REPORT ON RESULTS OF MONITORING THE

ROMANIAN ELECTRICITY MARKET

DECEMBER 2009

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

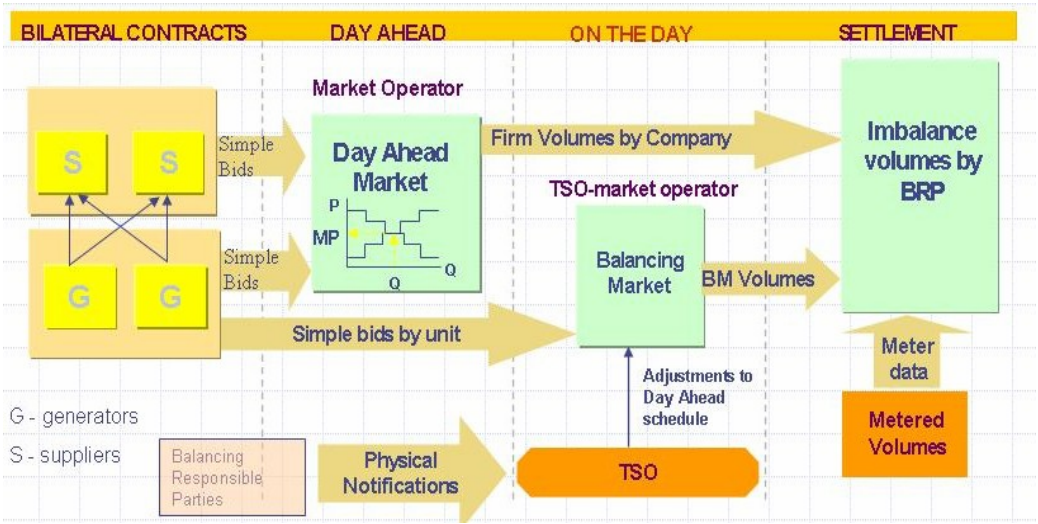
TABLE OF CONTENTS

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

- GD 365/1998 – vertically integrated monopol – RENEL – was split 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 disolved;
- September 2000 – launch of the compulsory electricity spot market in Romania, administrated by OPCOM and organized based on pool model;
- GD 1342/2001 – SC Electrica SA splits in 8 subsidiaries for electricity distribution and supply;
- GD 1524/2002 – SC Termoelectrica SA reorganizes in several separate legal entities for generation;
- July 2005 – launch of the new market model, based on:
  - voluntary spot market, with both sides offers and bilateral settlement;
  - compulsory balancing market, with TSO as single counterparty;
  - financial responsibilities of the balancing are allocated to the BRP;
- GD 644/2005 – electricity market opens at 83.5%;
- November 2005 – launch of the green certificates market;
- December 2005 – launch of the centralized market for bilateral contracts;
- March 2007 – launch of the centralized market for partially standardized bilateral contracts with continuous negociation;
- GD 638/2007 – fully opening of electricity and gas markets;
- July 2007 – rules for capacity market have been established.
- July 2008 – launch of the mechanism of direct debit and guarantee for electricity transactions on the day-ahead market (OPCOM as central counterparty).

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 December 2009 are presented below split into categories:

No.	Name	Comments
A	***Electricity generators operating dispatching units***	
1	SC CET Bacău SA	
2	SC CET Braşov SA	
3	SC CET Govora SA	
4	SC CET Iaşi SA	
5	SC CET Oradea SA	
6	SC Electrocentrale Bucureşti SA	
7	SC Electrocentrale Galaţi SA	
8	SC Dalkia Termo Prahova SRL	
9	SNP Petrom Sucursala Petrobrazi	
10	SC Termica SA Suceava	
11	SC Termoelectrica SA	
12	SC Uzina Termică Giurgiu SA	
13	SN Nuclearelectrica SA	
14	SC CE Rovinari SA	
15	SC CE Turceni SA	
16	RAAN	
17	SC CE Craiova SA	Generators acting also as suppliers on the competitive market
18	SC CET Arad SA	
19	SC Electrocentrale Deva SA	
20	SC Hidroelectrica SA	
B	***Transmission System Operator***	
1	CN TRANSELECTRICA SA	Balancing Market Operator
C	***DAM Operator***	
1	SC OPCOM SA	Operator of the Green Certificates Market, Bilateral Contracts Market and Settlement Administrator
D	***Distribution network operators***	
1	SC CEZ Distributie SA	Operators of the distribution network
2	SC ENEL Distributie Banat SA	
3	SC ENEL Distributie Dobrogea SA	
4	SC E.ON Moldova Distributie SA	
5	SC ENEL Distributie Muntenia SA	
6	SC FDEE Electrica Distributie Muntenia Nord SA	
7	SC FDEE Electrica Distributie Transilvania Sud SA	
8	SC FDEE Electrica Distributie Transilvania Nord SA	
E	***Incumbent suppliers***	
1	SC CEZ Vanzare SA	Incumbent suppliers acting also as suppliers on the competitive market
2	SC ENEL Energie SA	
3	SC E.ON Moldova Furnizare SA	
4	SC ENEL Energie Muntenia SA	
5	SC FFEE Electrica Furnizare Muntenia Nord SA	
6	SC FFEE Electrica Furnizare Transilvania Sud SA	
7	SC FFEE Electrica Furnizare Transilvania Nord SA	

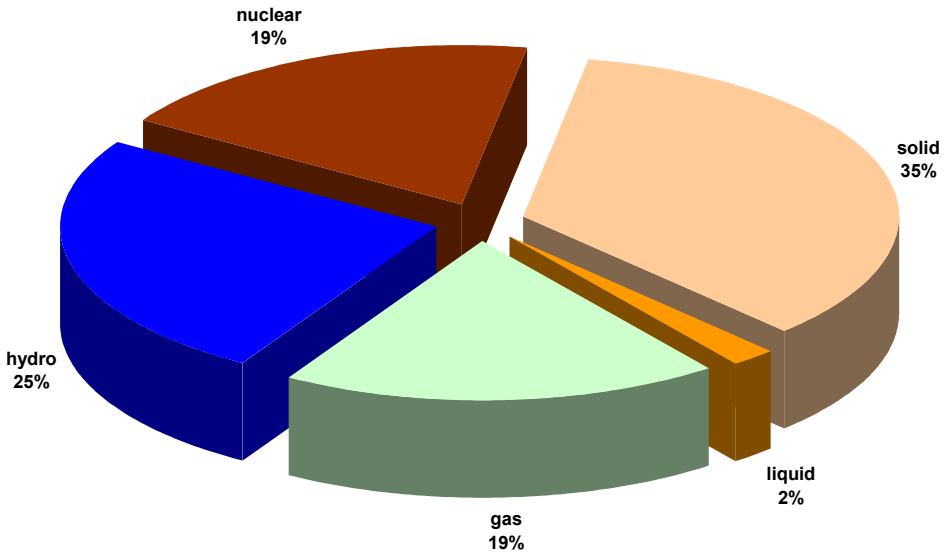
No.	Name
F	***Electricity Suppliers acting exclusively on the wholesale market***
1	SC Atel Energy Romania SRL
2	SC AMV Style SRL
3	CEZ as
4	SC CEZ Trade Romania SRL
5	SC EFT Romania SRL
6	SC Encaz SRL
7	SC Enel Trade Romania SRL
8	SC Energy Distribution Services SRL
9	SC Energy Market Consulting SRL
10	SC E.ON Energy Trading SE
11	SC Edison Trading SpA
12	SC Ezpada SRL
13	Ezpada SRO
14	Gazprom Marketing &Trading
15	SC GDF Suez Energy Trading Romania SRL
16	GEN-I Bukarest Electricity Trading and Sales
17	SC Global Electric Trading SRL
18	SC Grivco SA
19	Holding Slovenske Elektrarne Reprezentanta
20	SC Jas Budapest Zrt
21	SC Korlea Invest SRL
22	OET Obedineni Energini Targovtsi
23	SC Re Energie SRL
24	SC Romelectro SA
25	SC Rudnap SRL
26	SC RBS Sempra Energy Europe Ltd
27	Statkraft Markets GmbH
28	SC Statkraft Romania SRL
29	SC Transelectric Power SA
30	SC WIEE Romania SRL

No.	Name
G	***Electricity Suppliers***
1	SC Alro SA
2	SC Arelco Distributie SRL
3	SC Beny Alex SRL
4	SC Biol Energy SRL
5	SC Buzmann Industries SRL
6	SC Eco Energy SRL
7	SC EFE Energy SRL
8	SC EGL Gas & Power Romania SA
9	SC Ehol Distribution SRL
10	SC Elcomex EN SRL
11	SC Electrica SA
12	SC Electricom SA
13	SC Electromagnetica SA
14	SC Energotrans
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 Hidroconstructia 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.

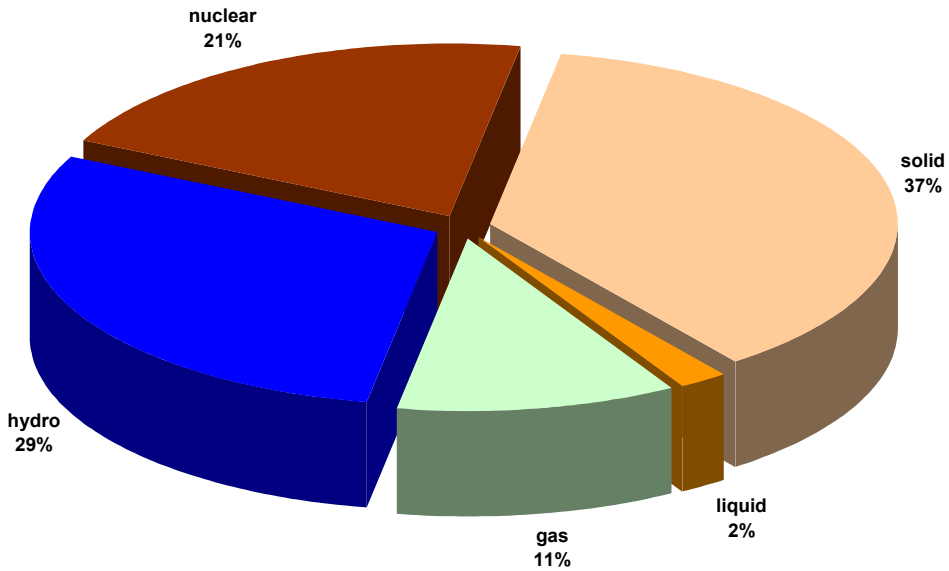
3. *Generation structure of National Energy System on resources types*

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



Source: Monthly reports of generators – processed by MG

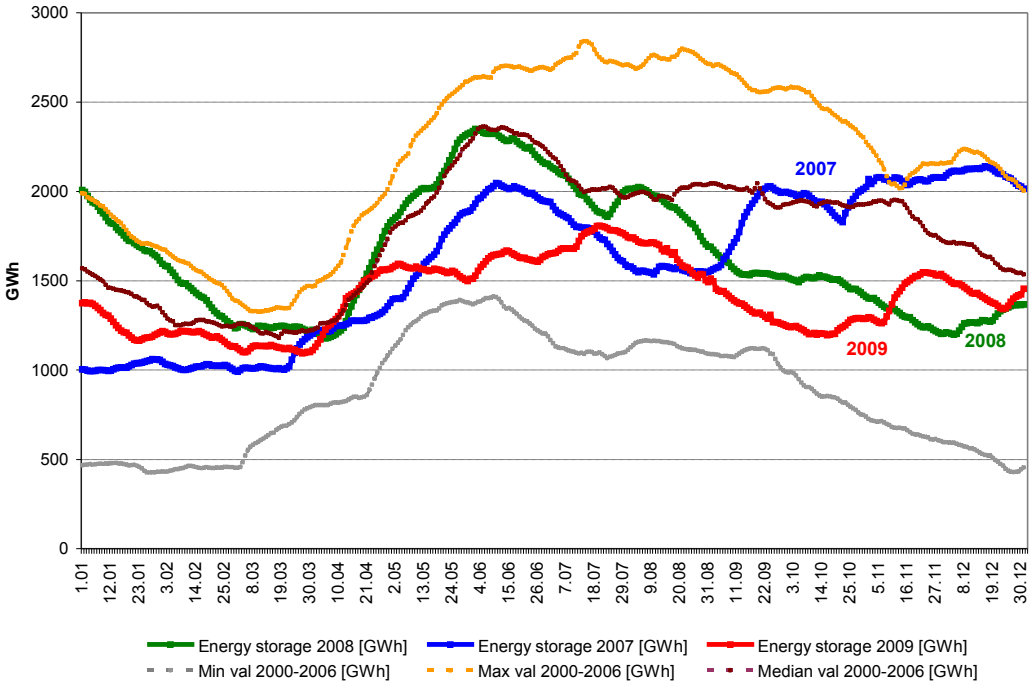
Electricity structure by primary sources
(delivered by generators with dispatchable units)
- 2009 -



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 3 years and compared to minimum, maximum and median values from 2000-2006.

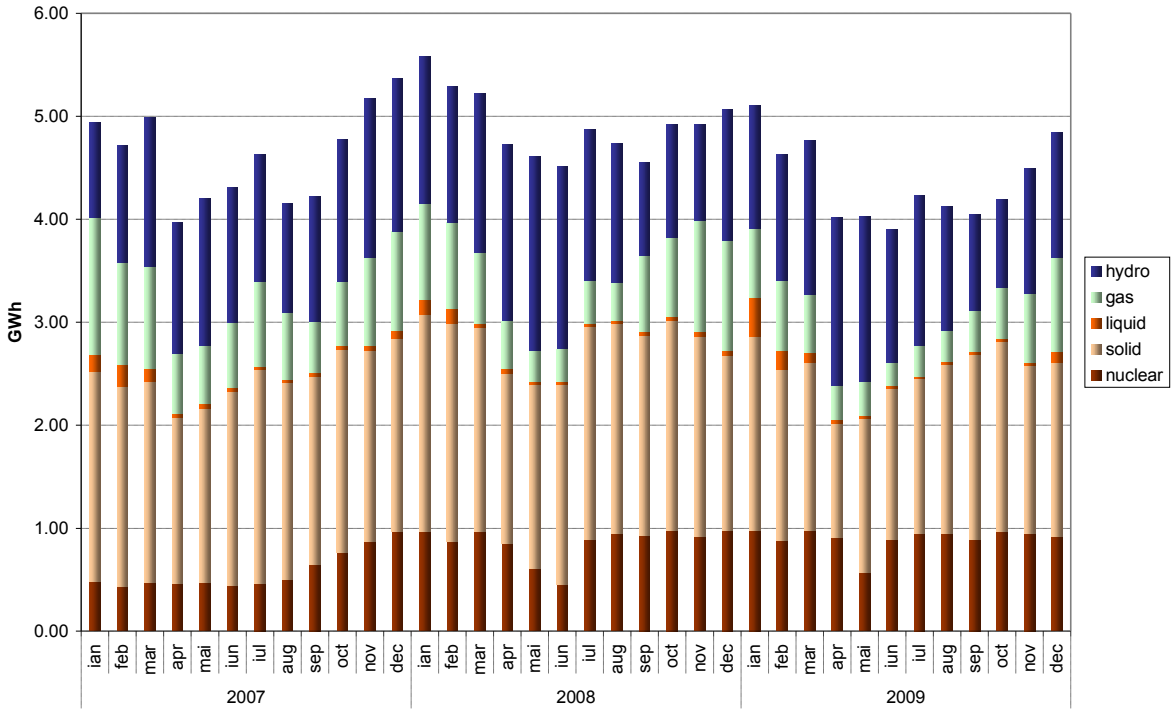
Yearly evolution of daily values of energy stored in the main water reservoirs



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 December 2009 and the entire year 2009, compared to data for similar periods of 2008:

No.	INDICATOR	MU	DEC 2008	DEC 2009	%	2008	2009	%
0	1	2	3	4	5=4/3*100	6	7	8=7/6*100
1	Generated electricity	TWh	5.52	5.30	95.97	64.01	56.69	88.57
2	Delivered electricity	TWh	5.07	4.84	95.61	59.07*	52.40	88.71
3	Import	TWh	0.12	0.04	34.11	0.92	0.68	73.32
4	Export	TWh	0.51	0.17	33.32	5.37	3.15	58.77
5	Internal consumption	TWh	4.68	4.72	100.80	54.63*	49.92	91.39
6	Consumption of household consumers on the regulated market	TWh	1.00	1.01	101.00	10.38	10.99	105.88
7	Consumption of non-households consumption	TWh	2.67	2.62	98.13	35.45	30.60	86.32
7.1	*on the regulated market*	TWh	*1.15*	*1.02*	*88.70*	*13.04*	*12.06*	*92.48*
7.2	*on the competitive market*	TWh	*1.52*	*1.60*	*105.26*	*22.41*	*18.54*	*82.73*
8	Transmission – Injection component	TWh	5.03	4.73	94.06	58.07	51.35	88.43
9	Transmission – Extraction component	TWh	5.11	4.81	94.27	58.86	52.26	88.80
10	System services	TWh	5.11	4.81	94.27	58.86	52.26	88.80
11	Actual transmission grid losses	TWh	0.09	0.09	100.45	1.00	0.99	99.85
12	Heat generated for delivery	Tcal	2621.45	2601.86	99.25	18703.07	17365.32	92.85
13	Heat in co-generation	Tcal	2325.96	2237.69	96.20	15498.34*	14297.03	92.25

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 – December 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 stardardised 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 December 2009 compared to the month before and December 2008;
- for 2009 compared to 2008-2007

TRANSACTIONS ON THE WHOLESALE MARKET	November 2009	December 2009	December 2008
1. BILATERAL CONTRACTS' MARKET			
traded volume (GWh)	5845[1)]	6087	5572
% from internal consumption (%)	134.0[1)]	129.1	119.1
average price (lei/MWh)	*162.69*[1)]	*165.05*	162.45
1.1. Sales on regulated contracts			
traded volume (GWh)	2833[1)]	2879	2800
% from internal consumption (%)	65[1)]	61.1	59.9
average price (lei/MWh)	*170.11*[1)]	172.39	170.26
1.2. Sales on negociated contracts*			
traded volume (GWh)	3012***	3208***	2772
% from internal consumption (%)	69.1	68.0	59.3
average price (lei/MWh)	*155.72*	158.46	154.56
2. EXPORT			
traded volume** (GWh)	198	171	512
% from internal consumption (%)	4.5	3.6	10.9
average price (lei/MWh)	*165.24*	156.54	204.71****
3. CENTRALISED MARKETS OF CONTRACTS			
traded volume (GWh)	520	387	718
% from internal consumption (%)	11.9	8,2	15.3
average price (lei/MWh)	*191.27*	191.25	179.83
4. DAY AHEAD MARKET			
traded volume (GWh)	460	552	480
% from internal consumption (%)	10.5	11.7	10.3
average price (lei/MWh)	*121.24*	*159.41*	*152.99*
5. BALANCING MARKET			
traded volume (GWh)	268	385	307
% from internal consumption (%)	6.1	8.2	6.6
upward volume (GWh)	94	252	128
average negative imbalance price(lei/MWh)	240.71	242.26	245.19
downward volume (GWh)	174	133	179
average positive imbalance price (lei/MWh)	35.91	47.03	65.57
INTERNAL CONSUMPTION (includes distribution and transmission losses) (GWh)	4362	4716	4678

Note: 1) Data published in the Report on monitoring results of the electricity market – November 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 not subject of ANRE regulations and not comprised within the market participants' reports*

*****Prices in December 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*

TRANSACTIONS ON THE WHOLESALE MARKET	2007	2008	2009
1. BILATERAL CONTRACTS' MARKET			
traded volume (GWh)	56569	63848	64921
% from internal consumption (%)	105.9	116.9	130.0
average price (lei/MWh)	142.16	148.39	*161.37*
1.1. Sales on regulated contracts			
traded volume (GWh)	29395	29104	30334
% from internal consumption (%)	55.1	53.3	60.8
average price (lei/MWh)	157.17	158.15[1)]	*164.44*
1.2. Sales on negociated contracts*			
traded volume (GWh)	27174	34745	34587***
% from internal consumption (%)	50.9	63.6	69.3
average price (lei/MWh)	125.82[1)]	146.07	*158.68*
2. EXPORT			
traded volume** (GWh)	3381	5366	3154
% from internal consumption (%)	6.33	9.8	6.3
average price (lei/MWh)	141.24[2)]	191.22[3)]	170.23
3. CENTRALISED MARKETS OF CONTRACTS			
traded volume (GWh)	5876	8770	6329
% from internal consumption (%)	11.0	16.1	12.7
average price (lei/MWh)	166.99	177.04	192.54
4. DAY AHEAD MARKET			
traded volume (GWh)	5043	5208	6347
% from internal consumption (%)	9.4	9.53	12.71
average price (lei/MWh)	*161.70*	*188.53*	*144.77*
5. BALANCING MARKET			
traded volume (GWh)	3492	3546	3206
% from internal consumption (%)	6.5	6.5	6.4
upward volume (GWh)	1805	2198	1272
average negative imbalance price(lei/MWh)	222.51	278.12	243.05
downward volume (GWh)	1687	1348	1934
average positive imbalance price (lei/MWh)	64.58	66.54	74.17
INTERNAL CONSUMPTION (includes distribution and transmission losses) (GWh)	53368	54627****	49923

Note:

* *Sales to final consumers are not included and the average prices for 2007 are calculated based on 1) 99% of total volumes, corresponding to quantities for which the participants have reported also the prices.*

** *Export volumes represent the quantities for which TSO applies the injection component of transmission tariff, which in some cases are different to those reported as traded by participants; in 2007 and 2008 the average price was calculated based on 2) 97% and 3) 94% from the total volume, corresponding to quantities for which the participants have also reported the prices (all values included the injection component, most of them also included the extraction component, system services and market administration tariffs, capacity interconnection value)*

*** *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*

**** *Data published within some of the Reports on monitoring results of the electricity market were modified due to some corrections*

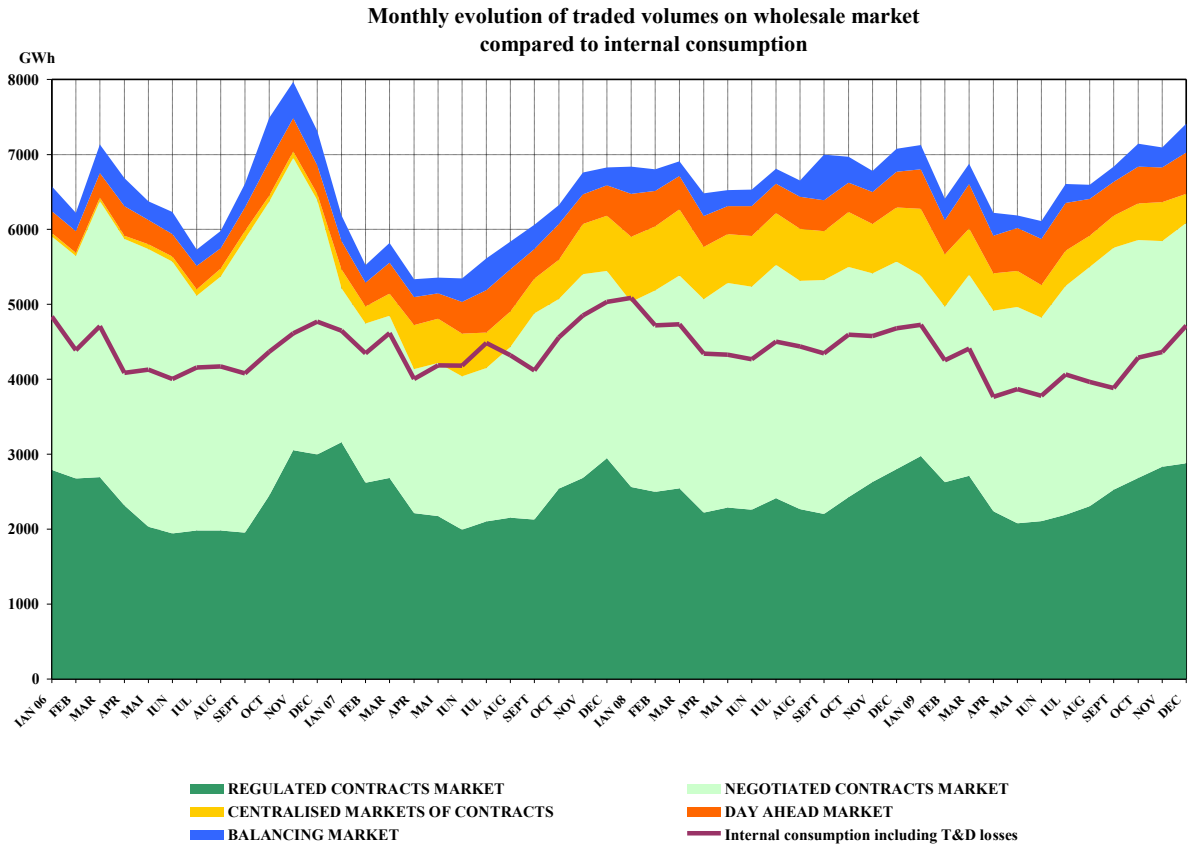
1) Comprises an average value of injection tariff (approx. 7 lei/MWh)

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 negociated 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.

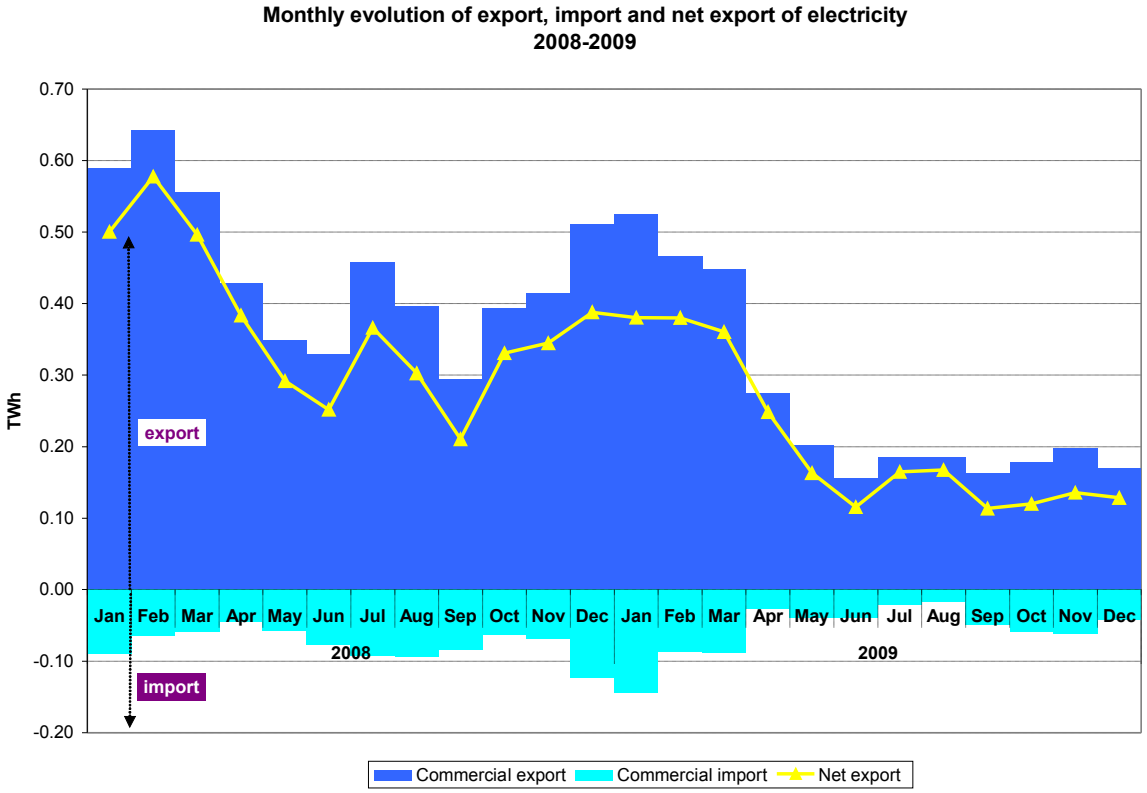
The evolution of the relation between the volumes sold on each market and the estimated internal consumption, during 2006-2009, is presented below:



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

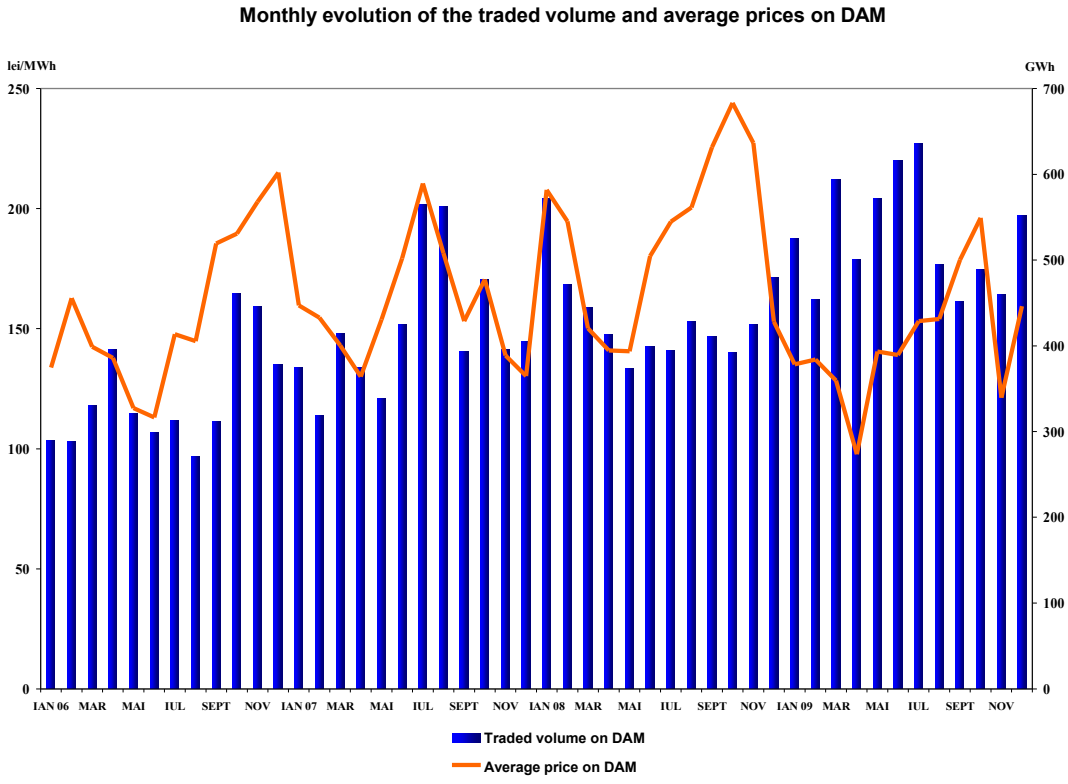
Note: In the above graph, the volumes traded on negociated contracts' market do not include the export trades

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.



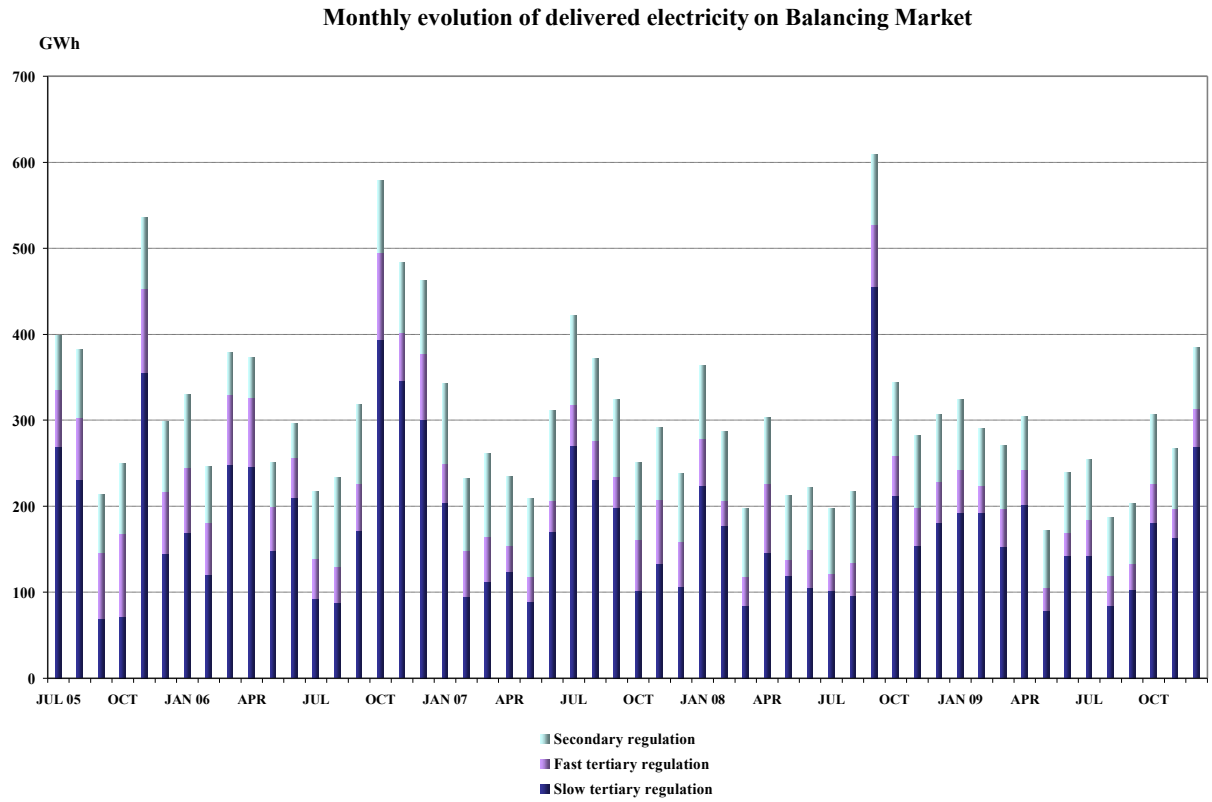
Source: Monthly reports of SC Opcom SA and CN Transelectrica SA – processed by MG

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 December 2009 is presented in the following table:

December 2009	Dispach order (GWh)	Delivered electricity (GWh)	Deviation (%)
Secondary regulation	**72**	**72**	
upward	32	32	
downward	39	39	
Fast tertiary regulation	**50**	**44**	**12**
upward	27	24	9
downward	23	19	16
Slow tertiary regulation	**291**	**270**	**7**
upward	205	195	5
downward	87	74	14
TOTAL	**413**	**385**	
upward	264	252	
downward	149	133	
INTERNAL CONSUMPTION		**4716**	
% share of traded volumes from internal consumption		***8.2%***	

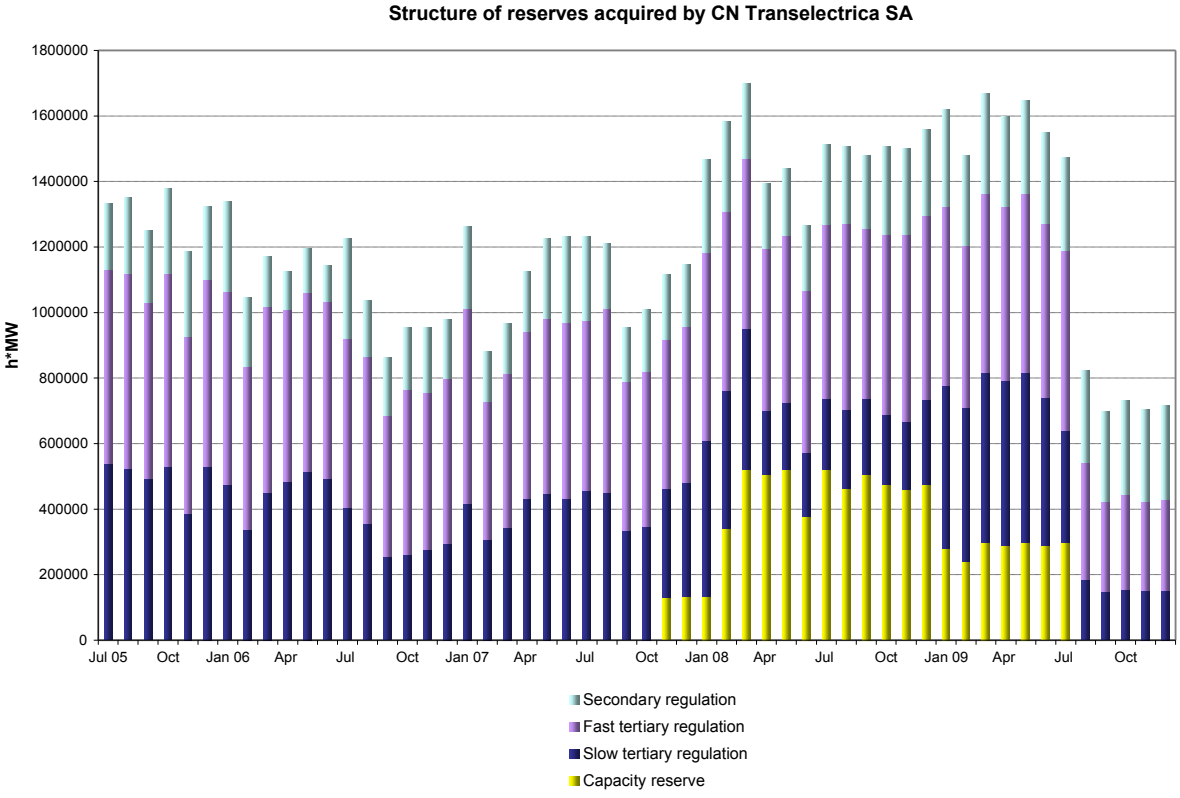
Source: Monthly reports of CN Transelectrica SA – processed by MG

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



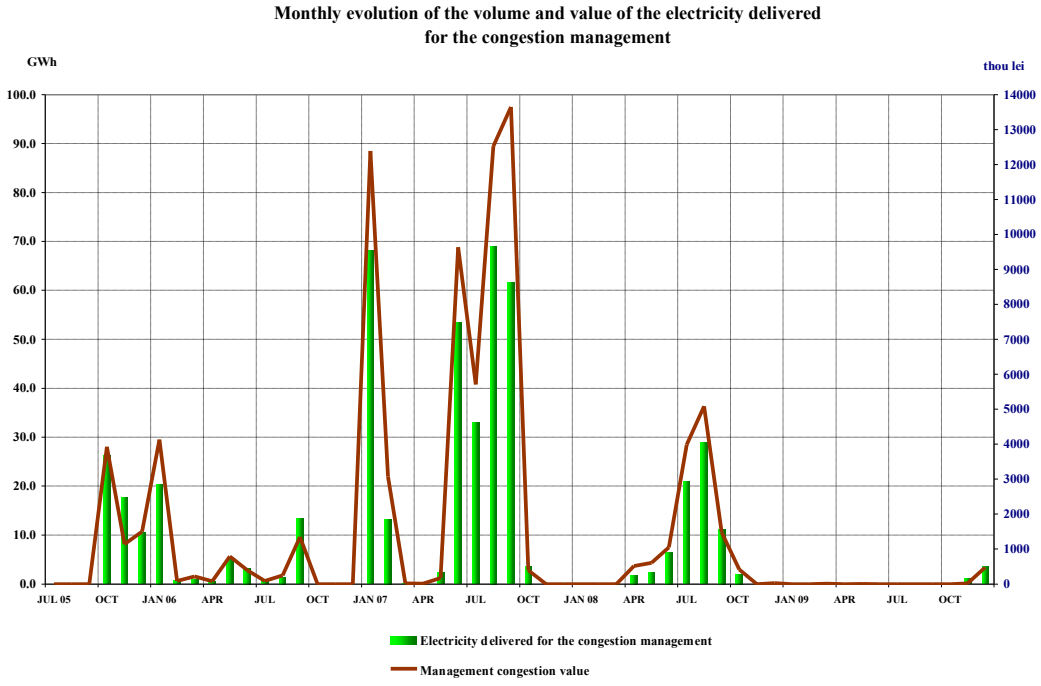
Source: Monthly reports of CN Transelectrica SA – processed by MG

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 Transelectrica SA starting with July 2005:



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

The following graph presents the 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 starting with July 2005.



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

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

Generators

The structure of electricity sales obligations contracted before delivery day by the electricity generators with dispatchable units in December 2009 compared to previous month and December 2008 was the following:

- GWh -

Transaction type	November 2009	December 2009	December 2008
0	1	2	3
Regulated to incumbents, thermal generators	1234.21	1350.97	1342.78
Regulated to incumbents, hydro generator	232.51	244.68	174.96
Regulated to incumbents, nuclear generator	486.55	518.35	505.36
Regulated for distribution losses, thermal generators	368.80	425.01	331.98
Regulated for distribution losses, hydro generator	39.98	42.72	63.24
Regulated for distribution losses, nuclear generator	134.79	140.48	147.93
Regulated for transmission losses, thermal generator	78.80	82.38	84.84
Regulated, to other generators (with return of obligation within a year)	257.27	74.47	149.05
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	76.52	145.56	102.52
Negotiated, to suppliers	1069.04	1054.68	1082.45
Contracts concluded on centralized markets (CMBC, CMBC-NC, RCE)	520.48	386.91	718.55
Supply to consumers (regulated and competitive)	202.58	211.65	237.83
Export	94.27	104.19	119.37
DAM	145.93	253.40	204.29
Total	4941.74	5035.45	5265.15

Source: Monthly reports of generators – processed by MG

Suppliers

In December 2009, 71 companies having as main activity the supply of electricity concluded transactions on the electricity market; from these, 30 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

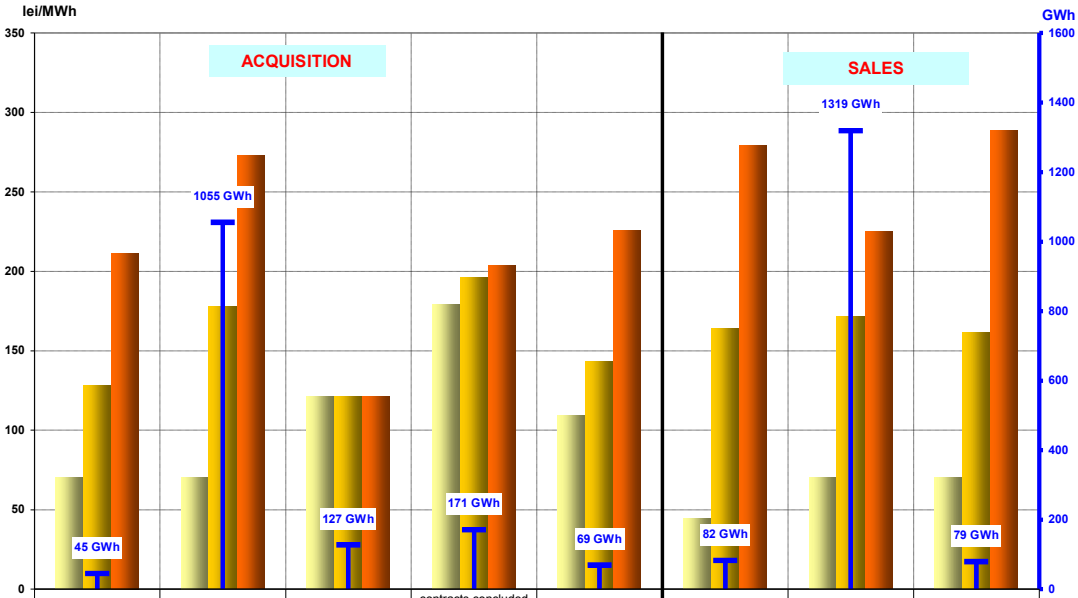
The following table shows the activity for December 2009 compared to December 2008 of the suppliers acting exclusively on WEM, acquisitions and sales being split by categories of markets/participants:

- GWh -

Transactions' structure of suppliers acting exclusively on WEM	December 2008	December 2009
Acquisitions		
Import	16.20	44.81
Negotiated contracts with suppliers	705.54	1054.85
Negotiated contracts with generators	224.13	127.51
Contracts concluded on centralized markets	221.81	170.69
DAM	44.65	68.63
Sales		
Export	390.00	82.44
Negociated contracts with suppliers	722.15	1318.74
DAM	103.24	78.80

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 December 2009:

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



	import	negotiated contracts with suppliers	negotiated contracts with generators	contracts concluded on centralised markets	DAM	export	negotiated contracts with suppliers	DAM
Min price	70.00	70.45	121.60	179.00	109.26	44.75	70.43	70.00
Weighted average price	128.23	178.00	121.37	196.42	143.01	164.06	171.69	161.81
Max price	211.48	273.23	121.48	203.49	225.53	279.43	225.00	288.52
Traded volume	45	1055	127	171	69	82	1319	79

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

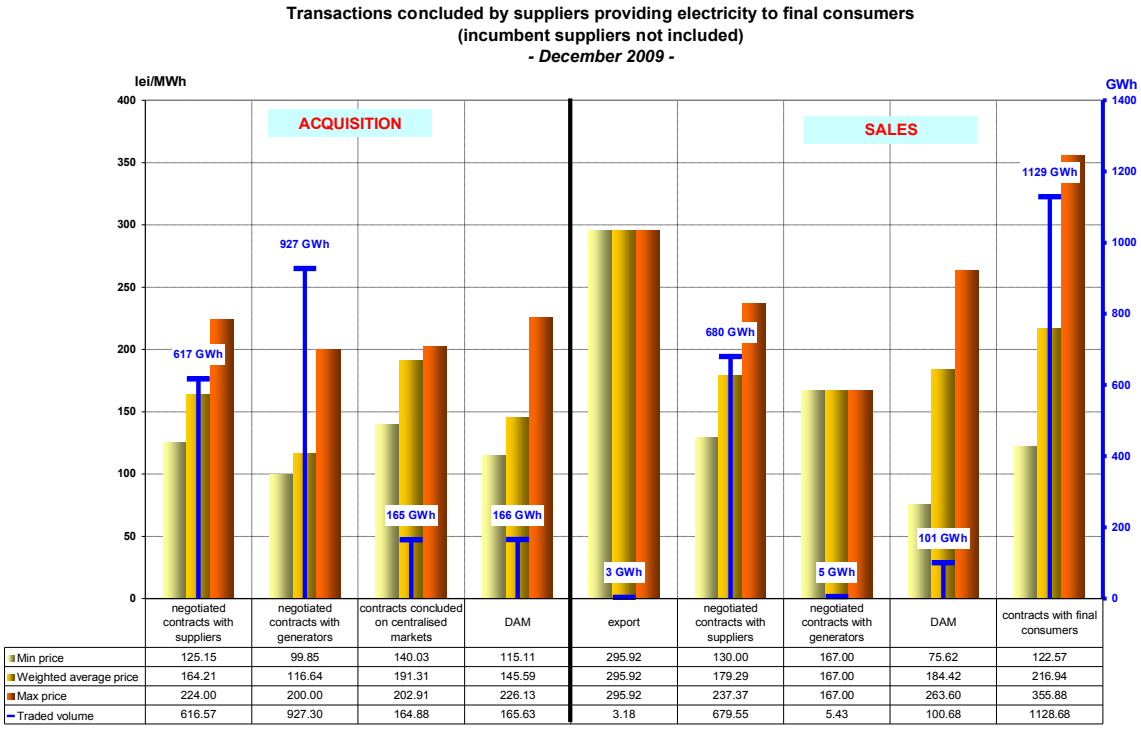
Active suppliers on REM (the incumbent suppliers are not included)

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

- GWh -

Transactions' structure of suppliers providing electricity to final consumers (the incumbent suppliers are not included)	December 2008	December 2009
Acquisitions		
Import	61.41	-
Negociated contracts with suppliers	626.06	616.57
Negociated contracts with generators	840.52	927.30
Contracts concluded on centralized markets	444.09	164.88
DAM	41.34	165.63
Sales		
Export	2.49	3.18
Negociated contracts with suppliers	796.96	679.55
Negociated contracts with generators	6.08	5.43
DAM	164.16	100.68
Final consumers	1014.85	1128.68

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 December 2009:



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

Incumbent suppliers

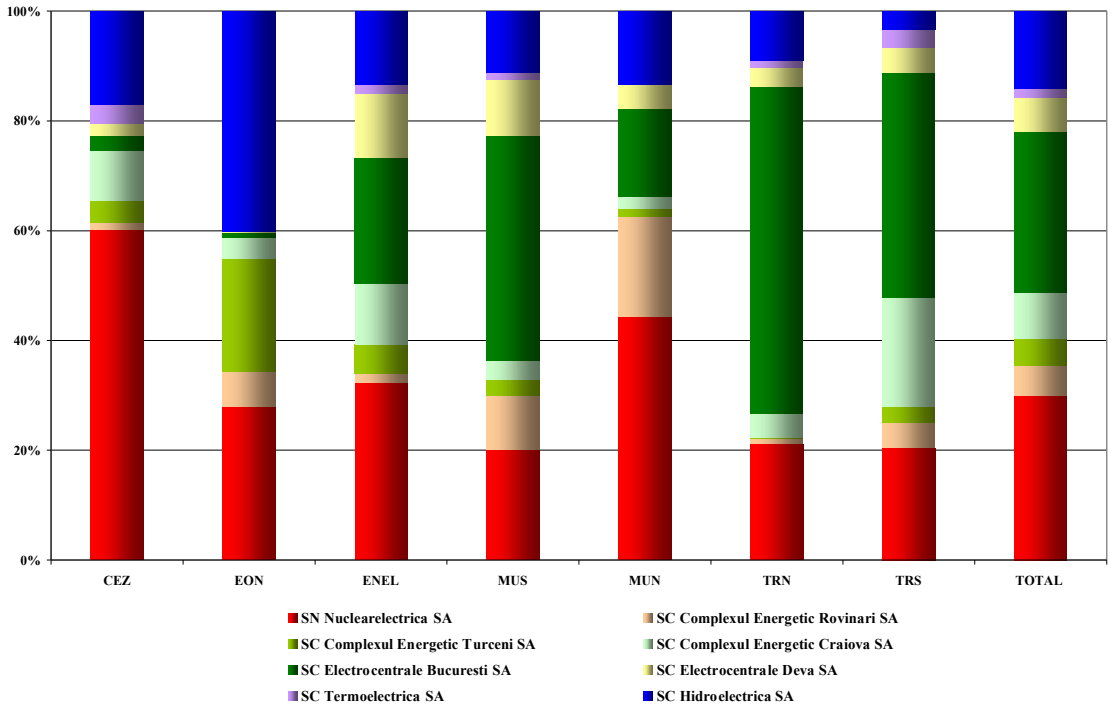
Electricity acquisition structure of incumbent suppliers (before the delivery day), for supplying the regulated market consumers, is presented in the table below, for December 2009 compared to the situation of December 2008:

- GWh -

Acquisition structure of incumbent suppliers for regulated REM component	December 2008	December 2009
Regulated contracts with generators	2077.72	2176.70
Negociated contracts	48.63	38.14
DAM	116.08	92.02

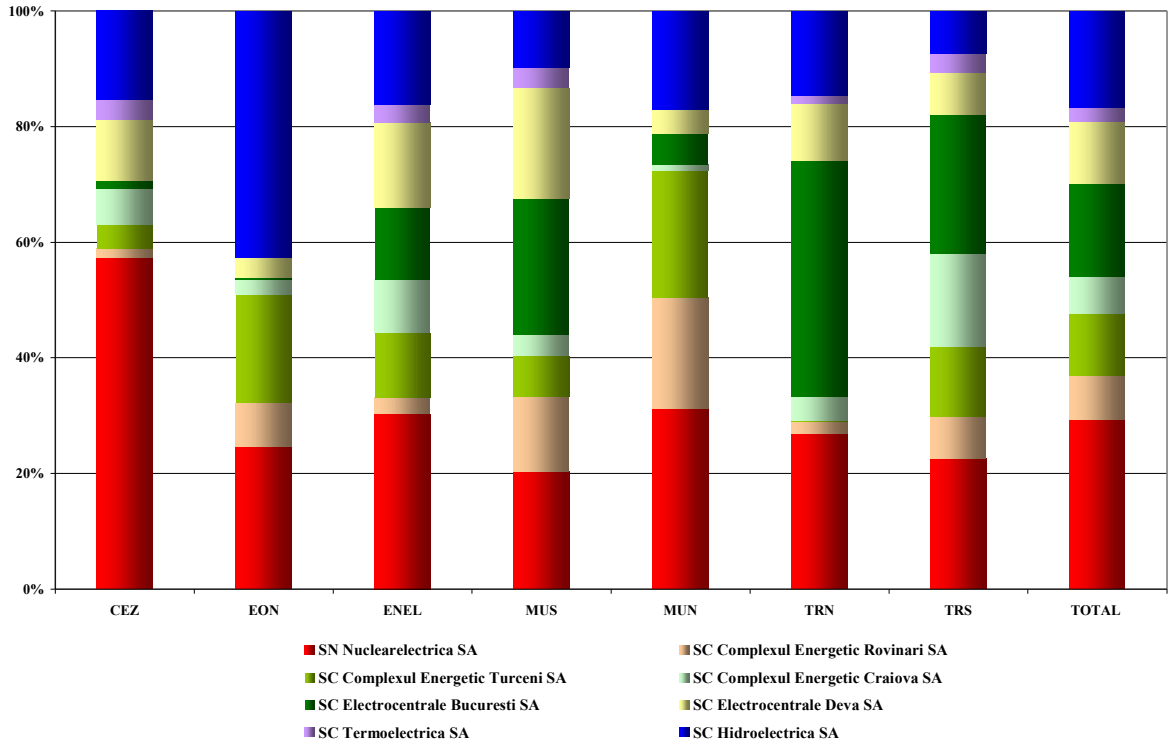
The structure of the electricity purchased by the incumbent suppliers from the main generators on regulated contracts is presented in the following graph for December 2009 and the entire year 2009:

Electricity aquisition from main generators, on regulated contracts, of incumbent suppliers for delivering electricity to final consumers on regulated market
- December 2009 -



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

Electricity aquisition from main generators, on regulated contracts, of incumbent suppliers for delivering electricity to final consumers on regulated market
- 2009 -



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

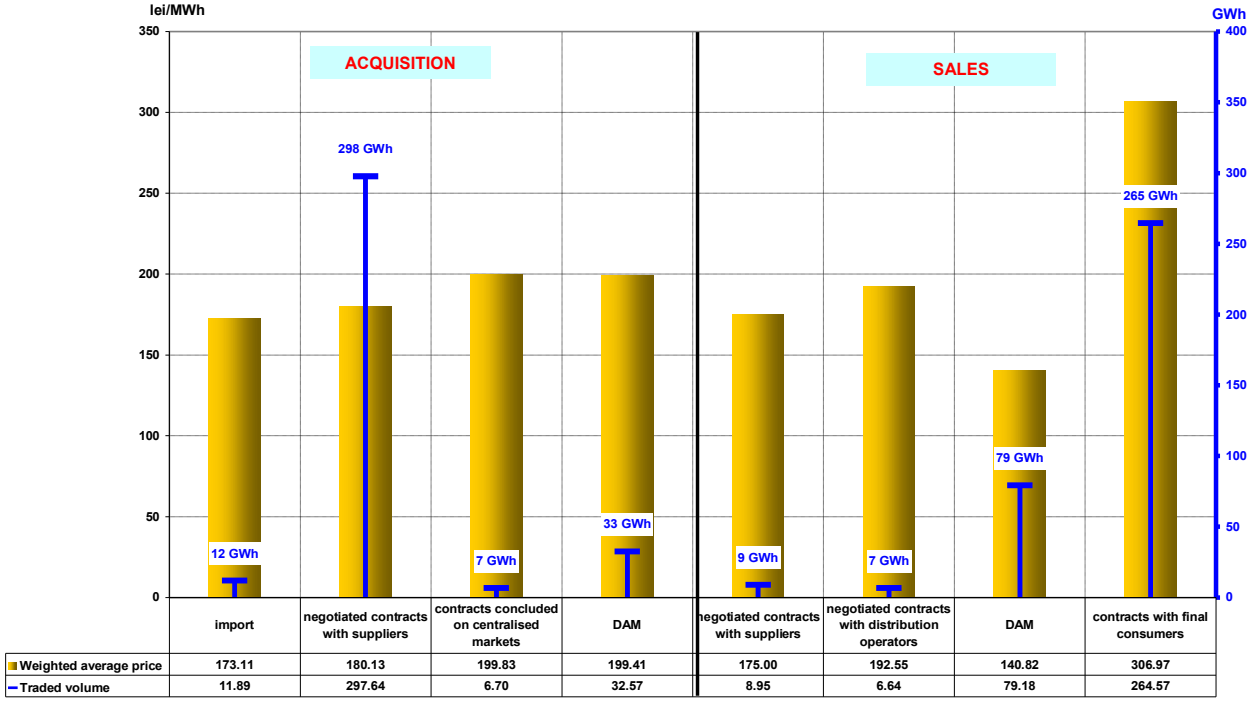
Likewise to the situation presented for the regulated REM, the table below presents the structure of incumbent suppliers' transactions (before the delivery day), corresponding to the competitive REM (energy supplied at negotiated prices to the consumers who renounced to regulated tariffs) for December 2009 compared to December 2008:

- GWh -

Transactions' structure of incumbent suppliers for competitive REM component	December 2008	December 2009
Acquisitions		
Import	46.40	11.89
Negotiated contracts with suppliers	202.12	297.64
Negotiated contracts with generators	16.69	-
Contracts concluded on centralized markets	52.08	6.70
DAM	55.76	32.57
Sales		
Negotiated contracts with suppliers	61.99	8.95
Negotiated contracts with distributors	-	6.64
DAM	27.98	79.18
Final consumers	265.19	264.57

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 December 2009:

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



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

Main distribution operators

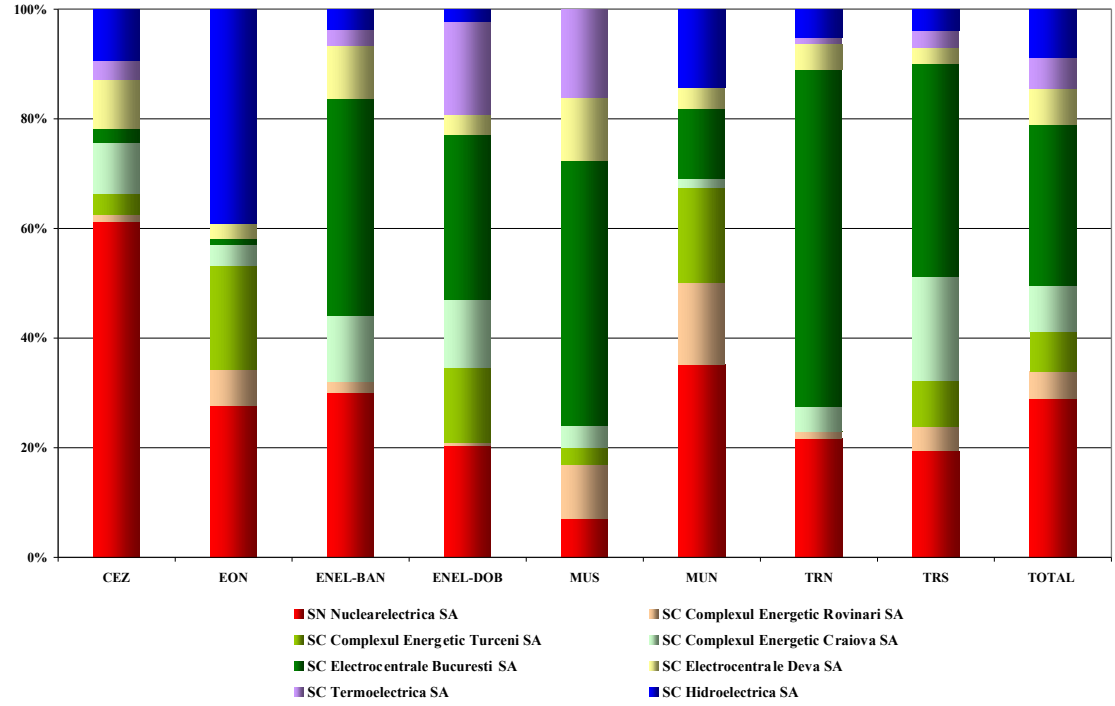
The following table shows the electricity acquisition structure of main distribution operators (before the delivery day), for covering the distribution network losses, for December 2009 compared to December 2008:

- GWh -

Acquisition structure	December 2008	December 2009
Regulated contracts with generators	543,14	608,21
Negotiated contracts with suppliers	-	6,64
DAM	166,77	145,31

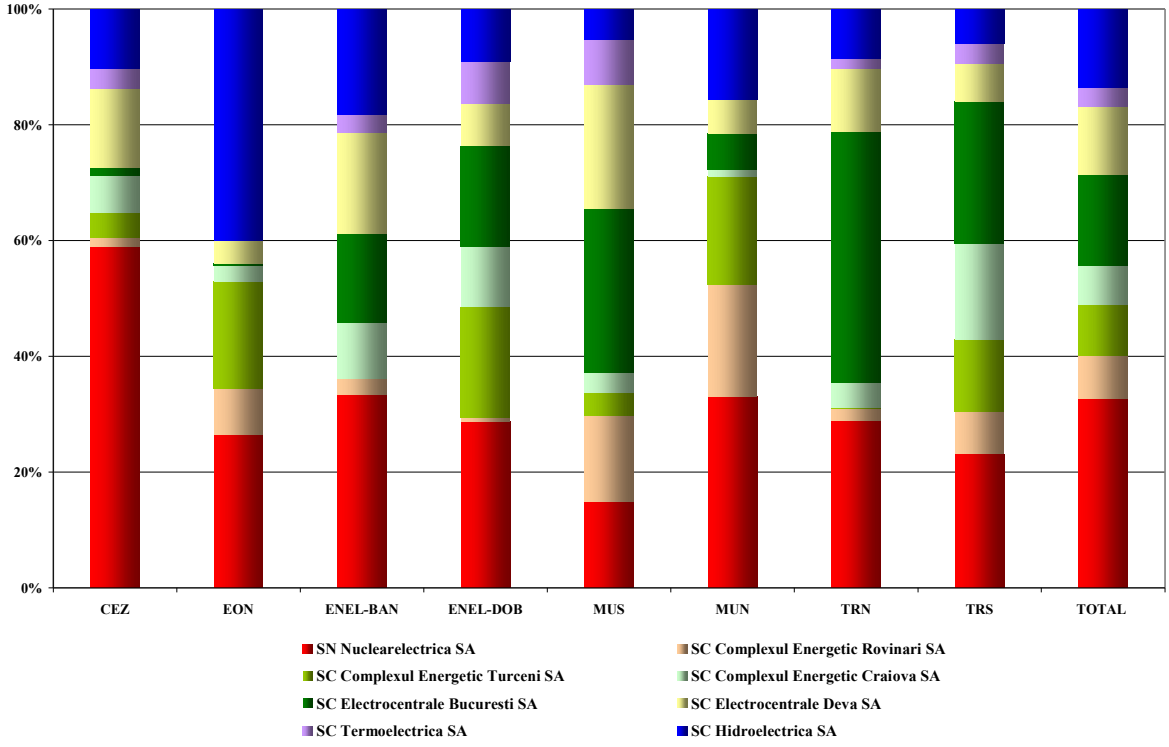
The electricity purchased by the 8 distribution operators from the main generators on regulated contracts, for covering their network losses is presented in detail in the following graph, for December 2009 and the entire year 2009:

Electricity acquisition of distribution operators from main generators, on regulated contracts, for covering the distribution losses
- December 2009 -



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

Electricity acquisition of distribution operators from main generators, on regulated contracts, for covering the distribution losses
2009



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

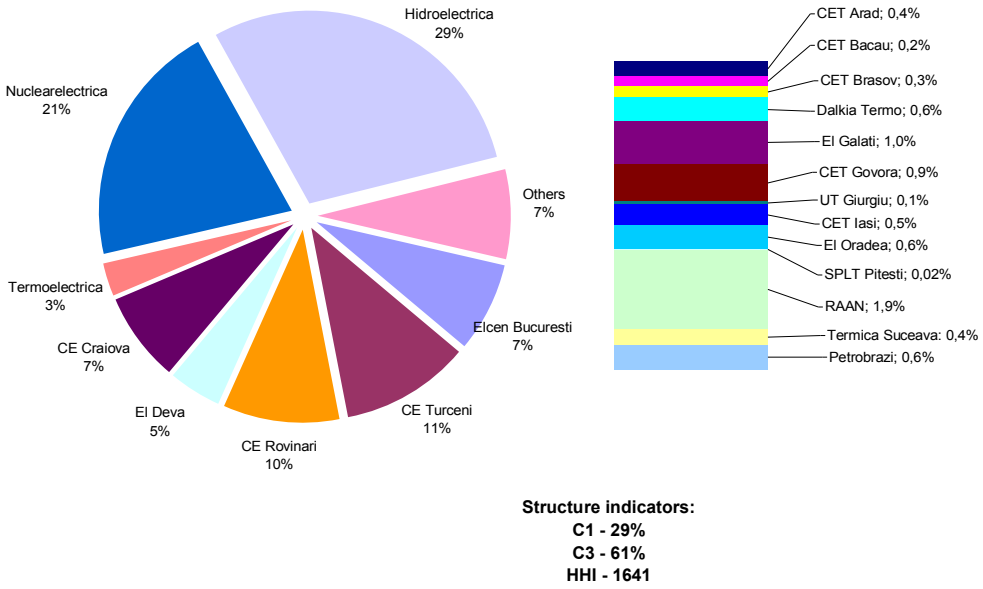
The market structure regarding the electricity generation offers an initial basis for analyzing the possible competitiveness level of the electricity market.

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

Concentration indicators - December 2009 -	C1 (%)	C3 (%)	HHI
Value	25	58	1422

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

Market shares of generators with dispatchable units by delivered electricity
- 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 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 December 2009 and the entire year 2009:

Structure/concentration indicators of BM - DECEMBER 2009 -	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
C1 - % -	69	71	62	61	60	52
C3 - % -	92	91	84	78	85	78
HHI	5078	5228	4114	4010	4005	3165

Structure/concentration indicators of BM - YEAR 2009 -	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
C1 - % -	64	64	55	47	39	32
C3 - % -	92	92	83	78	78	70
HHI	4526	4501	3543	2843	2478	2017

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 December 2009 and the entire year 2009:

Concentration indicators on ASM - December 2009 -		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve	Capacity reserve
regulated component	contracted quantity (h*MW)	288620	279480	150660	0
	C1 (%)	69.6	83.3	86.4	0
	C3 (%)	90.2	92.0	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 indicators on ASM - 2009 -		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve	Capacity reserve
regulated component	contracted quantity (h*MW)	3418580	5209885	2571450	0
	C1 (%)	62.2	80.2	71.7	0
	C3 (%)	88.7	90.4	100	0
competitive component	contracted quantity (h*MW)	0	0	1530106	1987304
	C1 (%)	0	0	42.1	34,2
	C3 (%)	0	0	82.7	86.1
	HHI	0	0	2869	2692

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 aplicable regulations.

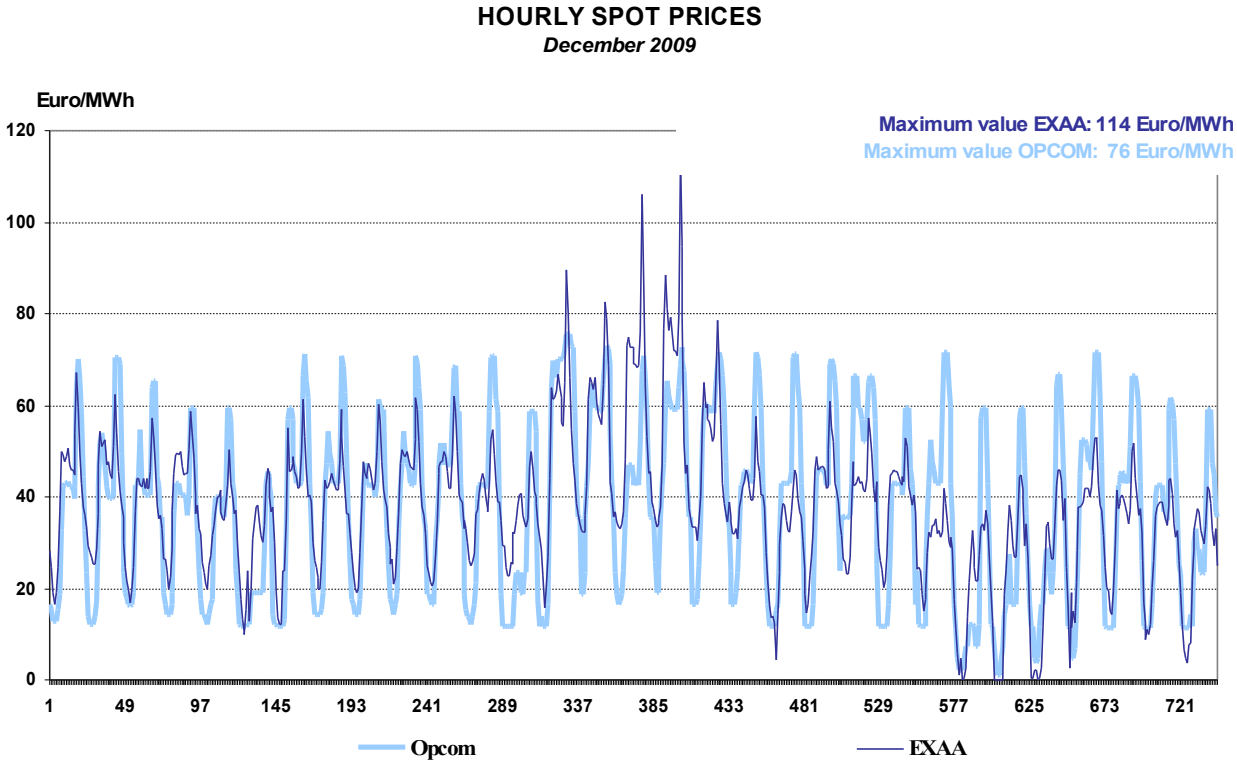
The concentration indicators on DAM reflects the level of competition between sellers and between buyers respectively, the dynamics of both influencing the price level. The following table presents C1, C3 and HHI for buying and for selling side of DAM in December 2009, based on quantities traded by participants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

Concentration indicators on DAM - December 2009 -	C1 (%)	C3 (%)	HHI
Buying transactions	17	39	811
Selling transactions	17	34	677

7. Price evolution on wholesale electricity market

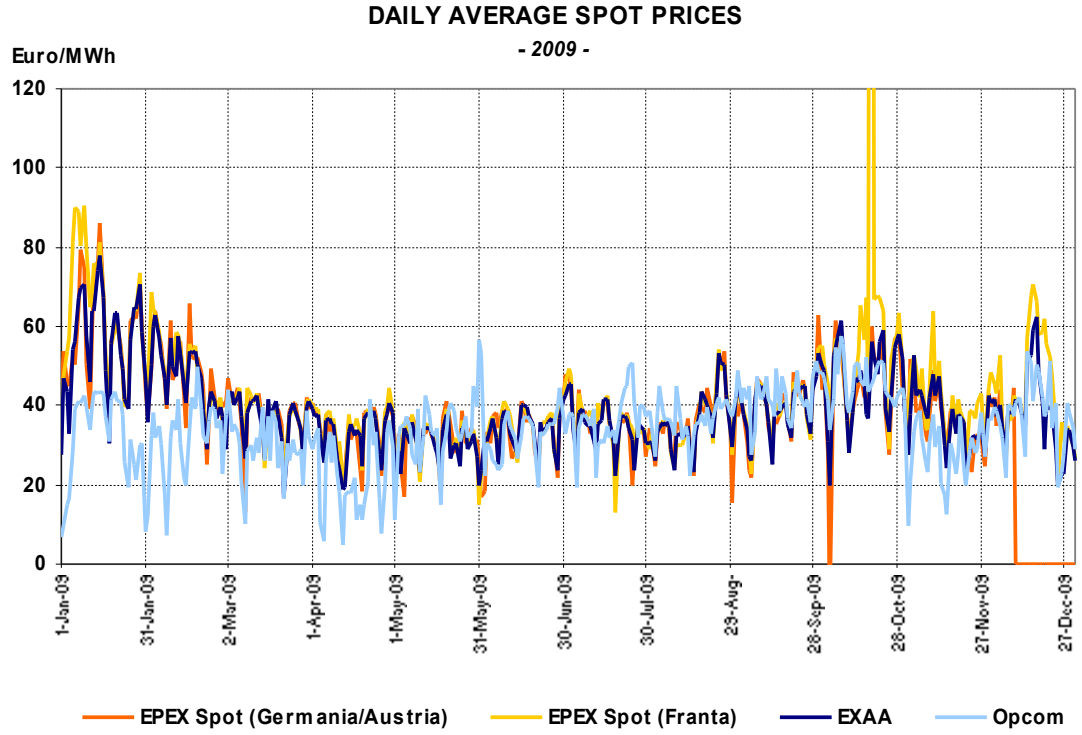
SC Opcom SA is the administrator of DAM. The MCP on DAM represents a reference value for the prices on the bilateral contracts. The evolutions of hourly and daily average prices on DAM in December 2009 and for 2009 are presented in the following graphs, along with the prices on EEX and EXXA.

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.



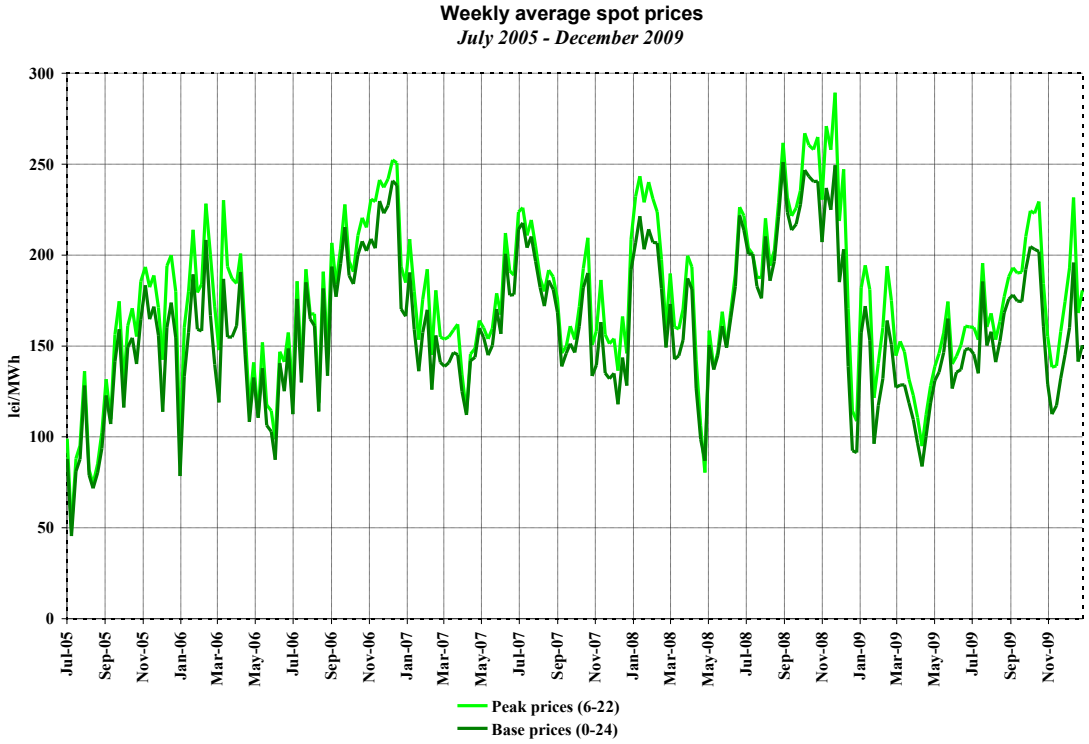
Source: Daily reports of SC Opcom SA and published data of EXAA and EEX – processed by MG

Note: starting from December 2009 the published data from EEX are no longer available for ANRE



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

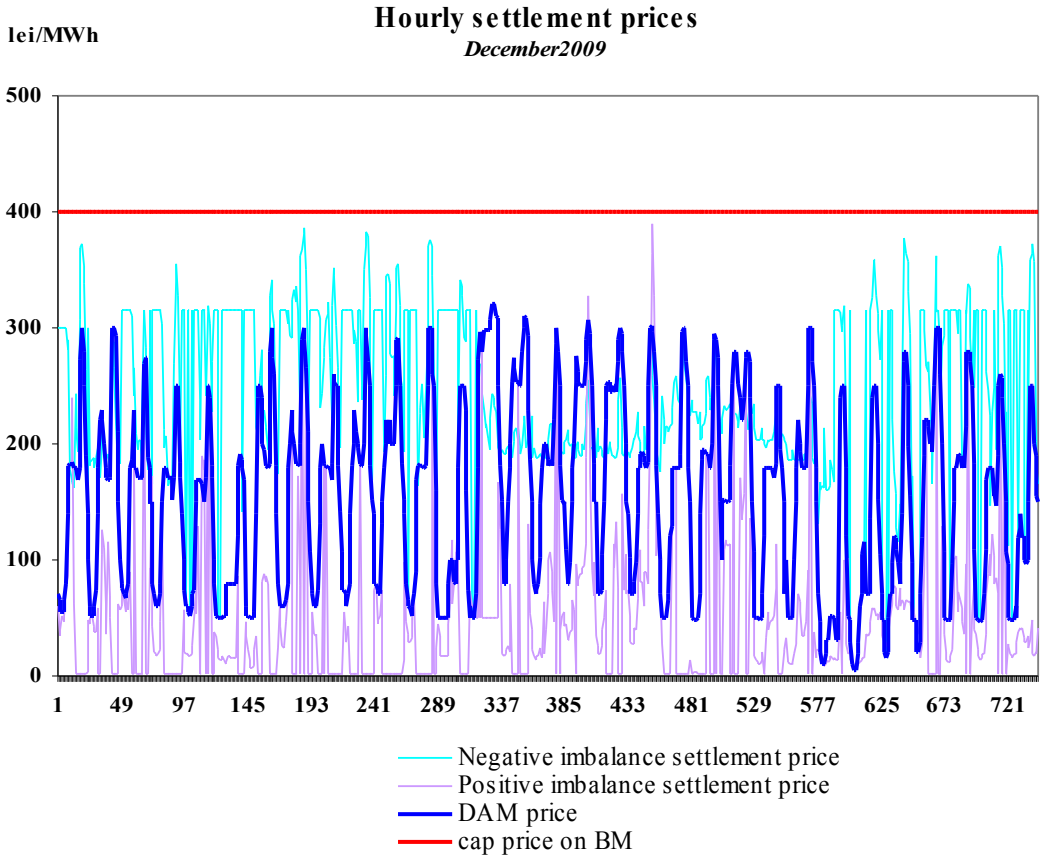
The following graph presents the evolution of weekly average spot prices starting with July 2005:



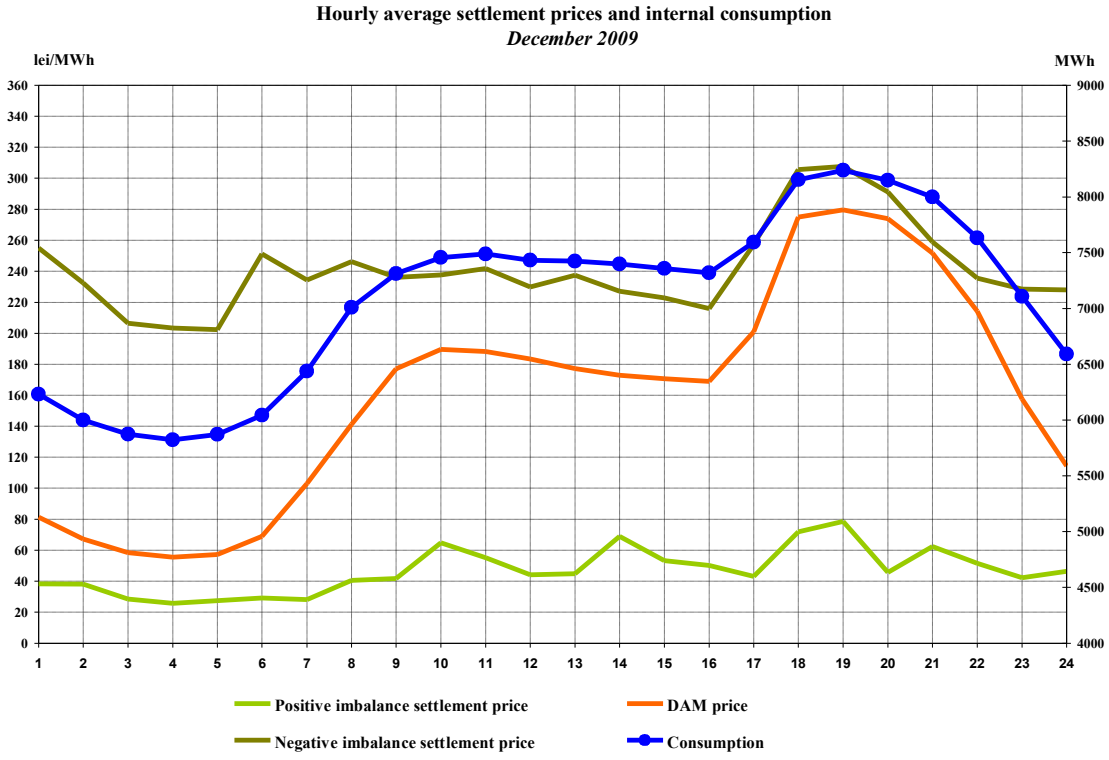
Source: Daily reports of SC Opcom SA – processed by MG

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.

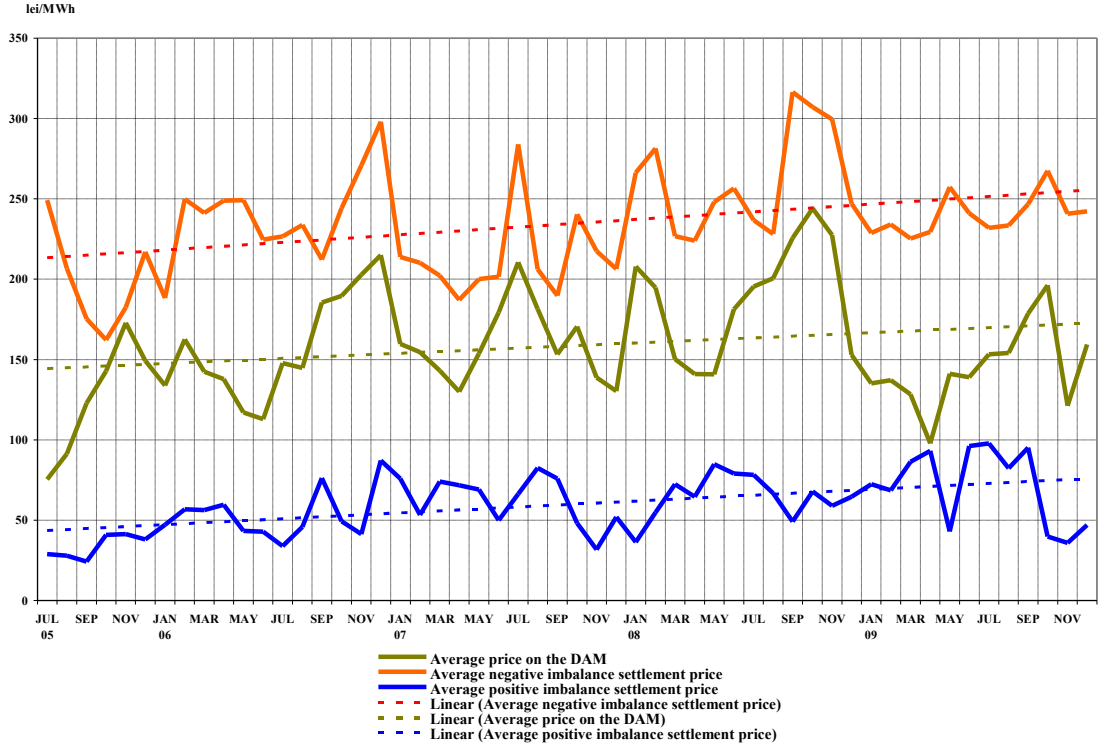


Source: Daily/monthly reports of SC Opcom SA – processed by MG



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

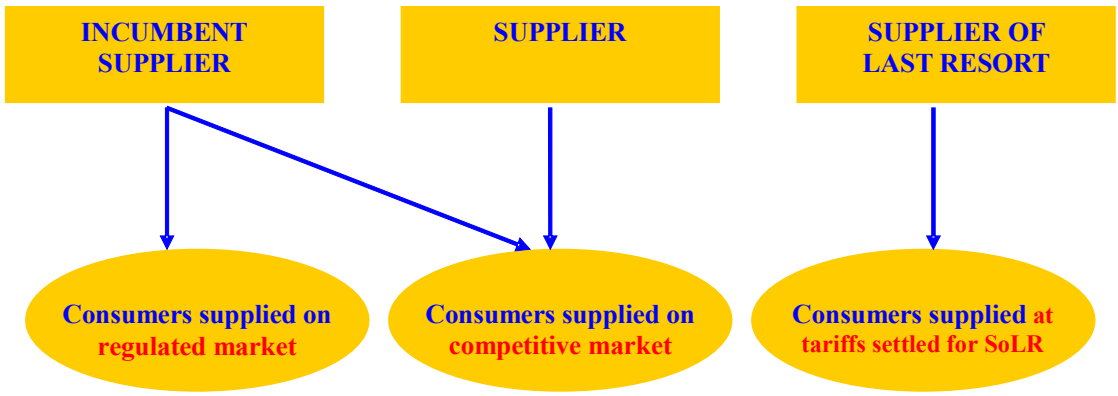
Monthly average prices on DAM and BM
July 2005 - December 2009



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

III. RETAIL ELECTRICITY MARKET

1. Structure of the retail electricity market

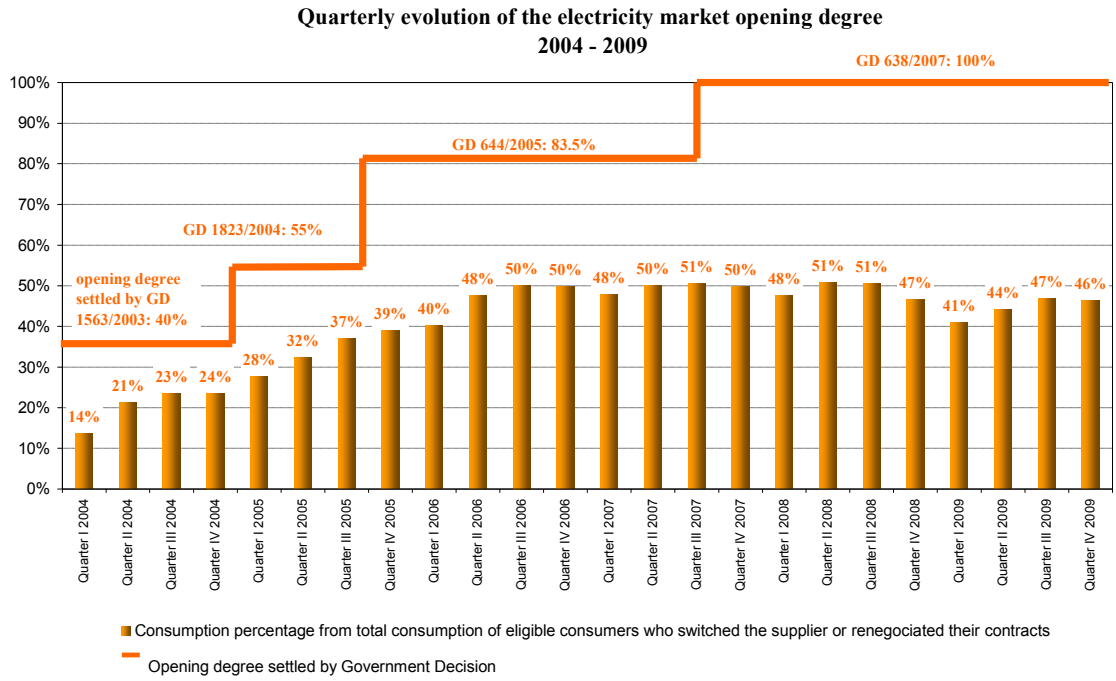


2. Steps in the opening process of the electricity market

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 – December 2009. The values presented are cumulated from the beginning of the opening process and are presented quarterly:

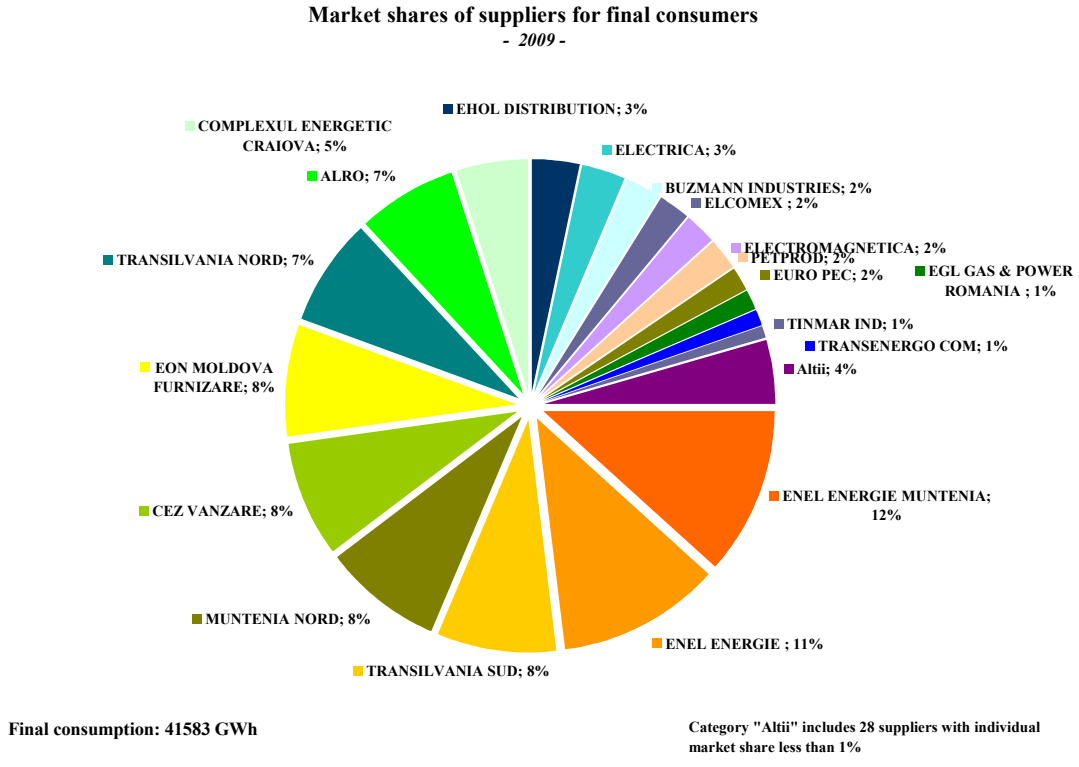


Source: Monthly reports of the final consumers' suppliers – processed by MG

4. *Market shares of the electricity suppliers*

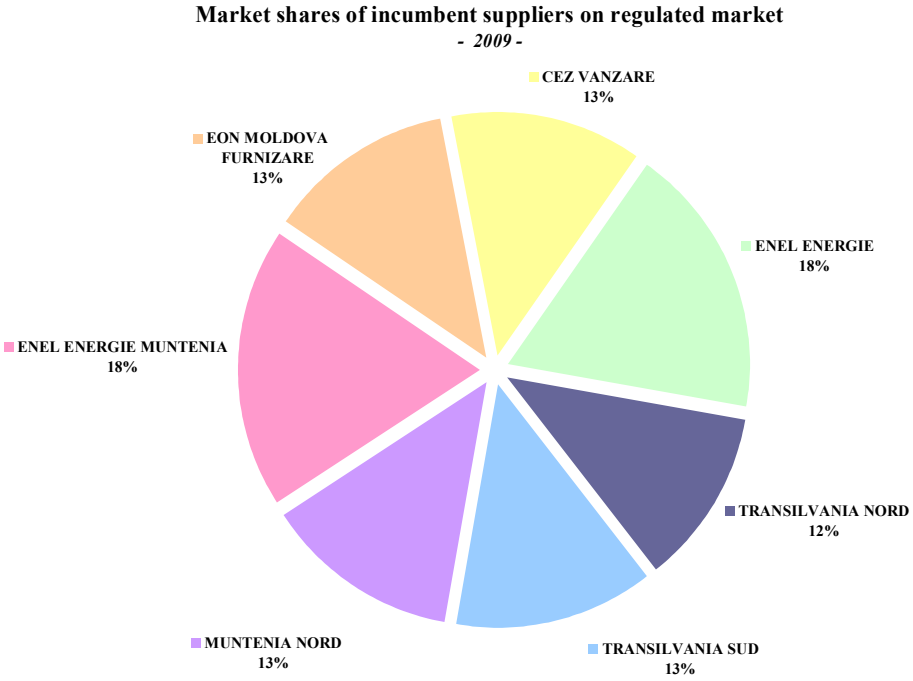
In the following three graphs there are presented the market shares of electricity suppliers on the retail market, calculated:

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 renegociated 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,

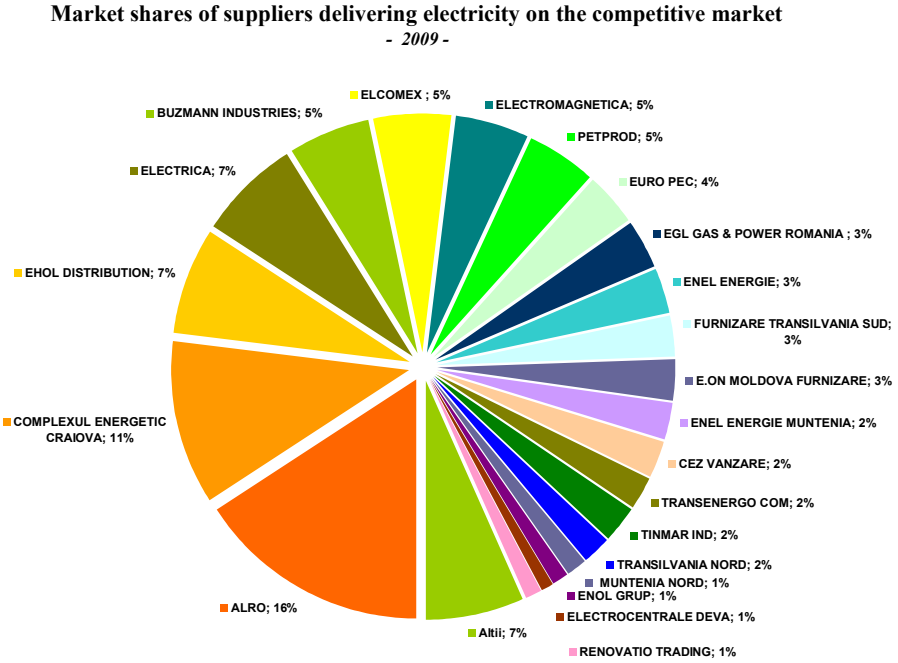


Consumption of consumers supplied at regulated tariffs: 23046 GWh

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 negociated prices on competitive component of REM:



Consumption on competitive market: 18536 GWh
Structure indicators:
HHI - 667 ; C3 - 34%; C1 - 16%

Category "Altii" 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.

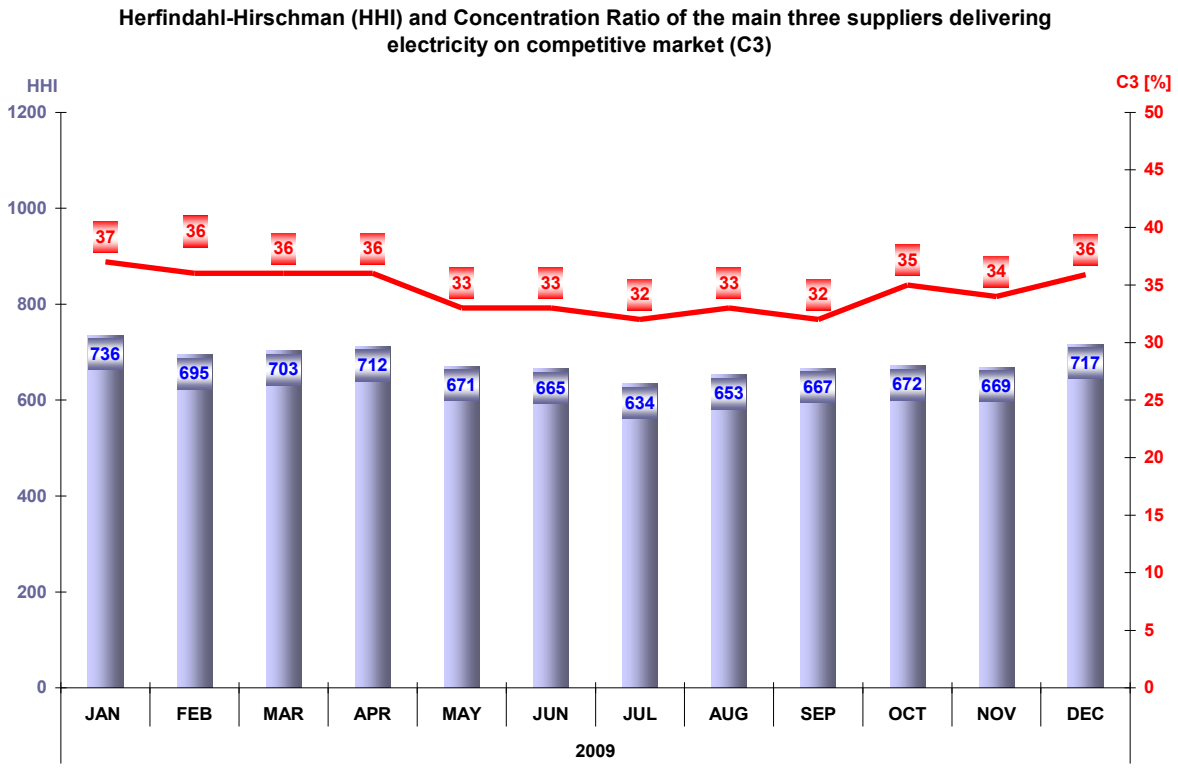
The electricity supplied to the final consumers used for calculating the market share of every supplier includes also the self-consumption of that particular supplier (e.g. consumers with supply license who buy electricity for themselves from WEM as competitive suppliers).

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 December 2009:

Number of suppliers	Share of sales to final consumers from total sales transactions			
	100%	75% - 100%	50% - 75%	<50%
Competitive	8	10	10	6
Incumbent	2	4	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 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 for and the number of active suppliers in December 2009 and the entire year 2009, 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:

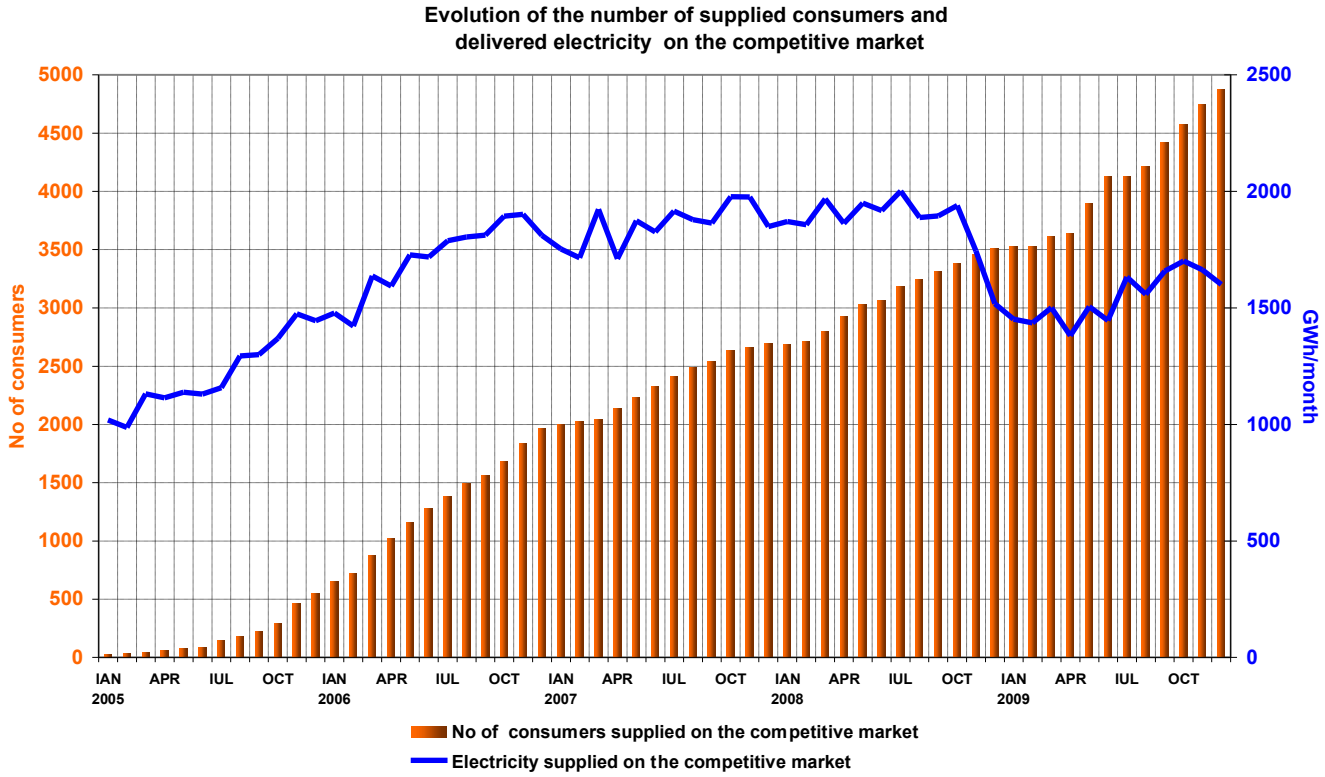
Indicators - December 2009	Consumer category							Total REM
	IA	IB	IC	ID	IE	IF	Other	
C1 - % -	95	24	14	17	20	20	30	**16**
C3 - % -	100	49	39	37	45	48	64	**36**
HHI	9165	1197	776	753	952	1287	1729	**717**
Consumption - GWh -	9.4	49	92	304	176	124	847	**1601**
No. of SUPPLIERS	11	30	37	37	20	12	13	**45**
No. of incumbent suppliers	6	7	7	6	4	3	1	**7**
No. of competitive suppliers	4	21	27	29	15	9	9	**34**
No. of producers	1	2	3	2	1	0	3	**4**

Indicators - Year 2009	Consumer category							Total REM
	IA	IB	IC	ID	IE	IF	Other	
C1 - % -	92	29	17	16	16	25	30	**16**
C3 - % -	98	52	37	37	39	47	64	**34**
HHI	8610	1385	782	714	765	1303	1735	**666**
Consumption - GWh -	43.1	438	1068	3637	2132	1644	9574	**18536**
No. of SUPPLIERS	11	31	37	40	23	12	13	**45**
No. of incumbent suppliers	6	7	7	7	6	3	1	**7**
No. of competitive suppliers	4	22	27	30	16	9	9	**34**
No. of producers	1	2	3	3	1	0	3	**4**

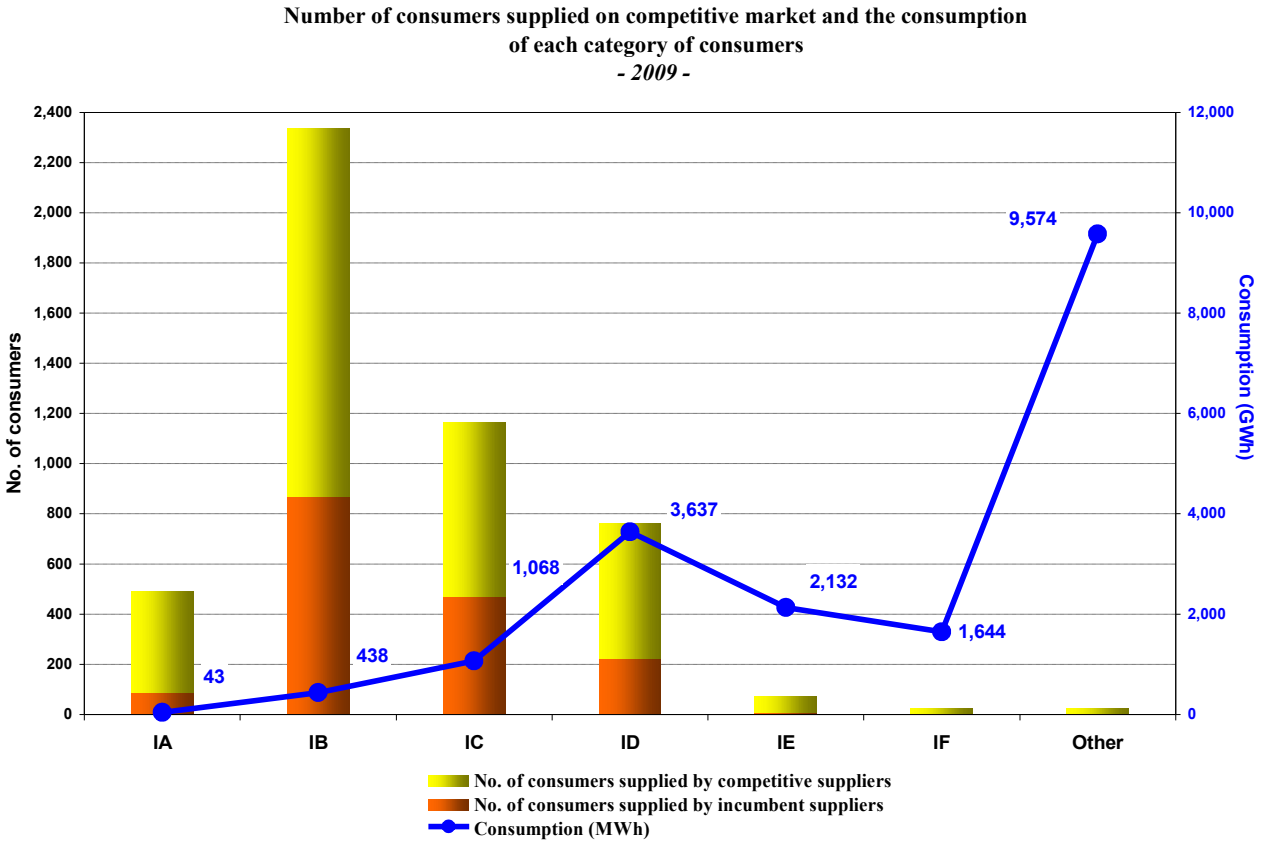
6. Evolution of consumers' number and of electricity delivered

Number of consumers supplied on the competitive market is presented as total value from the beginning of the market opening process; for December 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

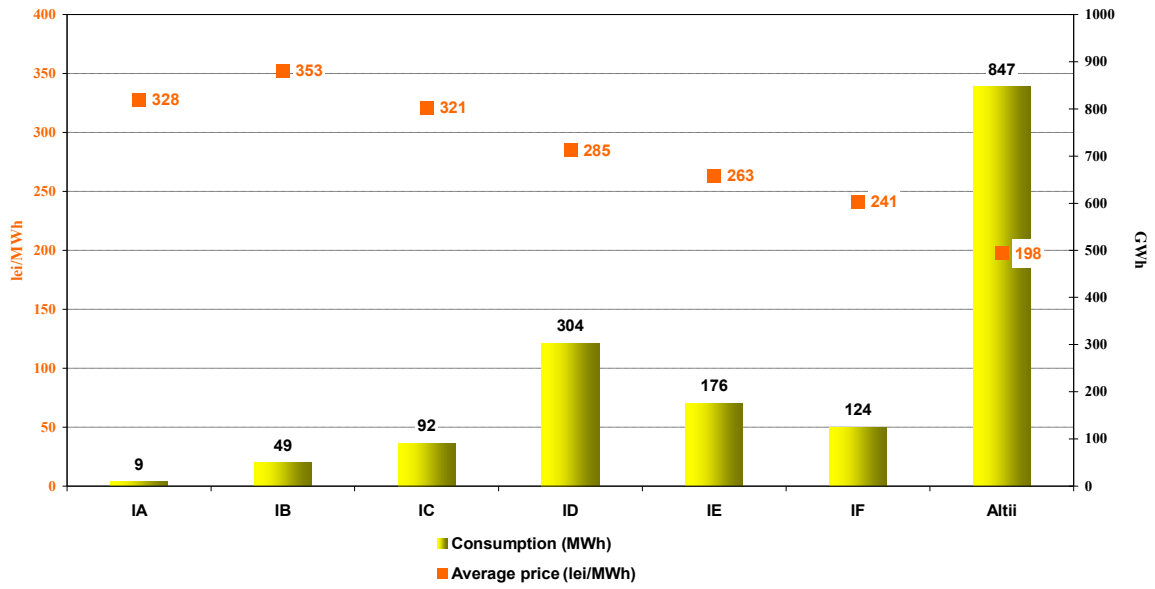


Source: Monthly reports of the suppliers – processed by MG

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

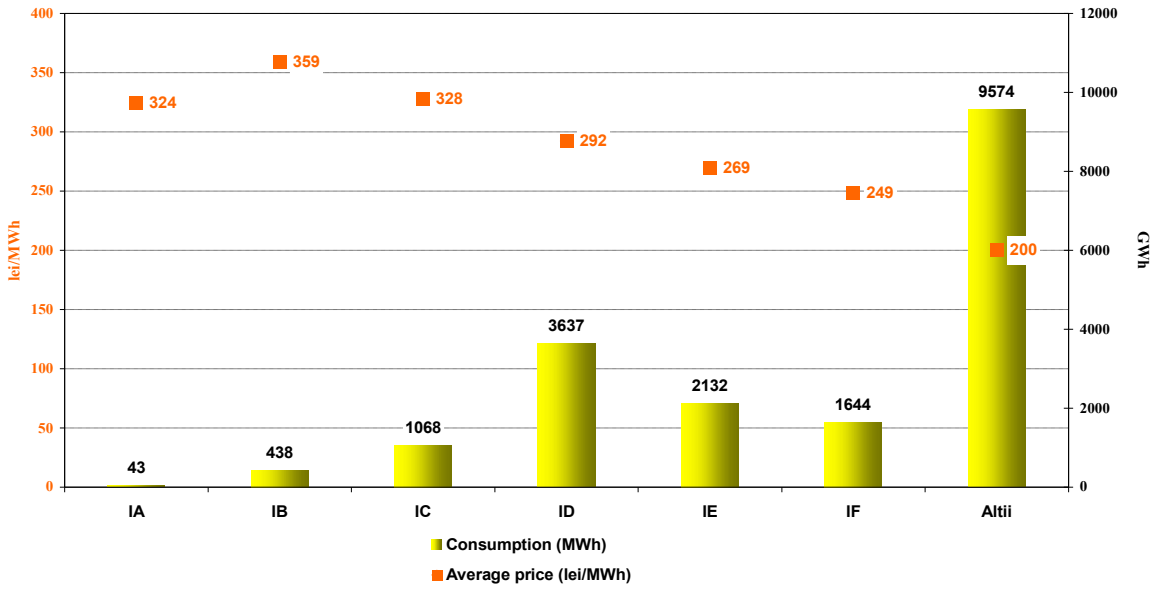
The following graph presents the average selling prices of consumers supplied on the competitive market, based on the structure defined according to the European Council Directive no. 90/377/EC, with the subsequent modifications.

Average price and energy consumption on types of consumers applied on compatitive market
- December 2009 -



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

Average price and energy consumption on types of consumers applied on compatitive market
- 2009 -



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.

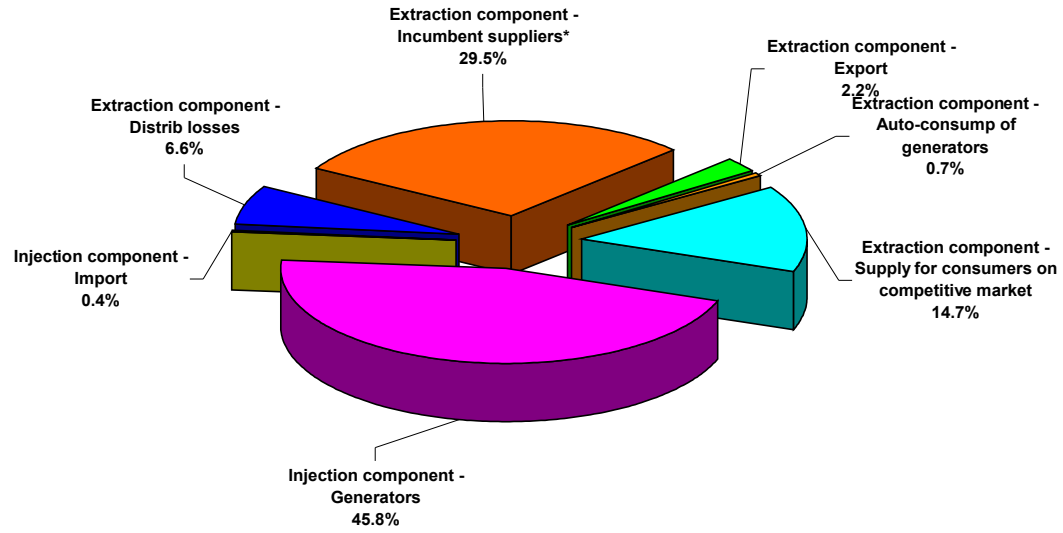
IV. TRANSMISSION AND SYSTEM OPERATOR C.N. TRANSELECTRICA S.A.

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 teritorry 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 2009.

CN Transelectrica SA structure of revenues from transmission services
- 2009 -

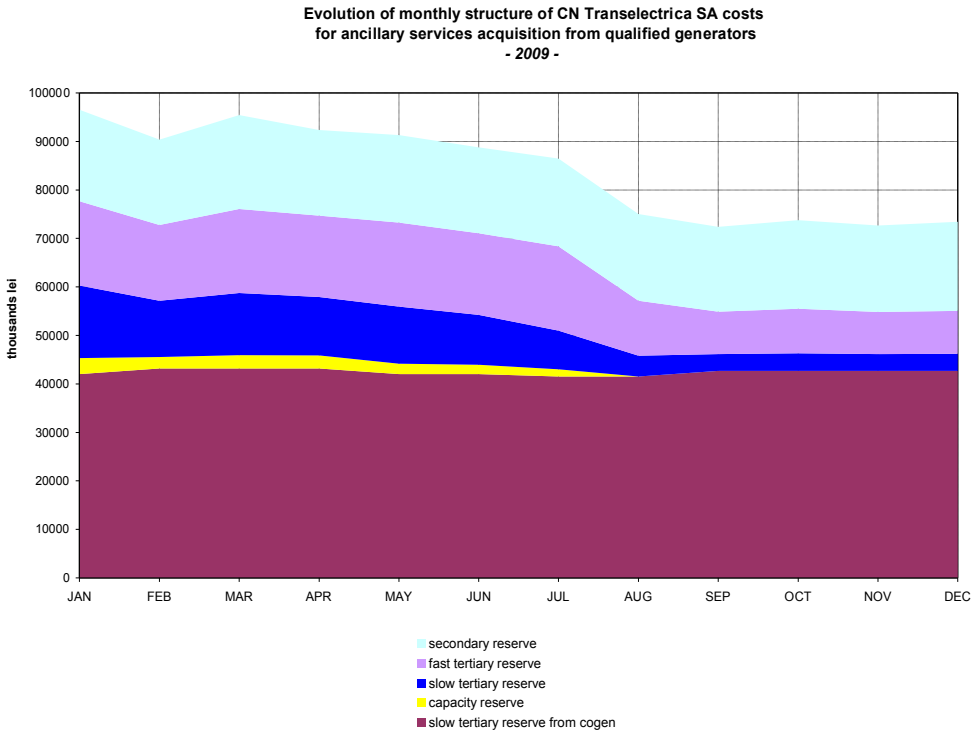


*** reffering to all their activity as well as the distribution losses for one distribution operator**

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 2009. 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. DISCLOSURE OF THE ELECTRICITY SUPPLIED IN 2009

In the middle of 2009, a new Electricity Disclosure Regulation has been enforced (ANRE Order no. 69/2009), as part of the international trend of clean technologies promotion, enhancing the 2004 release.

The Regulation imposed to the electricity suppliers the obligation to make the electricity label of the electricity supplied in the previous year available to every customer on yearly basis, in or with the bill. The electricity label represents a mean for customer information and for electricity supplier offers comparative analysis.

From 2005 onwards the electricity suppliers provided their customers every year with the following compulsory information:

1. the contribution of each energy source to the overall fuel mix of the supplier over the preceding year;
2. the environmental impact of the overall fuel mix specified at item 1 regarding:
    a) emissions of CO_2 resulting from the electricity produced by the overall fuel mix of the supplier in the preceding year;
    b) radioactive waste resulting from the electricity produced by the overall fuel mix of the supplier in the preceding year;
3. the comparison of the a) and b) values with the national averages.

The new release introduces as main improvement that since January 1st 2010, all the customers at regulated tariffs in Romania receive the same electricity label with the same overall fuel mix as computed by ANRE in correlation with the price setting mechanism for these customers. A customer that exercises his right to eligibility may ask his electricity supplier to purchase an amount of electricity with a larger ratio of green energy, unlike the customer that does not want to be active in the competitive market, remaining with the default supplier. For this last category ANRE sets the electricity overall fuel mix which is mandatory for any of the customers in Romania supplied at regulated conditions.

According to art.7 of the Disclosure Regulation:

"(1) ANRE establishes and publishes the electricity label for the electricity supplied at regulated tariffs.

(2) The electricity label for the customers specified in paragraph (1) will be publish by ANRE on www.anre.ro not later than April 15th every year; the suppliers of these customers will print it and submit it to the entitled customers under the circumstances stated in the present regulation.

(3) The information comprised in the electricity label for the customers supplied at regulated tariffs is uniform countrywide, independent of the geographic location of the customer and of the primary sources portfolio of the supplier that supplies electricity to that customer on contract-based conditions."

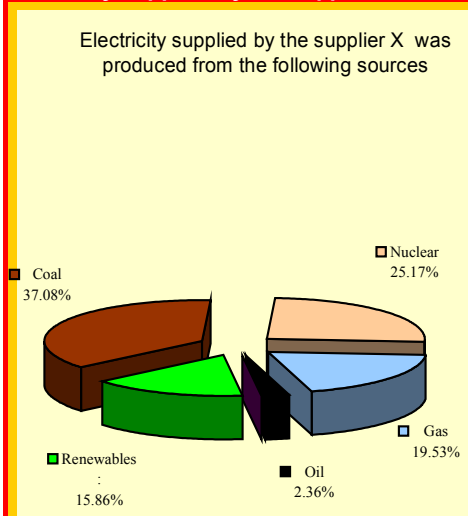
According to art. 14 of the up-mentioned regulation, the electricity suppliers edit the electricity label in order to send it to the customers that have been counterparts in electricity supply contracts in the preceding year, no later than July 1st every year.

The national electricity label for the electricity supplied at regulated tariffs to the customers in 2009 is presented below:

ELECTRICITY LABEL FOR THE CONSUMERS SUPPLIED AT REGULATED TARIFFS

Supplier: **Default Supplier X**
Telefon: **0800 - xxxxxxxxxx**
Web: www.supplier-x.com

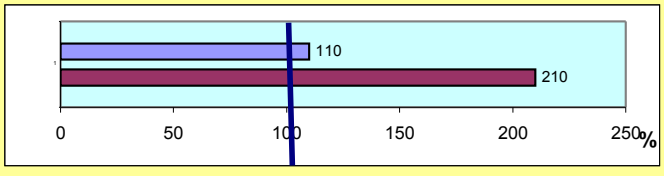
Electricity supplied by the supplier X in 2009



Primary Energy Source	Supplier	Romania Electricity Production 2009
Coal	**37.08%**	**37.80%**
Nuclear	**25.17%**	**21.27%**
Gas	**19.53%**	**11.39%**
Oil	**2.36%**	**1.58%**
Other conventional	**0.00%**	**0.56%**
Renewables:	**15.86%**	**27.41%**
Hydroelectric	15.86%	27.41%
Wind		
Biomass		
Solar		
Other Renewables		

Environmental impact

CO_2 emissions (490 g/ kWh)
Radioactive wastes
(0.042 g/ kWh)



CO2 emissions in Romania : 448 g/kWh

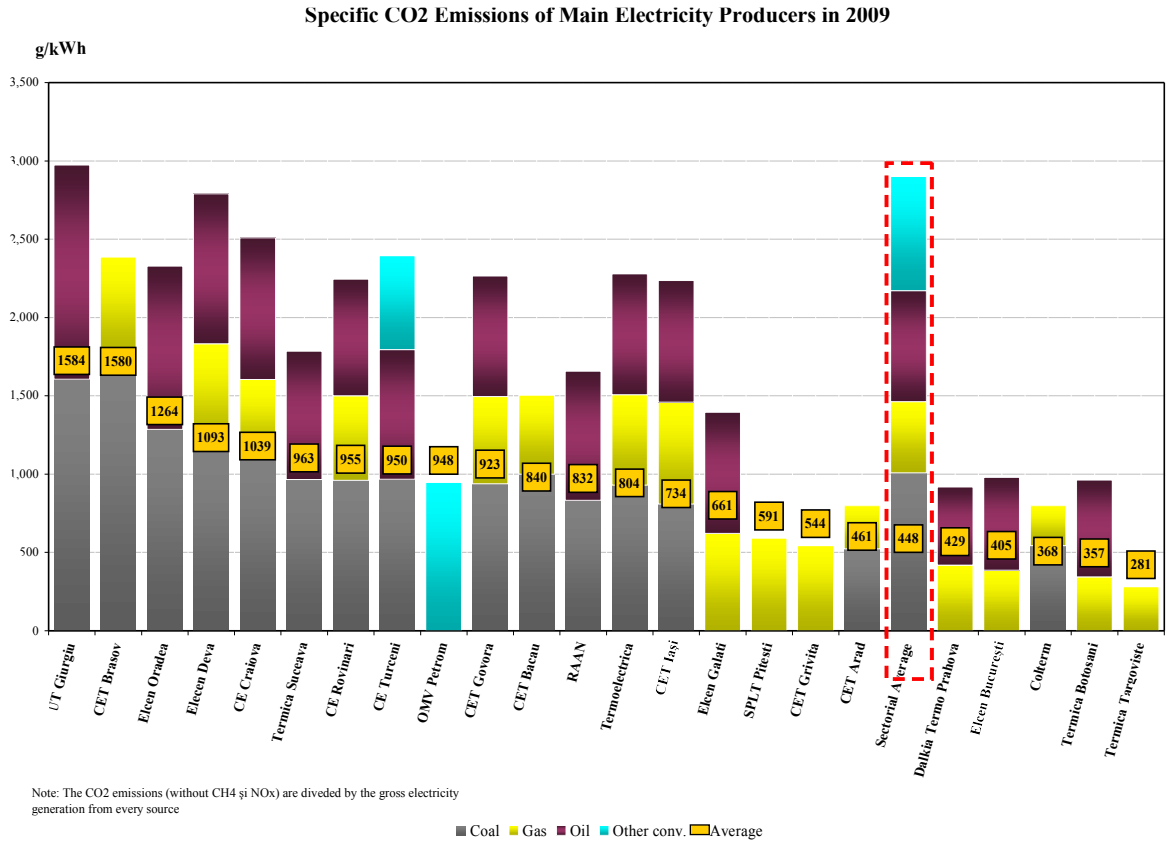
Radioactive wastes in Romania: 0,02 g/kWh

Environmental impact above the sectorial average

According to ANRE Order no. 69/2009 - Electricity Disclosure Regulation (www.anre.ro)

In 2009 the average CO2 emissions from electricity generation were 448 g/kWh, and the radioactive wasted totalised 0.02 g/kWh. In relation to these values, the suppliers active in the competitive electricity market specify in their label if the electricity supplied in 2009 had an environmental impact under or above the sectorial average.

The below graphic highlights the CO2 emissions from electricity generated in 2009:



Note: The CO2 emissions (without CH4 şi NOx) are diveded by the gross electricity generation from every source

VI. EVOLUTION OF MARKET RULES IN DECEMBER 2009

- In December 2009, a number of regulations with impact on the wholesale and retail electricity market were approved:
  1. ANRE Order no. 94/03.12.2009 approving the average tariff for transmission service, tariffs of system services and centralised markets administration as well as area tariffs for transmission used by market participants;
  2. ANRE Order no. 97/10.12.2009 regarding the establishing the mandatory quota of green certificates acquisition by the electricity suppliers in 2009;
  3. ANRE Order no. 100/23.12.2009 approving the specific tariffs of electricity distribution applied by the main distribution operators;
  4. ANRE Order no. 101/23.12.2009 approving the average tariff for transmission service, tariffs of system services and centralised markets administration as well as area tariffs for transmission used by market participants;
  5. ANRE Order no. 102/23.12.2009 approving the regulated tariffs for the electricity delivered by the incumbent suppliers and suppliers of last resort to the households and assimilated;
  6. ANRE Order no. 103/23.12.2009 approving the regulated tariffs for the electricity delivered by the incumbents suppliers and suppliers of last resort to captive consumers others than households and assimilated;
  7. ANRE Decisions no. 2767-2782 for qualifying the priority production of electricity from cogeneration configurations;
  8. ANRE Decisions no. 2925-2933 approving the regulated quantities of ancillary services acquired by CN Transelectrica SA from the generators qualified for this service – SC Hidroelectrica SA, SC CE Turceni SA, SC CE Rovinari SA, SC CE Craiova SA, SC

Electrocentrale Bucuresti SA, SC Electrocentrale Deva SA, SC Termoelectrica SA, SC Electrocentrale Galati SA, SC Dalkia Termo Prahova SA.

9. ANRE Decisions no 2951-2973 approving the regulated prices for electricity and heat as well as the regulated quantities in 2010 for dispatchable generators (including regulated quantities for transmission losses).

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 negociated 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
- EXAA – Energy Exchange Austria, 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 stardardised bilateral contracts with continuous negociation
- NES – National Energy System
- WEM – wholesale electricity market
- REM – retail electricity market
- RCE – Romanian Commodities Exchange