

**REPORT ON RESULTS OF MONITORING THE  
ROMANIAN ELECTRICITY MARKET  
OCTOBER 2009**

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

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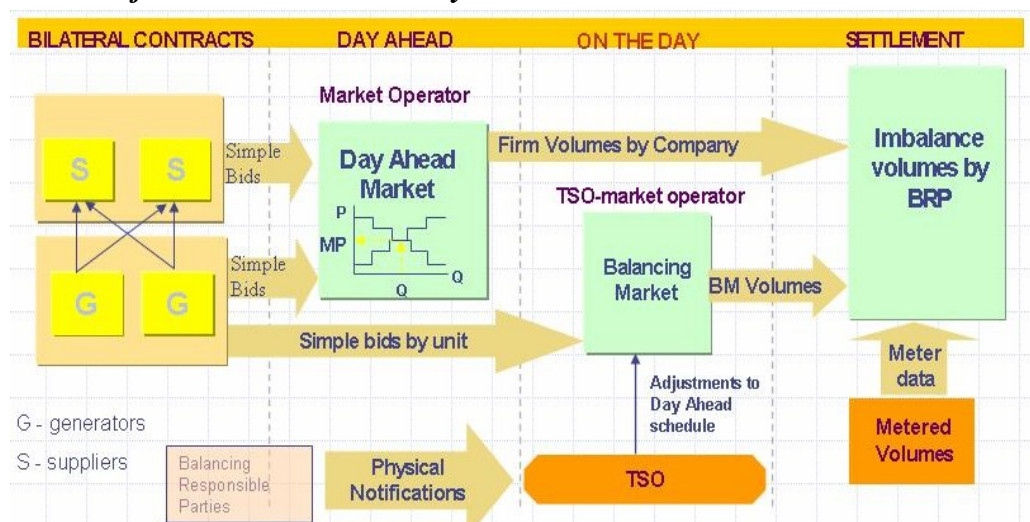
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## I. MAIN EVENTS IN THE DEVELOPMENT OF THE ROMANIAN ELECTRICITY MARKET

- **GD 365/1998** – vertically integrated monopol – RENEL – was split in. 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%;
- **November 2005** – launch of the green certificates market;
- **December 2005** – launch of the centralized market for bilateral contracts;
- **March 2007** – launch of the centralized market for partially standardized bilateral contracts with continuous negotiation;
- **GD 638/2007** – fully opening of electricity and gas markets;
- **July 2007** – rules for capacity market 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).

## II. WHOLESALE ELECTRICITY MARKET

### 1. Structure of the wholesale electricity market



## 2. Participants on the wholesale electricity market

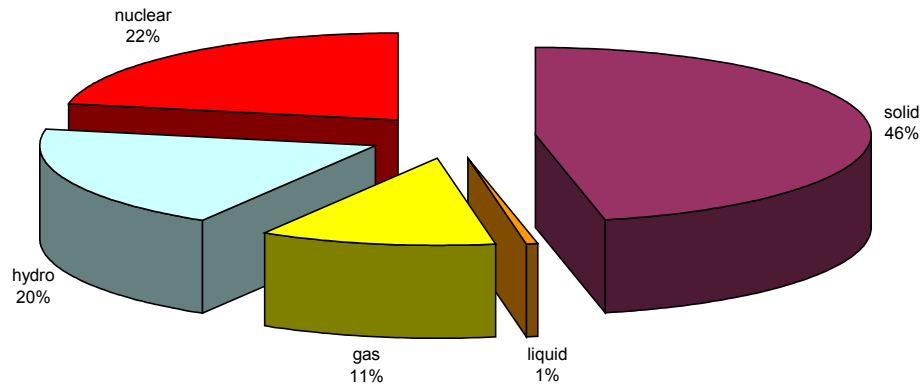
The market participants\* acting on the electricity market in October 2009 are presented below split into categories:

No.	Name	Comments	No.	Name
<b>A Electricity generators operating dispatching units</b>			<b>F Electricity Suppliers acting exclusively on the wholesale market</b>	
1	SC CET Bacău SA		1	SC Atel Energy Romania SRL
2	SC CET Braşov SA		2	SC AMV Style SRL
3	SC CET Govora SA		3	CEZ as
4	SC CET Iaşi SA		4	SC CEZ Trade Romania SRL
5	SC CET Oradea SA		5	SC EFT Romania SRL
6	SC Electrocentrale Bucureşti SA		6	SC Encaz SRL
7	SC Electrocentrale Galaţi SA		7	SC Enel Trade Romania SRL
8	SC Dalkia Termo Prahova SRL		8	SC Energy Distribution Services SRL
9	SNP Petrom Sucursala Petrobrazii		9	SC Energy Market Consulting SRL
10	SC Termica SA Suceava		10	SC E.ON Energy Trading SE
11	SC Termoelectrica SA		11	SC Edison Trading SpA
12	SC Uzina Termică Giurgiu SA		12	SC Ezpada SRL
13	SN Nuclearelectrica SA		13	Ezpada SRO
14	SC CE Rovinari SA		14	SC GDF Suez Energy Trading Romania SRL
15	SC CE Turceni SA		15	SC Global Electric Trading SRL
16	RAAN		16	SC Griuco SA
17	SC CE Craiova SA	Generators acting also as suppliers on the competitive market	17	SC Jas Budapest Zrt
18	SC CET Arad SA		18	SC Korlea Invest SRL
19	SC Electrocentrale Deva SA		19	SC Re Energie SRL
20	SC Hidroelectrica SA		20	SC Romelectro SA
<b>B Transmission System Operator</b>			21	SC Rudnap SRL
1	CN TRANSELECTRICA SA	Balancing Market Operator	22	SC RBS Sempra Energy Europe Ltd
<b>C DAM Operator</b>			23	SC Statkraft Romania SRL
1	SC OPCOM SA	Operator of the Green Certificates Market, Bilateral Contracts Market and Settlement Administrator	24	SC Transelectric Power SA
<b>D Distribution network operators</b>			<b>No.</b>	<b>Name</b>
1	SC CEZ Distribuţie SA	Operators of the distribution network	<b>G Electricity Suppliers</b>	
2	SC ENEL Distribuţie Banat SA		1	SC Alro SA
3	SC ENEL Distribuţie Dobrogea SA		2	SC Arelco Distribuţie SRL
4	SC E.ON Moldova Distribuţie SA		3	SC Beny Alex SRL
5	SC ENEL Distribuţie Muntenia SA		4	SC Biol Energy SRL
6	SC FDEE Electrica Distribuţie Muntenia Nord SA		5	SC Buzmann Industries SRL
7	SC FDEE Electrica Distribuţie Transilvania Sud SA		6	SC Eco Energy SRL
8	SC FDEE Electrica Distribuţie Transilvania Nord SA		7	SC EFE Energy SRL
<b>E Incumbent suppliers</b>			8	SC EGL Gas & Power Romania SA
1	SC CEZ Vanzare SA	Incumbent suppliers acting also as suppliers on the competitive market	9	SC Ehol Distribuţie SRL
2	SC ENEL Energie SA		10	SC Elcomex EN SRL
3	SC E.ON Moldova Furnizare SA		11	SC Electrica SA
4	SC ENEL Energie Muntenia SA		12	SC Electricom SA
5	SC FFEE Electrica Furnizare Muntenia Nord SA		13	SC Electromagnetica SA
6	SC FFEE Electrica Furnizare Transilvania Sud SA		14	SC Energotrans
7	SC FFEE Electrica Furnizare Transilvania Nord SA		15	SC Energy Holding SRL
			16	SC Energy Network SRL
			17	SC Enex SRL
			18	SC Ennet Grup SRL
			19	SC Enol Grup SA
			20	SC EURO-PEC SA
			21	SC Fidelis Energy SRL
			22	SC GDF SUEZ Energy Romania SA
			23	SC General Com Invest SRL
			24	SC Gevco SRL
			25	SC Hydroconstructia SA
			26	SC ICCO Electric SRL
			27	SC ICPE Electrocond Technologies SA
			28	SC Luxten LC SA
			29	SC Petprod SRL
			30	SC Renovation Trading SRL
			31	SC Tinmar Ind SA
			32	SC Total Electric Oltenia SA
			33	SC Transenergo Com SA
			34	SC UCM 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. The table does not include the Balancing Responsible Parties (BRP). The BRP updated list is published on the Balancing Market Operator website - [www.ope.ro](http://www.ope.ro).

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

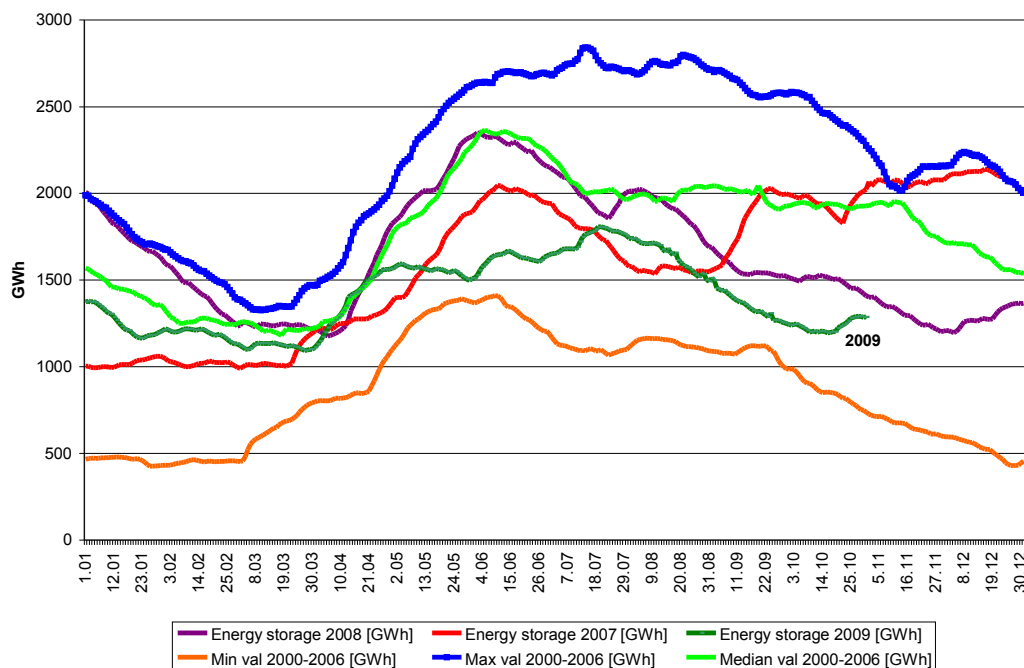
Electricity structure by primary sources  
(delivered by generators with dispatchable units)  
October 2009



Source: Monthly reports of generators – processed by MG

The electricity generated from hydro resources depends on and at the same time influences the energy stored in the main water reservoirs. The following graph presents the evolution of daily amounts of energy storage in October 2009 compared to daily values in 2007 and 2008 and to minimum, maximum and median values during 2000-2006.

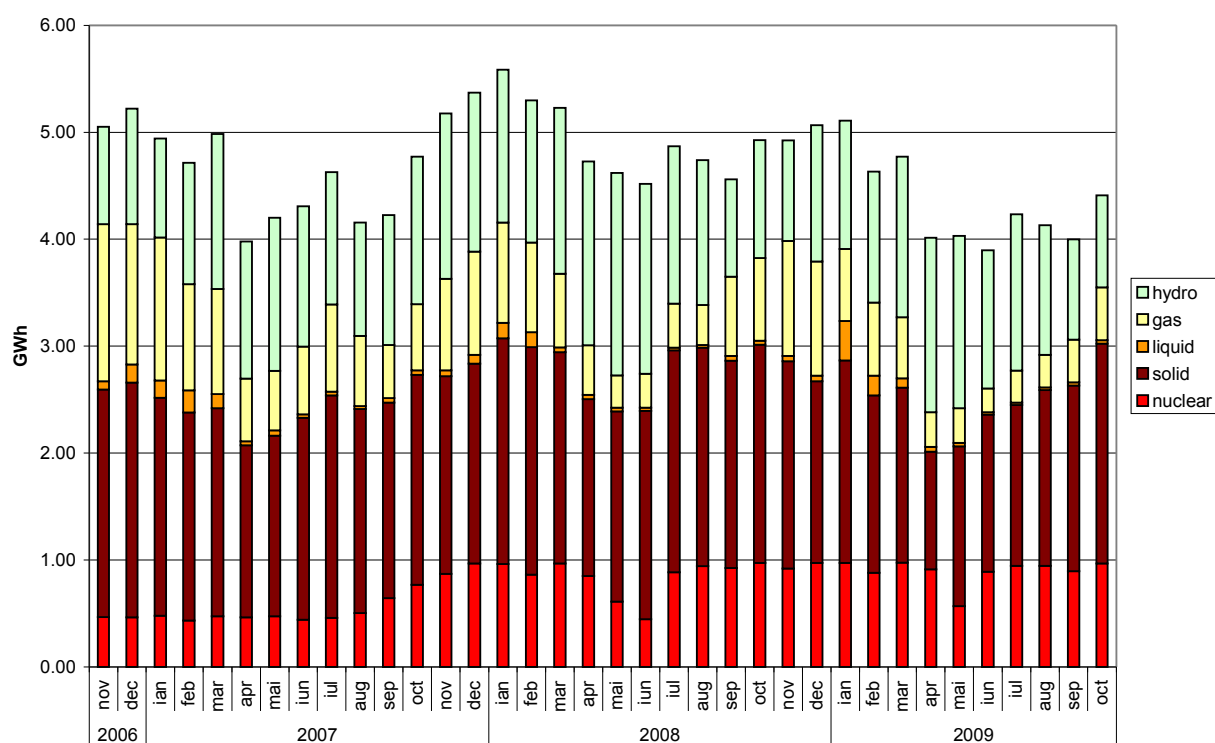
Yearly evolution of daily values of energy stored in the main water reservoirs



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

The evolution of delivered electricity structure, starting with October 2006, is the following:

Evolution of electricity delivered by generators with dispatchable units by primary sources



Source: Monthly reports of generators – processed by MG

The following table presents the main data regarding the physical balance of electricity for October 2009 and for the first 10 months of 2009, compared to data for similar periods of 2008:

No.	Indicator	MU	Oct 2008	Oct 2009	%	Jan-Oct 2008	Jan-Oct 2009	%
0	1	2	3	4	$5=4/3*100$	6	7	$8=7/6*100$
1	Generated electricity	TWh	5.31	4.78	90.01	53.11*	46.66	87.86
2	Delivered electricity	TWh	4.92*	4.41	89.56	49.08*	43.22	88.06
3	Import	TWh	0.06	0.06	93.34	0.73	0.57	78.44
4	Export	TWh	0.39	0.18	45.41	4.44	2.79	62.74
5	Internal consumption	TWh	4.59*	4.29	93.39	45.37*	41.01	90.38
6	Consumption of household consumers on the regulated market	TWh	0.86	0.91	105.81	8.46*	9.04	106.86
7	Consumption of non-households consumption	TWh	2.93	2.61	89.08	29.92*	25.34	84.69
7.1	<i>on the regulated market</i>	TWh	0.99	0.91	91.92	10.77*	10.07	93.50
7.2	<i>on the competitive market</i>	TWh	1.94	1.70	87.63	19.15	15.27	79.74
8	Transmission – Injection component	TWh	4.83	4.31	89.15	48.20	42.20	87.55
9	Transmission – Extraction component	TWh	4.90	4.36	89.16	48.85	42.93	87.88

10	System services	TWh	4.90	4.36	89.16	48.85	42.93	87.88
11	Actual transmission grid losses	TWh	0.08	0.09	117.45	0.83	0.82	98.78
12	Heat generated for delivery	Tcal	1054.38	1136.78	107.82	13990.63*	12876.42	92.04
13	Heat in co-generation	Tcal	887.07	885.91	99.87	11351.45*	10449.98	92.06

*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 consumers directly connected to the power plants (positions 6 & 7).  
2. The imported/exported quantities do not comprise transits and cross border exchange of CN Transelectrica 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 the electricity sold by generators for covering the transmission losses.  
\* Data published into Report on monitoring results of the electricity market – October 2008 were modified due to some corrections made by market participants

#### 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 generator-generator and supplier-supplier, 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) and on the Power floor of RCE (Romanian Commodities Exchange), transactions on DAM (day-ahead market) and on BM (Balancing Market).

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 table below for October 2009 compared to the volumes of the month before and October 2008:

<b>TRANSACTIONS ON THE WHOLESALE MARKET</b>	<b>September 2009</b>	<b>October 2009</b>	<b>October 2008</b>
<b>1. BILATERAL CONTRACTS' MARKET</b>			
traded volume (GWh)	<b>5756</b>	<b>5852</b>	<b>5502</b>
% from internal consumption (%)	148.2	136.4	119.8
average price (lei/MWh)	160.59 <sup>1)</sup>	161.63	156.65
<b>1.1. Sales on regulated contracts</b>			
traded volume (GWh)	<b>2526<sup>1)</sup></b>	<b>2685</b>	<b>2426</b>
% from internal consumption (%)	65.0 <sup>1)</sup>	62.6	52.8
average price (lei/MWh)	161.50 <sup>1)</sup>	160.67	154.72
<b>1.2. Sales on negotiated contracts*</b>			
traded volume (GWh)	<b>3230<sup>1)</sup></b>	<b>3174***</b>	<b>3076</b>
% from internal consumption (%)	83.8 <sup>1)</sup>	74.0	67.0
average price (lei/MWh)	159.87 <sup>1)</sup>	162.43	158.18
<b>2. EXPORT</b>			
traded volume** (GWh)	<b>163</b>	<b>179</b>	<b>394</b>
% from internal consumption (%)	4.2	4.2	8.6
average price (lei/MWh)	158.78	176.45	186.27****
<b>3. CENTRALISED MARKETS OF CONTRACTS</b>			
traded volume (GWh)	<b>428</b>	<b>489</b>	<b>729</b>
% from internal consumption (%)	11.0	11.4	15.9
average price (lei/MWh)	189.06	191.87	177.59

<b>4. DAY AHEAD MARKET</b>			
traded volume (GWh)	<b>451</b>	<b>489</b>	<b>393</b>
% from internal consumption (%)	11.6	11.4	8.5
average price (lei/MWh)	178.66	196.13	244.06
<b>5. BALANCING MARKET</b>			
traded volume (GWh)	<b>203</b>	<b>307</b>	<b>344</b>
% from internal consumption (%)	5.2	7.2	7.5
upward volume (GWh)	<b>87</b>	<b>213</b>	<b>271</b>
average negative imbalance price(lei/MWh)	246.75	267.37	307.06
downward volume (GWh)	<b>116</b>	<b>94</b>	<b>73</b>
average positive imbalance price (lei/MWh )	95.14	39.92	67.80
<b>INTERNAL CONSUMPTION (includes distribution and transmission losses) (GWh)</b>	<b>3884</b>	<b>4290</b>	<b>4593</b>

*Note: 1) Data published in the Report on monitoring results of the electricity market – September 2009 were modified due to some corrections*

*\* Contracts of supply to consumers and contracts of export are not included*

*\*\* 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*

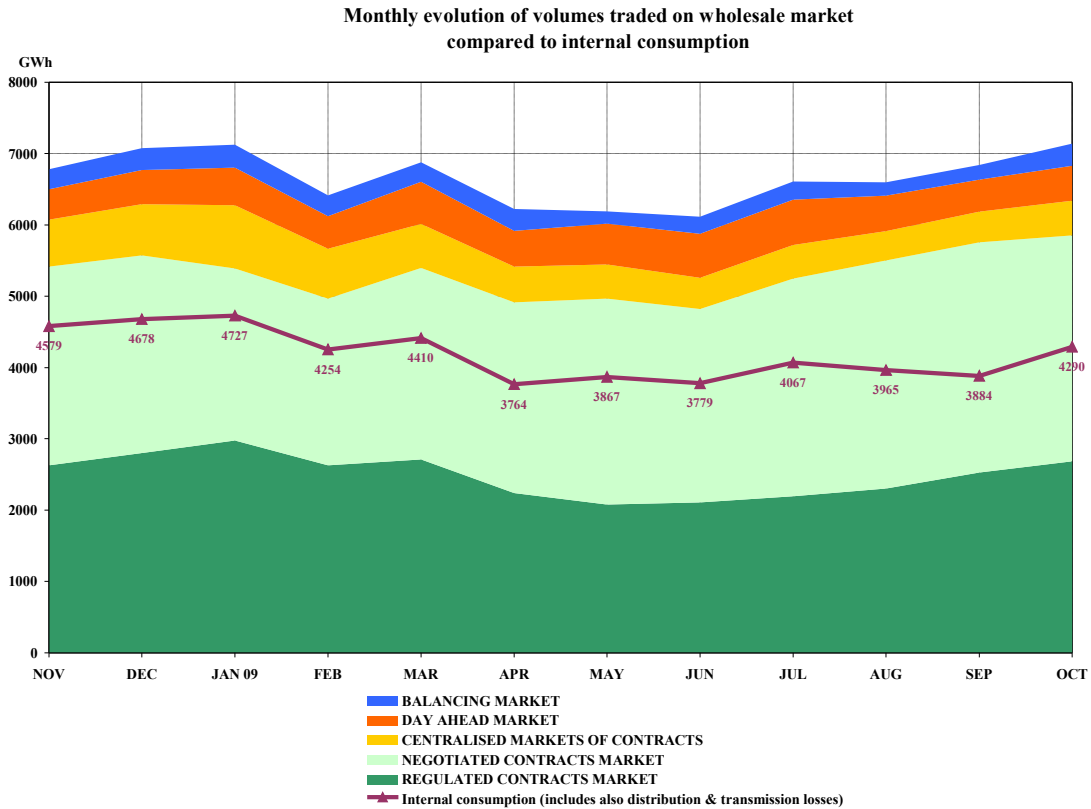
*\*\*\* Volumes traded on negotiated contracts do not include the quantities resulted from the processing contracts, as this activity is neither subject of ANRE regulations nor comprised within the market participants reports*

*\*\*\*\*Prices in October 2008 are calculated as average of prices reported by the participants; all prices include injection component of transmission tariff, most of them include the extraction component, system service and market administration tariffs and only few of them include value of interconnection capacity*

The percentage of electricity quantities from the internal consumption (see table from above) offers a dimensional reference for each of the specified markets.

The relevance of comparison between the above prices is affected by the fact that, in 2008, the value of injection component of the transmission tariff was not included in all categories of prices; thus, the average selling price on DAM/BM totally included this tariff component, the average selling price for negotiated contracts included it only partially, while the average selling price for regulated contracts did not include it at all. In 2008, the prices for export trades were not reported in an unified manner, but as the *Note \*\*\*\**) above. Starting with January 2009, all prices are including 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.

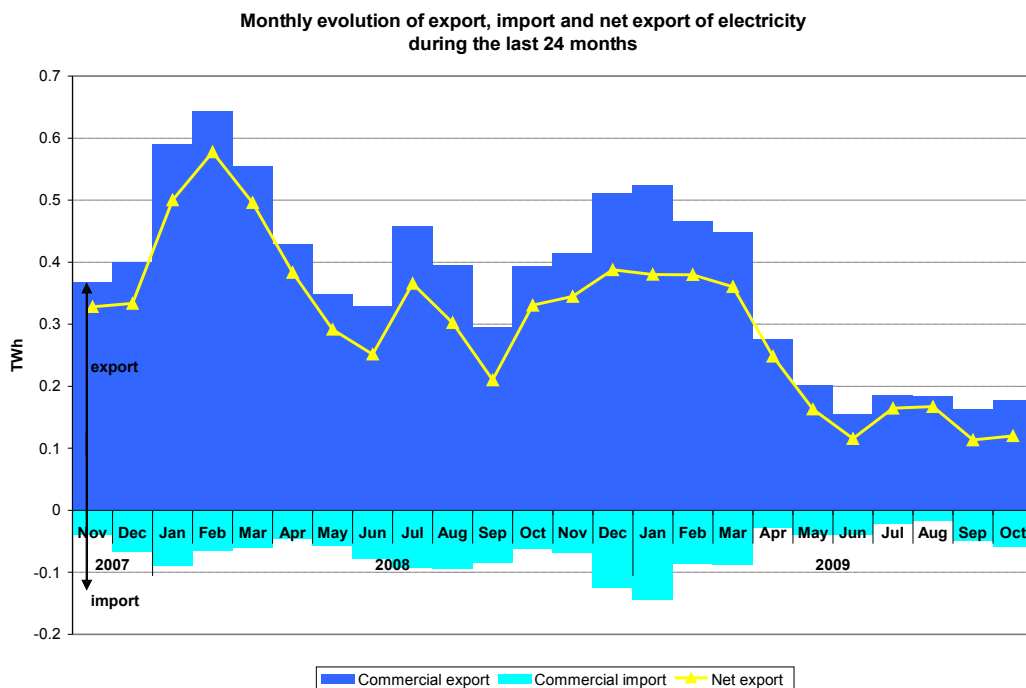
The evolution of the relation between the volumes sold on each market and the estimated internal consumption, for November 2008 – October 2009, is presented below:



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

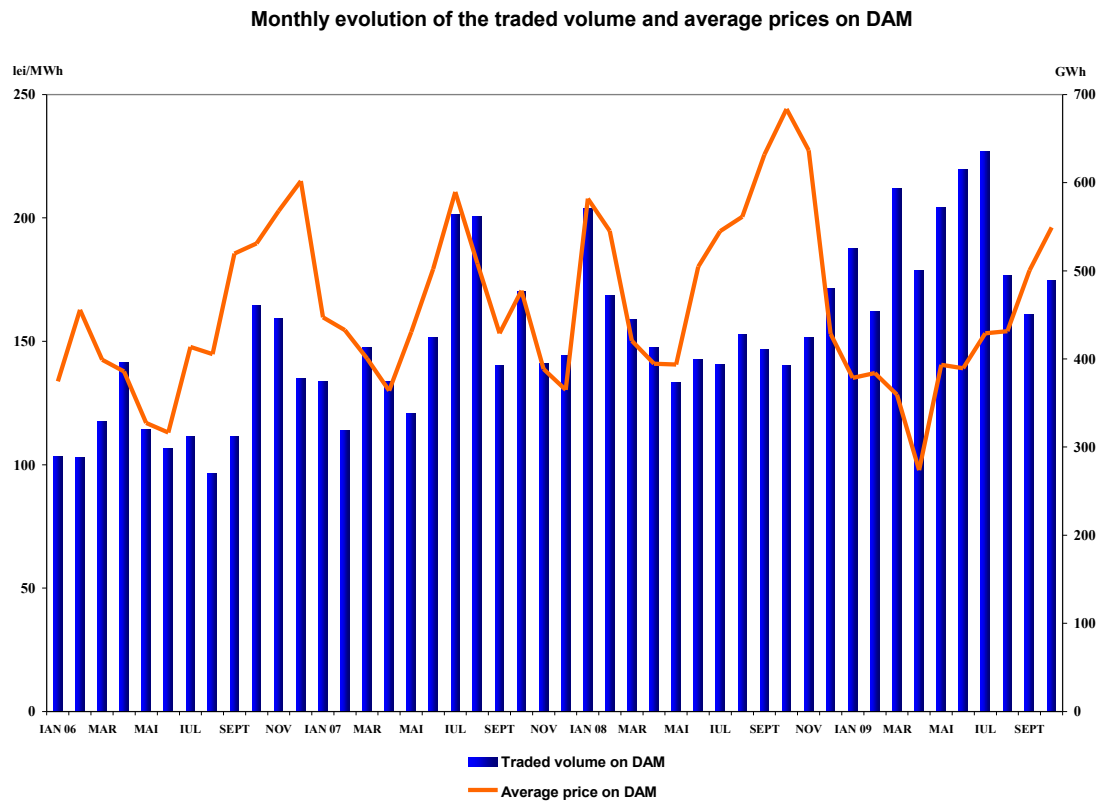
*Note:* In the above graph, the volumes traded on negotiated contracts’ market do not include the export trades

The following graph represents 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 Transelectrica SA – processed by MG

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



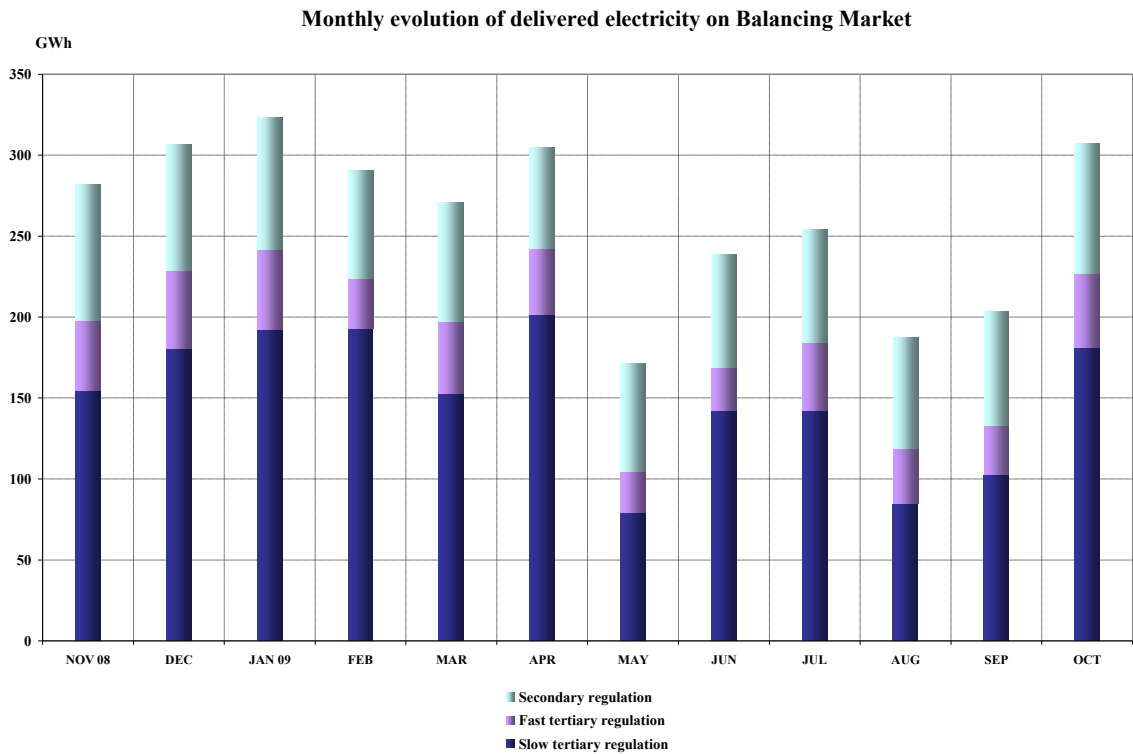
Source: Monthly reports of SC Opcom SA and CN Transelectrica SA – processed by MG

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 October 2009 is presented in the following table:

October 2009	Dispatch order (GWh)	Delivered electricity (GWh)	Deviation (%)
<b>Secondary regulation</b>	<b>81</b>	<b>81</b>	<b>0</b>
<i>upward</i>	33	33	0
<i>downward</i>	47	47	0
<b>Fast tertiary regulation</b>	<b>52</b>	<b>46</b>	<b>12</b>
<i>upward</i>	31	29	5
<i>downward</i>	21	16	21
<b>Slow tertiary regulation</b>	<b>200</b>	<b>181</b>	<b>9</b>
<i>upward</i>	159	151	5
<i>downward</i>	40	30	25
<b>TOTAL</b>	<b>332</b>	<b>307</b>	
<i>upward</i>	223	213	
<i>downward</i>	109	94	
<b>INTERNAL CONSUMPTION</b>		<b>4290</b>	
<b>% share of traded volumes from internal consumption</b>		<b>7.2%</b>	

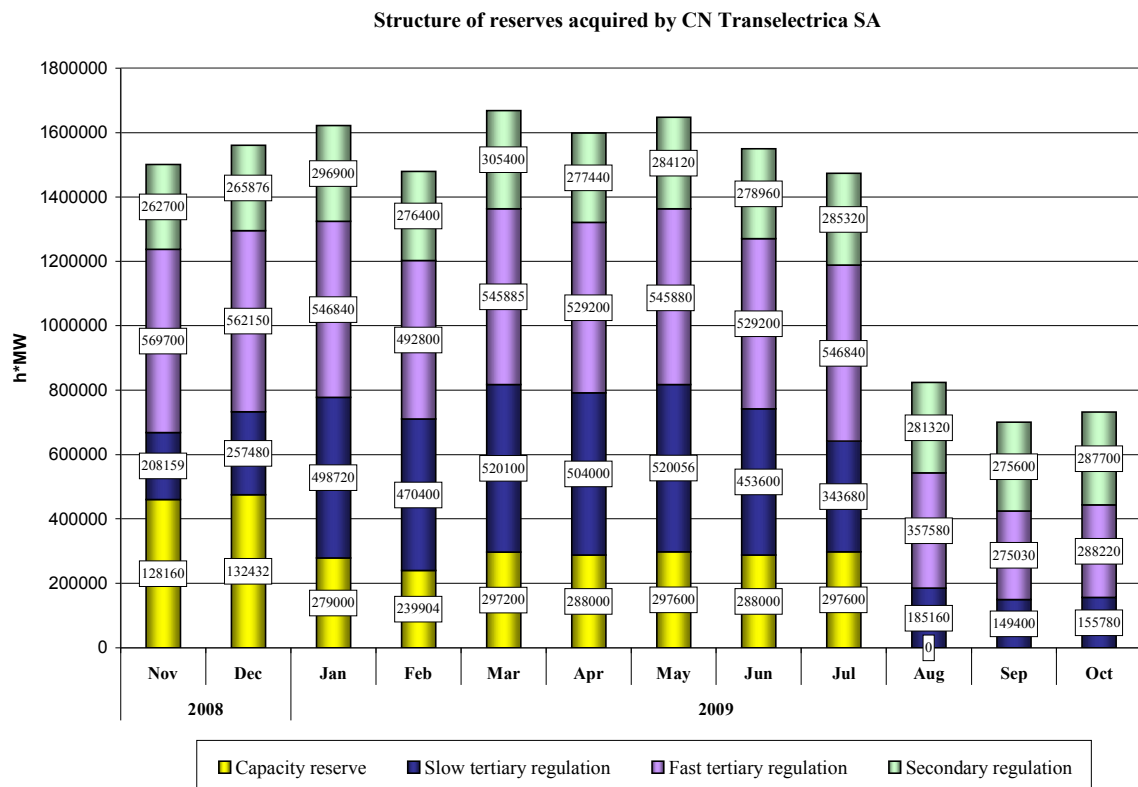
Source: Monthly reports of CN Transelectrica SA – processed by MG

The structure of balancing electricity delivered in the system on each type of regulation between November 2008 – October 2009 is presented in the graph below:



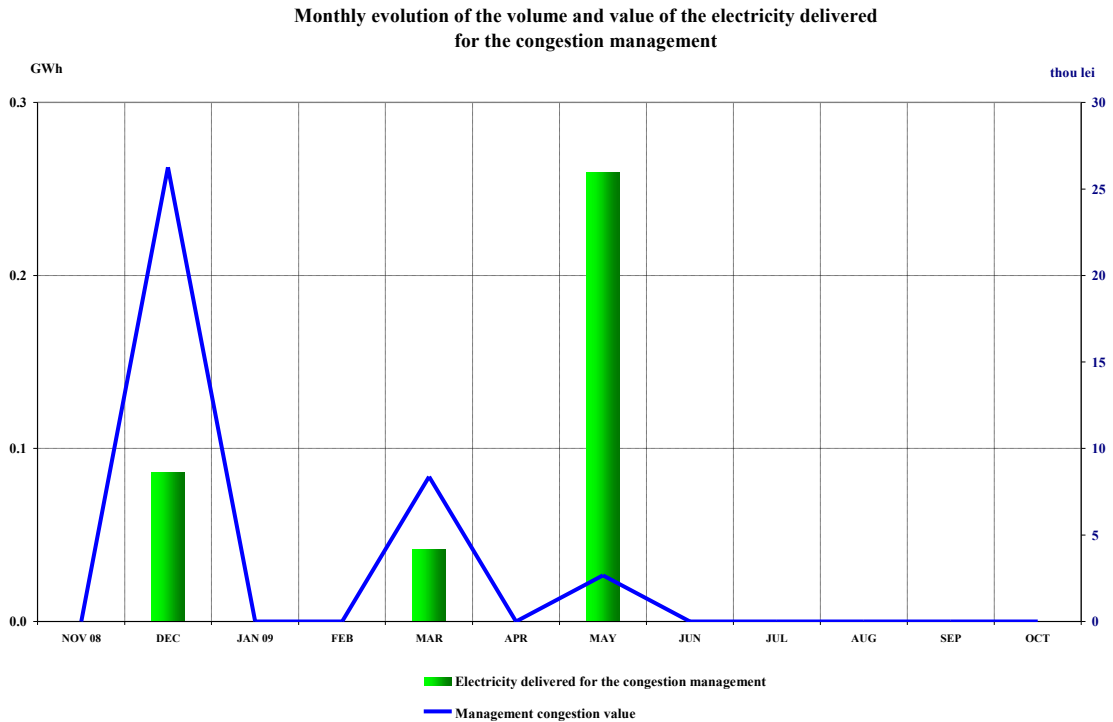
Source: Monthly reports of CN Traselectrica SA – processed by MG

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 Traselectrica SA during November 2008 – October 2009.



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

The following graph presents the last 12-months evolution of electricity traded by CN Transelectrica 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.



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 October 2009 compared to previous month and October 2008 was the following:

Transaction type	- GWh -		
	September 2009	October 2009	October 2008
0	1	2	3
Regulated to incumbents, thermal generators	956.38	877.27	1074.65
Regulated to incumbents, hydro generator	217.42	238.57	185.79
Regulated to incumbents, nuclear generator	490.21	516.89	507.14
Regulated for distribution losses, thermal generators	240.44	259.50	248.62
Regulated for distribution losses, hydro generator	38.38	40.93	57.92
Regulated for distribution losses, nuclear generator	133.66	138.18	148.45
Regulated for transmission losses, thermal generator	77.91	79.80	83.06
Regulated, to other generators (with return of obligation within a year)	371.73*	533.57	120.21
Regulated to other generators, activated on request, with option premium	0.00	0.00	0.00
Negotiated, to distributors	0.00	0.00	0.00
Negotiated, to other generators	186.92*	126.33	273.67
Negotiated, to suppliers	1133.29	1052.17	1250.22
Contracts concluded on centralized markets (CMBC, CMBC-NC, RCE)	416.01	488.60	730.10

Supply to consumers (regulated and competitive)	211.11	220.31	283.53
Export	107.96	112.60	121.58
DAM	175.68	233.15	164.13
<b>Total</b>	<b>4757.08</b>	<b>4917.85</b>	<b>5249.07</b>

\*Data published in the Report on monitoring results of the electricity market– September 2009 were modified due to some corrections  
 Source: Monthly reports of generators – processed by MG

### Suppliers

In October 2009, 65 companies having as main activity the supply of electricity concluded transactions on the electricity market; from these, 24 suppliers traded electricity exclusively on the wholesale market and 41 suppliers on both retail and wholesale markets (in this category are also included the 7 incumbent suppliers).

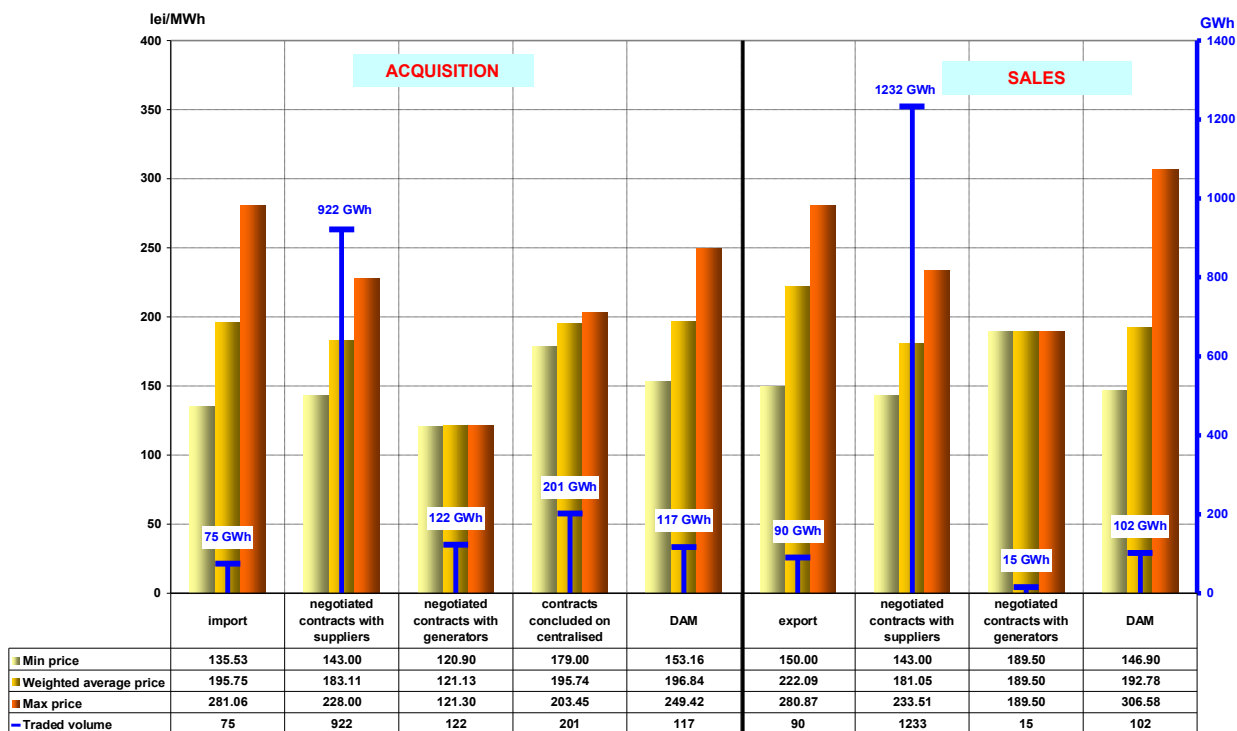
#### Suppliers acting exclusively on WEM

The following table shows the activity for October 2009 compared to October 2008 of the suppliers acting exclusively on WEM, acquisitions and sales being split by categories of markets/participants:

- GWh -

Transactions' structure of suppliers acting exclusively on WEM	October 2008	October 2009
<b>Acquisitions</b>		
Import	5.20	74.85
Negotiated contracts with suppliers	627.20	921.70
Negotiated contracts with generators	281.17	122.45
Contracts concluded on centralized markets	187.62	201.00
DAM	39.68	116.74
<b>Sales</b>		
Export	253.17	90.40
Negotiated contracts with suppliers	715.78	1233.02
Negotiated contracts with generators	90.99	14.96
Contracts concluded on centralized markets	-	-
DAM	81.75	101.76

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 October 2009:

Transactions concluded by suppliers acting exclusively on WEM  
 - October 2009 -


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

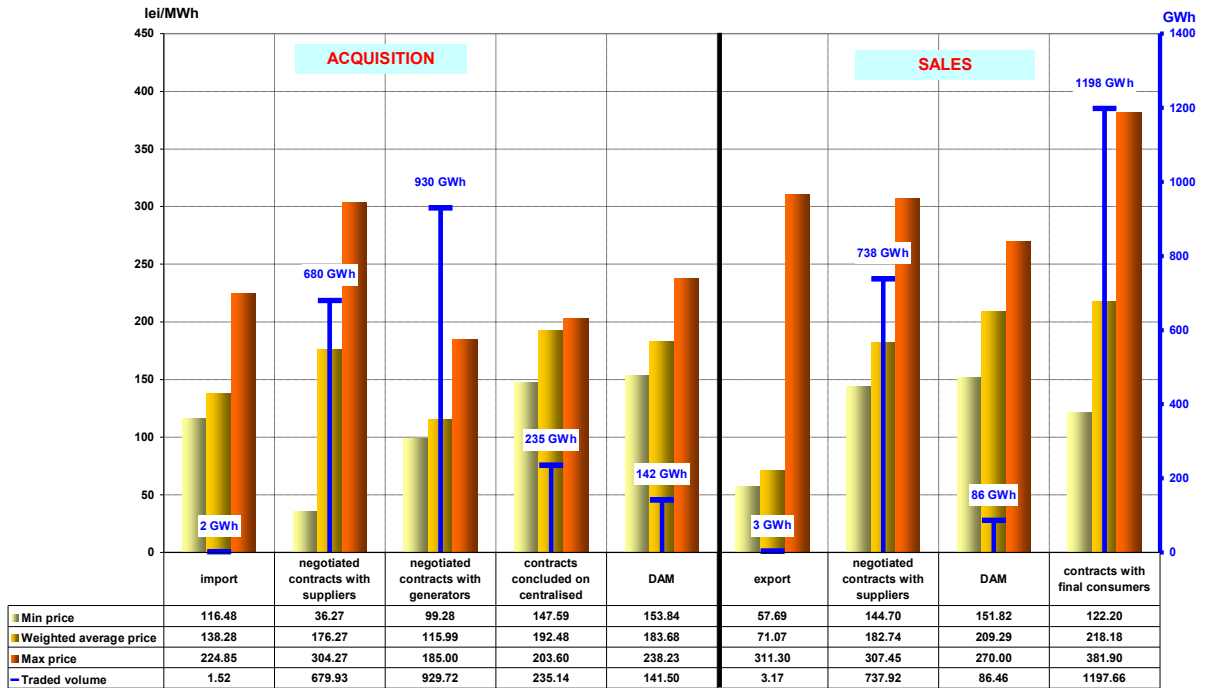
Active suppliers on REM (the incumbent suppliers are not included)

The following table presents aggregated information on transactions volume and structure for suppliers providing electricity to final consumers, on the competitive market, for October 2009 and October 2008.

	- GWh -	
Transactions' structure of suppliers providing electricity to final consumers (the incumbent suppliers are not included)	October 2008	October 2009
<b>Acquisitions</b>		
Import	26.79	1.52
Negotiated contracts with suppliers	645.69	679.93
Negotiated contracts with generators	969.15	929.72
Contracts concluded on centralized markets	451.23	235.14
DAM	60.07	141.50
<b>Sales</b>		
Export	18.89	3.17
Negotiated contracts with suppliers	661.81	737.92
Negotiated contracts with generators	-	-
Contracts concluded on centralized markets	-	-
DAM	112.74	86.46
Final consumers	1347.80	1197.66

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 consumers in October 2009:

Transactions concluded by suppliers providing electricity to final consumers  
(incumbent suppliers not included)  
- October 2009 -



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

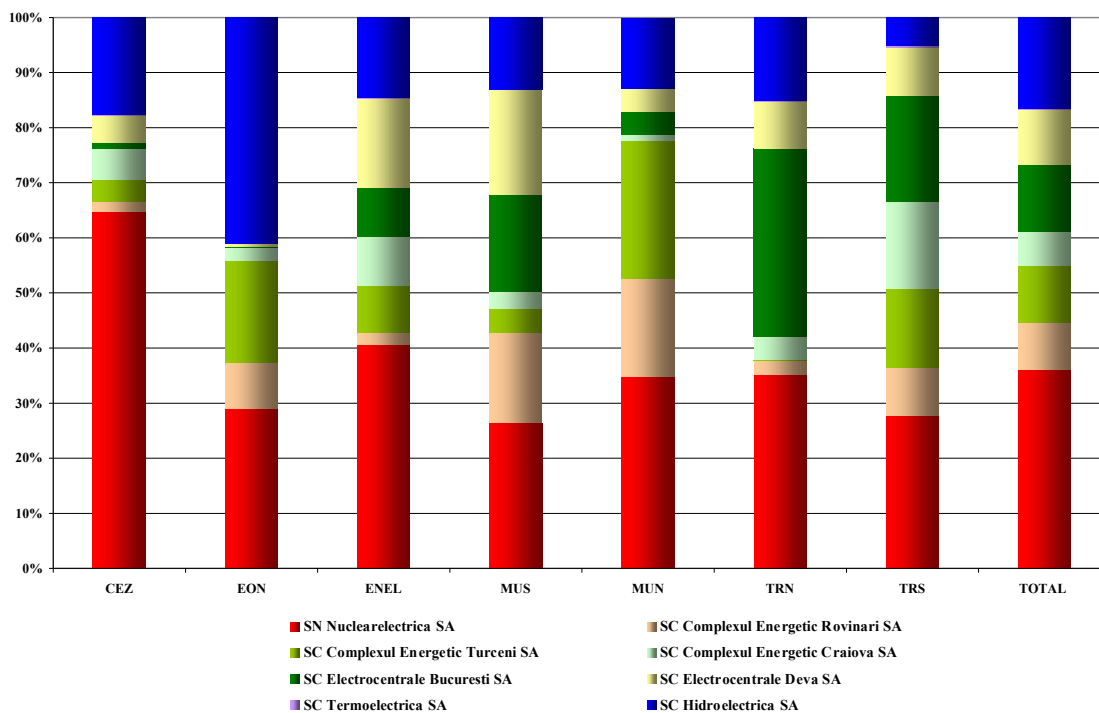
### Incumbent suppliers

Electricity acquisition structure of incumbent suppliers (before the delivery day), for supplying the regulated market consumers, is presented in the table below, for October 2009 compared to the situation of October 2008:

Acquisition structure of incumbent suppliers for regulated REM component	- GWh -	
	October 2008	October 2009
Regulated contracts with generators	1795.62	1660.93
Negotiated contracts	17.04	55.27
Contracts concluded on centralized markets	-	-
DAM	48.62	34.59

The structure of the electricity purchased by the incumbent suppliers from the main generators on regulated contracts is presented in the following graph for October 2009:

Electricity acquisition from main generators, on regulated contracts, of incumbent suppliers for delivering electricity to final consumers on regulated market



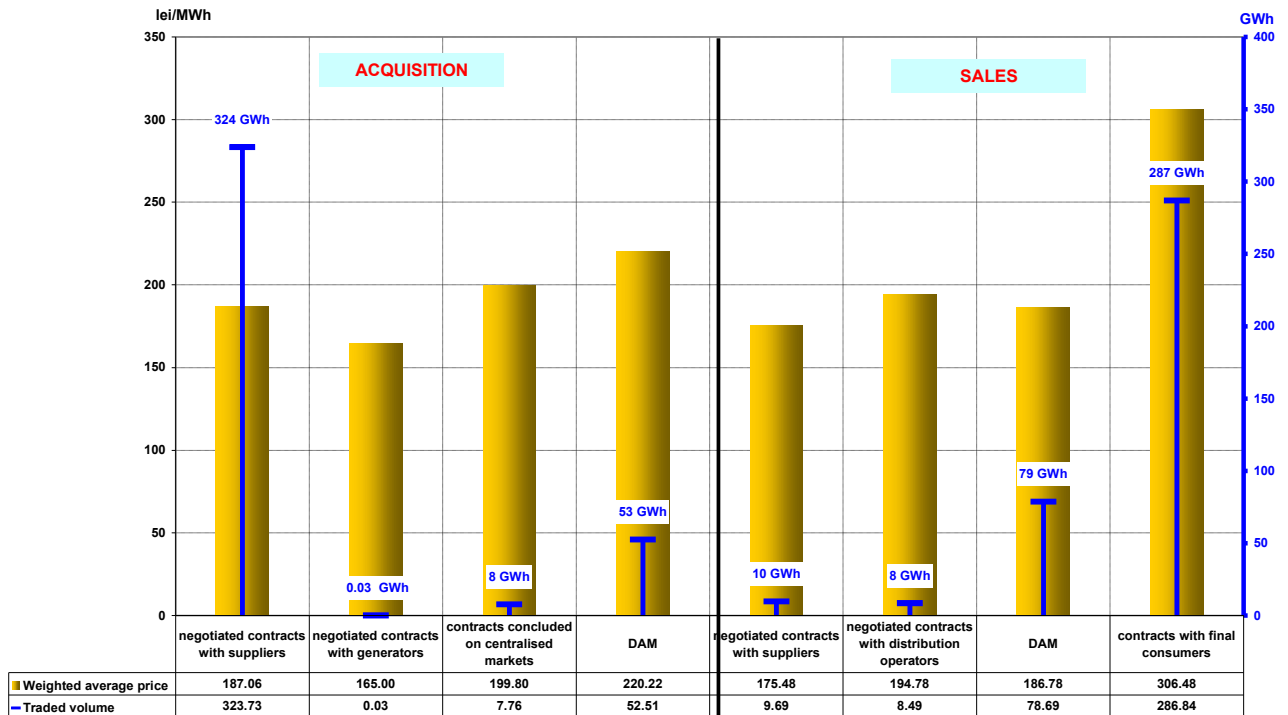
Source: Monthly reports of the incumbent suppliers – processed by MG

Likewise 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 consumers who renounced to regulated tariffs) for October 2009 compared to October 2008:

	- GWh -	
Transactions’ structure of incumbent suppliers for competitive REM component	October 2008	October 2009
<b>Acquisitions</b>		
Import	30.89	-
Negotiated contracts with suppliers	170.99	323.73
Negotiated contracts with generators	-	0.03
Contracts concluded on centralized markets	90.56	7.76
DAM	86.25	52.51
<b>Sales</b>		
Negotiated contracts with suppliers	83.43	9.69
Negotiated contracts with distributors	-	8.49
DAM	15.72	78.69
Final consumers	307.55	286.84

The structure by types of sources/destinations of the traded volumes combined with the actual average prices of the incumbent suppliers corresponding to the competitive segment of REM is presented in the following graph for October 2009:

Transaction concluded by incumbent suppliers providing electricity on the competitive component of REM - October 2009 -



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

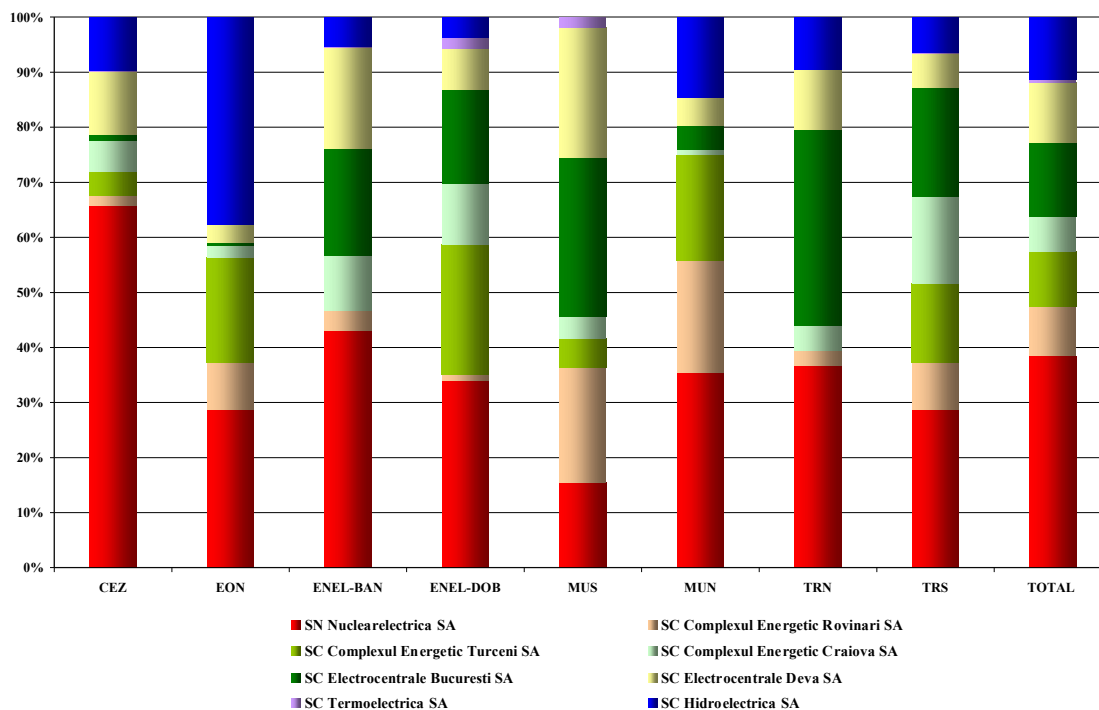
**Main distribution operators**

The following table shows the electricity acquisition structure of main distribution operators (before the delivery day), for covering the distribution network losses, for October 2009 compared to October 2008:

Acquisition structure	- GWh -	
	October 2008	October 2009
Regulated contracts with generators	454.99	438.61
Negotiated contracts with suppliers	10.50	8.49
Contracts concluded on centralized markets	-	-
DAM	46.20	94.76

The electricity purchased by the 8 distribution operators from the main generators on regulated contracts, for covering their network losses is presented in detail in the following graph, for October 2009:

Electricity acquisition of distribution operators from main generators, on regulated contracts, for covering the distribution losses



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

## 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

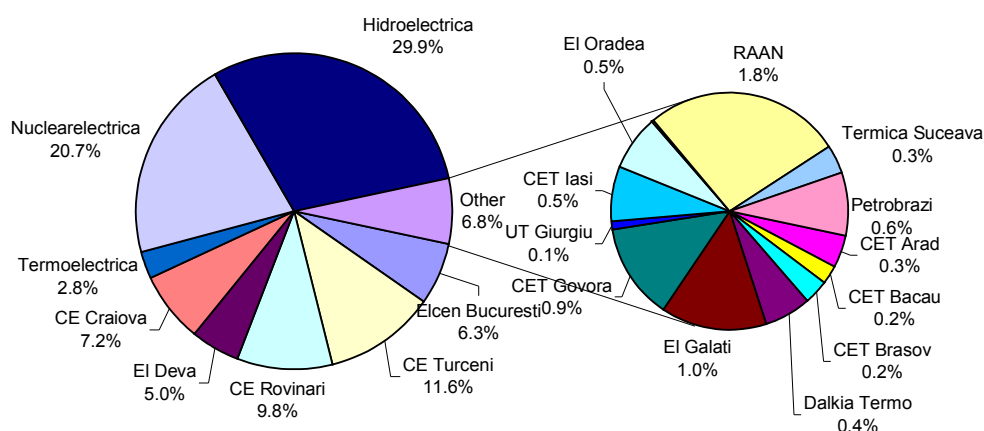
The market structure regarding the electricity generation offers an initial basis for analyzing the possible competitiveness level of the electricity market.

The following table presents the concentration indicators of electricity generation for October 2009, calculated based on electricity delivered into the networks by the generators with dispatchable units.

Concentration indicators - October 2009 -	C1 (%)	C3 (%)	HHI
Value	22	58	1431

The market shares of the electricity generators, taking into account all components of the wholesale electricity market, are presented in the following graph, during the first 10 months of 2009. These market shares are calculated based on the electricity delivered into networks.

**Market shares of generators with dispatchable units by delivered electricity  
January - October 2009**



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 in October 2009 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:

Structure/concentration indicators of BM - OCTOBER 2009 -	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
C1 - % -	60	58	69	34	54	31
C3 - % -	90	90	90	75	88	68
HHI	4117	3942	5098	2238	3586	1968

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 October 2009:

Concentration indicators on ASM - October 2009 -		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve	Capacity reserve
regulated component	contracted quantity (h*MW)	287700	288220	155780	0
	C1 (%)	65.7	80.3	80.1	0
	C3 (%)	90.9	89.3	100	0
competitive component	contracted quantity (h*MW)	0	0	0	0
	C1 (%)	0	0	0	0
	C3 (%)	0	0	0	0
	HHI	0	0	0	0

### 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.

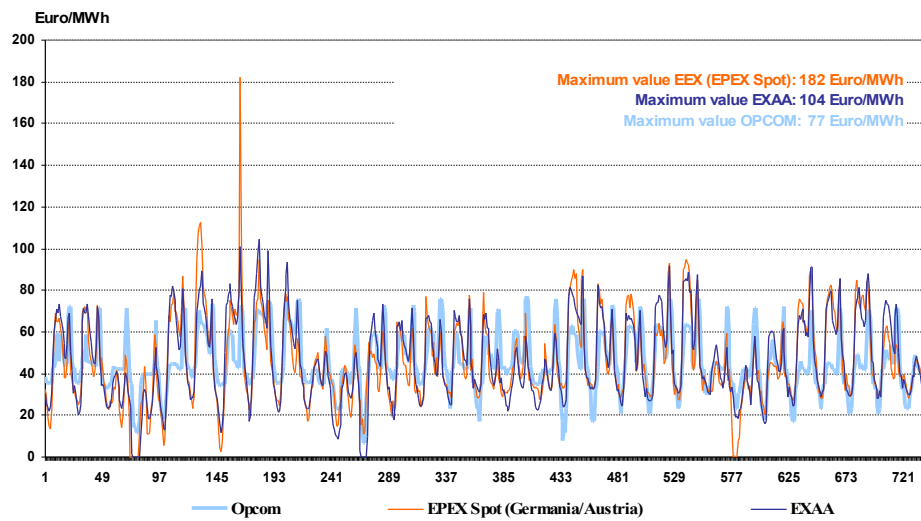
The concentration indicators on DAM reflects the level of competition between sellers and between buyers respectively, the dynamics of both influencing the price level. The following table presents C1, C3 and HHI for buying and for selling side of DAM in October 2009, based on quantities traded by participants on this market.

Concentration indicators on DAM - October 2009 -	C1 (%)	C3 (%)	HHI
Buying transactions	21	47	964
Selling transactions	15	37	679

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

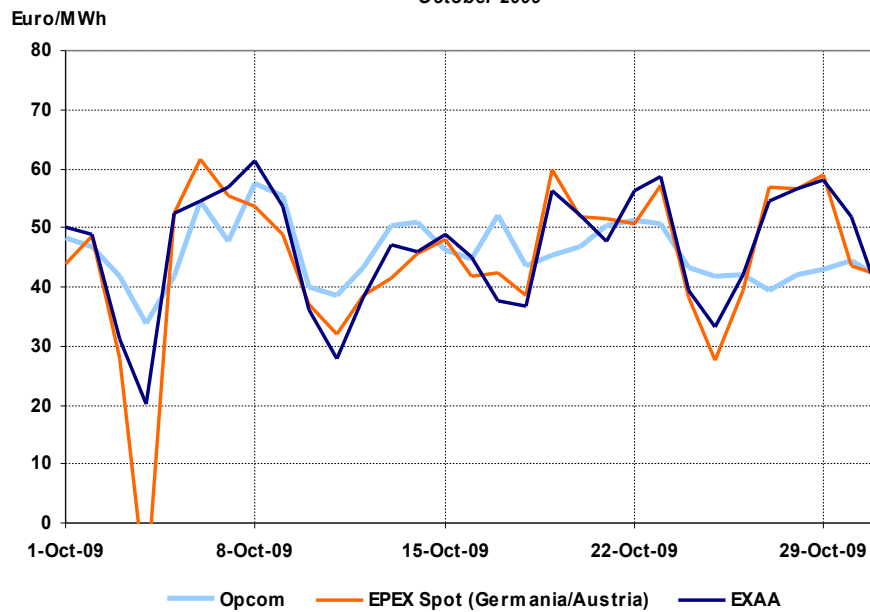
SC Opcom SA is the administrator of DAM. The MCP on DAM represents a reference value for the prices on the bilateral contracts. The evolution of hourly and daily average prices on DAM in October 2009 is presented in the following graphs, along with the prices on EEX and EXXA. For comparison with prices 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.

**HOURLY SPOT PRICES**  
October 2009



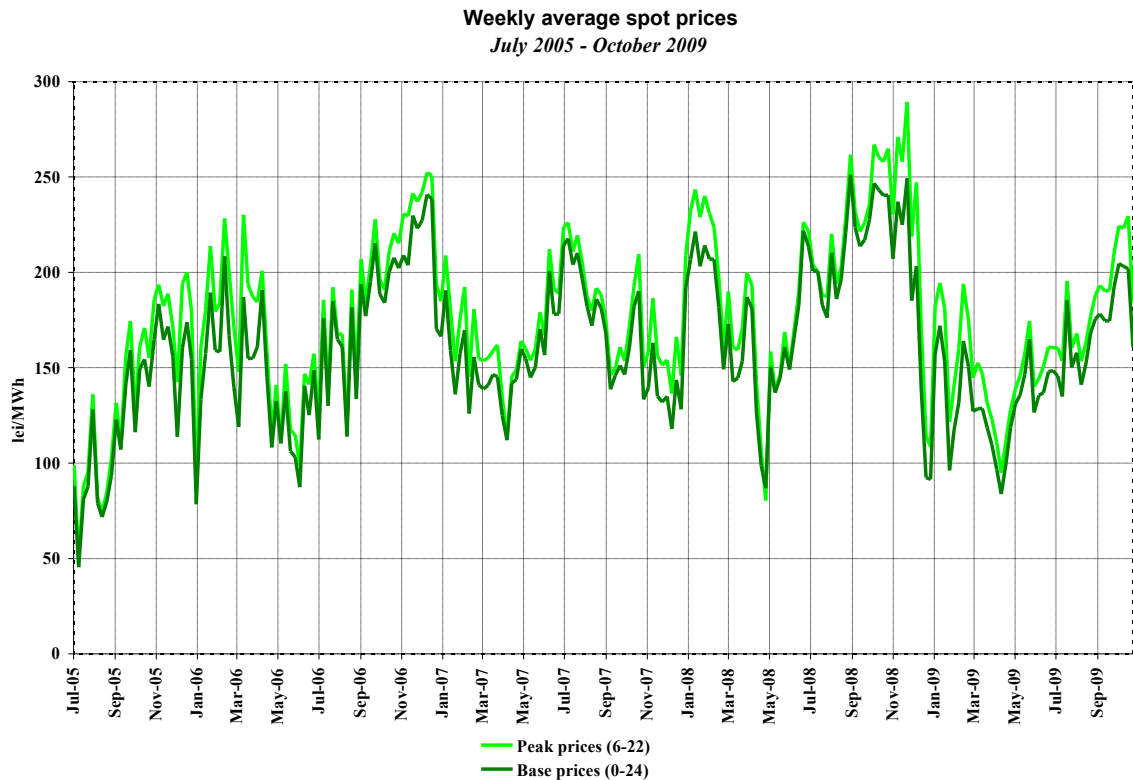
Source: Daily reports of SC Opcom SA and published data of EXAA and EEX  
– processed by MG

**DAILY AVERAGE SPOT PRICES**  
October 2009



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

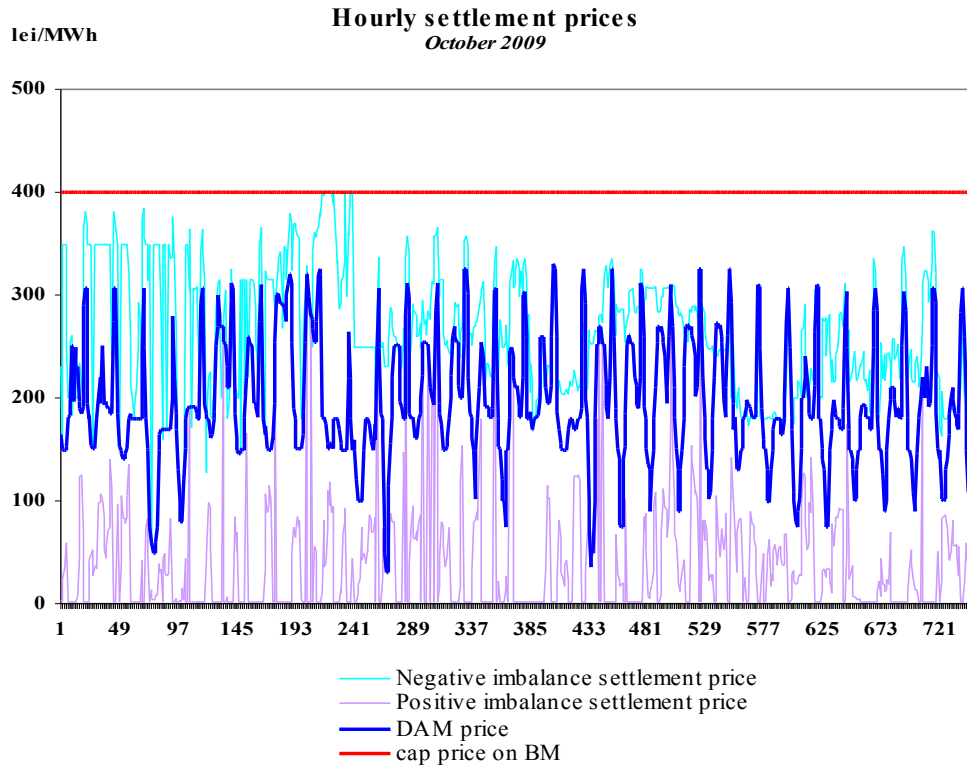
The following graph presents the evolution of weekly average spot prices starting with July 2005:



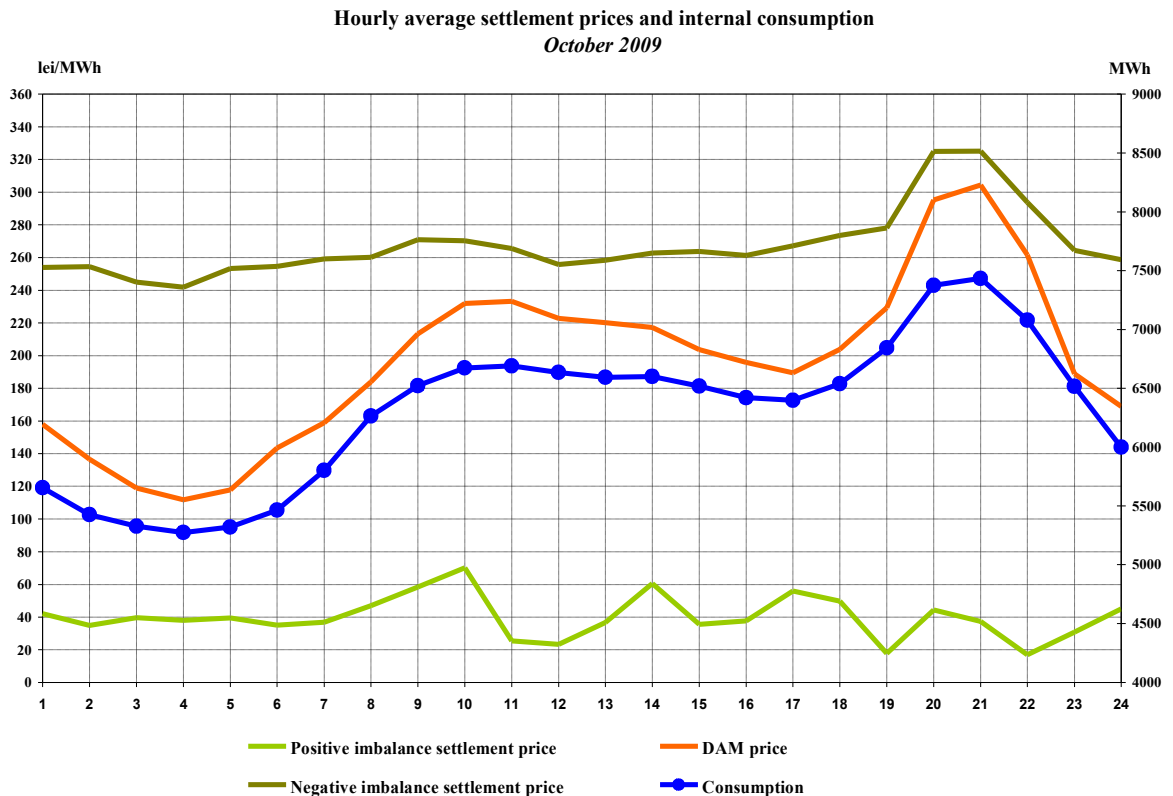
*Source: Daily reports of SC Opcom SA – processed by MG*

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 who generate the 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.

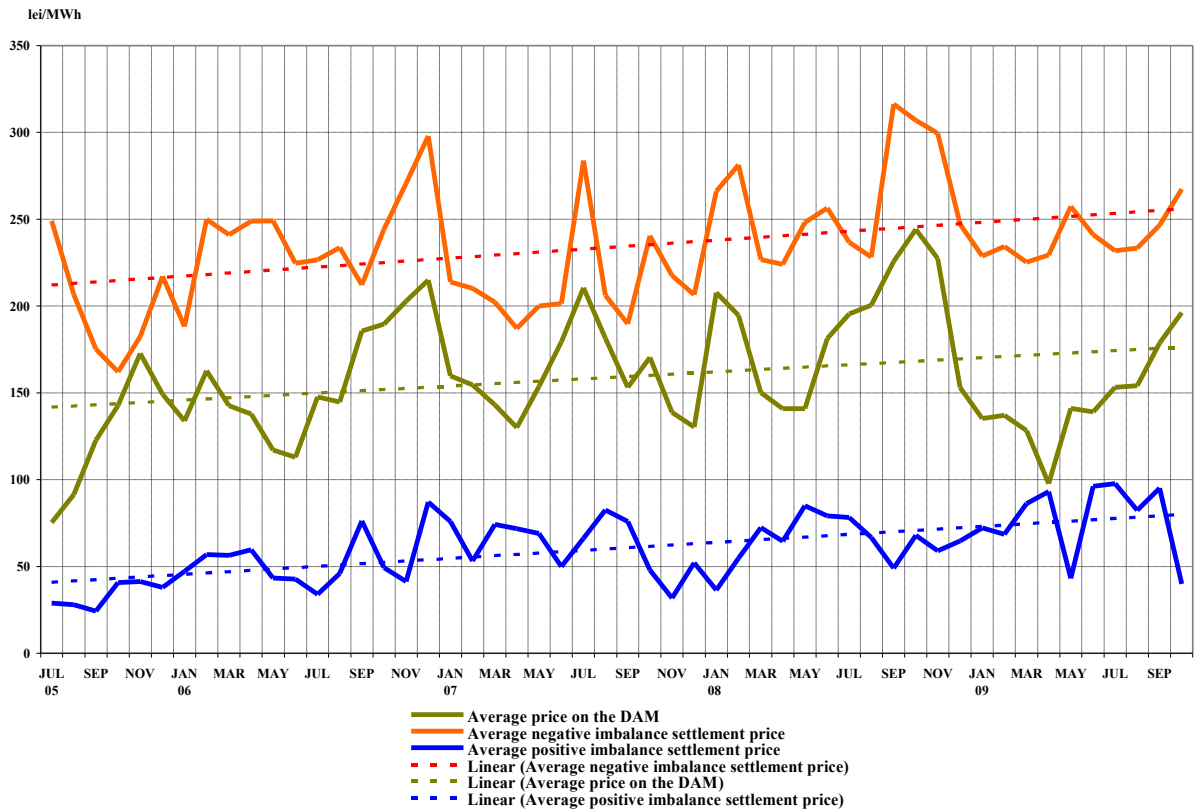


Source: Daily/monthly reports of SC Opcom SA – processed by MG



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

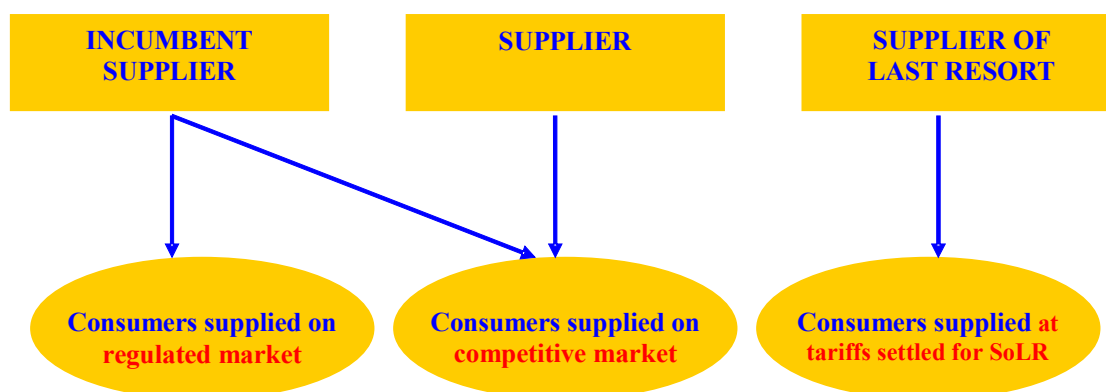
Monthly average prices on DAM and BM  
July 2005 - October 2009



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

### III. RETAIL ELECTRICITY MARKET

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

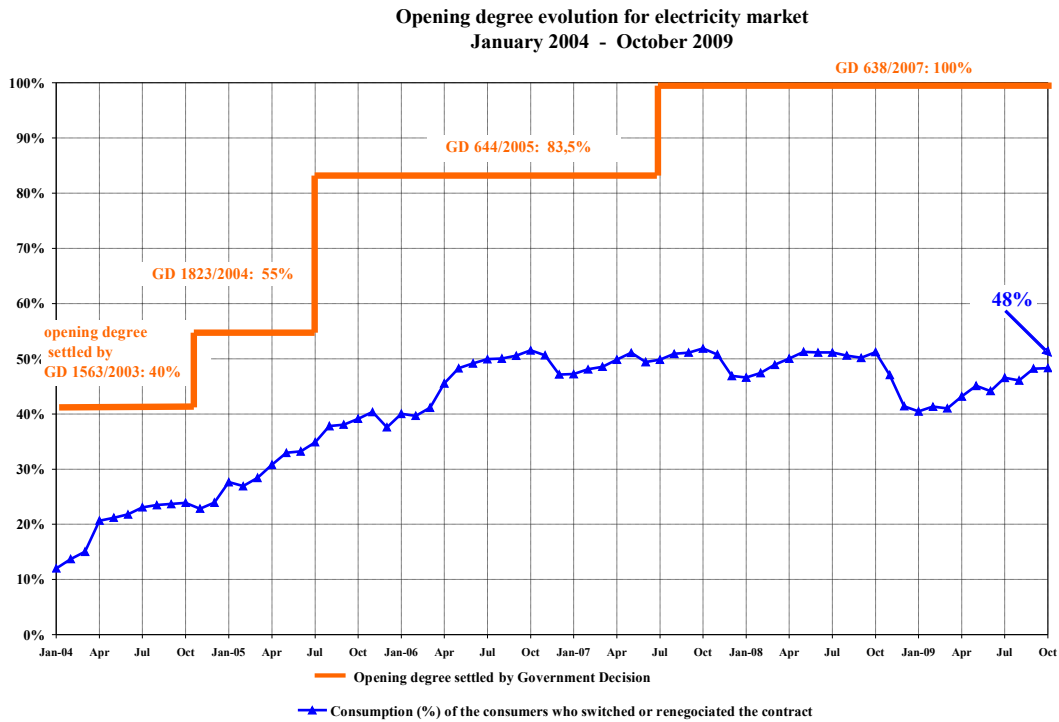


#### 2. Steps in the opening process of the electricity market

Government Decision	Opening degree %	Annual consumption threshold GWh/year
No. 122/2000, published in O.G. 77/21.02.2000	10	100
No. 982/2000, published in O.G. 529/27.10.2000	15	100
No. 1272/2001, published in O.G. 832/21.12.2001	25	40
No. 48/2002, published in O.G. 71/31.01.2002	33	40
No. 1563/2003, published in O.G. 22/12.01.2004	40	20
No. 1823/2004, published in O.G. 1062/16.11.2004	55	1
No. 644/2005, published in O.G. 684/29.07.2005	83.5	-
No. 638/2007, published in O.G. 427/27.06.2007	100	-

#### 3. Electricity market opening degree

The following graph contains the quota of the consumption from total consumption, of the consumers who switched their supplier or renegotiated their contracts with the suppliers operating on the regulated market, during January 2004 – October 2009. The values presented are cumulated from the beginning of the opening process and are presented monthly:

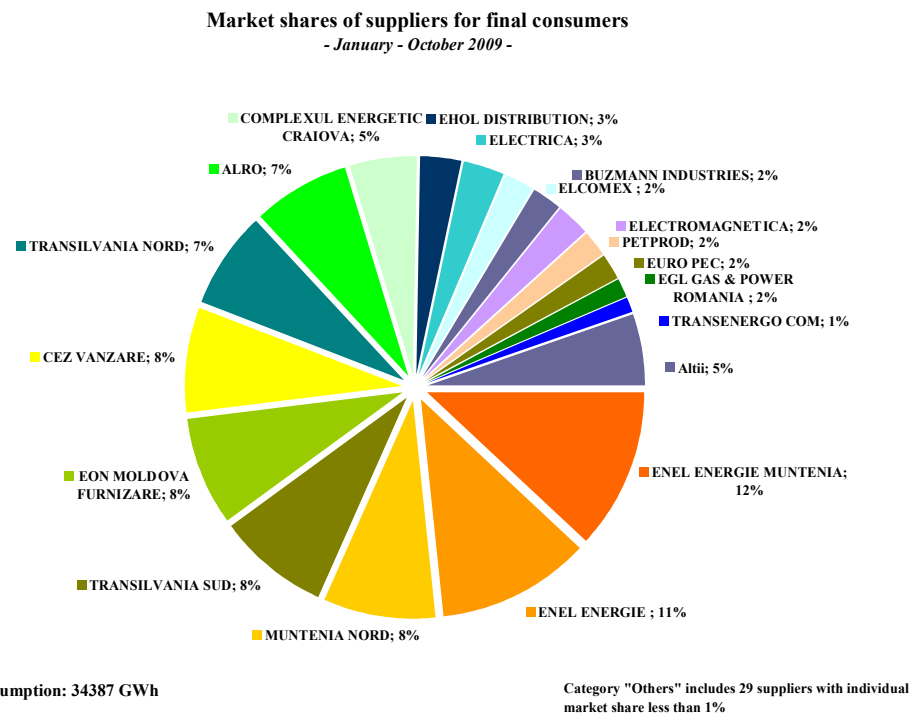


Source: Monthly reports of the final consumers' suppliers – processed by MG

#### 4. Market shares of the electricity suppliers

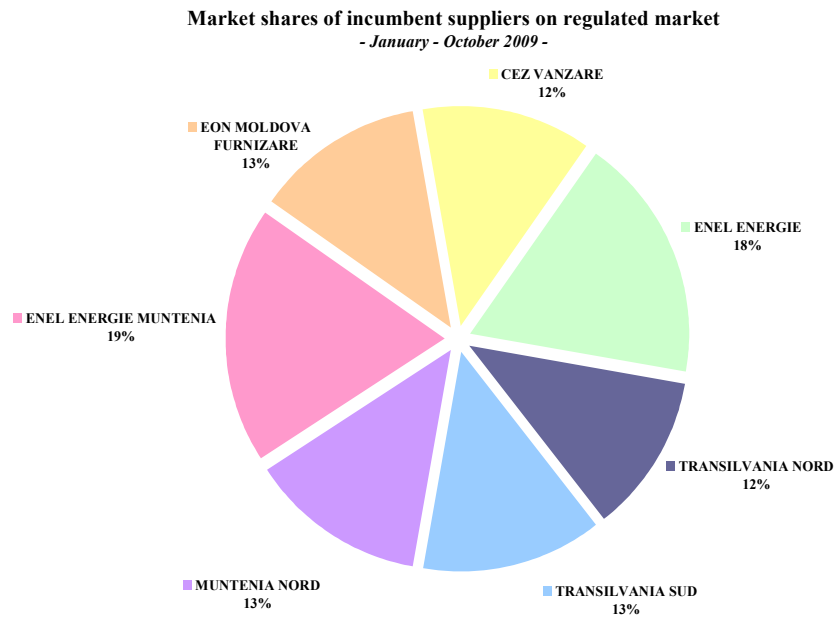
In the following three graphs there are presented the market shares of electricity suppliers on the retail market, calculated:

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



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

- b) for incumbent suppliers - based on the electricity supplied to the consumers at regulated tariffs,

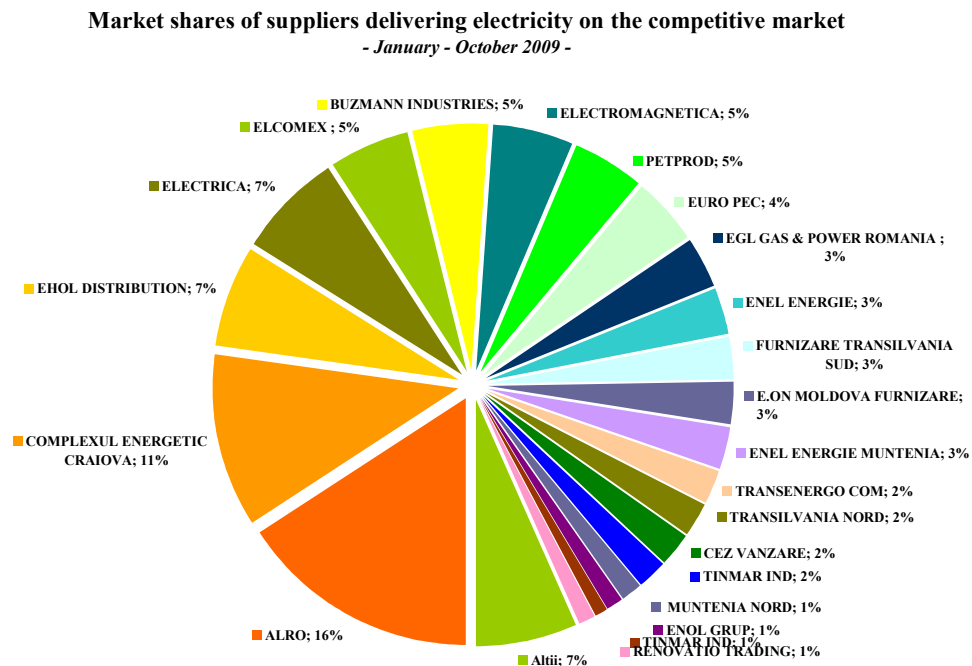


Consumption of consumers supplied at regulated tariffs: 19115 GWh

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

and

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



Consumption on competitive market: 15271 GWh

Structure indicators:

HHI - 667  
C3 - 34%; C1 - 16%

Category "Others" includes 25 suppliers with individual market share less than 1%

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 consumer which owns a supply license and based on it acquired its electricity from the WEM as a competitive supplier.

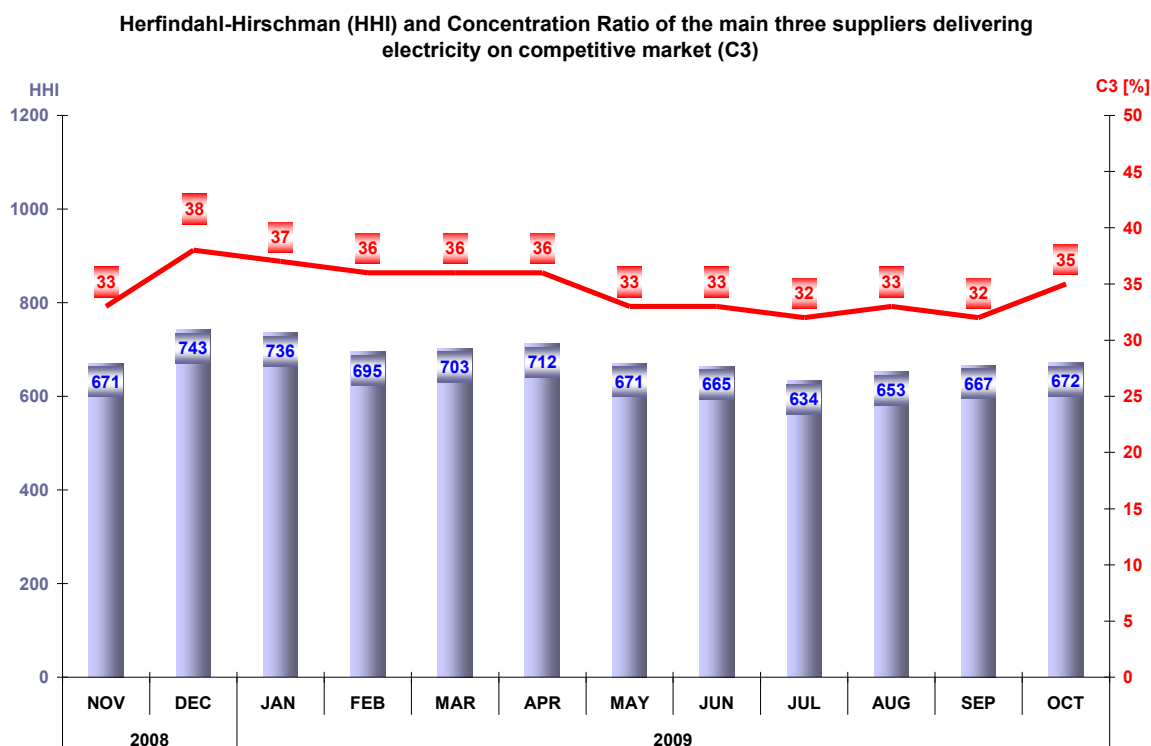
The electricity supplied to the final consumers used for calculating the market share of every supplier includes also the self-consumption of that particular supplier (e.g. consumers with supply license who buy electricity for themselves from WEM as competitive suppliers).

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 consumers in total electricity sales. The table below presents the number of suppliers acting on the REM, grouped into categories of sales weight during October 2009:

Number of suppliers	Share of sales to final consumers from total sales transactions			
	100%	75% - 100%	50% - 75%	<50%
<b>Competitive</b>	9	9	7	9
<b>Incumbent</b>	4	2	0	1

### 5. 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 November 2008 – October 2009 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 in October 2009 and number of active suppliers, calculated for each consumer category as defined

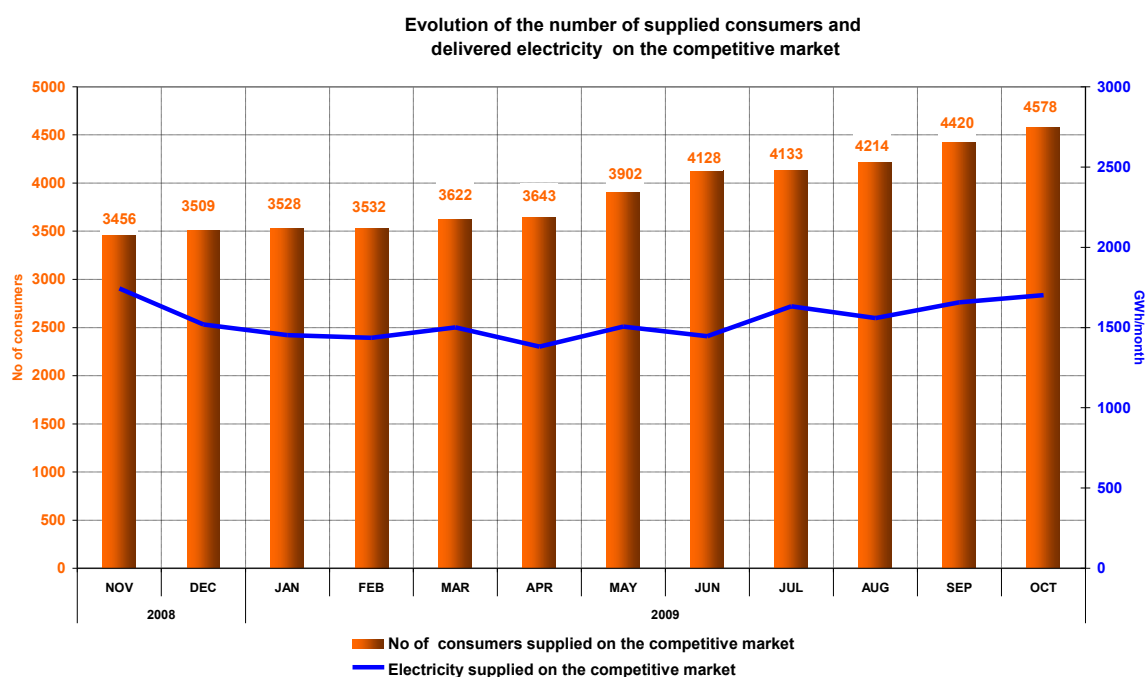
by the European Council Directive no. 90/377/EEC, modified by the Commission Decision no. 2007/394/EC:

Indicators - October 2009	Consumer category							Total REM
	IA	IB	IC	ID	IE	IF	Other	
C1 - % -	93	24	15	18	18	28	29	15
C3 - % -	99	49	38	39	43	51	63	35
HHI	8863	1200	764	810	896	1531	1685	672
Consumption - GWh -	8.1	46	99	326	198	154	871	1702
No. of SUPPLIERS	10	30	37	37	20	12	13	45
No. of incumbent suppliers	6	7	7	6	4	3	1	7
No. of competitive suppliers	3	21	27	29	15	9	9	34
No. of producers	1	2	3	2	1	0	3	4

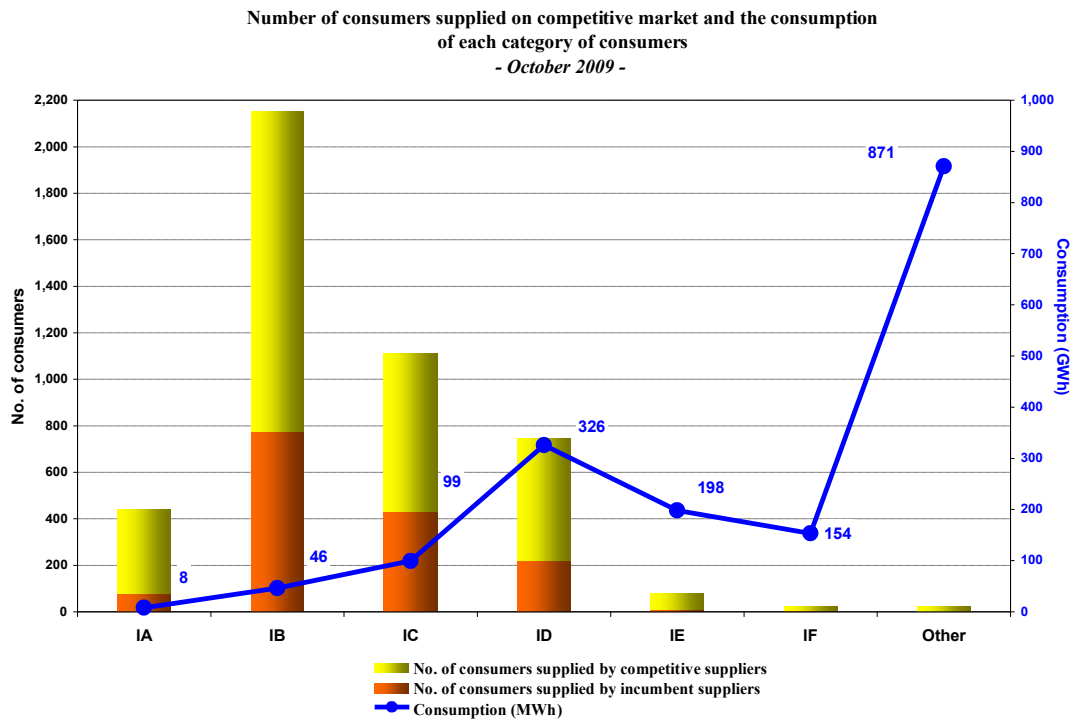
## 6. Evolution of consumers' number and of electricity delivered

Number of consumers supplied on the competitive market is presented as total value from the beginning of the market opening process; for October 2009 this number is split into categories, according to the provisions of the European Council Directive no. 90/377/EC, with subsequent modifications. The table below presents the bands of consumption of each category of consumers:

Industrial end-user	Annual electricity consumption (MWh)	
	Lowest	Highest
IA		<20
IB	20	<500
IC	500	<2000
ID	2000	<20000
IE	20000	<70000
IF	70000	<=150000
Others	>150000	



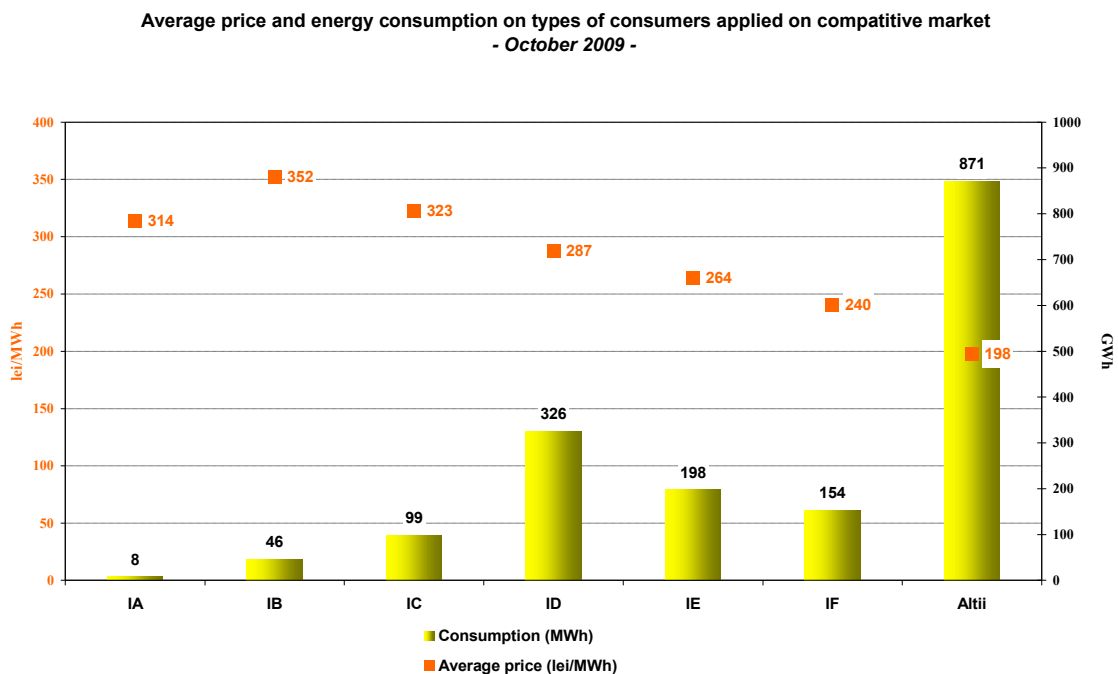
Source: Monthly reports of the competitive suppliers – processed by MG



Source: Monthly reports of the suppliers – processed by MG

## 7. Average selling prices of consumers supplied on the competitive market

The following graph presents the average selling prices of consumers supplied on the competitive market, based on the structure defined according to the European Council Directive no. 90/377/EC, with the subsequent modifications.



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, distribution, market settlement, imbalances, BRP aggregated taxes, metering).

Splitting consumers into categories was based on their annual consumption forecast, according to the provisions of above mentioned Directive.

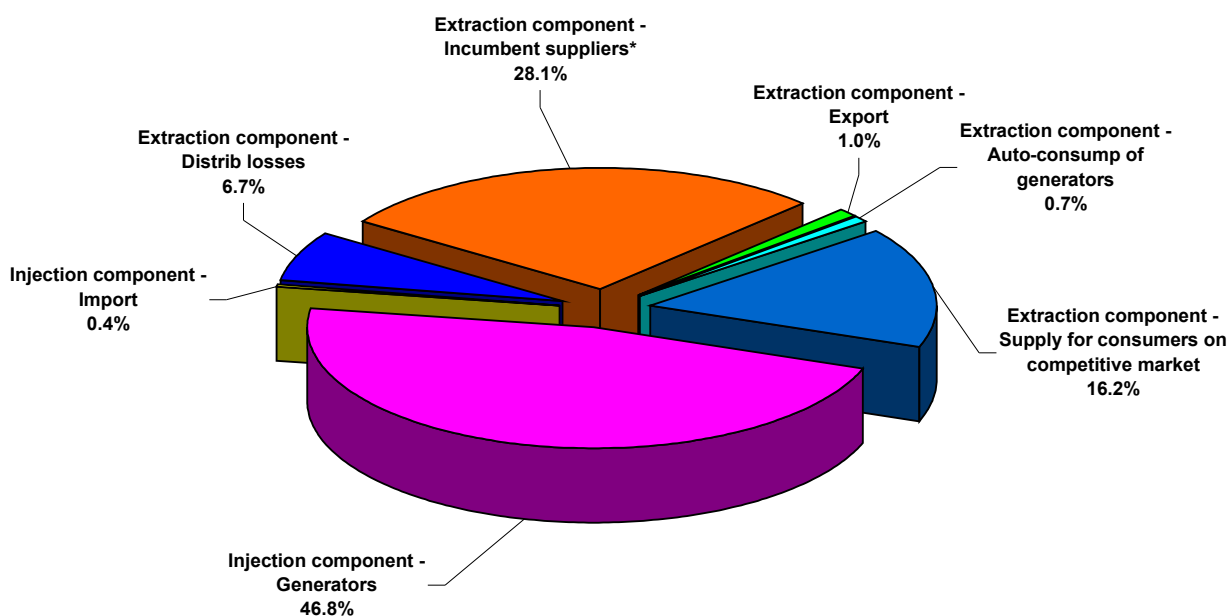
#### IV. TRANSMISSION AND SYSTEM OPERATOR C.N. TRANSELECTRICA S.A.

CN Traselectrica 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 consumers.

The following graph presents the structure of CN Traselectrica SA revenues from performing the transmission services and reflects the structure of its clients benefiting from this type of service in October 2009.

**CN Traselectrica SA structure of revenues from transmission services  
- October 2009 -**



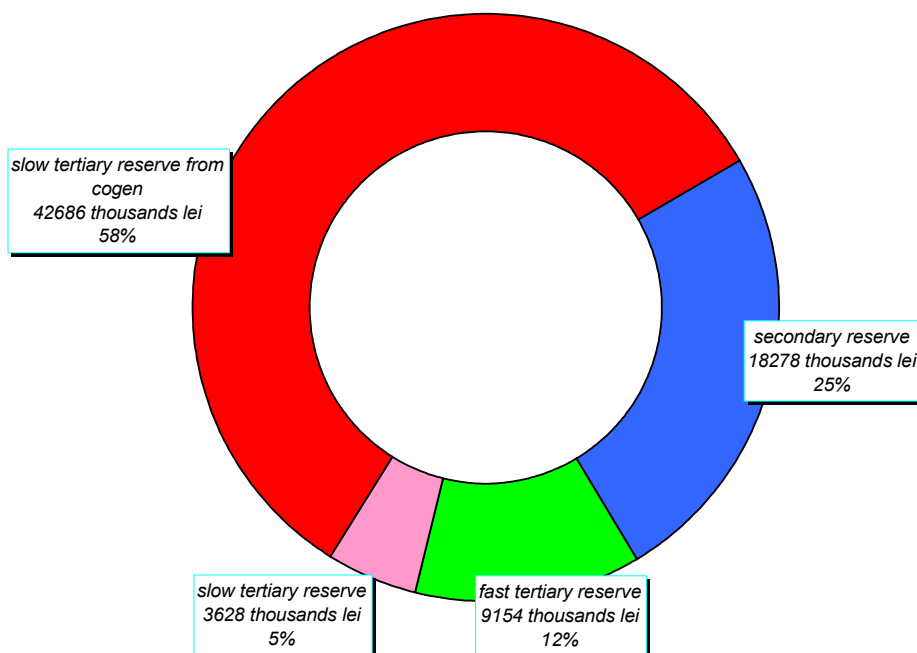
\* referring to all their activity as well as the distribution losses for one distribution operator

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

In order to perform the system operator tasks, CN Traselectrica SA assesses and contracts reserves (ancillary services) from qualified generators, which are integrated on BM. The ancillary services used are: reserves for secondary, fast tertiary, slow tertiary regulation and slow tertiary reserve from cogeneration. Starting with July 2007, the rules for capacity reserve entered into force, by determination of the reserve dimensions, the way in which the suppliers of this service are selected and the conditions in which this new type of reserve may be used by CN Traselectrica SA.

The following graph presents the costs of ancillary services CN Traselectrica SA had to pay in October 2009. In order to cover these costs and its own operating costs, TSO applies a regulated tariff for system services.

Structure of CN Transelectrica SA costs with ancillary services acquired from qualified generators  
- October 2009 -



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

## V. EVOLUTION OF MARKET RULES IN OCTOBER 2009

- No regulations concerning the functioning of the electricity market were issued in October 2009.

## 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 consumers on regulated market** represents the consumption of consumers supplied at regulated tariffs by the incumbent suppliers.
- **Consumption of consumers on competitive market** represents the consumption of consumers 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 SNP Petrom together with the electricity sold by the generators through direct lines or consumed by themselves at other consumption sites.
- **Competitive supplier** represents, within the present document, 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