

**REPORT ON RESULTS OF MONITORING THE  
ROMANIAN ELECTRICITY MARKET  
AUGUST 2011**

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

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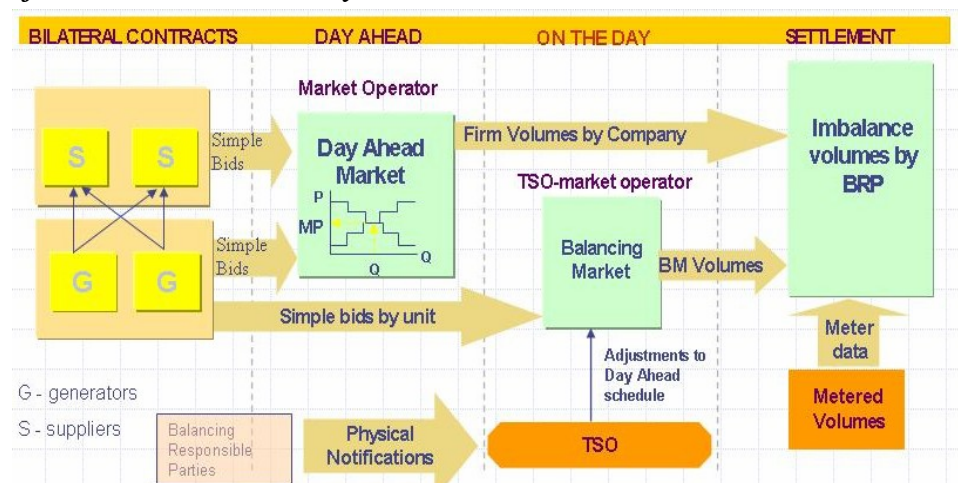
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## I. MAIN EVENTS IN THE DEVELOPMENT OF THE ROMANIAN ELECTRICITY MARKET

- GD 365/1998 – vertically integrated monopol – RENEL – was split in. Separated distribution and supply companies (SC Electrica SA) and generation companies (SC Termoelectrica SA and SC Hidroelectrica SA) were established within a new company - CONEL SA. Two other electricity generators (SN Nuclearelectrica SA and RAAN) were separately established;
- transmission, system services and market administration were separately organised, within CONEL SA;
- the relationships between parties within the electricity sector were settled based on contracts;
- GD 122/2000 – electricity market opens at 10%;
- GD 627/2000 – CONEL holding is dissolved;
- September 2000 – launch of the compulsory electricity spot market in Romania, administrated by OPCOM and organized based on pool model;
- GD 1342/2001 – SC Electrica SA splits in 8 subsidiaries for electricity distribution and supply;
- GD 1524/2002 – SC Termoelectrica SA reorganizes in several separate legal entities for generation;
- July 2005 – launch of the new market model, based on:
  - voluntary spot market, with both sides offers and bilateral settlement;
  - compulsory balancing market, with TSO as single counterparty;
  - financial responsibilities of the balancing are allocated to the BRP;
- GD 644/2005 – electricity market opens at 83.5%;
- November 2005 – launch of the green certificates market;
- December 2005 – launch of the centralized market for bilateral contracts;
- March 2007 – launch of the centralized market for partially standardized bilateral contracts with continuous negotiation;
- GD 638/2007 – fully opening of electricity and gas markets;
- July 2007 – rules for capacity market have been established.
- July 2008 – launch of the mechanism of direct debit and guarantee for electricity transactions on the day-ahead market (OPCOM as central counterparty).
- August 2008 – process of legal unbundling of distribution and supply companies has been concluded

## II. WHOLESALE ELECTRICITY MARKET

### 1. Structure of the wholesale electricity market



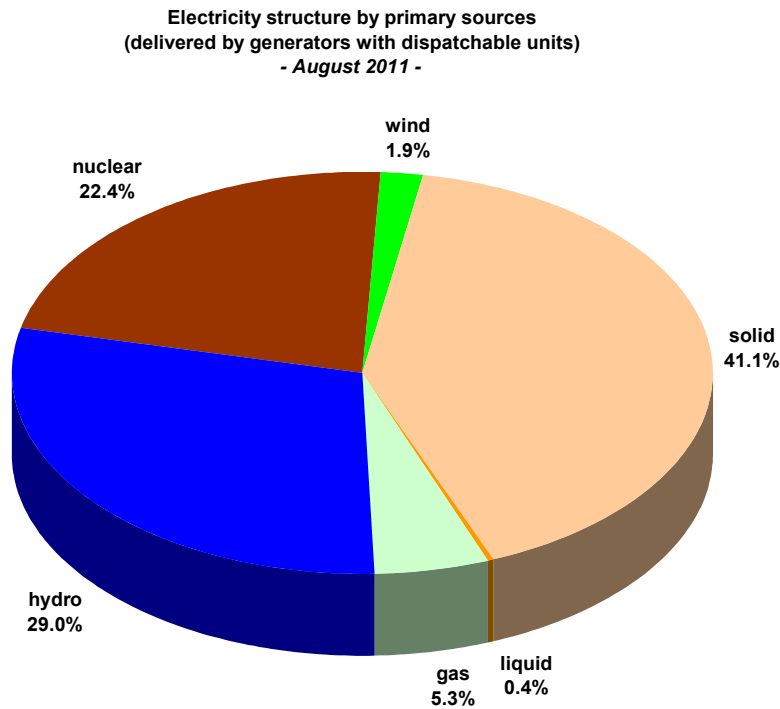
## 2. Participants on the wholesale electricity market

The market participants\* acting on the electricity market in August 2011 are presented below split into categories:

No.	Name	No.	Name	No.	Name				
<b>A Electricity generators operating dispatching units</b>									
1	SC CET Bacău SA	<b>F Electricity Suppliers acting exclusively on the wholesale market</b>							
2	SC CET Braşov SA	1	Alpiq Energy SE	<b>G Electricity Suppliers</b>					
3	SC CET Govora SA	2	SC AMV Style SRL	1	SC Alpiq RomEnergie SRL				
4	SC CET Iaşi SA	3	SC BIT-REEN SRL	2	SC Alpiq RomIndustries SRL				
5	SC CET Oradea SA	4	CEZ as	3	SC Afro SA				
6	SC Cernavoda Power SRL	5	SC CEZ Trade Romania SRL	4	SC Arcelormittal Galati SA				
7	SC Dalkia Termo Prahova SRL	6	Danske Commodities/s Aarhus	5	SC Arelco Distribuție SRL				
8	SC EDP Renewables România SRL	7	Electrabel SA	6	SC Aton Transilvania SRL				
9	SC Electrocentrale Bucureşti SA	8	SC Edison Trading SpA	7	SC Beny Alex SRL				
10	SC Electrocentrale Galaţi SA	9	SC Encaz SRL	8	SC Biol Energy SRL				
11	SC Enel Green SRL	10	SC Enel Trade Romania SRL	9	SC EFE Energy SRL				
12	SC Lukoil Energy & Gaz Romania SRL	11	Energy Financing Team Switzerland	10	SC EGI Gas & Power Romania SA				
13	SC Romconstruct Top SRL	12	SC Energy Market Consulting SRL	11	SC Electrica SA				
14	SC Termica SA Suceava	13	E.ON Energy Trading SE	12	SC Electricom SA				
15	SC Termoelectrica SA	14	SC Ezpada SRL	13	SC Electromagnetica SA				
16	SC Tomis Team SRL	15	Ezpada SRO	14	SC Energotrans SRL				
<b>A1 Electricity generators operating dispatching units and acting also as suppliers on the competitive market</b>									
17	RAAN	16	Gazprom Marketing & Trading	15	SC Energy Distribution Services SRL				
18	SN Nuclearelectrica SA	17	SC GDF Suez Energy Trading Romania SRL	16	SC Energy Financing Team Romania SRL				
19	SC OMV Petrom SA	18	GEN-I Bukarest Electricity Trading and Sales	17	SC Energy Holding SRL				
20	SC CE Craiova SA	19	SC Global Electric Trading SRL	18	SC Energy Network SRL				
21	SC CE Rovinari SA	20	SC Grivco SA	19	SC Energon Power&Gaz SRL				
22	SC CE Turceni SA	21	SC Grupul de Comerţ şi Investiţii SRL	20	SC Enex SRL				
23	SC CET Arad SA	22	SC Invest Dinamic Project SRL	21	SC Ennet Grup SRL				
24	SC Electrocentrale Deva SA	23	SC Jas Budapest Zrt	22	SC Enol Grup SA				
25	SC Hidroelectrica SA	24	JP Morgan Ltd	23	SC EURO-PEC SA				
<b>B Transmission System Operator</b>									
1	CN TRANSELECTRICA SA	25	Korlea Invest as	24	SC Fidelis Energy SRL				
<b>C DAM, Bilateral Contracts Market, Green Certificates Market Operator</b>									
1	SC OPCOM SA	26	SC Korlea Invest SRL	25	SC GDF SUEZ Energy Romania SA				
<b>D Distribution network operators</b>									
1	SC CEZ Distribuție SA	27	SC Lord Energy SRL	26	SC General Com Invest SRL				
2	SC ENEL Distribuție Banat SA	28	MVM Partner Energy Trading Ltd	27	SC Hydroconstructia SA				
3	SC ENEL Distribuție Dobrogea SA	29	OMV Trading GmbH	28	SC ICCO Energy SRL				
4	SC E.ON Moldova Distribuție SA	30	SC RomEnergy Industry SRL	29	ILIOTOMI Impex GRPA				
5	SC ENEL Distribuție Muntenia SA	31	RWE Supply Trading GmbH	30	SC ICPE Electrocond Technologies SA				
6	SC FDEE Electrica Distribuție Muntenia Nord SA	32	Repower Trading Ceska Republica	31	SC Luxten LC SA				
7	SC FDEE Electrica Distribuție Transilvania Sud SA	33	SC RE Power Generation SRL	32	Magyar Aramszolgaltato KFT				
8	SC FDEE Electrica Distribuție Transilvania Nord SA	34	SC Repower Vanzari Romania SRL	33	OET Obedineni Energini Targovtsi				
<b>E Incumbent suppliers</b>									
1	SC CEZ Vanzare SA	35	SC Romelectro SA	34	SC Petprod SRL				
2	SC ENEL Energie SA	36	SC Rudnap SRL	35	SC Renovation Trading SRL				
3	SC E.ON Energie Romania SA	37	SC Sindserv SA	36	SC Repower Furnizare Romania SRL				
4	SC ENEL Energie Muntenia SA	38	Societatea Națională a Lignitului Oltenia	37	SC Ten Gaz SRL				
5	SC FDEE Electrica Furnizare Muntenia Nord SA	39	Statkraft Markets GmbH	38	SC Tinmar Ind SA				
6	SC FDEE Electrica Furnizare Transilvania Sud SA	40	SC Statkraft Romania SRL	39	SC Transformer Supply SRL				
7	SC FFEE Electrica Furnizare Transilvania Nord SA	41	SC TEN Transilvania Energie SRL	40	SC Transegero Com SA				
				41	SC UCM Energy SRL				

\*) The electricity market participants report to ANRE technical/commercial data according to the *Methodology of wholesale electricity market monitoring for assessing the competition level on market and preventing the abuse of dominant position*, approved by ANRE Order no. 35/2006. The table does not include the Balancing Responsible Parties (BRP). The BRP updated list is published on the Balancing Market Operator website - [www.ope.ro](http://www.ope.ro).

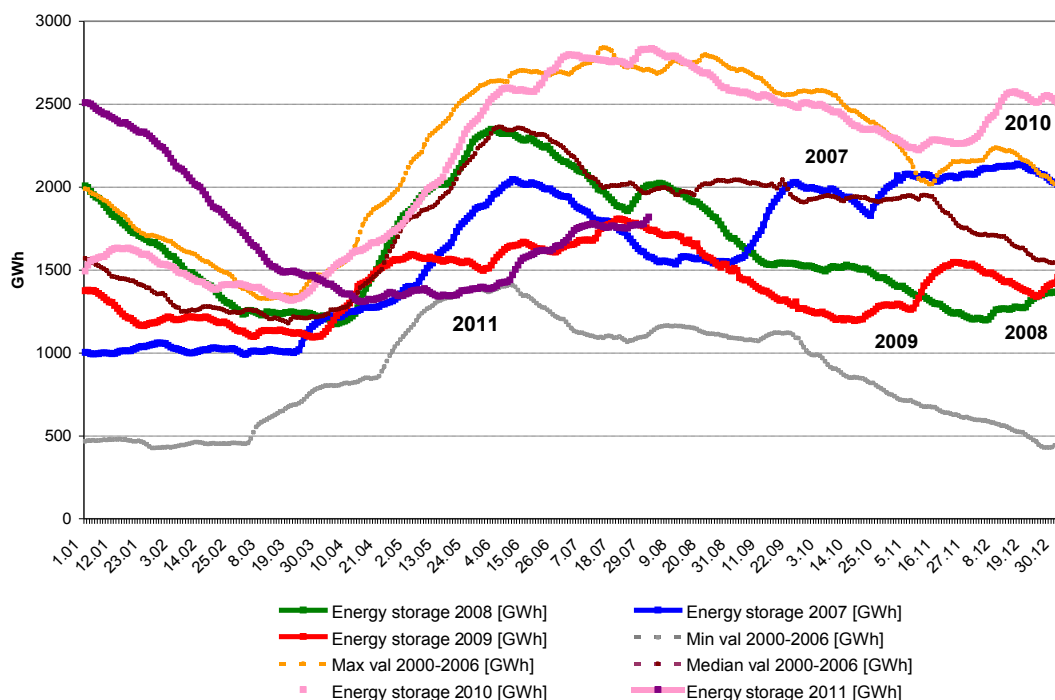
### 3. Generation structure of National Energy System on resources types



Source: Monthly reports of generators – processed by MG

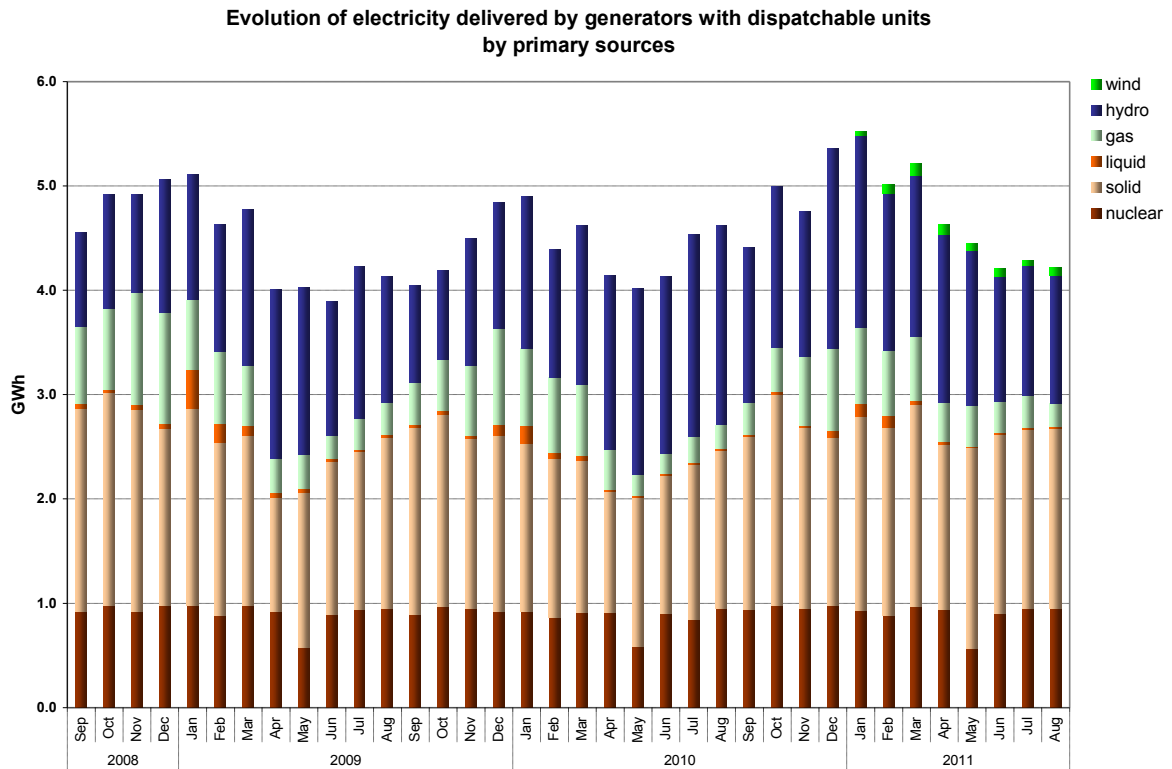
The electricity generated from hydro resources and the energy stored in the main water reservoirs are directly correlated. The following graph presents the evolution of daily amounts of energy storage during the last 4 years and compared to minimum, maximum and median values from 2000-2006.

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



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

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



Source: Monthly reports of generators – processed by MG

The following table presents the main data regarding the physical balance of electricity for August 2011 and for the first 8 months of 2011, compared to data for similar periods of 2010:

No.	Indicator	MU	Aug 2010	Aug 2011	%	Jan-Aug 2010	Jan-Aug 2011	%
0	1	2	3	4	$5=4/3*100$	6	7	$8=7/6*100$
1	Generated electricity	TWh	4.91	4.55	92.67	38.07	40.55	106.61
2	Delivered electricity	TWh	4.62	4.22	91.34	35.39	37.54	77.82
3	Import	TWh	0.03	0.10	333.33	0.65	0.52	80.00
4	Export	TWh	0.43	0.09	20.93	1.65	2.44	147.88
5	Internal consumption	TWh	4.22	4.23	100.24	34.39	35.61	103.55
6	Consumption of household consumers on the regulated market	TWh	0.89	0.91	102.25	7.52	7.72	102.66
7	Consumption of non-households consumption	TWh	2.70	2.90	107.41	21.13	22.74	107.62
7.1	on the regulated market	TWh	0.80	0.70	87.50	6.98	5.75	78.80
7.2	on the competitive market	TWh	1.90	2.20	115.79	14.31	16.99	118.73
8	Transmission – Injection component	TWh	4.49	4.17	92.87	34.70	36.84	106.17
9	Transmission – Extraction component	TWh	4.56	4.26	93.42	35.44	37.63	106.18
10	System services	TWh	4.56	4.26	93.42	35.44	37.63	106.18
11	Actual transmission grid losses	TWh	0.09	0.08	88.89	0.71	0.73	102.82
12	Heat generated for delivery	Tcal	569.34	621.53	109.17	11244.08	11423.66	101.60
13	Heat in co-generation	Tcal	449.03	556.59	123.95	9105.60	9640.78	105.88

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 Traselectrica SA with neighbor countries in order to ensuring the balance of the national energy system.  
 3. The electricity considered for transmission tariff – injection component do not comprise the electricity sold by generators for covering the transmission losses.

#### 4. Transactions' structure on the wholesale electricity market

The size of wholesale market depends on the sum of all transactions performed by the market players, exceeding the quantities physically transmitted from generation to consumption; the total transactions include also resale transactions made in order to match the contractual obligations and to obtain financial benefit.

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

The volumes traded and the average prices on each type of contracts and on the main components of the wholesale market are presented in the following tables for August 2011 compared to the month before and August 2010:

<b>TRANSACTIONS ON THE WHOLESALE MARKET</b>	<b>July 2011</b>	<b>August 2011</b>	<b>August 2010</b>
<b>1. BILATERAL CONTRACTS' MARKET</b>			
traded volume (GWh)	<b>6697<sup>1)</sup></b>	<b>7084</b>	<b>6257</b>
% from internal consumption (%)	156.7 <sup>1)</sup>	167.5	148.3
average price (lei/MWh)	172.12 <sup>1)</sup>	176.63	156.72
<b>1.1. Sales on regulated contracts</b>			
traded volume (GWh)	<b>2077<sup>1)</sup></b>	<b>2080</b>	<b>2068</b>
% from internal consumption (%)	48.6 <sup>1)</sup>	49.2	49.0
average price (lei/MWh)	156.66 <sup>1)</sup>	158.47	153.76
<b>1.2. Sales on negotiated contracts*</b>			
traded volume *** (GWh)	<b>4620</b>	<b>5004</b>	<b>4189</b>
% from internal consumption (%)	108.1	118.3	99.3
average price (lei/MWh)	179.05	184.18	158.18
<b>2. EXPORT</b>			
traded volume** (GWh)	<b>87</b>	<b>85</b>	<b>429</b>
% from internal consumption (%)	2.0	2.0	10.2
average price (lei/MWh)	236.02	159.49	159.64
<b>3. CENTRALISED MARKETS OF CONTRACTS</b>			
traded volume (GWh)	<b>381</b>	<b>415</b>	<b>382</b>
% from internal consumption (%)	8.9	9.8	9.1
average price (lei/MWh)	164.12	167.39	154.84
<b>4. DAY AHEAD MARKET</b>			
traded volume (GWh)	<b>732</b>	<b>708</b>	<b>870</b>
% from internal consumption (%)	17.1	16.7	20.6
average price (lei/MWh)	216.97	215.50	138.88
<b>5. BALANCING MARKET</b>			
traded volume (GWh)	<b>306</b>	<b>266</b>	<b>212</b>
% from internal consumption (%)	7.2	6.3	5.0
upward volume (GWh)	<b>226</b>	<b>184</b>	<b>92</b>
average negative imbalance price (lei/MWh)	280.60	286.16	181.27
downward volume (GWh)	<b>80</b>	<b>82</b>	<b>120</b>
average positive imbalance price (lei/MWh)	42.08	55.92	35.26
<b>INTERNAL CONSUMPTION (includes distribution and transmission losses) (GWh)</b>	<b>4274</b>	<b>4230</b>	<b>4219</b>

Note: 1) These data differ from those comprised in Monitoring Report – July 2011 due to some corrections

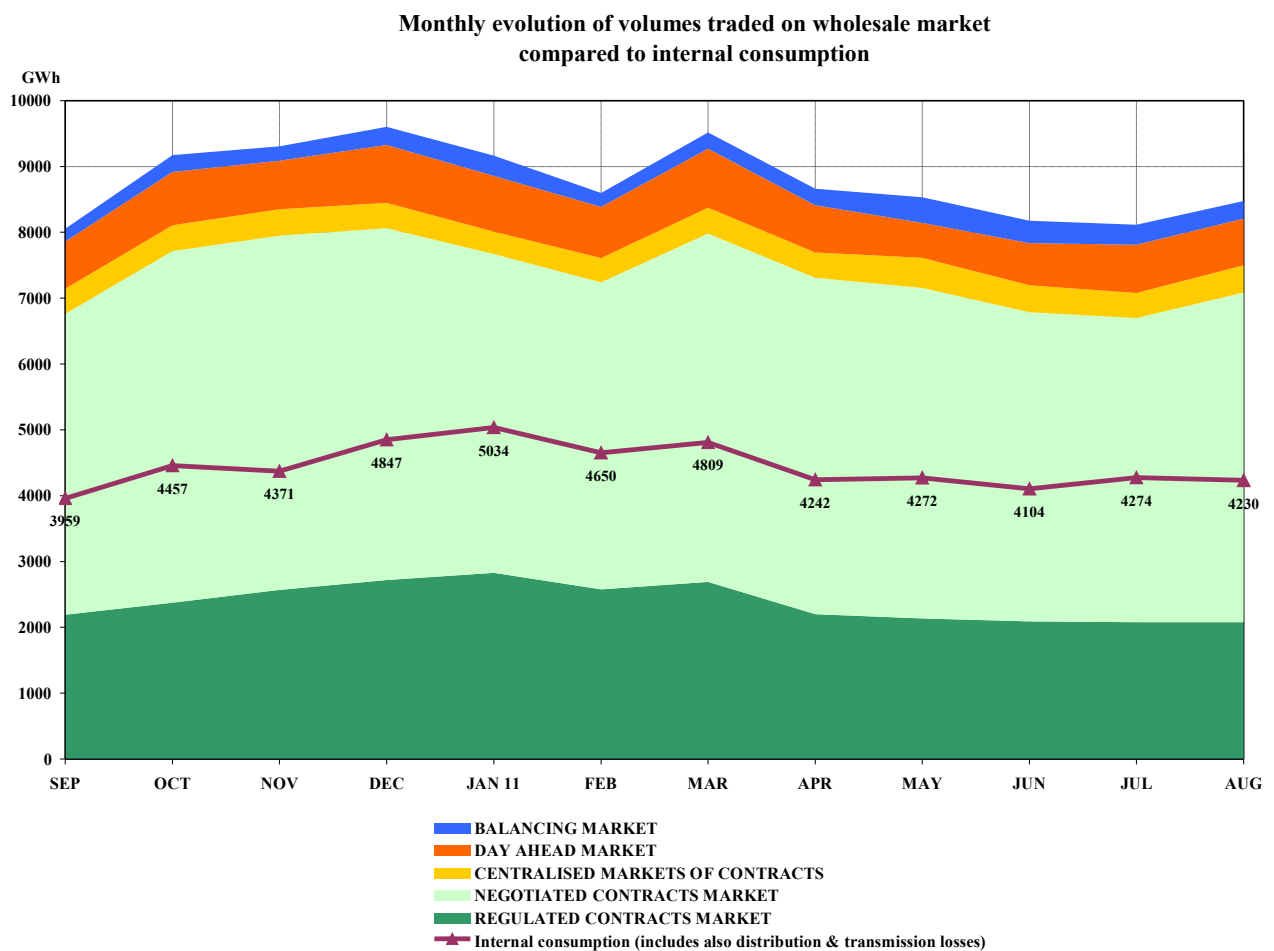
\* Contracts of supply to consumers and contracts of export are not included

\*\* Export volumes correspond to the quantities for which CN Tranelectrica 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 concluded between the fuel suppliers and the generators, as this activity is not subject of ANRE regulations and not comprised within the market participants' reports

The percentage of electricity quantities from the internal consumption (see table from above) offers a dimensional reference for each of the specified markets. Prices include only the injection component of the transmission tariff, in this way being comparable within a month and making possible the comparison with the previous month.

The evolution of the relation between the volumes sold on each market and the estimated internal consumption, during September 2010 – August 2011, is presented below:

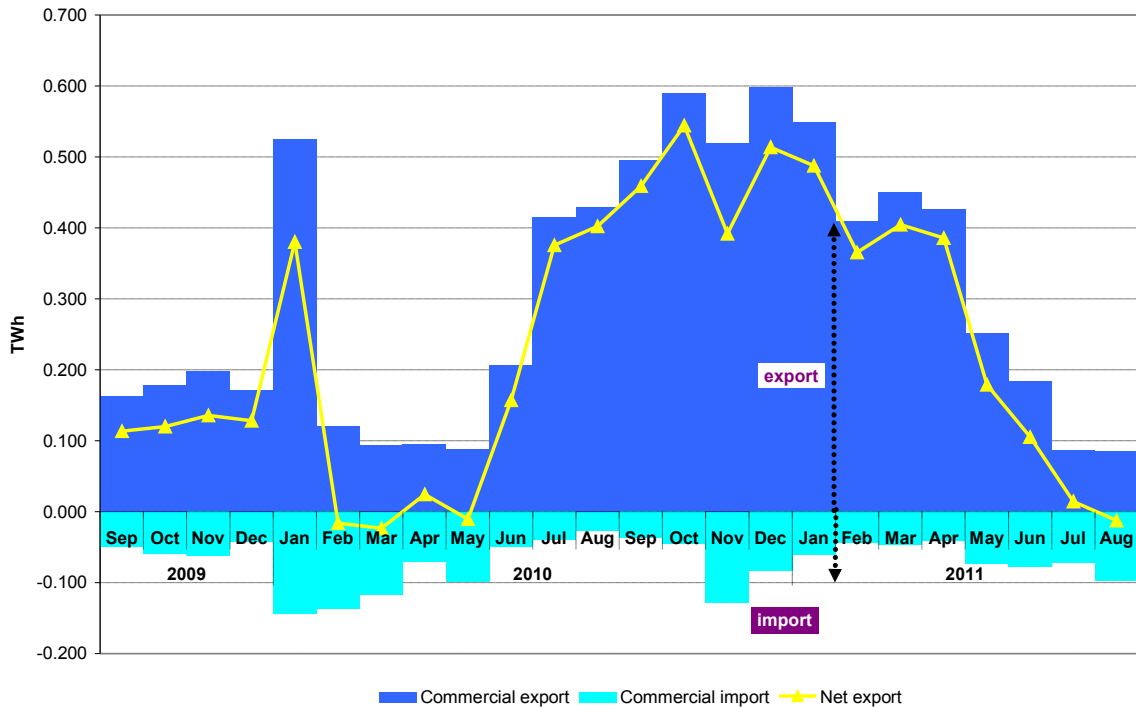


Source: Monthly reports of wholesale market participants, SC Opcom SA and CN Tranelectrica SA – processed by MG

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

The following graph represents the monthly values of commercial export (quantities for which the extraction component of transmission tariff was applied), commercial import (quantities for which the injection component of transmission tariff was applied) and the net export (export minus import) in the last 24 months:

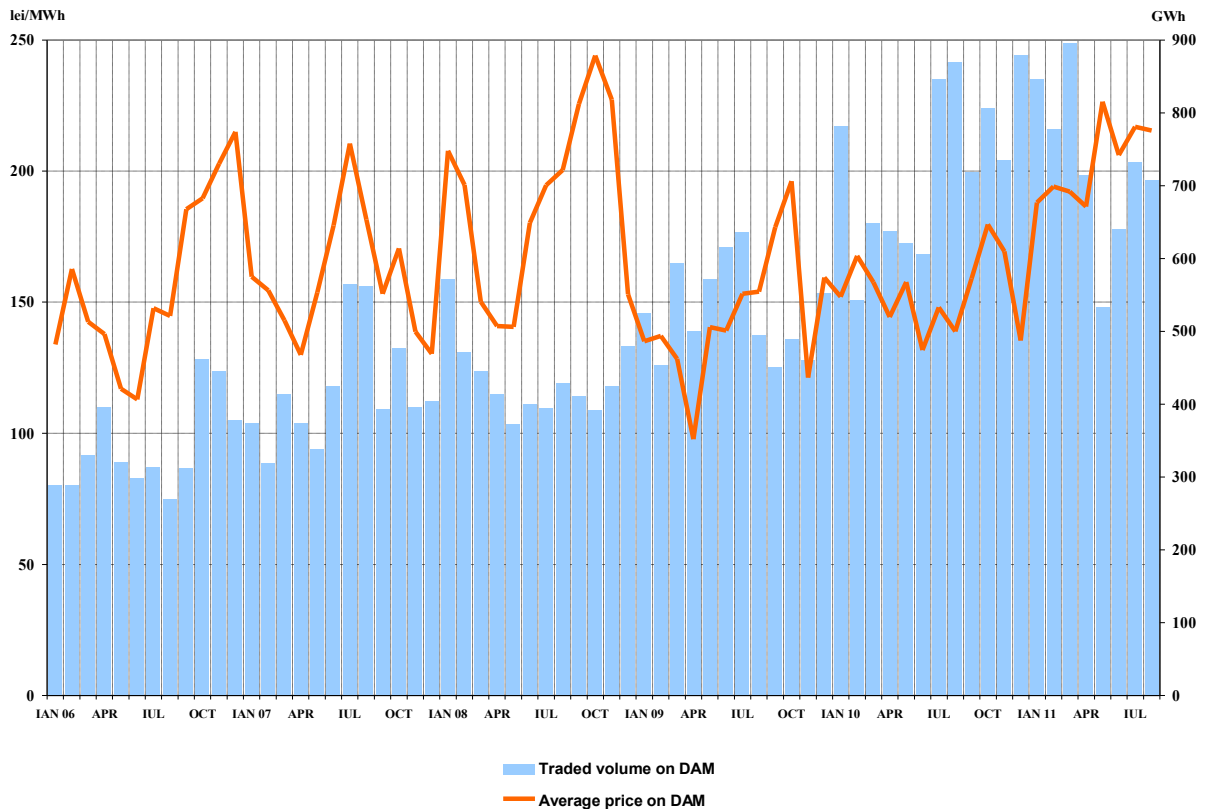
Monthly evolution of export, import and net export of electricity during the last 2 years



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

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

Monthly evolution of the traded volume and average prices on DAM



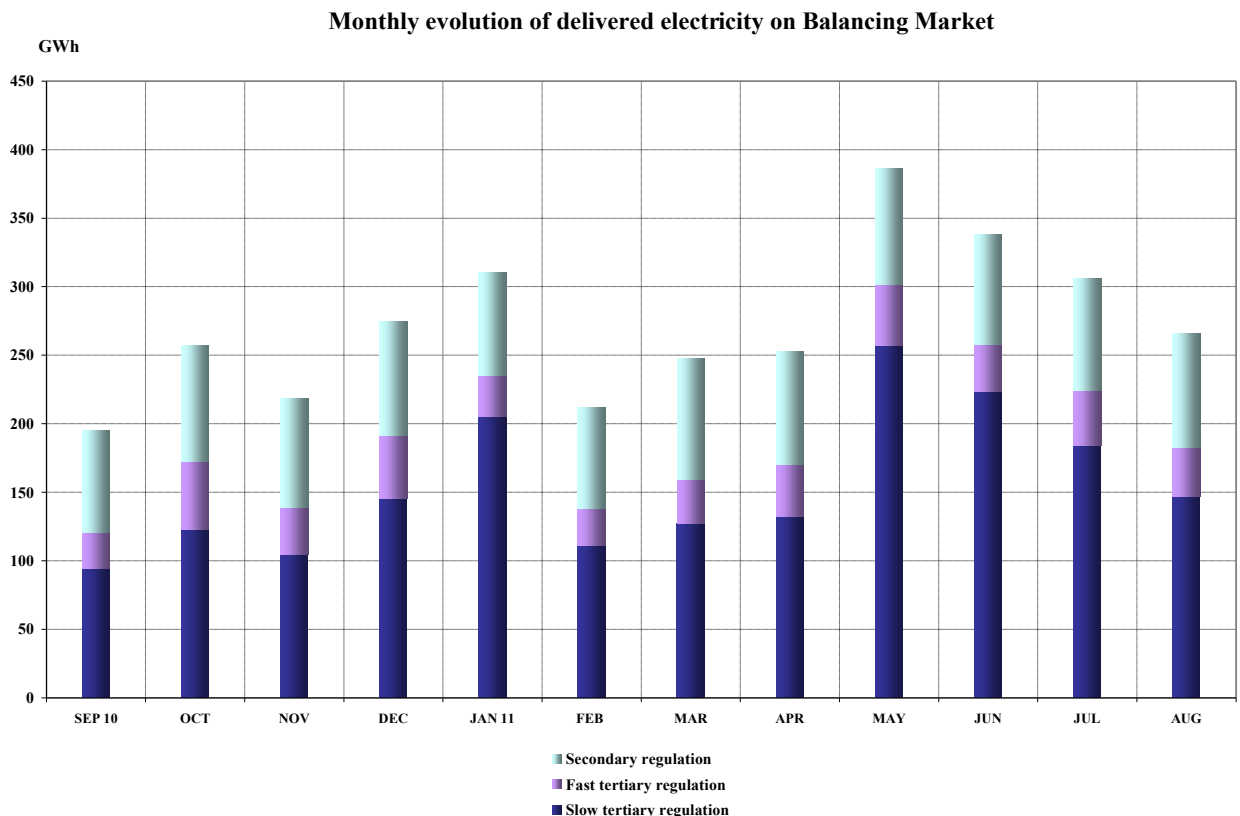
Source: Monthly reports of SC Opcom SA and CN Traselectrica SA – processed by MG

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 August 2011 is presented in the following table:

August 2011	Dispatch order (GWh)	Delivered electricity (GWh)	Deviation (%)
<b>Secondary regulation</b>	<b>84</b>	<b>84</b>	
<i>upward</i>	45	45	
<i>downward</i>	39	39	
<b>Fast tertiary regulation</b>	<b>40</b>	<b>36</b>	<b>11</b>
<i>upward</i>	28	26	8
<i>downward</i>	12	10	18
<b>Slow tertiary regulation</b>	<b>157</b>	<b>146</b>	<b>7</b>
<i>upward</i>	119	113	5
<i>downward</i>	38	33	13
<b>TOTAL</b>	<b>281</b>	<b>266</b>	
<i>upward</i>	192	184	
<i>downward</i>	89	82	
<b>INTERNAL CONSUMPTION</b>		<b>4230</b>	
<i>% share of traded volumes from internal consumption</i>		<b>6.3%</b>	

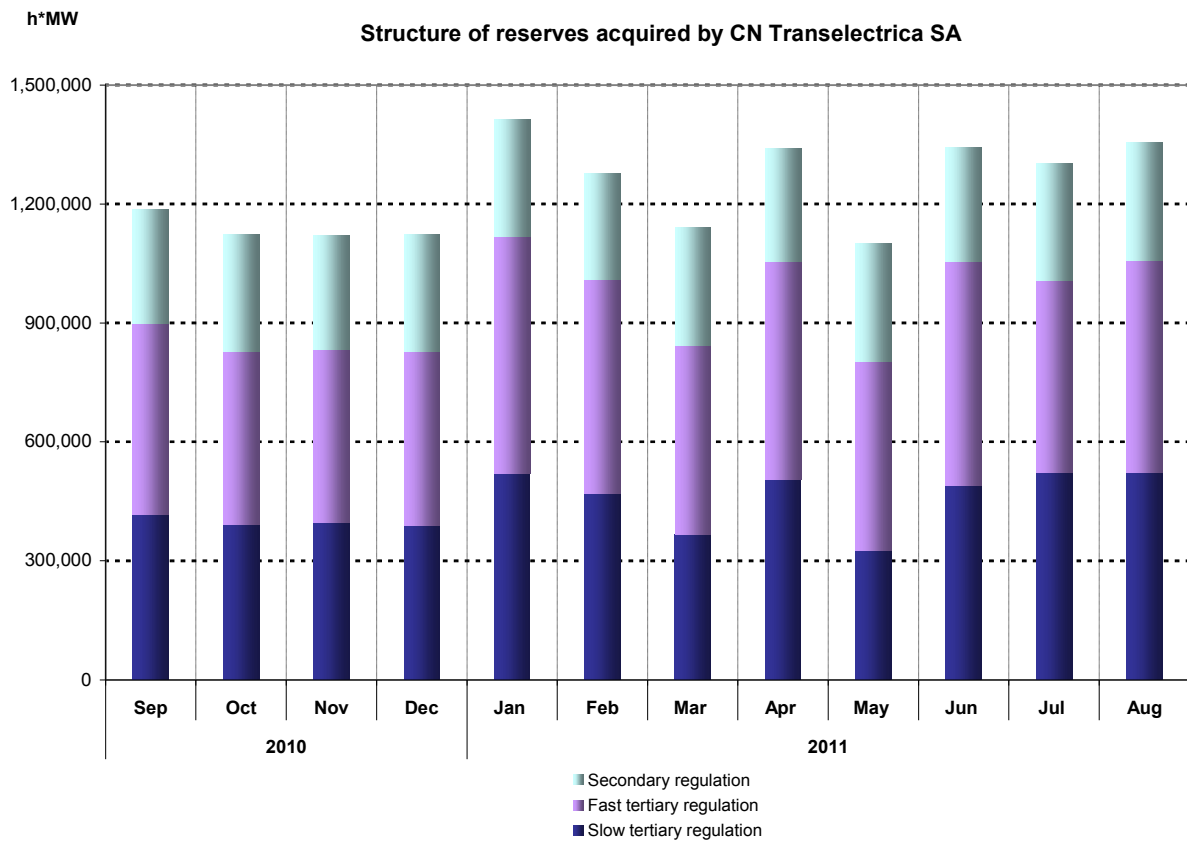
Source: Monthly reports of CN Transelectrica SA – processed by MG

The structure of balancing electricity delivered in the system on each type of regulation starting from August 2010 is presented in the graph below:



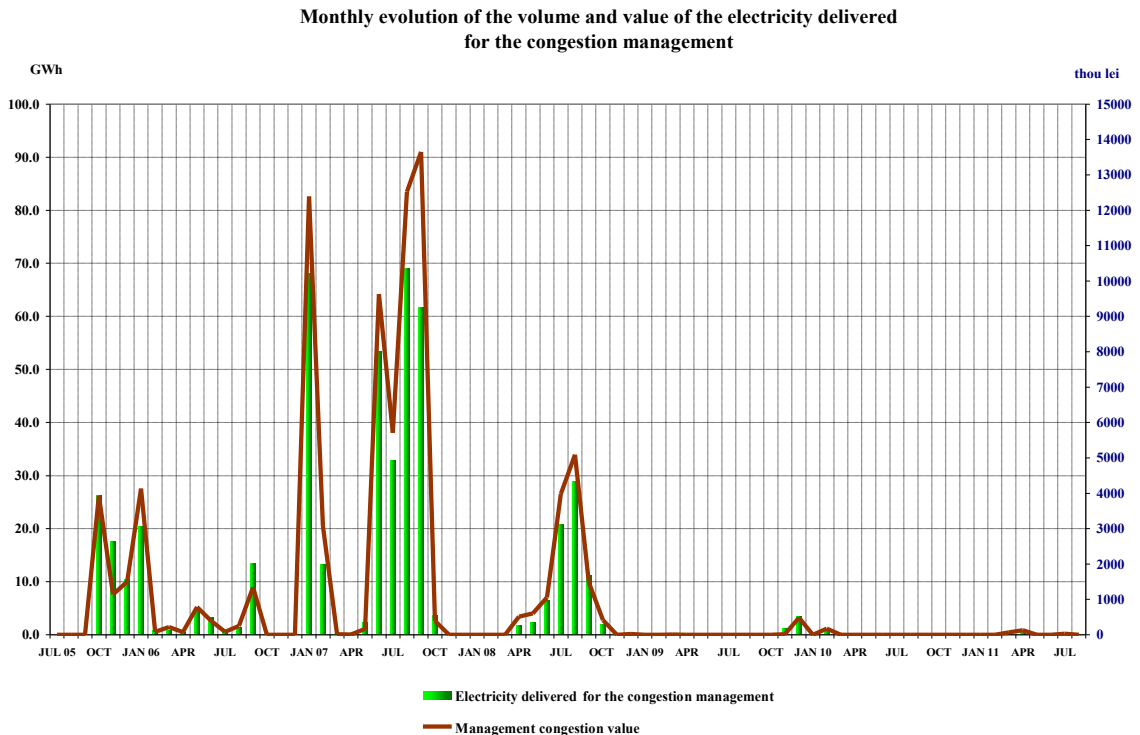
Source: Monthly reports of CN Transelectrica SA – processed by MG

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 Tranelectrica SA starting with August 2010:



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

The following graph presents the evolution of electricity traded by CN Tranelectrica SA on the Balancing Market for covering the electricity used for congestion management (in order to solve the congestions occurred within the transmission grid) and the evolution of the values of these transactions starting with 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 August 2011 compared to previous month and August 2010 was the following:

Transaction type	- GWh -		
	July 2011	August 2011	August 2010
0	1	2	3
Regulated to incumbents, thermal generators	666.55	106.60	867.25
Regulated to incumbents, hydro generator	327.37	295.82	290.75
Regulated to incumbents, nuclear generator	458.79	463.89	464.78
Regulated for distribution losses, thermal generators	181.95	182.81	182.51
Regulated for distribution losses, hydro generator	23.28	23.28	47.72
Regulated for distribution losses, nuclear generator	105.05	106.60	46.05
Regulated for transmission losses, thermal generator	76.28*	76.40	70.39
Regulated, to other generators (with return of obligation within a year)	237.44	210.04	98.54
Negotiated, to other generators	59.99	113.64	97.38
Negotiated, to suppliers	1166.95	1116.57	1208.16
Contracts concluded on centralized markets (CMBC, CMBC-NC, RCE)	380.67	415.11	382.40
Supply to consumers (regulated and competitive)	203.97	301.82	188.83
Export	0.00	65.00	117.53
DAM	512.15	478.87	662.90
<b>Total</b>	<b>4400.43*</b>	<b>4570.88</b>	<b>4725.18</b>

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

\* These data differ from those comprised in Monitoring Report – July 2011 due to some corrections

### Suppliers

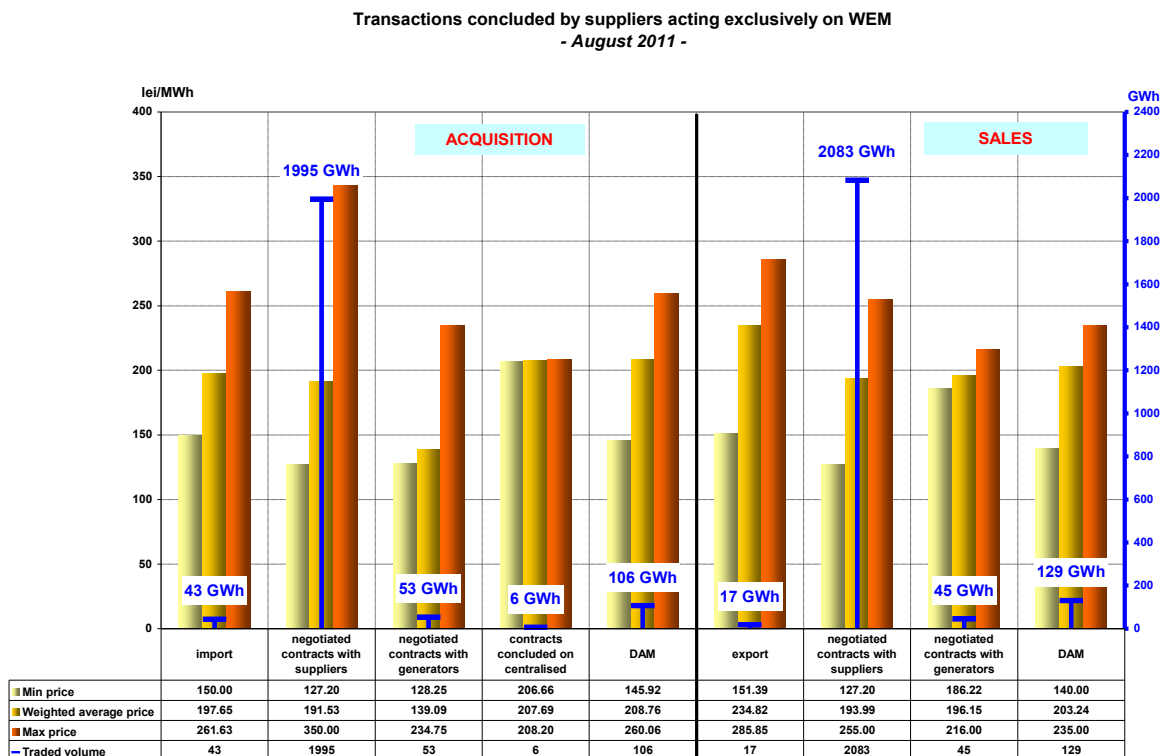
In August 2011, 89 companies having as main activity the supply of electricity concluded transactions on the electricity market; from these, 41 suppliers traded electricity exclusively on the wholesale market and 48 suppliers on both retail and wholesale markets (in this category are also included the 7 incumbent suppliers).

#### Suppliers acting exclusively on WEM

The following table shows the activity for August 2011 compared to August 2010 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	August 2010	August 2011
<b>Acquisitions</b>		
Import	3.73	43.43
Negotiated contracts with suppliers	1539.99	1995.04
Negotiated contracts with generators	0.00	53.37
Contracts concluded on centralized markets	22.01	5.80
DAM	90.19	106.21
<b>Sales</b>		
Export	280.04	16.91
Negotiated contracts with suppliers	1323.71	2082.52
Negotiated contracts with generators	0.00	44.64
DAM	101.01	129.35

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 August 2011:



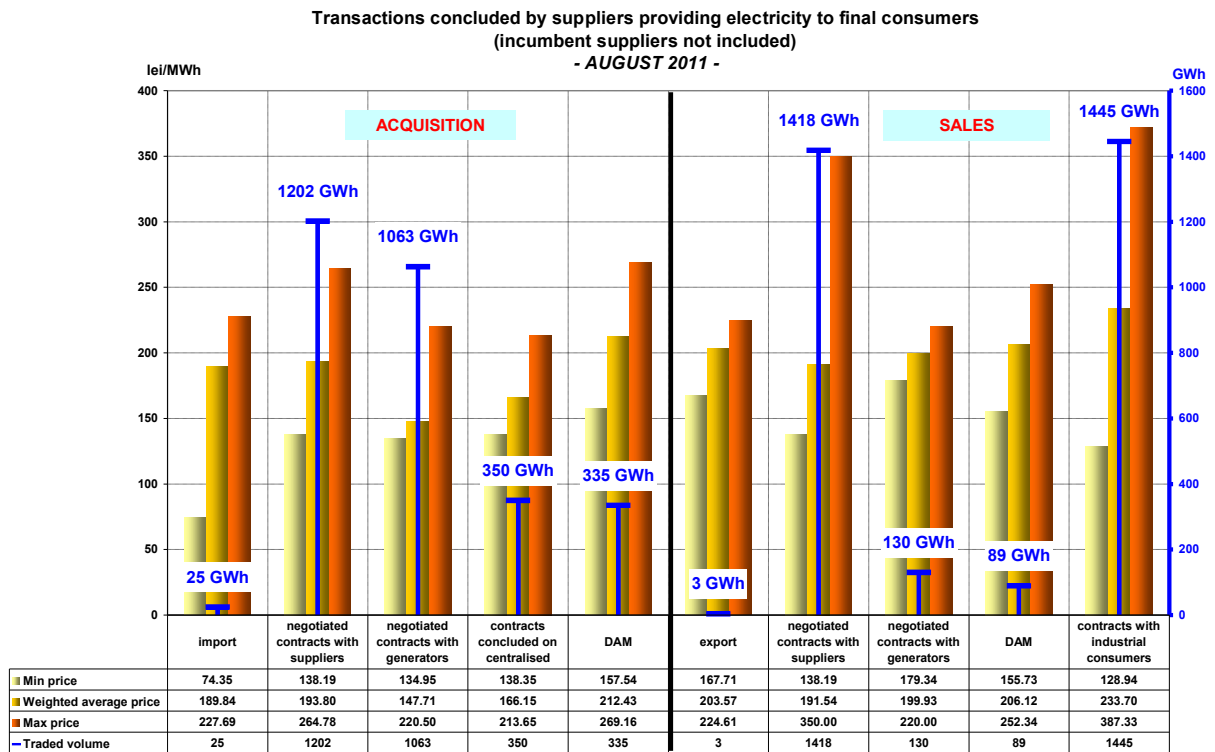
Source: Monthly reports of the competitive suppliers – processed by MG

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 August 2011 and August 2010.

		- GWh -	
Transactions' structure of suppliers providing electricity to final consumers (the incumbent suppliers are not included)		August 2010	August 2011
<b>Acquisitions</b>			
Import		0.07	24.55
Negotiated contracts with suppliers		911.07	1021.89
Negotiated contracts with generators		1208.16	1063.20
Contracts concluded on centralized markets		319.47	349.79
DAM		455.16	334.90
<b>Sales</b>			
Export		31.30	3.35
Negotiated contracts with suppliers		1516.22	1417.96
Negotiated contracts with generators		8.20	130.33
Contracts concluded on centralized markets		0.00	0.00
DAM		45.28	88.76
Final consumers		1329.06	1445.15

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 August 2011:



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

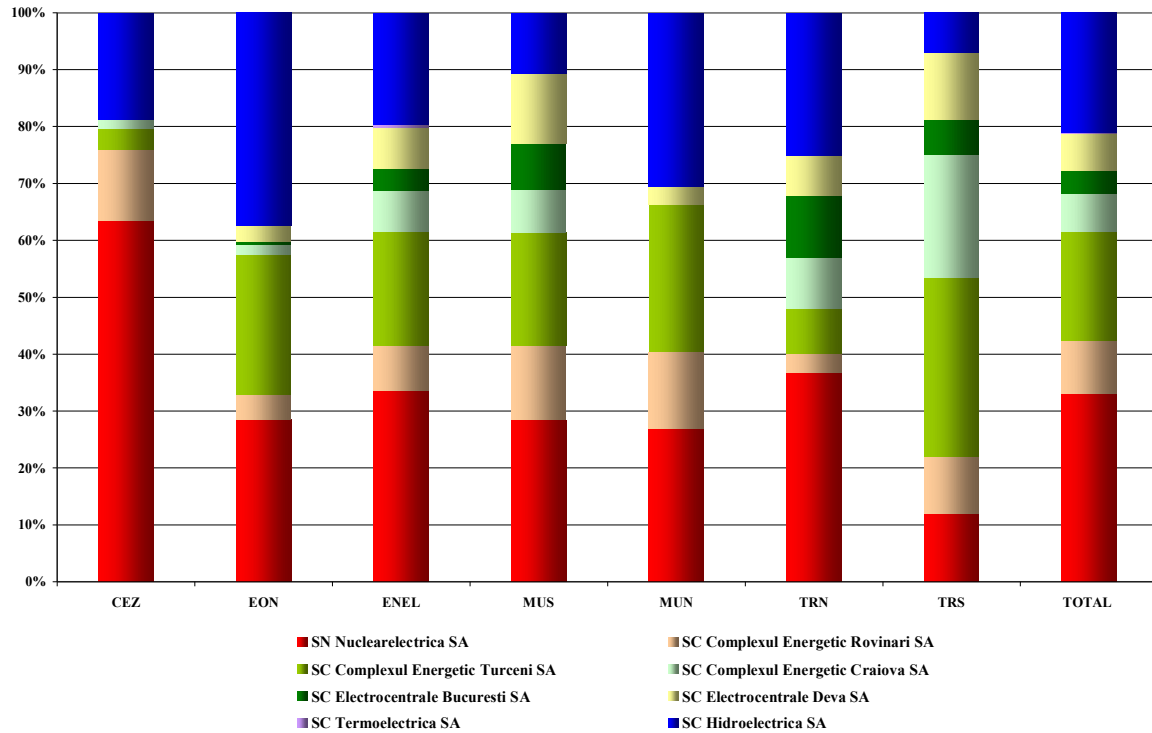
Incumbent suppliers

Electricity acquisition structure of incumbent suppliers (before the delivery day), for supplying the regulated market consumers, is presented in the table below, for August 2011 compared to the situation of August 2010:

Acquisition structure of incumbent suppliers for regulated REM component	- GWh -	
	August 2010	August 2011
Regulated contracts with generators	1656.03	1521.56
Negotiated contracts	43.81	4.86
Contracts concluded on centralized markets	0.00	0.00
DAM	112.04	66.61

The structure of the electricity purchased by the incumbent suppliers from the main generators on regulated contracts is presented in the following graph for August 2011:

**Electricity acquisition from main generators, on regulated contracts, of incumbent suppliers for delivering electricity to final consumers on regulated market**  
*AUGUST 2011*

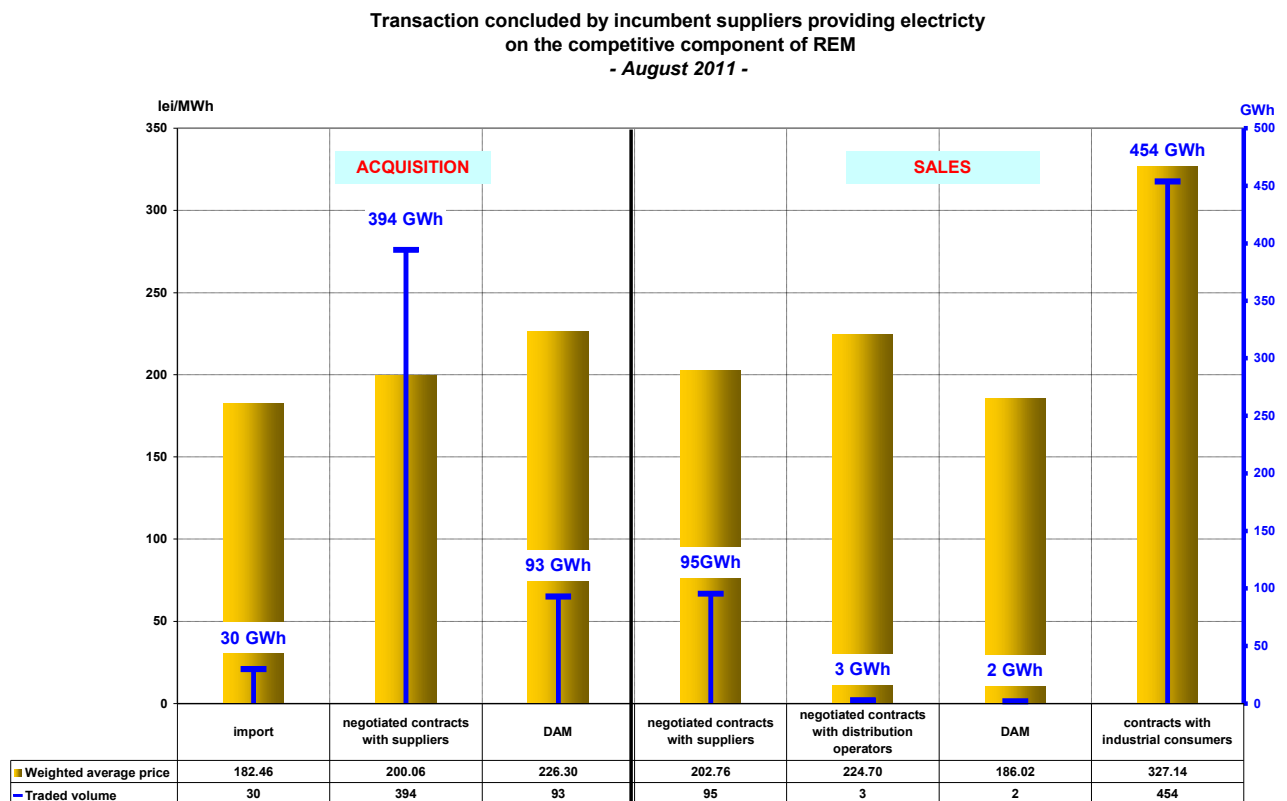


*Source: Monthly reports of the incumbent suppliers – processed by MG*

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 August 2011 compared to August 2010:

Transactions' structure of incumbent suppliers for competitive REM component	- GWh -	
	August 2010	August 2011
<b>Acquisitions</b>		
Import	22.64	29.92
Negotiated contracts with suppliers	369.61	394.04
Negotiated contracts with generators	0.00	0.00
Contracts concluded on centralized markets	0.00	0.00
DAM	100.40	92.86
<b>Sales</b>		
Negotiated contracts with suppliers	24.70	95.43
Negotiated contracts with distributors	10.98	2.82
DAM	76.26	1.89
Final consumers	386.51	453.67

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 August 2011:



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

### Main distribution operators

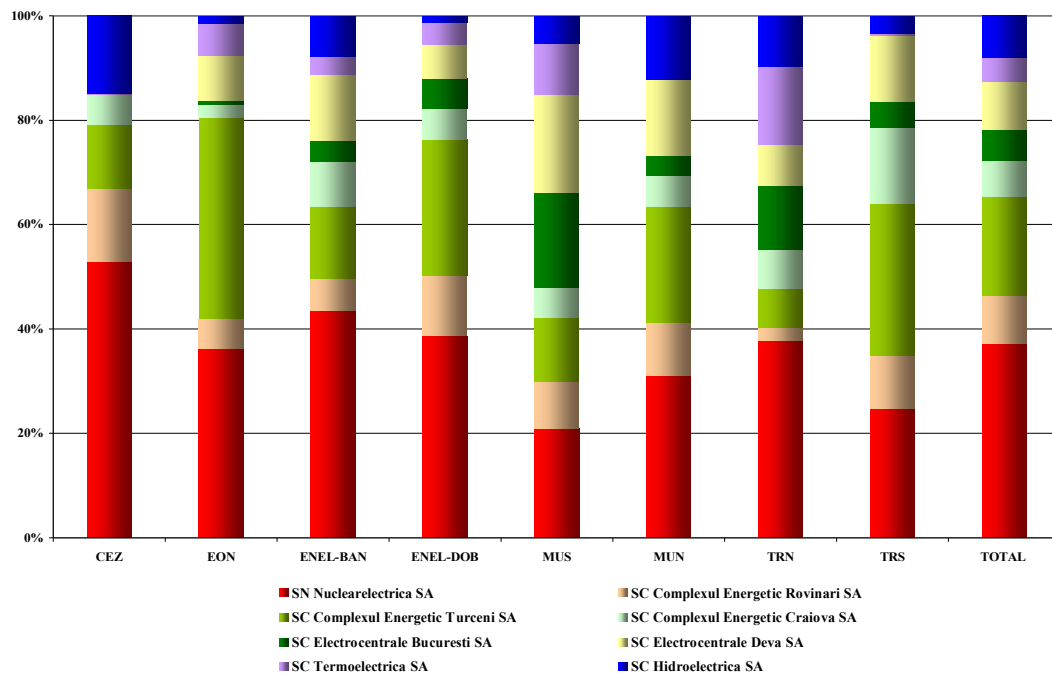
The following table shows the electricity acquisition structure of main distribution operators (before the delivery day), for covering the distribution network losses, for August 2011 compared to August 2010:

- GWh -

Acquisition structure	August 2010	August 2011
Regulated contracts with generators	276.28	315.45
Negotiated contracts with suppliers	10.98	2.82
Contracts concluded on centralized markets	0.00	0.00
DAM	112.74	76.15

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 August 2011:

Electricity acquisition of distribution operators from main generators, on regulated contracts, for covering the distribution losses  
August 2011



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

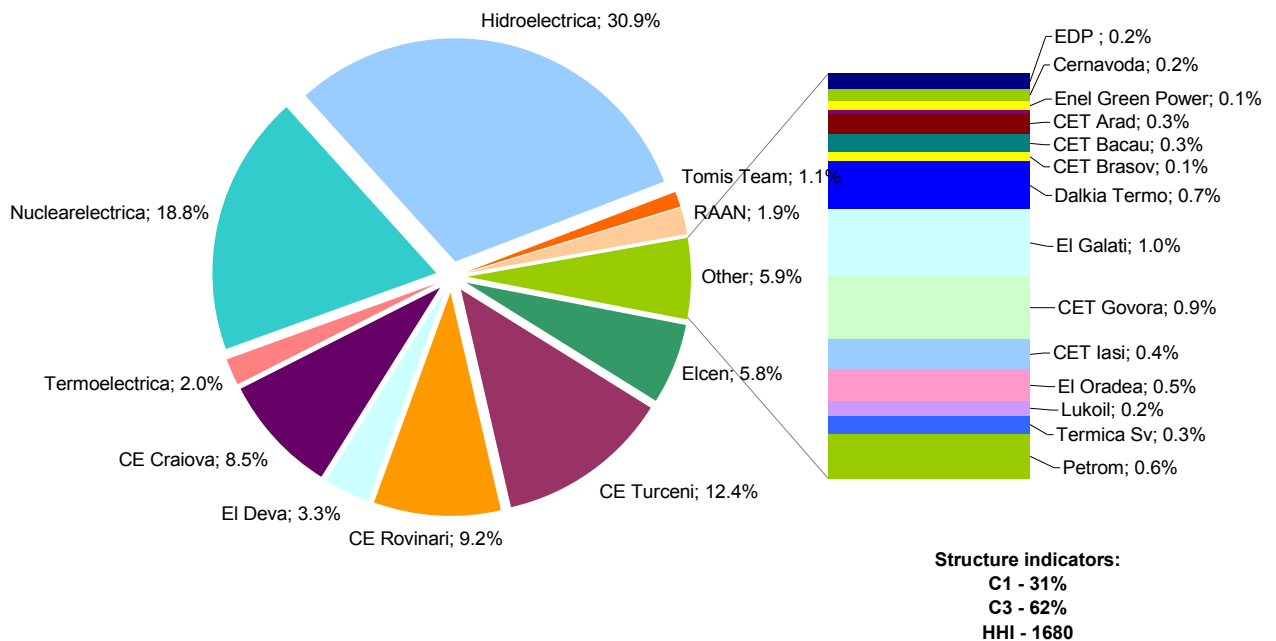
The market structure regarding the electricity generation offers an initial basis for analyzing the possible competitiveness level of the electricity market.

The following table presents the concentration indicators of electricity generation for August 2011, calculated based on electricity delivered into the networks by the generators with dispatchable units.

Concentration indicators - August 2011 -	C1 (%)	C3 (%)	HHI
Value	28.9	65.0	1751

The market shares of the electricity generators, taking into account all components of the wholesale electricity market, are presented in the following graph, for the first 8 months of 2011. These market shares are calculated based on the electricity delivered into networks.

**Market share of generators with dispatchable units by delivered electricity  
January-August 2011**



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 August 2011:

Structure/concentration indicators of BM - August 2011 -	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
<b>C1 - % -</b>	<b>60</b>	<b>59</b>	<b>78</b>	<b>49</b>	<b>28</b>	<b>32</b>
<b>C3 - % -</b>	<b>91</b>	<b>90</b>	<b>88</b>	<b>85</b>	<b>71</b>	<b>77</b>
<b>HHI</b>	<b>4112</b>	<b>4031</b>	<b>6160</b>	<b>3246</b>	<b>1972</b>	<b>2343</b>

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 August 2011:

Concentration indicators on ASM - August 2011 -		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve
<b>regulated component</b>	<b>contracted quantity (h*MW)</b>	<b>300200</b>	<b>478020</b>	<b>365800</b>
	<b>C1 (%)</b>	<b>52.1</b>	<b>79.8</b>	<b>38.3</b>
	<b>C3 (%)</b>	<b>86.8</b>	<b>89.2</b>	<b>82.0</b>
<b>competitive component</b>	<b>contracted quantity (h*MW)</b>	<b>0</b>	<b>57660</b>	<b>155000</b>
	<b>C1 (%)</b>	<b>-</b>	<b>80.6</b>	<b>60.2</b>
	<b>C3 (%)</b>	<b>-</b>	<b>95.7</b>	<b>100</b>
	<b>HHI</b>	<b>-</b>	<b>6635</b>	<b>4654</b>

### Concentration Indexes for the Day Ahead Market

Day Ahead Market (DAM) is a voluntary market, opened both for buying and selling for all types of market participants: generators, suppliers, grid operators, under applicable regulations.

The concentration indicators on DAM reflects the level of competition between sellers and between buyers respectively, the dynamics of both influencing the price level. The following table presents C1, C3 and HHI for buying and for selling side of DAM in August 2011, based on quantities traded by participants on this market.

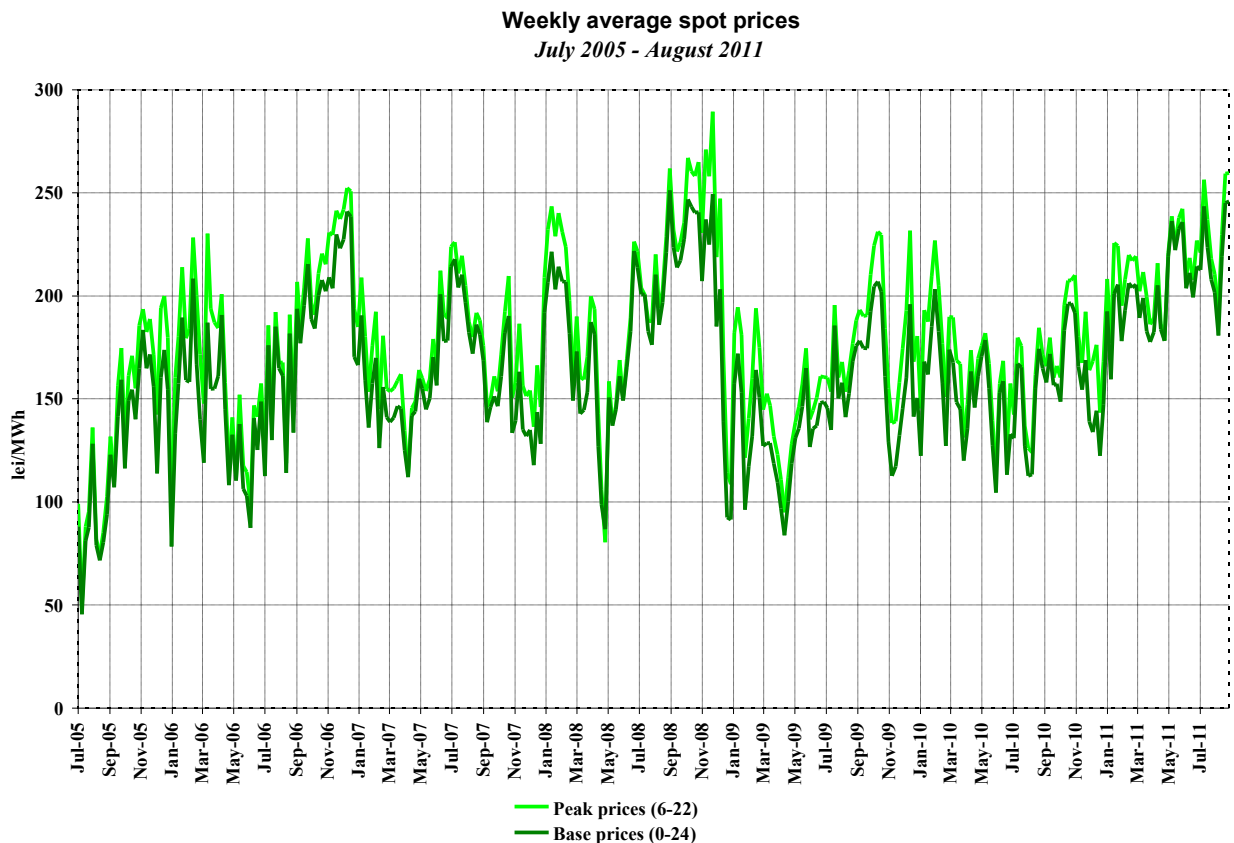
Concentration indicators on DAM - August 2011 -	C1 (%)	C3 (%)	HHI
<b>Buying transactions</b>	<b>19.8</b>	<b>30.8</b>	<b>726</b>
<b>Selling transactions</b>	<b>18.4</b>	<b>48,8</b>	<b>983</b>

### **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 August 2011 are presented in the following graphs, along with the prices on EXXA.



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

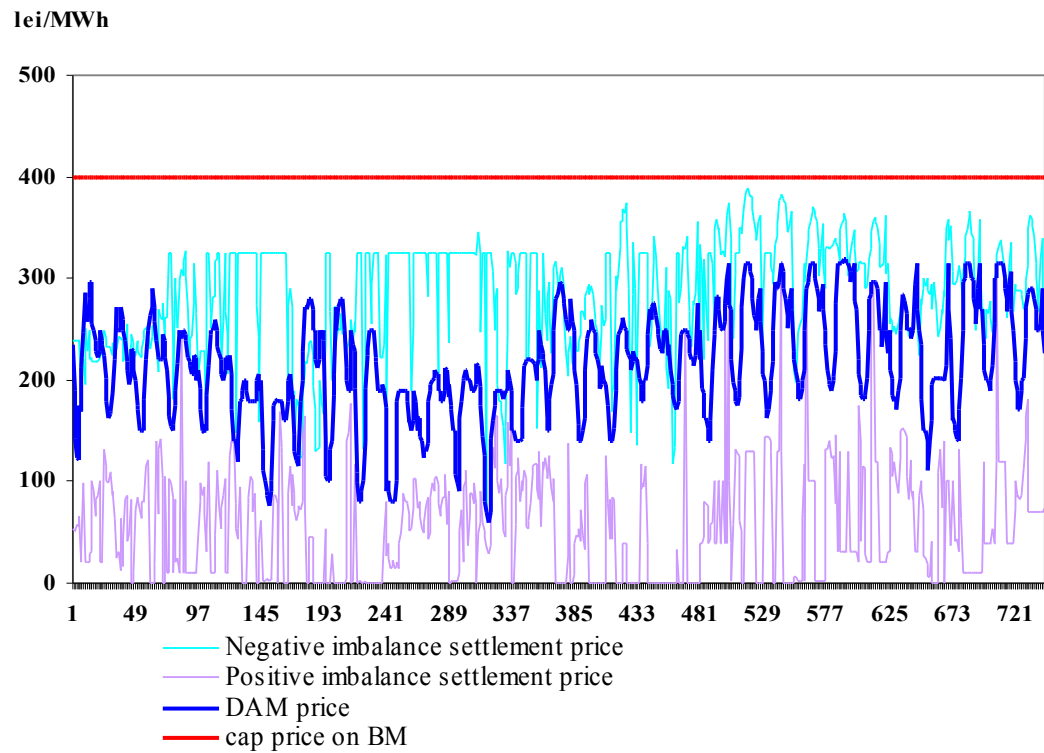


*Source: Daily reports of SC Opcom SA – processed by MG*

In order to cover the differences between planned/contracted amounts of consumption/generation and the real time consumption, the system operator (CN Transelectrica SA) operates the BM by buying or "selling" electricity at prices determined by the merit order of dispatchable generators' offers. The participants who generate the imbalances, grouped in BRPs, have to bear the imbalances costs. For the negative imbalances, they have to pay the settlement price resulting from the upward bids accepted on the BM, while for the positive imbalances they receive the settlement price resulting from the downward bids accepted on the BM.

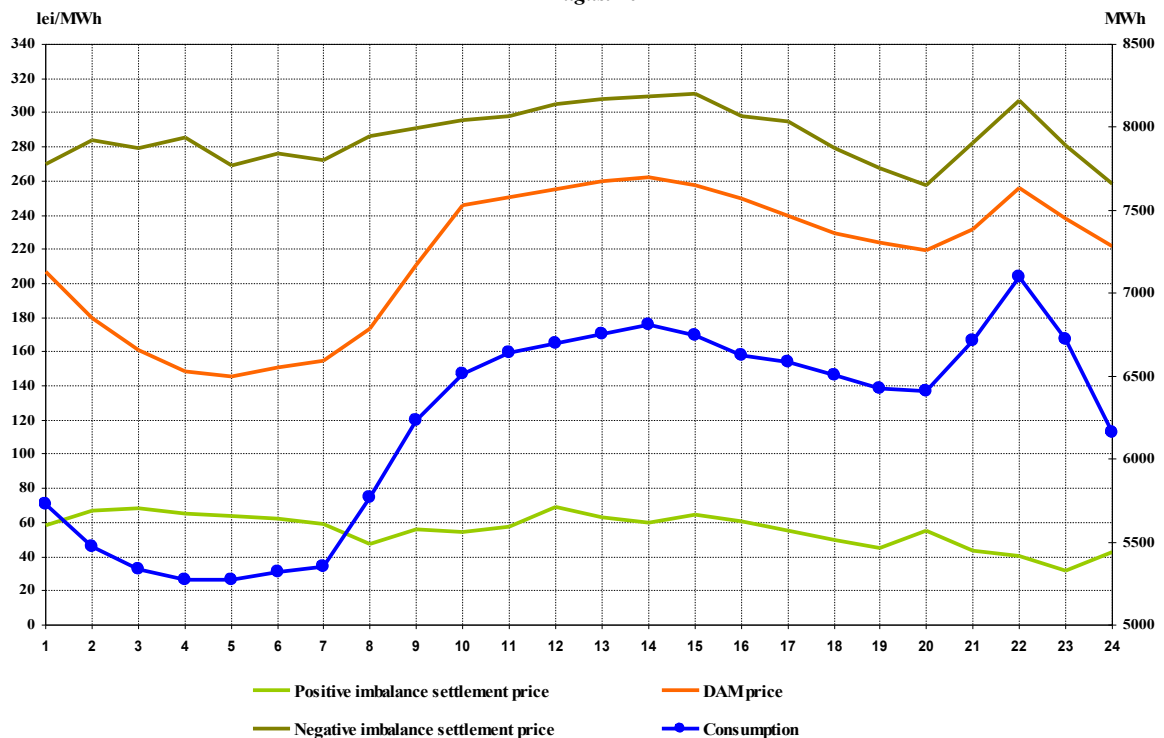
The settlement prices (MCP on DAM, negative imbalance settlement price and positive imbalance settlement price) are represented on the same graph, showing the two markets correlation degree. In the first graph the prices are expressed in hourly values, in the second graph in hourly average values compared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

### Hourly settlement prices August 2011



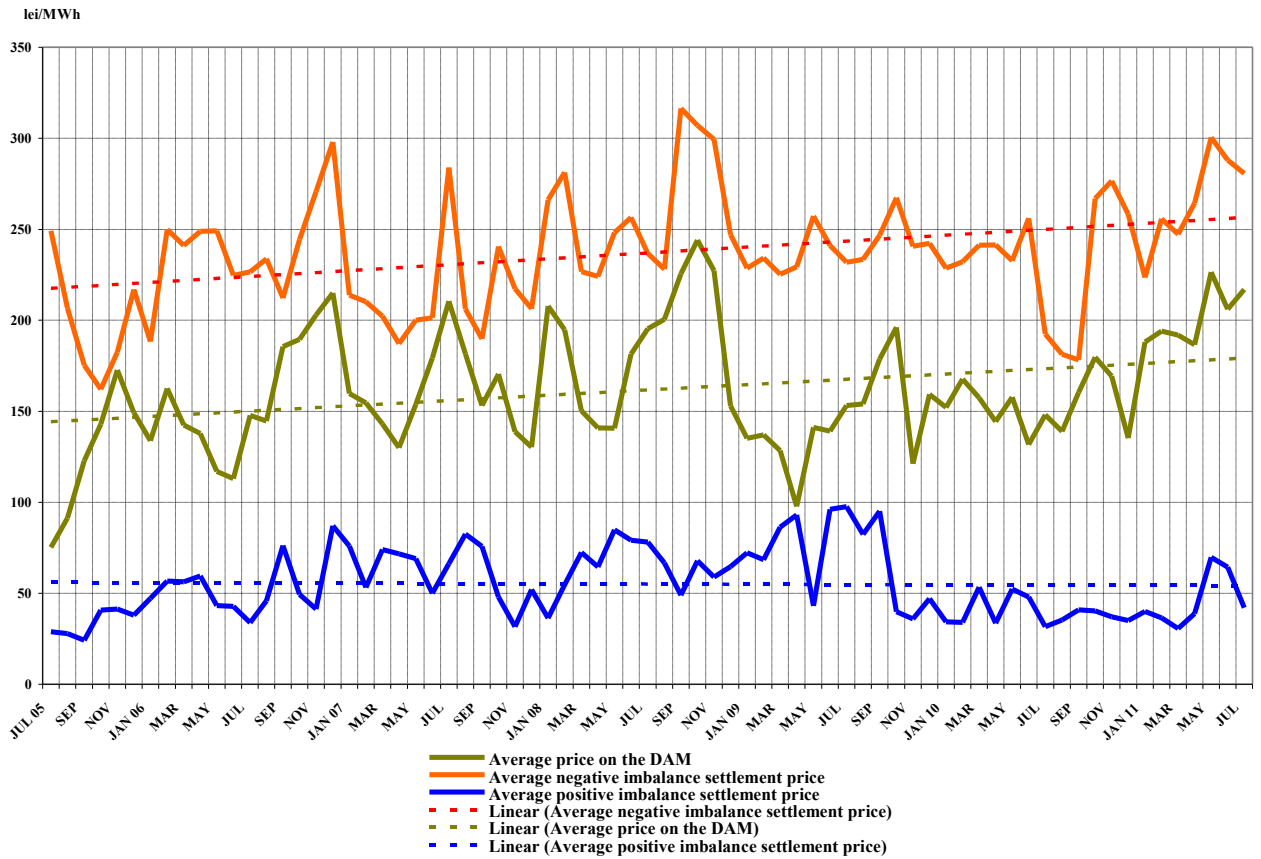
Source: Daily/monthly reports of SC Opcom SA – processed by MG

### Hourly average settlement prices and internal consumption August 2011



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

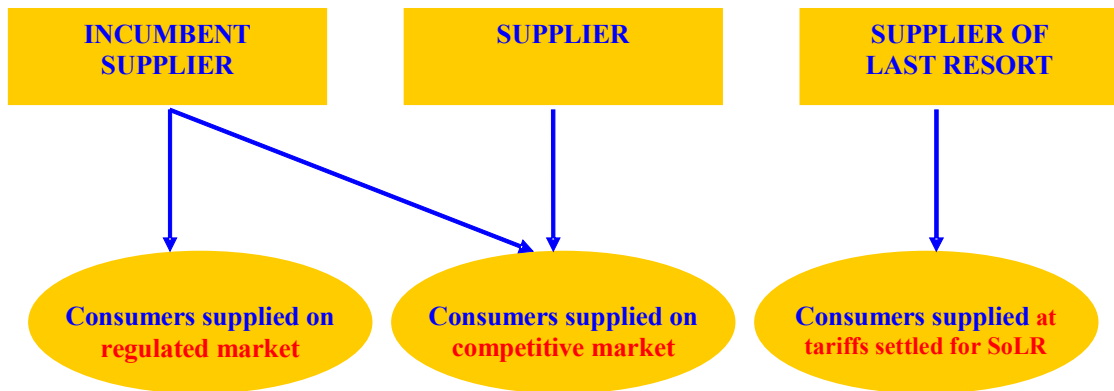
Monthly average prices on DAM and BM  
July 2005 - August 2011



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

### III. RETAIL ELECTRICITY MARKET

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



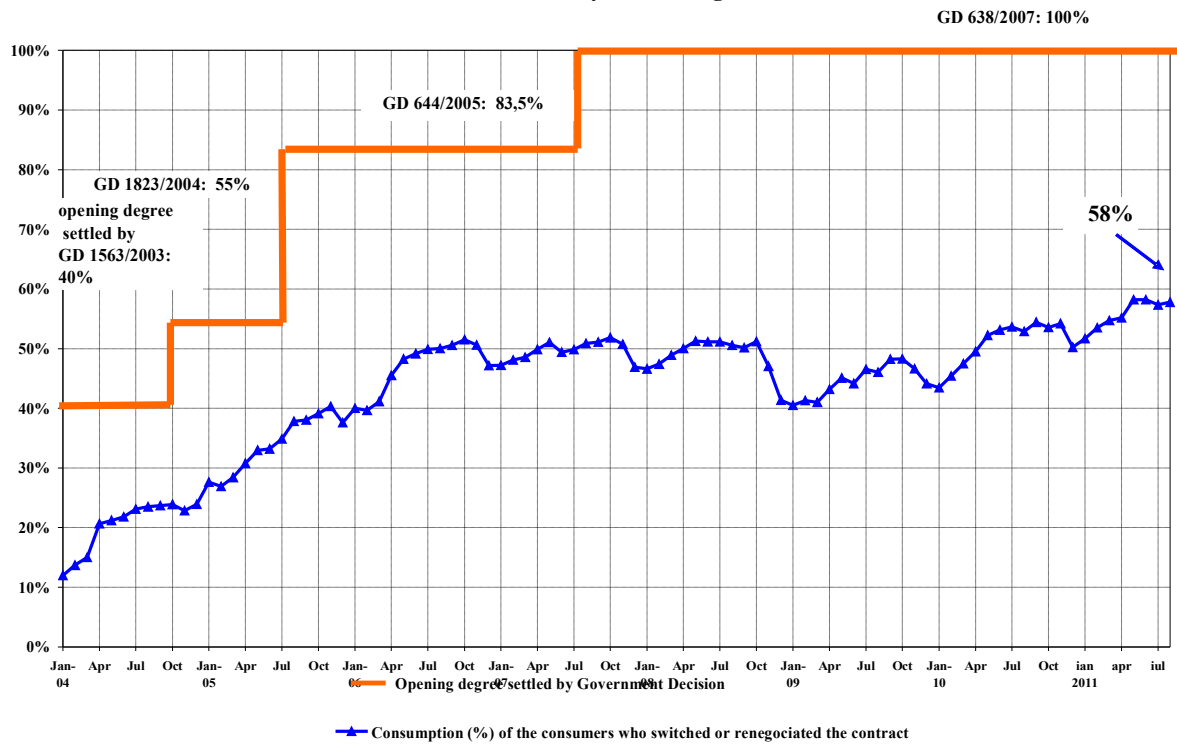
#### 2. Steps in the opening process of the electricity market

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 – August 2011. The values presented are cumulated from the beginning of the opening process and are presented monthly:

Opening degree evolution for electricity market  
January 2004 - August 2011



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

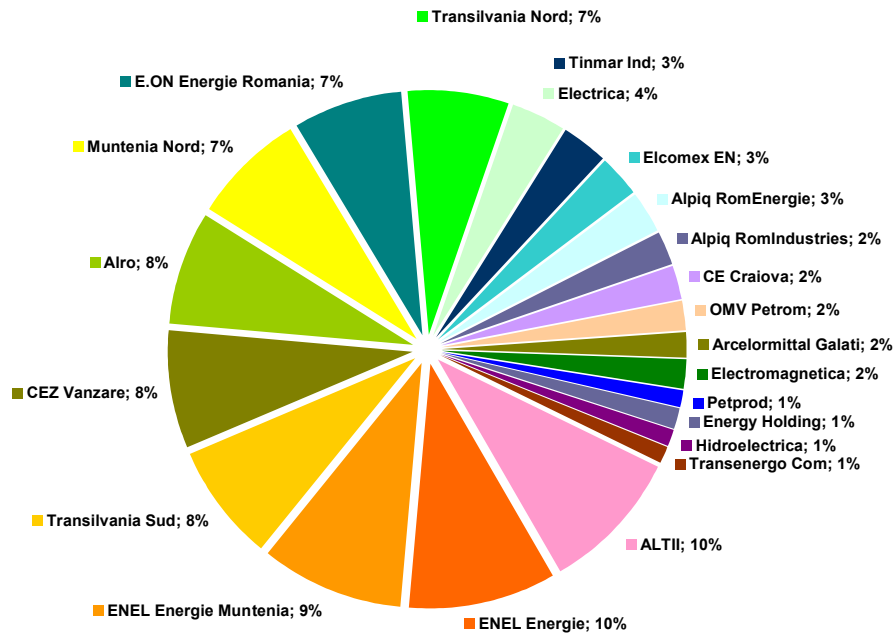
#### 4. Market shares of the electricity suppliers

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

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

**Market shares of suppliers for final consumers**

- January - August 2011 -



Final consumption: 30465 GWh

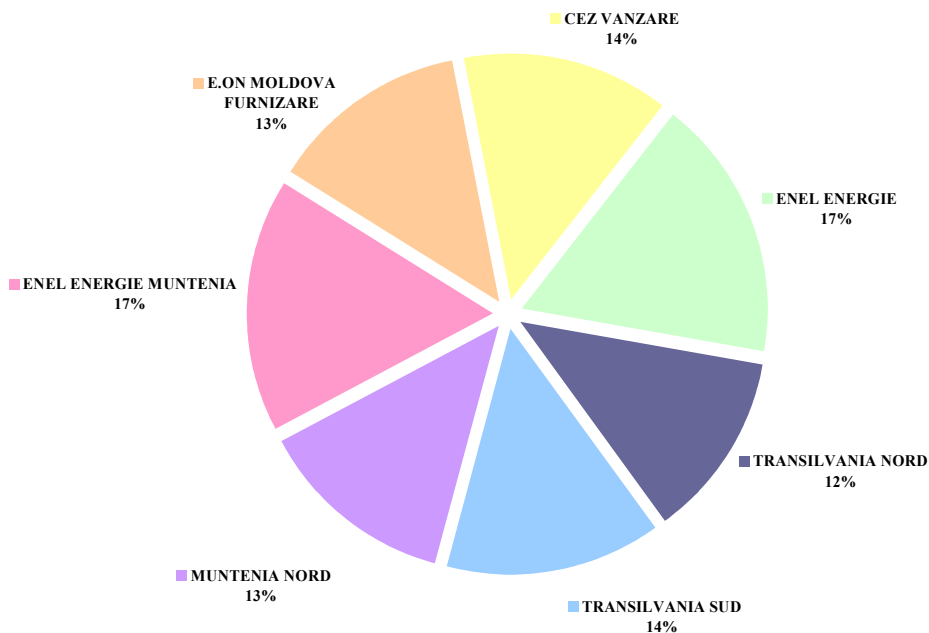
Category "Altii" includes 36 suppliers with individual market share less than 1%

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

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

**Market shares of incumbent suppliers on regulated market**

- January - August 2011 -



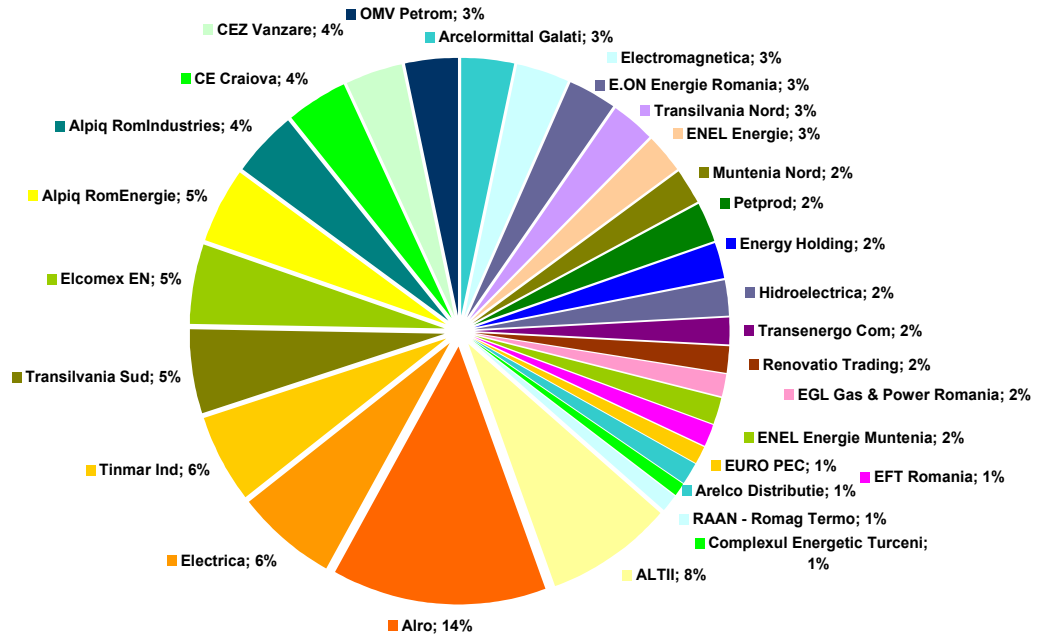
Consumption of consumers supplied at regulated tariffs: 13473 GWh

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

and

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

**Market shares of suppliers delivering electricity on the competitive market**  
- January - August 2011 -



Consumption on competitive market: 16993 GWh

Structure indicators:

HHI - 477; C3 - 25%; C1 - 14%

Category "Altii" includes 29 suppliers with individual market share less than 1%

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

The structure indicators were calculated without considering the principle of dominance. The delivered electricity (used for calculating the market shares) comprises the self-consumption of large industrial consumers who possess supply licenses and acquire electricity from the wholesale market as competitive suppliers.

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.

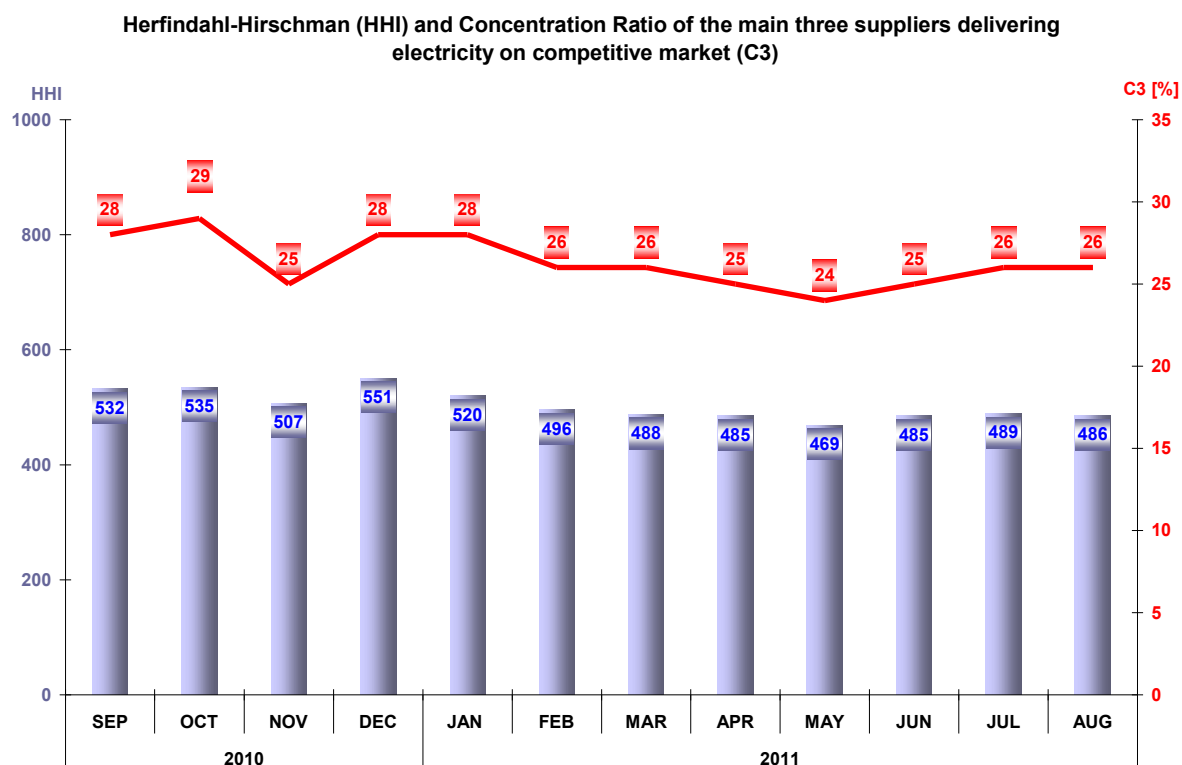
The electricity supplied to the final consumers used for calculating the market share of every supplier includes also the self-consumption of that particular supplier (e.g. consumers with supply license who buy electricity for themselves from WEM as competitive suppliers).

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 August 2011:

Number of suppliers	Share of sales to final consumers from total sales transactions			
	100%	75% - 100%	50% - 75%	<50%
<b>Competitive</b>	8	9	6	18
<b>Incumbent</b>	0	5	2	0

### 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 September 2010 – August 2011 in the following graph:



Source: Monthly reports of the suppliers – processed by MG

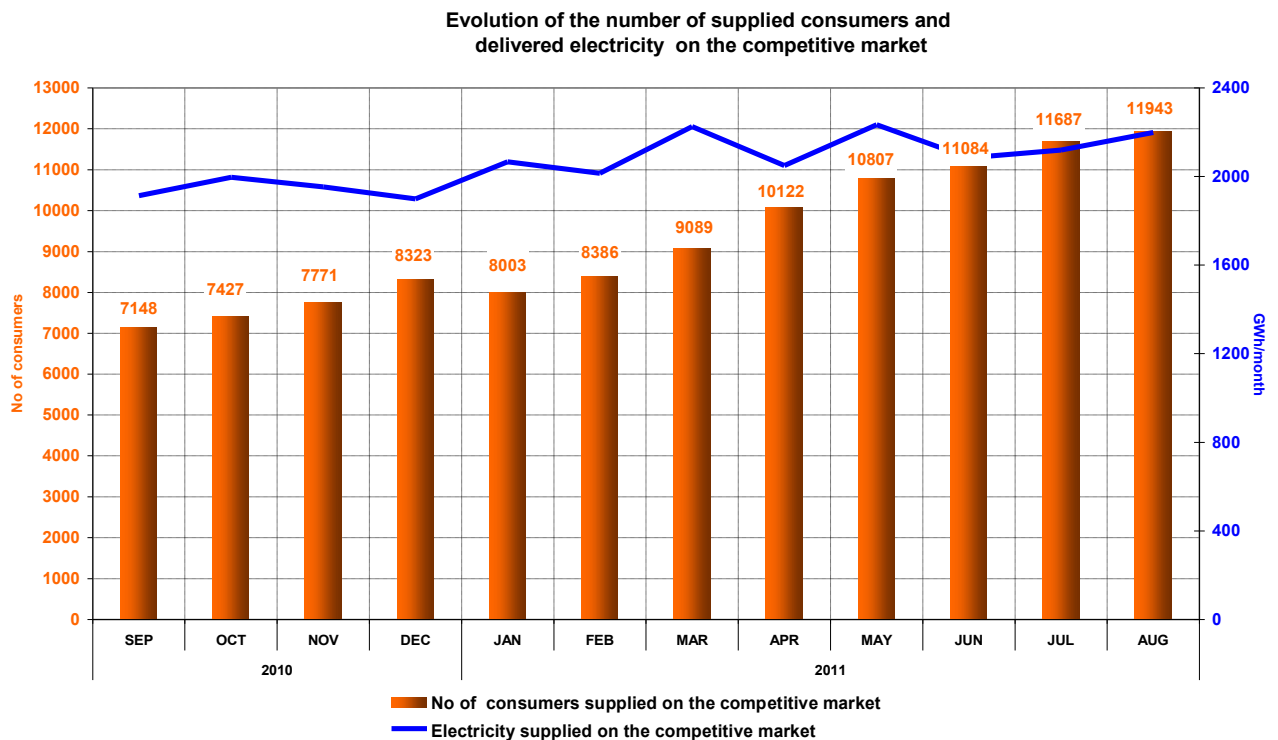
The table below shows the values of structure indicators of competitive component of REM for and the number of active suppliers in August 2011, calculated for each consumer category as defined by the European Council Directive no. 90/377/EEC, modified by the Commission Decision no. 2007/394/EC:

Indicators - August 2011	Consumer category							Total REM
	IA	IB	IC	ID	IE	IF	Other	
<b>C1 - % -</b>	48	19	22	17	11	30	32	<b>14</b>
<b>C3 - % -</b>	82	48	40	35	28	58	53	<b>26</b>
<b>HHI</b>	3034	1064	900	702	587	1513	1461	<b>486</b>
<b>Consumption - GWh -</b>	23.5	114	195	408	267	250	941	<b>2198</b>
<b>No. of SUPPLIERS</b>	24	45	49	43	26	12	18	<b>57</b>
<b>No. of incumbent suppliers</b>	7	7	7	7	4	3	1	<b>7</b>
<b>No. of competitive suppliers</b>	12	32	34	31	20	9	10	<b>41</b>
<b>No. of producers</b>	5	6	8	5	2	0	7	<b>9</b>

**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 August 2011 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	

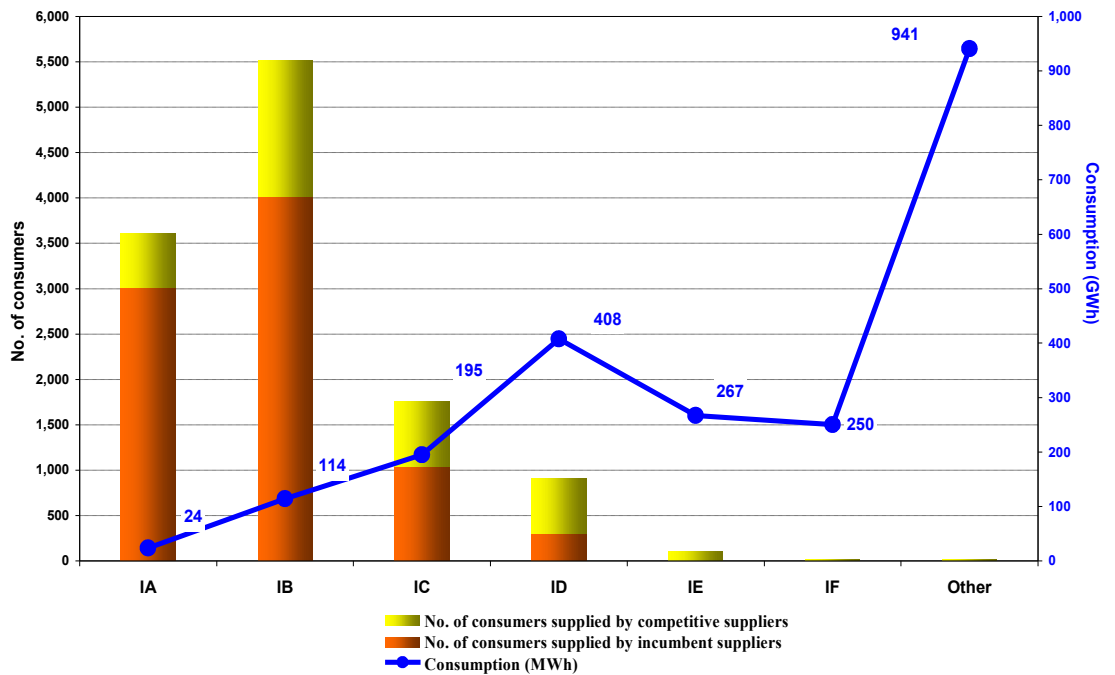


Source: Monthly reports of the competitive suppliers – processed by MG

NOTES: 1. Starting with January 2011, the data are also comprising the electricity delivered by 3 main dispatchable producers (with a self-generation exceeding 200 GWh in 2010) to their own consumption places - others than the generation site

2. There has been identified one supplier which had sent wrong figures corresponding to January-April 2011. Following the MG warnings, they reported the accurate figures, which are visible in the hereabove graph.

Number of consumers supplied on competitive market and the consumption of each category of consumers  
- August 2011 -

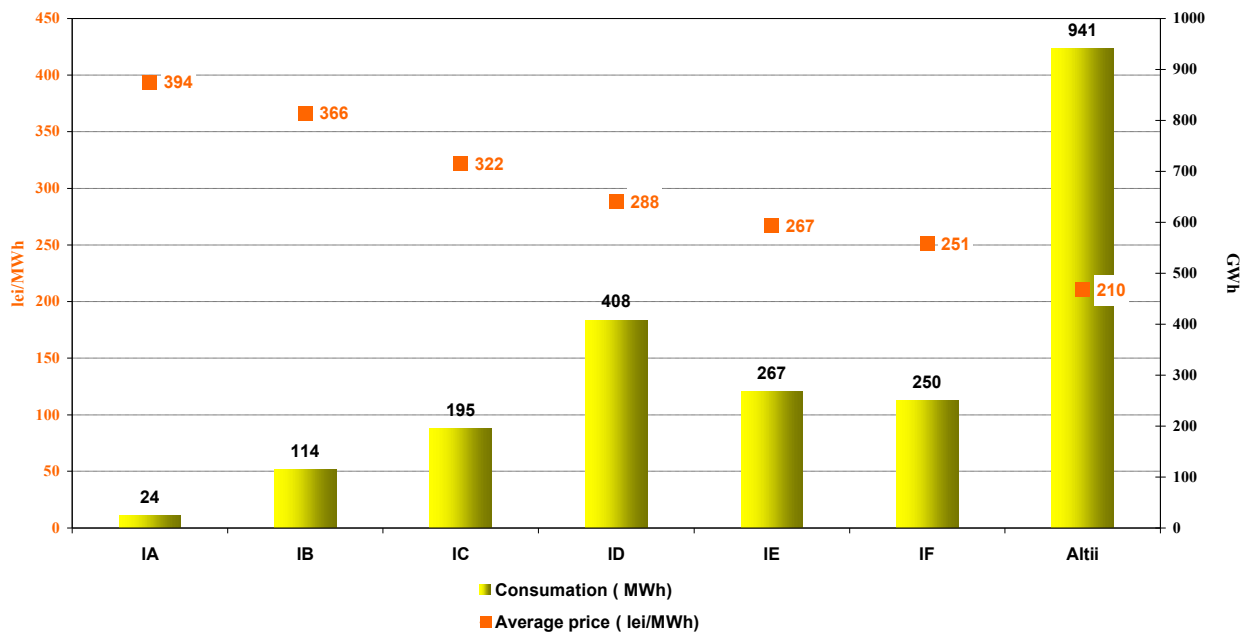


Source: Monthly reports of the suppliers – processed by MG

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

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

Average price and energy consumption on types of consumers applied on competitive market  
- August 2011 -



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.

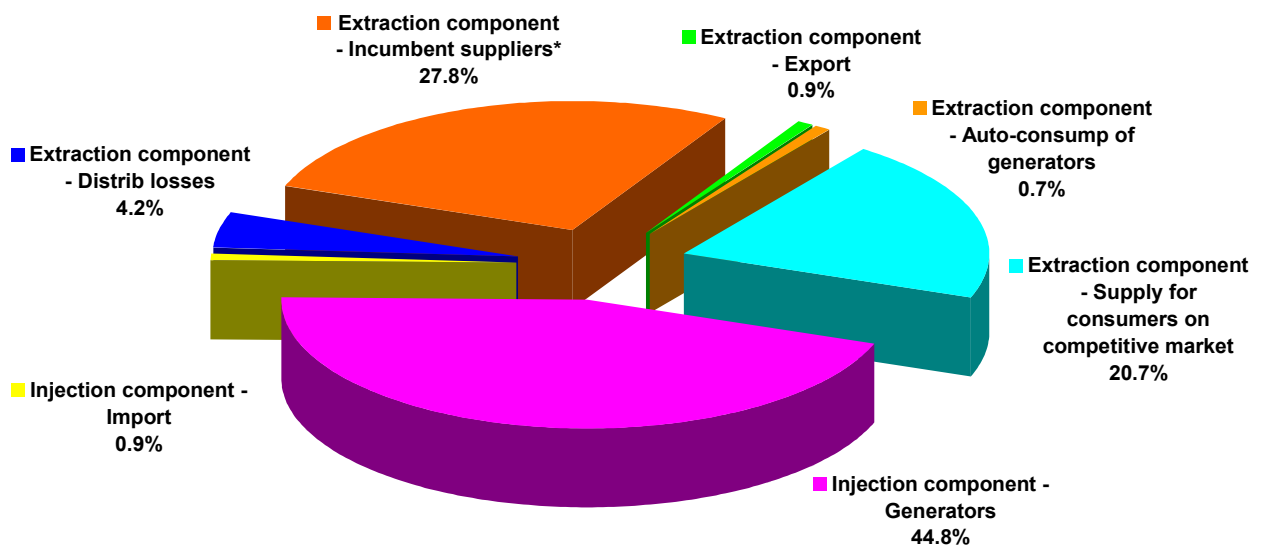
#### IV. TRANSMISSION AND SYSTEM OPERATOR C.N. TRANSELECTRICA S.A.

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

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

The following graph presents the structure of CN Tranelectrica SA revenues from performing the transmission services and reflects the structure of its clients benefiting from this type of service in August 2011.

**CN Tranelectrica SA structure of revenues from transmission services  
- August 2011 -**

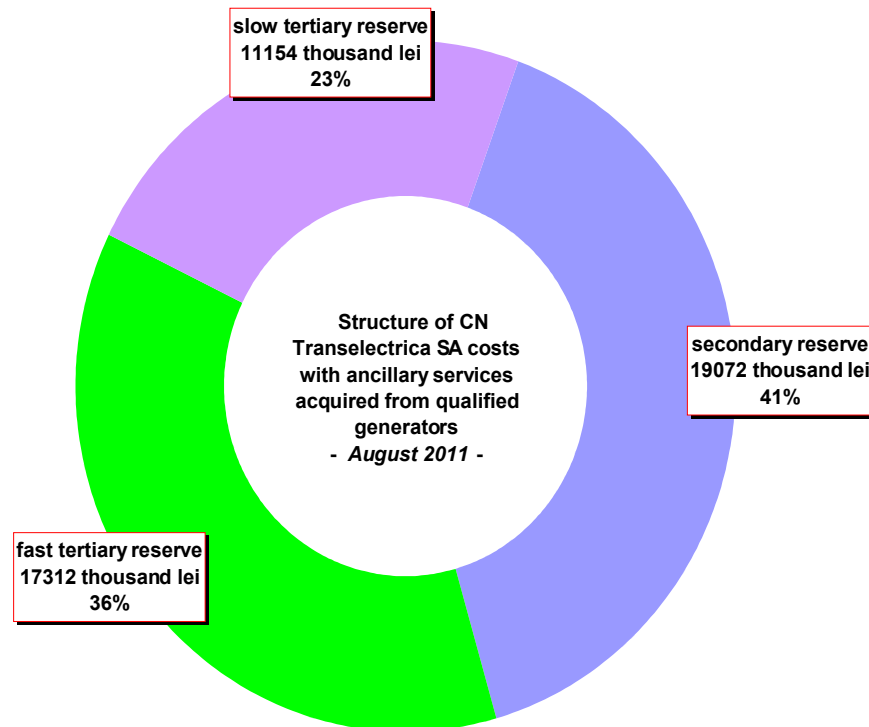


\* referring to all their activity as well as the distribution losses for one distribution operator

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

In order to perform the system operator tasks, CN Tranelectrica SA assesses and contracts reserves (ancillary services) from qualified generators, which are integrated on BM. The ancillary services which may be used are reserves for secondary, fast tertiary, slow tertiary regulation and reactive energy. With the implementation of the support scheme for high efficiency cogeneration from April 2011, the slow tertiary reserve from cogeneration has been eliminated.

The following graph presents the costs of ancillary services CN Transelectrica SA had to pay in August 2011. 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 AUGUST 2011

In August 2011, ANRE issued the followings Decisions with impact on the wholesale electricity market:

- Decision no. 2105/19.08.2011 for modifying ANRE Decision no. 3095/2010 regarding the qualification of priority production for producers of renewable energy;
- Decision no. 2106/19.08.2011 for approving the quantities produced in high efficiency cogeneration which benefits from bonus scheme in July 2011.

## VI. EXPLANATIONS AND ABBREVIATION

### 1. Explanations

- *Self-consumption of generators* – in the graph regarding the revenues of CN Transelectrica SA, the self-consumption exclusively represents the generators consumption at consumption places other than the generation sites.
- *Internal consumption* represents the electricity covered by the wholesale market participants and calculated as *Delivered electricity + Import – Export*.
- *Consumption of consumers on regulated market* represents the consumption of consumers supplied at regulated tariffs by the incumbent suppliers.
- *Consumption of consumers on competitive market* represents the consumption of consumers supplied at negotiated prices.
- *Fuel consumption* represents the fuel consumed for generating electricity and heat.
- *Electricity delivered into the grid* includes also the own consumption of auto-generators such as RAAN and OMV Petrom together with the electricity sold by the generators through direct lines or consumed by themselves at other consumption sites.

- *Competitive supplier* represents, within the present document, the supplier which is active on the competitive retail market.

## 2. Abbreviation

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