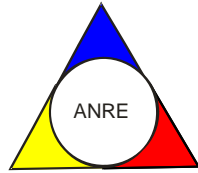




**ROMANIAN ENERGY REGULATORY AUTHORITY**  
**GENERAL DIRECTION OF ELECTRICITY MARKET**



**REPORT ON RESULTS OF MONITORING THE**  
**ROMANIAN ELECTRICITY MARKET**  
**MARCH 2013**

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

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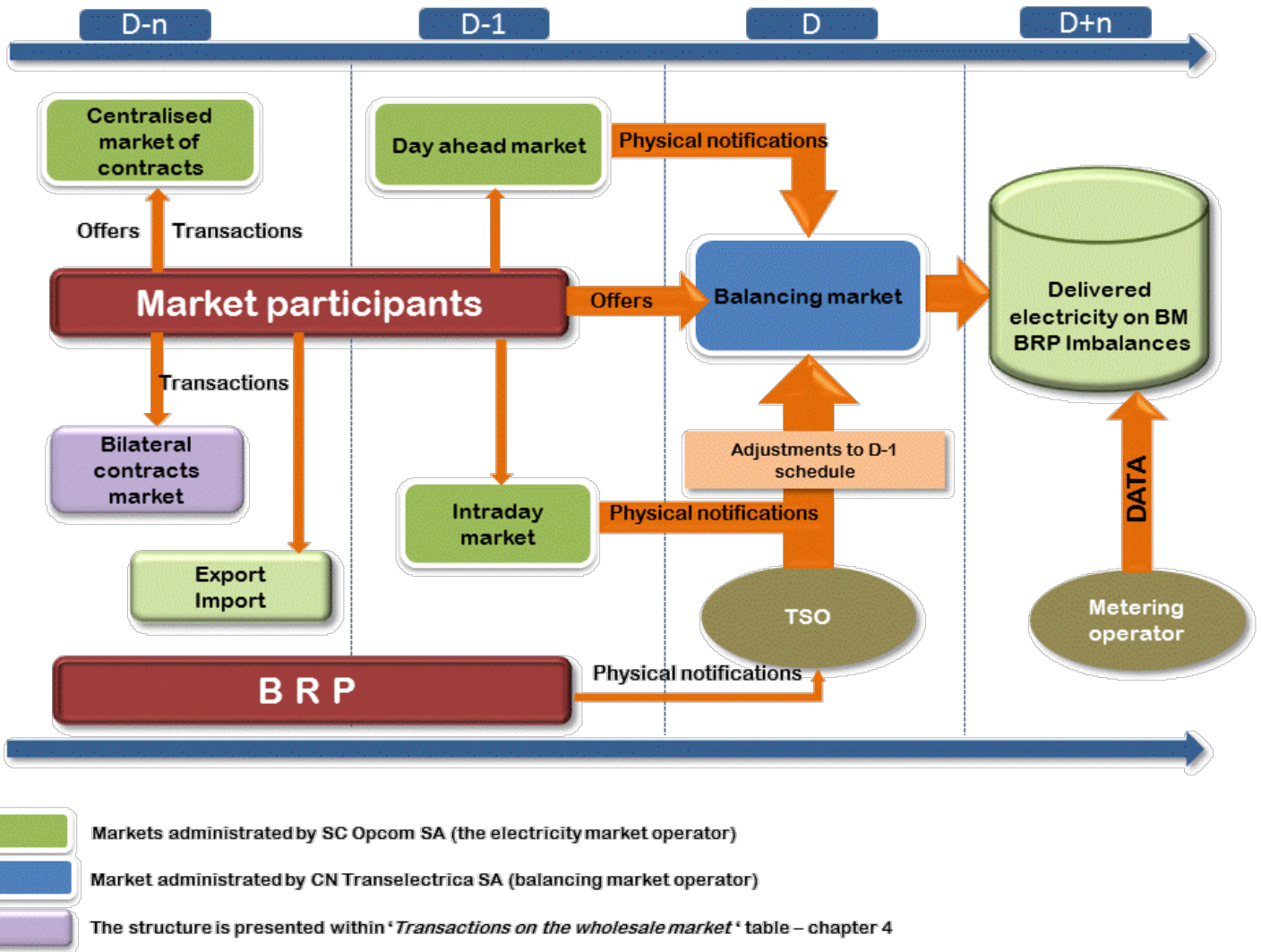
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## I. MAIN EVENTS IN THE DEVELOPMENT OF THE ROMANIAN ELECTRICITY MARKET

- GD 365/1998 – vertically integrated monopoly – RENEL – was split into separated distribution and supply companies (SC Electrica SA) and generation companies (SC Termoelectrica SA and SC Hidroelectrica SA) were established within a new company - CONEL SA. Two other electricity generators (SN Nuclearelectrica SA and RAAN) were separately established;
- transmission, system services and market administration were separately organised, within CONEL SA;
- the relationships between parties within the electricity sector were settled based on contracts;
- GD 122/2000 – electricity market opens at 10%;
- GD 627/2000 – CONEL holding is dissolved;
- September 2000 – launch of the compulsory electricity spot market in Romania, administered 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 incumbent 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 entered 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 of organisation and operation of the Romanian Energy Regulatory Authority no. 160/2012 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.

## II. WHOLESALE ELECTRICITY MARKET

### 1. Structure of the wholesale electricity market



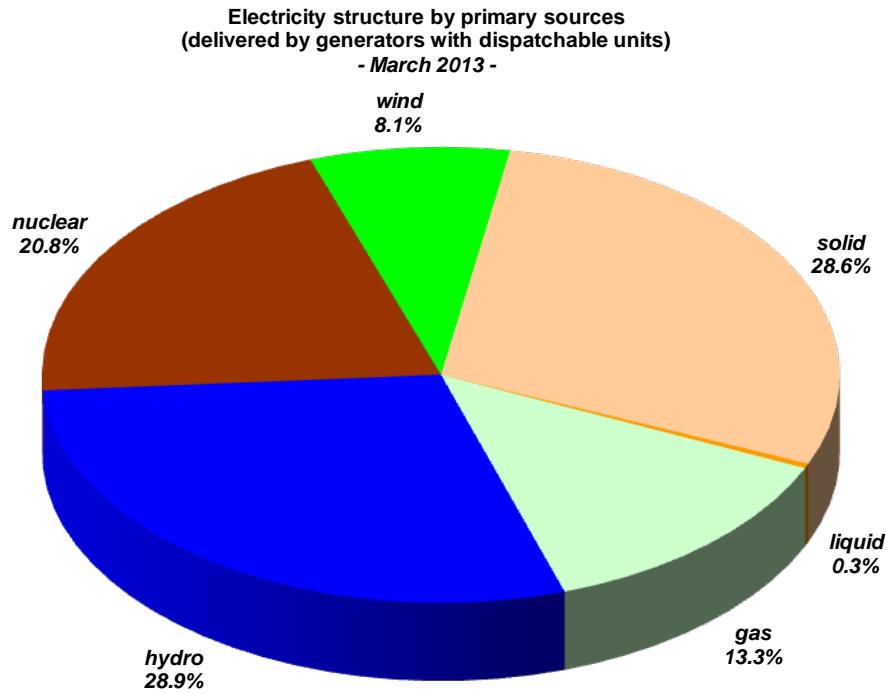
## 2. Participants on the wholesale electricity market

The market participants\*) acting on the electricity market in March 2013 are presented below split into categories:

No.	Name	No.	Name	No.	Name
<b>A Electricity generators operating dispatching units</b>					
1	SC Alpha Wind SRL	<b>F Electricity Suppliers acting exclusively on the wholesale market</b>		<b>G Electricity Suppliers acting also on the retail market</b>	
2	SC Blue Line Valea Nucariilor SRL			1	SC Aderro G.P. Energy SRL
3	SC Braia Winds SRL			2	SC Alpiq RomIndustries SRL
4	SC CAS Regenerabile SRL			3	SC Alro SA
5	SC CET Bacău SA			4	SC Arcelormittal Galati SA
6	SC CET Govora SA			5	SC Arelco Power SRL
7	SC CET Oradea SA			6	SC Xpo Energy Romania SRL
8	SC Cernavoda Power SRL			7	SC Biol Energy SRL
9	SC Dalkia Termo Iasi SRL			8	SC C-Gaz & Energy Distributie SRL
10	SC Dalkia Termo Prahova SRL			9	SC EFE Energy SRL
11	SC EDP Renewables Romania SRL			10	SC Electricom SA
12	SC Electrocentrale Bucuresti SA			11	SC Electromagnetica SA
13	SC Electrocentrale Grup SA			12	SC Energotrans SRL
14	SC Electrocentrale Galati SA			13	SC Energy Distribution Services SRL
15	SC Enel Green Power Romania SRL			14	SC Energy Financing Team Romania SRL
16	SC Eolca Dobrogea One SRL			15	SC Energy Holding SRL
17	SC Ovidiu Development SRL			16	SC Energy Network SRL
18	SC Pestera Wind Farm SRL			17	SC Enex SRL
19	SC Romconstruct Top SRL			18	SC Ennet Grup SRL
20	SC Termica SA Suceava			19	SC Enol Grup SA
21	S.N.G.N. ROMGAZ S.A.	20	SC Fidelis Energy SRL		
22	SC Termoelectrica SA	21	SC GDF SUEZ Energy Romania SA		
23	SC Tomis Team SRL	22	SC General Com Invest SRL		
<b>A1 Electricity generators operating dispatching units and acting also as suppliers on the competitive</b>					
24	RAAN	13	E.ON Global Commodities SE	23	SC ICCO Energy SRL
25	SN Nuclearelectrica SA	14	SC Ezpada SRL	24	ILIOTOMI Impex GRPA
26	SC OMV Petrom SA	15	Ezpada SRO	25	SC ICPE Electrocond Technologies SA
29	SC CE Huedoara SA	16	Freepoint Commodities Europe Ltd	26	SC Luxten LC SA
27	SC CE Olenia SA	17	GEN-I trgovanje in prodaja elektricne energije	27	Magyar Aramszolgalato KFT
28	SC CET Arad SA	18	GEN-I Bukarest Electricity Trading and Sales	28	SC Monsson Energy Trading SRL
30	SC Hidroelectrica SA	19	SC Getica 98 COM SRL	29	OET Obedineni Energini Targovtsi
31	SC Lukoil Energy & Gaz Romania SRL	20	SC KDF Energy SRL	30	SC P.C. Management & Consulting SRL
32	SC OMV Petrom Power Park SRL	21	SC Iberdola Romania SRL	31	SC Renovation Trading SRL
<b>B Transmission System Operator</b>					
1	CN TRANSELECTRICA SA	22	SC Lord Energy SRL	32	SC Repower Furnizare Romania SRL
<b>C DAM, Bilateral Contracts Market, Intra-Day, Green Certificates Market Operator</b>					
1	SC OPCOM SA	23	SC Lorfa SRL	33	SC Romenergo SA
<b>D Distribution network operators</b>					
1	SC CEZ Distributie SA	24	OMV Trading GmbH	34	SC Romenergy Industry SRL
2	SC ENEL Distributie Banat SA	25	RWE Supply Trading GmbH	35	SC TEN Transilvania Energie SRL
3	SC ENEL Distributie Dobrogea SA	26	Repower Trading Ceska Republica	36	SC Tinmar Ind SA
4	SC E.ON Moldova Distributie SA	27	SC Repower Vanzari Romania SRL	37	SC Transformer Supply SRL
5	SC ENEL Distributie Muntenia SA	28	SC Rudnap SRL	38	SC Transenergo Com SA
6	SC FDEE Electrica Distributie Muntenia Nord SA	29	Statkraft Markets GmbH		
7	SC FDEE Electrica Distributie Transilvania Sud SA	30	SC Statkraft Romania SRL		
8	SC FDEE Electrica Distributie Transilvania Nord SA	31	SC Verbund Trading România SRL		
<b>E Suppliers of last resort</b>					
1	SC CEZ Vanzare SA				
2	SC ENEL Energie SA				
3	SC E.ON Energie Romania SA				
4	SC ENEL Energie Muntenia SA				
5	SC Electrica Furnizare SA				

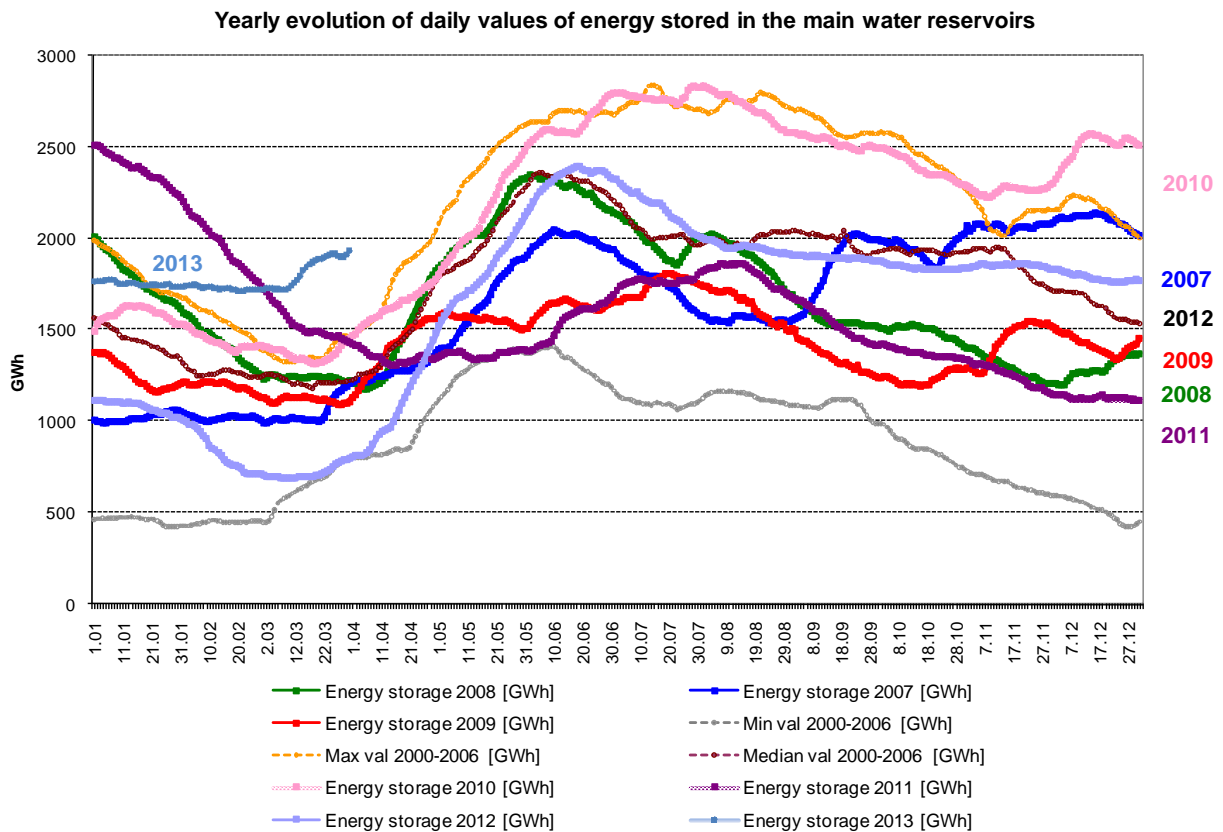
\*) The electricity market participants report to ANRE technical/commercial data according to the *Methodology of wholesale electricity market monitoring for assessing the competition level on market and preventing the abuse of dominant position*, approved by ANRE Order no. 35/2006 as well as to the *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.transselectrica.ro](http://www.transselectrica.ro).

### 3. Generation structure of National Energy System on resources types



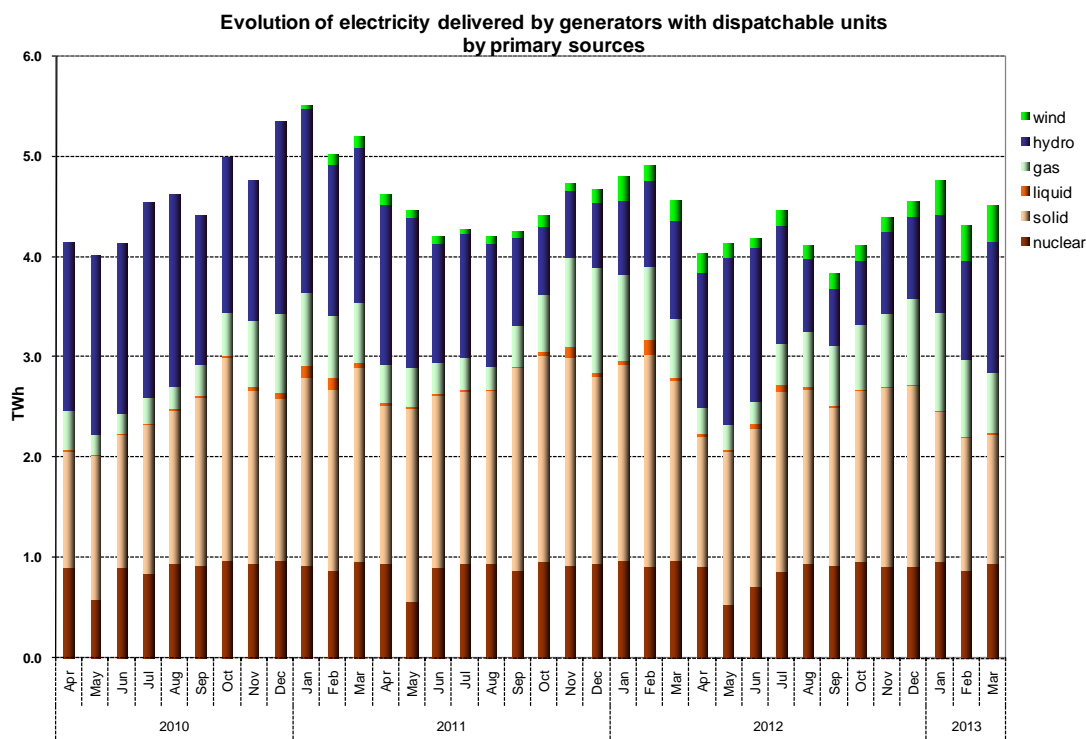
Source: Monthly reports of generators – processed by MG

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 2013 compared to the values of the last 6 years and compared to minimum, maximum and median values from 2000-2006.



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

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



Source: Monthly reports of generators – processed by MG

The following table presents the main data regarding the physical balance of electricity for March 2013, compared to data for similar period of 2012:

No	INDICATOR	MU	March 2012	March 2013	%	Jan-Mar 2012	Jan-Mar 2013	%
0	1	2	3	4	$5=4/3*100$	3	4	$5=4/3*100$
1	Generated electricity	TWh	4.98	4.90	98.39	15.65	14.79	94.50
2	Delivered electricity	TWh	4.56	4.52	99.12	14.28	13.60	95.24
3	Import	TWh	0.15	0.03	20.00	0.41	0.16	39.02
4	Export	TWh	0.08	0.12	150.00	0.35	0.34	97.14
5	Internal consumption	TWh	4.63	4.43	95.68	14.33	13.43	93.92
6	Consumption of household consumers on the regulated market	TWh	1.08	1.01	93.52	3.22	3.11	96.58
7	Consumption of non-households consumption	TWh	2.87	2.77	96.52	8.56	8.17	95.44
7.1	on the regulated market	TWh	0.84	0.72	85.71	2.42	2.24	92.56
7.2	on the competitive market	TWh	2.03	2.05	100.98	6.15	5.93	96.42
8	Transmission–Injection component	TWh	4.64	4.58	98.71	14.51	13.80	95.11
9	Transmission–Extraction component	TWh	4.69	4.70	100.21	14.65	14.05	95.90
10	Actual transmission grid losses	TWh	0.09	0.10	111.11	0.27	0.29	145.00
11	Heat generated for delivery	Tcal	1927.76	1977.22	102.57	7094.78	6529.42	92.03
12	Heat in co-generation	Tcal	1673.61	1523.97	91.06	6159.20	5055.02	82.07

Note: 1. 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).

2. The imported/exported quantities do not comprise transits and cross border exchange of CN Traselectrica SA with neighbor countries in order to ensuring the balance of the national energy system.

3. The electricity considered for transmission tariff – injection component do not comprise neither the electricity sold by generators for covering the transmission losses nor the electricity sold by nondispatchable but bigger than 10 MW generators;

4. The transmission tariff – extraction component and the system service tariff are applied to the same quantity of electricity.

#### **4. Transactions' structure 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.

Therefore, the wholesale electricity market includes regulated contracts and bilateral negotiated contracts between generators and suppliers, regulated contracts for covering the network losses, bilateral negotiated contracts between suppliers, as well as contracts concluded on centralized markets: CMBC (centralized market of bilateral contracts), CMBC-CN (centralized market of partially standardised bilateral contracts, with continuous negotiation), transactions on DAM (day-ahead market), on ID (Intraday Market and on BM (Balancing Market).

When entering into force, the new Law 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 the participation on the centralized markets administrated by Opcom, the only owner of a license issued for the electricity market operation in Romania. In this respect, efforts have been made by all the responsible factors for covering the diversity of trade products requested by the market participants. Consequently, two new centralized markets are in progress at Opcom level – the organized framework of contracting energy for large final customers and the centralized market trading with continuous double negotiation of bilateral contracts for electricity (developed based on a OTC platform model).

The volumes traded and the average prices on each type of contracts and on the main components of the wholesale market are presented in the following tables for March 2013 compared to the month before and March 2012.

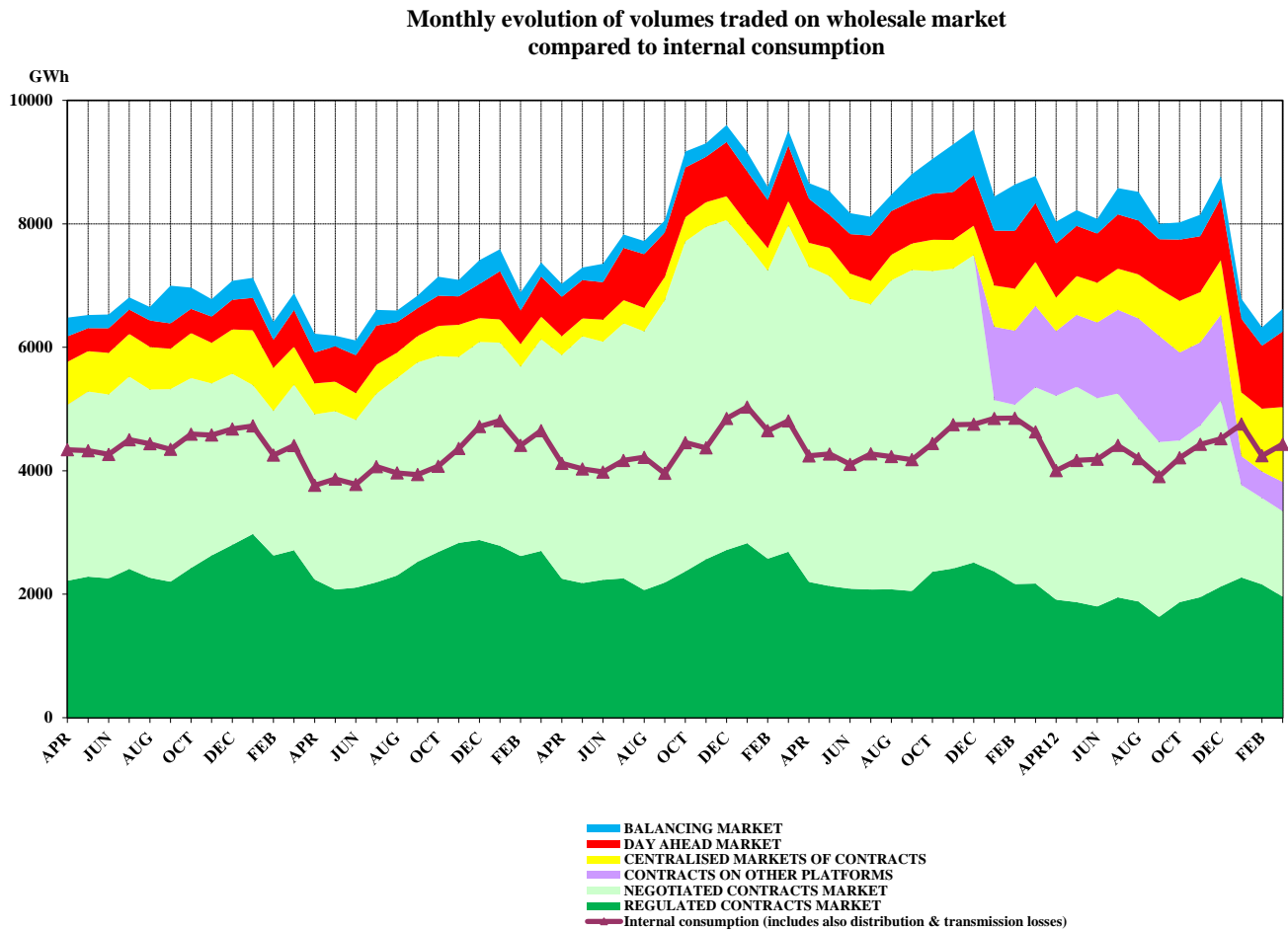
The aggregated volumes and the average prices for March 2012 and March 2013 on OTC contracts and on negotiated contracts are reported by the market participants at their own risk and they should reflect only the ongoing contracts which had been concluded before Law no. 123/2012 entered into force.

<b>TRANSACTIONS ON THE WHOLESALE MARKET</b>	<b>February 2013</b>	<b>March 2013</b>	<b>March 2012</b>
<b>1. BILATERAL CONTRACTS' MARKET</b>			
traded volume (GWh)	<b>3988</b>	<b>3821</b>	<b>6672</b>
% from internal consumption (%)	188.57	185.40	188.83
average price (lei/MWh)	94.0	86.3	144.1
<b>1.1. Sales on regulated contracts</b>			
traded volume (GWh)	<b>2160</b>	<b>1961</b>	2173
% from internal consumption (%)	182.78	181.74	157.14
average price (lei/MWh)	50.9	44.3	46.9
<b>1.2. Sales on contracts concluded on other platforms</b>			
traded volume (GWh)	<b>429</b>	<b>476</b>	1318
% from internal consumption (%)	222.59	222.54	216.33
average price (lei/MWh)	10.1	10.7	27.2
<b>1.3. Sales on negotiated contracts*</b>			
traded volume (GWh)	<b>1399</b>	<b>1384</b>	3181
% from internal consumption (%)	187.06	177.82	199.09
average price (lei/MWh)	33.0	31.2	68.7
<b>2. EXPORT**</b>			
traded volume (GWh)	<b>119</b>	<b>122</b>	<b>83</b>
% from internal consumption (%)	175.50	135.66	158.95
average price (lei/MWh)	2.8	2.8	1.8
<b>3. CENTRALISED MARKETS OF CONTRACTS</b>			
delivered volume (GWh)	<b>1018</b>	<b>1212</b>	<b>713</b>
% from internal consumption (%)	232.30	225.31	216.88
average price (lei/MWh)	24.0	27.4	15.4
<b>4. DAY AHEAD MARKET</b>			
traded volume (GWh)	<b>1021</b>	<b>1223</b>	<b>953</b>
% from internal consumption (%)	152.89	131.79	208.53
average price (lei/MWh)	24.1	27.6	20.6
<b>5. INTRADAY MARKET***</b>			
traded volume (GWh)	-	<b>0.055</b>	<b>1.133</b>
% from internal consumption (%)	-	130.62	304.65
average price (lei/MWh)	-	0.001	0.024
<b>6. BALANCING MARKET</b>			
traded volume (GWh)	<b>297</b>	<b>366</b>	<b>438</b>
% from internal consumption (%)	7.0	8.3	9.5
upward volume (GWh)	<b>108</b>	<b>187</b>	<b>234</b>
average negative imbalance price(lei/MWh)	268.67	228.24	284.29
downward volume (GWh)	<b>189</b>	<b>179</b>	<b>204</b>
average positive imbalance price (lei/MWh )	59.84	36.92	64.57
<b>INTERNAL CONSUMPTION (includes distribution and transmission losses) (GWh)</b>	<b>4244</b>	<b>4429</b>	<b>4629</b>

<i>Note:</i>	*	Supply contracts to customers and export contracts are not included; volumes traded on negotiated contracts do not include the quantities resulted from the processing contracts concluded between the fuel suppliers and the generators, as this activity is not subject of ANRE regulations and not comprised within the market participants' reports
	**	Export volumes correspond to the quantities for which CN Transelectrica SA applied extraction component of transmission tariff for export. which in some cases are different to those reported as traded by participants
	***	The average monthly price has been calculated based on monthly traded volume and transaction value published by SC Opcom SA

The percentage of electricity quantities from the internal consumption (see table from above) 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.

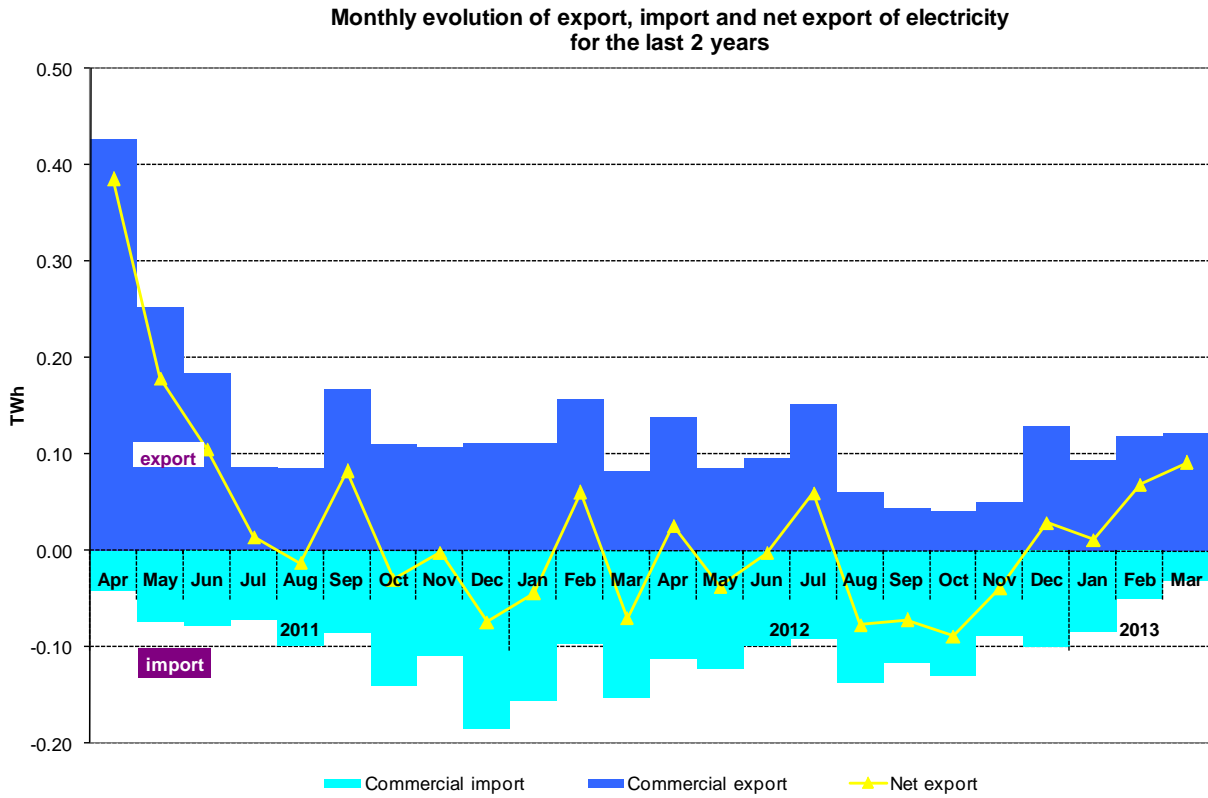
The following graph presents the evolution of the relation between the volumes sold on each market and the estimated internal consumption, during the last 5 years.



Source: Monthly reports of wholesale market participants. SC Opcom SA and CN Traselectrica SA – processed by MG

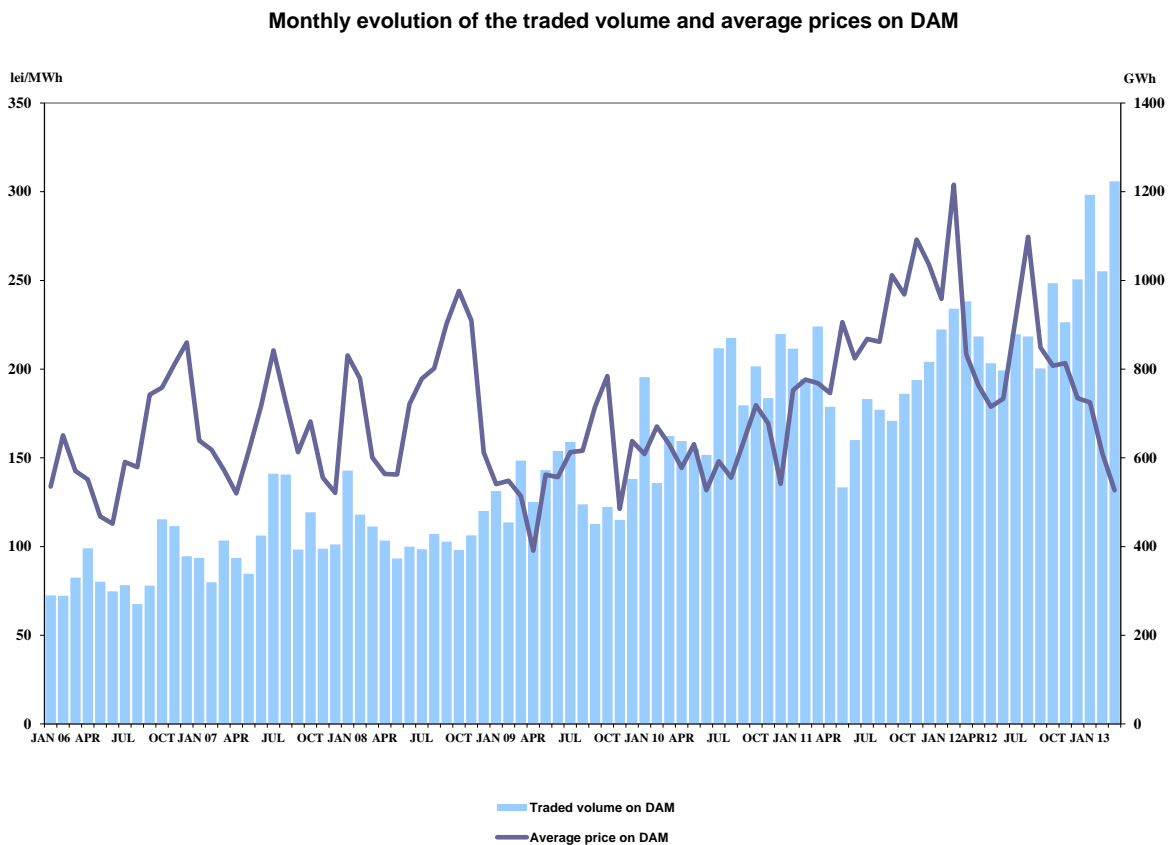
Note: In the above graph, the volumes traded on negotiated contracts' market do not include the export trades

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) in the last 24 months:



*Source: Monthly reports of CN Tranelectrica SA – processed by MG*

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



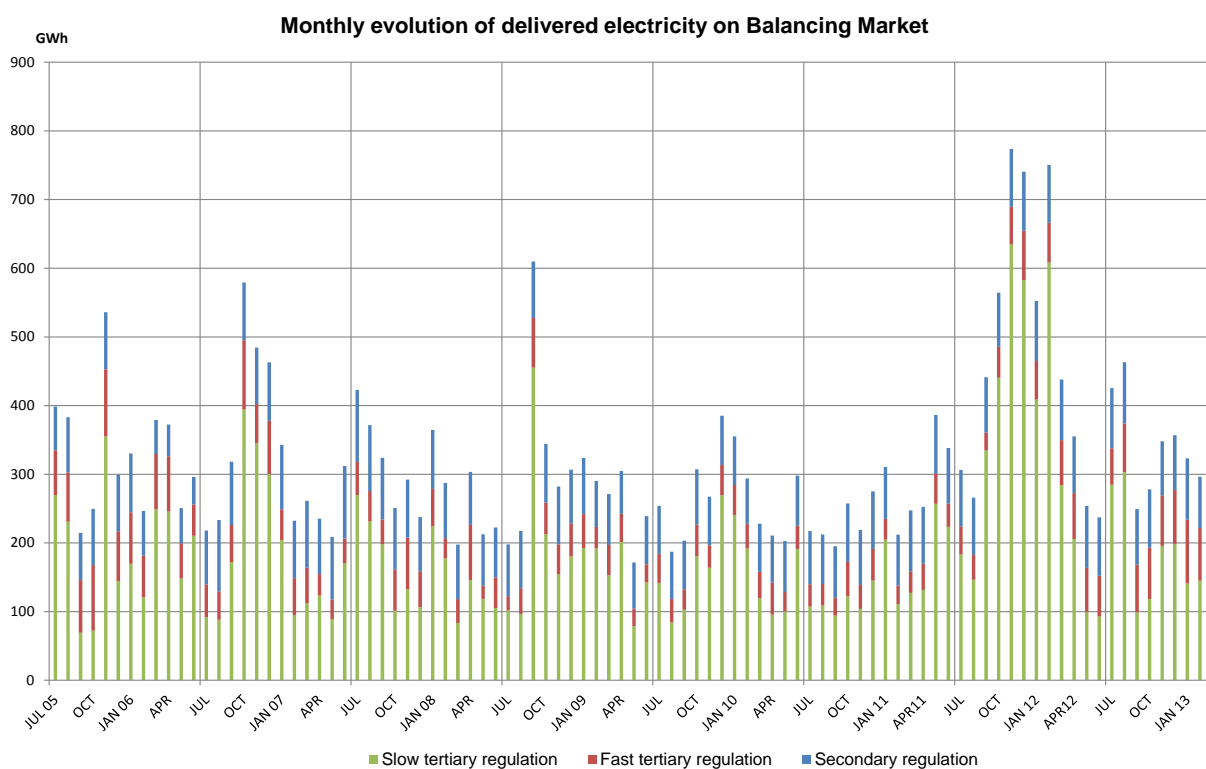
*Source: Monthly reports of SC Opcom SA and CN Tranelectrica SA – processed by MG*

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 2013 presented in the following table:

March 2013	Dispatch order (GWh)	Delivered electricity (GWh)	Deviation (%)
<b>Secondary regulation</b>	<b>85</b>	<b>85</b>	
<i>upward</i>	43	43	
<i>downward</i>	42	42	
<b>Fast tertiary regulation</b>	<b>108</b>	<b>99</b>	<b>8</b>
<i>upward</i>	78	74	6
<i>downward</i>	30	26	14
<b>Slow tertiary regulation</b>	<b>190</b>	<b>181</b>	<b>4</b>
<i>upward</i>	75	70	7
<i>downward</i>	115	112	3
<b>TOTAL</b>	<b>383</b>	<b>366</b>	
<i>upward</i>	197	187	
<i>downward</i>	186	179	
<b>INTERNAL CONSUMPTION</b>		<b>4429</b>	
<i>% share of traded volumes from internal consumption</i>		<b>8,3%</b>	

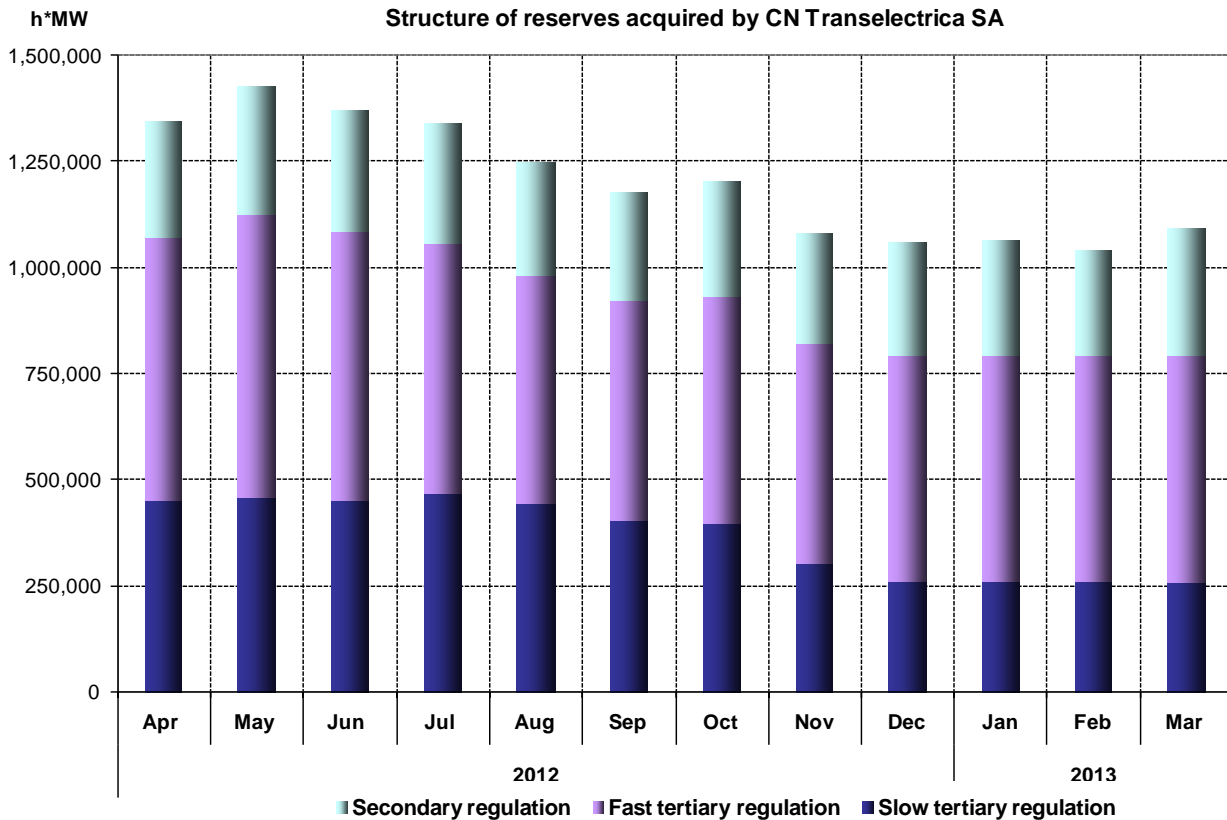
Source: Monthly reports of CN Traselectrica SA – processed by MG

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



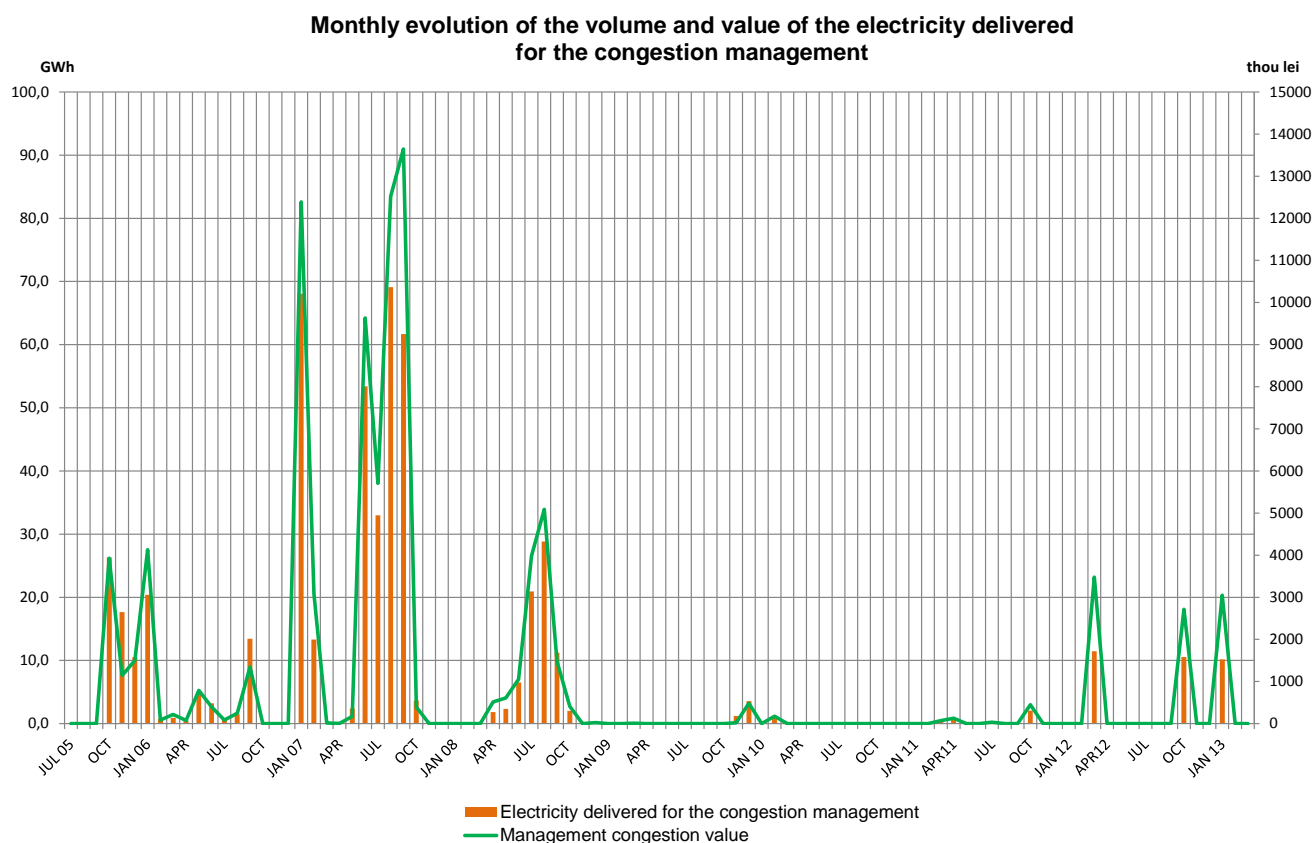
Source: Monthly reports of CN Traselectrica SA – processed by MG

For comparison, the following graph presents the evolution of reserves (ancillary services, i.e. obligations of generators to maintain their contracted capacities available for dispatching/offering on BM) acquired/paid by CN Tranelectrica SA from July 2005 until present:



Source: Monthly reports of CN Tranelectrica SA – processed by MG

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



*Source: Monthly reports of CN Transelectrica SA – processed by MG*

## 5. Trading structure on the wholesale electricity market of different participant categories

### Generators

The structure of electricity sales obligations contracted before delivery day by the electricity generators with dispatchable units in March 2013 compared to previous month and March 2012 was the following:

Transaction type	- GWh -		
	February 2012	March 2013	March 2012
<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Regulated to incumbents, thermal generators	807.61	664.80	826.69
Regulated to incumbents, hydro generator	379.28	441.01	226.78
Regulated to incumbents, nuclear generator	428.53	474.53	529.57
Regulated for distribution losses, thermal generators	544.37	380.63	264.79
Regulated for distribution losses, hydro generator	0.00	0.00	80.73
Regulated for distribution losses, nuclear generator	0.00	0.00	177.95
Regulated for transmission losses, thermal generator	0.00	0.00	33.42
Regulated to other generators	0.00	0.00	33.42
Negotiated to other generators	0.00	0.00	1.85
Negotiated to suppliers	578.27	603.21	842.39
Contracts concluded on centralized markets	826.80	972.32	707.57
Regulated and competitive supply to customers	307.69	294.41	318.15
Export	0.00	0.00	48.37
DAM	642.22	842.04	410.22
<b>Total</b>	<b>4514.78</b>	<b>4672.93</b>	<b>4501.88</b>

*Source: Monthly reports of generators – processed by MG*

## Suppliers

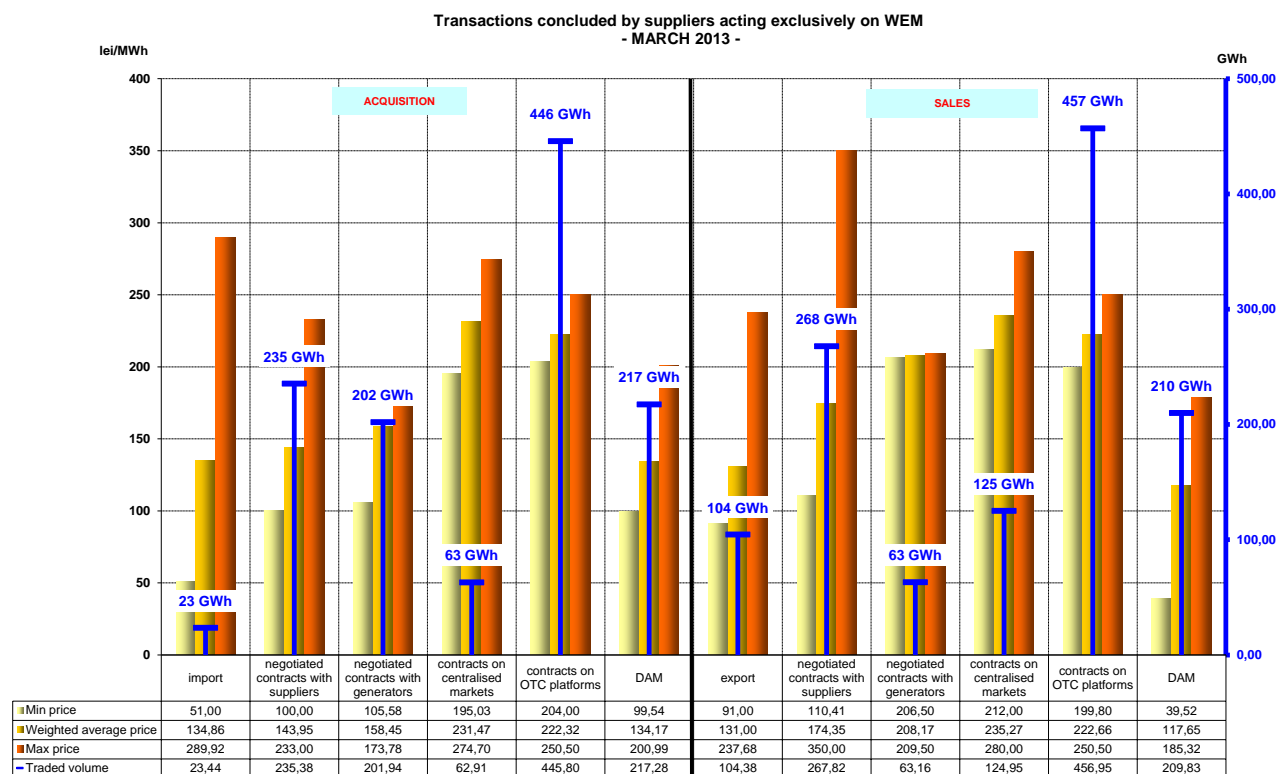
In March 2013, 74 companies having as main activity the supply of electricity concluded transactions on the electricity market; from these, 31 suppliers traded electricity exclusively on the wholesale market and 43 suppliers on both retail and wholesale markets (in this category are also included the 5 suppliers of last resort).

### Suppliers acting exclusively on WEM

The following table shows the activity for March 2013 compared to March 2012 of the suppliers acting exclusively on WEM, acquisitions and sales being split by categories of markets/participants:

Transactions' structure of suppliers acting exclusively on WEM	- GWh -	
	March 2012	March 2013
<b>Acquisitions</b>		
Import	69.94	23.44
Negotiated contracts with suppliers	837.38	235.38
Negotiated contracts with generators	122.78	201.94
Contracts concluded on centralized markets	95.66	62.91
Contracts on OTC platforms	1242.55	445.80
DAM	88.29	217.28
<b>Sales</b>		
Export	29.77	104.38
Negotiated contracts with suppliers	925.28	267.82
Negotiated contracts with generators	73.90	63.16
Contracts concluded on centralized markets	1.50	124.95
Contracts on OTC platforms	1274.70	456.95
DAM	176.43	209.83

In addition to the data from the table above, the following graph presents the minimum, average and maximum actual prices by categories of transactions completed by the suppliers acting exclusively on WEM (traders) in March 2013:



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

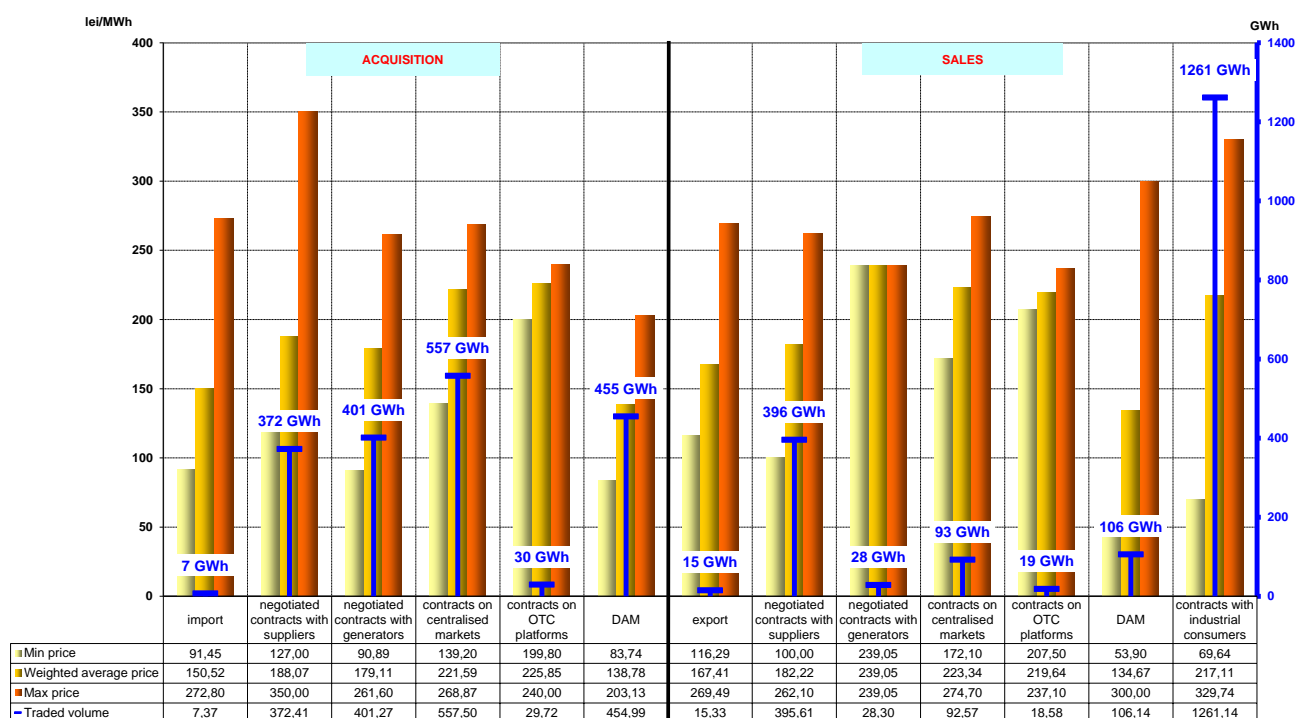
Active suppliers on REM (the suppliers of last resort are not included)

The following table presents aggregated information on transactions volume and structure for suppliers providing electricity to final consumers, on the competitive market, for March 2013 and March 2012.

	- GWh -	
Transactions' structure of suppliers providing electricity to final customers (the suppliers of last resort are not included)	March 2012	March 2013
<b>Acquisitions</b>		
Import	35.74	7.37
Negotiated contracts with suppliers	948.62	372.41
Negotiated contracts with generators	716.24	401.27
Contracts concluded on centralized markets	400.03	557.50
Contracts on OTC platforms	75.50	29.72
DAM	316.98	454.99
<b>Sales</b>		
Export	4.51	15.33
Negotiated contracts with suppliers	1013.17	395.61
Negotiated contracts with generators	49.43	28.30
Contracts concluded on centralized markets	4.34	92.57
Contracts on OTC platforms	43.35	18.58
DAM	229.86	106.14
Contracts with industrial customers	1158.66	1261.14

In addition to the data from the table above, the following graph presents the sales structure and the minimum, average and maximum actual prices by categories of transactions completed by suppliers providing electricity to final customers in March 2013:

**Transactions concluded by suppliers providing electricity to final consumers  
(suppliers of last resort not included)  
- MARCH 2013 -**



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

### Suppliers of last resort

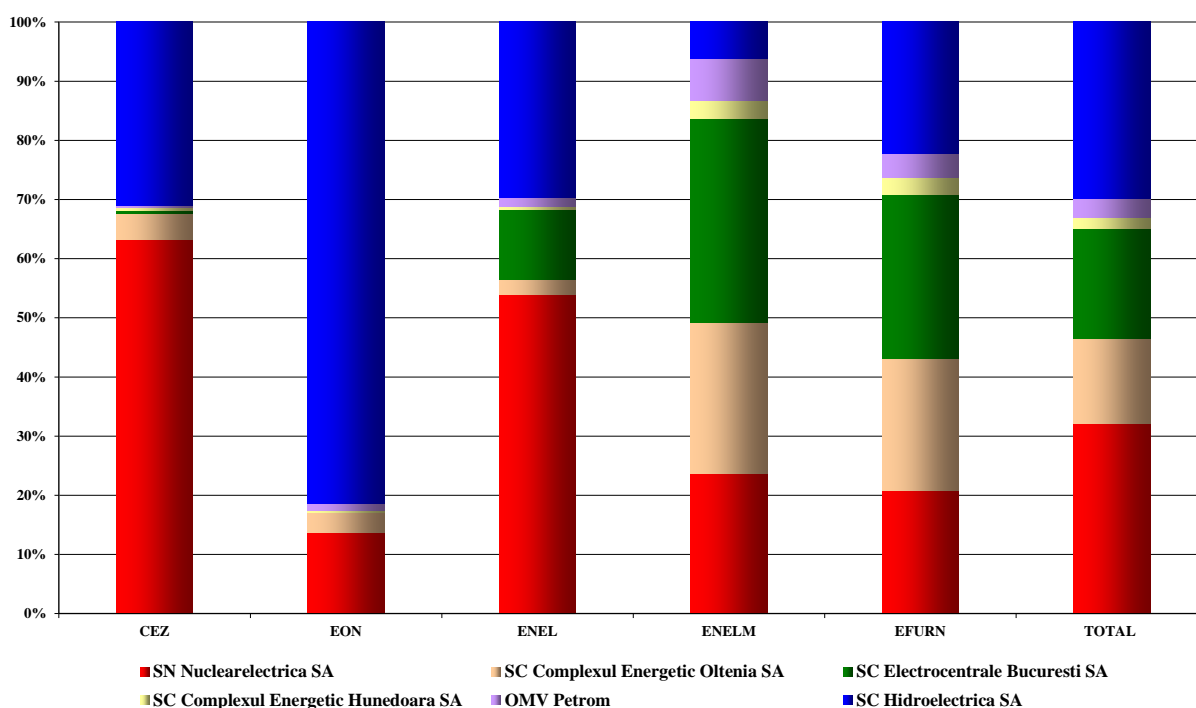
Electricity acquisition structure of suppliers of last resort (before the delivery day), for supplying the regulated market customers, is presented in the table below, for March 2013 compared to the situation of March 2012:

- GWh -

Acquisition structure of suppliers of last resort for regulated REM component	March 2012	March 2013
Regulated contracts with generators	1632.56	1594.05
Negotiated contracts	48.02	40.72
Contracts concluded on centralized markets	46.83	134.80
Intraday	0.90	0.00
DAM	154.12	125.26

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 2013:

**Electricity acquisition of suppliers of last resort from main generators, on regulated contracts for delivering electricity to final customers on regulated market**  
**MARCH 2013**



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

The suppliers of last resort apply a new tariff for the active power to the non-household customers who do not exercise their eligibility rights called the “Competitive Market Component” (CMC).

Starting with 1<sup>st</sup> September 2012, the suppliers of last resort display this tariff component separately in the bills of non-household customers who do not exercise their eligibility rights, which was proposed by each supplier of last resort and finally approved by ANRE, in accordance with the provisions of ANRE Order no. 30/2012 for approving the Methodology to set up prices and tariffs to the final customers who chose not to exercise their eligibility rights.

The following table presents the electricity acquisition structure of suppliers of last resort for CMC (before the delivery day) for March 2013.

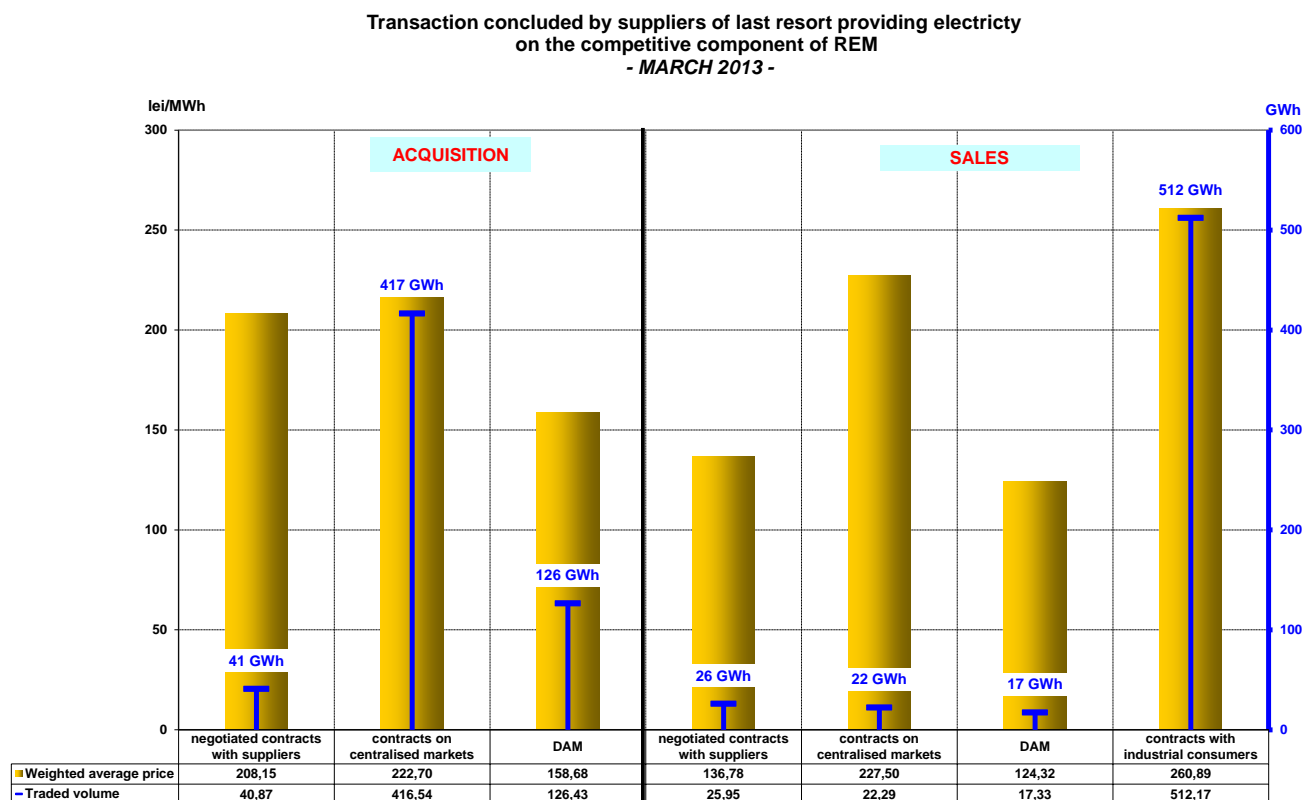
<b>Acquisition structure of incumbent suppliers for CMC</b>	<b>Quantity [GWh]</b>	<b>Average price [lei/MWh]</b>
Negotiated contracts	40.72	243.20
Contracts concluded on centralized markets	134.80	237.73
Contracts IntraDay	0.00	0.00
DAM	41.35	166.17
<b>TOTAL</b>	<b>216.87</b>	<b>225.12</b>

Similar to the situation presented for the regulated REM, the table below presents the structure of incumbent suppliers' transactions (before the delivery day), corresponding to the competitive REM (energy supplied at negotiated prices to the customers who renounced to regulated tariffs) for March 2013 compared to March 2012:

<b>Transactions' structure of suppliers of last resort for competitive REM component</b>	<b>- GWh -</b>	
	<b>March 2012</b>	<b>March 2013</b>
<b>Acquisitions</b>		
Import	46.96	0.00
Negotiated contracts with suppliers	379.46	40.87
Contracts concluded on centralized markets	155.72	416.54
DAM	242.09	126.43
<b>Sales</b>		
Negotiated contracts with suppliers	275.04	25.95
Negotiated contracts with generators	0.00	0.00
Contracts concluded on centralized markets	0.00	22.29*
Contracts on OTC platforms	0.00	0.00
DAM	6.00	17.33
Final customers	557.56	512.17

*\*There are still some report inconsistencies as well as unclarities regarding the type of transaction concluded between a supplier of last resort and the distribution operator between the same group of companies; further clarifications have been required*

The structure by types of sources/destinations of the traded volumes combined with the actual average prices of the suppliers of last resort corresponding to the competitive segment of REM is presented in the following graph for March 2013:



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

### Main distribution operators

The following table shows the electricity acquisition structure of main distribution operators (before the delivery day), for covering the distribution network losses, for March 2013 compared to March 2012:

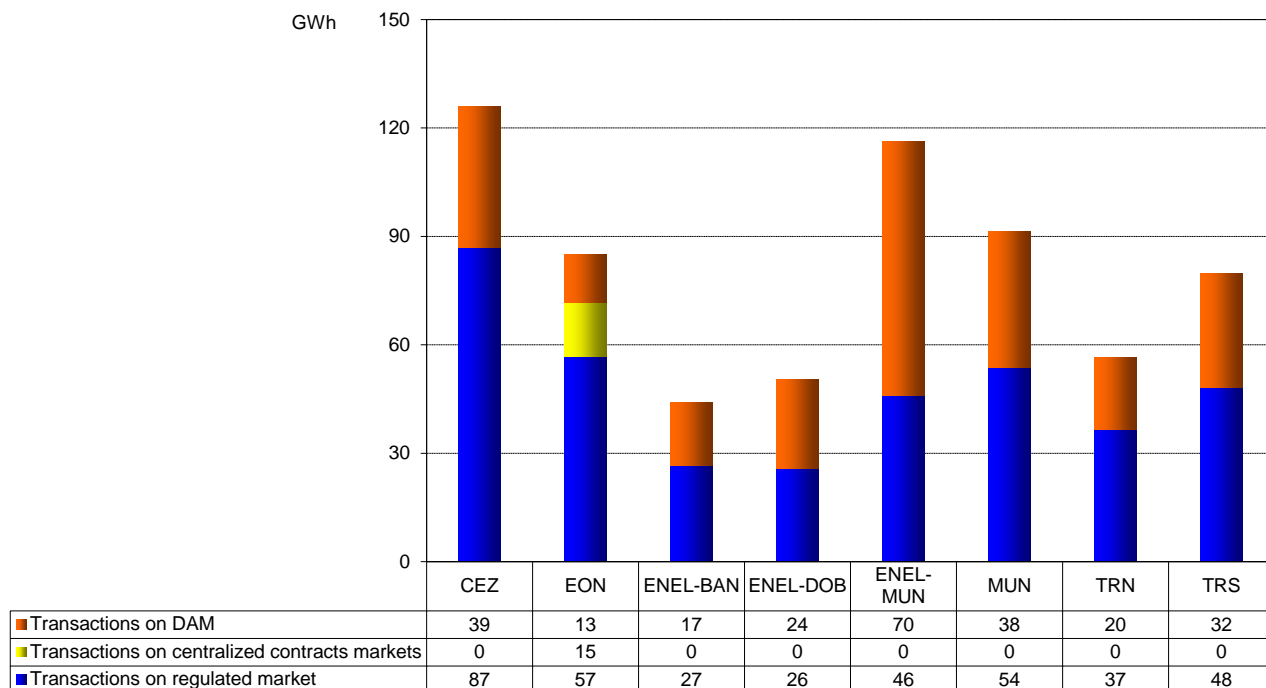
- GWh -

Acquisition structure	March 2012	March 2013
Regulated contracts with generators	528.76	380.63
Negotiated contracts with suppliers	0.00	0.00
Contracts concluded on centralized markets	0.00	14.86*
DAM	96.28	253.65

\*There are still some report inconsistencies as well as unclarities regarding the type of transaction concluded between a supplier of last resort and the distribution operator between the same group of companies; further clarifications have been required

The electricity purchased by the 8 distribution operators for covering their network losses is presented in detail in the following graph, for March 2013:

**Electricity acquisition of distribution operators for covering the distribution losses  
MARCH 2013**



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

For March 2013, the percentage of regulated acquisition of the main distribution operators for grid losses is covered by CE Oltenia and CE Hunedoara.

## 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.
- 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.

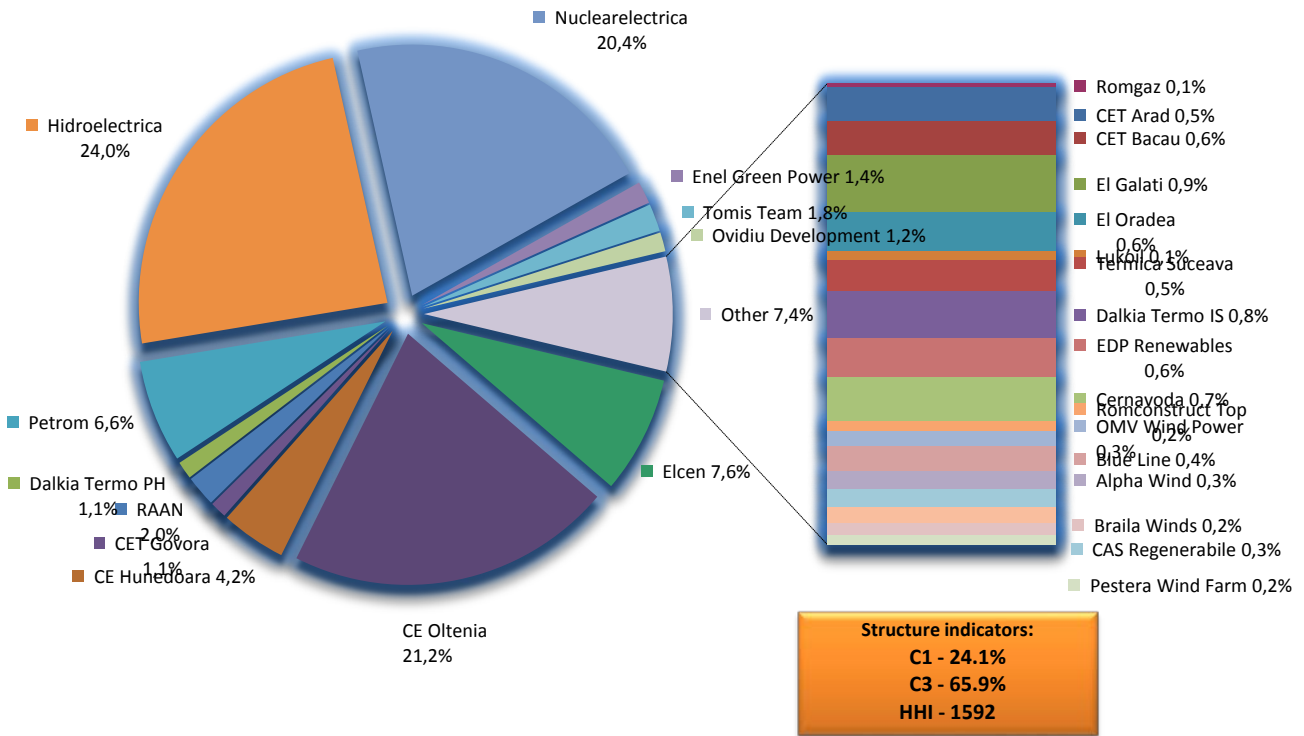
Concentration indicators and market shares of the electricity generators

The market structure regarding the electricity generation offers an initial basis for analyzing the possible competitiveness level of the electricity market. The following table presents the concentration indicators of electricity generation for March 2013, calculated based on electricity delivered into the networks by the generators with dispatchable units.

Concentration indicators - March 2013 -	C1 (%)	C3 (%)	HHI
Value	28.8	68.9	1735

The following graph presents the market shares of the electricity generators for the first 2 months from 2013, taking into account all the components of wholesale electricity market and calculated based on the electricity delivered into the grid by the dispatchable generators.

**Market share of generators with dispatchable units by delivered electricity  
January - March 2013**



Source: Monthly reports of generators – processed by MG

A component of the WEM where direct competition between generators exists 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 March 2013:

Structure/concentration indicators of BM - MARCH 2013 -	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
<b>C1 - % -</b>	<b>62</b>	<b>60</b>	<b>68</b>	<b>36</b>	<b>36</b>	<b>41</b>
<b>C3 - % -</b>	<b>100</b>	<b>100</b>	<b>91</b>	<b>91</b>	<b>83</b>	<b>95</b>
<b>HHI</b>	<b>4857</b>	<b>4673</b>	<b>4986</b>	<b>2851</b>	<b>2741</b>	<b>3151</b>

Source: Monthly reports of CN Traselectrica SA – processed by MG

The competition between generators is also present when speaking about the ensuring the reserves necessary for security of supply in the NES. Due to the fact that generators have different levels of capabilities for ensuring this type of service, this market has an important regulated component. The relationship between regulated and competitive components on the Ancillary Services Market (ASM) as well as the main concentration indicators on each type of reserve (secondary, fast tertiary and slow tertiary) are presented in the following table for March 2013:

Concentration indicators on ASM - March 2013 -		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve
<b>regulated component</b>	<b>contracted quantity (h*MW)</b>	<b>266310</b>	<b>534960</b>	<b>-</b>
	<b>C1 (%)</b>	<b>46.4</b>	<b>80.1</b>	<b>-</b>
	<b>C3 (%)</b>	<b>96.7</b>	<b>91.2</b>	<b>-</b>
<b>competitive component</b>	<b>contracted quantity (h*MW)</b>	<b>29590</b>	<b>-</b>	<b>260050</b>
	<b>C1 (%)</b>	<b>100</b>	<b>-</b>	<b>48.5</b>
	<b>C3 (%)</b>	<b>100</b>	<b>-</b>	<b>99.5</b>
	<b>HHI</b>	<b>10000</b>	<b>-</b>	<b>3656</b>

Source: Monthly reports of CN Traselectrica SA – processed by MG

### Concentration Indexes 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 applicable regulations.

The concentration indicators on DAM reflects 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 selling side of DAM in March 2013, based on quantities traded by participants on this market.

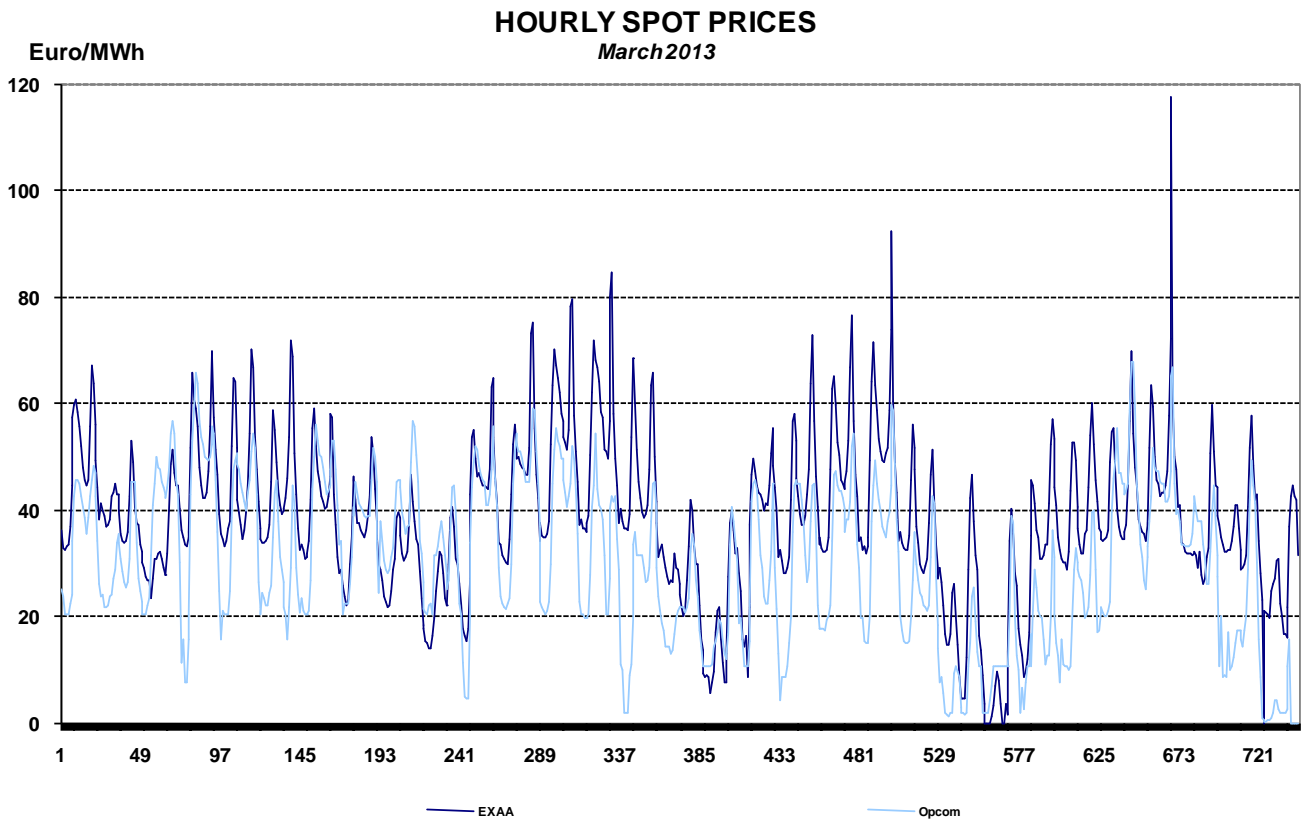
Concentration indicators on DAM - March 2013 -	C1 (%)	C3 (%)	HHI
<b>Selling</b>	<b>18.01</b>	<b>42.15</b>	<b>867</b>
<b>Buying</b>	<b>14.70</b>	<b>32.05</b>	<b>625</b>

Source: Monthly reports of SC Opcom SA – processed by MG

**7. Price evolution on wholesale electricity market**

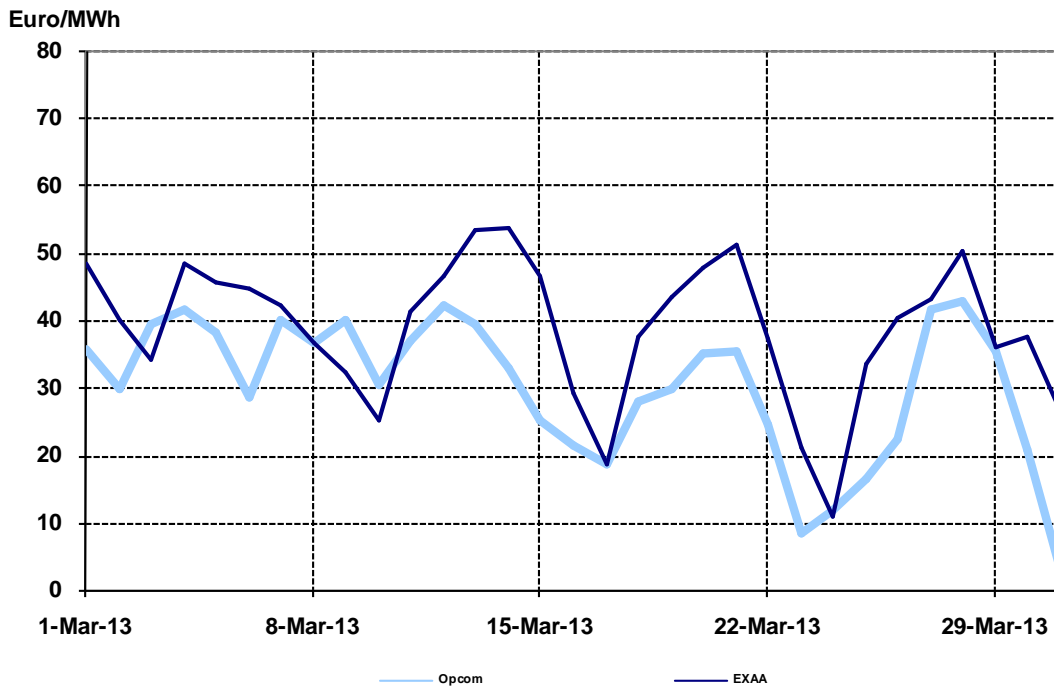
SC Opcom SA is the administrator of DAM. The MCP on DAM represents a reference value for the prices on the bilateral contracts. The evolutions of hourly and daily average prices on DAM in March 2013 are presented in the following graphs, along with the prices on EXXA.

For comparison with prices on the European power exchanges, the spot price on SC Opcom SA is denominated in EUR, taking into consideration the daily exchange rates Euro/leu communicated by the National Bank of Romania.



Source: Daily reports of SC Opcom SA and published data of EXAA  
– processed by MG

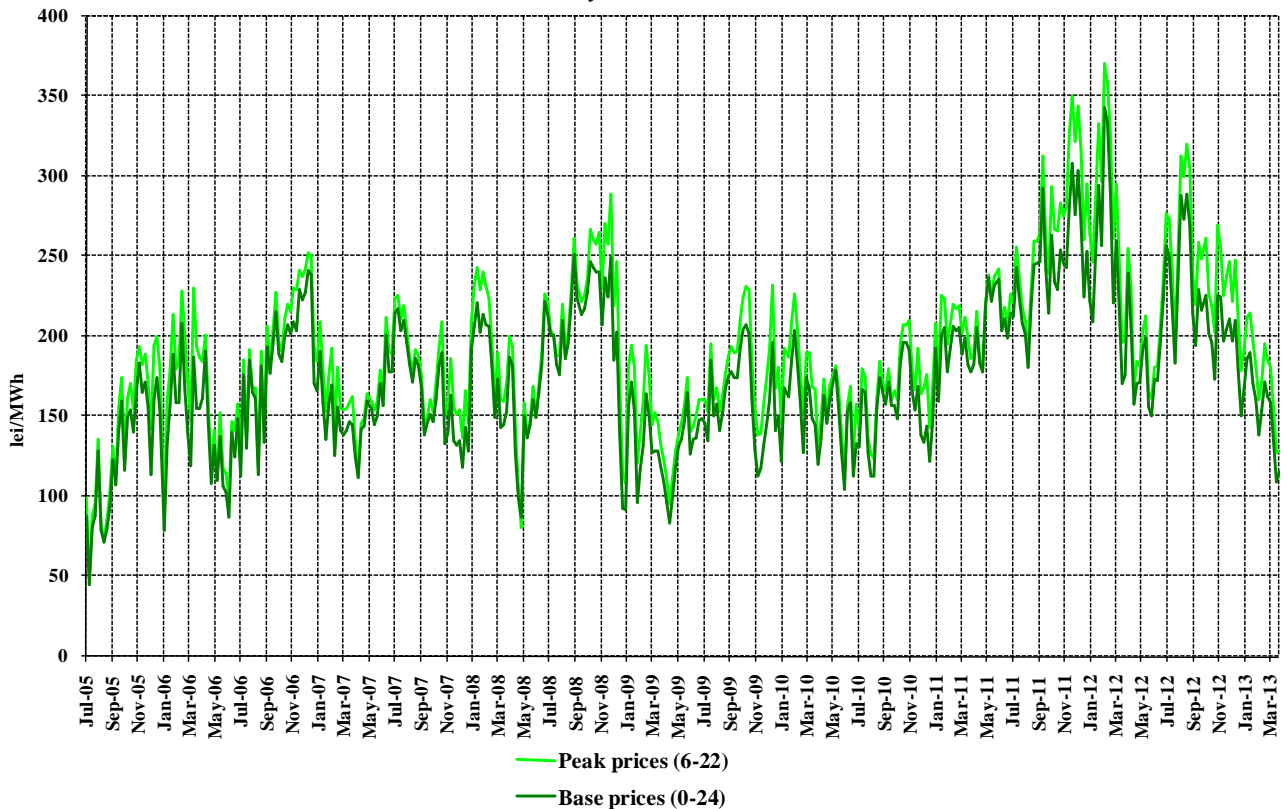
**DAILY AVERAGE SPOT PRICES**  
March 2013



Source: Daily reports of SC Opcom SA and published data of EXAA  
– processed by MG

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

**Weekly average spot prices**  
July 2005 - March 2013



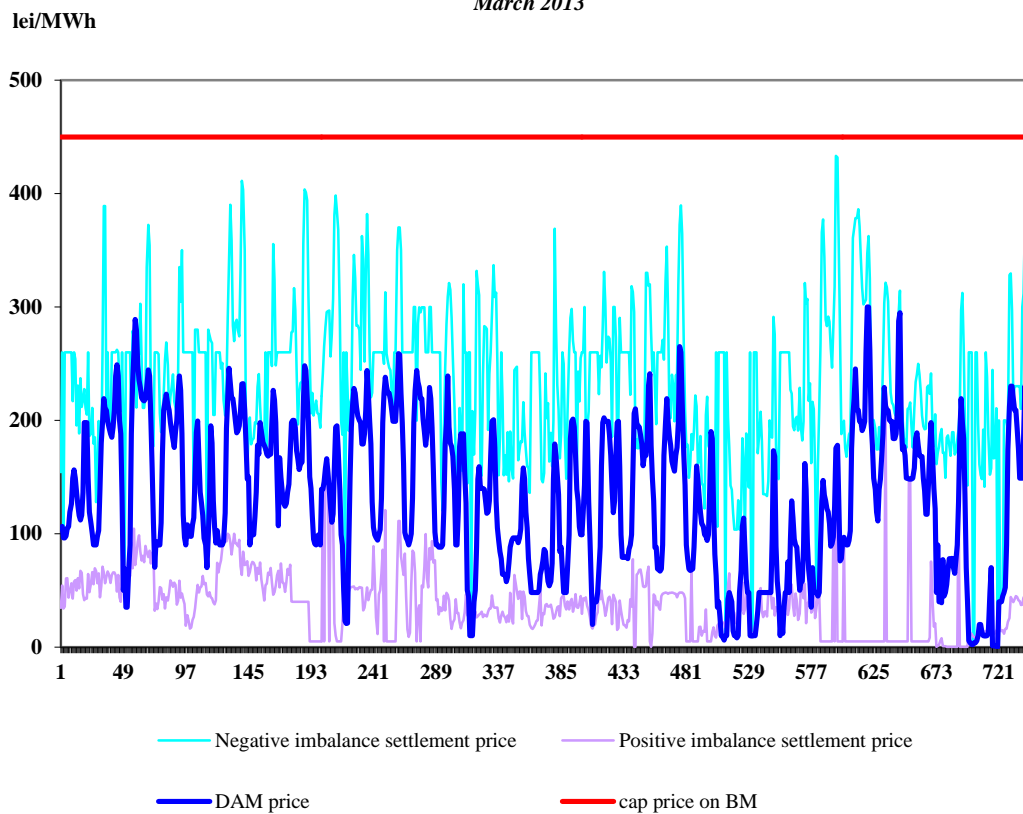
Source: Daily reports of SC Opcom SA – processed by MG

In order to cover the differences between planned/contracted amounts of consumption/ generation and the real time consumption, the system operator (CN 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.

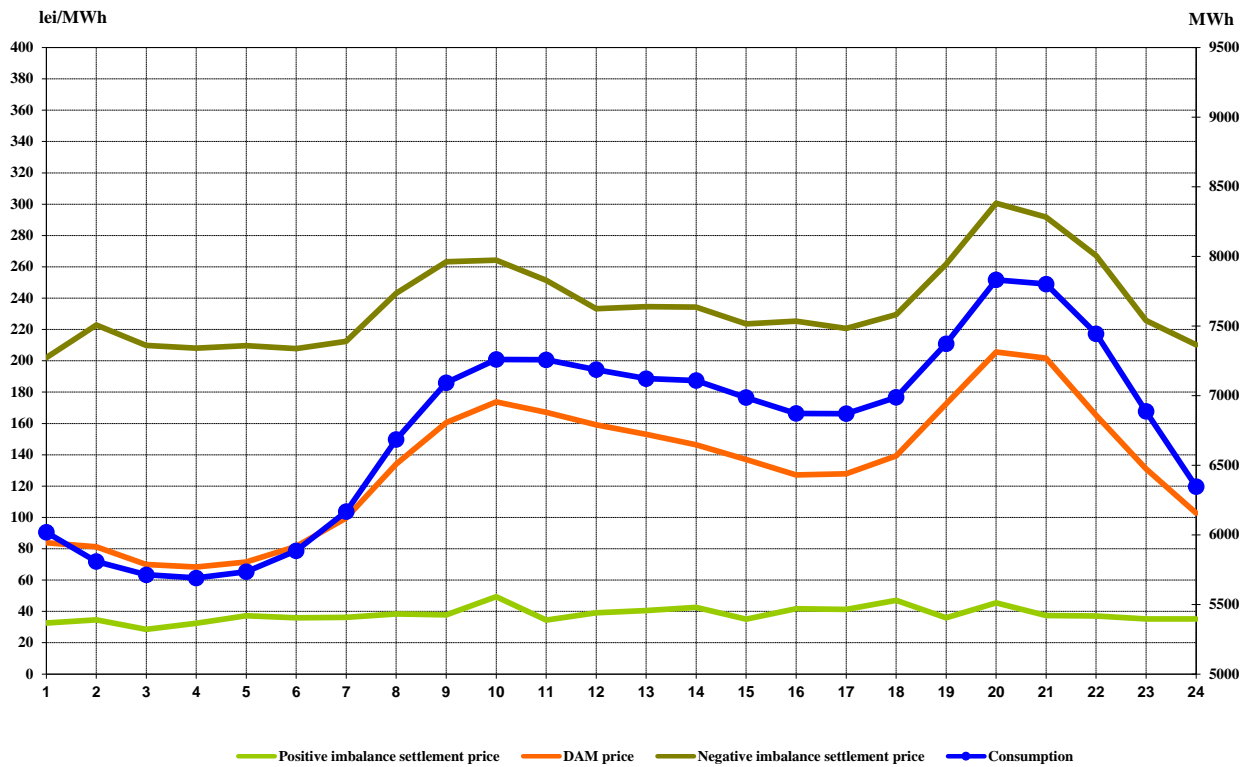
### Hourly settlement prices

March 2013



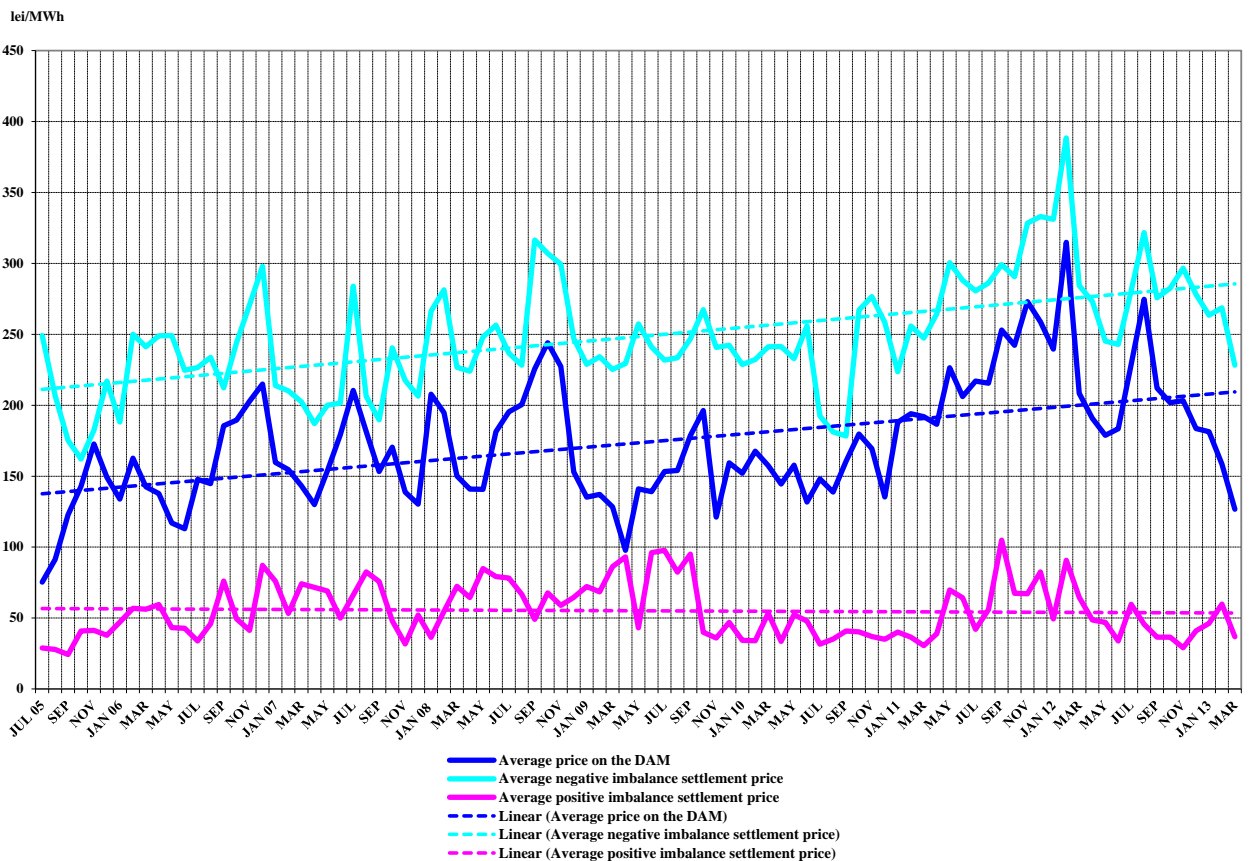
Source: Daily/monthly reports of SC Opcom SA – processed by MG

Hourly average settlement prices and internal consumption  
March 2013



Source: Monthly reports of SC Opcom SA and CN Transelectrica SA – processed by MG

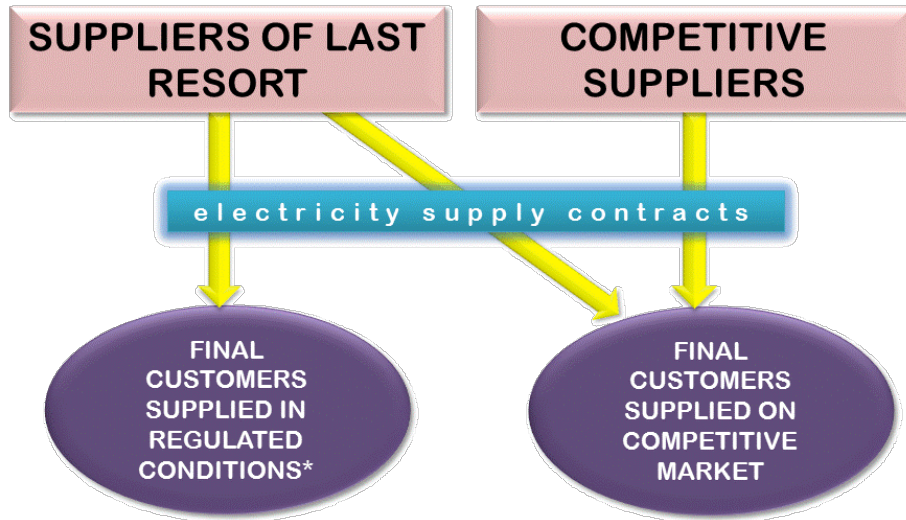
Monthly average prices on DAM and BM  
July 2005 - March 2013



Source: Monthly/daily reports of SC Opcom SA – processed by MG

### III. RETAIL ELECTRICITY MARKET

#### 1. Structure of the retail electricity market

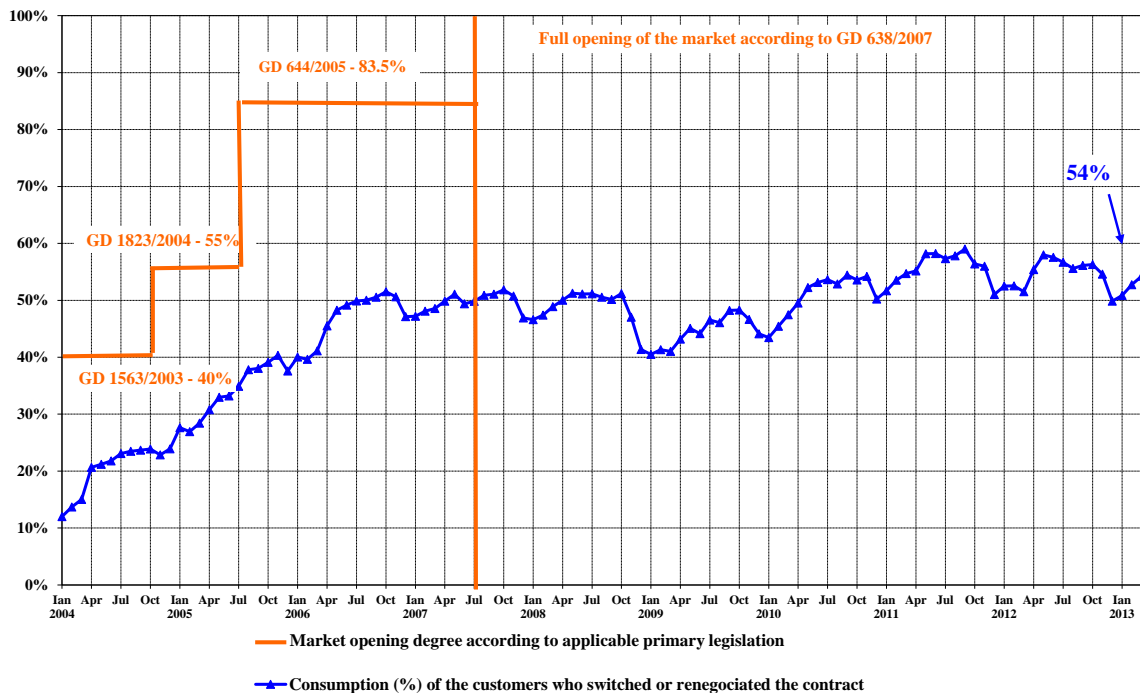


\* according to art. 53 (2) and art. 55 (1) from Electricity and Gas Law no. 123/2012

#### 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, during January 2004 – March 2013. 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 2013



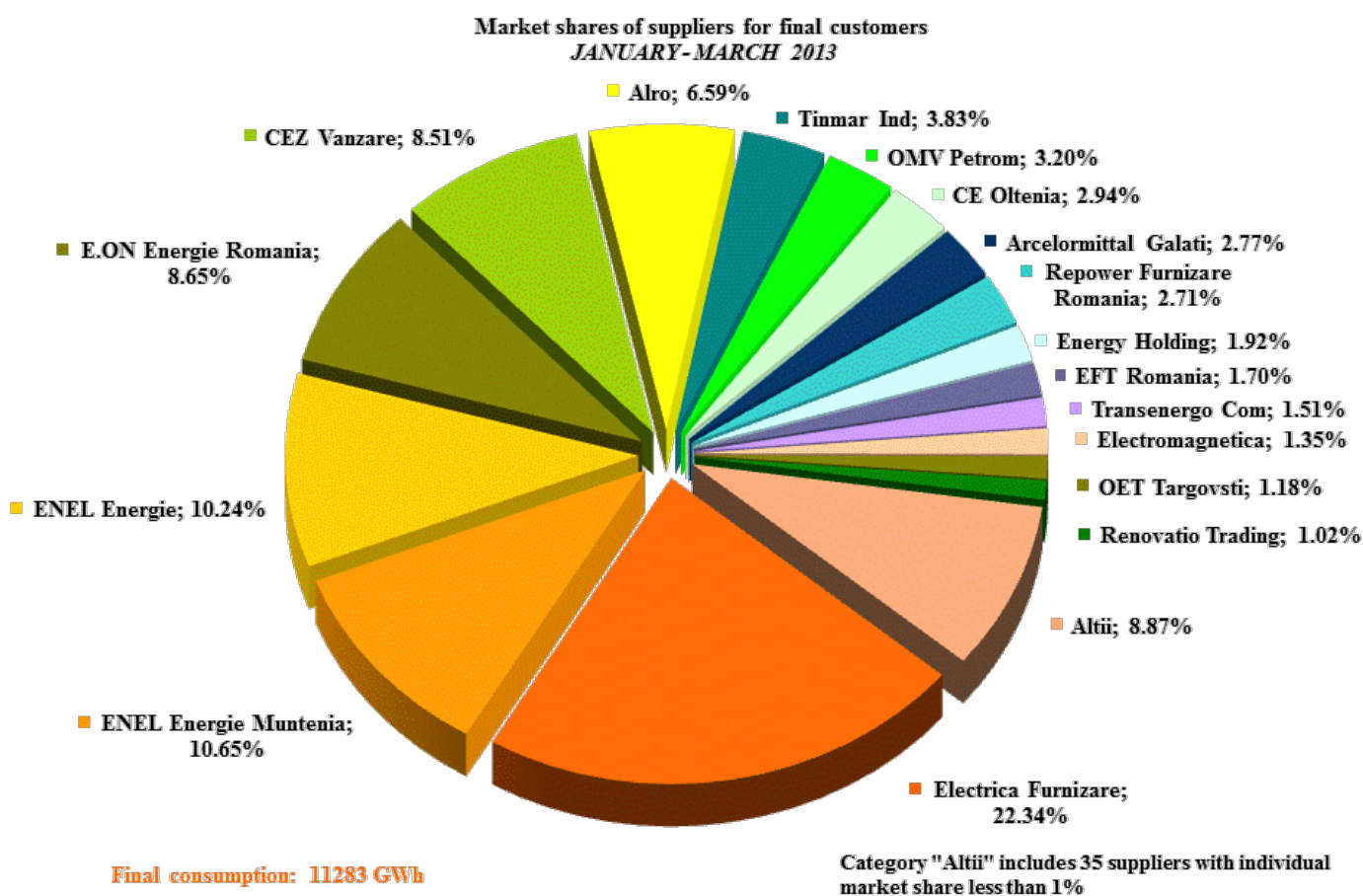
Source: Monthly reports of the final customers' suppliers – processed by MG

Under the Memorandum of Understanding approved by the Romanian Government on March 13<sup>th</sup> 2012 and in accordance with the obligations assumed by the Romanian Government in relation to International Monetary Fund, World Bank and European Commission, there has been approved the timetable of phasing out the regulated tariffs for the final customers who chosen not to use their eligibility rights. In this respect, the deadline for phasing out the regulated tariffs for non-household customers will be December 31<sup>st</sup> 2013 and for household customers will be December 31<sup>st</sup> 2017.

### 3. Market shares of the electricity suppliers

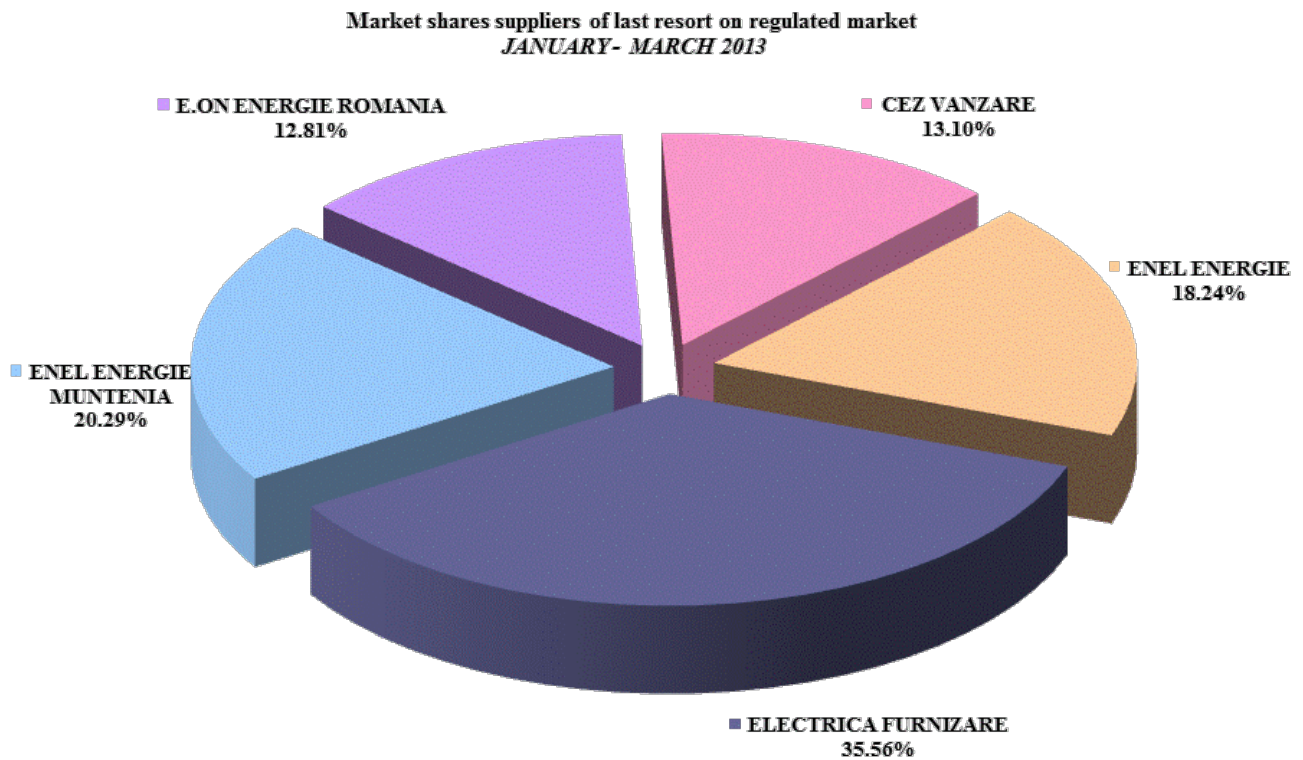
In the following three graphs there are presented the market shares of electricity suppliers on the retail market, calculated:

- a) for all suppliers (including the suppliers of last resort) on REM – based on the electricity supplied to the customers on regulated tariffs (including CMC) as well as to the customers who switched their supplier or renegotiated their contract;



Source: Monthly reports of the incumbent suppliers – processed by MG

- b) for suppliers of last resort - based on the electricity supplied to the final customers at regulated tariffs and CMC;

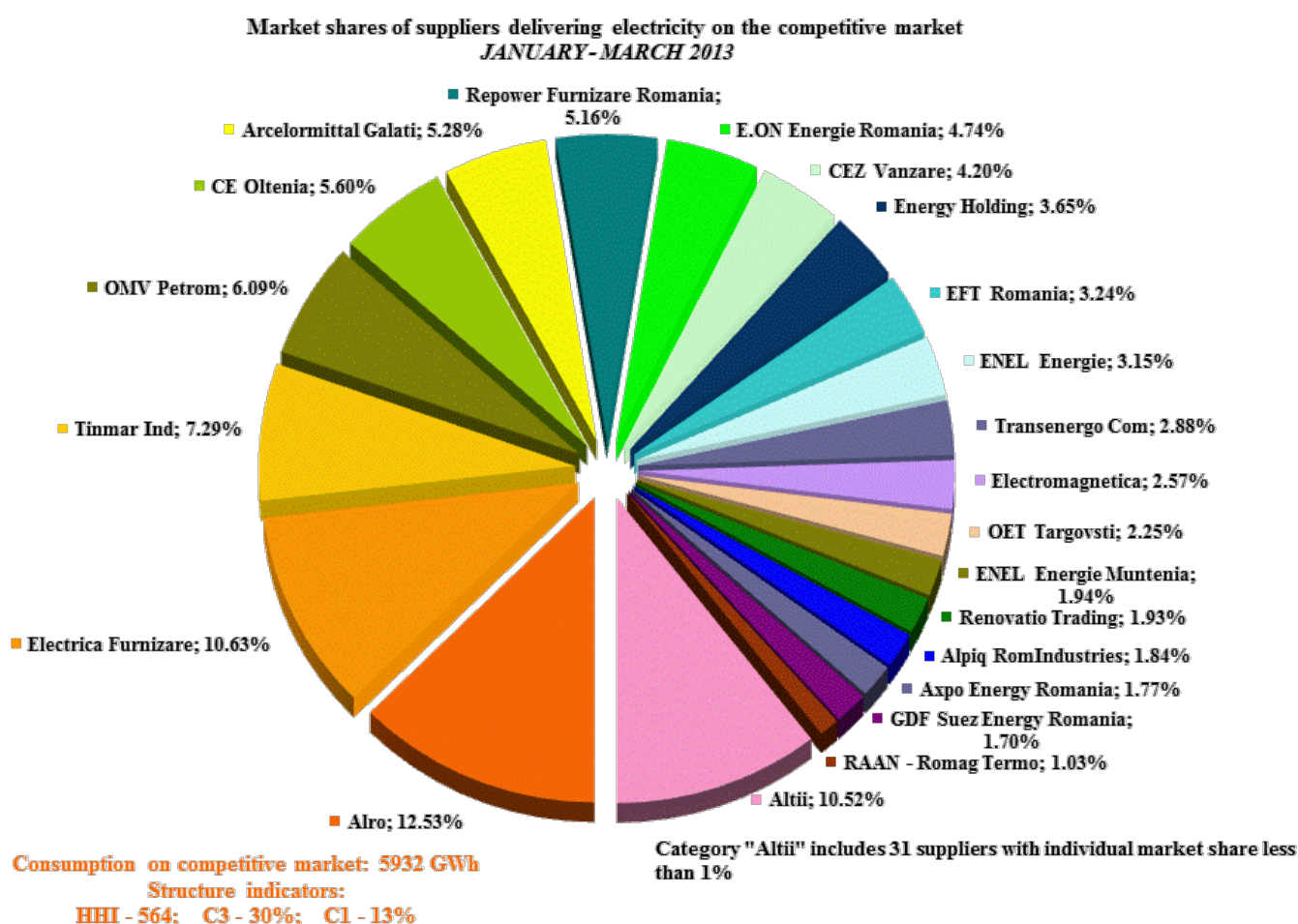


**Consumption of final customers supplied at regulated tariffs and CMC: 5351 GWh**

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

and

- 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:



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

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.

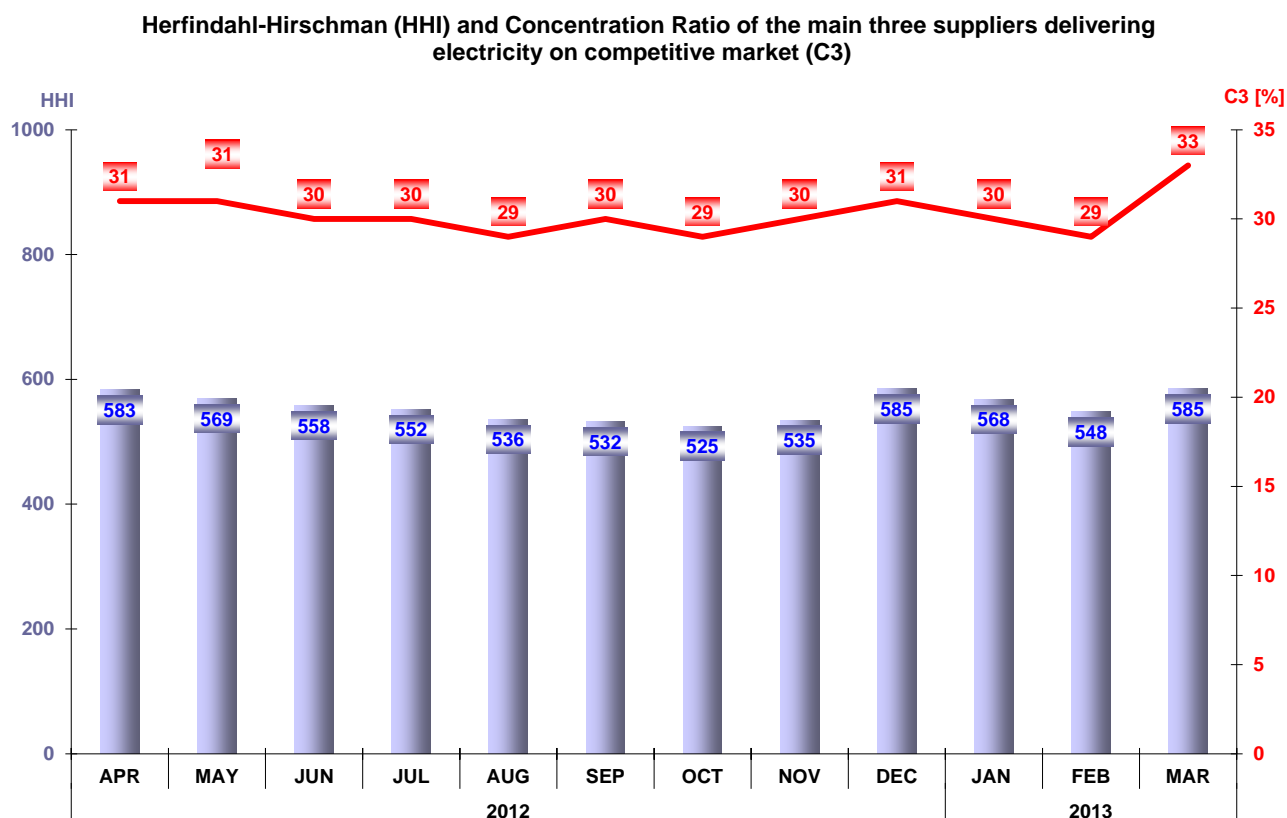
The electricity supplied to the final customers used for calculating the market share of every supplier includes also the self-consumption of that particular supplier (e.g. customers with supply license who buy electricity for themselves from WEM as competitive suppliers).

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 2013:

Number of suppliers	Share of sales to final customers from total sales transactions			
	100%	75% - 100%	50% - 75%	<50%
Competitive	4	14	5	15
Of last resort	0	4	1	0

#### 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 April 2012 – March 2013 in the following graph:



Source: Monthly reports of the suppliers – processed by MG

The table below shows the values of structure indicators of competitive component of REM for and the number of active suppliers in March 2013, calculated for each customer category as defined by the Directive 2008/92/EC of the European Parliament and of the Council:

Indicators - March 2013	Consumer category							Total REM
	IA	IB	IC	ID	IE	IF	Other	
C1 - % -	17	27	24	16	21	20	32	13
C3 - % -	43	54	42	35	42	49	55	33
HHI	1042	1292	983	711	959	1209	1581	585
Consumption - GWh -	2,3	117	190	504	281	177	778	2048
No. of SUPPLIERS	27	42	42	41	19	11	16	52
No. of suppliers of last resort	5	5	5	5	3	3	2	5
No. of competitive suppliers	18	33	31	32	15	7	7	38
No. of producers	4	4	6	4	1	1	7	9

Source: Monthly reports of the suppliers – processed by MG

### 5. Evolution of customers' number and of electricity delivered

Number of customers supplied on the competitive market is presented as total value from the beginning of the market opening process; for March 2013 this number is split into categories, according to the provisions of Directive 2008/92/EC of the European Parliament and of the Council. The table below presents the bands of consumption of each category of customers:

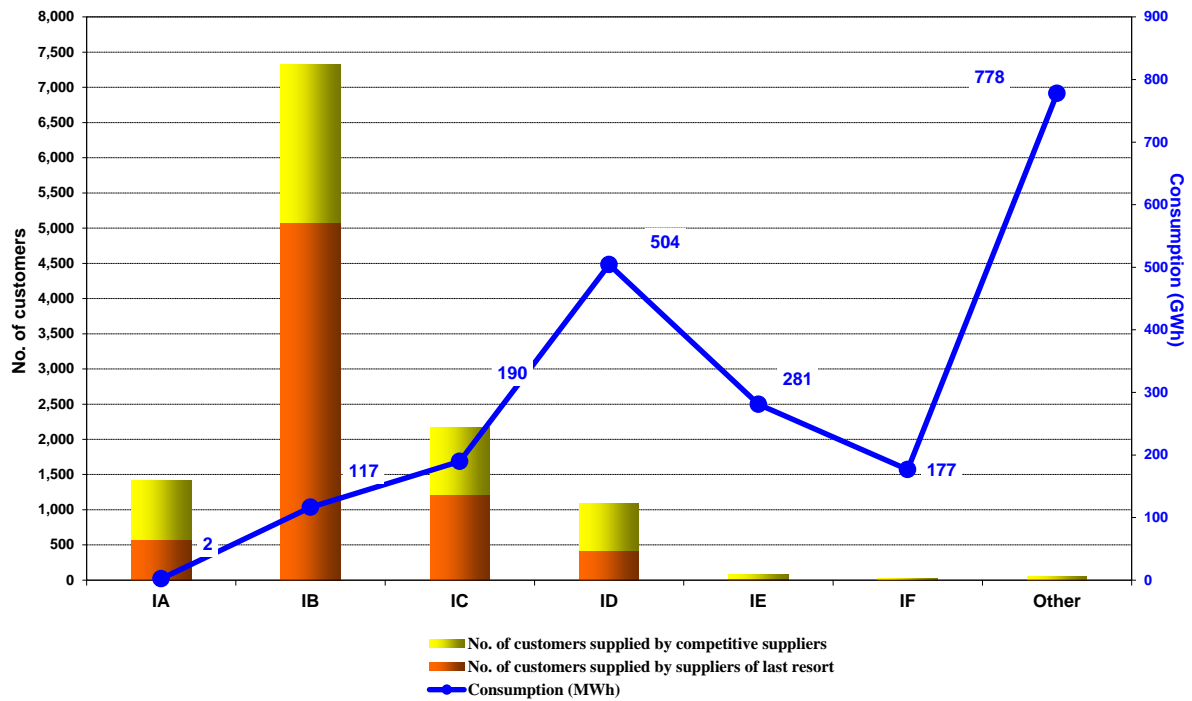
Non-household customers	Annual electricity consumption (MWh) between:	
	IA	
IB	20	<500
IC	500	<2000
ID	2000	<20000
IE	20000	<70000
IF	70000	<=150000
Others	>150000	

Evolution of the number of supplied customers and delivered electricity on the competitive market



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

Number of customers supplied on competitive market and the consumption on each category of customers  
- MARCH 2013 -

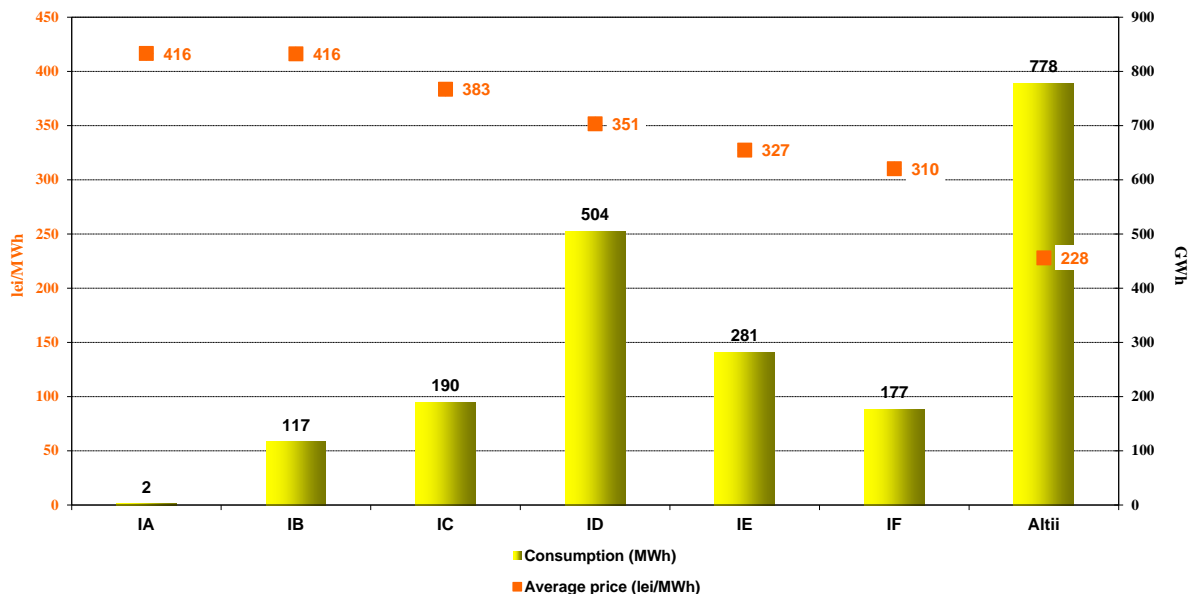


Source: Monthly reports of the suppliers – processed by MG

### 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 Directive 2008/92/EC of the European Parliament and of the Council.

Average price and energy consumption on types of customers applied on competitive market  
- MARCH 2013 -



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

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 Directive. The average prices do not include VAT, excise or other taxes but include the supplied services (injection and extraction components of transmission, system services, distributi, market settlement, imbalance, BRP aggregated tax, metering). Splitting customers into categories was based on their annual consumption forecast, according to the provisions of above mentioned Directive.

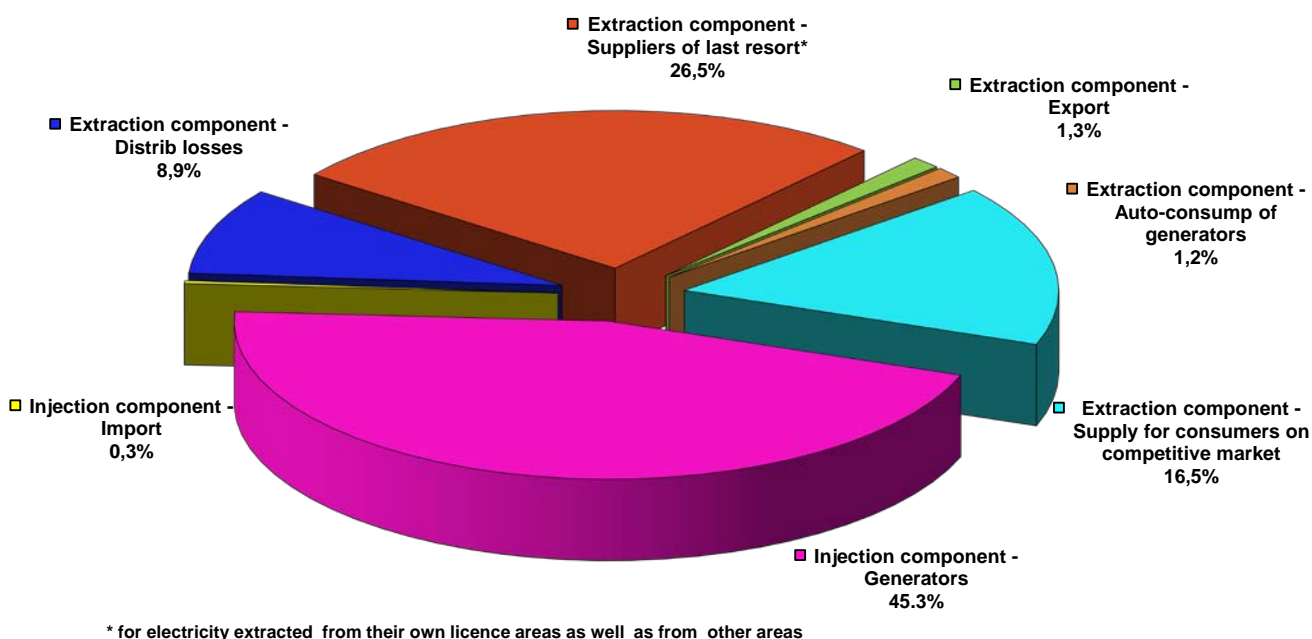
#### IV. TRANSMISSION AND SYSTEM OPERATOR C.N. TRANSELECTRICA S.A.

CN Transelectrica SA performs the electricity transmission service at regulated tariffs, which have two components:

- injection component (TG), aimed to determine an optimum geographic positioning of the new power units;
- extraction component (TL), as an incentive for an equilibrate positioning into the territory of the customers.

The following graph presents the structure of CN Transelectrica SA revenues from performing the transmission services and reflects the structure of its clients benefiting from this type of service in March 2013.

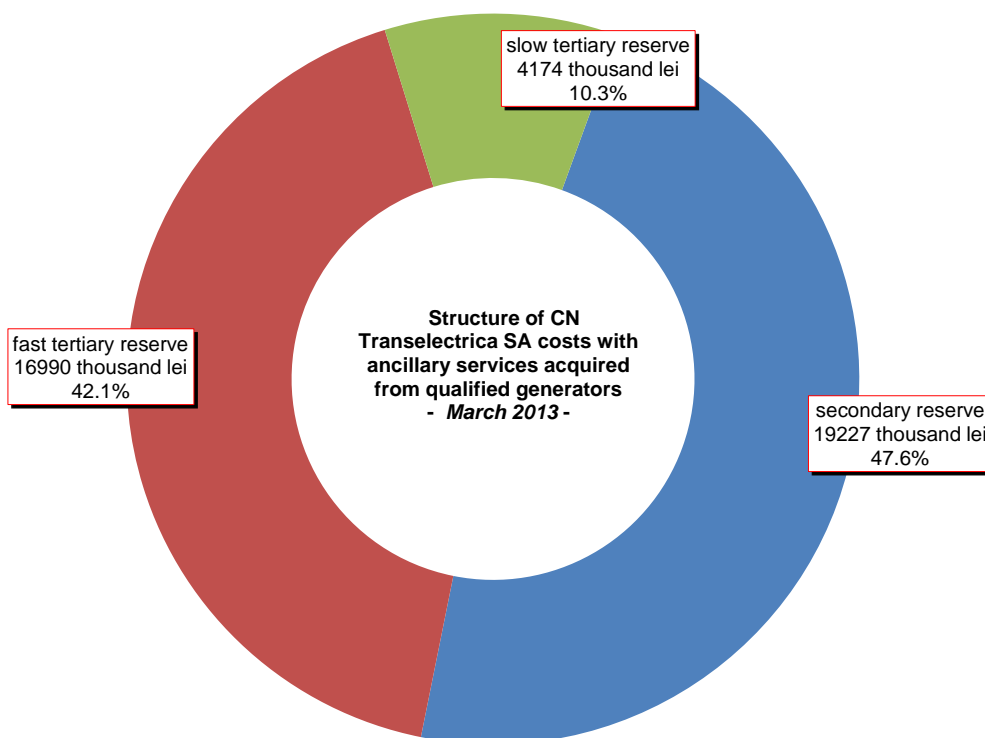
**Structure of Transelectrica's revenues received for transmission services  
- March 2013 -**



*Source: Monthly reports of CN Transelectrica SA – processed by MG*

In order to perform the system operator tasks, CN Transelectrica 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.

The following graph presents the costs of ancillary services that CN Transelectrica SA had to pay in March 2013. In order to cover these costs and its own operating costs, TSO applies a regulated tariff for system services.



Source: Monthly reports of CN Transelectrica SA – processed by MG

## V. EVOLUTION OF MARKET RULES IN MARCH 2013

In March 2013, ANRE issued the following regulations with impact on the wholesale electricity markets:

- Order of ANRE president no. 10/2013 for updating the limit-trade values of green certificates and the value of an unaquired green certificate in case the compulsory acquisition quota for 2013 is not fulfilled;
- Order of ANRE president no. 17/2013 for modifying the monitoring methodology of the system designed for promoting the electricity produced from renewable sources by green certificates approved by ANRE order no. 6/2012;
- Order of ANRE president no. 18/2013 regarding the approval of the tariff received by Transelectrica for performing the transit of electricity to/from perimeter countries;
- Decision no. 695/2013 of ANRE President for approving the quantities produced in high efficiency cogeneration which benefit of bonus scheme in February 2013.

## VI. EXPLANATIONS AND ABBREVIATION

### 1. Explanations

- *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.
- *Internal consumption* represents the electricity covered by the wholesale market participants and calculated as *Delivered electricity + Import – Export*.
- *Consumption of final customers on regulated market* represents the consumption of customers supplied at regulated tariffs and CMC by suppliers of last resort.
- *Consumption of final customers on competitive market* represents the consumption of customers supplied at negotiated prices.
- *Fuel consumption* represents the fuel consumed for generating electricity and heat.
- *Electricity delivered into the grid* includes also the own consumption of auto-generators such as RAAN and OMV Petrom together with the electricity sold by the generators through direct lines or consumed by themselves at other consumption sites.
- *Competitive supplier* represents the supplier which is active on the competitive retail market.

### 2. Abbreviation

- MG – Monitoring Group
- EEX – European Energy Exchange – Leipzig, Germany. [www.eex.de](http://www.eex.de)
- EXAA – Energy Exchange Austria. [www.exaa.at](http://www.exaa.at)
- DAM – Day Ahead Market
- BM – Balancing Market
- ASM – Ancillary Services Market
- MCP – Market Clearing Price
- BRP – Balancing Responsible Party
- TG/TL – injection / extraction component of the transmission tariff
- CMBC – centralised market of bilateral contracts
- CMBC-CN – centralised market for partially standardised bilateral contracts with continuous negotiation
- NES – National Energy System
- WEM – wholesale electricity market
- REM – retail electricity market
- RCE – Romanian Commodities Exchange