REPORT ON MONITORING RESULTS OF THE

ELECTRICITY MARKET

DECEMBER 2008

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

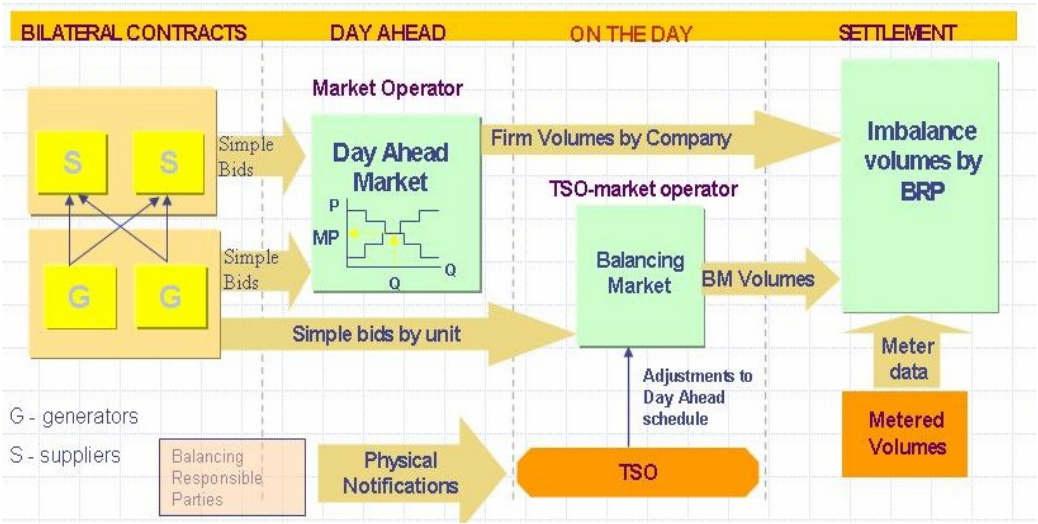
TABLE OF CONTENTS

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* in December 2008 are presented below split into categories:

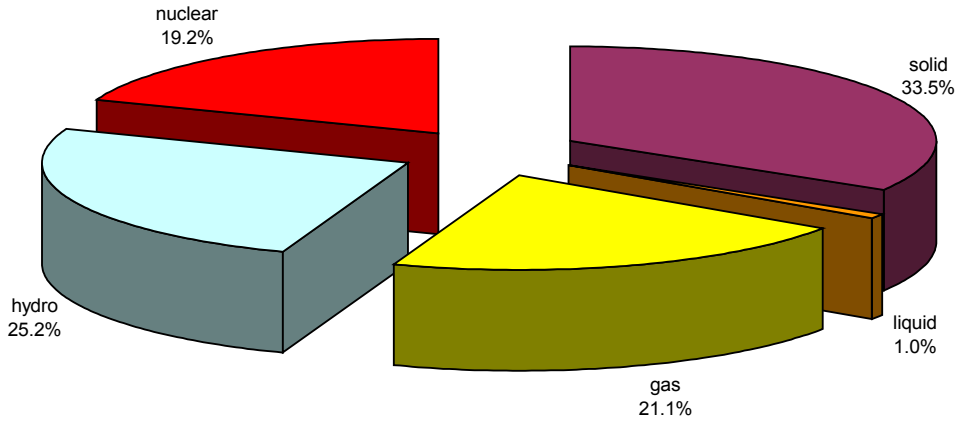
No.	Name	Comments
A	*Electricity generators operating dispatching units*	
1	SC CET Bacău SA	
2	SC CET Braşov SA	
3	SC CET Govora SA	
4	SC CET Iaşi SA	
5	SC CET Oradea SA	
6	SC Electrocentrale Bucureşti SA	
7	SC Electrocentrale Galaţi SA	
8	SC Dalkia Termo Prahova SRL	
9	SNP Petrom Sucursala Petrobrazi	
10	SC Termica SA Suceava	
11	SC Termoelectrica SA	
12	SC Termoficare 2000 SA Piteşti	
13	SC Uzina Termică Giurgiu SA	
14	SN Nuclearelectrica SA	
15	SC CE Rovinari SA	
16	SC CE Turceni SA	
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	
21	RAAN	
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 CEZ Trade Romania SRL
3	SC EFT Romania SRL
4	SC Electrabel Romania SRL
5	SC Encaz SRL
6	SC Energy Market Consulting SRL
7	SC E.ON Energy Trading AG
8	SC Eco Energy SRL
9	SC Ezpada SRL
10	SC Global Electric Trading SRL
11	SC Grivco SA
12	SC Inteltra SRL
13	SC Jas Budapest Zrt
14	SC Korlea Invest SRL
15	SC Re Energie SRL
16	SC Romelectro SA
17	SC Rudnap SRL
18	SC RBS Sempra Energy Europe Ltd
19	SC Ten Transilvania Energy SRL
20	SC Statkraft Romania SRL
21	SC Uniwatt Plus SRL
No.	**Name**
G	*Electricity Suppliers*
1	SC Alro SA
2	SC Also Energ SA
3	SC Arelco Distributie SRL
4	SC Beny Alex SRL
5	SC Biol Energy SRL
6	SC Buzmann Industries 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 Energy Holding SRL
15	SC Energy Network SRL
16	SC Enex SRL
17	SC Ennet Grup SRL
18	SC Enol Grup SA
19	SC EURO-PEC SA
20	SC Fidelis Energy SRL
21	SC General Com Invest SRL
22	SC Gevco SRL
23	SC Green Energy SRL
24	SC Hidroconstructia SA
25	SC ICCO Electric SRL
26	SC ICPE Electrocond Technologies SA
27	SC Interagro SA
28	SC Luxten LC SA
29	SC Petprod SRL
30	SC Tinmar Ind SA
31	SC Total Electric Oltenia SA
32	SC Transenergo Com SA
33	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.

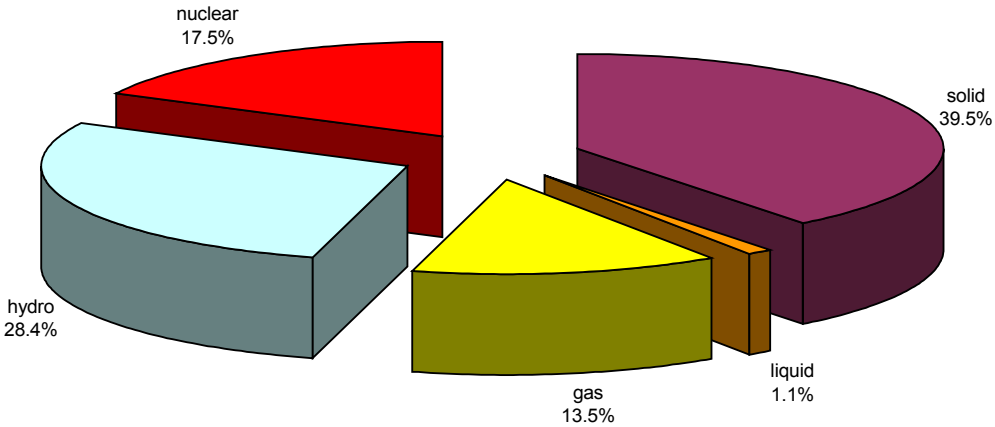
3. Generation structure of National Energy System on resources types

Electricity structure by primary sources (delivered by generators with dispatchable units)
- December 2008 -



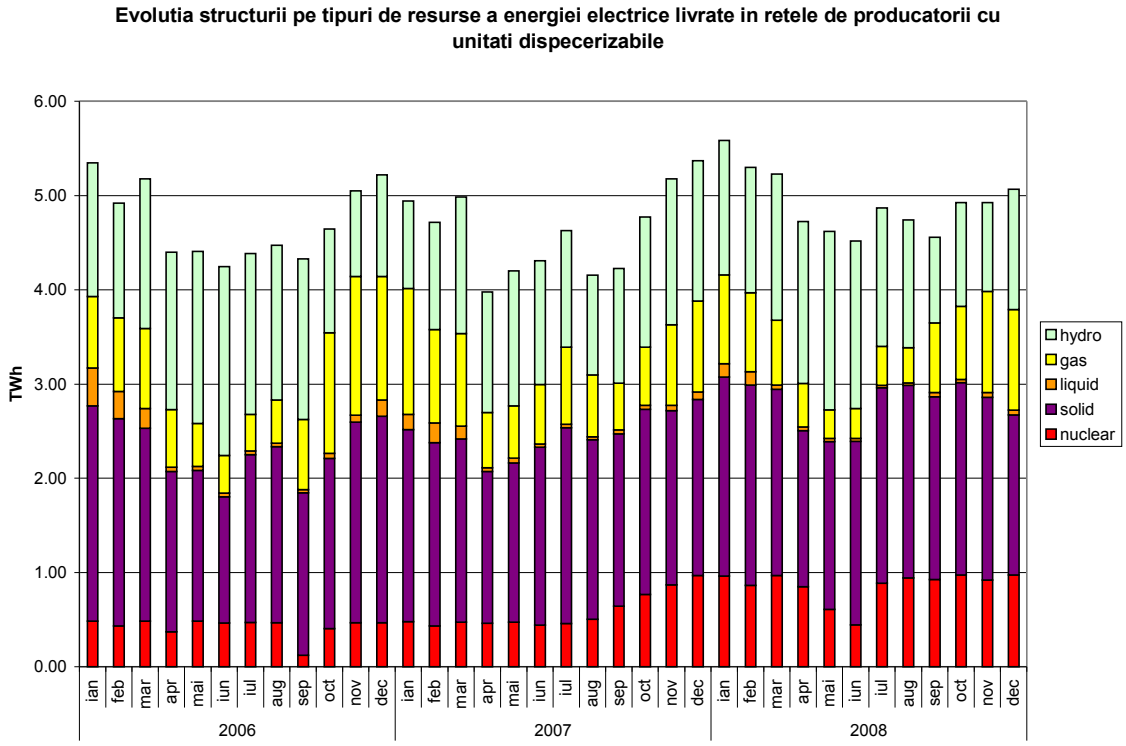
Source: Monthly reports of generators – processed by MG

Electricity structure by primary sources (delivered by generators with dispatchable units)
- 2008 -



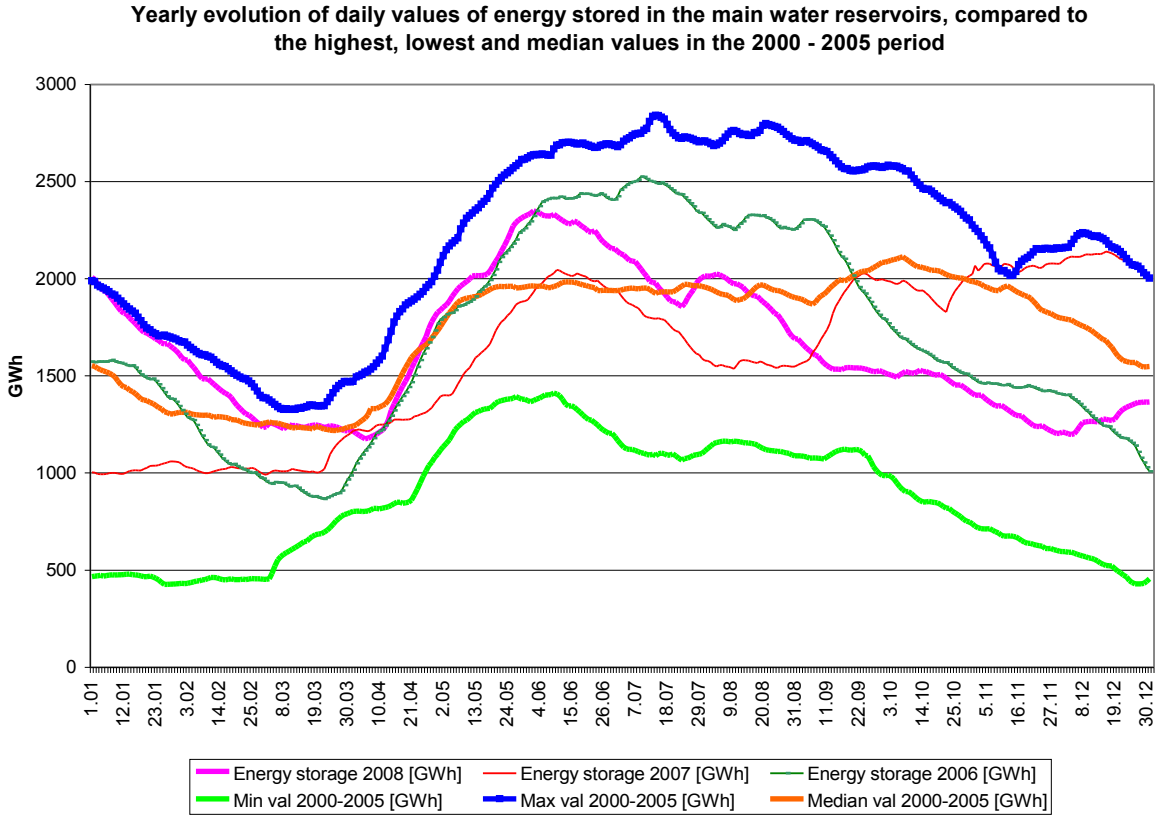
Source: Monthly reports of generators – processed by MG

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



Source: Monthly reports of generators – processed by MG

The evolution of hydro energy stored in the main water reservoirs during each of the last 3 years, compared to the evolution of the lowest, highest and median daily values from 2000 – 2005, is shown in the following graph:



Source: Data reported by Hidroelectrica – processed by MG

The following table presents the main data regarding the physical balance of electricity for December 2007 and 2008 and cumulative for 2007 and 2008:

No.	Indicator	UM	December 2007	December 2008	%	2007	2008	%
0	1	2	3	4	5=4/3*100	6	7	8=7/6*100
1	Generated electricity	TWh	5.87	5.52	94.04	60.51	64.01	105.78
2	Delivered electricity	TWh	5.37	5.07	94.38	55.45	59.05*	106.50
3	Import	TWh	0.07	0.12	184.91	1.30	0.92	70.94
4	Export	TWh	0.40	0.51	127.75	3.38	5.37	158.68
5	Internal consumption	TWh	5.03	4.68	92.93	53.37	54.61	102.32
6	Electricity supplied on the regulated market	TWh	2.09*	2.15	102.9	22.61*	23.42	103.6
6.1	*Of which electricity supplied to households*	*TWh*	*0.88*	*1.00*	*113.6*	*9.55*	*10.38*	*108.7*
7	Electricity supplied on the competitive market	TWh	1.85	1.52	0.82	22.26	22.41	100.7
8	Transmission – Injection component	TWh	5.31	5.03	94.72	55.01	58.07	105.57
9	Transmission – Extraction component	TWh	5.34	5.11	95.60	55.37	58.86	106.30
10	System services	TWh	5.34	5.11	95.60	55.71	58.86	105.65
11	Actual transmission grid losses	TWh	0.11	0.09	83.02	0.92	1.00	108.51
12	Heat generated for delivery	Tcal	3107.34	2621.45	84.36	19160.88	18703.07	97.61
13	Heat in co-generation	Tcal	2447.17	2325.96	95.05	15417.38	15505.20	100.57

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 the unscheduled cross border exchange with neighbor countries for ensuring the balance of the national energy system.
3. The electricity considered for transmission tariff – injection component include neither the electricity sold by generators for covering the transmission losses nor the electricity imported by competitive suppliers and used for the same purpose by Transelectrica, due to the exceptions applied for G payment obligations.
**The values of delivered electricity were modified due to corrections made subsequent to respective reports publication.*

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 on each type of contracts and on the main components of the wholesale market are presented in the table below for December 2008 compared to the volumes of December 2007:

TRANSACTIONS ON THE WHOLESALE MARKET	UM	December 2007	December 2008
0	1	2	3
1. BILATERAL CONTRACTS' MARKET	GWh	**5846**	**6084**
1.1. Sales on regulated contracts	GWh	*2946*	*2800*
1.2. Sales on negotiated contracts *	GWh	*2499*	*2772*
1.3. Export	GWh	*401*	*512*
2. CONTRACTS ON CENTRALISED MARKETS	GWh	**739**	**718**
3. DAY AHEAD MARKET	GWh	**405**	**480**
4. BALANCING MARKET (all the transactions)	GWh	**238**	**307**
4.1. Upward	GWh	*90*	*128*
4.2. Downward	GWh	*148*	*179*
INTERNAL CONSUMPTION (includes distribution and transmission losses)	GWh	**5034**	**4678**

* Sales to final consumers are not included

The average prices and volumes traded on the main components of the wholesale market are presented in the table below for 2008 compared with data from 2006 and 2007:

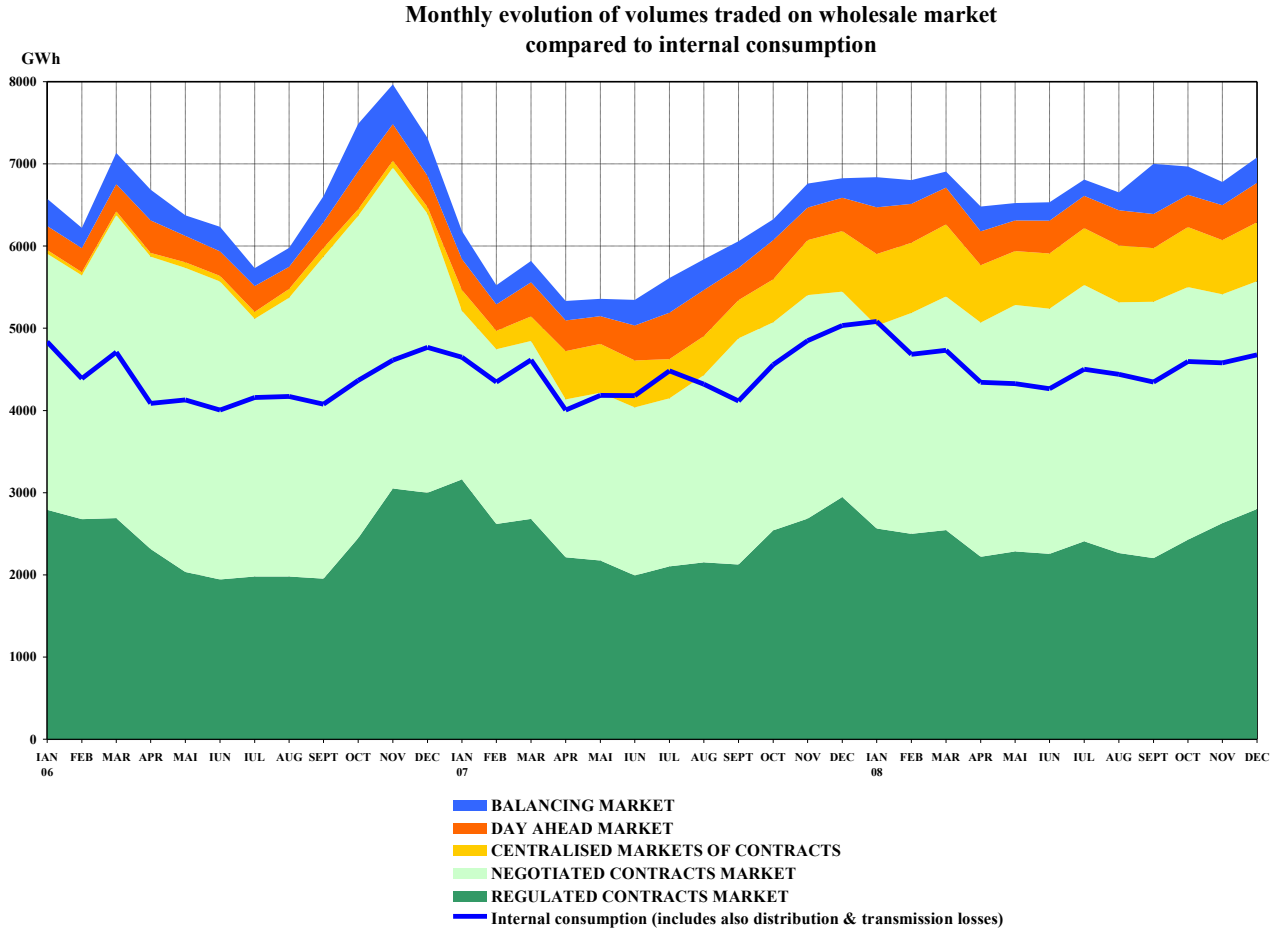
TRANSACTIONS ON THE WHOLESALE MARKET	UM	2006	2007	2008
0	1	2	3	4
1. BILATERAL CONTRACTS' MARKET (without export)				
- Traded volume	GWh	71182	56569	63848
- Average price	Lei/MWh	126.54	142.16	148.39
1.1. Sales on regulated contracts				
- Traded volume	GWh	28858	29395	29104
- Average price	Lei/MWh	154.40	157.17	151.15
1.2. Sales on negotiated contracts *				
- Traded volume	GWh	42323	27174	34745
- Average price	Lei/MWh	107.53[1)]	125.82[2)]	146.07[3)]
2. EXPORT **				
- Export volume	GWh	5279	3381	5366
- Average price	lei/MWh	- [4)]	141.24[5)]	191.22[6)]
3. CONTRACTS ON CENTRALISED MARKETS				
- Traded volume	GWh	858	5876	8770
- Average price	Lei/MWh	127.81	166.99	177.04
4. DAY AHEAD MARKET				
- Traded volume	GWh	4106	5043	5208
- Average price	Lei/MWh	161.06	161.70	188.53
5. BALANCING MARKET (all the transactions)	GWh	4169	3492	3546
- Upward volume	GWh	2498	1805	2198
- Upward average price	Lei/MWh	248.77	222.51	278.12
- Downward volume	GWh	1674	1687	1348
- Downward average price	Lei/MWh	52.89	64.58	66.54
INTERNAL CONSUMPTION (includes distribution and transmission losses)	GWh	52308	53368	54608

** Sales to final consumers are not included and the average prices are calculated based on:* ***1)*** *89%;* ***2)*** *99%;* ***3)*** *100% of total volumes, corresponding to quantities for which the participants have reported also the prices.*

*** Export volumes are those for which OTS applied the load component of transmission tariff for extracted electricity exported;* ***4)*** *as the quantities for which prices were reported in 2006 weren't representative, the average price for 2006 was not presented; for 2007 and 2008 the average price was calculated based on:* ***5)*** *97%,* ***6)*** *94% of total volumes, corresponding to quantities for which the participants have reported also the prices.*

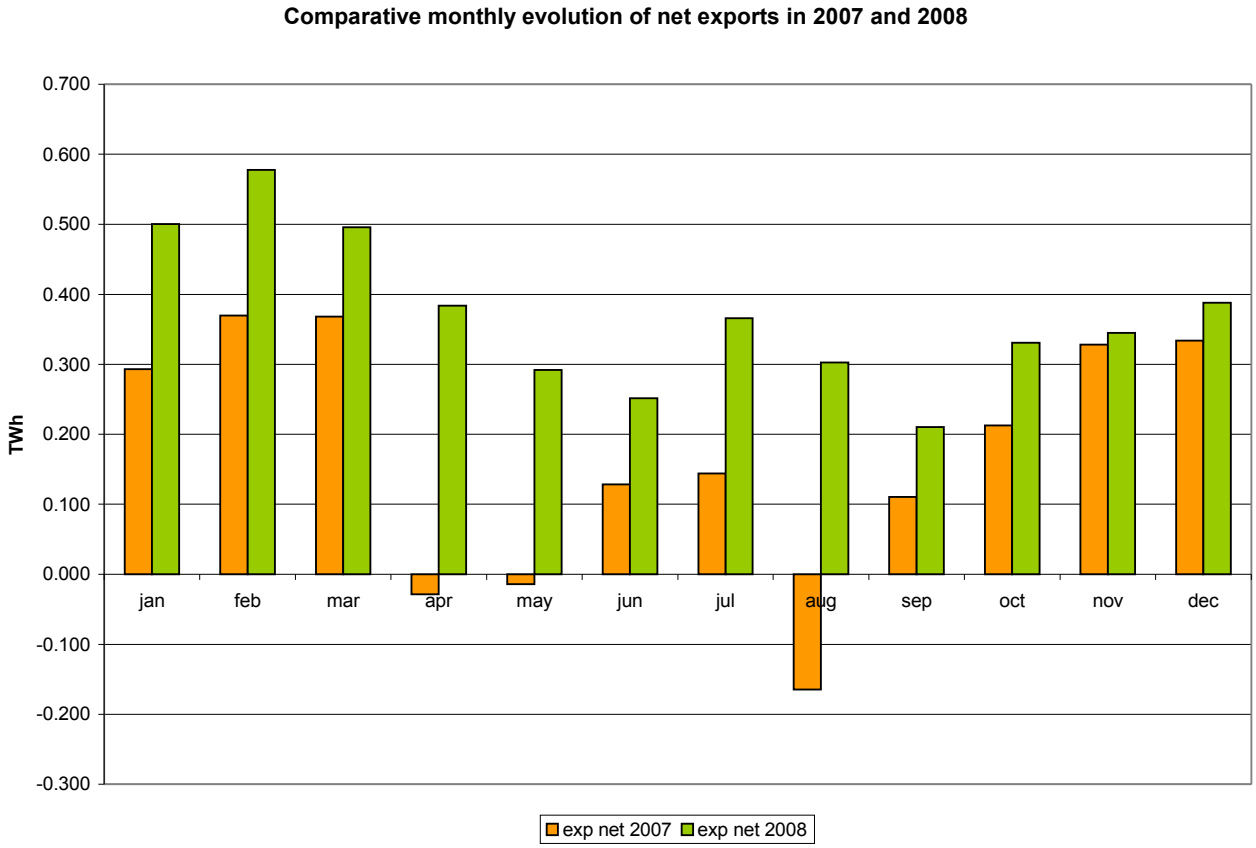
The prices presented hereabove are not completely comparable, as the regulated prices reflect only the electricity price while the prices on DAM and BM include the transmission tariff – injection component (the offered prices include this component) and the prices on negociated market and on centralised markets may or may not include this tariff component. As for the export prices, these mostly include applicable transmission and system tariffs.

The evolution of the relation between the volumes sold on each market and the estimated internal consumption, for 2006 - 2008, is presented below:

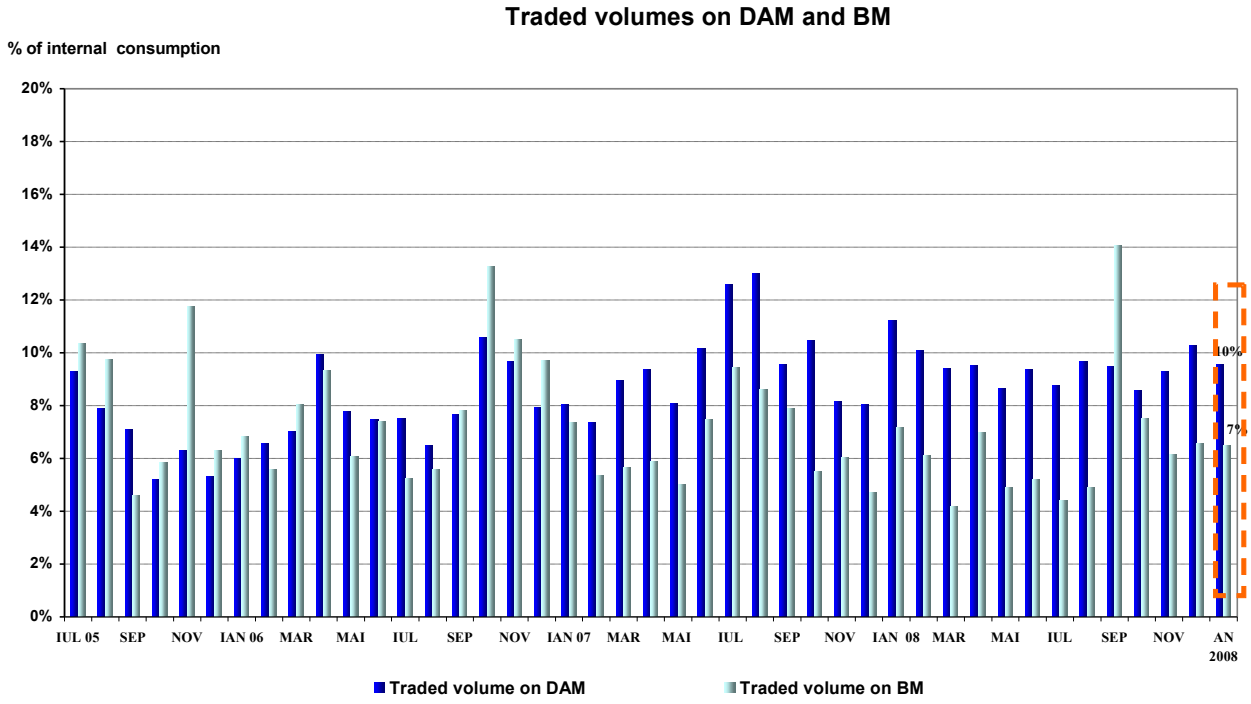


Source: Monthly reports of wholesale market participants, SC Opcom SA and CN Transelectrica SA – processed by MG

The traded volumes on the negotiated contracts market, presented above, don't include the export volumes. The monthly evolution of net export (export - import) in 2007 and 2008 is shown in the following graph:



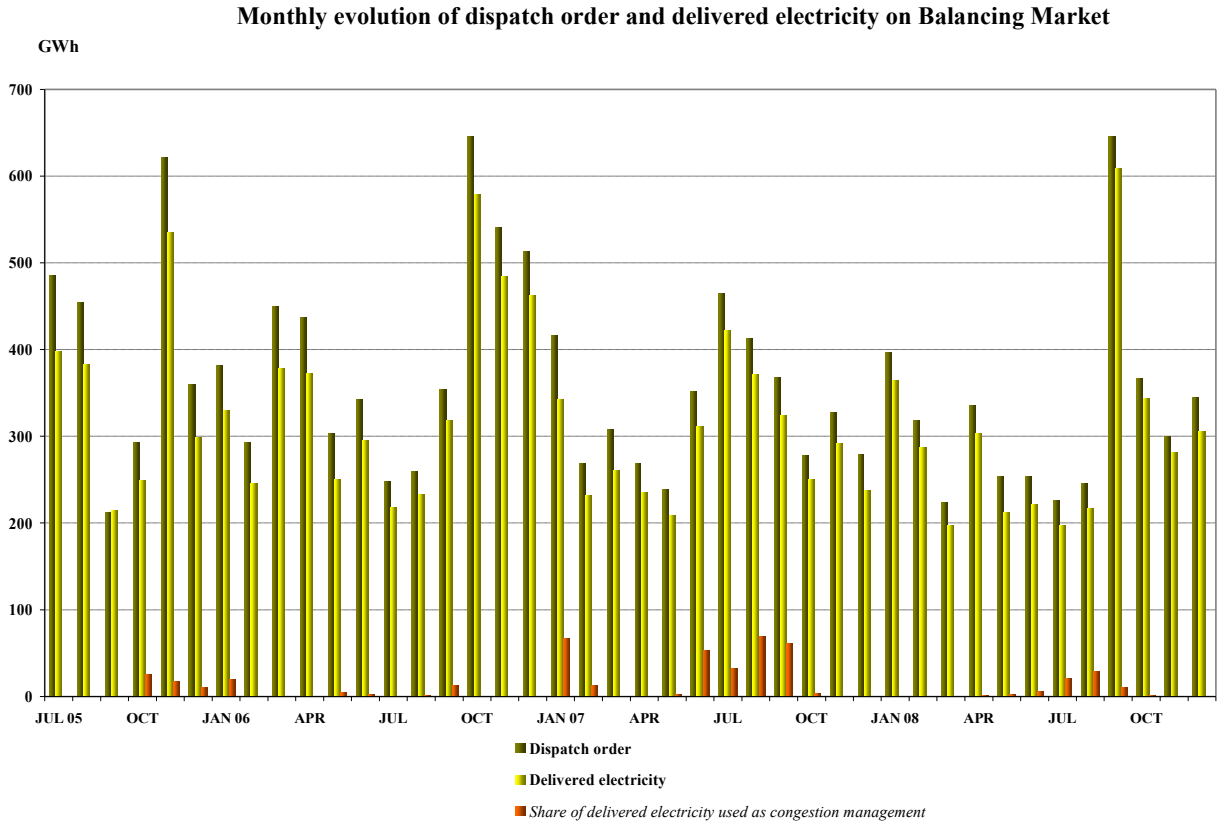
The following graph presents, beginning with July 2005, the evolution of volumes traded on DAM, compared to volumes traded on BM (expressed as percentages from the internal consumption) in order to evaluate the relationship between those two types of traded volumes.



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 the balancing

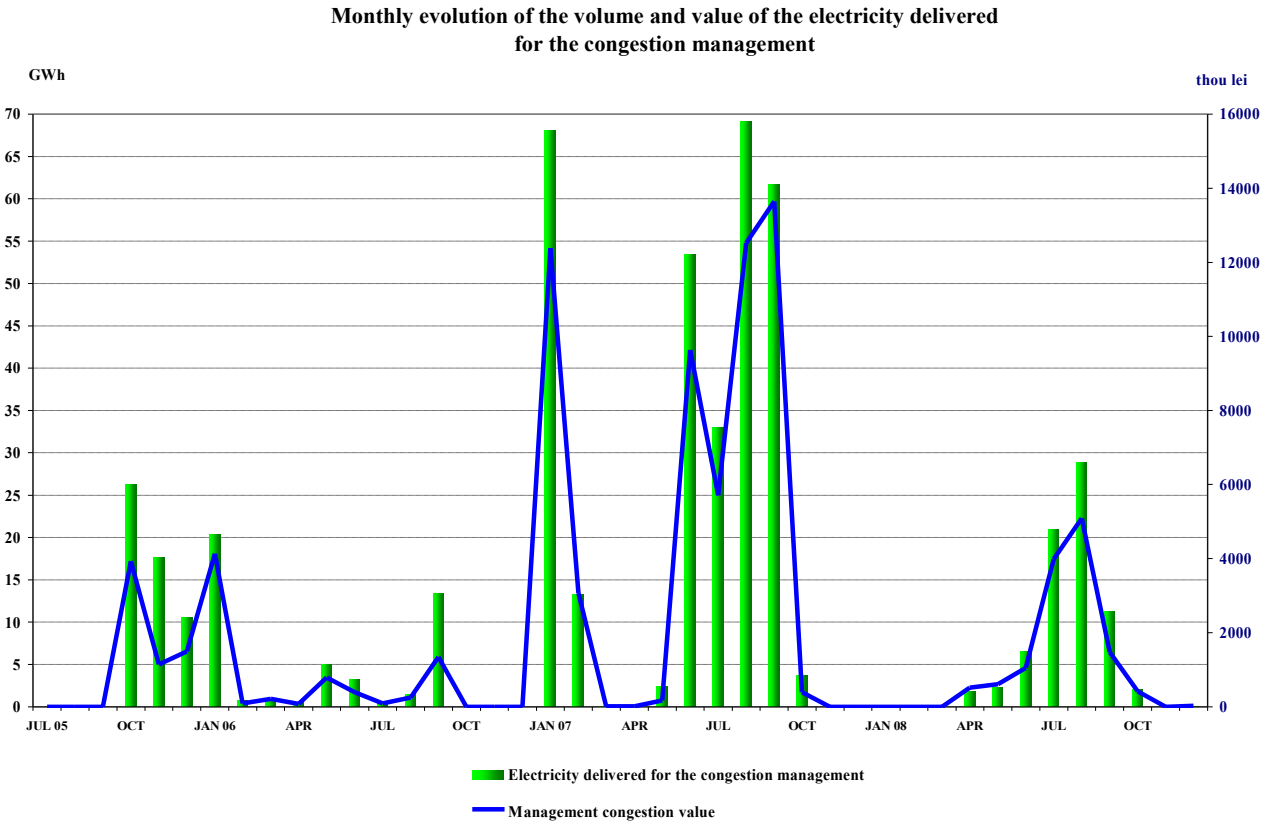
market is determined based on the measured (approved) values; the relation between the accepted and delivered electricity beginning with July 2005 is presented in the following graph:



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

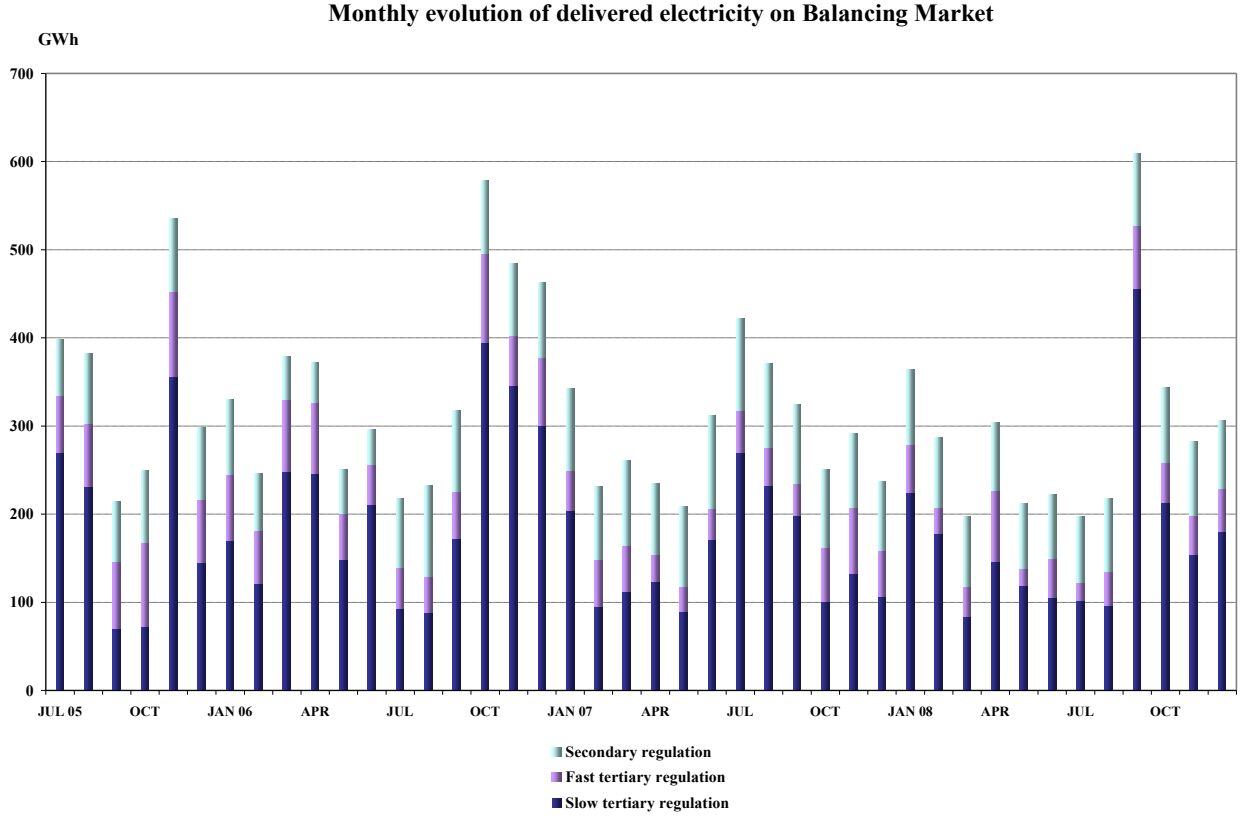
The above graph also presents the energy used for congestion management compared to the volumes traded on BM; this energy represents the quantity purchased by the transmission operator on the balancing market in order to solve the congestions appeared in the transmission network.

The following graph presents the monthly evolution and the values of transactions made by CN Transelectrica SA for the electricity used for congestion management, starting with July 2005.



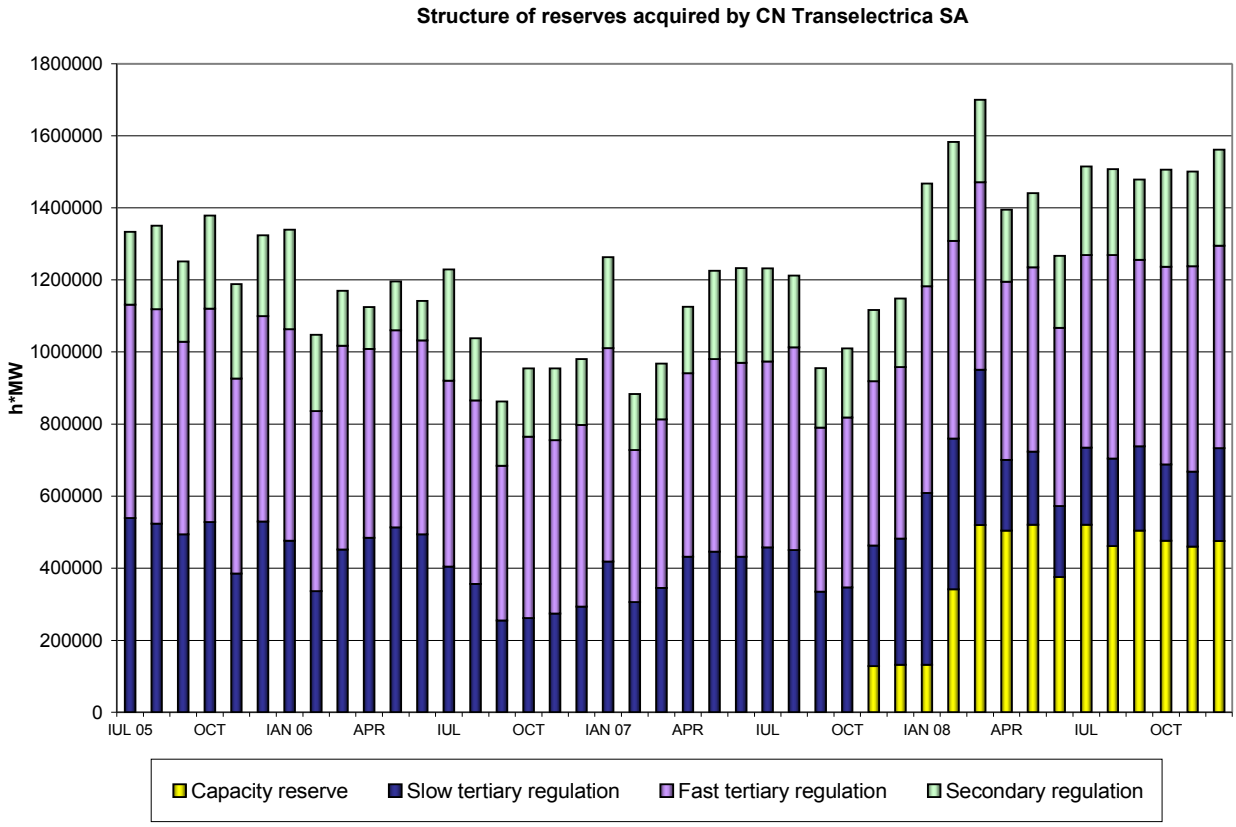
Source: Monthly reports of CN Transelectrica SA – processed by MG

The structure of balancing electricity delivered in the system on each type of regulation beginning with 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 beginning 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

In December 2008, the structure of electricity sales obligations contracted before delivery day by the electricity generators with dispatchable units was the following:

Transaction type	MU	December 2007	December 2008
0	1	2	3
Regulated to incumbents, thermal generators	GWh	1333.87	1342.78
Regulated to incumbents, hydro generator	GWh	169.58	174.96
Regulated to incumbents, nuclear generator	GWh	604.98	505.36
Regulated for distribution losses, thermal generators	GWh	504.77	331.98
Regulated for distribution losses, hydro generator	GWh	83.52	63.24
Regulated for distribution losses, nuclear generator	GWh	119.65	147.93
Regulated for transmission losses, thermal generator	GWh	44.08	84.84
Regulated, to other generators (with the obligation of return, within a year)	GWh	45.13	149.05

Regulated to other generators, activated on request, with option premium	GWh	0.00	0.00
Negotiated, to incumbents	GWh	2.23	0.00
Negotiated, to distributors	GWh	0.00	0.00
Negotiated. to other generators	GWh	93.87	102.52
Negotiated, to competitive suppliers	GWh	1353.15	1082.45
Contracts concluded on centralized markets (CMBC, CMBC-NC, RCE)	GWh	679.01	718.55
Supply to consumers (negotiated + auction on centralized markets)	GWh	197.49	237.83
Export	GWh	130.60	119.37
DAM	GWh	183.73	204.29
Total	**GWh**	**5545.66**	**5265.15**

Source: Monthly reports of generators – processed by MG

Suppliers

In December 2008, 61 companies having as main activity the supply of electricity concluded transactions on the electricity market; 21 suppliers out of 61 traded electricity exclusively on the wholesale market (WEM) and 40 suppliers traded electricity on the retail market as well (REM), including the 7 incumbent suppliers trading electricity both on competitive and regulated markets.

Suppliers acting exclusively on WEM

The following table shows the activity for December 2008 compared to December 2007 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 2007**	**December 2008**
Acquisitions		
Import	0.60	16.20
Negotiated contracts with suppliers	352.91	705.54
Negotiated contracts with generators	189.67	224.13
Contracts concluded on centralized markets	120.74	221.81
DAM	8.98	44.65
Sales		
Export	142.11	390.00
Negotiated contracts with suppliers	453.93	722.15
Negotiated contracts with generators	13.08	-
Contracts concluded on centralized markets	-	-
DAM	36.73	103.24

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

The following table presents aggregated information on acquisitions volume and structure for suppliers providing electricity to final consumers, on the competitive market, for December 2008 and December 2007.

- GWh -

Acquisition structure of suppliers providing electricity to final consumers (the incumbent suppliers are not included)	**December 2007**	**December 2008**
Import	66.38	61.41
Negotiated contracts with suppliers	496.33	626.06
Negotiated contracts with generators	1163.60	840.52
Contracts concluded on centralized markets	428.92	444.09
DAM	89.62	41.34

Incumbent suppliers

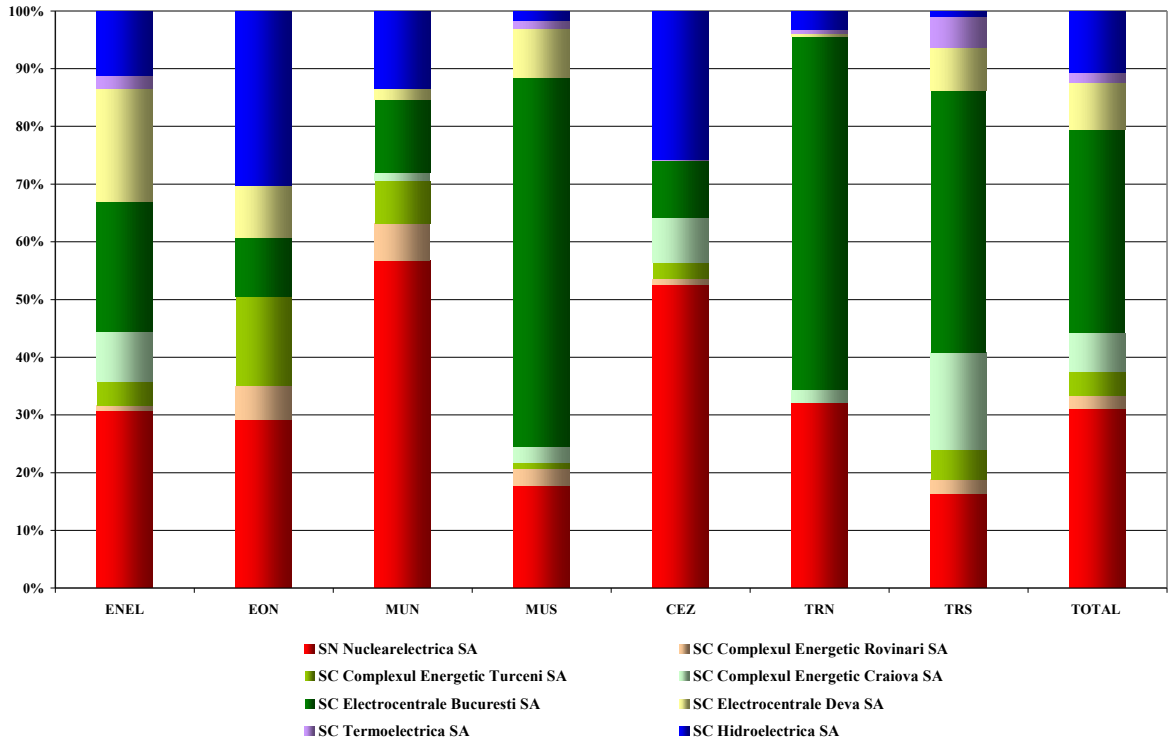
Electricity acquisition structure of incumbent suppliers (before the delivery day), for supplying the regulated market consumers, is presented in the table below, for December 2008 compared to the situation of December 2007:

- GWh -

Acquisition structure of incumbent suppliers for regulated REM component	**December 2007**	**December 2008**
Regulated contracts	2166.74	2077.72
Negociated contracts	32.56	48.63
Contracts concluded on centralized markets		-
DAM	40.93	116.08

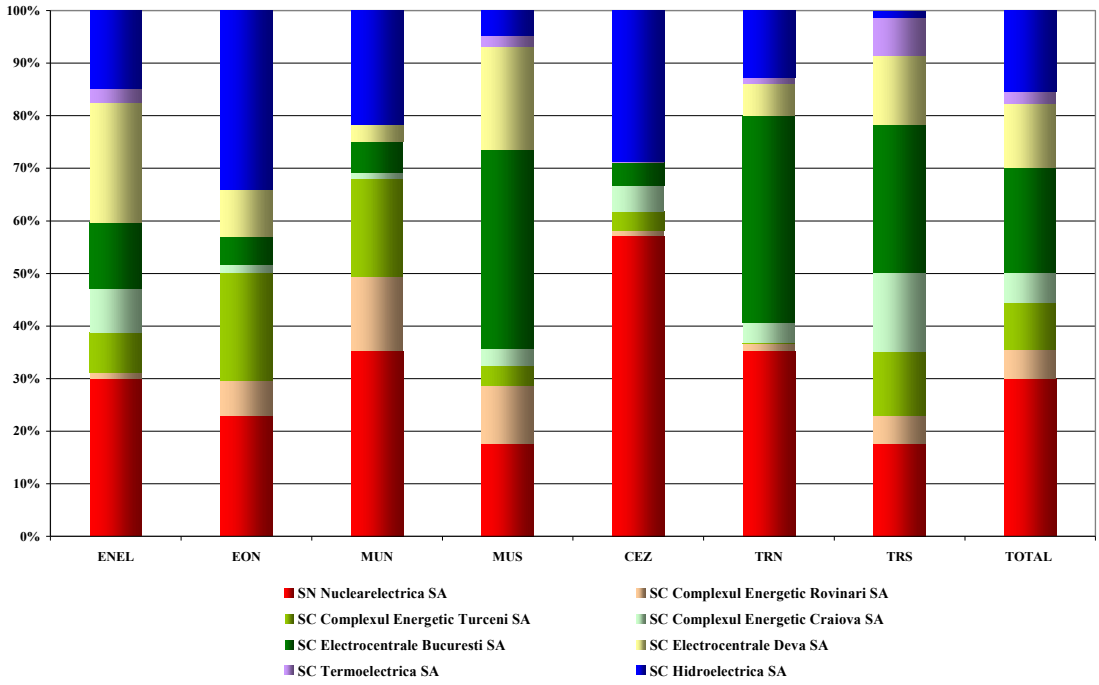
The structure of the electricity purchased by the incumbent suppliers from the main generators on regulated contracts is presented in the following graph for December 2008 and throughout 2008:

Electricity aquisition from main generators, on regulated contracts, of incumbent suppliers for delivering electricity to final consumers on regulated market
December 2008



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

Electricity acquisition from main generators, on regulated contracts, of incumbent suppliers for delivering electricity to final consumers on regulated market
- 2008 -



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

Likewise to the situation presented for the regulated REM, the table below presents the acquisition structure of incumbent suppliers (before the delivery day), corresponding to the competitive REM (energy supplied at negotiated prices to the consumers who renounced to regulated tariffs) for December 2008 compared to December 2007:

- GWh -

Acquisition structure of incumbent suppliers for competitive REM component	**December 2007**	**December 2008**
Import	-	46.40
Negotiated contracts with suppliers	127.31	202.12
Negotiated contracts with generators	2.23	16.69
Contracts concluded on centralized markets	167.11	52.08
DAM	66.88	55.76

Main distribution operators

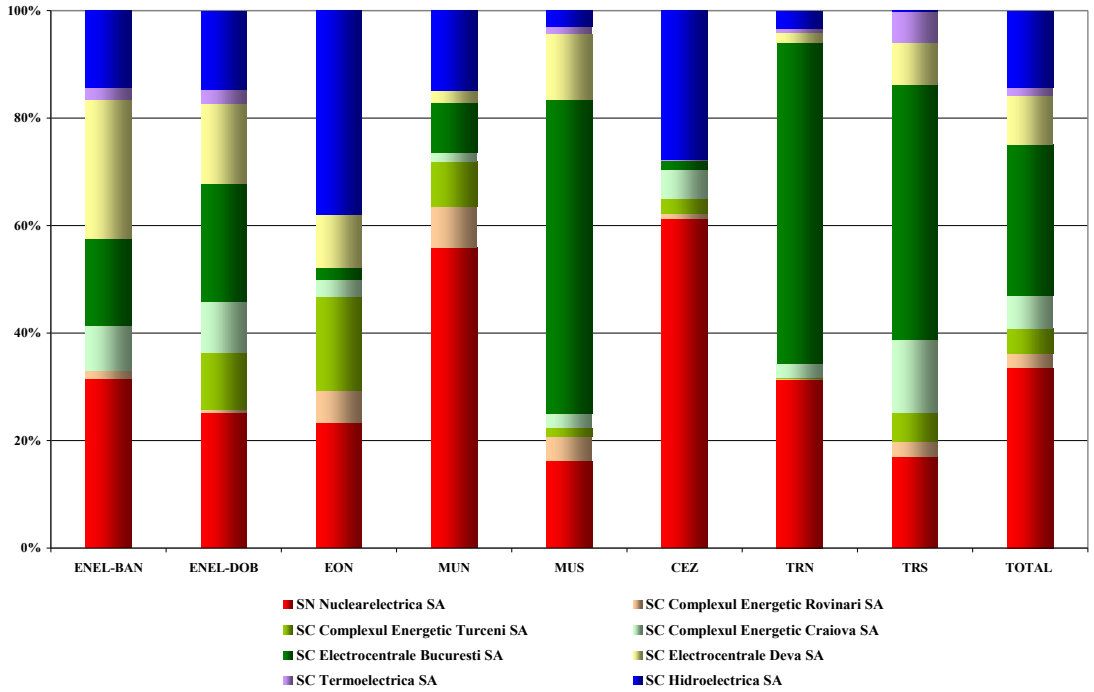
The following table shows the electricity acquisition structure of main distribution operators (before the delivery day), for covering the distribution network losses, for December 2008 compared to December 2007:

- GWh -

Acquisition structure	**December 2007**	**December 2008**
Regulated contracts	708.89	543.14
Negotiated contracts	29.25	-
Contracts concluded on centralized markets		-
DAM	72.91	166.77

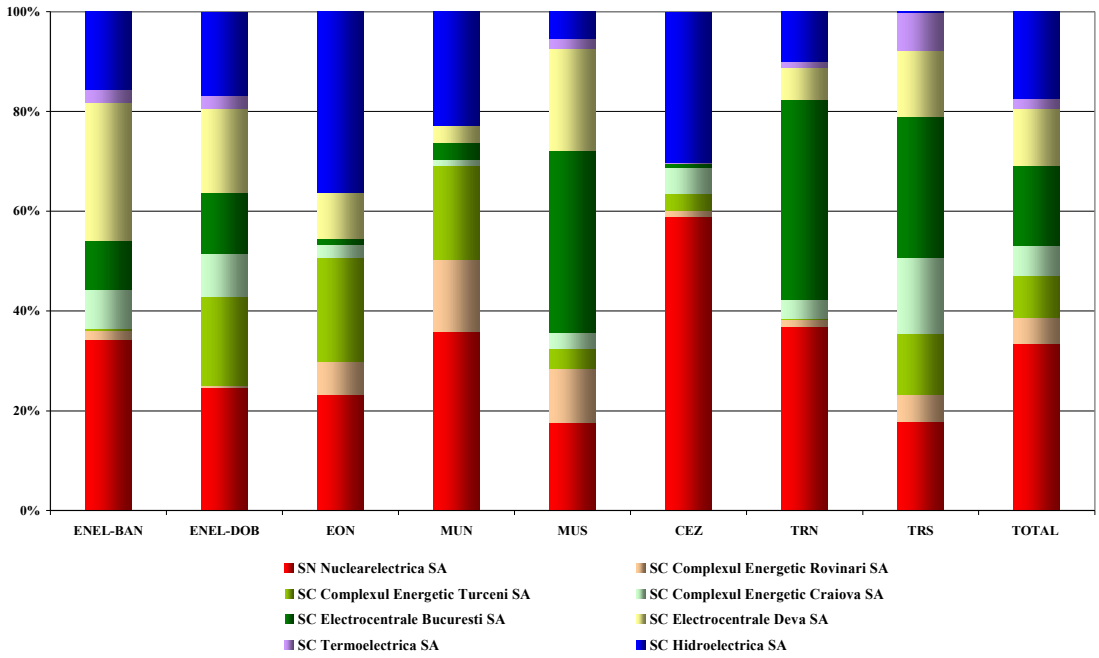
The electricity purchased by the 8 distribution operators from the main generators on regulated contracts, for covering their network losses is presented in detail in the following graph, for December 2008 and the year 2008:

Electricity acquisition of distribution operators from main generators, on regulated contracts, for covering the distribution losses
December 2008



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
- 2008 -



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	unconcentrated 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

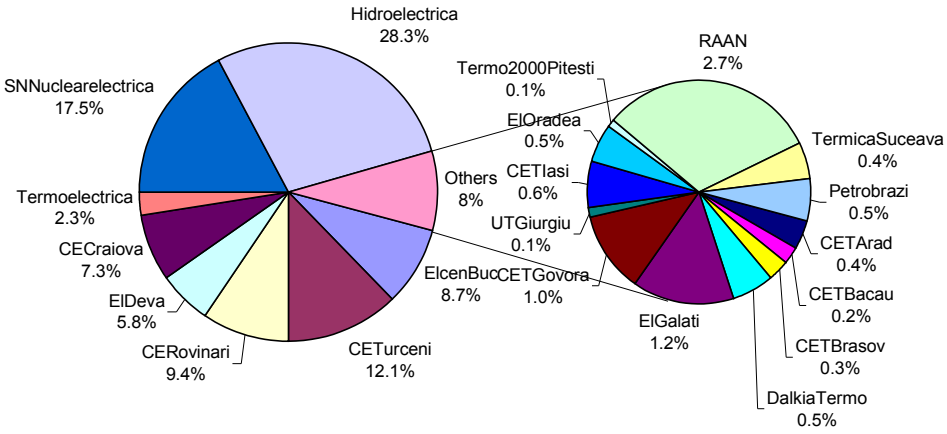
The market structure regarding the electricity generation offers an initial basis for analyzing the possible competitiveness level of the electricity market.

The following table presents the concentration indicators of electricity generation for December 2008 and for the whole year 2008, calculated based on electricity delivered into the networks by the generators with dispatchable units.

Indicator	C1	C3	HHI
December 2008	25%	58%	1415
2008	28%	58%	1523

The market shares of the electricity generators in 2008, taking into account all components of the wholesale electricity market, are presented in the following graph. These market shares are calculated based on the electricity delivered into networks.

Market shares of dispatchable generators by delivered electricity
- 2008 -



Source: Monthly reports of generators – processed by MG

A component of the WEM where direct competition between generators exists is the BM. The values of concentration indicators on this market for December and for the entire year 2008 are determined based on effectively delivered electricity, for each type of regulation defined within the Commercial Code, and they are presented in the following tables:

Structure/concentration indicators of BM - DECEMBER 2008 -	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
C1 - % -	75	76	68	43	33	33
C3 -% -	97	98	87	71	64	73
HHI	5836	5980	4843	2463	1942	2148

Structure/concentration indicators of BM - YEAR 2008 -	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
C1 - % -	71	71	70	38	27	27
C3 - % -	97	97	86	70	67	63
HHI	5438	5367	5065	2319	2021	1838

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 the generators have different levels of capabilities for ensuring this type of service and therefore the competition between them is barely possible, this market has an important regulated component.
The relationship between regulated and competitive components on the ancillary services market 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 2008:

Concentration indicators on ancillary services market - December 2008 -		**Secondary reserve**	**Fast tertiary reserve**	**Slow tertiary reserve**	**Capacity reserve**
regulated component	**contracted quantity (h*MW)**	265876	562150	188480	0
	C1 (%)	86.5	79.1	78.1	0
	C3 (%)	98.7	88.6	100	0
competitive component	**contracted quantity (h*MW)**	0	0	69000	475416
	C1 (%)	0	0	82.9	72.6
	C3 (%)	0	0	100	100
	HHI	0	0	7168	5650

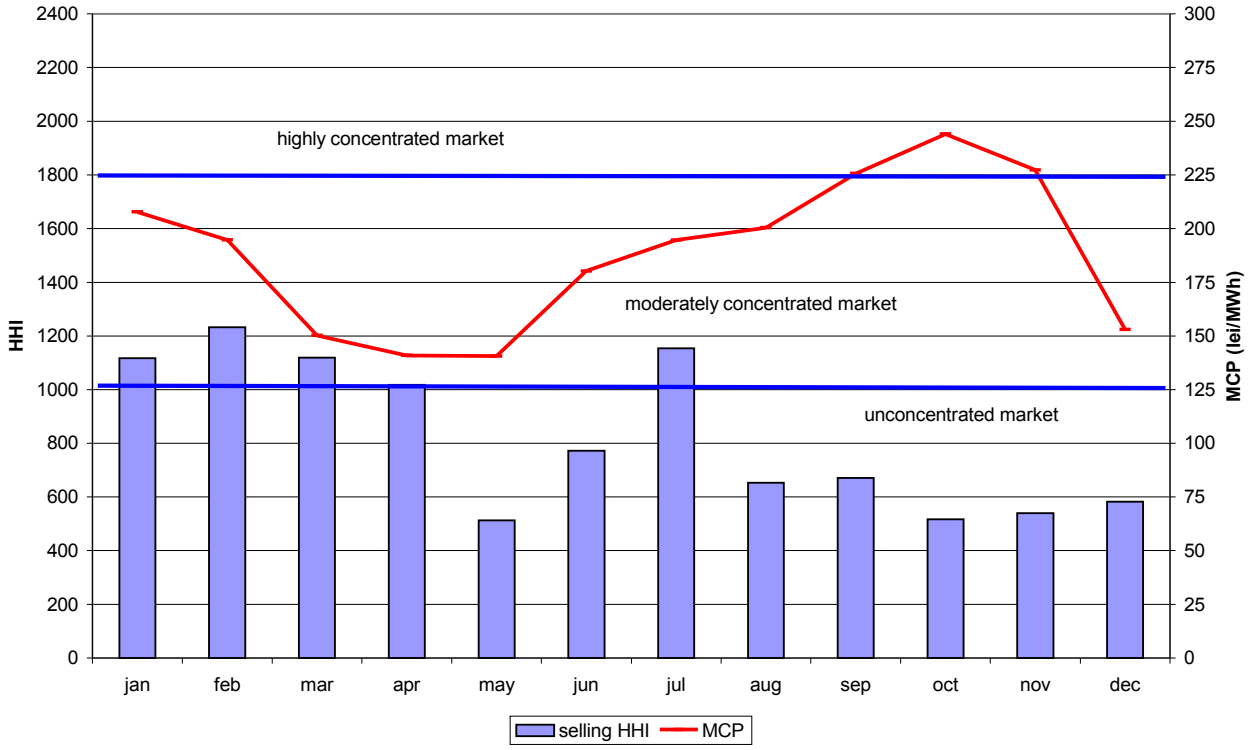
The following table shows the concentration indicators for regulated and competitive components of ancillary services market in 2008:

Concentration indicators on ancillary services market - 2008 -		**Secondary reserve**	**Fast tertiary reserve**	**Slow tertiary reserve**	**Capacity reserve**
regulated component	contracted quantity (h*MW)	2789794	6325480	2303199	0
	C1 (%)	82.6	82.6	78.2	0
	C3 (%)	98.6	91.2	100	0
competitive component	contracted quantity (h*MW)	108940	115080	986395	5292419
	C1 (%)	77.5	92.5	64.3	75,8
	C3 (%)	100	100	97,8	100
	HHI	6516	8605	4765	6130

Concentration indexes on DAM

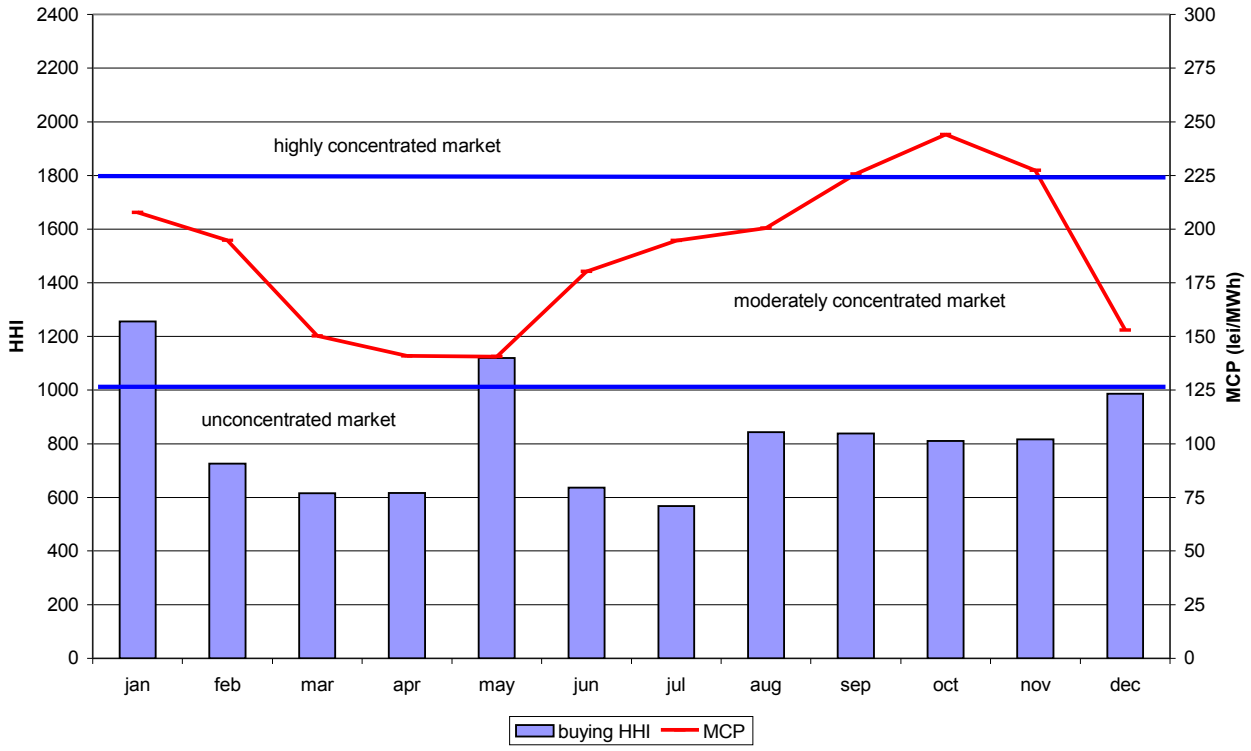
DAM is open to all licensed operators, as sellers and as buyers as well, which is a good premise to decrease the concentration on this market. In the following graphs, the monthly HHI evolution in 2008 is presented (based on traded volumes), both on the selling side and on the buying side, compared to the average monthly DAM price, in order to facilitate a correlation assessement.

HHI monthly evolution on the selling side of DAM (on traded volumes), compared to average MCP evolution



Source: S.C. Opcom S.A. monthly reports

HHI monthly evolution on the buying side of DAM (on traded volumes), compared to average MCP evolution

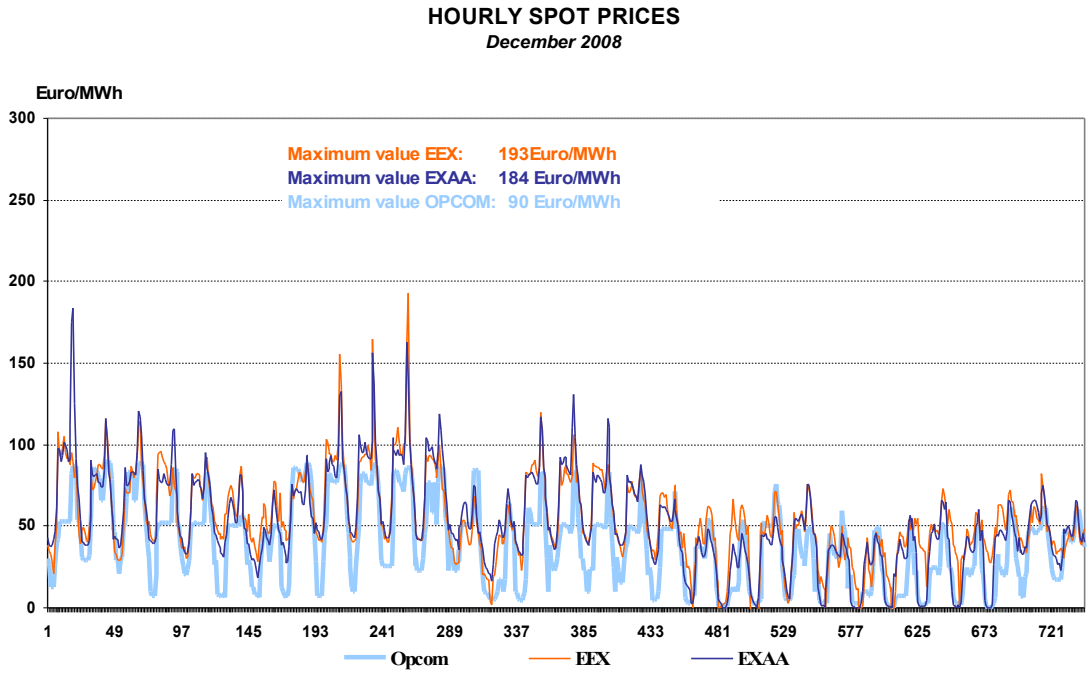


Source: S.C. Opcom S.A. monthly reports

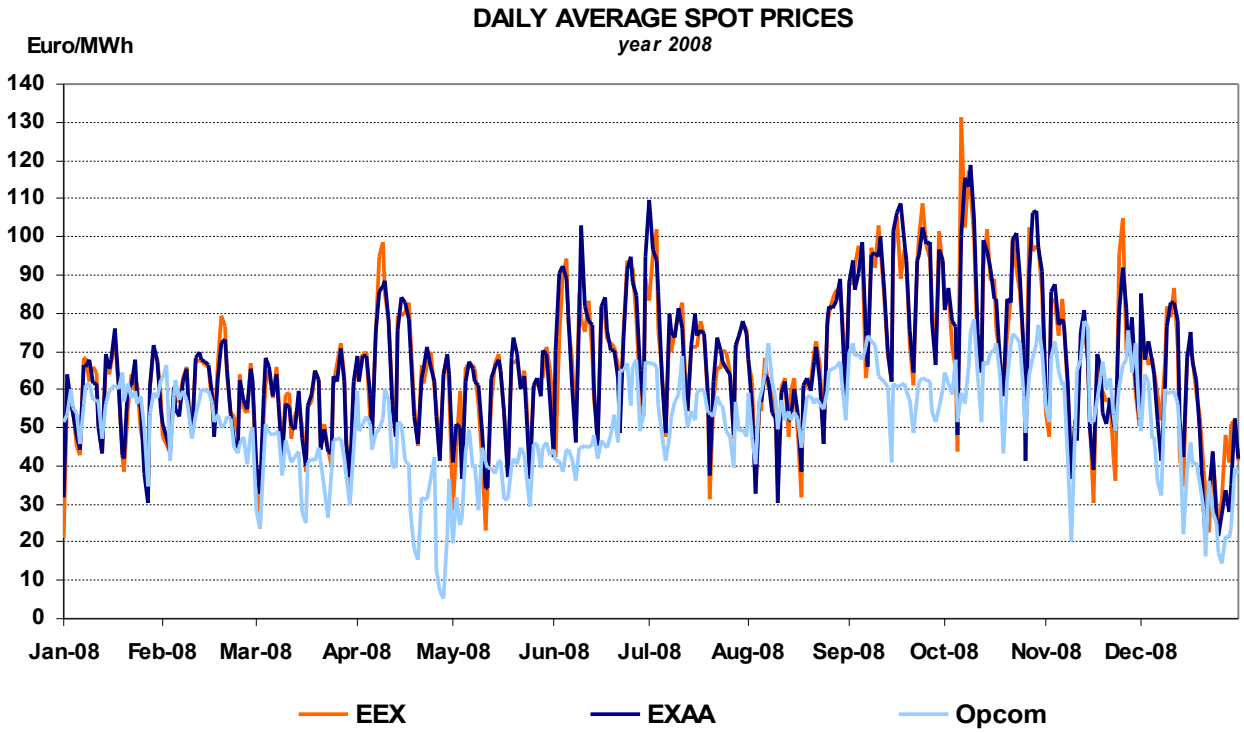
7. Price evolution on wholesale electricity market

SC Opcom SA is the administrator of DAM. The MCP on DAM represents a reference value for the prices on the bilateral contracts. The evolution of hourly prices on DAM in December 2008 and daily average prices along the year 2008 is presented in the followings 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.

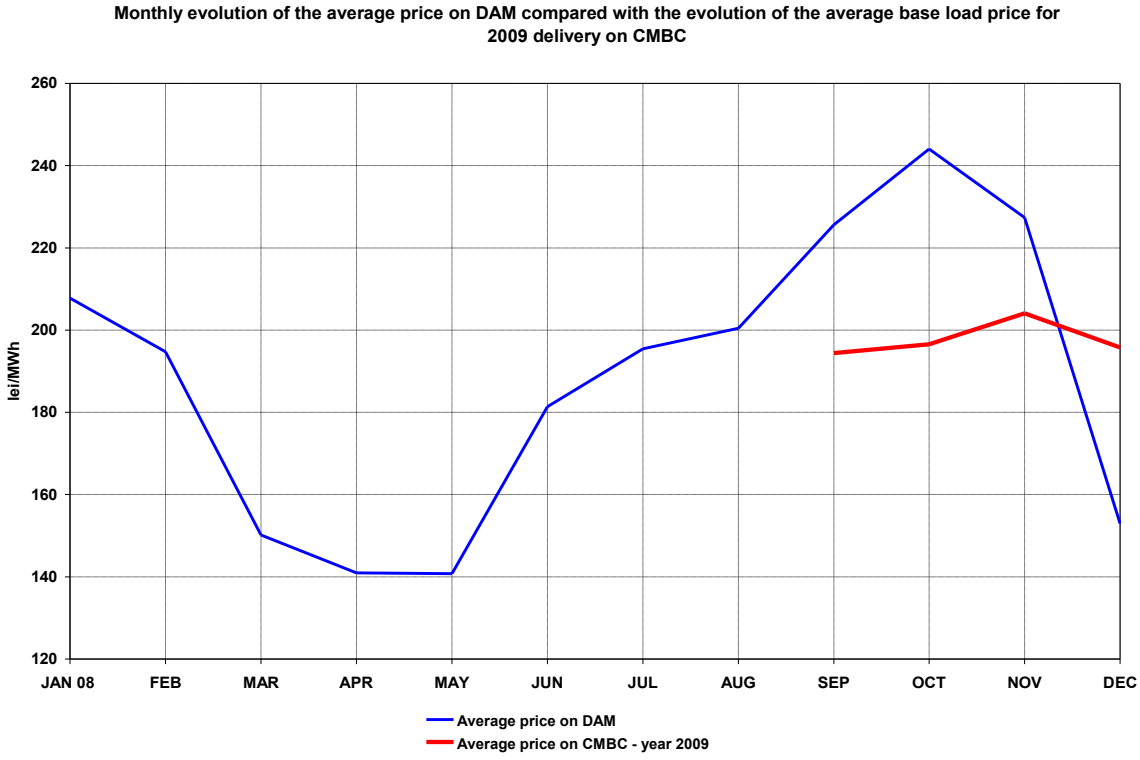


Source: Daily reports of SC Opcom SA and published data of EXAA and EEX – processed by MG



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

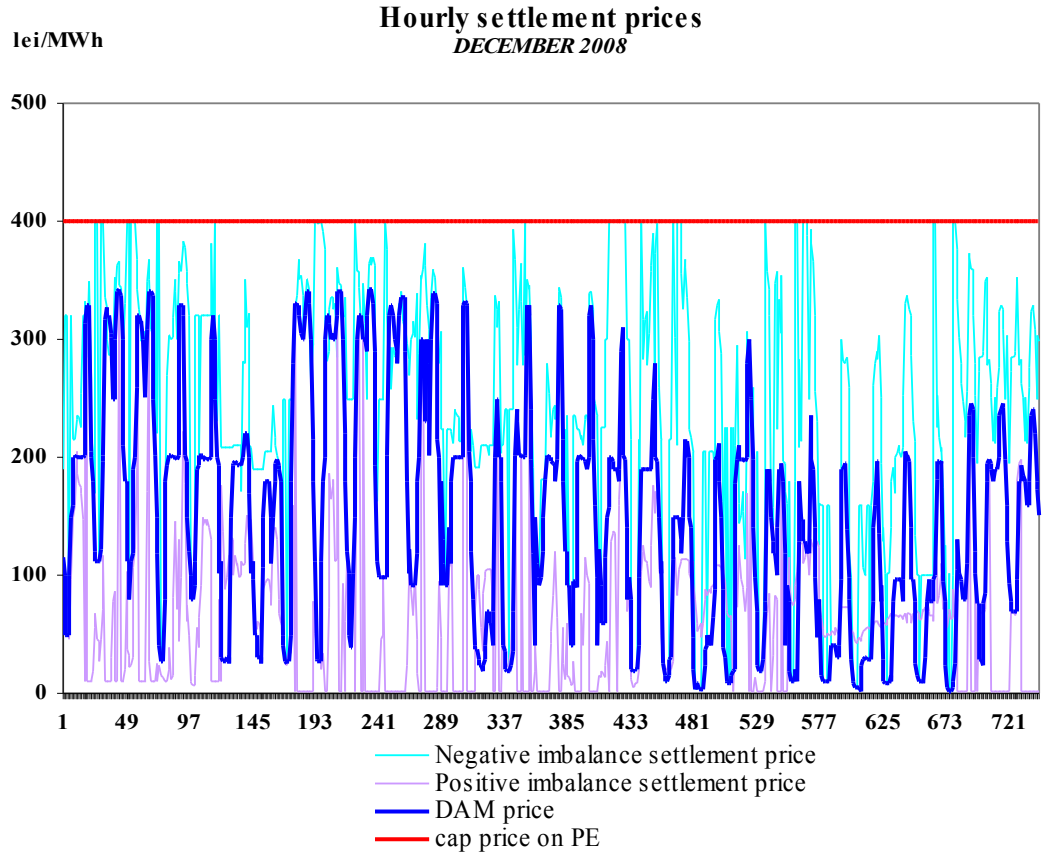
In the next graph, the monthly average of MCP in the year 2008 is presented, compared to the monthly arithmetic average of the prices resulted on the centralized forward market (CMBC) auctions for base load contracts with delivery in calendar year 2009. It's worth noting that such contracts (base load, delivery in January 1 – December 31, 2009) were concluded on CMBC only starting with September 2008.



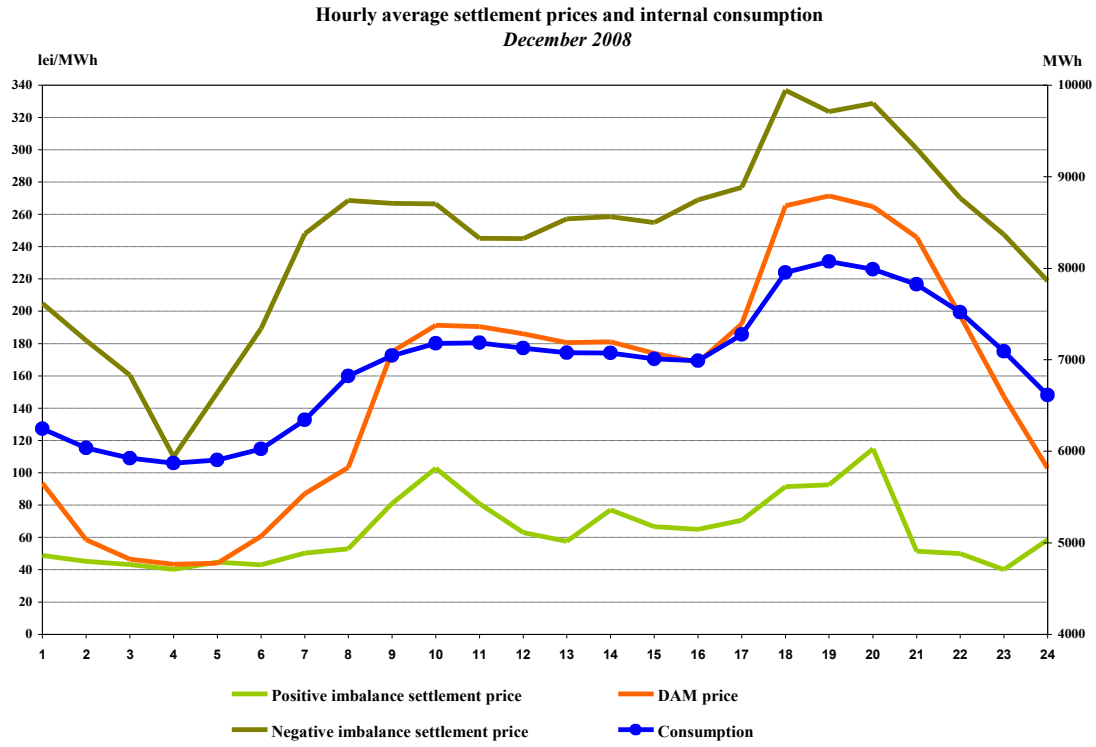
Source: Daily reports of SC Opcom SA and published data of SC Opcom SA – processed by MG

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.

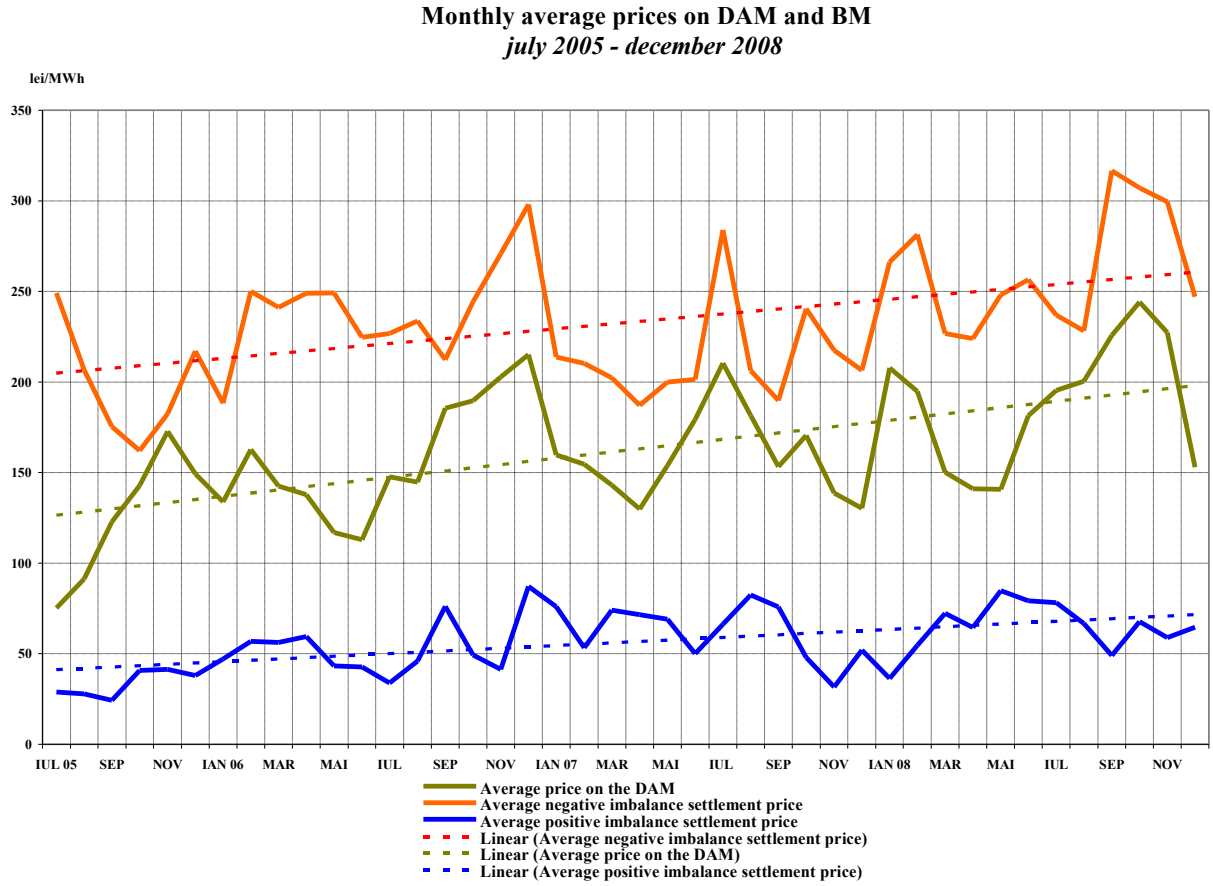
The settlement prices (MCP on DAM, negative imbalance settlement price and positive imbalance settlement price) are represented on the same graph, showing the two markets correlation degree. In the first graph the prices are expressed in hourly values, in the second graph in hourly average values compared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



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



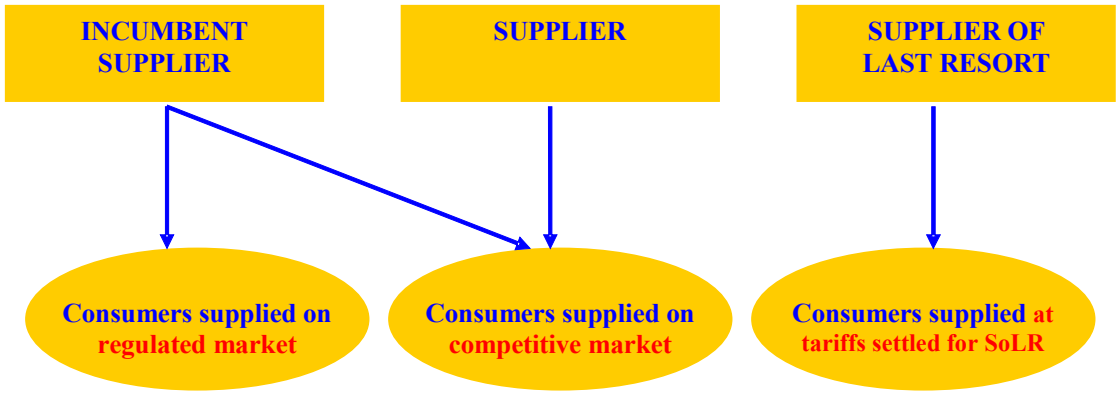
Source: Monthly reports of SC Opcom SA and CN Transelectrica SA – processed by MG



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

III. RETAIL ELECTRICITY MARKET

1. Structure of the retail electricity market

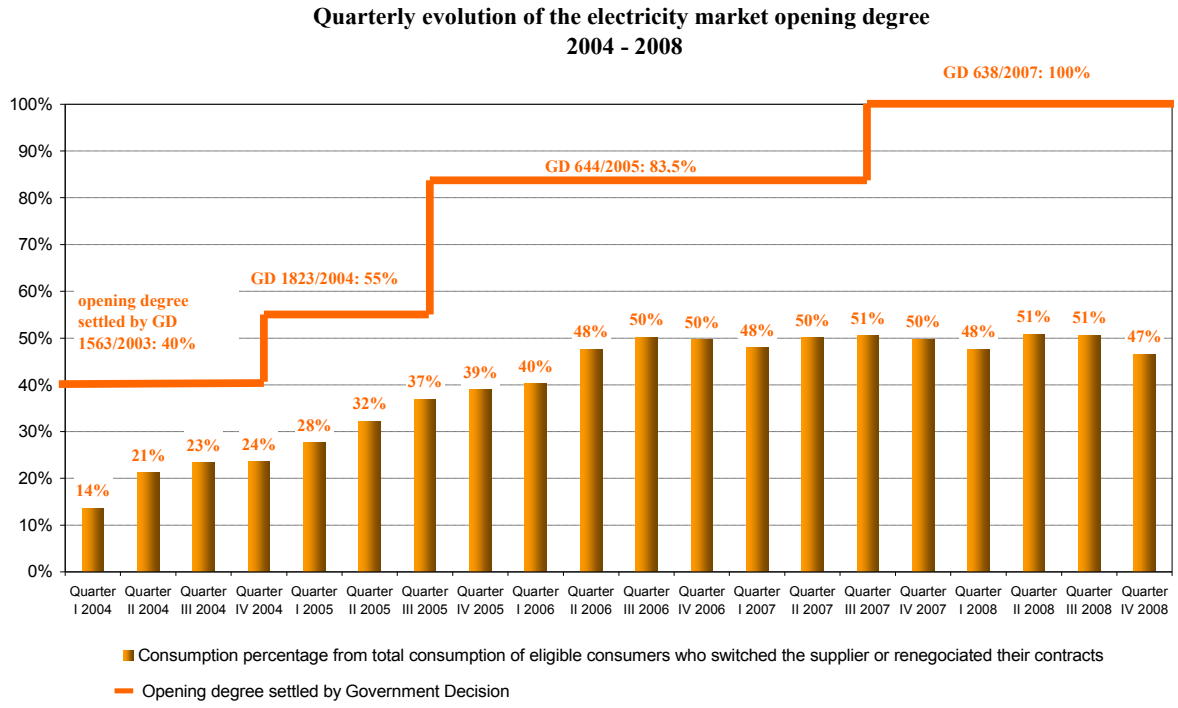


2. Steps in the opening process of the electricity market

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 presents the share of consumption corresponding to those consumers who switched their supplier or renegotiated their contracts with their incumbent supplier from the total consumption, between 2004-2008. The values are presented in a cumulative mode from the beginning of the market opening and on a quarterly basis.

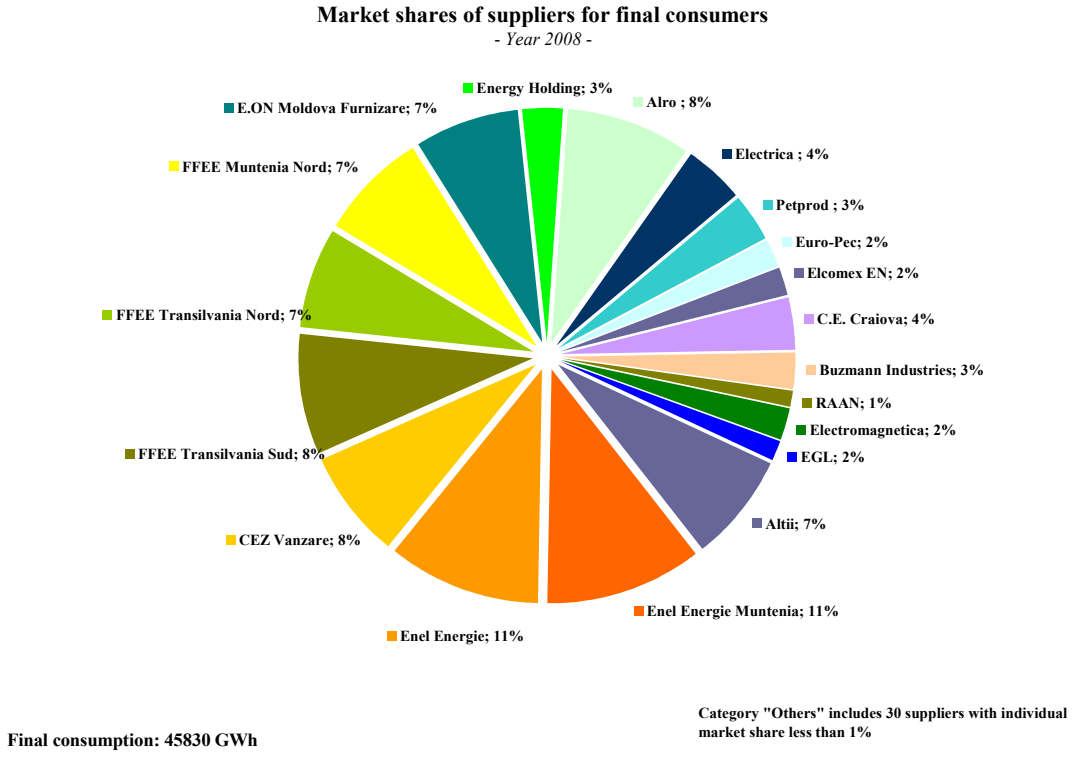


Source: Monthly reports of the final consumers' suppliers – processed by MG

4. *Market shares of the electricity suppliers*

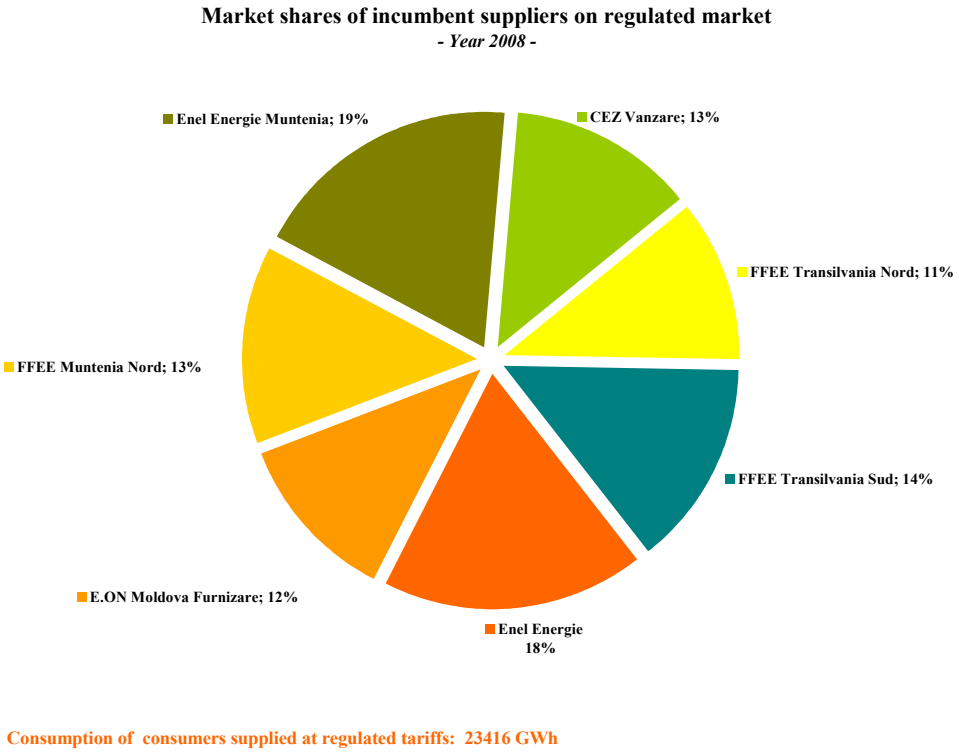
In the following two graphs there are presented the market shares of electricity suppliers on the retail market, calculated:

a) for all suppliers (including the incumbents) - based on the electricity supplied for the consumers at regulated tariffs and negociated prices on REM;



Source: Monthly reports of the suppliers – processed by MG

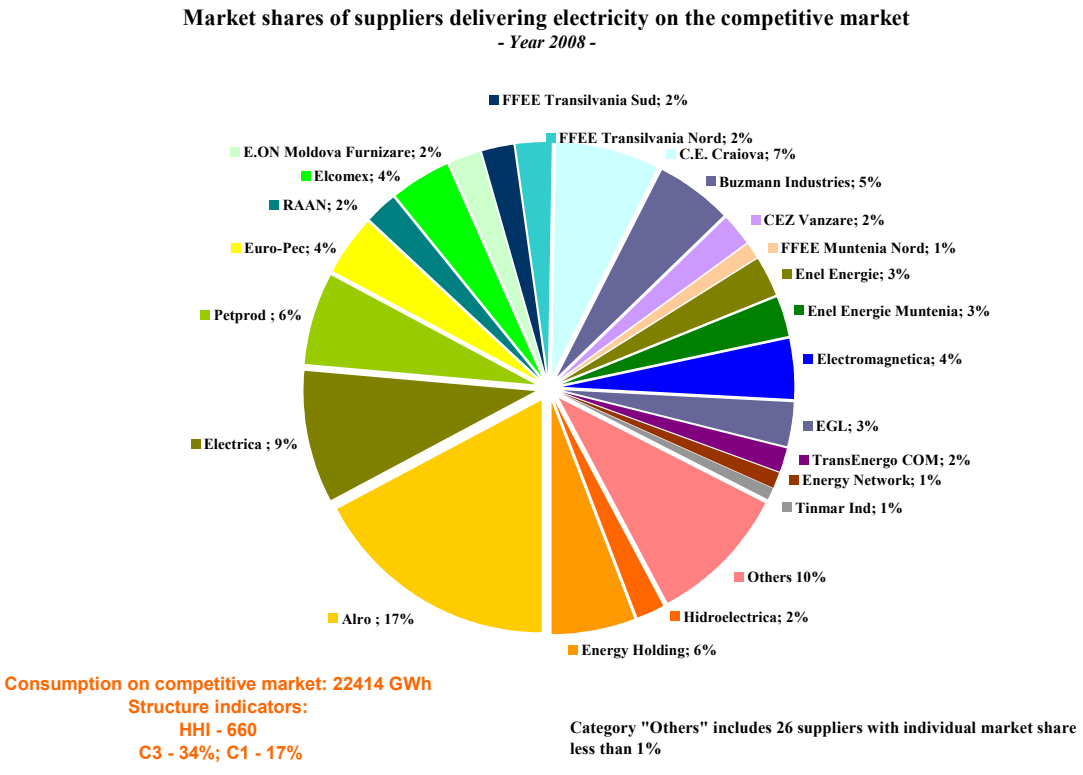
b) for incumbent suppliers - based on the electricity supplied for the consumers at regulated tariffs;



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:



Source: Monthly reports of the supplier s– processed by MG

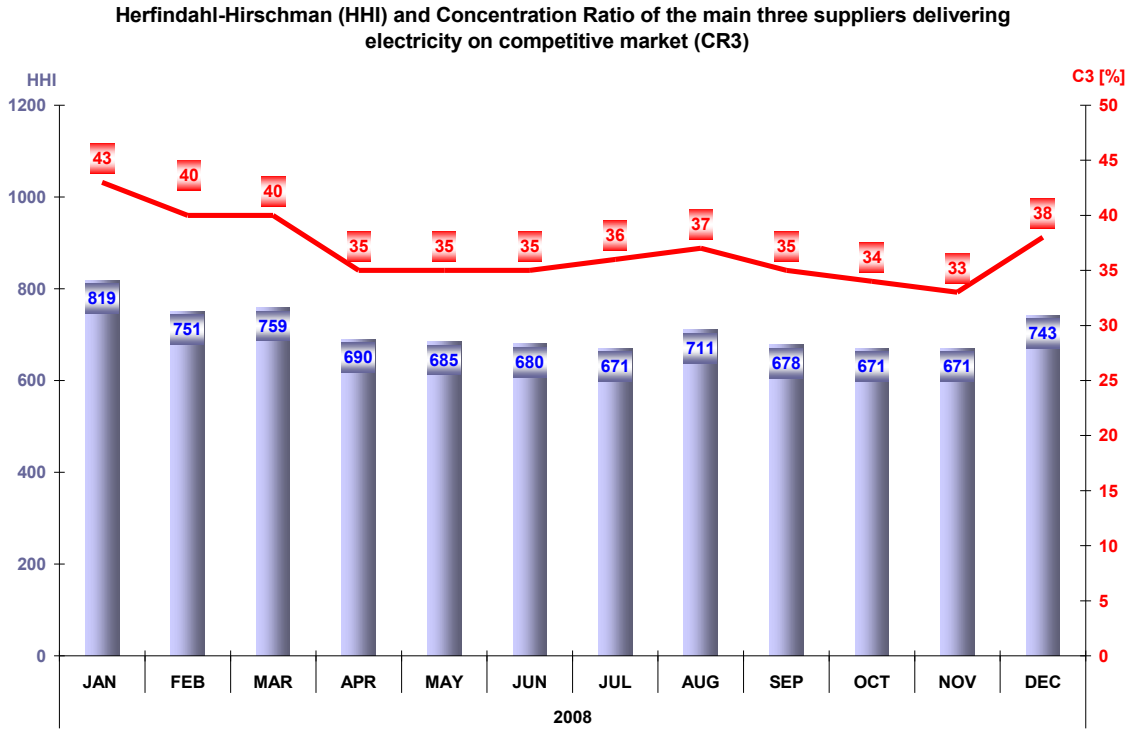
The electricity supplied to the final consumers used for calculating the market share of every supplier includes also the self-consumption of that particular supplier (e.g. consumers with supply license who buy electricity for themselves from WEM as competitive suppliers).

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 2008.

Number of suppliers - December 2008 -	**Share of sales to final consumers from total sales transactions**			
	100%	**75% - 100%**	**50% - 75%**	**<50%**
Competitive	3	6	9	15
Incumbent	5	1	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 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 December and for the entire year 2008, calculated for each consumer category as defined by the European Directive 377/90, modified by the Commission Decision 2007/394/EC:

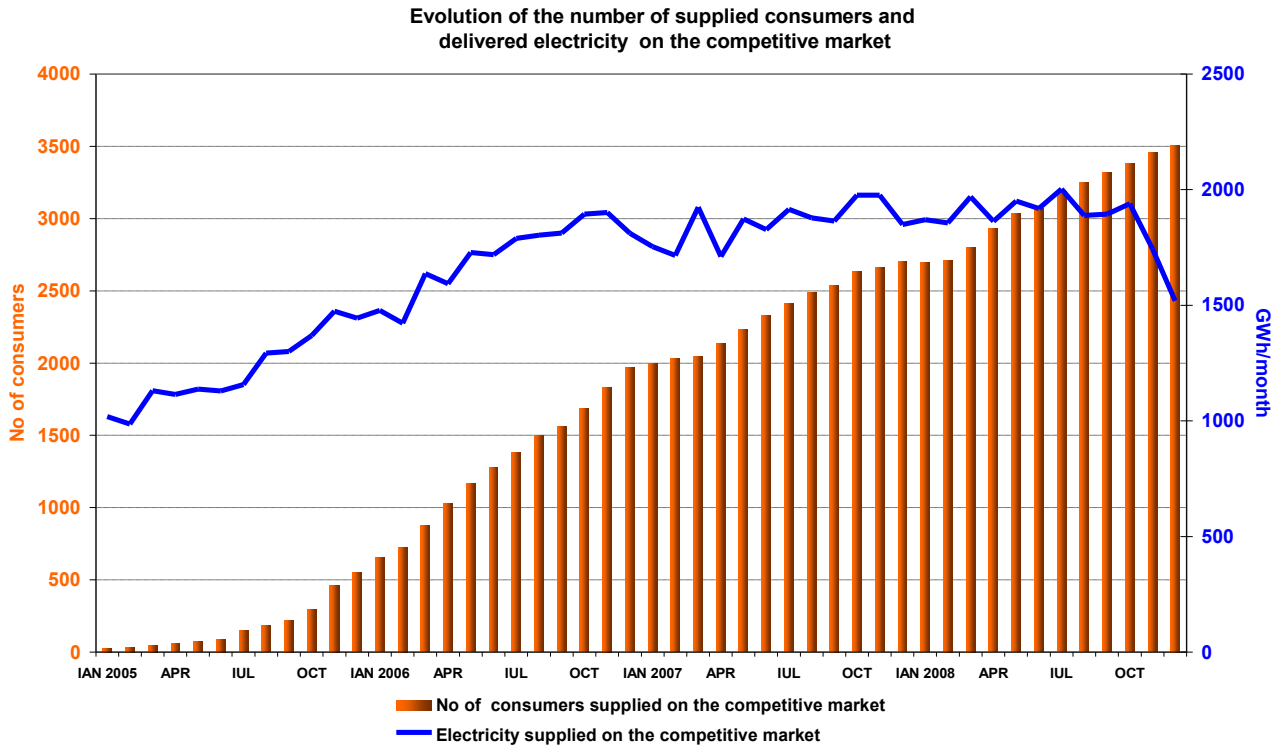
Indicators - December 2008 -	Consumer category							Total
	IA	IB	IC	ID	IE	IF	Others	
C1 -% -	24	37	19	13	13	30	35	**19**
C3 - % -	65	62	42	33	36	62	67	**38**
HHI	1695	1811	879	666	727	1659	1911	**743**
No. of suppliers	10	28	35	38	23	11	12	**45**
Incumbent suppliers	6	7	7	7	6	3	0	**7**
Competitive suppliers	4	20	25	28	16	8	8	**33**
Generators acting as suppliers	0	1	3	3	1	0	4	**5**

Indicators - 2008 -	Consumer category							Total
	IA	IB	IC	ID	IE	IF	Others	
C1 -% -	75	29	18	14	15	29	30	**17**
C3 - % -	88	55	47	32	35	54	58	**34**
HHI	5773	1465	976	661	707	1406	1530	**660**
No. of suppliers	11	31	38	40	26	15	16	**48**
Incumbent suppliers	7	7	7	7	7	3	3	**7**
Competitive suppliers	4	23	28	29	18	12	9	**36**
Generators acting as suppliers	0	1	3	4	1	0	4	**5**

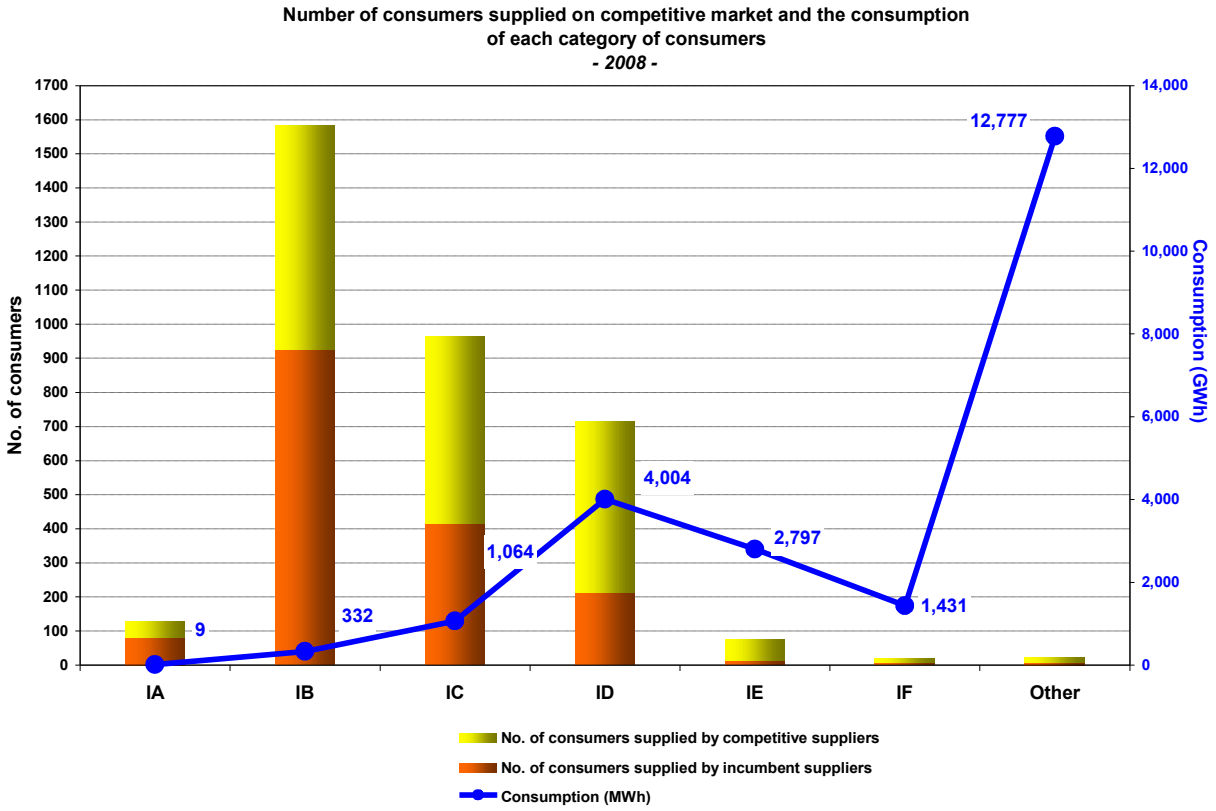
6. Evolution of consumers' number and of the electricity delivered

Number of consumers supplied on the competitive market is presented as total value from the beginning of the market opening process; for December 2008 this number is split into categories, according to the provisions of the European Directive 90/377/EC, with the subsequent moddifications. 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 on competitive market

The following table presents the average selling prices of consumers supplied at negociated prices in 2008. The structure of the consumers into categories is realized in accordance with the provisions of the European Directive 2007/394/EC, with the subsequent moddifications

AN 2008

Consumer category	Consumption (MWh)	Average selling price (lei/MWh)
IA	8503	326.54
IB	331723	343.95
IC	1063927	308.08
ID	4004294	276.73
IE	2796914	252.40
IF	1430927	227.01
Others	12777289	191.51
Total	**22413578**	**224.44**

Source: Monthly reports of the suppliers – processed by MG

Notes:

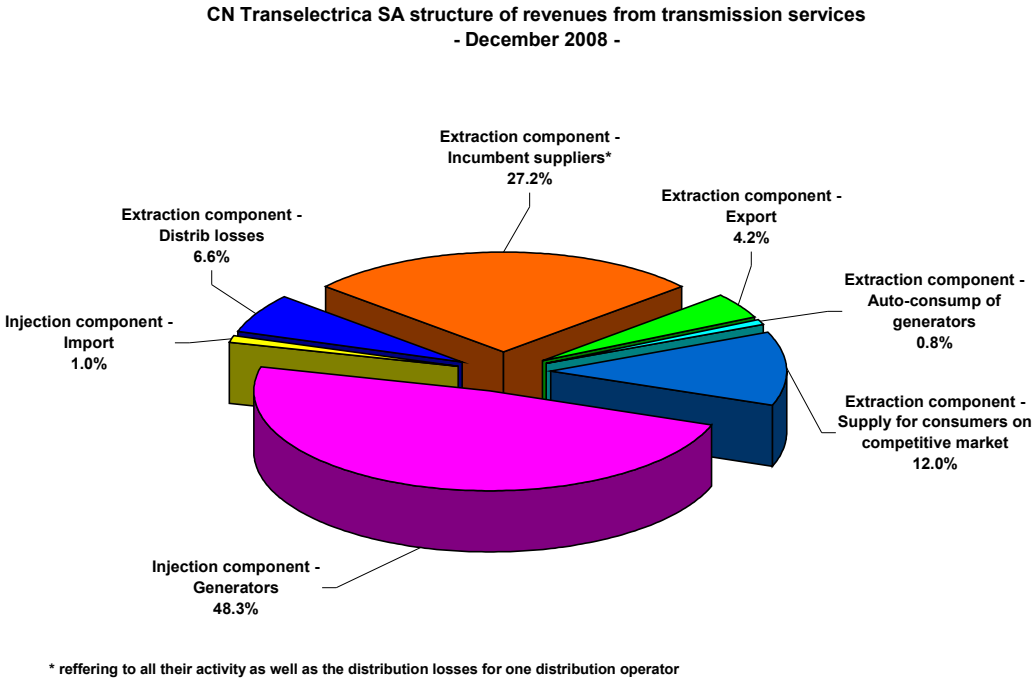
The average selling price on each category was calculated as weighted average of prices used by suppliers with quantities supplied, according to provisions of the European Directive. The average prices do not include VAT, excise or other taxes but include the supplied services (injection and extraction components of transmission, system services, distribution, market settlement, imbalances, BRP aggregated taxes, metering).

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.

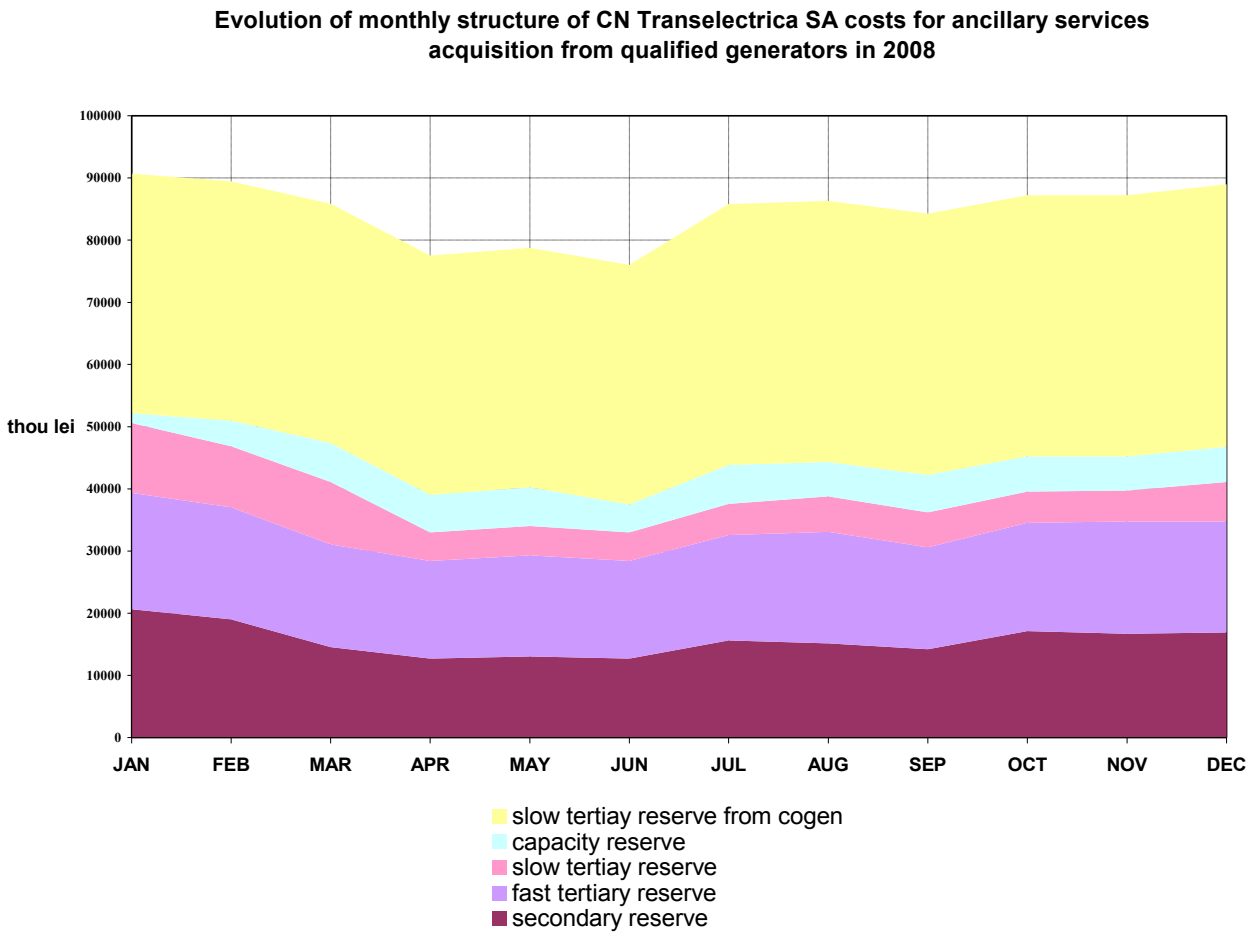
The following graph presents the structure of CN Transelectrica SA revenues from performing the transmission services and reflects the structure of its clients benefiting from this type of service in December 2008.



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 2008. 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 DECEMBER 2008

1. In December 2008, ANRE approved Order no. 131/2008 regarding the modification of *Methodology for establishing, implementing and using the ancillary services – capacity reserve*, The modification consists of changing the the dates for defining, implementing and testing the market mechanism for ensuring the capacity reserve corresponding to the phase II.
2. ANRE also approved the prices for produced thermal energy and electricity and the tariffs for distribution, transmission, system services and market administration.
3. SC Opcom SA has received the writen agreement of ANRE for the fifth revision of the „Operational procedure regarding the functioning of the centralized market for electricity contracts concluded by public auction (CMBC)"; the main changes refer to: reduction of financial guarrantees quota and their due duration, registering of foreign participants, improved transparency rules and public access to the auction sessions.
4. In December 2008, ANRE approved the *Methodology for establishing the regulated tariffs for the electricity delivered to the consumers on the regulated market*, through Order no. 133/2008. Also, there were approved a new value of the regulated tariffs for the electricity delivered to the consumers supplied on regulated 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 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
- 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