

**REPORT ON RESULTS OF MONITORING THE  
ROMANIAN ELECTRICITY MARKET  
MAY 2010**

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

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## TABLE OF CONTENTS

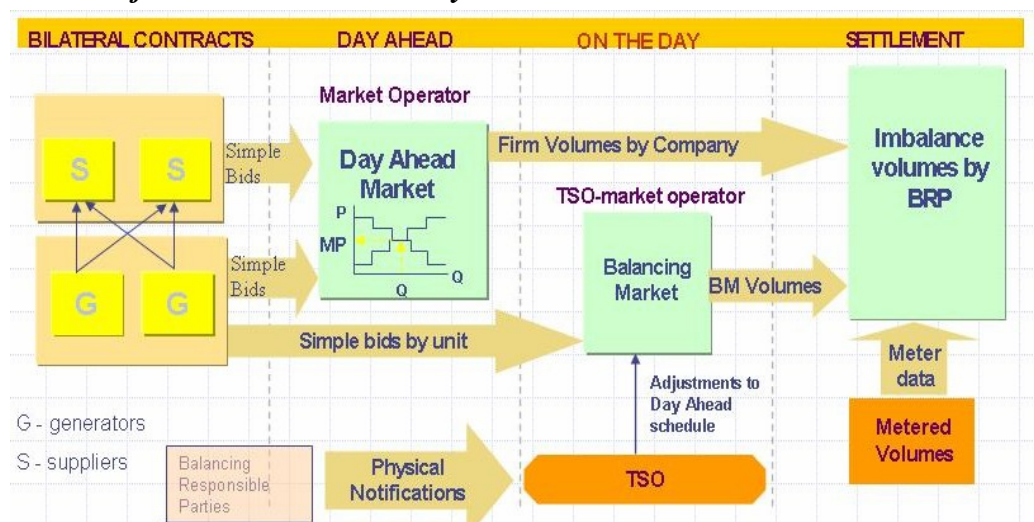
<u>I.MAIN EVENTS IN THE DEVELOPMENT OF THE ROMANIAN ELECTRICITY MARKET</u>	<u>3</u>
<u>II.WHOLESALE ELECTRICITY MARKET</u>	<u>3</u>
<u>1.Structure of the wholesale electricity market</u>	<u>3</u>
<u>2.Participants on the wholesale electricity market</u>	<u>4</u>
<u>3.Generation structure of National Energy System on resources types</u>	<u>5</u>
<u>4.Transactions' structure on the wholesale electricity market</u>	<u>7</u>
<u>5.Trading structure on the wholesale electricity market of different participant categories</u>	<u>12</u>
<u>6.Concentration indicators on the wholesale electricity market and its components</u>	<u>17</u>
<u>7.Price evolution on wholesale electricity market</u>	<u>19</u>
<u>III.RETAIL ELECTRICITY MARKET</u>	<u>24</u>
<u>1. Structure of the retail electricity market</u>	<u>24</u>
<u>2.Steps in the opening process of the electricity market</u>	<u>24</u>
<u>3.Electricity market opening degree</u>	<u>24</u>
<u>4.Market shares of the electricity suppliers</u>	<u>25</u>
<u>5.Concentration indicators of the competitive retail electricity market</u>	<u>28</u>
<u>6.Evolution of consumers' number and of electricity delivered</u>	<u>28</u>
<u>7.Average selling prices of consumers supplied on the competitive market</u>	<u>30</u>
<u>IV.TRANSMISSION AND SYSTEM OPERATOR C.N. TRANSELECTRICA S.A.</u>	<u>30</u>
<u>V.EVOLUTION OF MARKET RULES IN MAY 2010</u>	<u>32</u>
<u>VI.EXPLANATIONS AND ABBREVIATION</u>	<u>32</u>

## 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

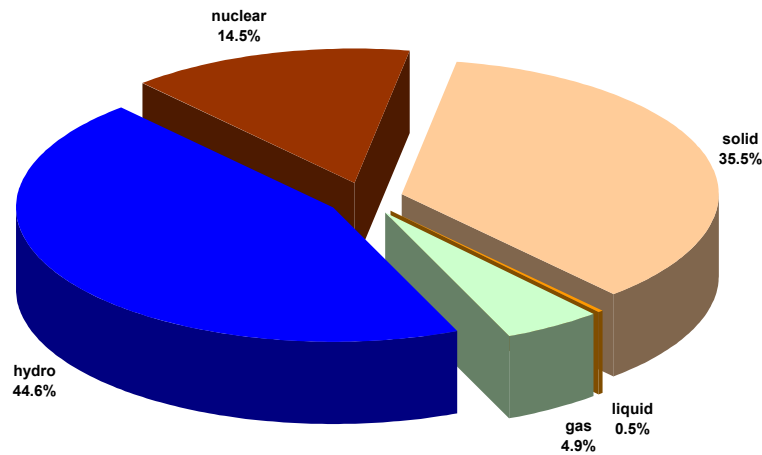
The market participants\* acting on the electricity market in May 2010 are presented below split into categories:

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	Alpiq Energy SE	
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	Edison Trading Spa	
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 Market Consulting SRL	
9	SNP Petrom Sucursala Petrobraz		9	E.ON Energy Trading SE	
10	SC Termica SA Suceava		10	SC Ezpada SRL	
11	SC Termoelectrica SA		11	Ezpada SRO	
12	Serviciul Public Local de Termoficare Pitesti		12	SC GDF Suez Energy Trading Romania SRL	
13	SC Uzina Termică Giurgiu SA		13	GEN-I Bukarest Electricity Trading and Sales	
14	SN Nuclearelectrica SA		14	SC Global Electric Trading SRL	
15	SC CE Rovinari SA		15	SC Griveco SA	
16	SC CE Turceni SA		16	SC Invest Dinamic Project SRL	
17	RAAN		17	SC Jas Budapest Zrt	
18	SC CE Craiova SA	Generators acting also as suppliers on the competitive market	18	SC Korlea Invest SRL	
19	SC CET Arad SA		19	MVM Partner Energy Trading Ltd	
20	SC Electrocentrale Deva SA		20	SC Re Energie SRL	
21	SC Hidroelectrica SA		21	SC Romelectro SA	
<b>B Transmission System Operator</b>			22	SC Rudnap SRL	
1	CN TRANSELECTRICA SA	Balancing Market Operator	23	SC RBS Sempra Energy Europe Ltd	
<b>C DAM Operator</b>			24	Statkraft Markets GmbH	
1	SC OPCOM SA	Operator of the Green Certificates Market, Bilateral Contracts Market and Settlement Administrator	25	SC Statkraft Romania SRL	
<b>D Distribution network operators</b>			26	SC TEN Transilvania Energie SRL	
1	SC CEZ Distributie SA	Operators of the distribution network	27	SC Trans Electric Power SRL	
2	SC ENEL Distributie Banat SA			No.	Name
3	SC ENEL Distributie Dobrogea SA			<b>G Electricity Suppliers</b>	
4	SC E.ON Moldova Distributie SA			1	SC Alpiq RomEnergie SRL
5	SC ENEL Distributie Muntenia SA			2	SC Alpiq RomIndustries SRL
6	SC FDEE Electrica Distributie Muntenia Nord SA			3	SC Alro SA
7	SC FDEE Electrica Distributie Transilvania Sud SA			4	SC Arcelormittal Galati SA
8	SC FDEE Electrica Distributie Transilvania Nord SA			5	SC Areco Distributie SRL
<b>E Incumbent suppliers</b>			6	SC Aton Transilvania SRL	
1	SC CEZ Vanzare SA	Incumbent suppliers acting also as suppliers on the competitive market	7	SC Beny Alex SRL	
2	SC ENEL Energie SA			8	SC Biol Energy SRL
3	SC E.ON Moldova Furnizare SA			9	SC EFE Energy SRL
4	SC ENEL Energie Muntenia SA			10	SC EGL Gas & Power Romania SA
5	SC FFEE Electrica Furnizare Muntenia Nord SA			11	SC Elcomex EN SRL
6	SC FFEE Electrica Furnizare Transilvania Sud SA			12	SC Electrica SA
7	SC FFEE Electrica Furnizare Transilvania Nord SA			13	SC Electricom SA
			14	SC Electromagnetica SA	
			15	SC Energotrans SRL	
			16	SC Energy Distribution Services SRL	
			17	SC EFT Romania SRL	
			18	SC Energy Holding SRL	
			19	SC Energy Network SRL	
			20	SC Enex SRL	
			21	SC Ennet Grup SRL	
			22	SC Enol Grup SA	
			23	SC EURO-PEC SA	
			24	SC Fidelis Energy SRL	
			25	SC GDF SUEZ Energy Romania SA	
			26	SC General Com Invest SRL	
			27	SC Geveco SRL	
			28	SC Hidroconstructia SA	
			29	SC ICCO Energ SRL	
			30	SC ICCO Supply SRL	
			31	SC ICPE Electrocond Technologies SA	
			32	SC Luxten LC SA	
			33	OET Obedineni Energini Targovtsi	
			34	SC Petprod SRL	
			35	SC Renovation Trading SRL	
			36	SC Timmar Ind SA	
			37	SC Transenergo Com SA	
			38	SC Total Electric Oltenia SRL	
			39	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

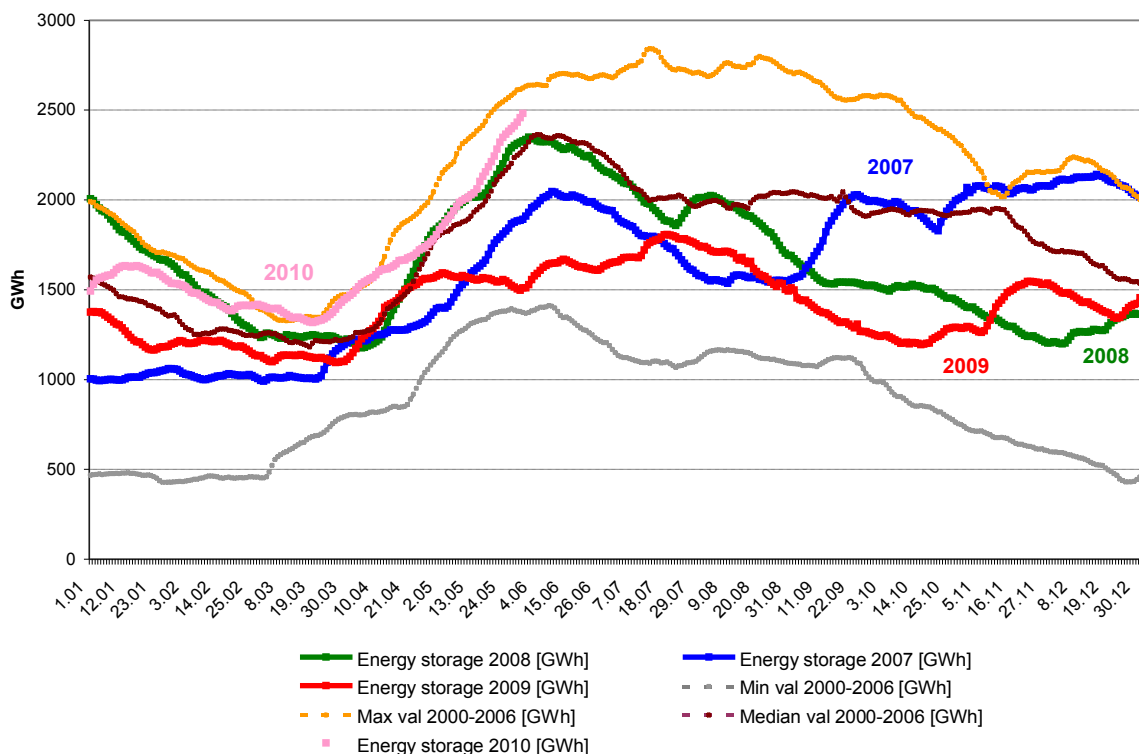
Electricity structure by primary sources  
(delivered by generators with dispatchable units)  
- May 2010 -



Source: Monthly reports of generators – processed by MG

The electricity generated from hydro resources and the energy stored in the main water reservoirs are directly correlated. The following graph presents the evolution of daily amounts of energy storage during the last 4 years and compared to minimum, maximum and median values from 2000-2006.

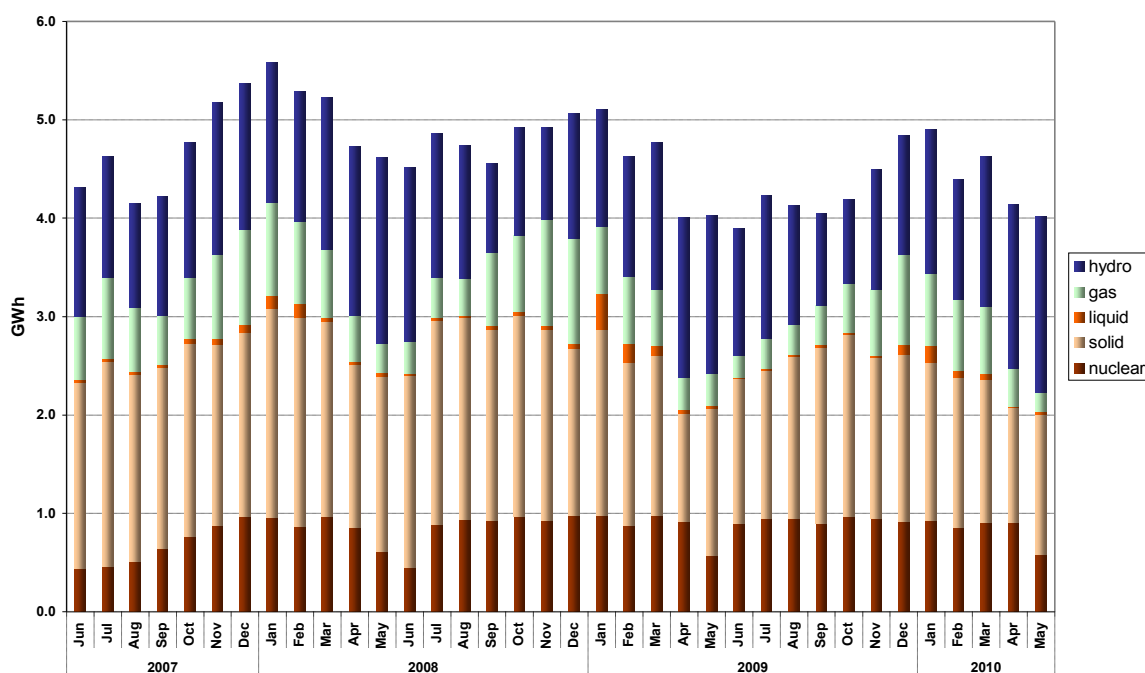
Yearly evolution of daily values of energy stored in the main water reservoirs



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

The evolution of delivered electricity structure, during the last 3 years, 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 May 2010 and for the first 5 months of 2010, compared to data for similar periods of 2009:

	INDICATOR	M	May 2009	May 2010	%	Jan-May 2009	Jan-May 2010	%
0	1	2	3	4	5=4/3*100	6	7	8=7/6*100
1	Generated electricity	TWh	4.29	4.28	99.77	24.45*	23.93	101.48
2	Delivered electricity	TWh	4.03	4.02	99.75	22.55	22.09	101.33
3	Import	TWh	0.04	0.10	250.00	0.39	0.53	135.90
4	Export	TWh	0.20	0.09	45.00	1.92	0.60	31.25
5	Internal consumption	TWh	3.87	4.03	104.13	21.02	22.03	108.74
6	Consumption of household consumers on the regulated market	TWh	0.86	0.90	104.65	4.74	4.89	103.16
7	Consumption of non-households consumption	TWh	2.48	2.61	105.24	12.52	13.18	105.27
7.1	on the regulated market	TWh	0.97	0.78	80.41	5.24	4.59	87.60
7.2	on the competitive market	TWh	1.51	1.83	121.19	7.28	8.59	117.99
8	Transmission – Injection component	TWh	3.91	3.94	100.77	22.13	21.74	98.24
9	Transmission – Extraction component	TWh	3.99	4.04	101.25	22.54	22.24	98.67
10	System services	TWh	3.99	4.04	101.25	22.54	22.24	98.67
11	Actual transmission grid losses	TWh	0.08	0.10	125.00	0.40	0.44	110.00
12	Heat generated for delivery	Tcal	733.76	692.48	94.37	9469.92	9449.69	113.82
13	Heat in co-generation	Tcal	549.62	516.79	94.03	7933.80	7732.89	111.00

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 in the Report on monitoring results of the electricity market – May 2009 were modified due to some corrections

#### 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 following tables for May 2010 compared to the month before and May 2009:

<b>TRANSACTIONS ON THE WHOLESALE MARKET</b>	<b>April 2010</b>	<b>May 2010</b>	<b>May 2009</b>
<b>1. BILATERAL CONTRACTS' MARKET</b>			
traded volume (GWh)	<b>5857</b>	<b>6171</b>	<b>4965</b>
% from internal consumption (%)	142,1	153,1	128,4
average price (lei/MWh)	155,58 <sup>1)</sup>	156,43	154,47
<b>1.1. Sales on regulated contracts</b>			
traded volume (GWh)	<b>2237</b>	<b>2175</b>	<b>2077</b>
% from internal consumption (%)	54,3	54,0	53,7
average price (lei/MWh)	157,41	156,03	154,41
<b>1.2. Sales on negotiated contracts*</b>			
traded volume (GWh)	<b>3620</b>	<b>3996</b>	<b>2888</b>
% from internal consumption (%)	87,8	99,1	74,7
average price (lei/MWh)	154,46 <sup>1)</sup>	156,65	154,52
<b>2. EXPORT</b>			
traded volume** (GWh)	<b>95</b>	<b>89</b>	<b>202</b>
% from internal consumption (%)	2,3	2,2	5,2
average price (lei/MWh)	139,25	150,60	159,68
<b>3. CENTRALISED MARKETS OF CONTRACTS</b>			
traded volume (GWh)	<b>308</b>	<b>292</b>	<b>479</b>
% from internal consumption (%)	7,5	7,2	12,4
average price (lei/MWh)	155,36	153,61	192,48
<b>4. DAY AHEAD MARKET</b>			
traded volume (GWh)	<b>638</b>	<b>621</b>	<b>572</b>
% from internal consumption (%)	15,5	15,4	14,8
average price (lei/MWh)	144,41	157,73	140,52
<b>5. BALANCING MARKET</b>			
traded volume (GWh)	<b>211</b>	<b>203</b>	<b>172</b>
% from internal consumption (%)	5,1	5,0	4,4
upward volume (GWh)	<b>90</b>	<b>56</b>	<b>72</b>
average negative imbalance price(lei/MWh)	241,44	232,81	257,36
downward volume (GWh)	<b>121</b>	<b>147</b>	<b>100</b>
average positive imbalance price (lei/MWh )	33,59	52,42	43,07
<b>INTERNAL CONSUMPTION (includes distribution and transmission losses) (GWh)</b>	<b>4121</b>	<b>4031</b>	<b>3867</b>

Note: 1) Data published in the Report on monitoring results of the electricity market – April 2010 were modified due to some corrections

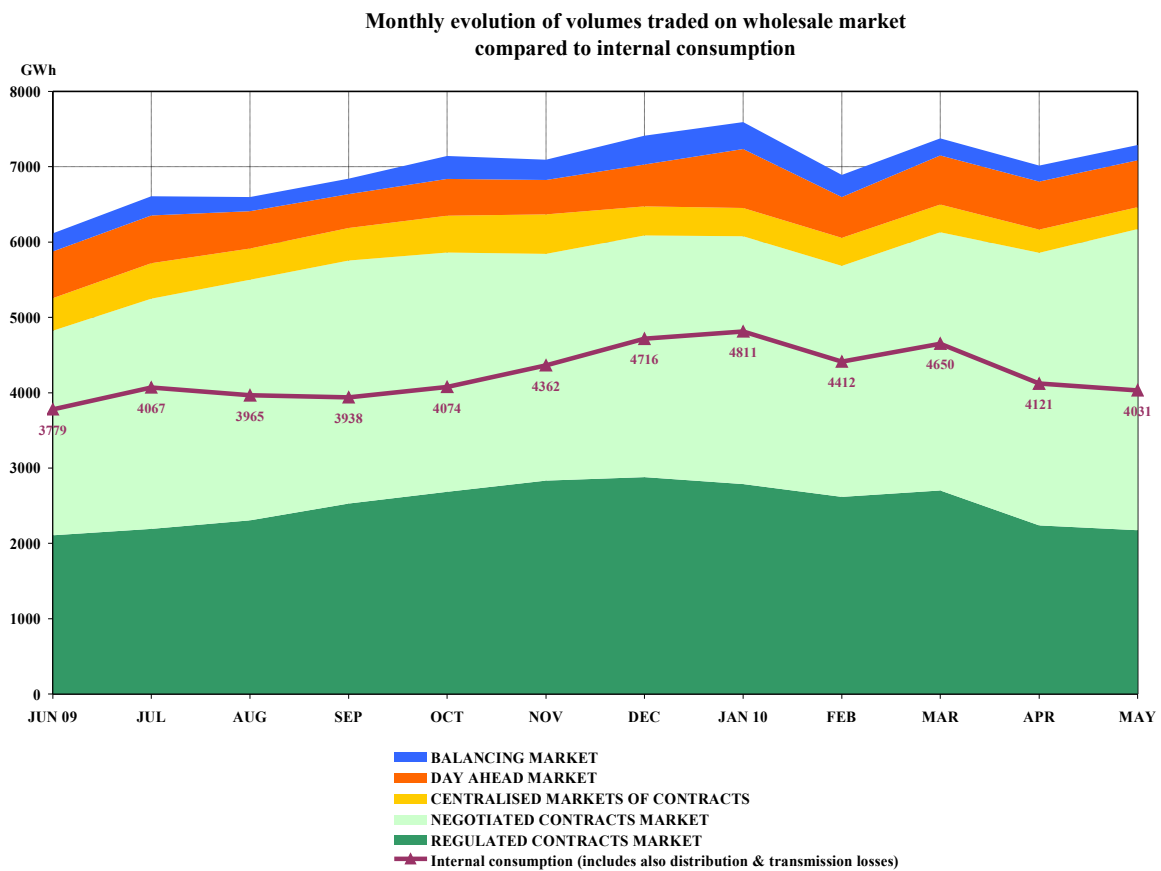
\* Contracts of supply to consumers and contracts of export are not included

\*\* 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 not subject of ANRE regulations and not comprised within the market participants' reports

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 evolution of the relation between the volumes sold on each market and the estimated internal consumption, during June 2009 - May 2010, is presented below:

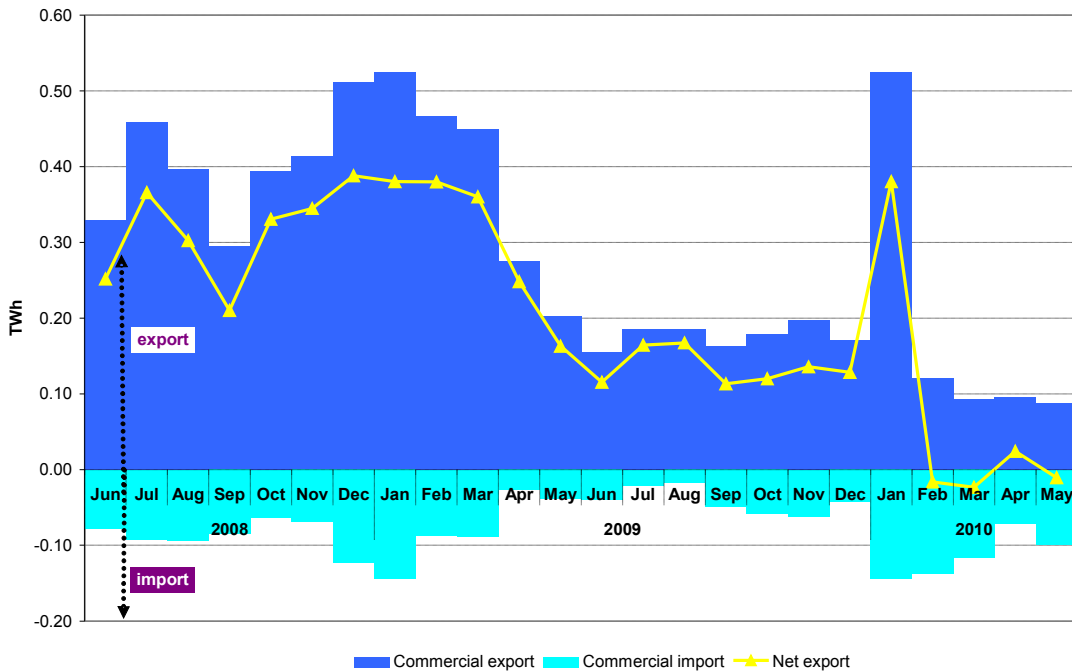


Source: Monthly reports of wholesale market participants, SC Opcom SA and CN Transelectrica SA – processed by MG

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:

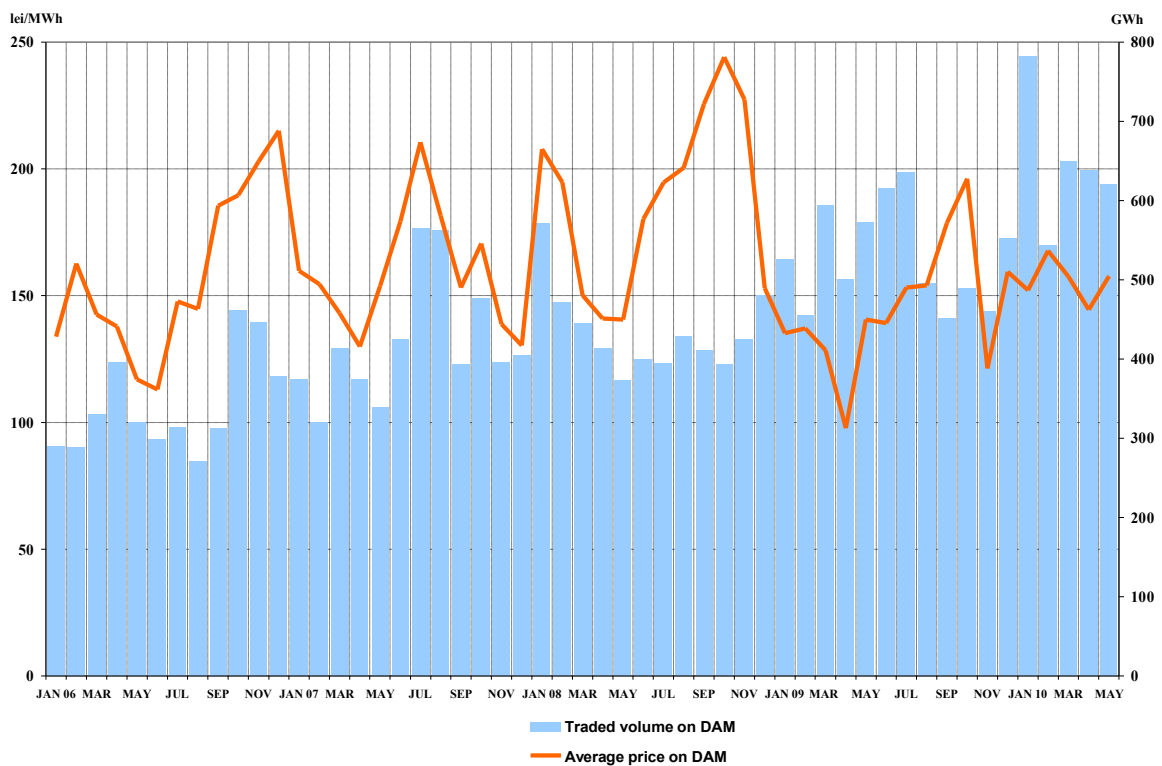
Monthly evolution of export, import and net export of electricity during the last 24 months



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.

Monthly evolution of the traded volume and average prices on DAM



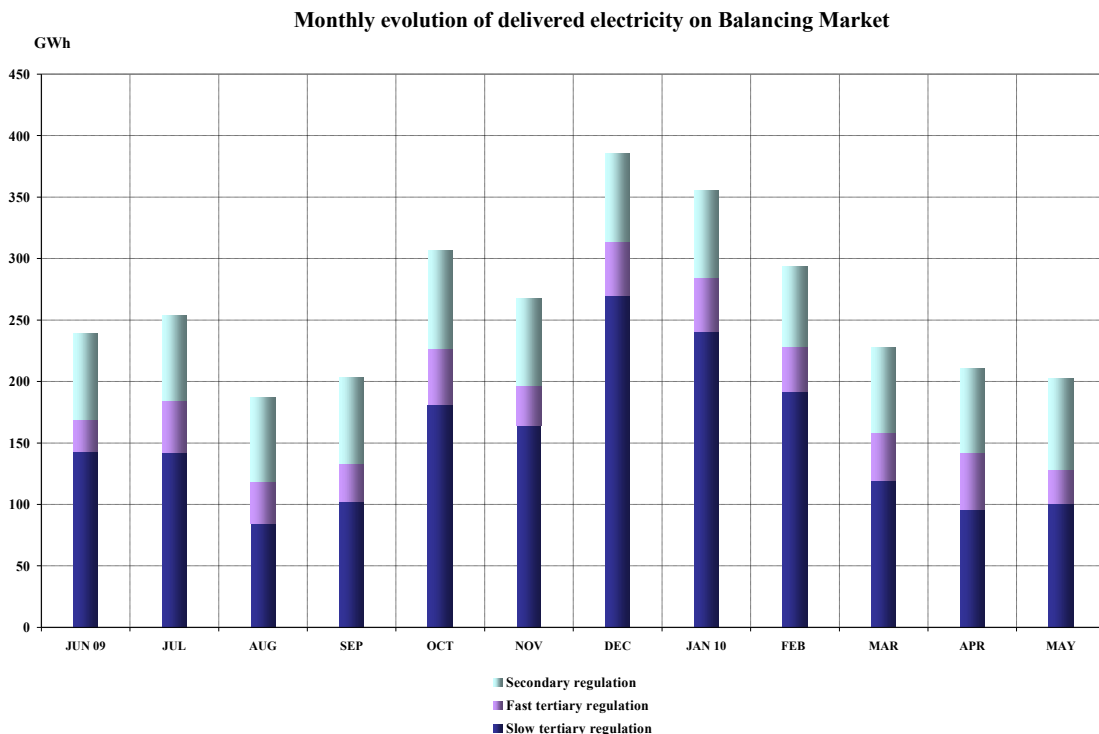
Source: Monthly reports of SC Opcom SA and CN Transelectrica SA – processed by MG

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 May 2010 is presented in the following table:

May 2010	Dispatch order (GWh)	Delivered electricity (GWh)	Deviation (%)
<b>Secondary regulation</b>	<b>74</b>	<b>74</b>	
<i>upward</i>	26	26	
<i>downward</i>	48	48	
<b>Fast tertiary regulation</b>	<b>32</b>	<b>28</b>	<b>12</b>
<i>upward</i>	11	10	11
<i>downward</i>	21	18	13
<b>Slow tertiary regulation</b>	<b>114</b>	<b>100</b>	<b>12</b>
<i>upward</i>	22	20	9
<i>downward</i>	92	81	12
<b>TOTAL</b>	<b>220</b>	<b>203</b>	
<i>upward</i>	59	56	
<i>downward</i>	161	147	
<b>INTERNAL CONSUMPTION</b>		<b>4031</b>	
<i>% share of traded volumes from internal consumption</i>		<b>5.0%</b>	

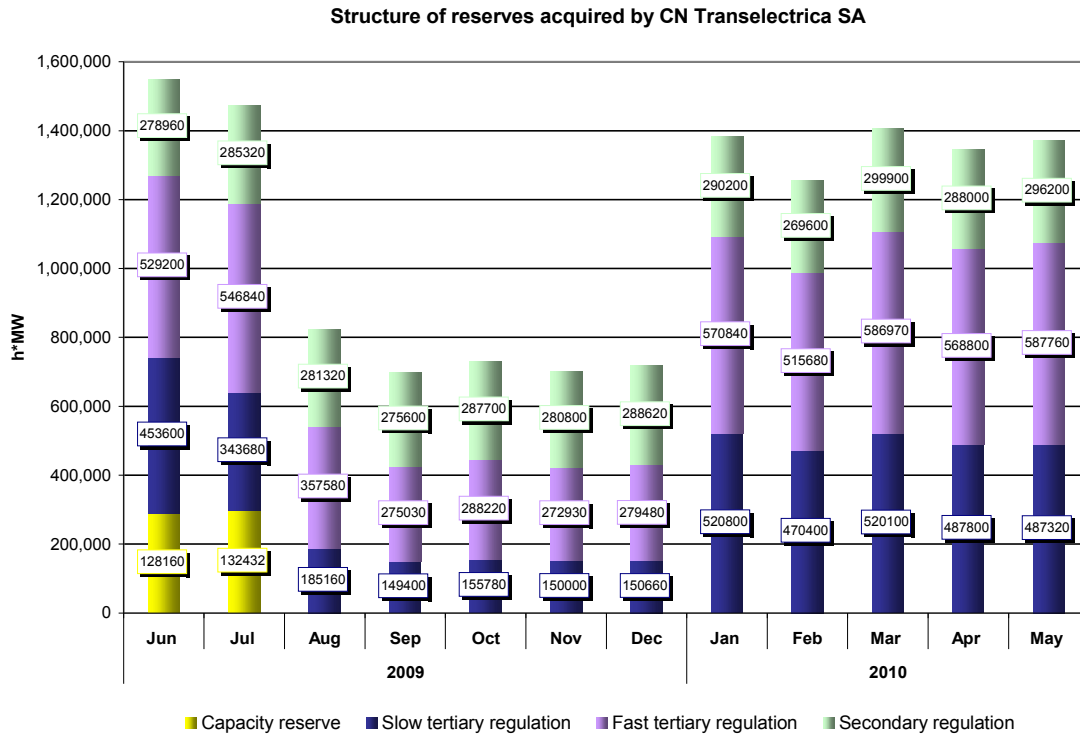
Source: Monthly reports of CN Traselectrica SA – processed by MG

The structure of balancing electricity delivered in the system on each type of regulation starting from June 2009 is presented in the graph below:



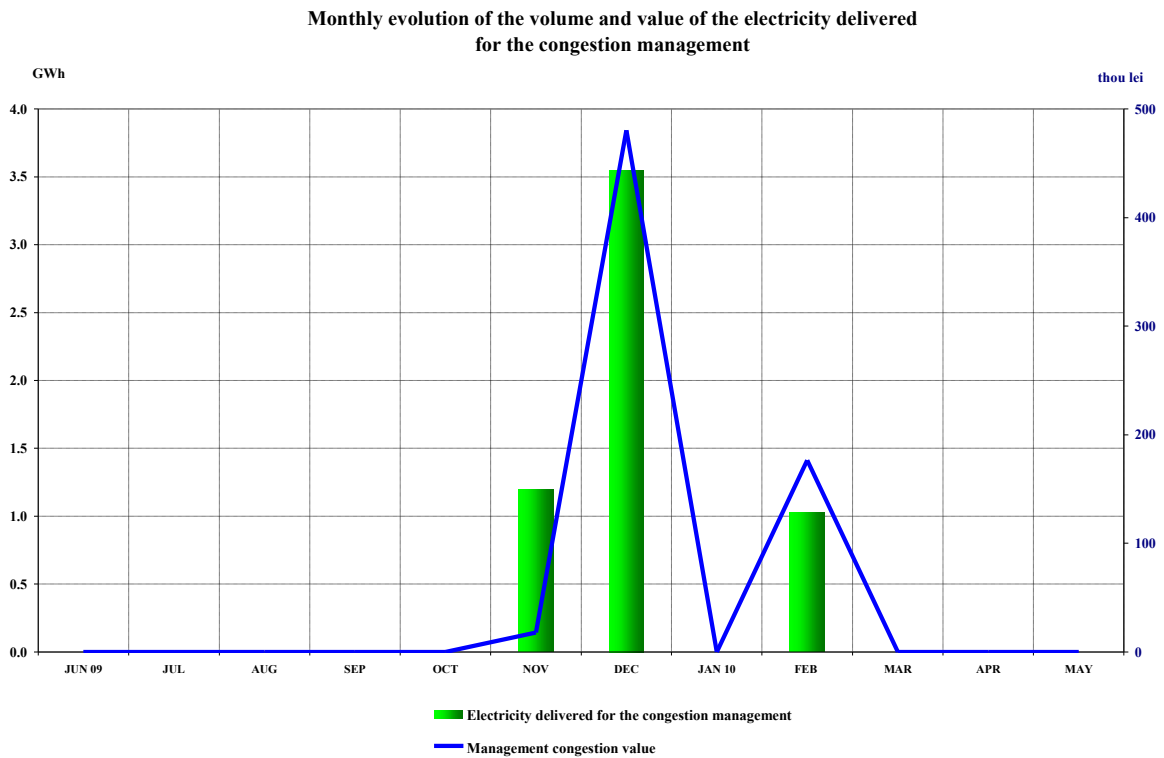
Source: Monthly reports of CN Traselectrica SA – processed by MG

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 starting with June 2009:



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 with June 2009.



Source: Monthly reports of CN Tranelectrica 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 May 2010 compared to previous month and May 2009 was the following:

Transaction type	- GWh -		
	April 2010	May 2010	May 2009
0	1	2	3
Regulated to incumbents, thermal generators	779.62	898.22	871.55
Regulated to incumbents, hydro generator	362.18	423.43	419.85
Regulated to incumbents, nuclear generator	475.69	301.96	305.37
Regulated for distribution losses, thermal generators	170.38	194.40	220.89
Regulated for distribution losses, hydro generator	74.03	84.56	83.73
Regulated for distribution losses, nuclear generator	117.67	76.56	90.04
Regulated for transmission losses, thermal generator	67.66	72.31	69.85
Regulated, to other generators (with return of obligation within a year)	189.47	123.54	15.80
Negotiated, to other generators	102.96	134.03	77.09
Negotiated, to suppliers	1074.48	1096.10	1052.29
Contracts concluded on centralized markets (CMBC, CMBC-NC, RCE)	304.27	291.55	475.77
Supply to consumers (regulated and competitive)	206.50	203.14	198.84
Export	62.61	62.50	104.88
DAM	414.71	396.55	237.67
<b>Total</b>	<b>4402.23</b>	<b>4358.85</b>	<b>4223.62</b>

Source: Monthly reports of generators – processed by MG

### Suppliers

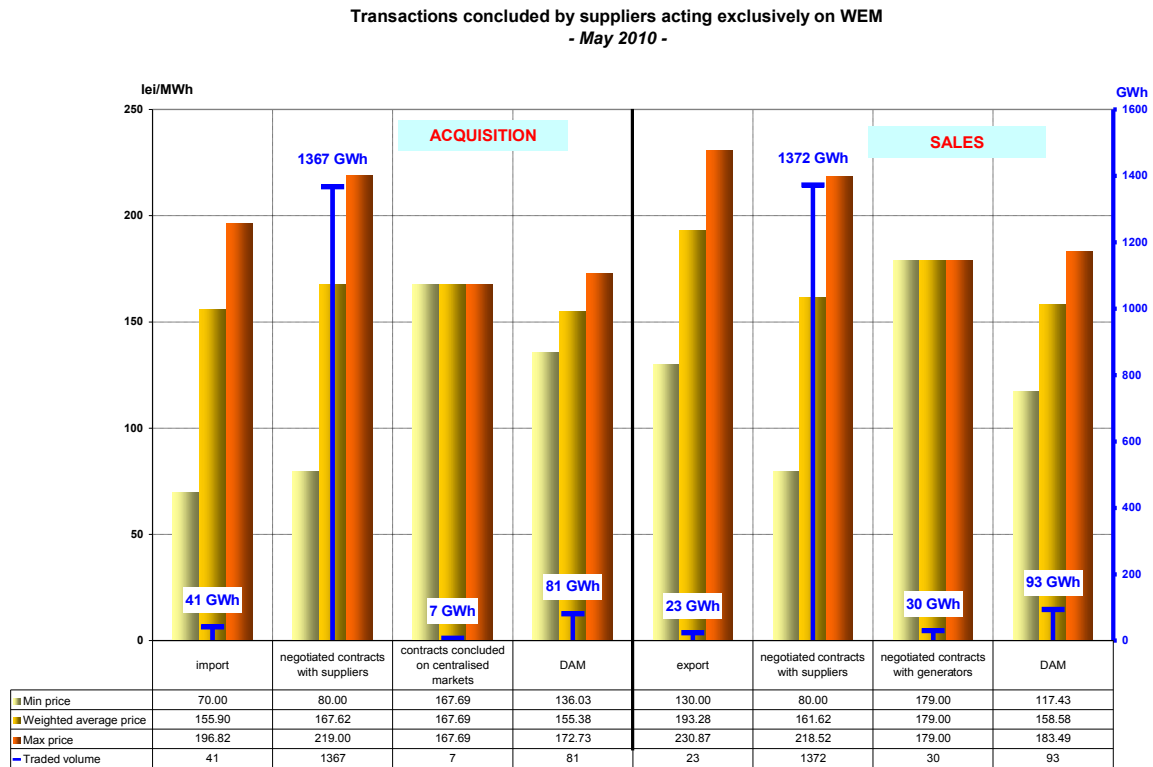
In May 2010, 73 companies having as main activity the supply of electricity concluded transactions on the electricity market; from these, 27 suppliers traded electricity exclusively on the wholesale market and 46 suppliers on both retail and wholesale markets (in this category are also included the 7 incumbent suppliers).

#### Suppliers acting exclusively on WEM

The following table shows the activity for May 2010 compared to May 2009 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 -	
	May 2009	May 2010
<b>Acquisitions</b>		
Import	26.49	41.39
Negotiated contracts with suppliers	800.40	1367.28
Negotiated contracts with generators	164.10	0.00
Contracts concluded on centralized markets	219.97	7.44
DAM	76.60	80.77
<b>Sales</b>		
Export	94.09	23.35
Negotiated contracts with suppliers	1027.92	1372.15
Negotiated contracts with generators	55.80	29.76
DAM	110.34	93.29

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 May 2010:



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

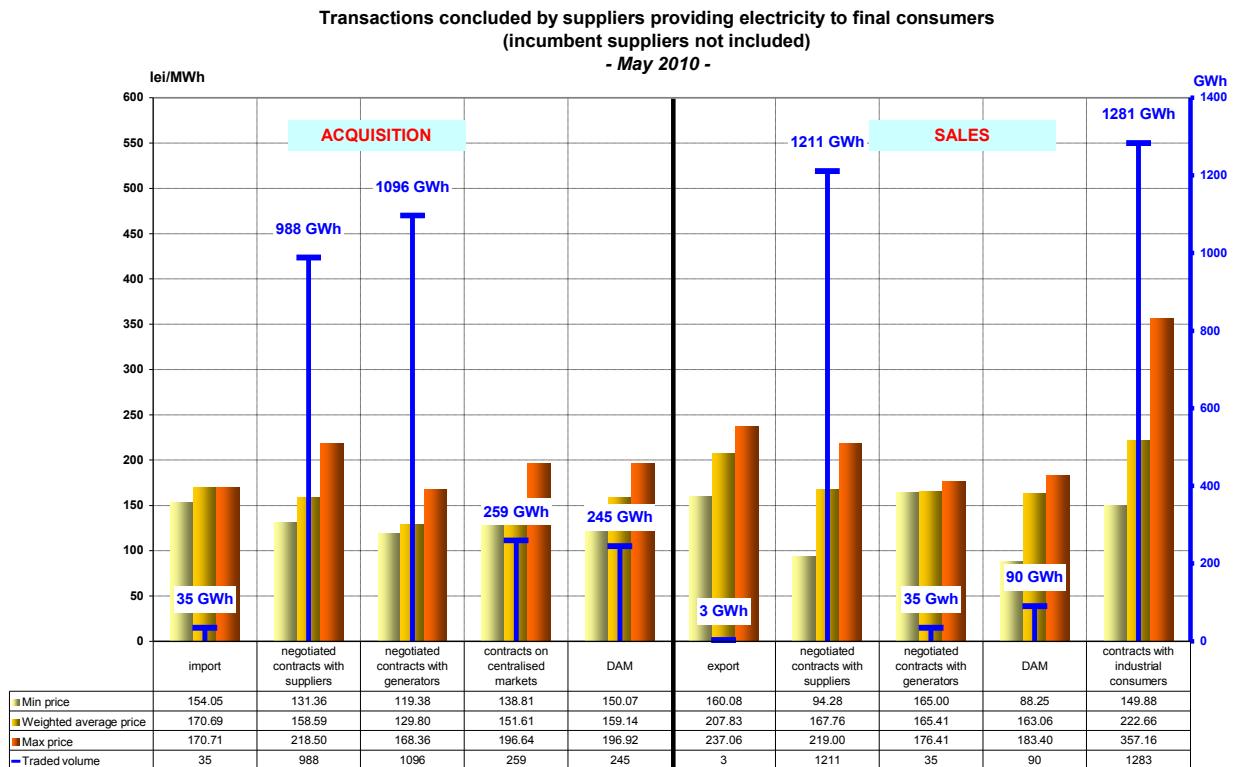
**Active suppliers on REM (the incumbent suppliers are not included)**

The following table presents aggregated information on transactions volume and structure for suppliers providing electricity to final consumers, on the competitive market, for May 2010 and May 2009.

**- GWh -**

Transactions' structure of suppliers providing electricity to final consumers (the incumbent suppliers are not included)	May 2009	May 2010
<b>Acquisitions</b>		
Import	0.66	34.63
Negotiated contracts with suppliers	575.76	988.03
Negotiated contracts with generators	888.19	1096.10
Contracts concluded on centralized markets	215.62	259.32
DAM	127.10	244.58
<b>Sales</b>		
Export	5.33	2.74
Negotiated contracts with suppliers	644.72	1210.69
Negotiated contracts with generators	-	34.74
Contracts concluded on centralized markets	3.72	-
DAM	127.83	90.44
Final consumers	1050.83	1283.10

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 May 2010:



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

### Incumbent suppliers

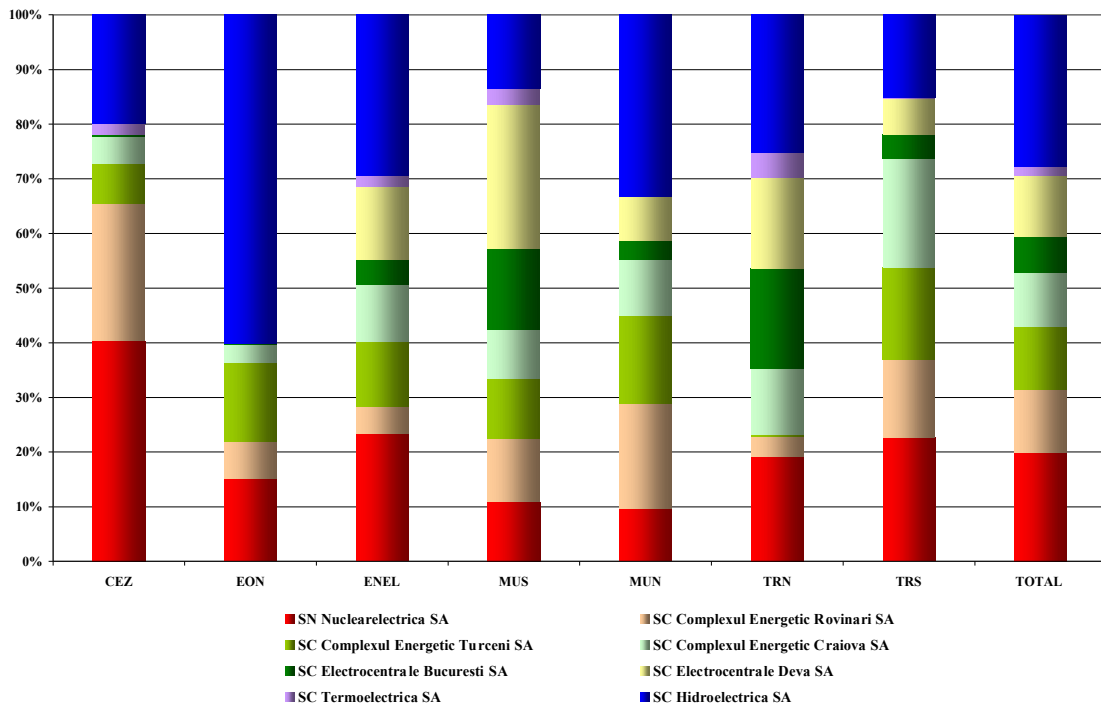
Electricity acquisition structure of incumbent suppliers (before the delivery day), for supplying the regulated market consumers, is presented in the table below, for May 2010 compared to the situation of May 2009:

- GWh -

Acquisition structure of incumbent suppliers for regulated REM component	May 2009	May 2010
Regulated contracts with generators	1631.45	1671.66
Negotiated contracts	37.81	16.91
Contracts concluded on centralized markets	0.00	0.00
DAM	139.82	43.77

The structure of the electricity purchased by the incumbent suppliers from the main generators on regulated contracts is presented in the following graph for May 2010:

Electricity acquisition from main generators, on regulated contracts, of incumbent suppliers for delivering electricity to final consumers on regulated market  
May 2010



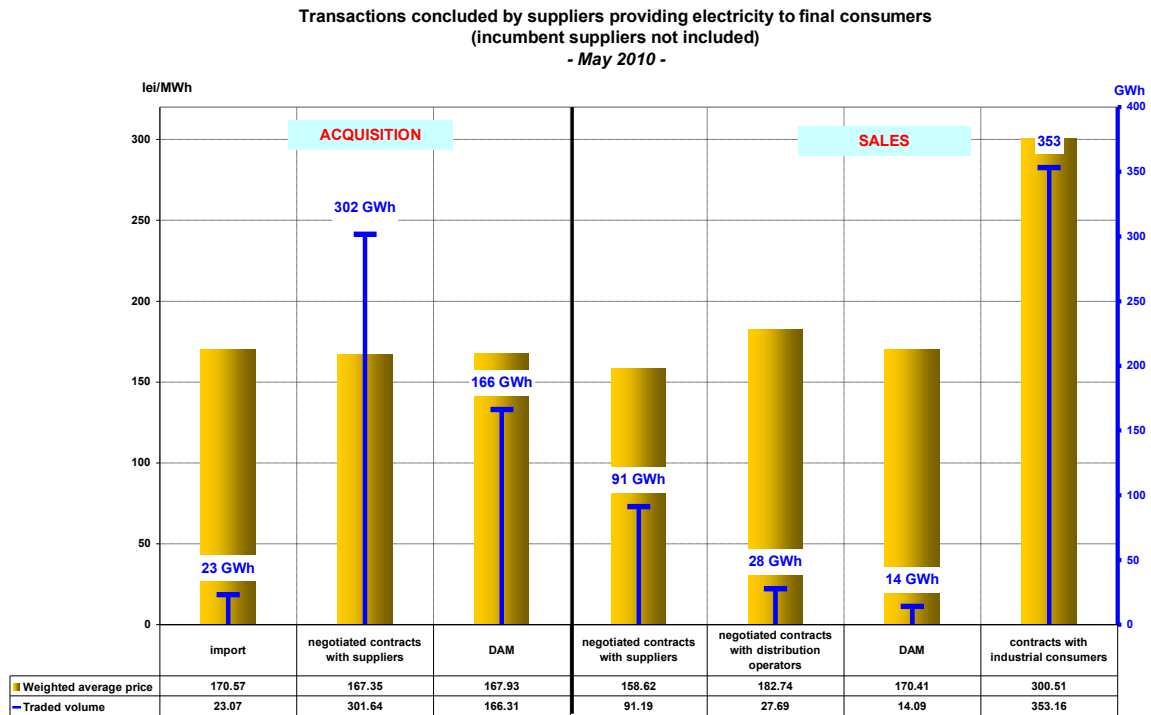
Source: Monthly reports of the incumbent suppliers – processed by MG

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 May 2010 compared to May 2009:

- GWh -

Transactions' structure of incumbent suppliers for competitive REM component	May 2009	May 2010
<b>Acquisitions</b>		
Import	14.09	23.07
Negotiated contracts with suppliers	288.72	301.64
Negotiated contracts with generators	0.00	0.00
Contracts concluded on centralized markets	6.70	0.00
DAM	71.00	166.31
<b>Sales</b>		
Negotiated contracts with suppliers	30.14	91.19
Negotiated contracts with distributors	0.20	27.69
DAM	84.70	14.09
Final consumers	259.14	353.16

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 May 2010:



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

### Main distribution operators

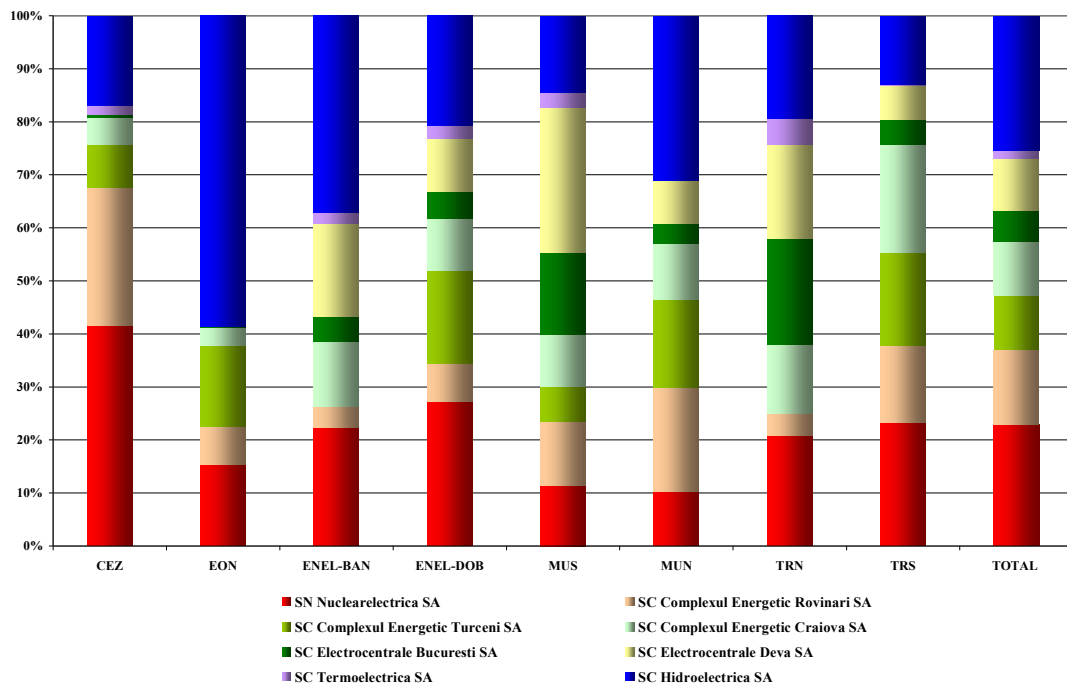
The following table shows the electricity acquisition structure of main distribution operators (before the delivery day), for covering the distribution network losses, for May 2010 compared to May 2009:

- GWh -

Acquisition structure	May 2009	May 2010
Regulated contracts with generators	394.66	356.71
Negotiated contracts with suppliers	197.00	27.69
Contracts concluded on centralized markets	-	-
DAM	18.31	28.66

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 May 2010:

Electricity acquisition of distribution operators from main generators, on regulated contracts, for covering the distribution losses  
May 2010



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

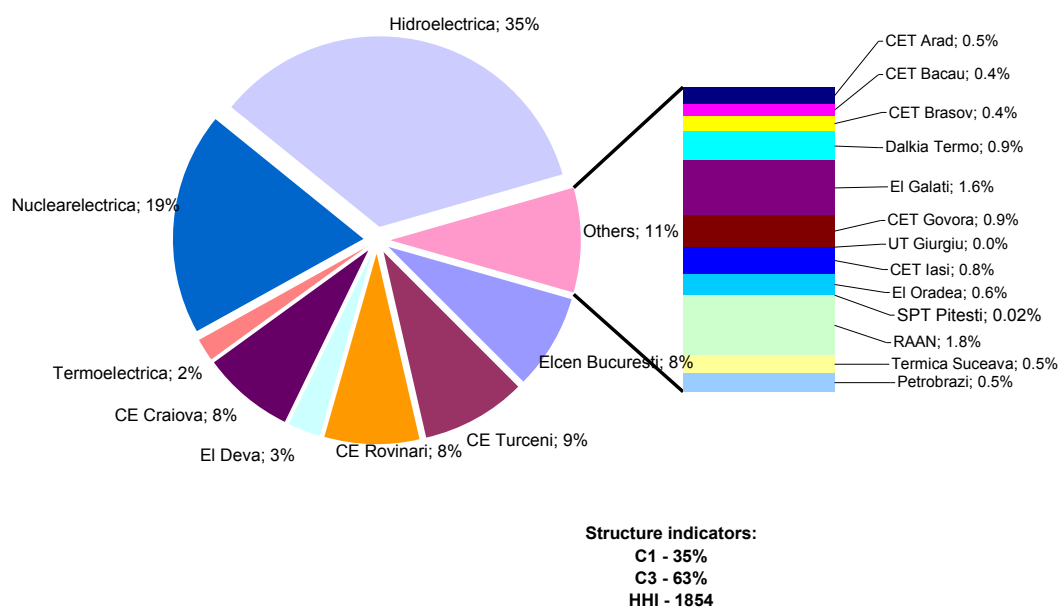
The market structure regarding the electricity generation offers an initial basis for analyzing the possible competitiveness level of the electricity market.

The following table presents the concentration indicators of electricity generation for May 2010, calculated based on electricity delivered into the networks by the generators with dispatchable units.

Concentration indicators - May 2010 -	C1 (%)	C3 (%)	HHI
Value	45	70	2538

The market shares of the electricity generators, taking into account all components of the wholesale electricity market, are presented in the following graph, for the first 5 months of 2010. These market shares are calculated based on the electricity delivered into networks.

Market shared of generators with dispatchable units by delivered electricity  
January - May 2010



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 May 2010:

Structure/concentration indicators of BM - MAY 2010 -	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
C1 - % -	69	72	50	69	31	31
C3 - % -	97	97	84	91	78	72
HHI	5139	5474	3262	5062	2399	2142

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 May 2010. Starting with August

2009, the acquisitions of electricity from the capacity market through bidding process had been suspended:

Concentration indicators on ASM - May 2010 -		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve
regulated component	contracted quantity (h*MW)	296200	587760	487800
	C1 (%)	75,7	83,8	42.8
	C3 (%)	98,3	90,9	88.6
competitive component	contracted quantity (h*MW)	0	0	0
	C1 (%)	0	0	0
	C3 (%)	0	0	0
	HHI	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 May 2010, based on quantities traded by participants on this market.

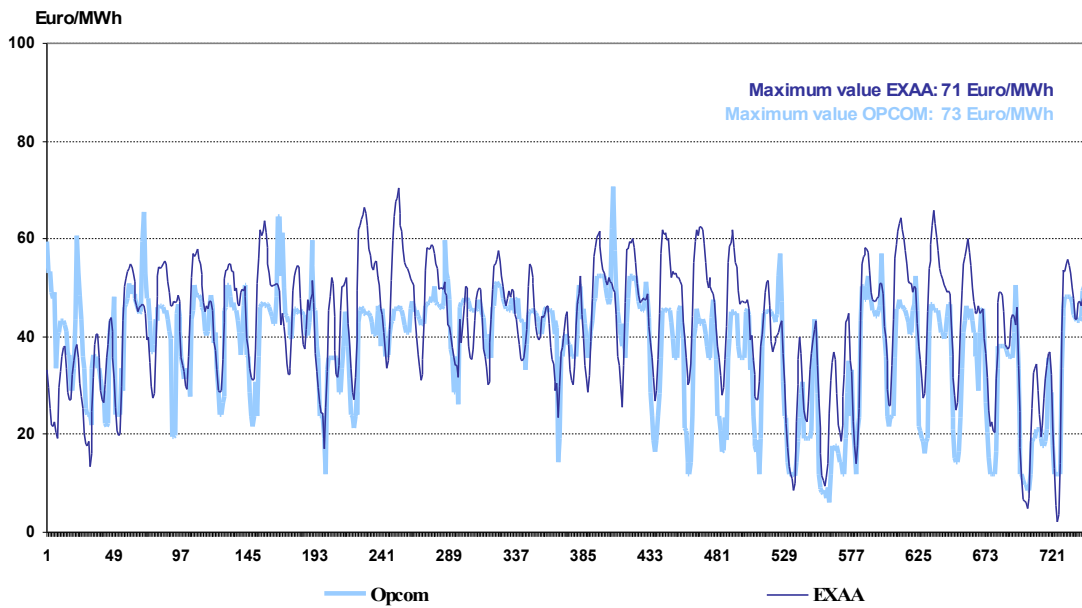
Concentration indicators on DAM - May 2010 -	C1 (%)	C3 (%)	HHI
Buying transactions	11	29	532
Selling transactions	24	55	1284

### **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 May 2010 are presented in the following graphs, along with the prices on EXXA.

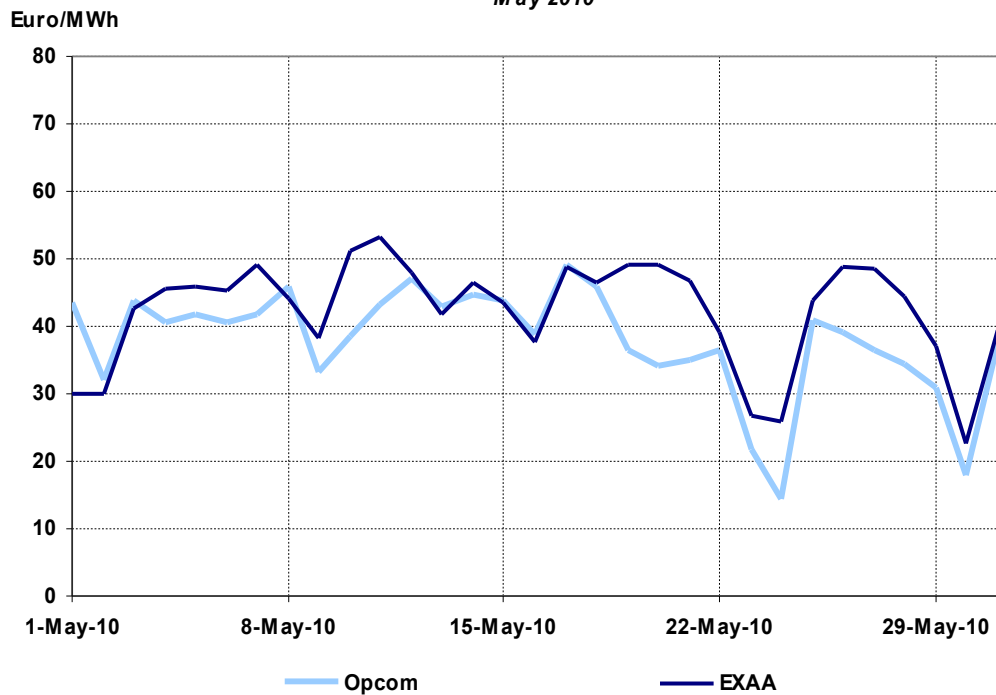
For comparison with prices on the European power exchanges, the spot price on SC Opcom SA is denominated in EUR, taking into consideration the daily exchange rates Euro/leu communicated by the National Bank of Romania.

**HOURLY SPOT PRICES**  
May 2010



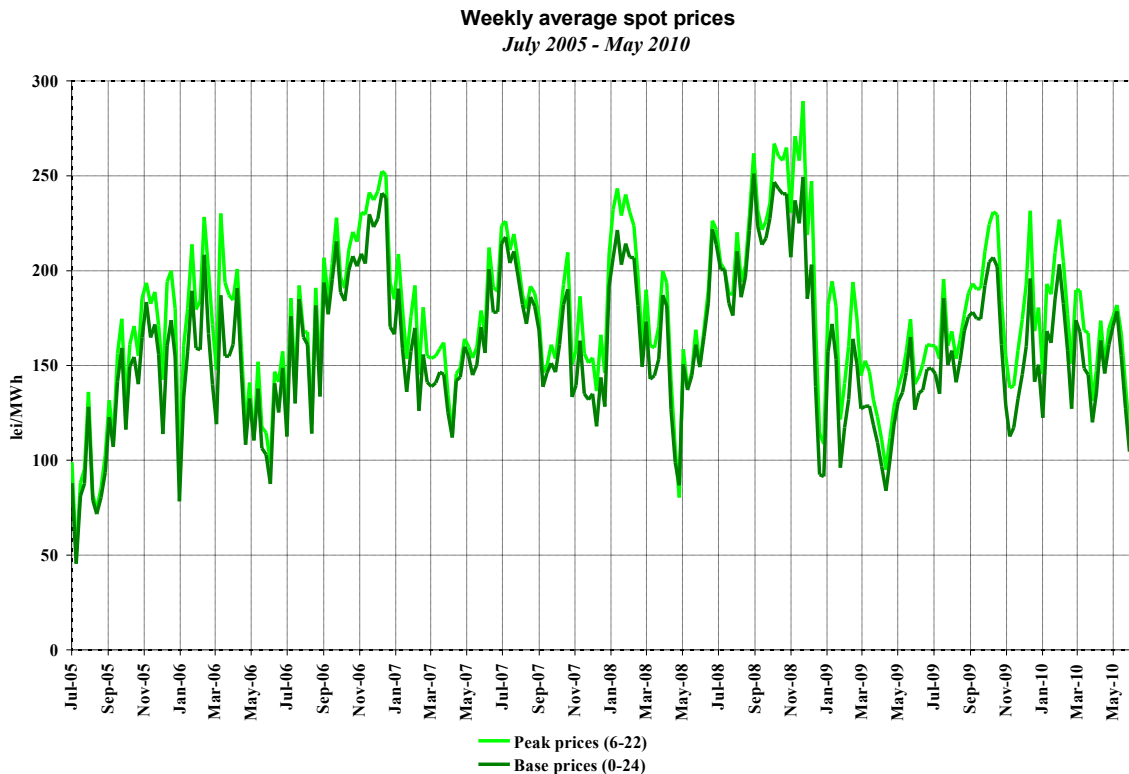
Source: Daily reports of SC Opcom SA and published data of EXAA  
– processed by MG

**DAILY AVERAGE SPOT PRICES**  
May 2010



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:

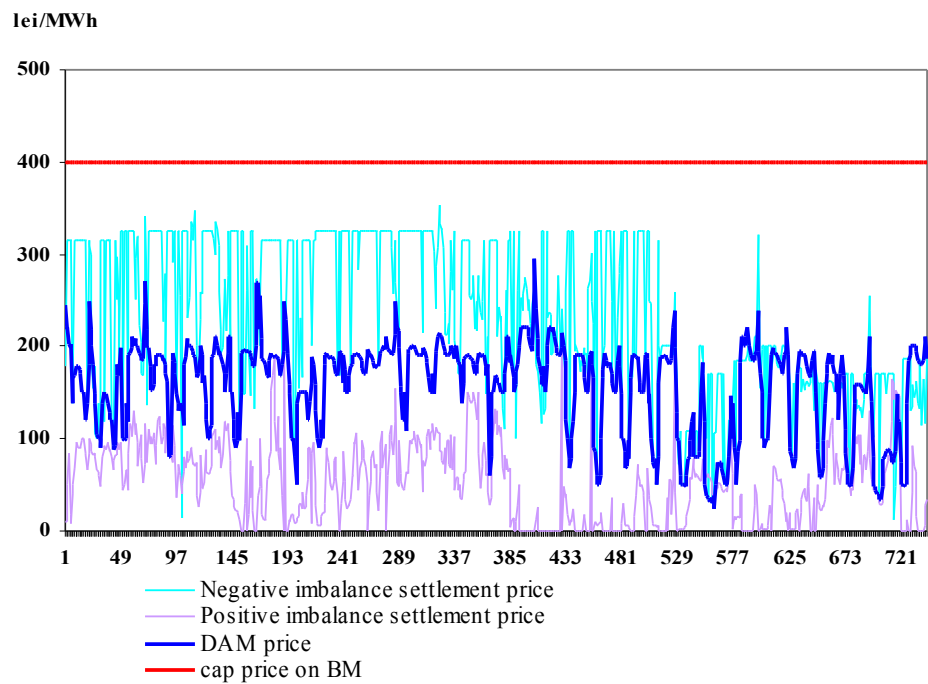


*Source: Daily reports of SC Opcom SA – processed by MG*

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.

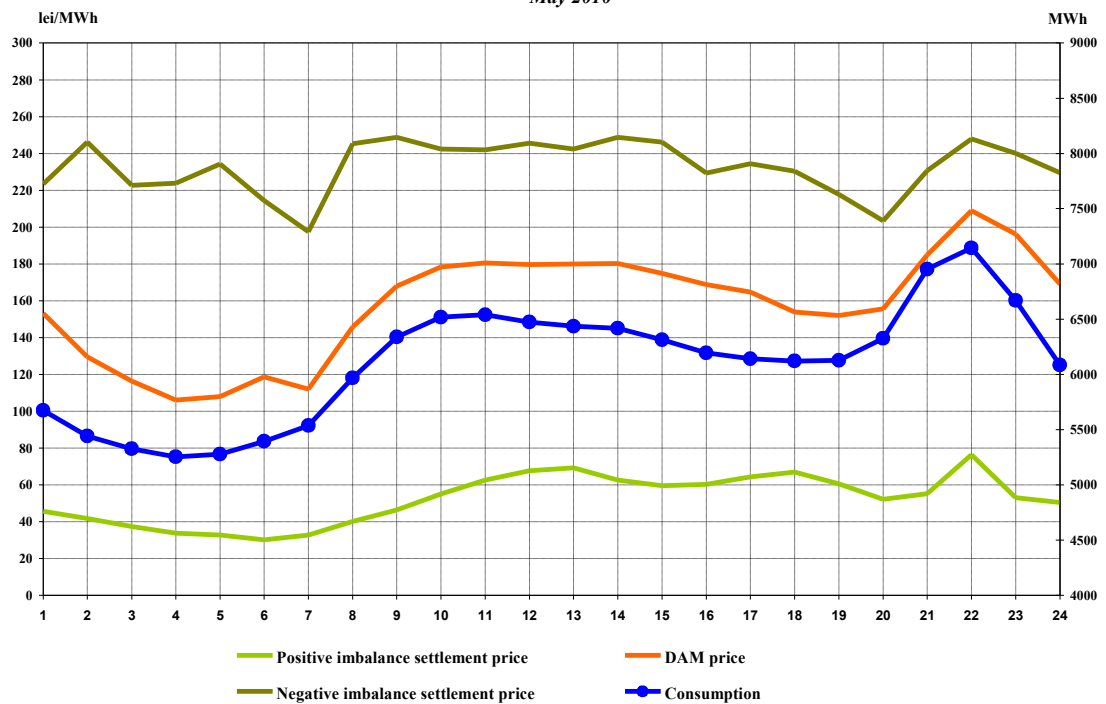
The settlement prices (MCP on DAM, negative imbalance settlement price and positive imbalance settlement price) are represented on the same graph, showing the two markets correlation degree. In the first graph the prices are expressed in hourly values, in the second graph in hourly average values compared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

### Hourly settlement prices May 2010



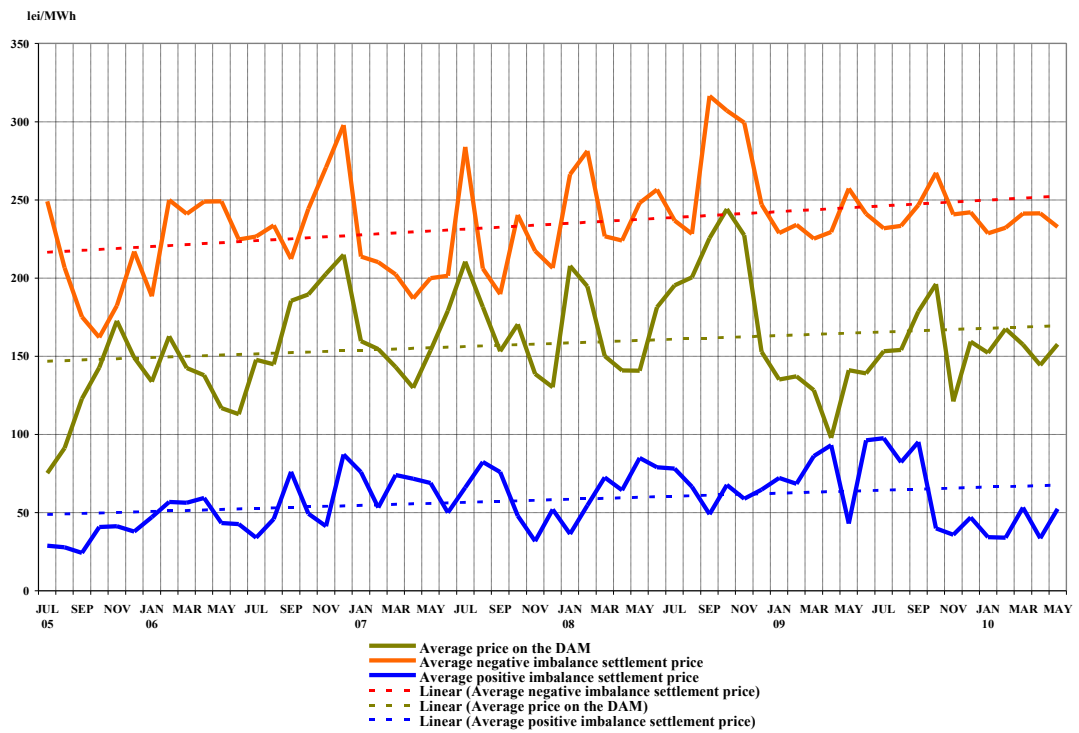
Source: Daily/monthly reports of SC Opcom SA – processed by MG

### Hourly average settlement prices and internal consumption May 2010



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

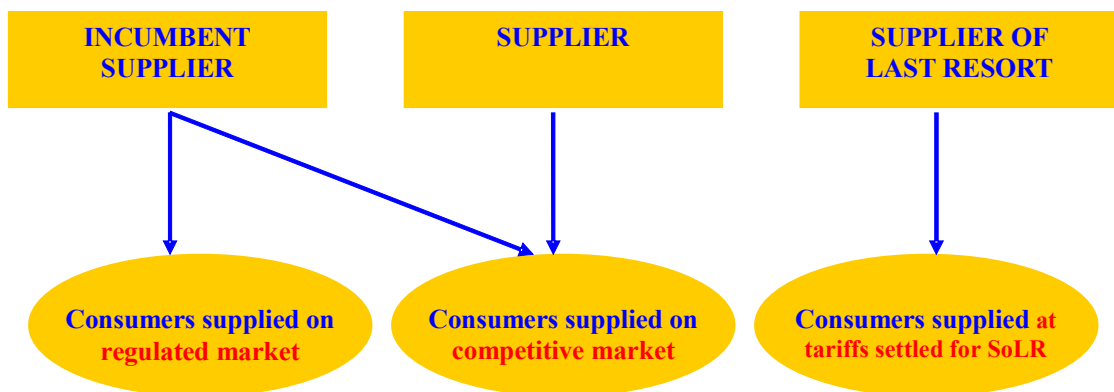
Monthly average prices on DAM and BM  
July 2005 - May 2010



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

### III. RETAIL ELECTRICITY MARKET

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



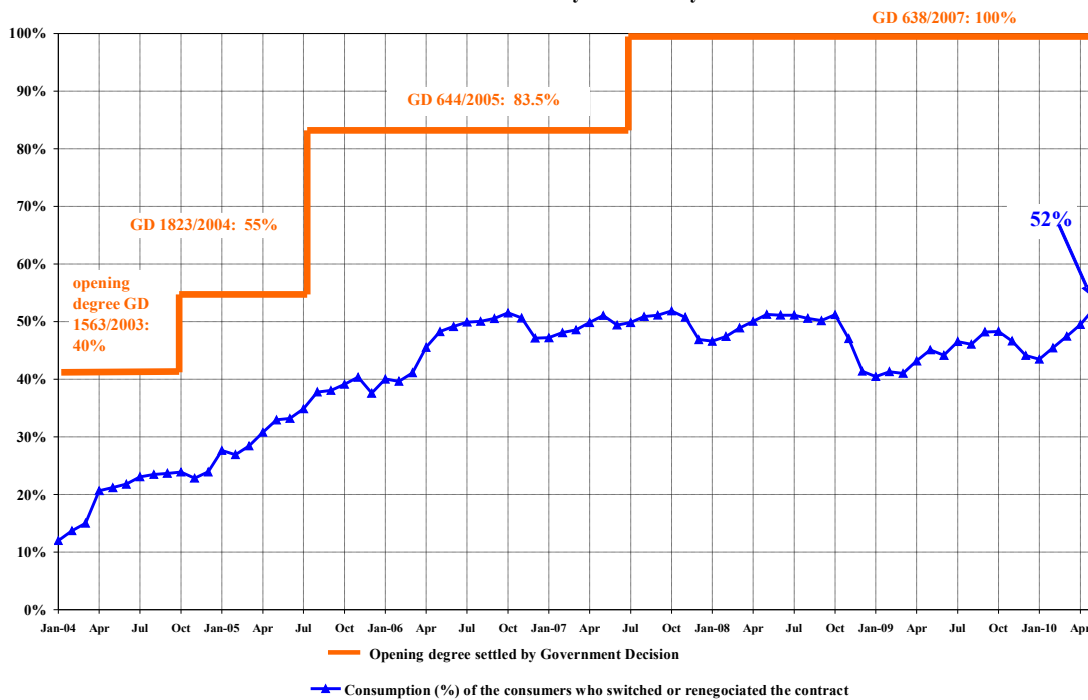
#### 2. Steps in the opening process of the electricity market

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 – May 2010. The values presented are cumulated from the beginning of the opening process and are presented monthly:

Opening degree evolution for electricity market  
January 2004 - May 2010



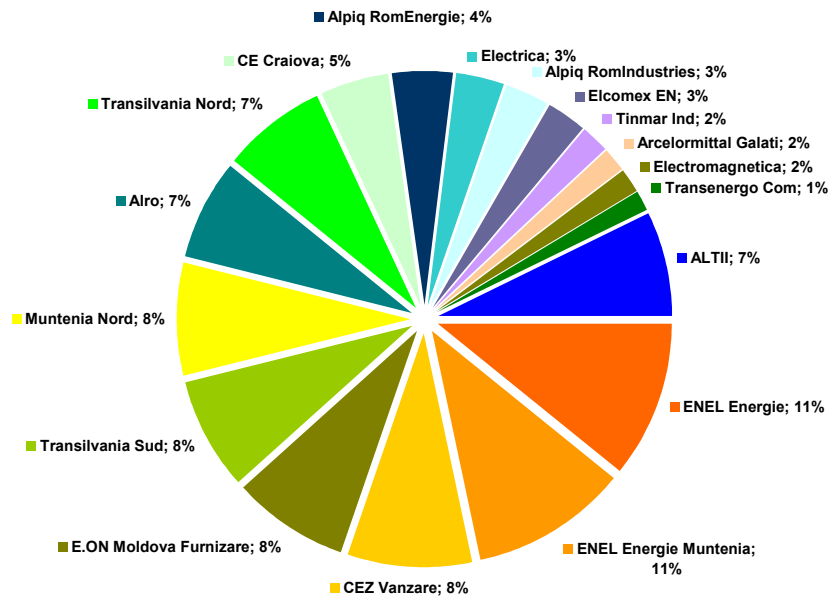
Source: Monthly reports of the final consumers' suppliers – processed by MG

#### 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;

Market shares of suppliers for final consumers  
- January - May 2010 -



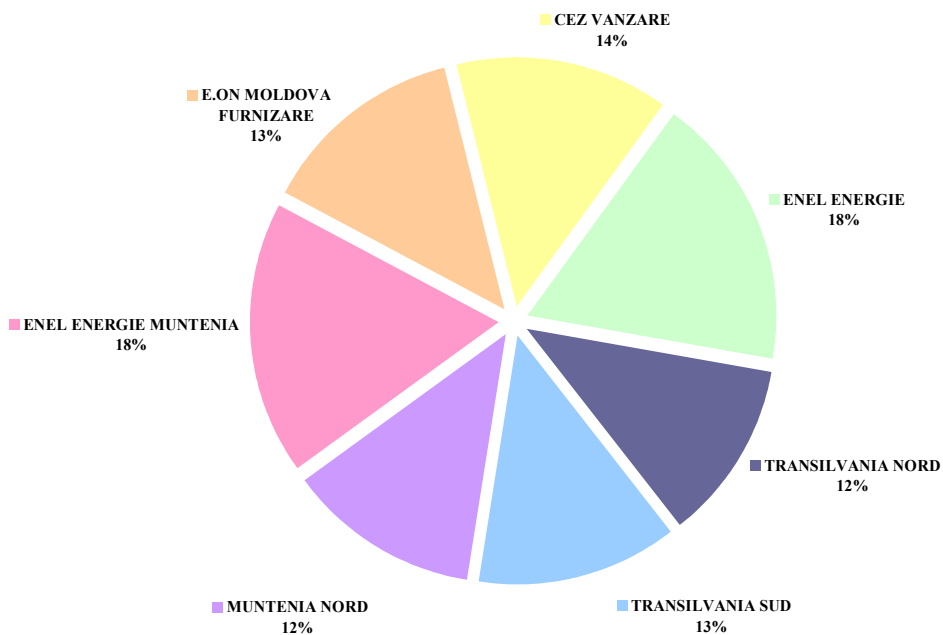
Final consumption: 18077 GWh

Category "Altii" includes 34 suppliers with individual market share less than 1%

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,

Market shares of incumbent suppliers on regulated market  
- January - May 2010 -



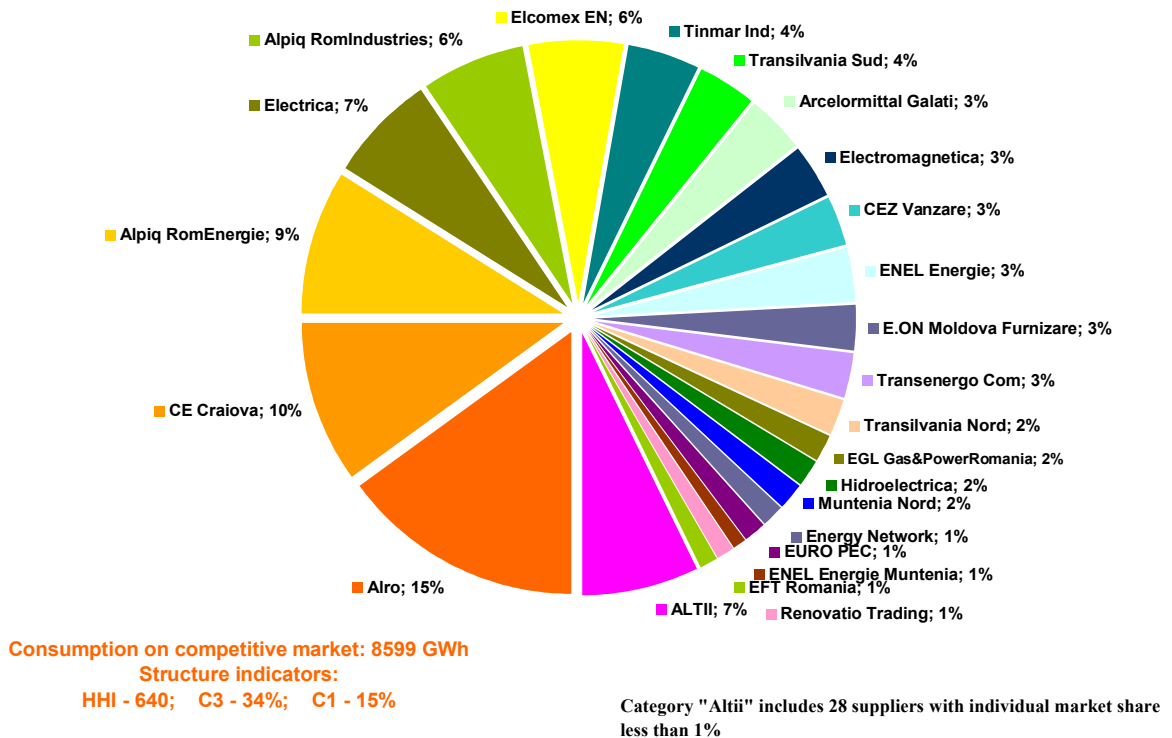
Consumption of consumers supplied at regulated tariffs: 9478 GWh

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:

**Market shares of suppliers delivering electricity on the competitive market**  
- January - May 2010 -



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.

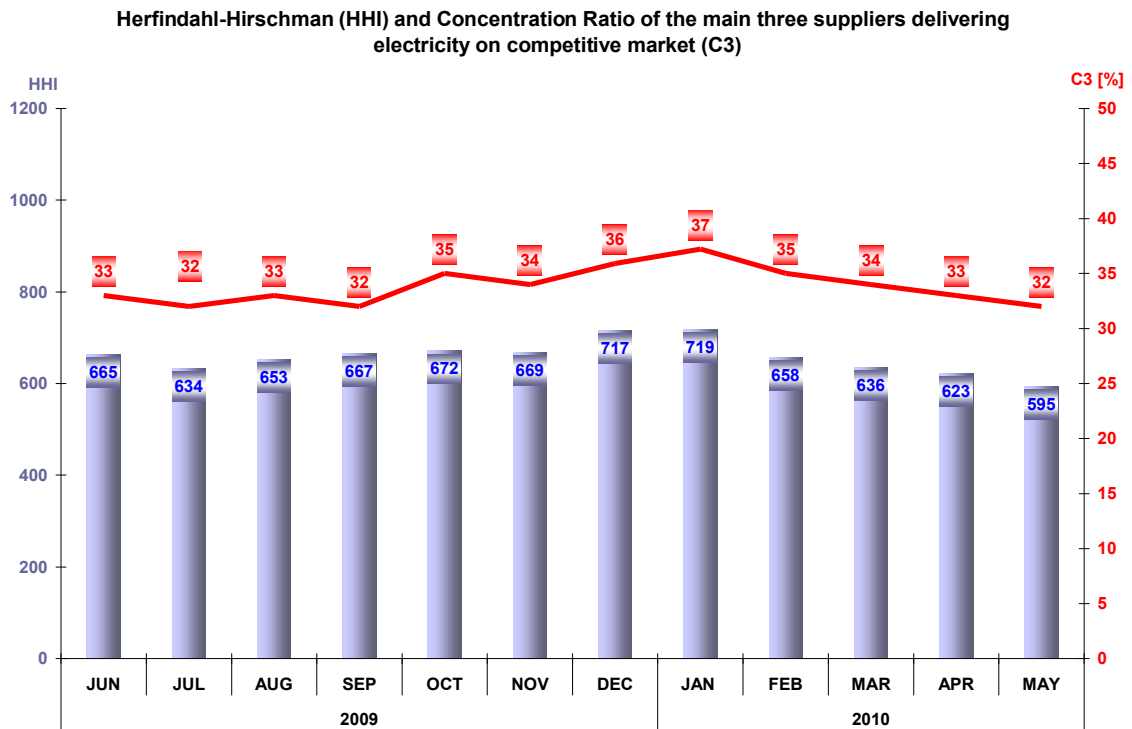
The electricity supplied to the final consumers used for calculating the market share of every supplier includes also the self-consumption of that particular supplier (e.g. consumers with supply license who buy electricity for themselves from WEM as competitive suppliers).

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 May 2010:

Number of suppliers	Share of sales to final consumers from total sales transactions			
	100%	75% - 100%	50% - 75%	<50%
<b>Competitive</b>	9	5	6	19
<b>Incumbent</b>	2	2	2	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 June 2009 – May 2010 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 May 2010, 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:

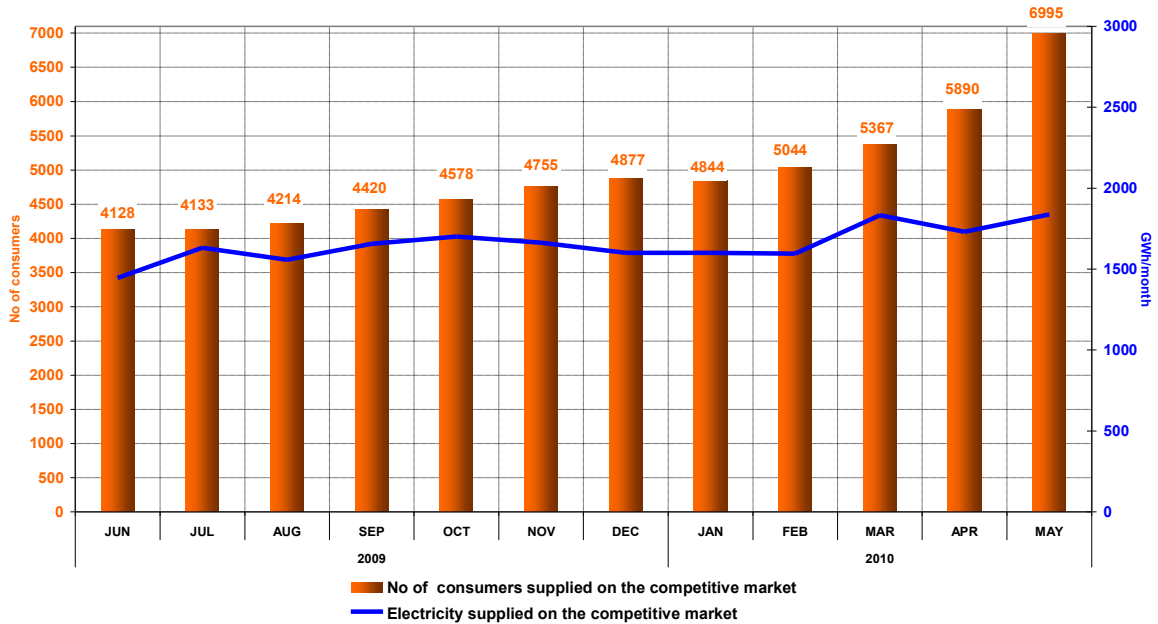
Indicators - May 2010	Consumer category							Total REM
	IA	IB	IC	ID	IE	IF	Other	
C1 - % -	86	21	14	15	17	21	28	14
C3 - % -	97	46	38	36	38	51	58	32
HHI	7398	1132	775	721	796	1260	1501	595
Consumption - GWh -	6.6	63	125	384	210	139	910	1838
No. of SUPPLIERS	14	32	37	36	18	8	12	50
No. of incumbent suppliers	7	7	7	7	4	2	1	7
No. of competitive suppliers	6	23	27	27	13	6	9	39
No. of producers	1	2	3	2	1	0	2	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 May 2010 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:

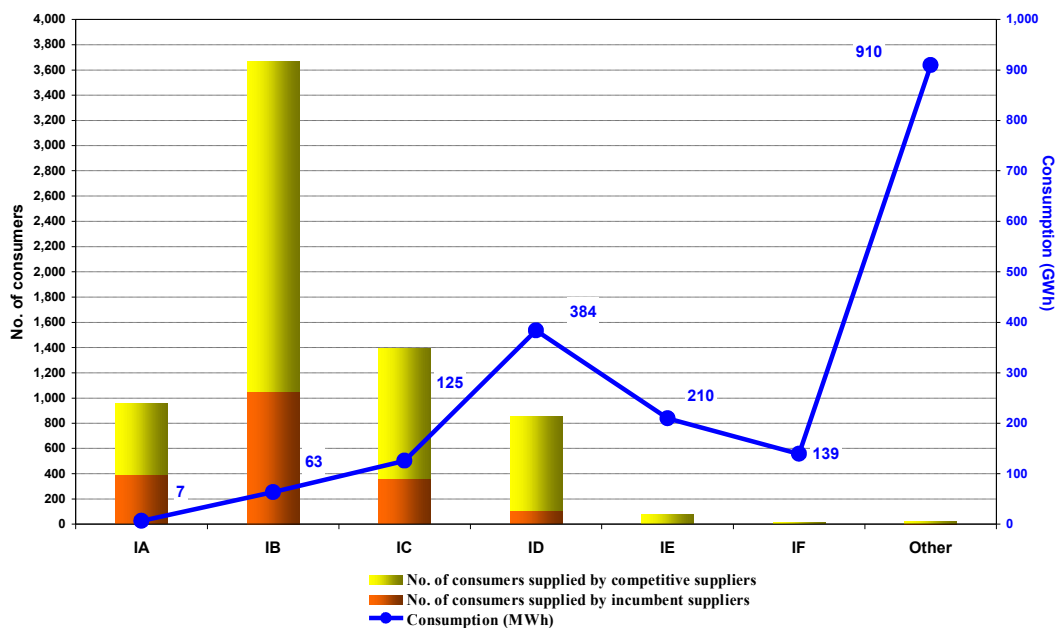
Industrial end-user	Annual electricity consumption (MWh)	
	Lowest	Highest
IA		<20
IB	20	<500
IC	500	<2000
ID	2000	<20000
IE	20000	<70000
IF	70000	<=150000
Others	>150000	

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



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

Number of consumers supplied on competitive market and the consumption of each category of consumers - May 2010 -

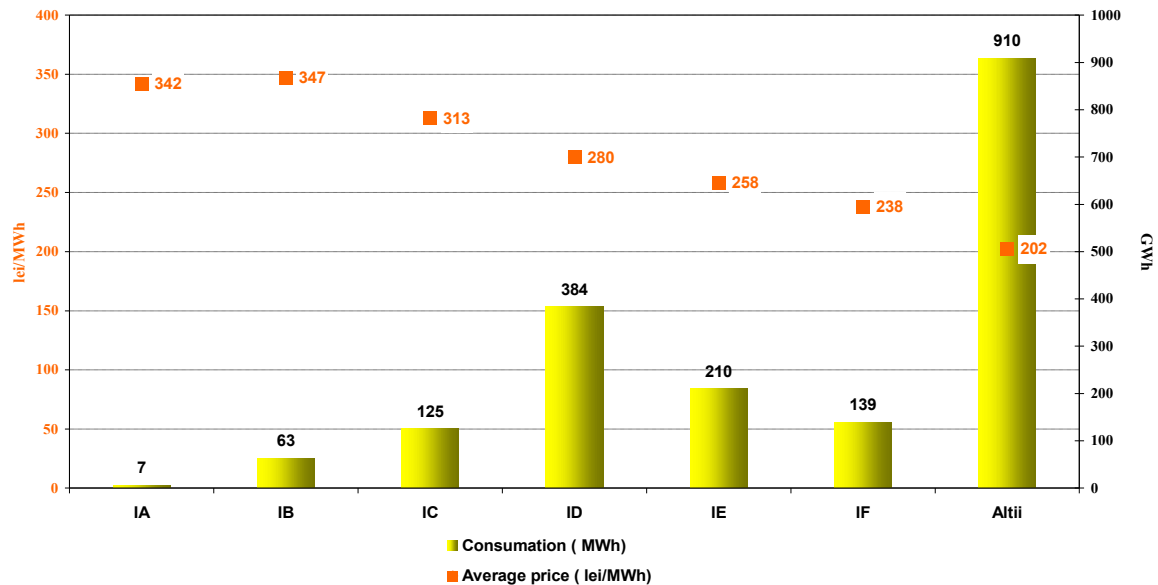


Source: Monthly reports of the suppliers – processed by MG

## 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.

Average price and energy consumption on types of consumers applied on competitive market  
- May 2010 -



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.

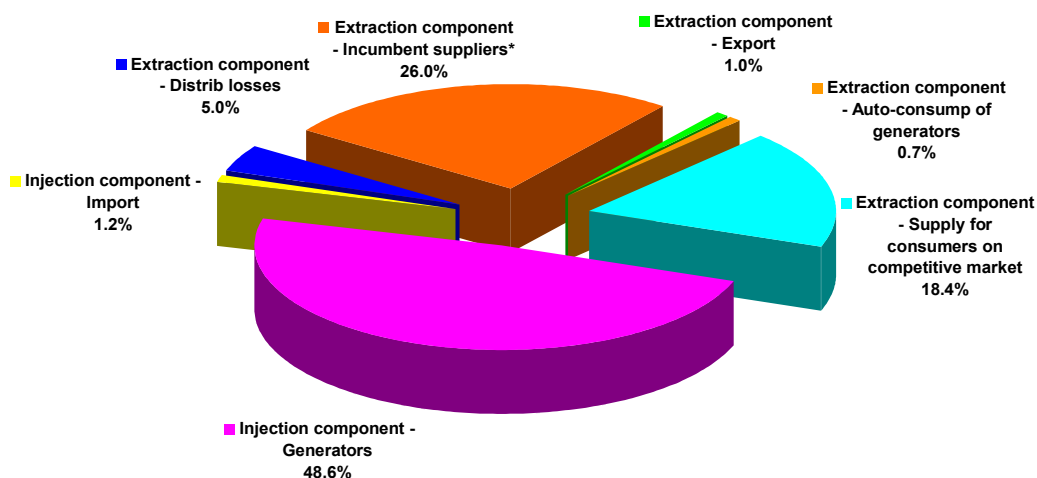
## IV. TRANSMISSION AND SYSTEM OPERATOR C.N. TRANSELECTRICA S.A.

CN 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 consumers.

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 May 2010.

CN Transelectrica SA structure of revenues from transmission services  
- May 2010 -

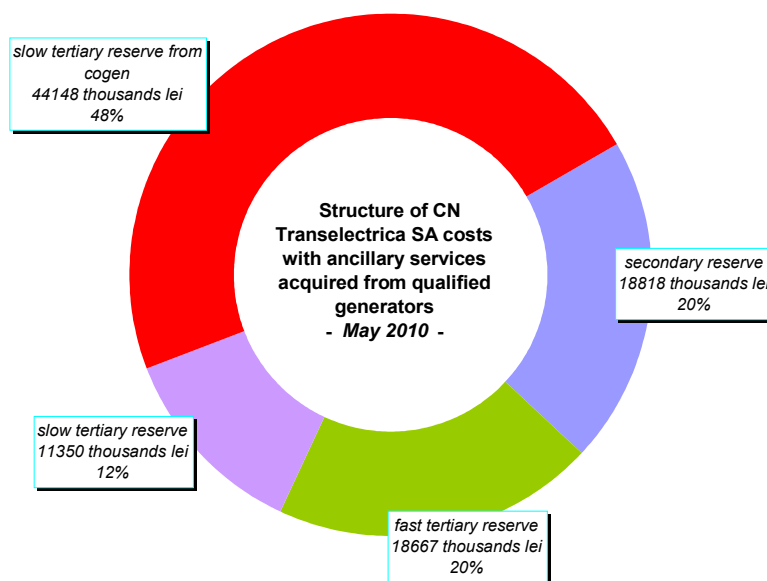


\*\* referring to all their activity as well as the distribution losses for one distribution operator

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 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 Transelectrica SA.

The following graph presents the costs of ancillary services CN Transelectrica SA had to pay in May 2010. 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 MAY 2010

- ✓ In May 2010, ANRE approved the Decision no. 1238 which determines the degree of achieving the fixed quota of green certificates electricity suppliers had to buy in 2009.;
- ✓ In May 2010 there were issued no regulations affecting the operation of the retail electricity market.

## 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