	5.89	106.32	17.18*	17.44	101.51
2	Delivered electricity	TWh	5.22*	5.53	105.94	16.06	16.35	101.81
3	Import	TWh	0.26	0.22	84.62	0.75	0.63	84.00
4	Export	TWh	0.84	0.56	66.67	2.18	1.83	83.95
5	Internal consumption (2+3-4)	TWh	4.64	5.19	111.85	14.64*	15.15	103.48
6	Consumption of household customers:	TWh	1.11	1.17	105.41	3.37	3.44	102.08
6.1	on Universal Service regime	TWh	1.03	0.95	92.23	3.17	2.81	88.64
6.2	on the competitive market	TWh	0.08	0.22	275.00	0.20	0.63	315.00
7	Consumption of non-households customers:	TWh	3.08	3.34	108.44	9.05*	9.43	104.20
7.1	on US and last resort regime	TWh	0.12	0.10	83.33	0.37	0.29	78.38
7.2	on the competitive market	TWh	2.96	3.24	109.46	8.68*	9.14	105.30
8	Transmission–Injection component	TWh	5.12	5.41	105.66	15.76*	16.02	101.65
9	Transmission–Extraction component	TWh	4.70	5.16	109.79	14.59*	15.00	102.81
10	Actual transmission grid losses	TWh	0.09	0.13	144.44	0.25	0.34	136.00
11	Heat generated for delivery	Tcal	1377.56	1795.73	130.36	5504.52	5445.18	98.92
12	Heat in co-generation	Tcal	1128.50	1307.75	115.88	4258.15	4025.00	94.52

Note:

1. The generated electricity and delivered electricity are presented according to the data reported by monitored generators, as they are defined as dispatchable in the Regulation of scheduling the dispatchable generation units and consumption units approved by the ANRE Order no. 32/2013;

2. Data shown in the table neither include the energy produced by the generators who do not own dispatchable units (positions 1 & 2) nor the energy delivered to the customers directly connected to the power plants (positions 6 & 7);

3. The imported/exported quantities do not comprise transits and cross-border exchange of CNTEE Transelectrica SA with neighboring countries in order to ensuring the balance of the national energy system;

4. The electricity quantity for applying the injection tariff is the electricity delivered by the generation units with installed capacity higher than 5 MW linked to the transmission network and distribution network;

5. Households customers consumption for US regime represents electricity consumption invoiced at regulated tariff and “Competitive Market Component” (CMC) tariff.

*Differences compared to the Report on results of monitoring the Romanian electricity market – March 2017 are due to the modified data reported by some market participants.

4. The structure of transactions on the wholesale electricity market

The size of wholesale market depends on the sum of all transactions performed by the market players, exceeding the quantities physically transmitted from generation to consumption; the total transactions include also resale transactions made in order to match the contractual obligations and to obtain financial benefit.

When entering into force, the Law no. 123/2012 on Electricity and Natural Gas has set the general principle that energy competitive market and electricity transactions should take place in a transparent, public, centralized and non-discriminatory way. Therefore, all the new transactions have to be the result of participation on the centralized markets administrated by Opcom SA, the only owner of a license issued by ANRE 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 operated by Opcom SA (which ensure the transparent, public, centralized and non-discriminatory character required by the Law) there still exist bilateral negotiated contracts concluded before the entering into force of the Law, export and import contracts and regulated contracts with regulated quantities and prices, based on ANRE decisions concluded between a number of generators and the suppliers of last resort.

Following the entering into force of the Law no. 23/2014 subsequent to Law no. 220/2008 for establishing the system for promoting producing electricity from renewable energy sources, modified and completed by Law no. 122/2015, a specific range of RES generators may conclude negotiated bilateral contracts as follows:

- those owning power plants that benefit from the promotion system and having installed capacity less than 1 MW/generator and less than 2 MW/generator for biomass high efficiency cogeneration, but only with suppliers for final customers;
- those owning power plants that benefit from the promotion system and having installed capacity between 1 and 3 MW/generator and between 2 and 3 MW/generator for biomass high efficiency cogeneration, but only if they are considered small or medium enterprises, according to the Law no. 346/2004.

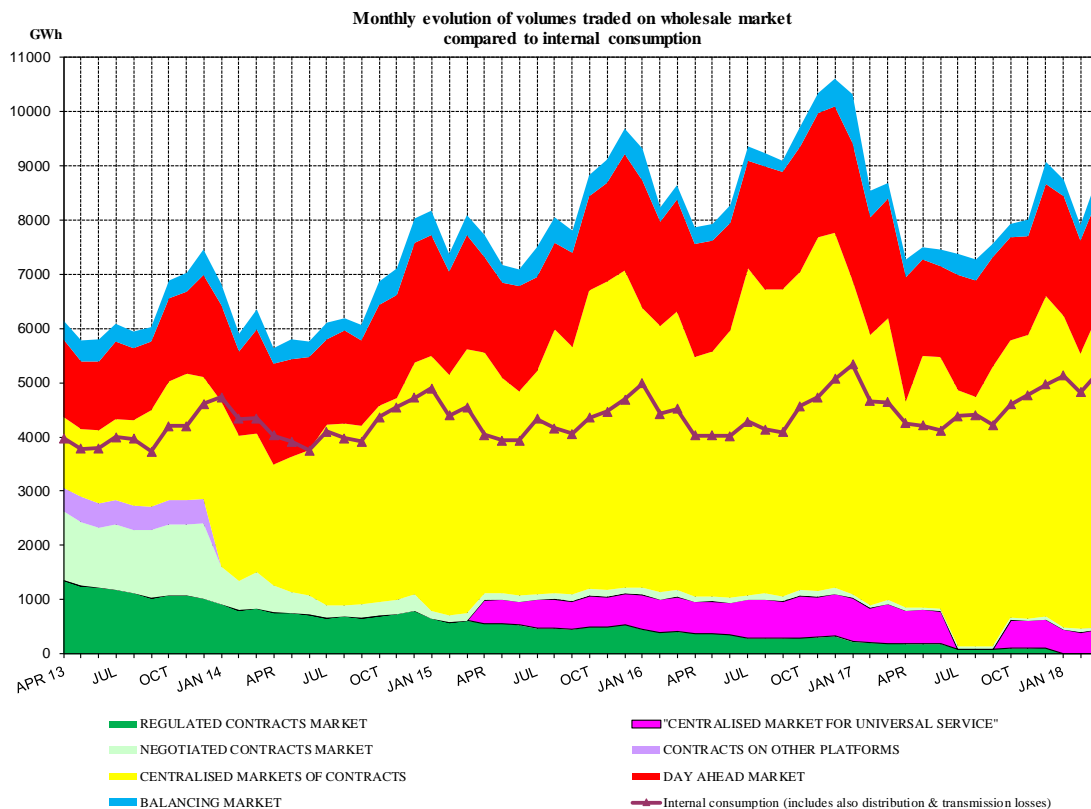
The following table presents the volumes traded and the average prices on each type of contracts and on the main components of the wholesale market. The aggregated volumes and the average prices on negotiated contracts are reported by market participants on their own responsibility and except the concluded contracts based on provisions of Law no. 23/2014 they should reflect only the ongoing contracts which had been concluded before Law no. 123/2012 entered into force.

TRANSACTIONS ON THE WHOLESALE MARKET	February 2018	March 2018	March 2017
1. BILATERAL CONTRACTS' MARKET			
traded volume (GWh)	52	42	267
average price (lei/MWh)	141.96	141.18	123.01
% from internal consumption (%)	1.1	0.8	5.8
1.1. Sales on regulated contracts			
traded volume (GWh)			196
average price (lei/MWh)	-	-	118.40
% from internal consumption (%)			4.2
1.2. Sales on negotiated contracts¹⁾			
traded volume (GWh)	52	42	71
average price (lei/MWh)	141.96	141.18	135.67
% from internal consumption (%)	1.1	0.8	1.5
2. EXPORT			
traded volume (GWh) ²⁾	656	559	836
average price (lei/MWh)	176.81	152.37	163.74
% from internal consumption (%)	13.6	10.8	18.00
3. CENTRALIZED MARKETS OF CONTRACTS			
traded volume (GWh)	5090	5792	5202
average price (lei/MWh)	199.25	189.58	161.42
% from internal consumption (%)	105.5	111.6	112.1
3.1. Extended auction mechanism CMBC-EA³⁾			
traded volume (GWh)	1904	2081	1582*
average price (lei/MWh)	182.18	181.62	158.90*
% from internal consumption (%)	39.4	40.1	34.1
3.2. Continuous negotiation mechanism CMBC-CN³⁾			
traded volume (GWh)	1375	1316	1000
average price (lei/MWh)	213.45	206.20	164.94
% from internal consumption (%)	28.5	25.3	21.5
3.3. CM-OTC mechanism³⁾			
traded volume (GWh)	1811	2395	2621
average price (lei/MWh)	206.40	187.36	161.60
% from internal consumption (%)	37.5	46.1	56.4*
4. CENTRALIZED MARKET FOR UNIVERSAL SERVICE - CMUS			
traded volume (GWh)	401	444	725
average price (lei/MWh)	249.67	249.67	174.84
% from internal consumption (%)	8.3	8.5	15.6
5. DAY AHEAD MARKET			
traded volume (GWh)	2085	2141	2199
average price (lei/MWh) ⁴⁾	178.15	156.00	165.48
% from internal consumption (%)	43.2	41.2	47.4
6. INTRADAY MARKET			
traded volume (GWh)	25.3	20.7	12.8
average price (lei/MWh) ⁵⁾	119.44	130.92	136.71
% from internal consumption (%)	0.5	0.4	0.3
7. BALANCING MARKET			
traded volume (GWh)	285	419	288
% from internal consumption (%)	5.9	8.1	6.2
upward volume (GWh)	183	320	123
average negative imbalance price(lei/MWh)	286.82	270.35	278.61
downward volume (GWh)	102	99	165
average positive imbalance price (lei/MWh)	43.51	24.42	25.56
INTERNAL CONSUMPTION (GWh) (distribution and transmission losses included)	4826	5192	4644*

- Note:
- 1) Supply contracts to final customers and export contracts are not included as they are separately identified;
 - 2) Export volumes and price information correspond to those reported monthly by market participants and include the volumes exported by CNTEE Transelectrica as shipper for coupled DAM; in some cases those volumes are different from those notified in DAMAS platform;
 - 3) The monthly data are presented as reported by the participants for the electricity delivered in the respective month. These information refer both to transactions concluded previously on CMBC and CMBC-NC (ANRE Order 6/2011) and to transactions concluded on CMBC-EA and CMBC-NC (ANRE Order 78/2014) with delivery within the reported month;
 - 4) Price table price is calculated as the average of the hourly market closing price and it is published by Opcom SA. The average monthly price published by Opcom SA calculated as weighted average of the hourly market closing price with traded volumes was 165.48 lei/MWh in February 2018;
The average monthly price is calculated based on monthly traded volume and transaction value published by OPCOM SA.
 - 5) SA.

*Differences compared to the Report on results of monitoring the Romanian electricity market – March 2017 are due to modified data reported by some participants

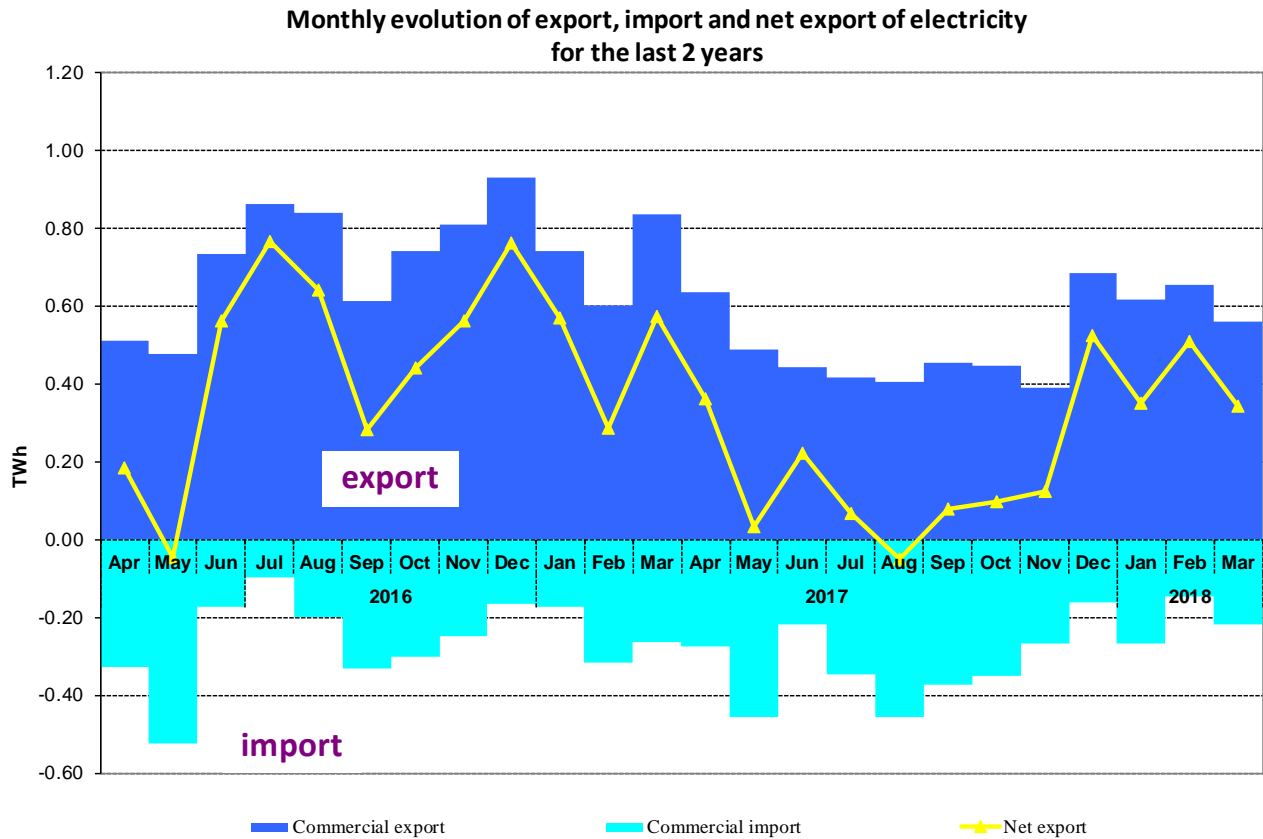
The percentage of electricity quantities from internal consumption (see above table) offers a dimensional reference for each of the specified markets. Prices include only the injection component of the transmission tariff, in this way being comparable within a month and making possible the comparison with the previous month. The following graph presents the evolution of the relation between the volumes sold on each market and the estimated internal consumption, since March 2013.



Source: Monthly reports of wholesale market participants, Opcom SA and CNTEE Transelectrica SA – processed by MU

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

The following graph presents the monthly values of commercial export (quantities for which the extraction component of transmission tariff was applied), commercial import (quantities for which the injection component of transmission tariff was applied) and the net export (export minus import) during the last 24 months:

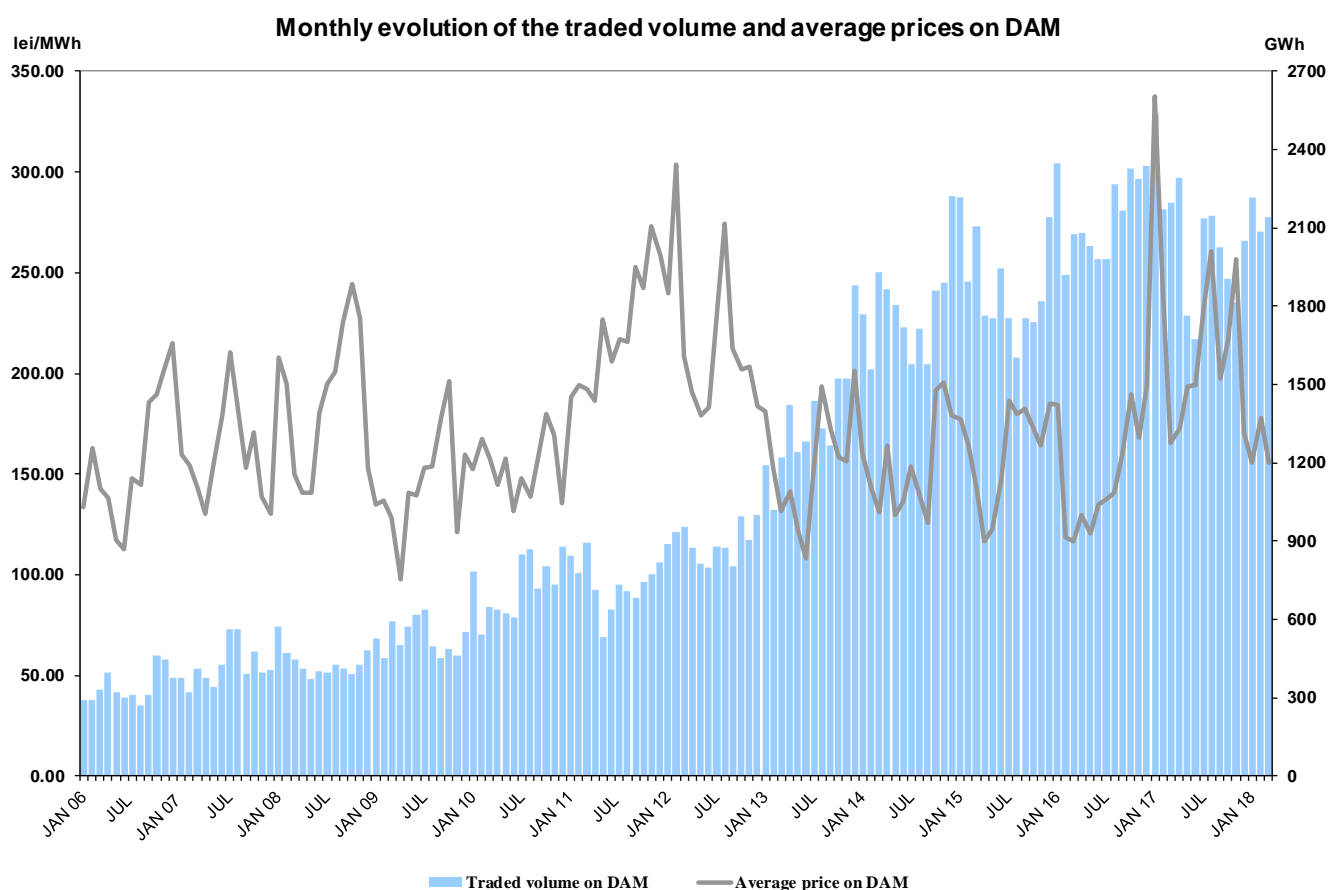


Source: Monthly reports of CNTEE Tranelectrica SA – processed by MU

The following table presents commercial export and import transactions for electricity extracted/introduced from/in the transmission network. These include transactions executed by CNTEE Tranelectrica SA as a shipper agent in the price coupling mechanism of DAM, known as 4M MC. Shipper agent role is reflected in physical and commercial transfer of electricity for import/export on the interconnections between Romania and Hungary.

Import/Export Transactions	February 2018	March 2018	March 2017
Export			
traded volume (GWh)	656	559	836
average price (lei/MWh)	176.81	152.37	163.74
% from internal consumption	13.6	10.8	18.0
in which, for coupled DAM			
traded volume (GWh)	152	150	77
average price (lei/MWh)	162.41	137.52	122.48
% from internal consumption	3.1	2.9	1.7
Import			
traded volume (GWh)	147	217	263
average price (lei/MWh)	199.50	186.80	192.37
% from internal consumption	3.0	4.2	5.7
in which, for coupled DAM			
traded volume (GWh)	77	72	154
average price (lei/MWh)	193.87	166.00	194.08
% from internal consumption	1.6	1.4	3.3

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



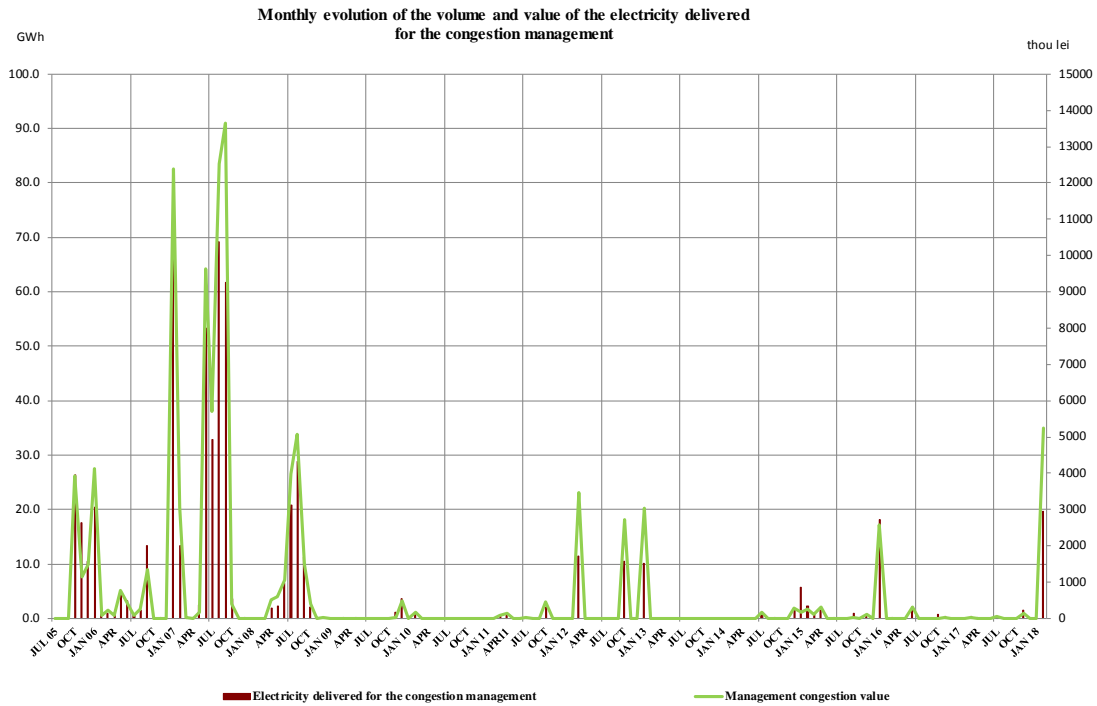
Source: Monthly reports of Opcom SA and CNTEE Tranelectrica SA – processed by MU

Balancing electricity is determined by the dispatch orders (accepted offers) received by generators. After settlement, the actual electricity delivered by generators on balancing market is determined based on the measured (approved) values; the relation between the accepted and delivered electricity in March 2018 is presented in the following table:

March 2018	Dispatch order (GWh)	Delivered electricity (GWh)	Deviation (%)
Secondary regulation	90	90	
<i>upward</i>	43	43	
<i>downward</i>	47	47	
Fast tertiary regulation	282	271	4
<i>upward</i>	237	232	2
<i>downward</i>	45	39	13
Slow tertiary regulation	60	58	2
<i>upward</i>	46	46	1
<i>downward</i>	13	13	6
TOTAL	431	419	
<i>upward</i>	326	320	
<i>downward</i>	105	99	
INTERNAL CONSUMPTION		5193	
<i>% share of traded volumes from internal consumption</i>		8.1%	

Source: Monthly reports of CNTEE Tranelectrica SA – processed by MU

The following graph presents the monthly evolution of electricity traded by CNTEE Transelectrica SA on the Balancing Market for covering the electricity used for congestion management (in order to solve the congestions in the transmission grid) and the evolution of the values of these transactions starting from July 2005.



Source: Monthly reports of CNTEE Transelectrica SA – processed by MU

5. The structure of transactions on the wholesale electricity market of different market participant categories

Generators

In March 2018 compared with similar period of 2017, the structure of electricity sales obligations contracted before the delivery interval by the electricity generators with dispatchable units was the following:

Transaction type	-GWh-	
	March 2017	March 2018
	1	2
Regulated contracts to suppliers of last resort - hydro generator	135.49	-
Regulated contracts to suppliers of last resort - nuclear generator	60.47	-
Negotiated contracts to suppliers	71.25	42.38
Contracts concluded on Opcom centralized markets:	2960.49*	3752.04
<i>CMBC-EA</i>	1228.00*	1829.55
<i>CMBC-CN</i>	763.50	850.18
<i>CM-OTC</i>	969.00	1072.31
Centralized market for universal service	453.92	425.13
DAM	1549.08	1338.23
Intraday	7.19	9.00
Supply contracts to final customers. from which:	403.95	504.60
<i>Households*</i>	0.34	0.34
<i>Non-households</i>	403.61	504.26
Total	5641.85*	6071.39

Source: Monthly reports of generators – processed by MU

*Differences to the Report on results of monitoring the Romanian electricity market – March 2017 are due to modified data reported by some participants

Suppliers

In March 2018, 99 companies with main activity the supply of electricity, concluded transactions on the electricity market; from those, 29 suppliers traded exclusively on the wholesale market and 70 suppliers on both retail and wholesale markets (in this category there are also included the 5 suppliers of last resort which act on both retail and wholesale markets).

Suppliers acting exclusively on WEM

The following table shows the activity for March 2018 of the suppliers acting exclusively on WEM, acquisitions and sales being split by categories of markets participants, compared with similar period of 2017:

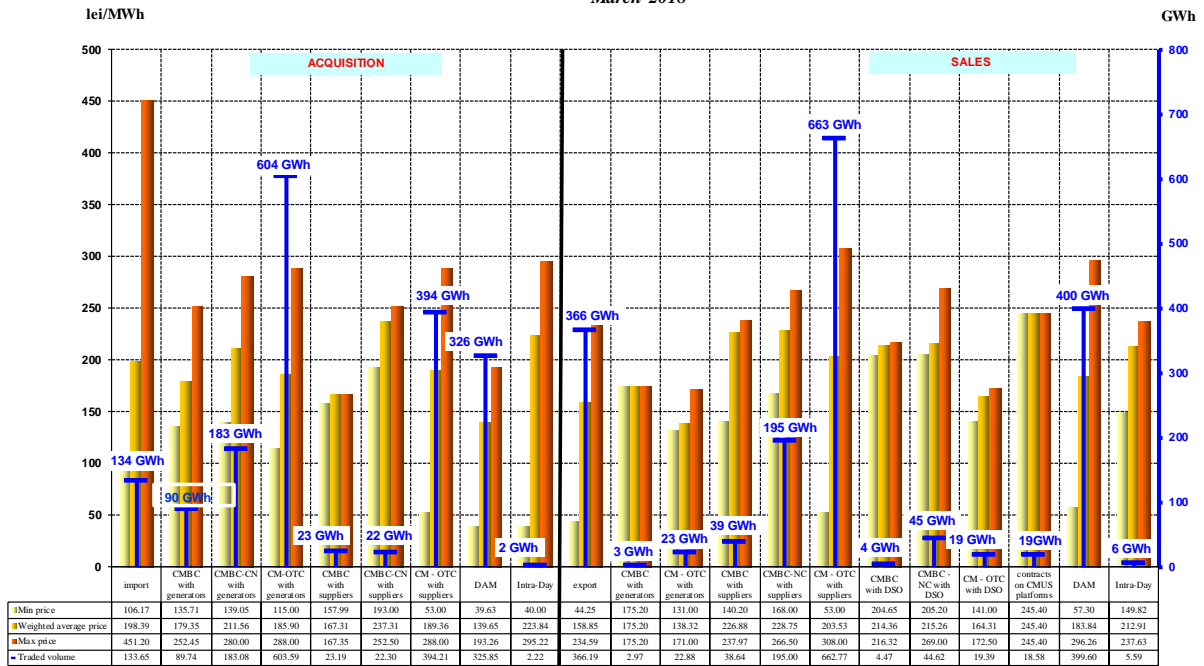
-GWh-

Transactions structure of suppliers acting exclusively on WEM	March 2017	March 2018
Purchase		
Import	101.91	133.65
Contracts concluded on Opcom centralized markets:	1635.80	1316.11
- on CMBC-EA with generators	173.09	89.74
- on CMBC-CN with generators	406.91	183.08
- on CM-OTC with generators	397.83	603.59
- on CMBC-EA with other suppliers	0.00	23.19
- on CMBC-CN with other suppliers	33.45	22.30
- on CM-OTC with other suppliers	624.53	394.21
DAM	260.08	325.85
Intraday market	1.76	2.22
Sales		
Export	624.29	366.19
Contracts concluded on Opcom centralized markets:	925.59	990.73
- on CMBC-EA with generators	0.00	2.97
- on CM-OTC with generators	11.15	22.88
- on CMBC-EA with other suppliers	70.62	38.64
- on CMBC-CN with other suppliers	97.35	195.00
- on CM-OTC with other suppliers	680.37	662.77
- on CMBC-EA with DO	0.00	4.47
- on CMBC-CN with DO	0.00	44.62
- on CM-OTC with DO	48.30	19.39
- on CMBC-EA with TSO	17.81	0.00
CMUS with last resort suppliers	173.48	18.58
DAM	274.09	399.60
Intraday market	2.40	5.59

Source: Monthly reports of suppliers – processed by MU

Breakdown by source / destination of traded volumes, minimum, average and maximum prices for March 2018 by WEM exclusive suppliers is presented in the following graph.

Transactions concluded by suppliers acting exclusively on WEM
- March 2018 -



Source: Monthly reports of the competitive suppliers– processed by MU

Active suppliers on REM (suppliers of last resort not included)

The following table presents aggregated information on transactions volume and structure for suppliers providing electricity to final customers, on the competitive market, for March 2018 compared with similar period of 2017:

Transactions' structure of suppliers acting on REM (suppliers of last resort excluded)	-GWh -	
	March 2017	March 2018
Purchase		
Import	7.13	11.18
Negotiated contracts with generators	72.92	46.75
Contracts concluded on Opcom centralized markets:	2222.29	2254.67
- on CMBC-EA with generators	710.54	1045.06
- on CMBC-CN with generators	291.85	345.06
- on CM-OTC with generators	320.12	245.38
- on CMBC-EA with other suppliers	158.69	82.63
- on CMBC-CN with other suppliers	95.91	112.34
- on CM-OTC with other suppliers	645.18	424.21
Negotiated contracts with undispachable generators (others than under Law 23/2014 and Law 122/2015)*	17.98	9.84
Negotiated contracts with undispachable generators (Law 23/2014 and Law 122/2015)**	31.60	22.21
DAM	647.30	333.79
Intraday market	6.96	9.62

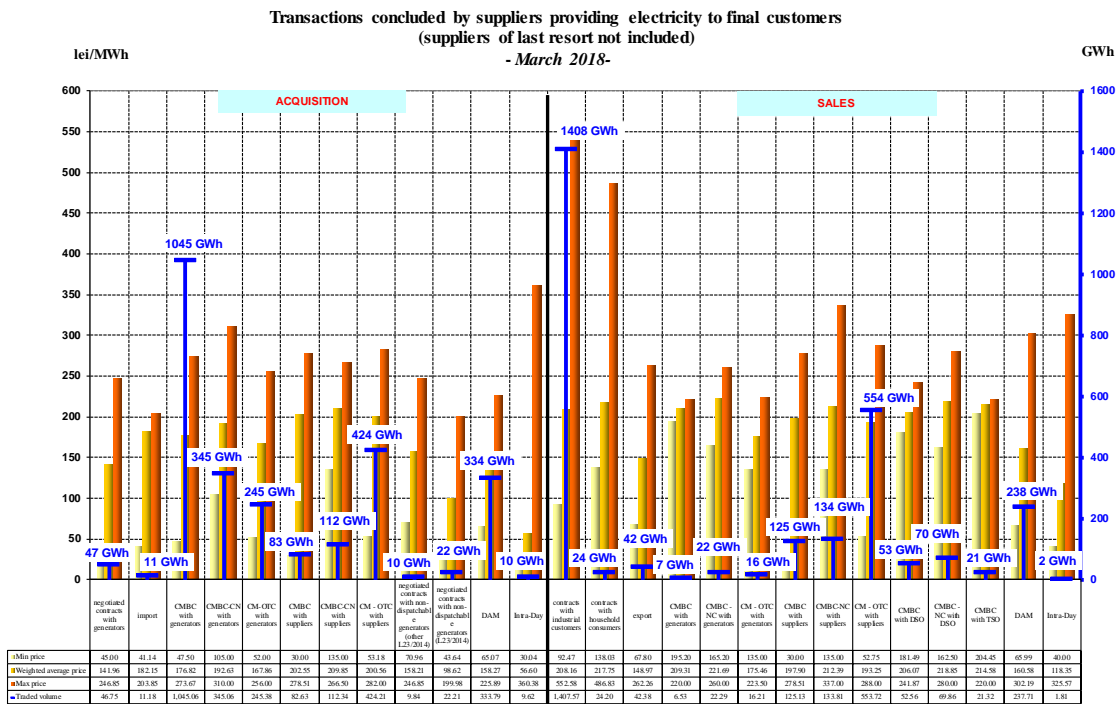
Transactions' structure of suppliers acting on REM (suppliers of last resort excluded)	March 2017	March 2018
Sales		
Export	134.58	42.38
Contracts concluded on Opcom centralized markets:	1244.48	1001.43
- on CMBC-EA with generators	13.91	6.53
- on CMBC-NC with generators	16.35	22.29
- on CM-OTC with generators	9.28	16.21
- on CMBC-EA with other suppliers	111.77	125.13
- on CMBC-NC with other suppliers	122.82	133.81
- on CM-OTC with other suppliers	830.26	553.72
- on CMBC-EA with DO	128.22	52.56
- on CMBC-NC with DO	0.00	69.86
- on CMBC-EA with TSO	11.88	21.32
CMUS with last resort suppliers	98.08	0.00
DAM	162.82	237.71
Intraday market	0.39	1.81
Household customers	12.23	24.20
Non-household customers	1344.93	1407.57

Source: Monthly reports of the competitive suppliers – processed by MU

*negotiated trades concluded with undispachable generators which are not able to conclude contracts according to Law 23/2014 provisions. with subsequent changes and additions of Law no. 122/2015. both Laws subsequent to Law no. 220/2008

**negotiated trades concluded with undispachable generators which may conclude contracts according to Law 23/2014 provisions. with subsequent changes and additions of Law no. 122/2015. both Laws subsequent to Law no. 220/2008

In addition to the data from the table above, the following graph presents the breakdown by source / destination of the volumes traded, the minimum, average and maximum prices in March 2018, by suppliers active on WEM and REM:



Source: Monthly reports of the competitive suppliers – processed by MU

Suppliers of last resort

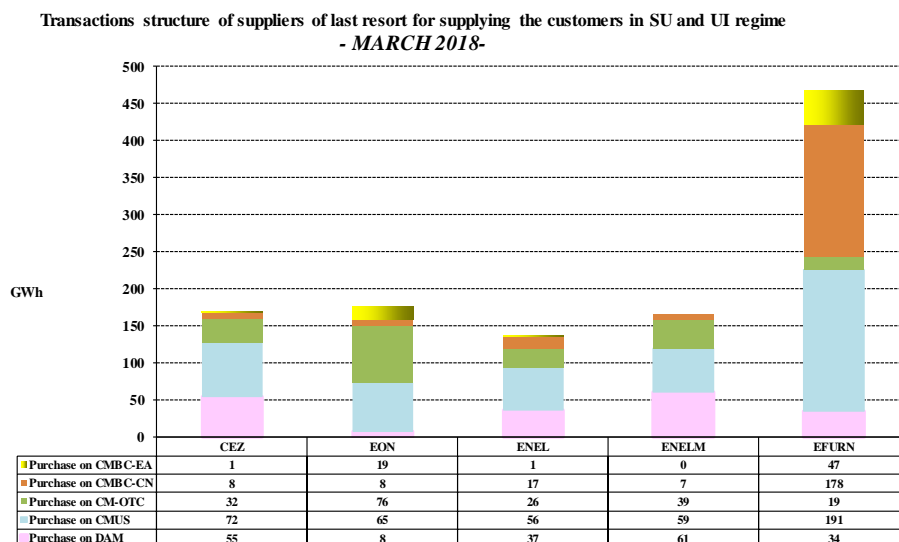
The structure of electricity transactions of suppliers of last resort (before the delivery interval) for supplying the customers under universal service and last resort regime is presented in the table below for March 2018, compared to similar period of 2017:

- GWh -

Transactions structure of suppliers of last resort for supplying the customers in SU and UI regime	March 2017	March 2018
Regulated contracts with generators	195.96	-
Negotiated contracts with undispachable generators (Law 23/2014 and Law 122/2015)*	0.03	0.41
Contracts concluded on Opcom centralized markets:	22.78	479.16
- contracts on CMBC-EA with generators	8.84	31.49
- contracts on CMBC-CN with generators	2.21	66.71
- contracts on CM-OTC with generators	0.07	10.04
- contracts on CMBC-EA with other suppliers	0.00	37.52
- contracts on CMBC-CN with other suppliers	3.83	151.19
- contracts on CM-OTC with other suppliers	7.82	182.20
Centralized market for universal service:	725.48	443.71
- contracts on CMUS with generators	453.92	425.13
- contracts on CMUS with suppliers	271.56	18.58
Transactions concluded on DAM:	156.56	168.10
- purchase	176.65	195.83
- sales	20.09	27.73
Transactions concluded on Intraday market:	0.13	0.19
- purchase	0.13	0.19
- sales	0.00	0.19

*negotiated trades concluded with undispachable generators which may conclude contracts according to Law 23/2014 provisions. with subsequent changes and additions of Law no. 122/2015, both Laws subsequent to Law no. 220/2008

The structure of the electricity purchased by the suppliers of last resort from the main generators on regulated contracts is presented in the following graph for March 2018:



Source: Monthly reports of the suppliers of last resort – processed by MU

Suppliers of the last resort present separately in the customers' invoice the "Competitive Market Component" (CMC), proposed by each supplier of last resort and approved by ANRE, in accordance with the provisions of The methodology for setting prices and tariffs for final consumers who do not use their eligibility rights; CMC is applied starting with 1 2013 in households' invoices. In order to reduce the differences between the electricity purchase prices to cover the consumption invoiced at the CMC tariffs by suppliers of last resort, in July 2014 ANRE developed the PCSU regulatory framework and OPCOM SA, the operator of the electricity market, implemented the corresponding trading mechanism which became operational in April 2015. As of August 2017, according to ANRE Order 75/2017, which brought amendments to the Regulation for the organization and operation of simultaneous auctions with decreasing price on the Centralized Market for Universal Service (ANRE Order 65/2014) and The methodology for setting prices and tariffs for final consumers who do not use their eligibility rights, the purchase of the electricity forecasted to be invoiced at the CMC tariff is done in a centralized way on the PCSU for at least half of the amount and through bilateral contracts concluded on the centralized contracts markets. The difference between the consumption and the contracted quantities can be traded on DAM, ID and/or at the imbalance price. To meet final customer consumption, the required power is purchased from the CMBC-EA, CMBC-CN, CM-OTC, DAM and ID centralized platforms.

During the period of suspension or in the event of the termination of a bilateral contract concluded by SLR on the CMUS prior to the expiration of its validity period, the purchase by the SLR of the corresponding quantities of electricity is done on the centralized contracts markets, DAM, ID and / or at imbalance price.

The structure of SLR's electricity transactions on the REM (made before the delivery interval) for universal service is presented in the following table for March 2018, compared with the similar period of 2017:

-GWh-

Transactions' structure of suppliers of last resort for universal service	March 2017		March 2018	
	Quantity [GWh]	Average price [lei/MWh]	Quantity [GWh]	Average price [lei/MWh]
Negotiated contracts with undispachable generators			0.39	240.00
Contracts concluded on Opcom centralized markets:			414.15	228.38
- on CMBC-EA with generators			24.98	226.13
- on CMBC-CN with generators			65.41	233.86
- on CM-OTC with generators			9.33	246.85
- on CMBC-EA with other suppliers			37.15	234.18
- on CMBC-CN with other suppliers			124.98	237.03
- on CM-OTC with other supplier			152.30	216.74
Contracts concluded on CMUS:	725.48	174.98	443.71	249.67
- contracts on CMUS with generators	453.92	176.39	425.13	249.86
- contracts on CMUS with suppliers	271.56	172.23	18.58	245.40
Transactions concluded on DAM:	87.12	-	146.54	219.34
- purchase	105.67	174.86	172.33	201.20
- sales	18.56	164.95	25.79	98.13
TOTAL	812.59	175.06	1004.79	236.47

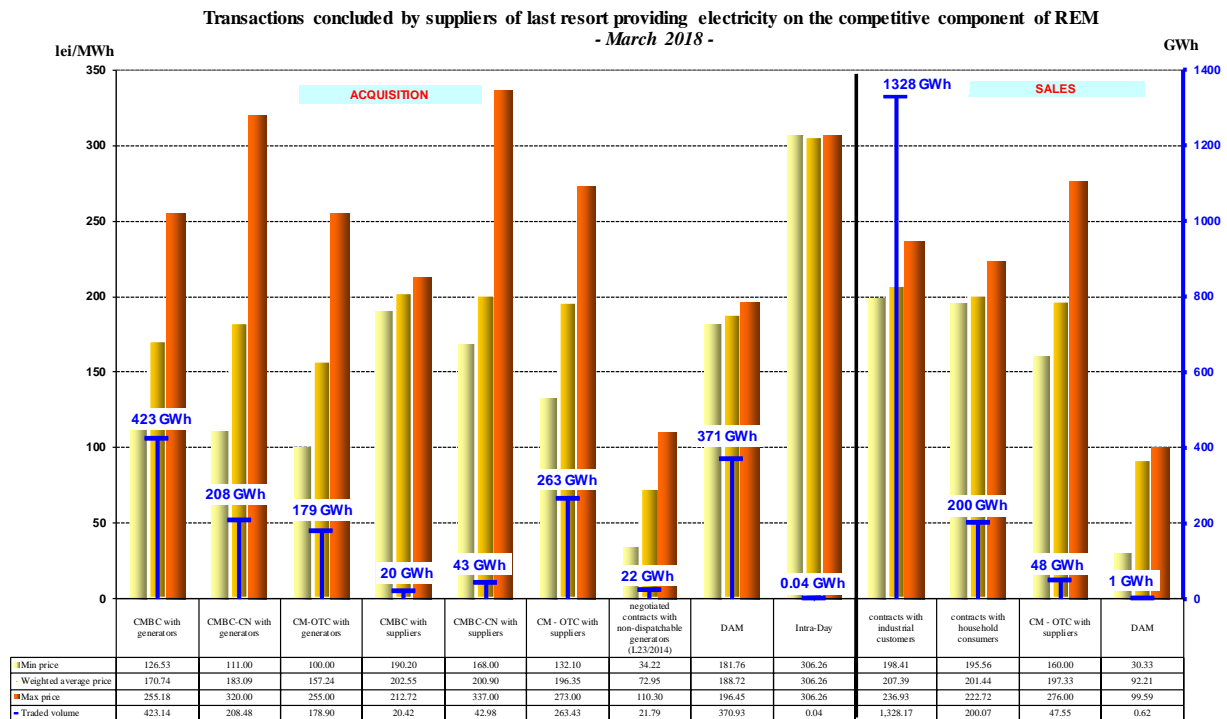
*negotiated trades concluded with undispachable generators which may conclude contracts according to Law 23/2014 provisions. with subsequent changes and additions of Law no. 122/2015. both Laws subsequent to Law no. 220/2008

The following table presents the electricity acquisition structure of suppliers of last resort (before the delivery interval) corresponding to the competitive REM (energy supplied at negotiated prices to the customers who renounced to regulated tariffs) for March 2018 compared to similar previous period:

Transactions' structure of suppliers of last resort for the competitive segment of REM	March 2017	March 2018
Purchase		
Contracts concluded on Opcom centralized markets:	881.51	1137.35
- on CMBC-EA with generators	179.32	423.14
- on CMBC-CN with generators	48.36	208.48
- on CM-OTC with generators	240.94	178.90
- on CMBC-EA with other suppliers	23.70	20.42
- on CMBC-CN with other suppliers	86.98	42.98
- on CM-OTC with other suppliers	302.20	263.43
Negotiated contracts with undispatchable generators (others than under Law 23/2014 and Law 122/2015)*	27.69	21.79
DAM	417.76	370.93
ID	1.02	0.04
Sales		
Contracts concluded on Opcom centralized markets:	72.81	47.55
- on CM-OTC with other suppliers	69.10	47.55
- on CM-OTC with DO	3.72	0.00
DAM	0.15	0.62
Household customers	63.40	200.07
Non-household customers	1215.13	1328.17

*negotiated trades concluded with undispatchable generators which may conclude contracts according to Law 23/2014 provisions. with subsequent changes and additions of Law no. 122/2015. both Laws subsequent to Law no. 220/2008

The structure by types of sources/destinations of the traded volumes and the average prices of the suppliers of last resort for March 2018, on the competitive segment of REM is presented in the following graph:



Source: Monthly reports of the suppliers of last resort – processed by MU

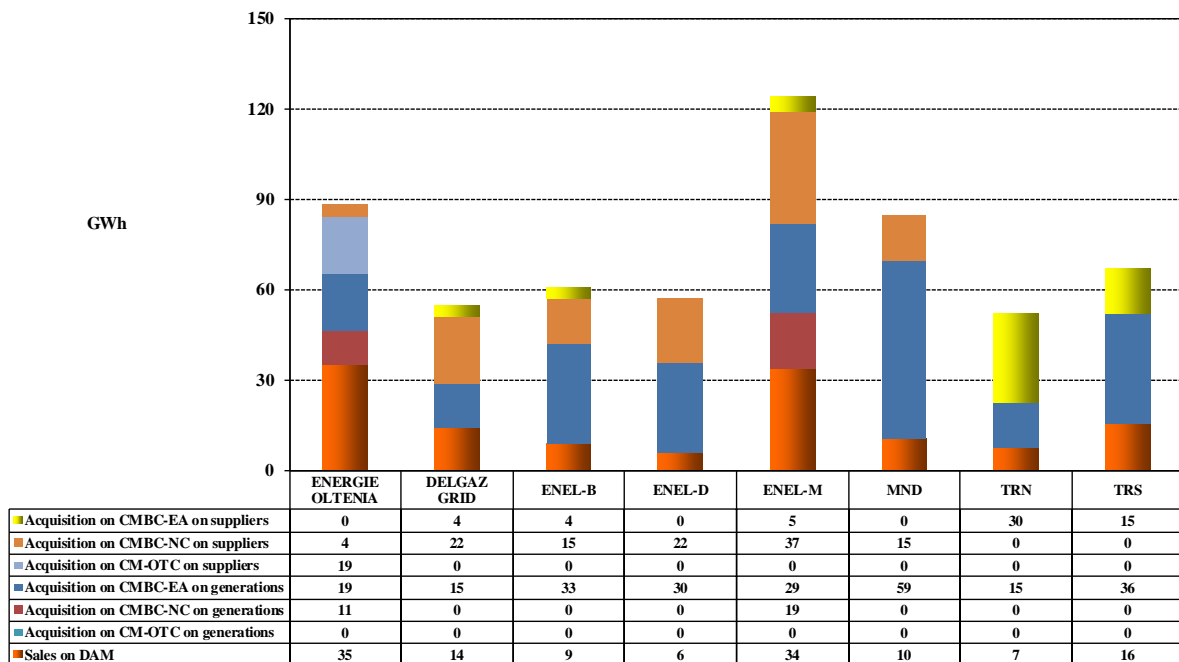
Main distribution operators

The following table shows the electricity acquisition structure of main distribution operators (before the delivery interval), for covering the distribution network losses, for March 2018 compared with similar previous period:

Structure of transactions	March 2017	March 2018
Contracts concluded on Opcom centralized markets:	359.33	456.55
- CMBC-EA with generators	171.60	235.86
- CMBC-CN with generators	3.79	29.81
- CM-OTC with generators	3.72	0.00
- CMBC-EA with suppliers	128.22	57.03
- CMBC-CN with suppliers	0.00	114.47
- CM-OTC with suppliers	52.01	19.39
Transactions concluded on Intraday market	0.14	0.31
- purchase	0.14	0.31
- sales	0.00	0.00
Transactions concluded on DAM:	213.81	130.41
- purchase	213.81	130.72
- sales	0.00	0.31

The electricity bought for covering the network losses is presented in detail in the following graph, for March 2018:

Electricity acquisition of distribution operators for covering the distribution losses
March 2018



Source: Monthly reports of the distribution operators – processed by MU

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

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

- HHI. Herfindahl-Hirschman Index = sum of square market shares (%) of 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%	clearly indicates a dominant position.

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

The indicator values signify:

40% < C3 < 70%	moderately concentrated market;
C3 > 70%	highly concentrated market.

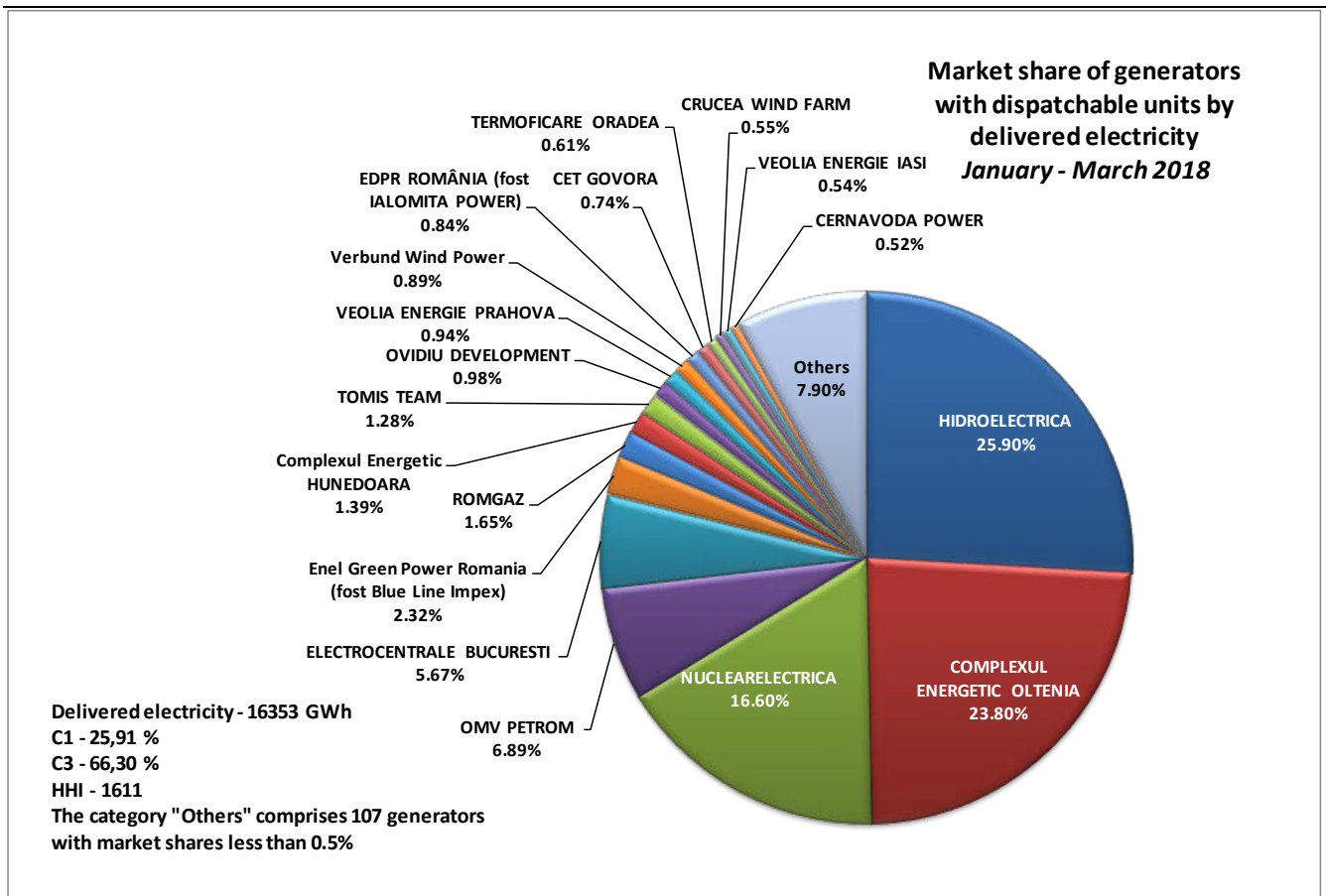
These concentration indicators may be defined for the wholesale market (electricity market or ancillary services market) or for each of its components where direct competition takes place.

Concentration indicators and market shares of the electricity generators

The market structure at generation level offers an initial basis for analyzing the possible competitiveness level of the electricity market.

The following table presents the concentration indicators for March 2018, and in the graph are presented the market shares of generators with dispatchable units, on the wholesale electricity market and determined on the basis of the electricity supplied into the networks.

Concentration indicators - March 2018 -	C1 (%)	C3 (%)	HHI
Value	32.83	71.84	1921



Source: Monthly reports of generators – processed by MU

A component of the WEM on which direct competition between generators exists is the Balancing Market (BM). The values of concentration indicators on this market for March 2018 are determined based on delivered electricity, for each type of regulation defined within the Commercial Code, and they are presented in the following table:

Structure/concentration indicators of BM - March 2018 -	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
C1 - % -	59	60	80	56	56	60
C3 - % -	98	97	92	92	94	92
HHI	4761	4817	6464	3830	4301	4383

Source: Monthly reports of CNTEE Transelectrica SA – processed by MU

In order to maintain the level of security in the NES functioning, due to significant increase of the number of RES generators, ancillary Services are ensured both based on market mechanisms and regulated contracts. Based on the provisions of *Government Decision no. 760/2014 on approving the winter program in the energy sector regarding the measures to ensure the safety stocks of the National Power System in what regards the fuel necessary for the cold season and the water volume in the water reservoirs, during the period 15 November 2017 – 15 March 2018, and other measures for the safety and security of the functioning of the National Energy System*, were established regulated quantities for secondary reserve, fast tertiary and slow tertiary reserve. Additionally, in order to ensure the ancillary services necessary to ensure the safety of the NES, CNTEE Transelectrica SA has organised auctions for buying reserves on the competitive market.

The following table presents the concentration indicators on types of reserves (secondary, fast tertiary and slow tertiary), that characterize the regulated component of the Ancillary Services Market, compared with the competitive one, for March 2018.

Concentration indicators on Ancillary Services Market - March 2018 -		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve
regulated component	contracted quantity (h*MW)	7200	7200	241200
	C1 (%)	100	100	68.7
	C3 (%)	100	100	100
competitive component	contracted quantity (h*MW)	342650	506900	354500
	C1 (%)	60.6	75.6	34.2
	C3 (%)	98.0	91.3	91.6
	HHI	4890	5851	2918

Source: Monthly reports of CNTEE Transelectrica SA – processed by MU

Concentration Indicators for the Day Ahead Market

Day Ahead Market (DAM) is a voluntary market, opened both for buying and selling for all types of market participants: generators, suppliers, grid operators, under the conditions set 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 buying and for the selling side of DAM based on quantities traded by participants on this market.

Concentration indicators on DAM - March 2018 -	C1 (%)	C3 (%)	HHI
Selling	12.91	32.24	543
Buying	16.75	32.09	577

Source: Monthly reports of Opcom SA – processed by MU

7. Evolution of prices on the wholesale electricity market

Starting with 19 November 2014 the Romanian DAM is coupled with the spot markets from Hungary, Slovakia and Czech Republic based on the price coupling mechanism, project known as 4M MC. This coordinated correlation mechanism uses an unique 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 coupling algorithm recommended by ACER (Euphemia) and its goal is maximizing the social welfare to the entire area of the coupled markets.

The coupling mechanism is accomplished through the 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 from 1 January 2016). After successfully finalisation of the implementation process of the changes and tests performed, OPCOM operates in its own name the coupling solution implemented in the 4M MC operational mechanism, all processes performed was carried out in safety conditions of coupled functioning 4M MC day-ahead markets. Coupling operators are acting as Coordinators on a monthly rotation basis.

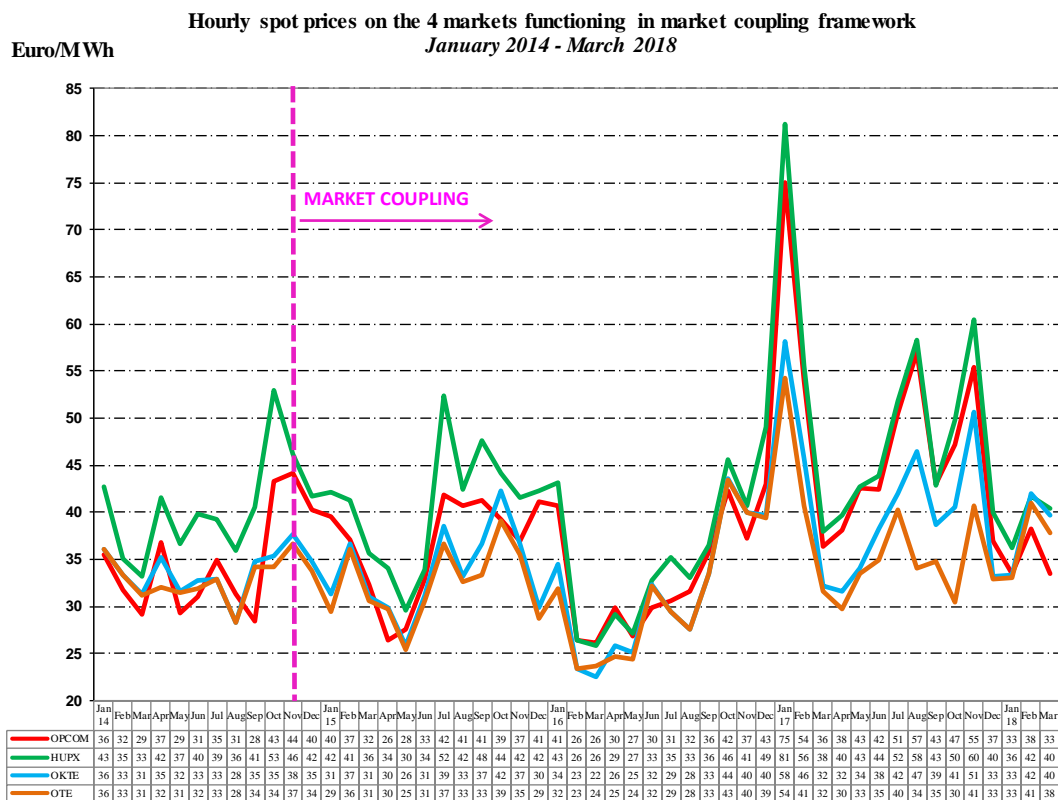
According to EU legislation, coordinated cross border capacity allocation is under the governance of the transmission system operators from the 4 countries and the allocation model to be used is the default allocation on DAM of the available interconnection capacity.

To better meet the purpose of DAM coupling mechanism - electricity transfer at level and direction based on generation and consumption conditions and dependent on the coupled DAM prices - starting with 1st January 2016. TSO operators from Romania and Hungary (CNTEE Transelectrica SA and Mavir ZRt) agreed to reserve a quota from interconnection capacity for DAM allocation based on the authorities recommendations from both countries, ANRE and MEKH. The same rule was adopted for interconnection capacity allocation on Bulgarian border.

Thus, for each month of the year, reserved capacity for DAM allocation is determined as a difference between monthly ATC for each subperiod and 80% from the lowest value between the ATC resulted for subperiods of the month, incremented with the already allocated capacity at the yearly auction but which has been returned to TSO.

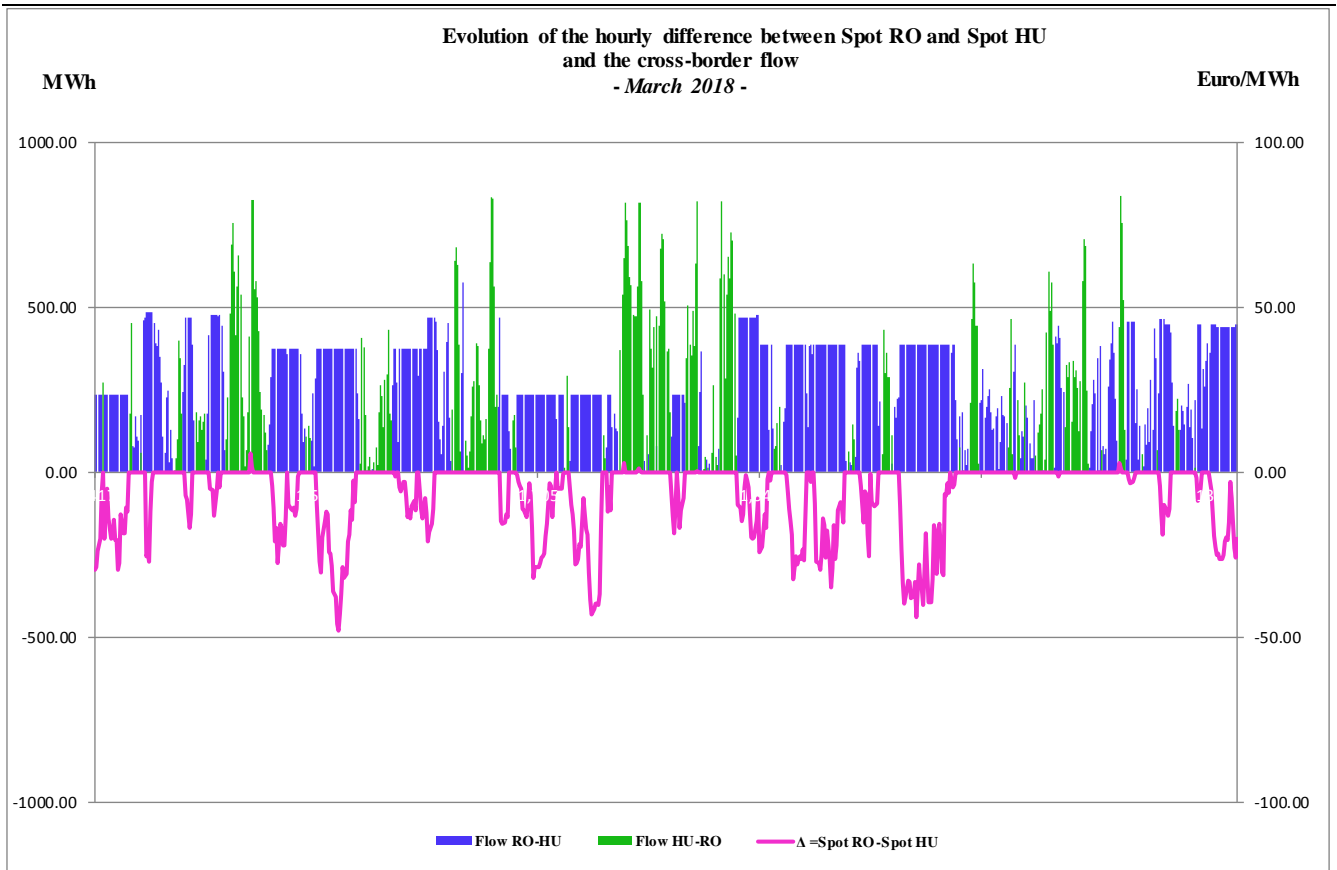
Particularly, for Hungarian border, if 80% from the lowest value of the ATC resulted for monthly subperiods is lower than 80 MW, ATC for monthly allocation will be 80% from the ATC calculated for each subperiod incremented with the already allocated capacity at the yearly auction but which has been returned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

Next graph presents the monthly spot prices of the 4 markets involved in the coupling mechanism starting with January 2014, before and after the start of operational phase.



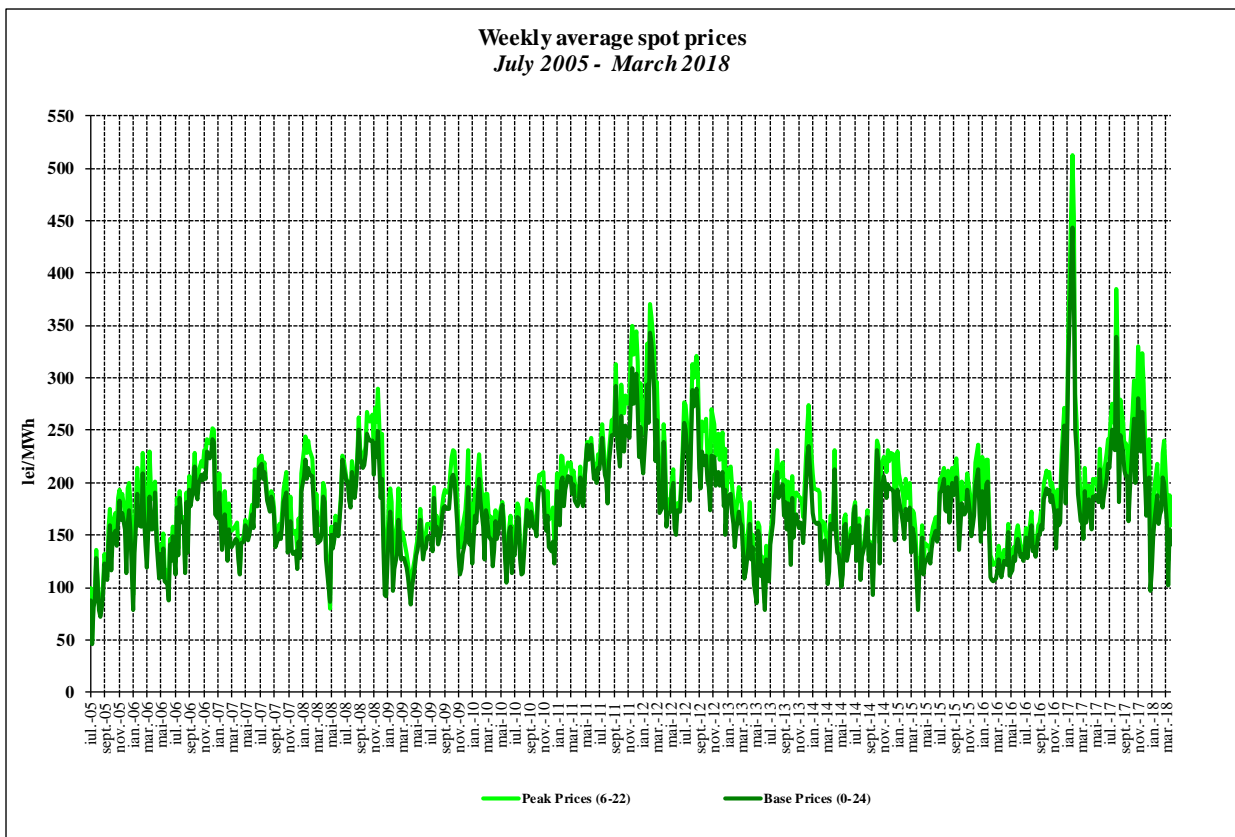
Source: Monthly reports of Opcom SA – processed by MU

The following graph presents the evolution of March 2018 hourly gap between DAM prices in Romania and Hungary as a result of coupled markets, correlated with the cross border flows RO-HU for both directions.



Source: Data published by Opcom SA – processed by MU

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



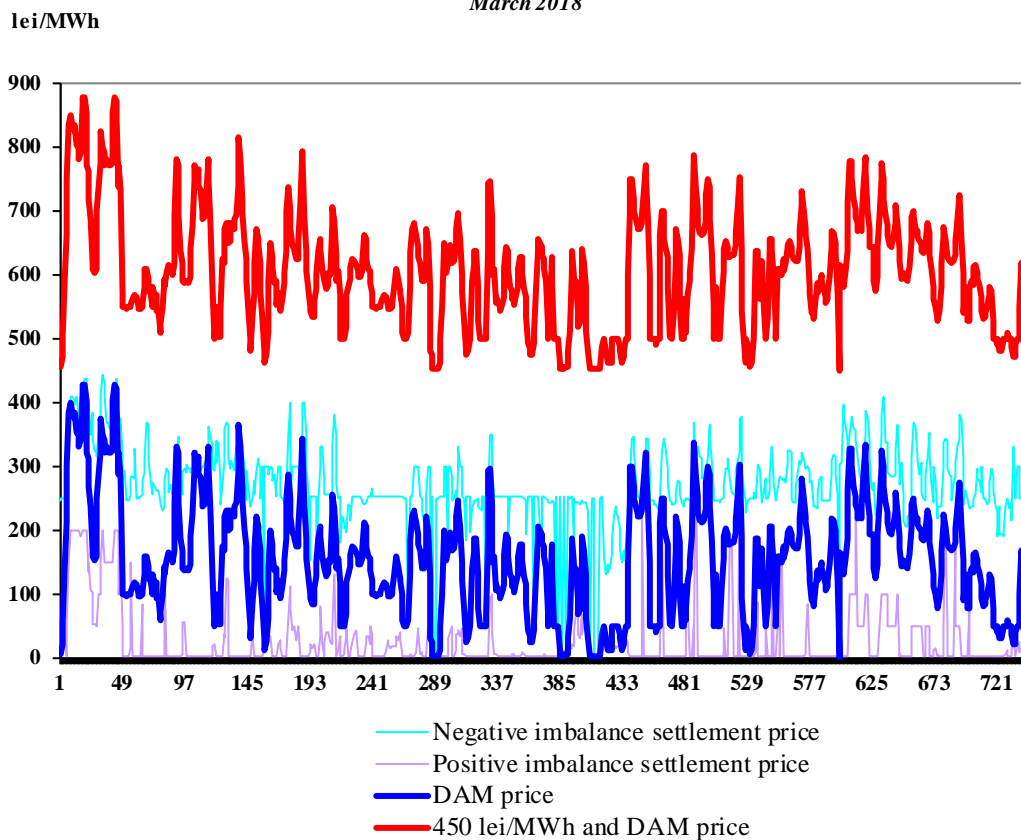
Source: Daily reports of Opcom SA – processed by MU

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

The settlement prices (MCP on DAM, negative imbalance settlement price and positive imbalance settlement price) are represented on the same graph, showing the two markets correlation degree. In the first graph the 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.

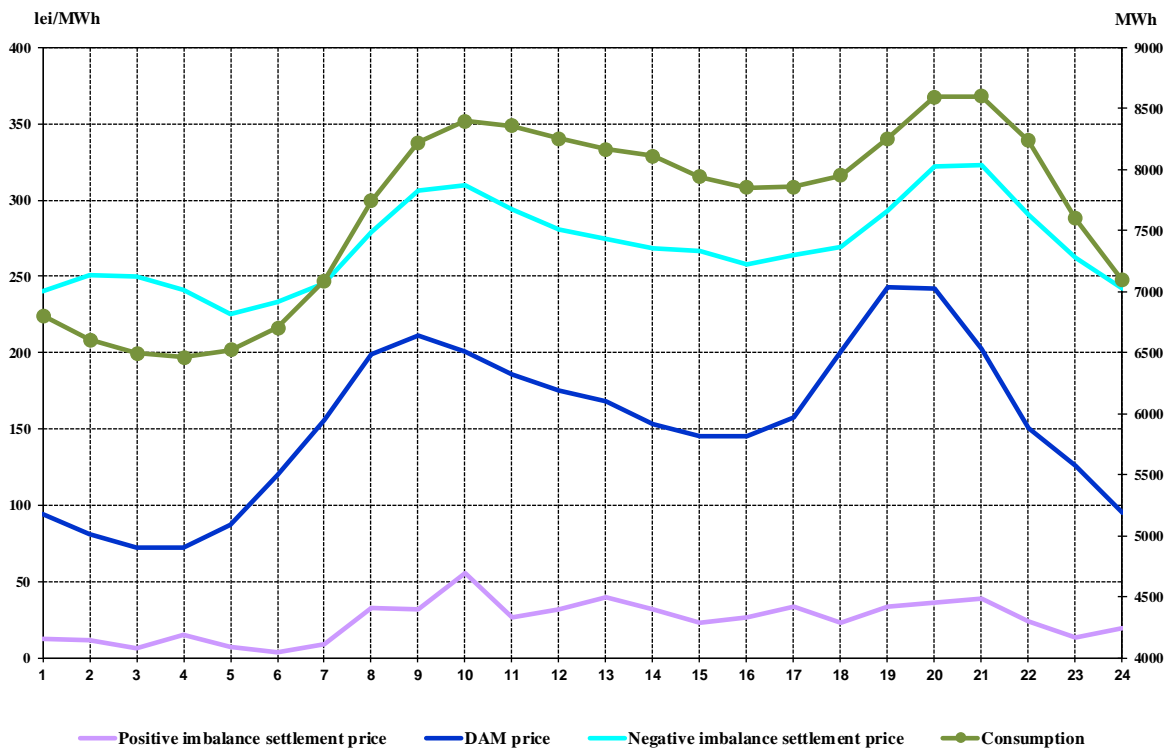
Hourly settlement prices

March 2018



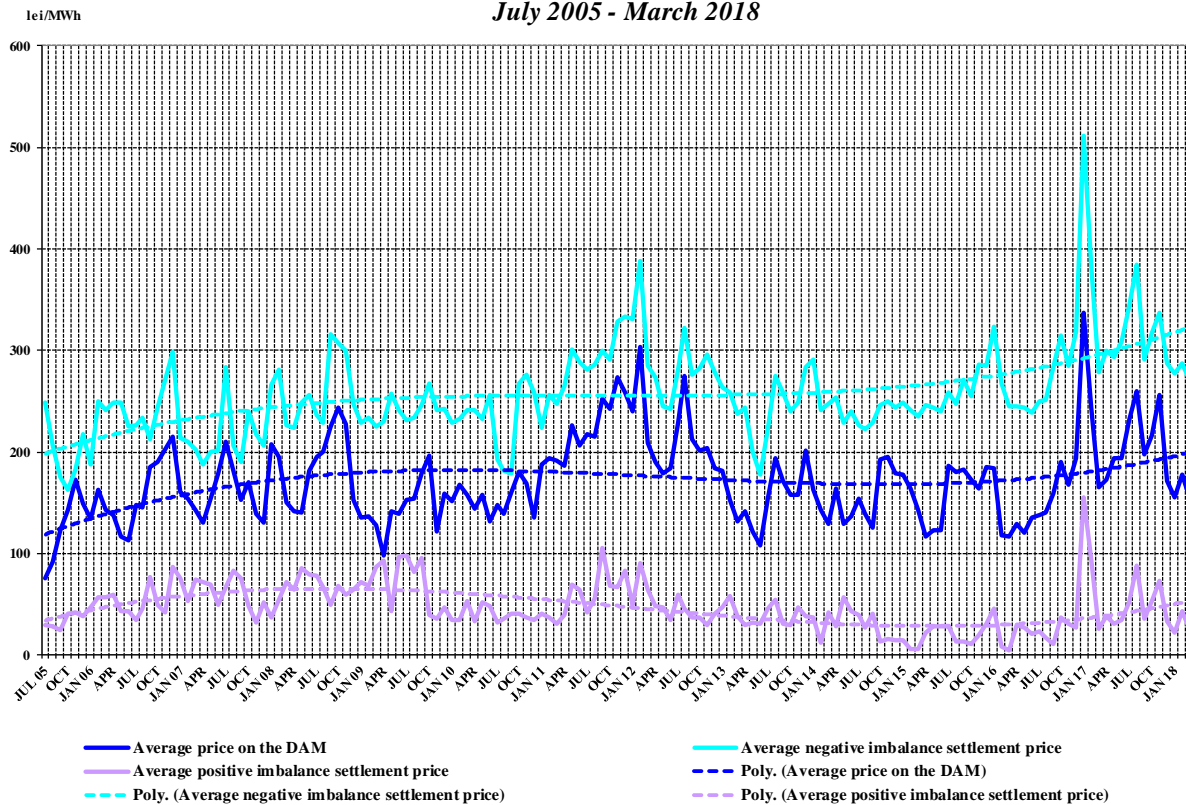
Source: Daily/monthly reports of Opcom SA – processed by MU

Hourly average settlement prices and internal consumption
March 2018



Source: Monthly reports of Opcom SA and CNTEE Tranelectrica SA – processed by MU

Monthly average prices on DAM and BM
July 2005 - March 2018

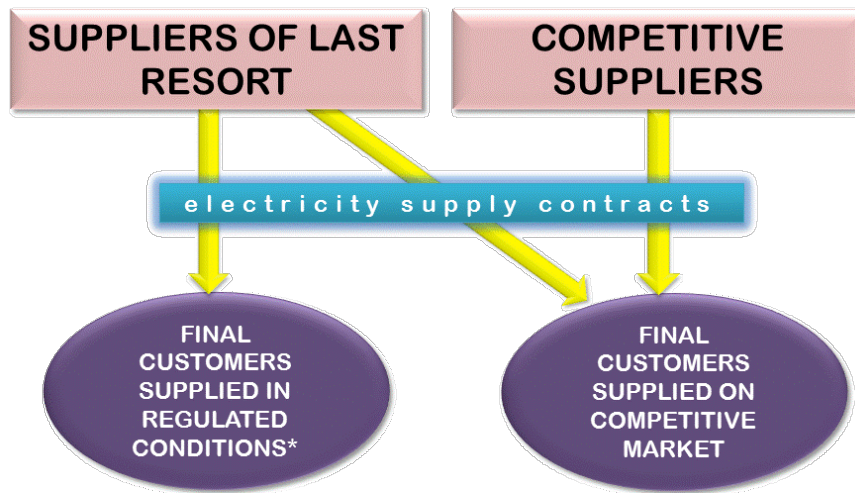


Source:

Monthly/daily reports of Opcom SA – processed by MU

III. RETAIL ELECTRICITY MARKET

1. Structure of the retail electricity market

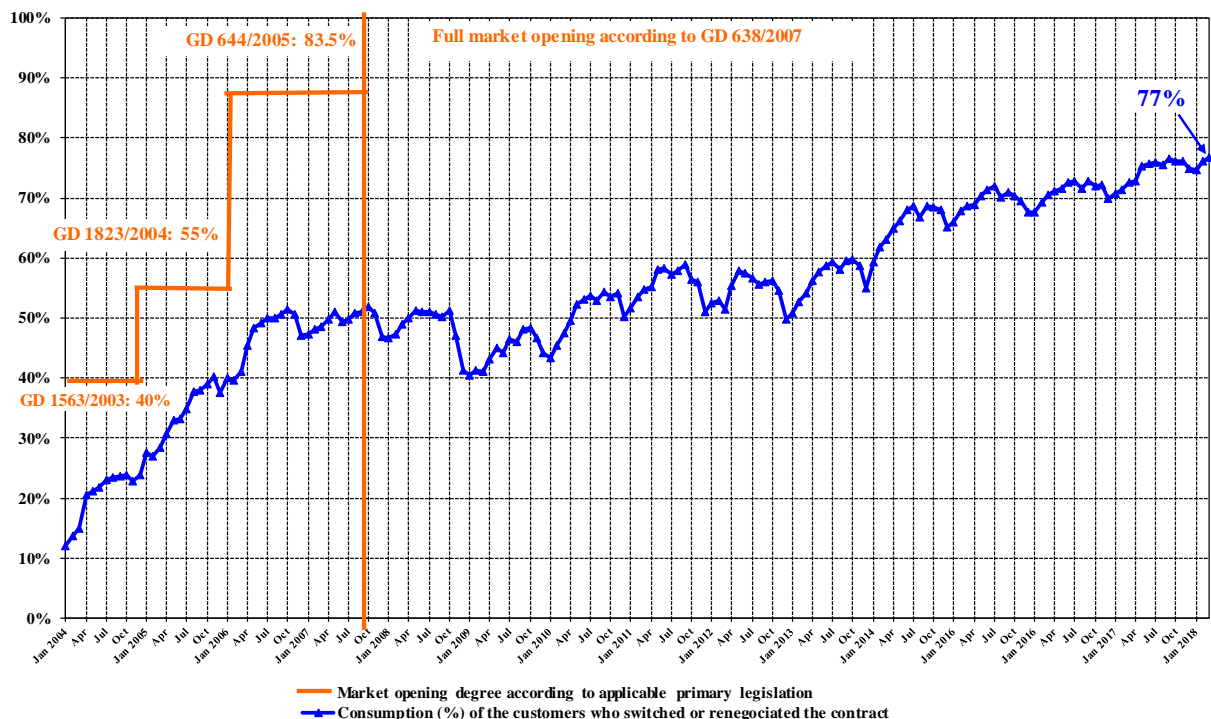


* according to art. 53 (2) and art. 55 (1) from Electricity and Gas Law no. 123/2012

2. The degree of opening of the electricity market

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 – March 2018. The values presented are cumulated from the beginning of the opening process and are presented monthly:

Opening degree evolution of electricity market
January 2004 - March - 2018

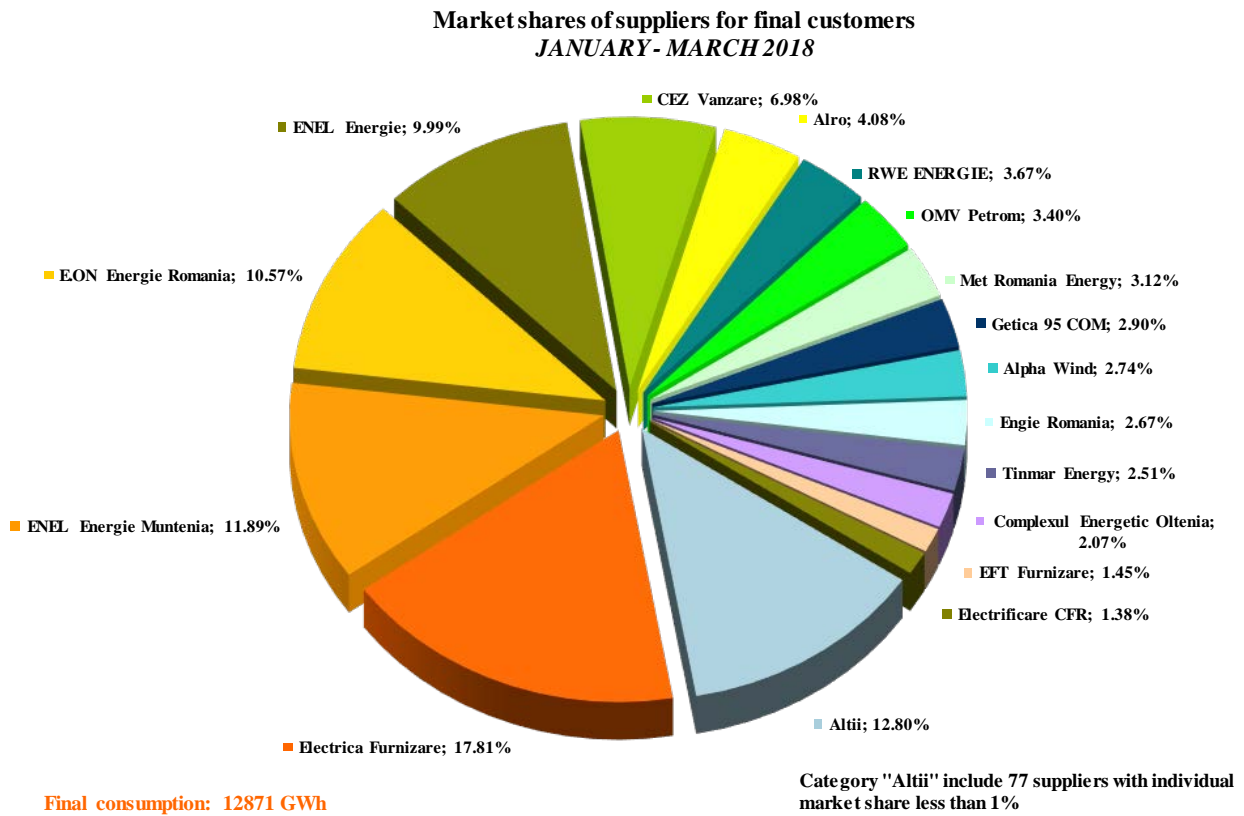


Source: Monthly reports of the final customers' suppliers – processed by MU

3. Market shares of the electricity suppliers

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

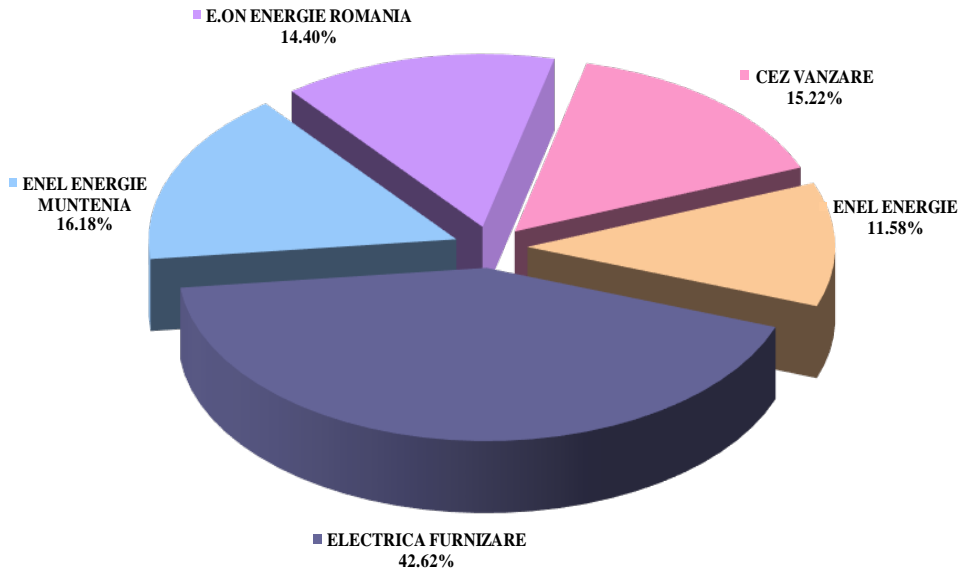
- a) for all suppliers acting on REM. including the suppliers of last resort. based on the electricity supplied to the final customers (on regulated. Competitive Market Component and last resort tariffs) in US and last resort regime, as well as to the customers who switched their supplier or renegotiated their contract;



Source: Monthly reports of suppliers for final customers– processed by MU

- b) for suppliers of last resort - based on the electricity supplied to the final customers in US and last resort regime;

Market shares of suppliers of last resort on US and last resort regime
JANUARY - MARCH 2018

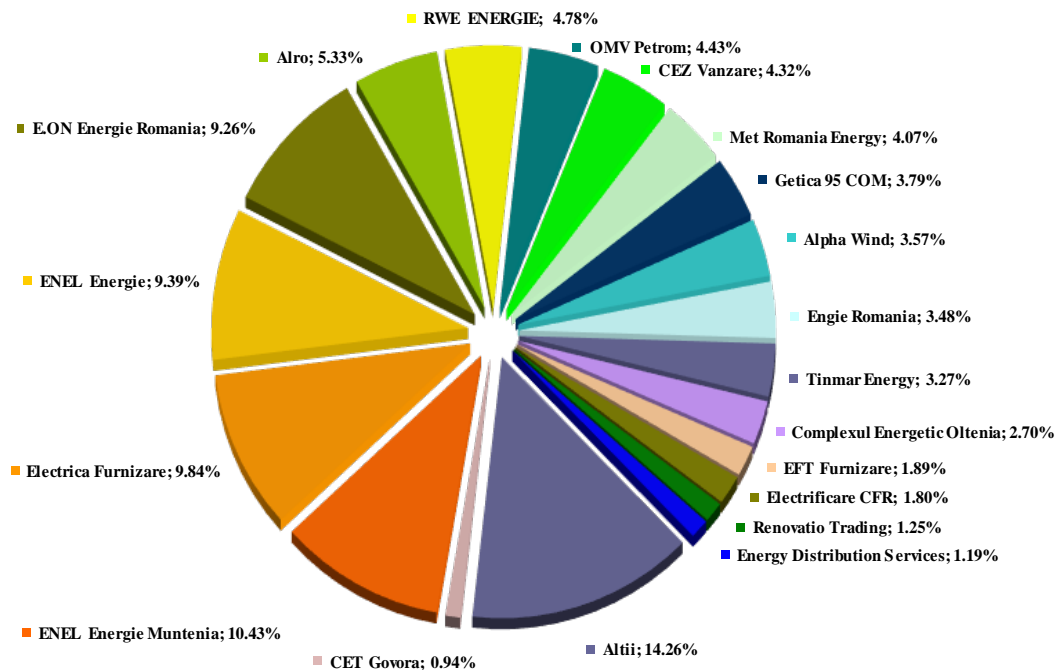


Consumption of customers supplied at CMC and last resort tariffs: 3102 GWh

Source: Monthly reports of the suppliers of last resort – processed by MU

- c) for all suppliers (including the suppliers of last resort) based on the electricity supplied for the customers at negotiated prices on competitive component of REM:

Market shares of suppliers delivering electricity on the competitive market
JANUARY - MARCH 2018



Consumption on competitive market: 9769 GWh
Structure indicators:
HHI - 571; C3 - 30%; C1 - 11%

Category "Altii" includes 75 suppliers with individual market share less than 1%

Source: Monthly reports of the competitive suppliers– processed by MU

The values of market indicators were calculated without taking into consideration the dominance principle. The delivered electricity used for determining the market share of each supplier comprises the self-consumption of the largest industrial customer which owns a supply license and based on it acquired its electricity from the WEM as a competitive supplier.

The electricity supplied to the final customers used for calculating the market share of every supplier includes also the self-consumption of that particular supplier (e.g. customers with supply license who buy electricity for themselves from WEM as competitive suppliers).

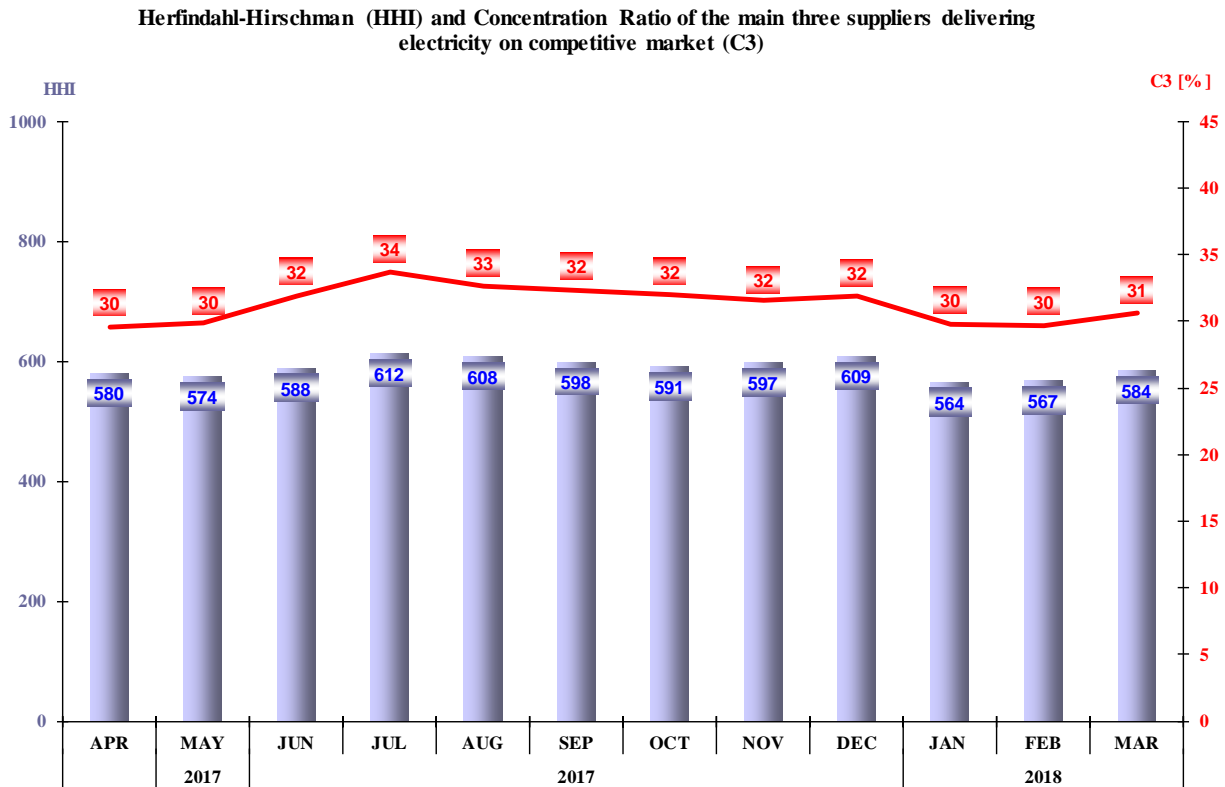
The analysis of the competitive suppliers’ activity on the competitive REM component compared to their activity on the WEM is developed based on the weight of the electricity sold to final customers in total electricity sales. The table below presents the number of suppliers acting on the REM. grouped into categories of sales weight during March 2018:

Number of suppliers	Share of sales to final customers from total sales transactions			
	100%	75% - 100%	50% - 75%	<50%
Competitive	9	19	11	26
Of last resort	1	4	0	0

Source: Monthly reports of the suppliers– processed by MU

4. Concentration indicators of the competitive retail electricity market

The monthly evolution of concentration indicators (C3, HHI) determined on the competitive component of the REM is presented for March 2018 in the following graph:



Source

Source: Monthly reports of the suppliers – processed by MU

The tables below show the values of structural indicators for the competitive component of REM and the number of active suppliers in March 2018, calculated for each non-household and household customer categories as defined by the Regulation (EU) 2016/1952 of the European Parliament and of the Council:

Indicators - Mar 2018	Consumption tranches - Non-household customers								Total
	IA	IB	IC	ID	IE	IF	IG		
C1 - % -	38	23	16	10	17	16	20	10	
C3 - % -	76	51	40	29	43	40	46	29	
HHI	2291	1259	835	592	920	866	1024	550	
Consumption - GWh -	138	412	326	769	426	278	891	3240	
No. of SUPPLIERS	67	75	66	60	26	17	17	89	
No. of suppliers of last resort	0	5	5	5	5	3	3	5	
No. of competitive suppliers	52	54	47	45	17	11	7	62	
No. of producers	15	16	14	10	4	3	7	22	

Source: Monthly reports of the suppliers – processed by MU

Indicators - March 2018	Consumption tranches - Household customers					
	DA	DB	DC	DD	DE	Total
C1 - % -	59	43	35	30	28	42
C3 - % -	95	78	72	71	72	81
HHI	4620	2713	2169	2026	2056	2764
Consumption - GWh -	67	64	42	36	16	225
No. of SUPPLIERS	42	40	40	43	39	53
No. of suppliers of last resort	5	5	5	5	5	5
No. of competitive suppliers	33	32	31	35	30	42
No. of producers	4	3	4	3	4	6

Source: Monthly reports of the suppliers – processed by MU

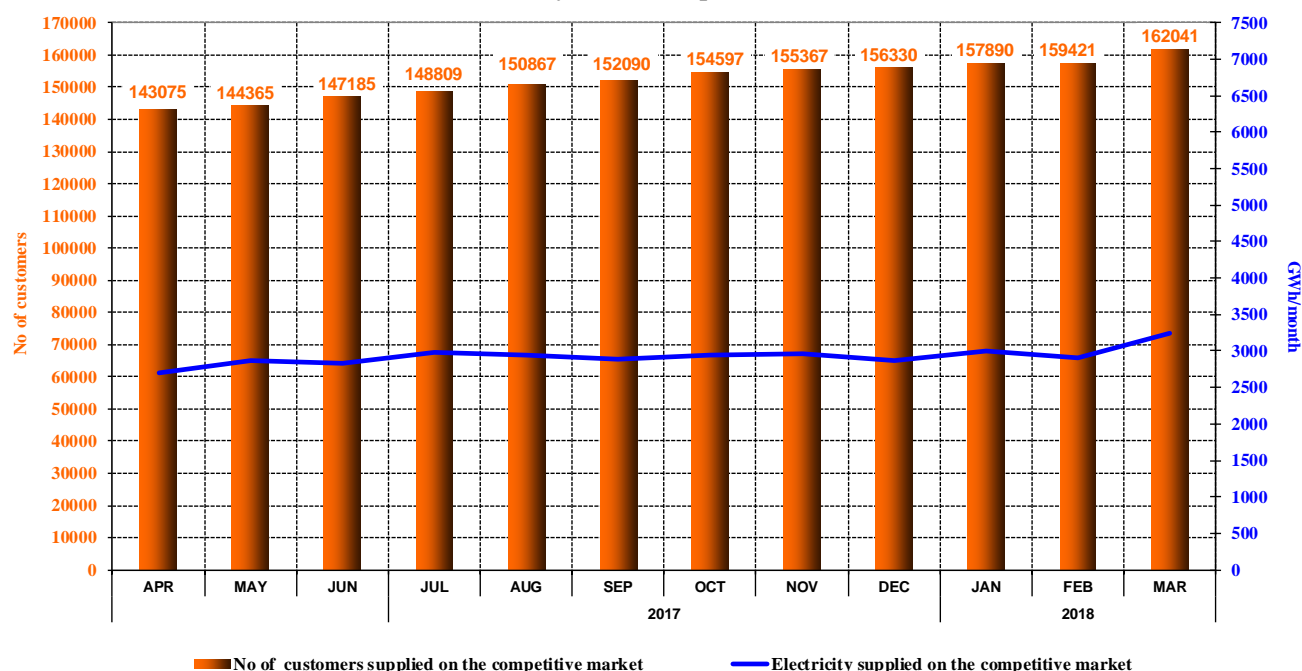
5. The evolution of the number of customers and of the electricity delivered

Number of customers supplied on the competitive market is presented as an evolution over the last 12 months; for March 2018 this number is split into categories, according to the provisions of Regulation (EU) no. 2016/1952 of the European Parliament and of the Council. The tables below presents the consumption intervals corresponding to each consumption category:

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 supplied non-household customers and delivered electricity on the competitive market

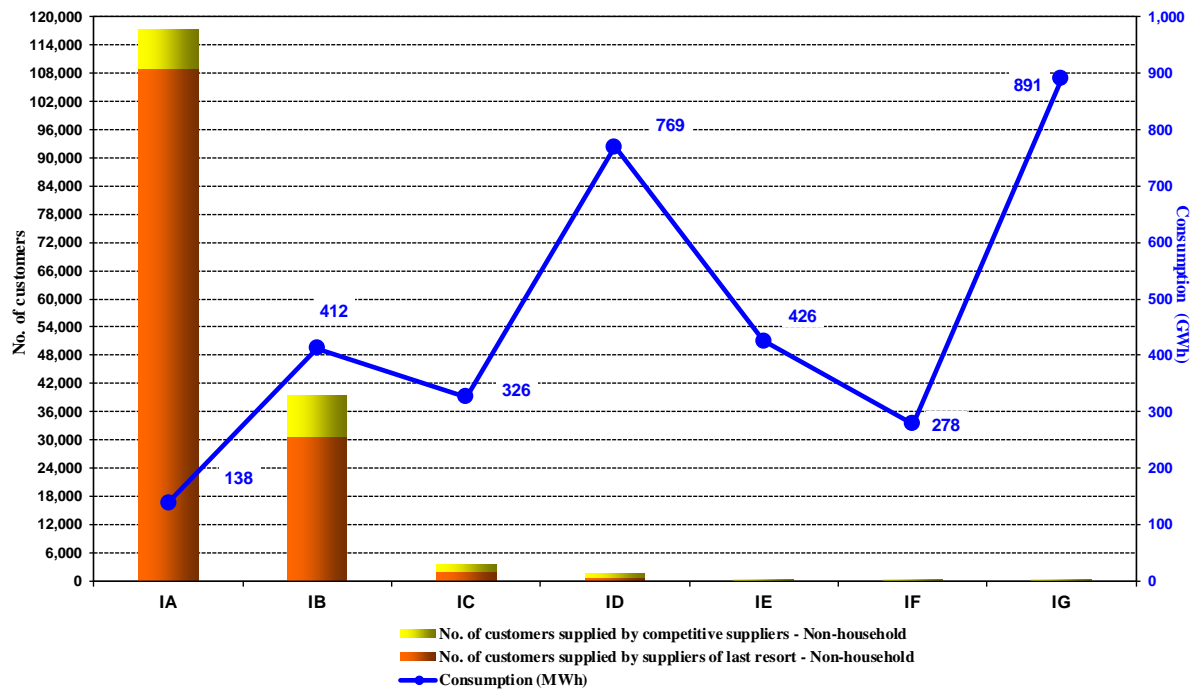


Source: Monthly reports of the competitive suppliers – processed by MU

Competitive suppliers sales to final household customers on the competitive component of REM is presented in the following table:

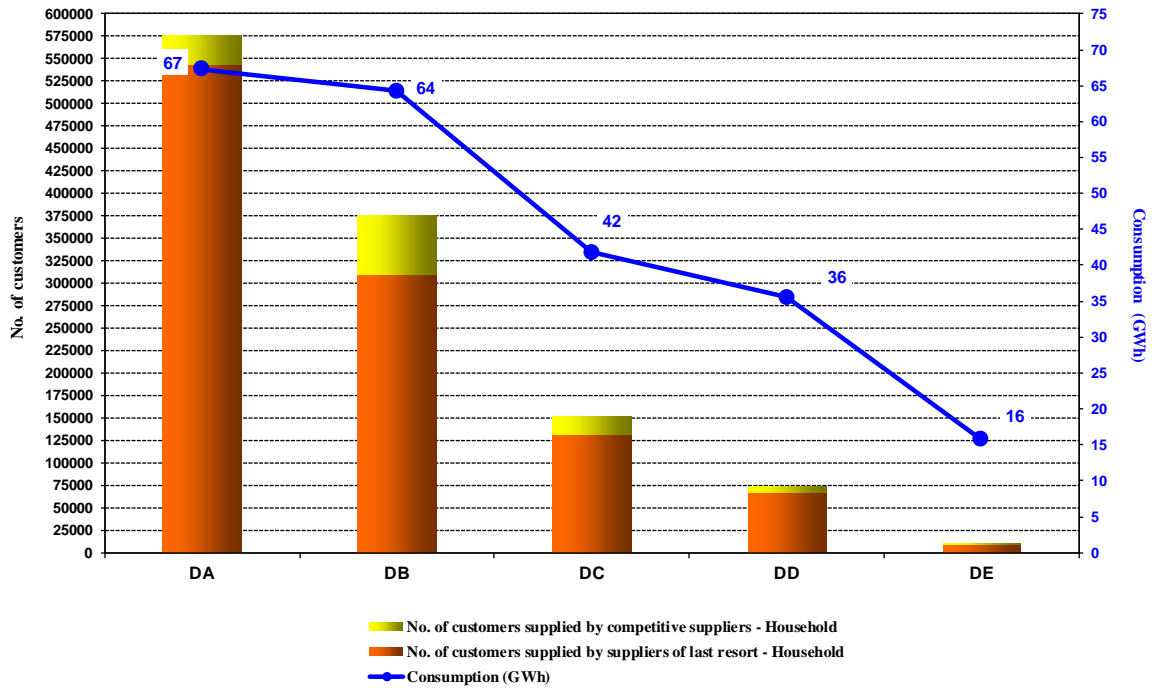
No.	Reporting month 2018	Supplied electricity (MWh)		No. of household customers	
		Total of which:	Suppliers of last resort	Total of which:	Suppliers of last resort
1	January	207 358	184 899	1 075 167	957 269
2	February	199.387	177.748	1.132.212	1.008.532
3	March	224.608	200.069	1.189.528	1.061.084

Number of non-household customers supplied on competitive market and the consumption of each category of customers - MARCH 2018 -



Source: Monthly reports of the suppliers – processed by MU

Number of household customers supplied on competitive market and the consumption of each category of customers
- MARCH 2018 -

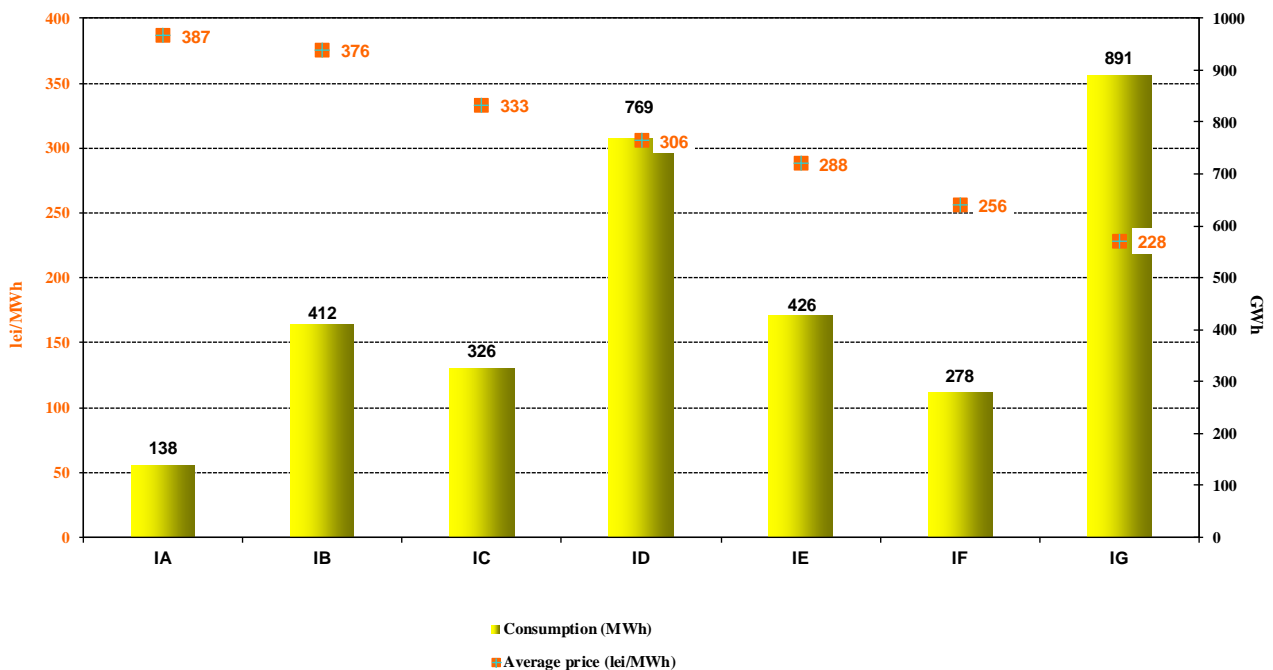


Source: Monthly reports of the suppliers – processed by MU

6. Average selling prices of customers supplied on the competitive market

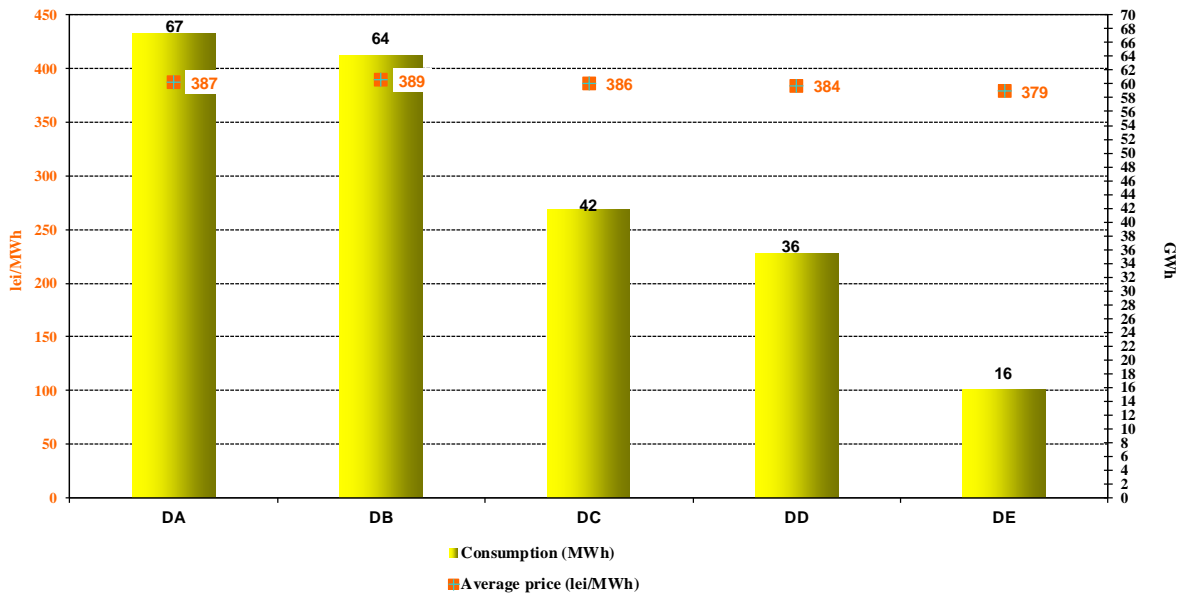
The following graph presents the average selling prices of customers supplied on the competitive market, based on the structure defined according to the Regulation (EU) no. 2016/1952 of the European Parliament and of the Council for March 2018.

Average price and energy consumption for non-household customers' tranches on competitive segment of REM
- MARCH 2018 -



Source: Monthly reports of the competitive suppliers – processed by MU

Average price and energy consumption for household customers' tranches on competitive segment of REM
- MARCH 2018-



Source: Monthly reports of the competitive suppliers – processed by MU

Note: The average selling price on each category was calculated as weighted average of prices applied by suppliers with quantities supplied according to the provisions of the European Regulation. The average prices do not include VAT, excise or other taxes but include the corresponding services (transmission, system services, distribution tariffs, imbalance, BRP aggregated tax, metering). Splitting customers into categories was based on their annual consumption forecast, according to the provisions of above mentioned Regulation.

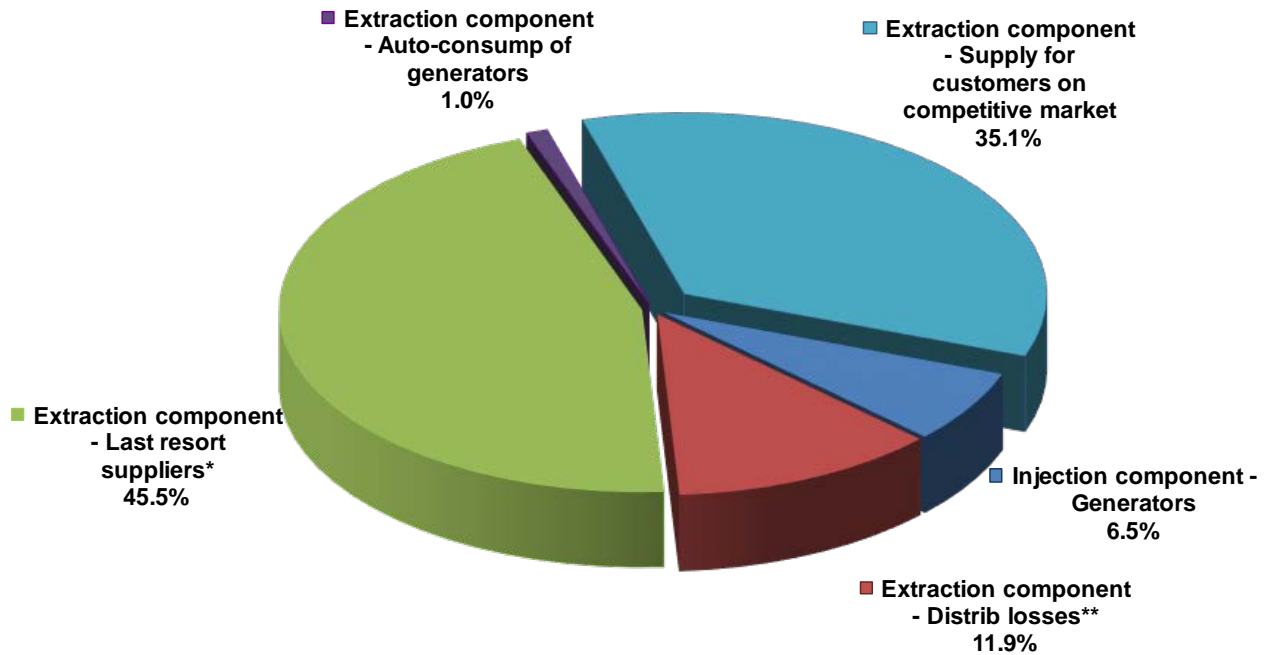
IV. TRANSMISSION AND SYSTEM OPERATOR CNTEE TRANSELECTRICA SA

TSO performs the electricity transmission service at regulated tariffs, differentiated by separate tariff zones, depending on the impact of injection or extraction of electricity in/from transmission grid upon NES functioning regime.

Compared to the previous method of establishing the transmission zonal tariffs, which aimed to offer locational signals, starting with July 2015 the methodological principles were modified in order to comply with EU regulations and ACER recommendations in this field. Following this, the injection tariff covers only the network losses costs with different zonal tariffs, while the extraction tariff covers the average cost of transmission service.

The following graph presents the structure of CNTEE Transelectrica SA revenues from performing the transmission services and reflects the structure of its clients benefiting from this type of service in March 2018.

**CNTEE Traselectrica SA structure of revenues from transmission services
- March 2018-**



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

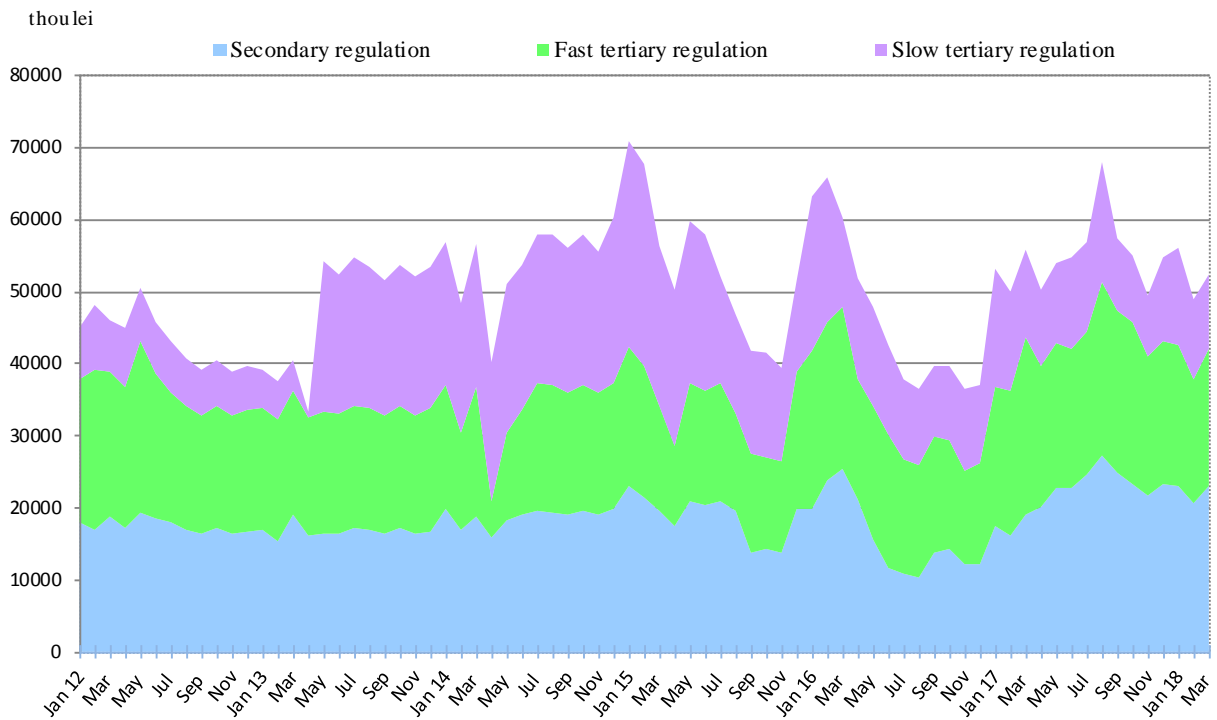
** includes the electricity with which some distribution operators supply their own self-consumption places

Source: Monthly reports of CNTEE Traselectrica SA – processed by MU

In order to perform the system operator tasks. CNTEE Traselectrica SA assesses and contracts reserves (ancillary services) from qualified generators, which are integrated on BM. The ancillary services which may be used are reserves for secondary, fast tertiary, slow tertiary regulation and reactive energy necessary in the network.

The following graph represents the cost evolution of ancillary services acquisition which were paid by the transmission and system operator starting with January 2012. In order to cover these 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 – processed by MU

V. MARKET RULES EVOLUTION IN MARCH 2018

In March 2018 ANRE issued the following regulations with impact on the wholesale and retail electricity markets:

- ANRE President Order no. 65/29 March 2018 regarding the amendment of the Regulation for the organization and functioning of the Green Certificates Market approved by Order no. 77/2017;
- ANRE President Order no. 66/29 March 2018 on regularization of the value of the green certificates for the year 2017;
- ANRE President Decision no. 464/21 March 2018 regarding the approval of the quantities produced in high efficiency cogeneration units benefiting from the bonus scheme for February 2018.

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 negotiated prices or defined by standard bids;
 - **Fuel consumption** represents the fuel consumed for generating electricity and heat in the power plants of monitored generators;
 - **Self-consumption of generators** (in the graph regarding the revenues of CN Transelectrica SA) the self-consumption exclusively represents the generators consumption at consumption places other than the generation sites;
 - **Electricity delivered into the grid** includes the electricity sold by the generators through direct lines or consumed by themselves at other consumption sites;
 - **Electricity delivered into the grid according to the transport contract** is the electricity for which the transport service (the grid input component) is provided corresponding to the electricity delivered from the power plants with installed capacity of more than 5 MW connected to the transmission and distribution electric grids (according to ANRE President Order No. 89/2013); CNTEE Transelectrica SA charges for only a part of the respective electricity, given that in four of the grids the regional tariffs are zero (according to ANRE President Order No. 27/2016)

2. Abbreviation

- MU – Monitoring Unit
- WEM – Wholesale Electricity Market
- REM – Retail Electricity Market
- CMBC – Centralised Market of Bilateral Contracts
- CMC – Competitive Market Component
- DAM – Day Ahead Market
- ID – Intraday Market
- BM – Balancing Market
- MCP – Market Clearing Price
- PCSU – Centralised Market of Universal Service (Romanian abbreviation)
- 4M MC – Price coupling mechanism for spot markets from Romania, Hungary, Slovakia and Czech Republic
- BRP – Balancing Responsible Party
- TG/TL – injection / extraction component of the transmission tariff
- OU-NPD – Operational Unit-National Power Dispatch
- US – Universal Service
- DO – Distribution operator
- SLR – Supplier of last resort
- ATC – Available Transmission Capacity
- DO – Distribution operator
- SLR – Supplier of last resort
- ATC – Available Transmission Capacity