# REPORT ON RESULTS OF MONITORING THE ROMANIAN ELECTRICITY MARKET JULY 2012

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

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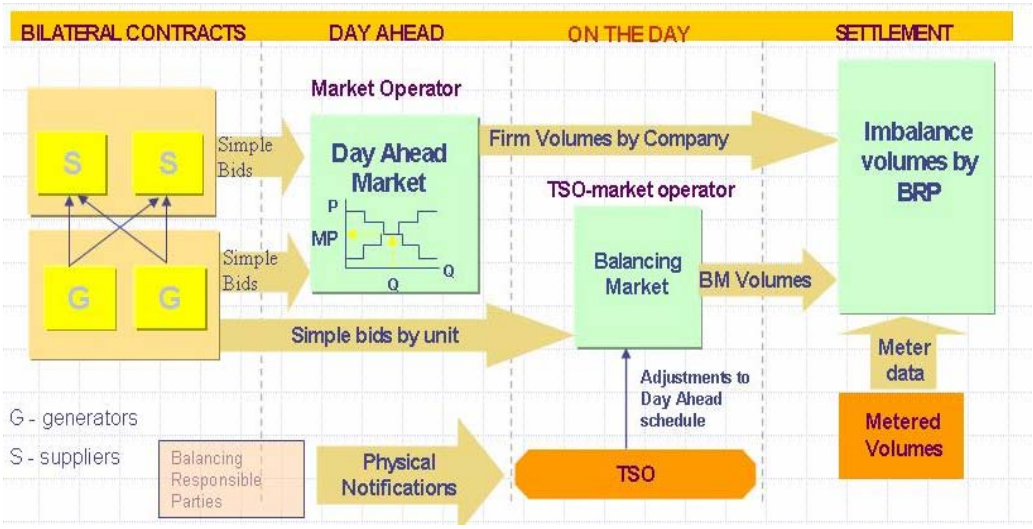
# I. MAIN EVENTS IN THE DEVELOPMENT OF THE ROMANIAN ELECTRICITY MARKET

- GD 365/1998 – vertically integrated monopol – RENEL – was split into 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).
- August 2008 – process of legal unbundling of distribution and supply companies has been concluded;
- August/October 2010 – launch of bilateral coordinated auctions for capacity allocation on interconections with Hungary and Bulgaria;
- July 2011 - launch of the intraday market;
  - GD 930/2010 – SC Electrica Furnizare SA had been established through merger of the former incumbent suppliers Electrica Furnizare Muntenia Nord, Electrica Furnizare Transilvania Nord and Electrica Furnizare Transilvania Sud;
- June 2012 - GD 1024/2011, Complexul Energetic Oltenia SA had been established in a dual system through merger of the former SNLO Tg. Jiu SA , SC Complexul Energetic Turceni SA, SC Complexul Energetic Rovinari SA and SC Complexul Energetic Craiova SA;
- July 2012 – the Law of electricity and natural gas no. 123 came into force.

# 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 July 2012 are presented below split into categories:

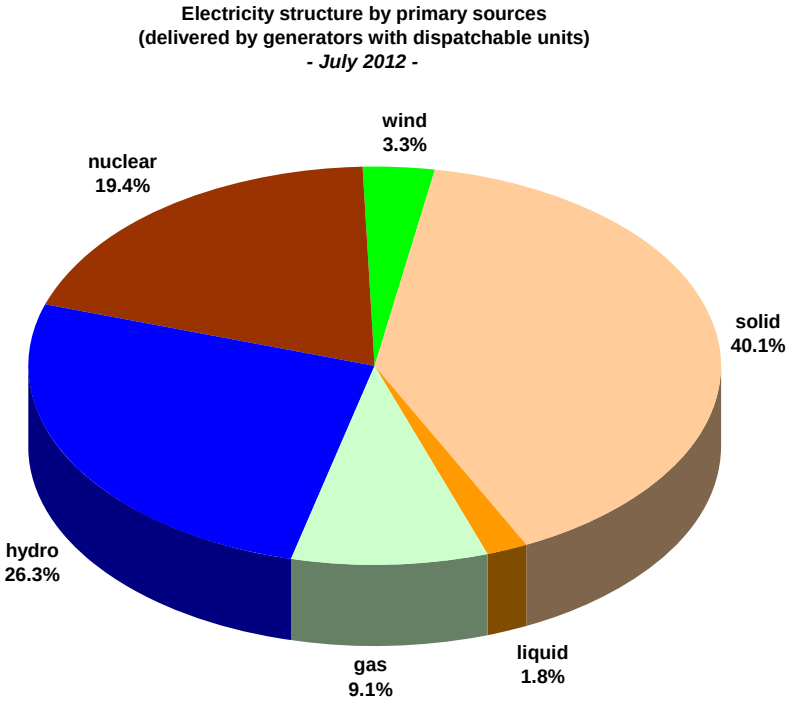
| No. | Name |
|---|---|
| *A* | *Electricity generators operating dispatching units* |
| 1 | SC CET Bacău SA |
| 2 | SC CET Govora SA |
| 3 | SC CET Oradea SA |
| 4 | SC Cernavoda Power SRL |
| 5 | SC Dalkia Termo Prahova SRL |
| 6 | SC EDP Renewables România SRL |
| 7 | SC Electrocentrale Bucureşti SA |
| 8 | SC Electrocentrale Galaţi SA |
| 9 | SC Electrocentrale Paroşeni SA |
| 10 | SC Enel Green SRL |
| 11 | SC Romconstruct Top SRL |
| 12 | SC Termica SA Suceava |
| 13 | SC Termoelectrica SA |
| 14 | SC Tomis Team SRL |
| *A1* | *Electricity generators operating dispatching units and acting also as suppliers on the competitive* |
| 15 | RAAN |
| 16 | SN Nuclearelectrica SA |
| 17 | SC OMV Petrom SA |
| 18 | SC CE Oltenia SA |
| 19 | SC CET Arad SA |
| 20 | SC Electrocentrale Deva SA |
| 21 | SC Hidroelectrica SA |
| 22 | SC Lukoil Energy & Gaz Romania SRL |
| 23 | SC OMV Petrom Power Park SRL |
| *B* | *Transmission System Operator* |
| 1 | CN TRANSELECTRICA SA |
| *C* | *DAM, Bilateral Contracts Market, Green Certificates Market Operator* |
| 1 | SC OPCOM SA |
| *D* | *Distribution network operators* |
| 1 | SC CEZ Distributie SA |
| 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 |
| 2 | SC ENEL Energie SA |
| 3 | SC E.ON Energie Romania SA |
| 4 | SC ENEL Energie Muntenia SA |
| 5 | SC FFEE Electrica Furnizare SA |

| No. | Name |
|---|---|
| *F* | *Electricity Suppliers acting exclusively on the wholesale market* |
| 1 | SC Adederro G.P. Energy SRL |
| 2 | Alpiq Energy SE |
| 3 | CEZ as |
| 4 | SC CEZ Trade Romania SRL |
| 5 | SC Dalkia Romania SRL |
| 6 | Danske Commoditiesa/s Aarhus |
| 7 | E&T ENERGIE Handelsgesellschaft |
| 8 | SC Edison Trading SpA |
| 9 | SC Electrica SA |
| 10 | SC Enel Trade Romania SRL |
| 11 | Energy Financing Team Switzerland |
| 12 | SC Energy Market Consulting SRL |
| 13 | SC Energon Power&Gaz SRL |
| 14 | SC Entrex Services SRL |
| 15 | E.ON Energy Trading SE |
| 16 | SC Ezpada SRL |
| 17 | Ezpada SRO |
| 18 | Freepoint Commodities Europe Ltd |
| 19 | Gazprom Marketing & Trading |
| 20 | GEN-I trgovanje in prodaja elektricne energije |
| 21 | GEN-I Bukarest Electricity Trading and Sales |
| 22 | SC Getica 98 COM SRL |
| 23 | SC Grivco SA |
| 24 | SC Iberdola Romania SRL |
| 25 | SC KBS Threenergyes SRL |
| 26 | SC Lord Energy SRL |
| 27 | SC Midest Energy SRL |
| 28 | SC MVM Partner Bucharest SRL |
| 29 | OMV Trading GmbH |
| 30 | RWE Supply Trading GmbH |
| 31 | Repower Trading Ceska Republica |
| 32 | SC Romelectro SA |
| 33 | SC Rudnap SRL |
| 34 | Statkraft Markets GmbH |
| 35 | SC Statkraft Romania SRL |
| 36 | SC Verbund Trading România SRL |

| No. | Name |
|---|---|
| *G* | *Electricity Suppliers* |
| 1 | SC Alpiq RomEnergie SRL |
| 2 | SC Alpiq RomIndustries SRL |
| 3 | SC Alro SA |
| 4 | SC Arcelormittal Galati SA |
| 5 | SC Arelco Power SRL |
| 6 | SC Biol Energy SRL |
| 7 | SC EFE Energy SRL |
| 8 | SC EGL Gas & Power Romania SA |
| 9 | SC Electricom SA |
| 10 | SC Electromagnetica SA |
| 11 | SC Energotrans SRL |
| 12 | SC Energy Distribution Services SRL |
| 13 | SC Energy Financing Team Romania SRL |
| 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 Gaz Sud Furnizare SRL |
| 22 | SC GDF SUEZ Energy Romania SA |
| 23 | SC General Com Invest SRL |
| 24 | SC ICCO Energ SRL |
| 25 | ILIOTOMI Impex GRPA |
| 26 | SC ICPE Electrocond Technologies SA |
| 27 | SC Luxten LC SA |
| 28 | Magyar Aramszolgaltato KFT |
| 29 | SC Monsson Energy Trading SRL |
| 30 | OET Obedineni Energini Targovtsi |
| 31 | SC Renovation Trading SRL |
| 32 | SC Repower Furnizare Romania SRL |
| 33 | SC Romenergy Industry SRL |
| 34 | SC Romenergo SA |
| 35 | SC TEN Transilvania Energie SRL |
| 36 | SC Tinmar Ind SA |
| 37 | SC Transformer Supply SRL |
| 38 | SC Transenergo Com SA |

*) 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.

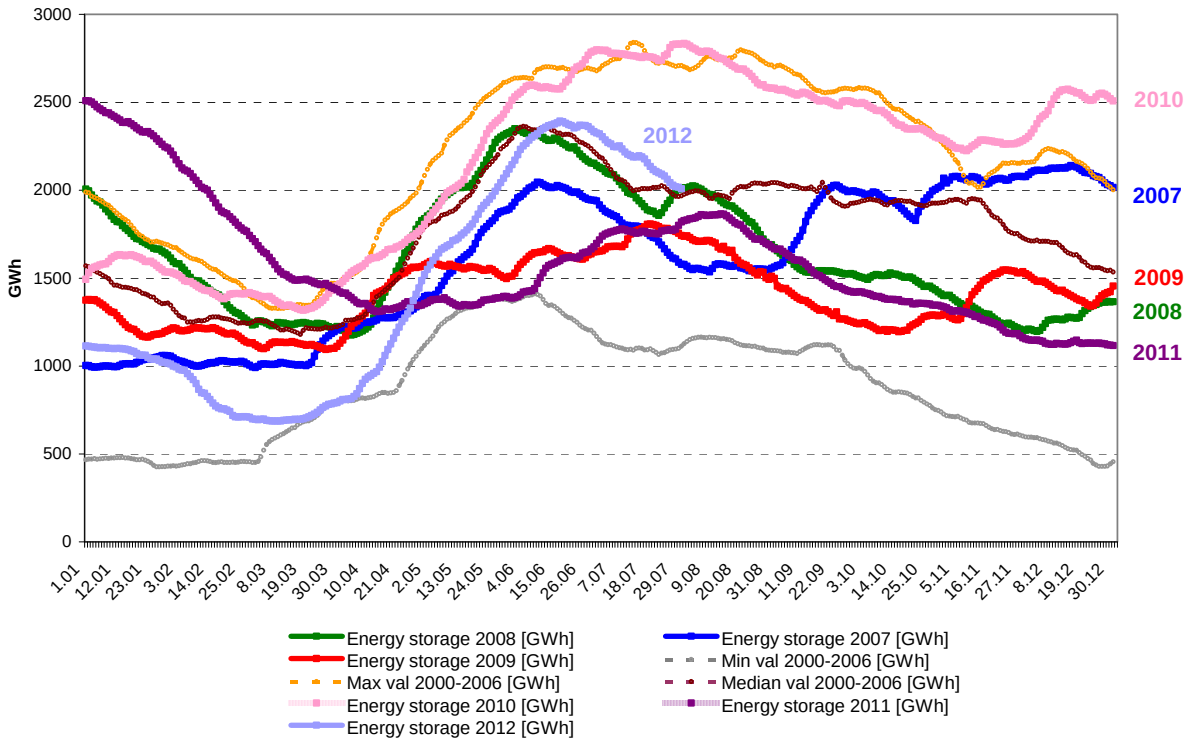
## 3. *Generation structure of National Energy System on resources types*




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

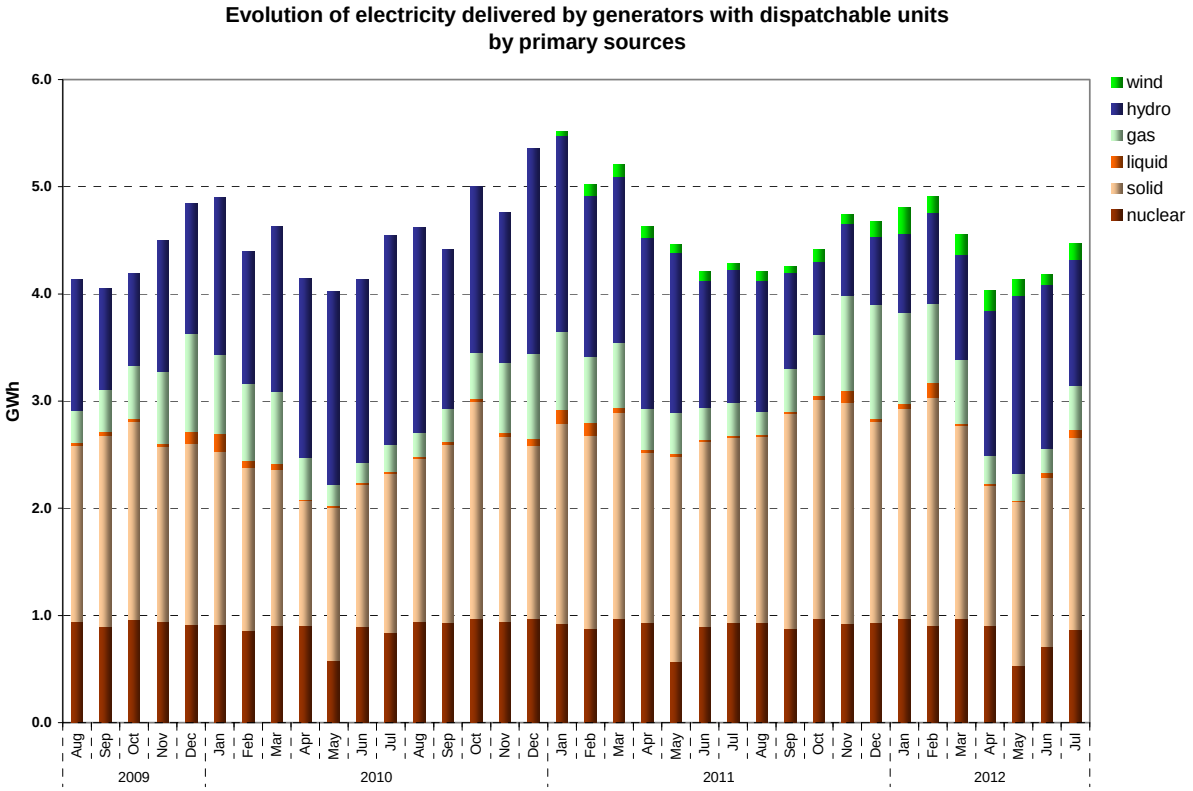
The electricity generated from hydro resources and the energy stored in the main water reservoirs are directly correlated. The following graph presents the evolution of daily amounts of energy storage during the last 4 years and compared to minimum, maximum and median values from 2000-2006.

**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 July 2012 compared to data for similar period of 2011:

| No. | INDICATOR | MU | July 2011 | July 2012 | % | Jan-Jul 2011 | Jan-Jul 2011 | % |
|---|---|---|---|---|---|---|---|---|
| **0** | **1** | **2** | **3** | **4** | **5=4/3*100** | **3** | **4** | **5=4/3*100** |
| 1 | Generated electricity | TWh | 4.62 | 4.84 | 104.76 | 36.00 | 33.75 | 93.75 |
| 2 | Delivered electricity | TWh | 4.29 | 4.47 | 104.20 | 33.33 | 31.09 | 93.28 |
| 3 | Import | TWh | 0.07 | 0.09 | 128.57 | 0.42 | 0.83 | 197.62 |
| 4 | Export | TWh | 0.09 | 0.15 | 166.67 | 2.36 | 0.82 | 34.75 |
| 5 | Internal consumption | TWh | 4.27 | 4.41 | 103.28 | 31.38 | 31.10 | 99.11 |
| 6 | Consumption of household consumers on the regulated market | TWh | 0.94 | 0.95 | 101.06 | 6.81 | 6.97 | 102.35 |
| 7 | Consumption of non-households consumption | TWh | 2.75 | 2.98 | 108.36 | 19.85 | 19.87 | 100.10 |
| *7.1* | *on the regulated market* | TWh | *0.63* | *0.75* | *119.05* | *5.05* | *5.19* | *102.77* |
| *7.2* | *on the competitive market* | TWh | *2.12* | *2.23* | *105.19* | *14.80* | *14.68* | *99.19* |
| 8 | Transmission–Injection component | TWh | 4.22 | 4.54 | 107.58 | 32.67 | 31.52 | 96.48 |
| 9 | Transmission–Extraction component | TWh | 4.31 | 4.57 | 106.03 | 33.37 | 31.91 | 95.62 |
| 10 | Actual transmission grid losses | TWh | 0.088 | 0.0806 | 91.59 | 0.6122 | 0.6005 | 98.09 |
| 11 | Heat generated for delivery | Tcal | 653.51 | 585.86 | 89.65 | 10802.13 | 9782.85 | 90.56 |
| 12 | Heat in co-generation | Tcal | 554.70 | 491.99 | 88.69 | 9084.18 | 8430.08 | 92.80 |

*Note: 1. Data shown in the table neither include the energy produced by the generators who do not own dispatchable units (positions 1 & 2) nor the energy delivered to the consumers directly connected to the power plants (positions 6 & 7).*
*2. The imported/exported quantities do not comprise transits and cross border exchange of CN Transelectrica SA with neighbor countries in order to ensuring the balance of the national energy system.*
*3. The electricity considered for transmission tariff – injection component do not comprise the electricity sold by generators for covering the transmission losses.*
*4. The transmission tariff – extraction component and the system service tariff are applied for the same quantity of electricity*

## *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), on BM (Balancing Market) and Intraday Market (recently introduced).

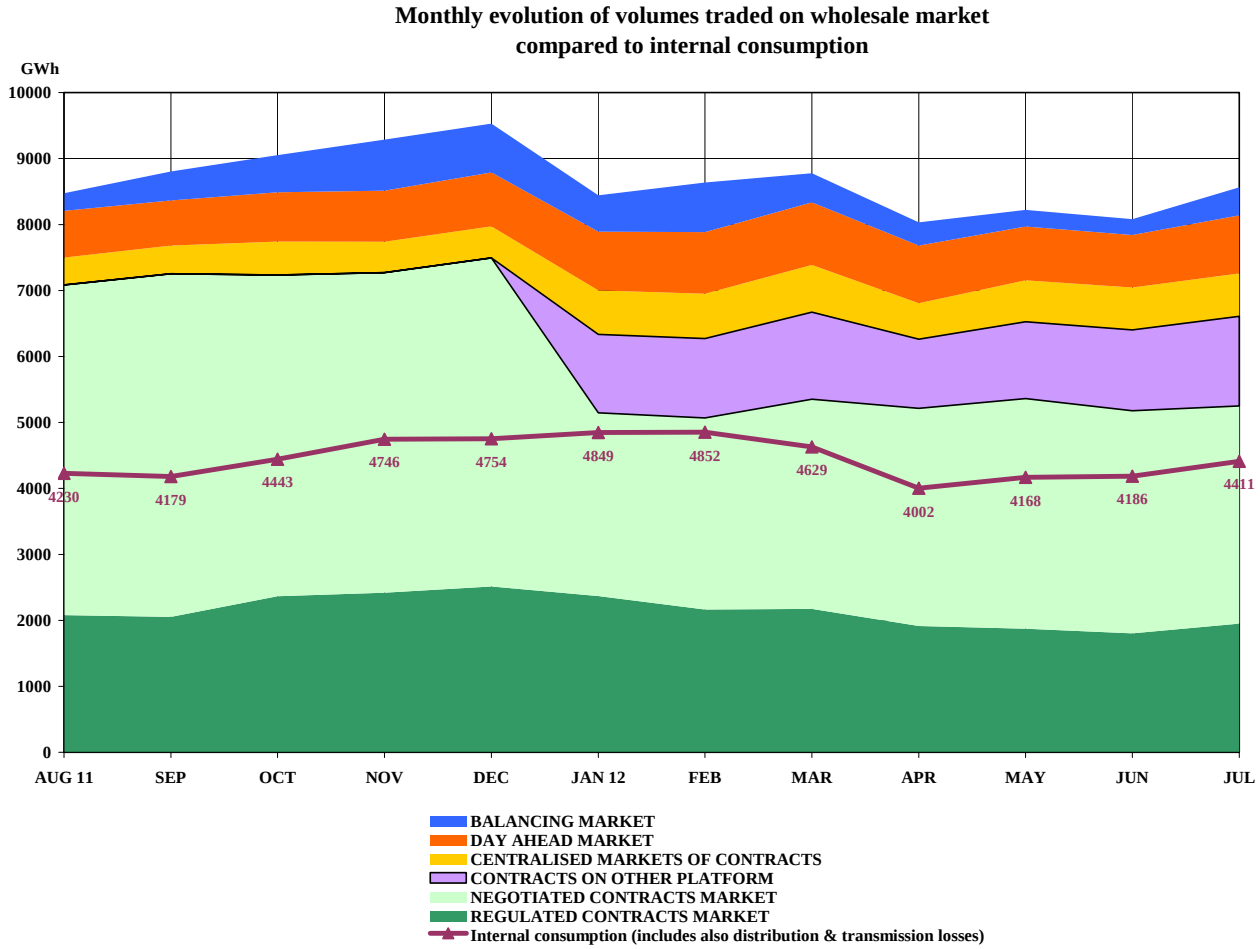
The volumes traded and the average prices on each type of contracts and on the main components of the wholesale market are presented in the following tables for July 2012 compared to the month before and July 2011:

| TRANSACTIONS ON THE WHOLESALE MARKET | June 2012 | July 2012 | July 2011 |
|---|---|---|---|
| **1. BILATERAL CONTRACTS' MARKET** | | | |
| traded volume (GWh) | **6403** | **6610** | **6697** |
| % from internal consumption (%) | 177.11 | 182.98 | 172.11 |
| average price (lei/MWh) | 152.9 | 149.9 | 156.7 |
| **1.1. Sales on regulated contracts** | | | |
| traded volume (GWh) | **1802** | **1950** | **2077** |
| % from internal consumption (%) | 144.95 | 146.74 | 156.66 |
| average price (lei/MWh) | 43.1 | 44.2 | 48.6 |
| **1.2. Sales on contracts concluded on other platforms *** | | | |
| traded volume (GWh) | **1226** | **1358** | |
| % from internal consumption (%) | 203.50 | 208.79 | - |
| average price (lei/MWh) | 25.3 | 30.8 | |
| **1.3. Sales on negociated contracts**** | | | |
| traded volume (GWh) | **3374** | **3302** | **4620** |
| % from internal consumption (%) | 184.68 | 193.77 | 179.05 |
| average price (lei/MWh) | 80.6 | 74.9 | 108.1 |
| **2. EXPORT***** | | | |
| traded volume (GWh) | **96** | **151** | **87** |
| % from internal consumption (%) | 158.02 | 203.77 | 236.02 |
| average price (lei/MWh) | 2.3 | 3.4 | 2.0 |
| **3. CENTRALISED MARKETS OF CONTRACTS** | | | |
| delivered volume (GWh) | **643** | **665** | **381** |
| % from internal consumption (%) | 204.29 | 202.73 | 164.12 |
| average price (lei/MWh) | 15.4 | 15.1 | 8.9 |
| **4. DAY AHEAD MARKET** | | | |
| traded volume (GWh) | **797** | **879** | **732** |
| % from internal consumption (%) | 183.41 | 228.81 | 216.97 |
| average price (lei/MWh) | 19.0 | 19.9 | 17.1 |
| **5. INTRADAY MARKET****** | | | |
| traded volume (GWh) | **0.030** | **0.300** | |
| % from internal consumption (%) | 300.00 | 301.55 | - |
| average price (lei/MWh) | 0.001 | 0.007 | |
| **6. BALANCING MARKET** | | | |
| traded volume (GWh) | **237** | **426** | **306** |
| % from internal consumption (%) | 5.7 | 9.7 | 7.2 |
| upward volume (GWh) | **131** | **306** | **226** |
| average negative imbalance price(lei/MWh) | 242.79 | 280.69 | 280.60 |
| downward volume (GWh) | **106** | **120** | **80** |
| average positive imbalance price (lei/MWh ) | 33.89 | 59.66 | 42.08 |
| ***INTERNAL CONSUMPTION (includes distribution and transmission losses) (GWh)*** | **4186** | **4411** | **4274** |

| | | |
|---|---|---|
| *Note:* | * | After a large consultation process with market participants, starting with January 2012, the contracts concluded on other platforms (such as ICAP, TFS) have been separately identified; before this, these volumes had been comprised within negotiated contracts |
| | ** | Supply contracts to consumers and export contracts are not included; 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 |
| | *** | Export volumes correspond to the quantities for which CN Transelectrica SA applied extraction component of transmission tariff for export. which in some cases are different to those reported as traded by participants |
| | **** | The average monthly price has been calculated based on monthly traded volume and transaction value published by SC Opcom SA |

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.

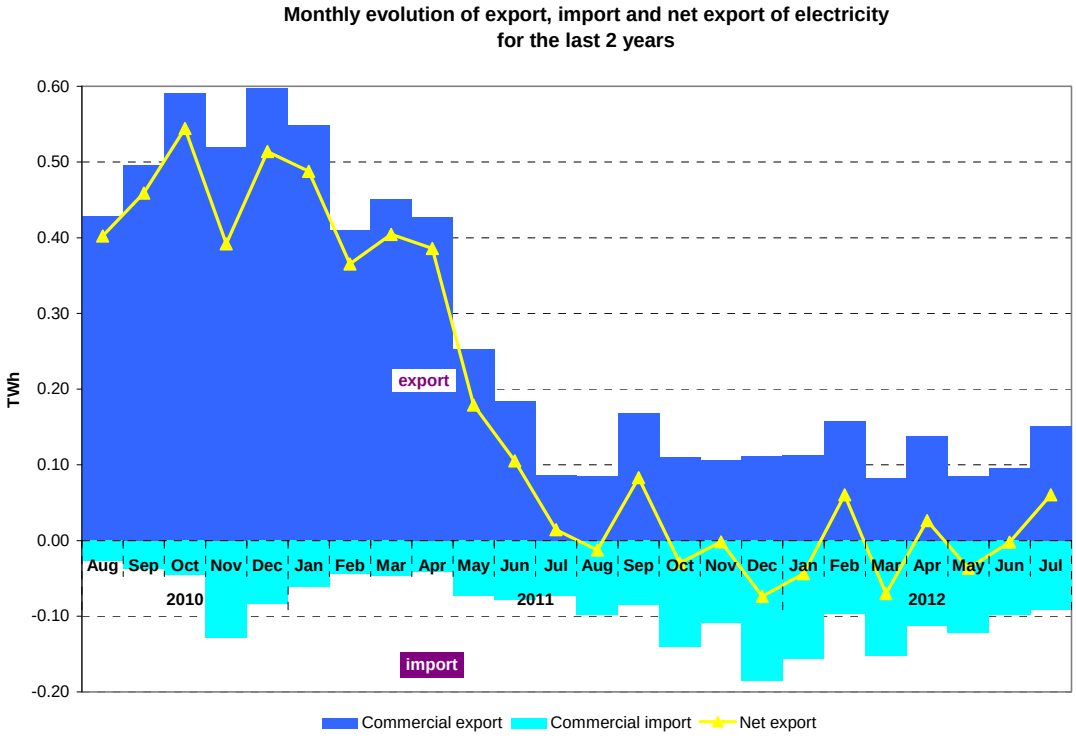
The following graph presents the evolution of the relation between the volumes sold on each market and the estimated internal consumption between August 2011 – July 2012.




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

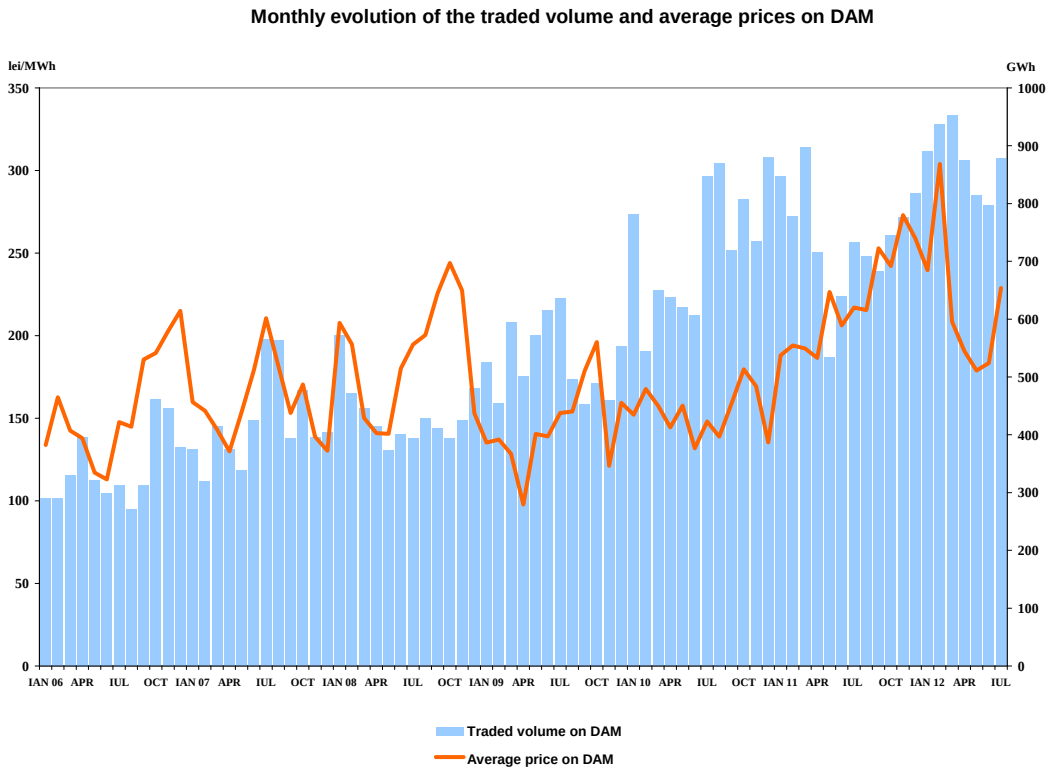
*Note: In the above graph, the volumes traded on negociated contracts' market do not include the export trades*

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




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

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



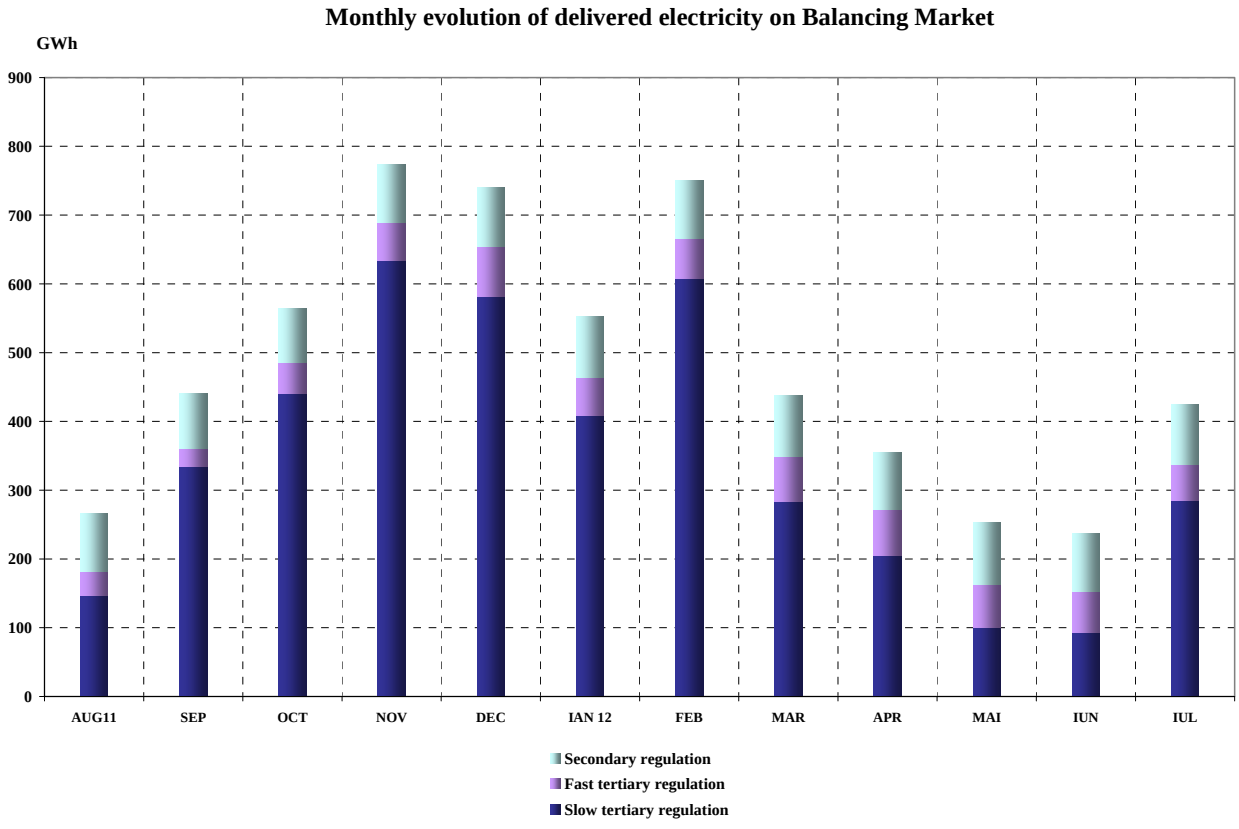

*Source: Monthly reports of SC Opcom SA and CN Transelectrica SA – processed by MG*

Balancing electricity is determined by the dispatch orders (accepted offers) received by generators. After settlement, the actual electricity delivered by generators on balancing market is determined based on the measured (approved) values; the relation between the accepted and delivered electricity in July 2012 is presented in the following table:

| July 2012 | Dispach order (GWh) | Delivered electricity (GWh) | Deviation (%) |
|---|---|---|---|
| **Secondary regulation** | **87** | **87** | |
| *upward* | 41 | 41 | |
| *downward* | 46 | 46 | |
| **Fast tertiary regulation** | **59** | **53** | **10** |
| *upward* | 21 | 20 | 5 |
| *downward* | 38 | 33 | 13 |
| **Slow tertiary regulation** | **300** | **285** | **5** |
| *upward* | 255 | 245 | 4 |
| *downward* | 45 | 40 | 11 |
| **TOTAL** | **447** | **425** | |
| *upward* | 317 | 306 | |
| *downward* | 130 | 120 | |
| **INTERNAL CONSUMPTION** | | **4411** | |
| ***% share of traded volumes from internal consumption*** | | ***9.6%*** | |

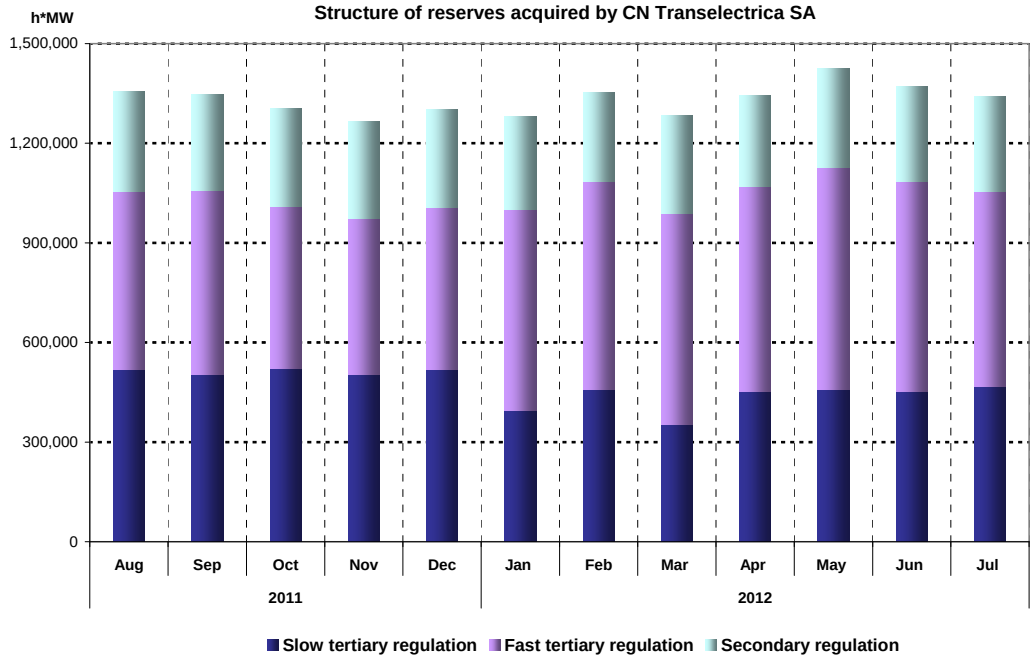
*Source: Monthly reports of CN Transelectrica SA – processed by MG*

The structure of balancing electricity delivered in the system on each type of regulation starting from August 2011 is presented in the graph below:



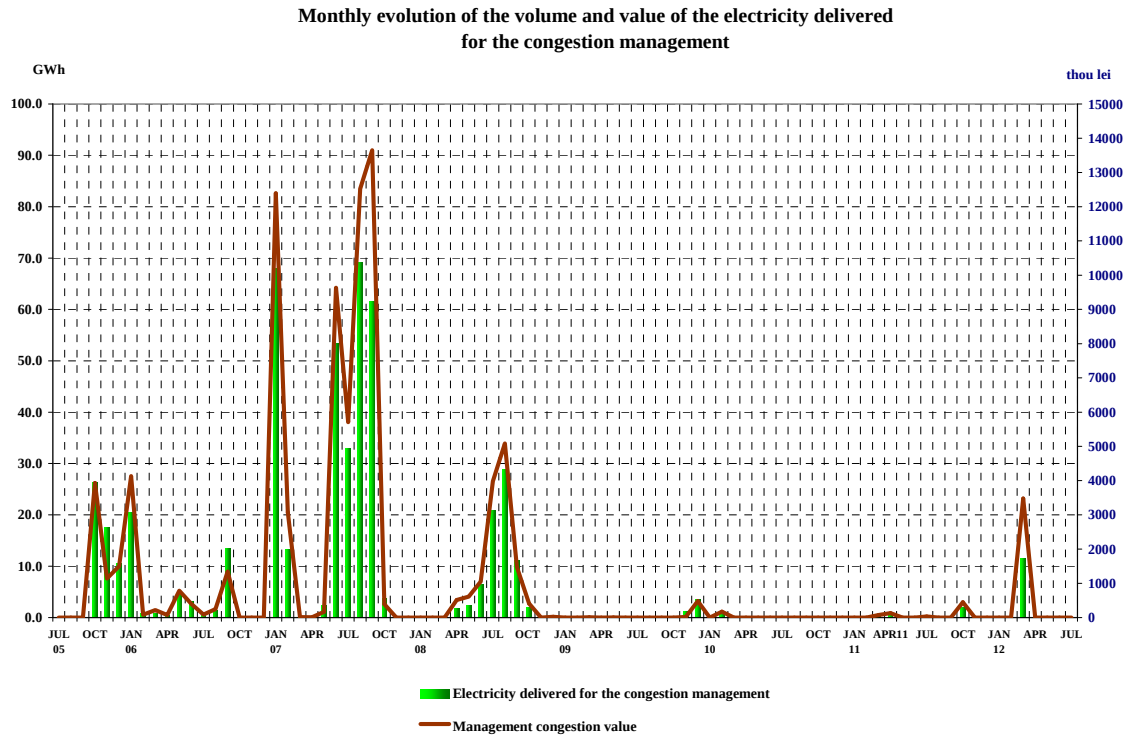

*Source: Monthly reports of CN Transelectrica SA – processed by MG*

For comparison, the following graph presents the evolution of reserves (ancillary services, i.e. obligations of generators to maintain their contracted capacities available for dispatching/offering on BM) acquired/paid by CN Transelectrica SA starting from August 2011:




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

The following graph presents the evolution of electricity traded by CN Transelectrica SA on the Balancing Market for covering the electricity used for congestion management (in order to solve the congestions occurred within the transmission grid) and the evolution of the values of these transactions starting from 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 July 2012 compared to previous month and July 2011 was the following:

**- GWh -**

| Transaction type | June 2012 | July 2012 | July 2011 |
|---|---|---|---|
| **0** | **1** | **2** | **3** |
| Regulated to incumbents, thermal generators | 684.39 | 673.67 | 666.55 |
| Regulated to incumbents, hydro generator | 405.85 | 357.32 | 327.37 |
| Regulated to incumbents, nuclear generator | 360.02 | 515.98 | 458.79 |
| Regulated for distribution losses. thermal generators | 177.46 | 185.12 | 181.95 |
| Regulated for distribution losses, hydro generator | 63.67 | 55.79 | 23.28 |
| Regulated for distribution losses, nuclear generator | 110.87 | 161.63 | 105.05 |
| Regulated for transmission losses, thermal generator | 0.00 | 0.00 | 76.28 |
| Regulated, to other generators (with return of obligation within a year) | 0.00 | 0.00 | 237.44 |
| Negotiated, to other generators | 53.95 | 188.53 | 59.99 |
| Negotiated, to suppliers | 948.03 | 921.45 | 1166.95 |
| Contracts concluded on centralized markets (CMBC, CMBC-NC, RCE) | 597.42 | 590.37 | 380.67 |
| Supply to consumers (regulated and competitive) | 281.04 | 296.67 | 203.97 |
| Export | 70.06 | 65.00 | 0.00 |
| DAM | 425.64 | 549.51 | 512.15 |
| **Total** | **4178.37** | **4561.03** | **4400.43** |

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

***Suppliers***

In July 2012, 79 companies having as main activity the supply of electricity concluded transactions on the electricity market; from these, 36 suppliers traded electricity exclusively on the wholesale market and 43 suppliers on both retail and wholesale markets (in this category are also included the 5 incumbent suppliers).

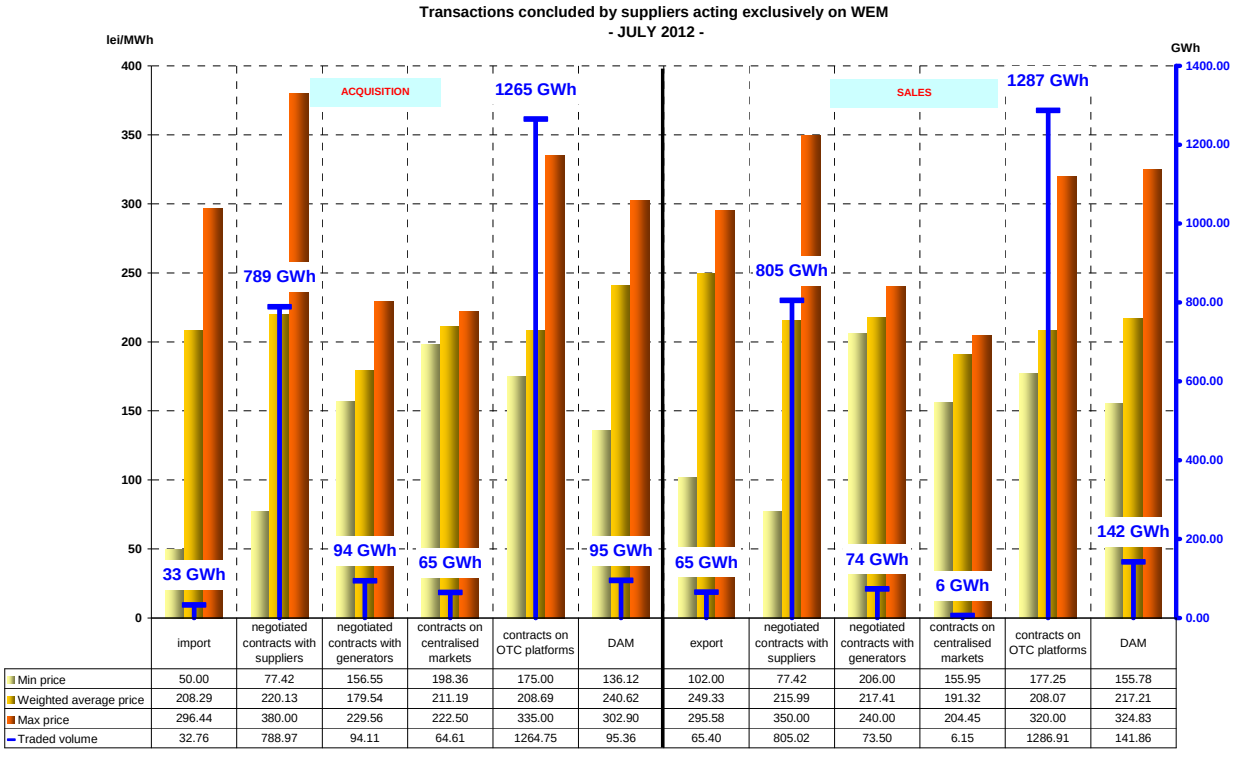
Suppliers acting exclusively on WEM

The following table shows the activity for July 2012 compared to July 2011 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** | **July 2011** | **July 2012** |
|---|---|---|
| **Acquisitions** | | |
| Import | 32.72 | 32.76 |
| Negotiated contracts with suppliers | 1844.44 | 788.97 |
| Negotiated contracts with generators | 29.60 | 94.11 |
| Contracts concluded on centralized markets | 5.04 | 64.61 |
| Contracts on OTC platforms | 0.00 | 1264.75 |
| DAM | 89.21 | 95.36 |
| **Sales** | | |
| Export | 78.22 | 65.40 |
| Negotiated contracts with suppliers | 1797.95 | 805.02 |
| Negotiated contracts with generators | 44.64 | 73.50 |
| Contracts concluded on centralized markets | 0.00 | 6.15 |
| Contracts on OTC platforms | 0.00 | 1286.91 |
| DAM | 148.52 | 141.86 |

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 July 2012:




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

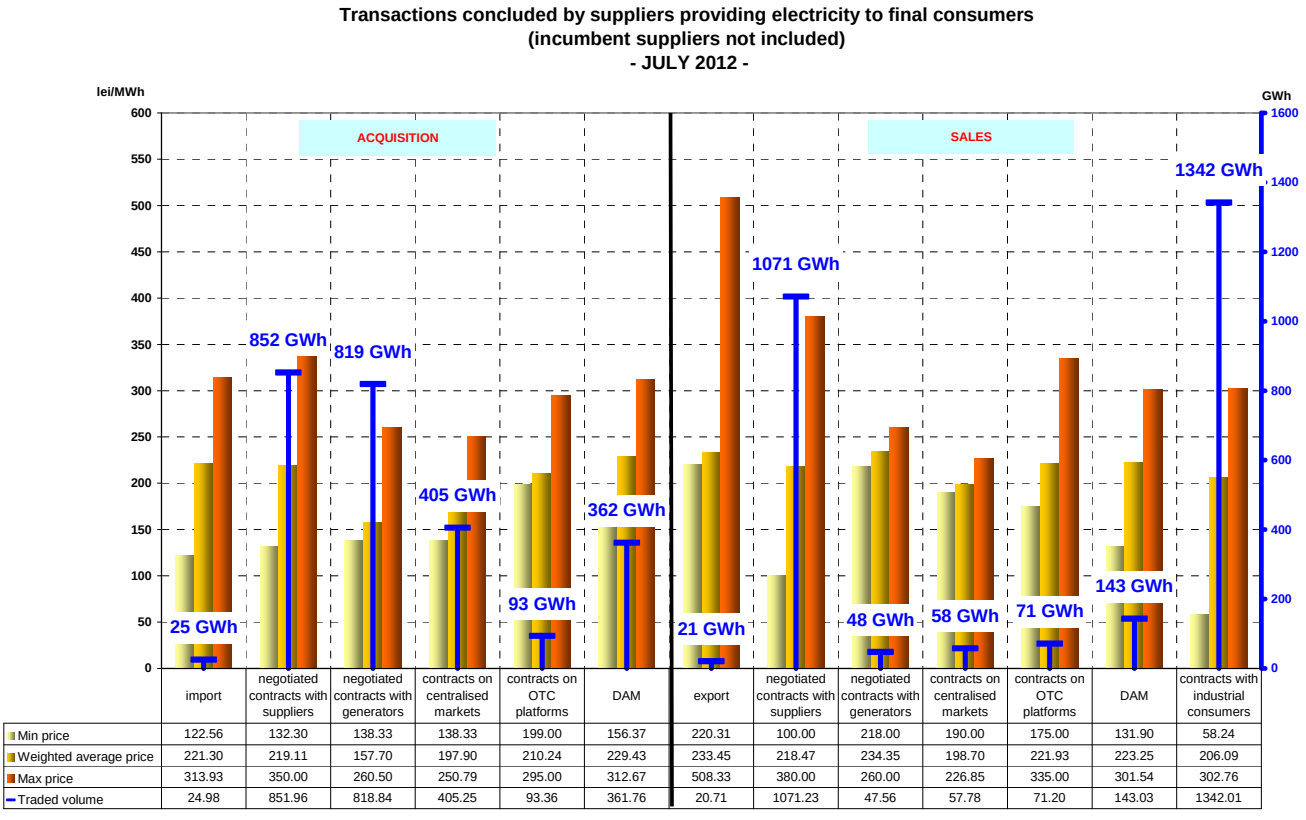
Active suppliers on REM (the incumbent suppliers are not included)

The following table presents aggregated information on transactions volume and structure for suppliers providing electricity to final consumers, on the competitive market, for July 2012 and July 2011.

**- GWh -**

| **Transactions' structure of suppliers providing electricity to final consumers (the incumbent suppliers are not included)** | **July 2011** | **July 2012** |
|---|---|---|
| **Acquisitions** | | |
| Import | 9.94 | 24.98 |
| Negotiated contracts with suppliers | 1071.10 | 851.96 |
| Negotiated contracts with generators | 1137.34 | 818.84 |
| Contracts concluded on centralized markets | 316.11 | 405.25 |
| Contracts on OTC platforms | - | 93.36 |
| DAM | 311.97 | 361.76 |
| **Sales** | | |
| Export | 8.74 | 20.71 |
| Negotiated contracts with suppliers | 1403.93 | 1071.23 |
| Negotiated contracts with generators | 48.41 | 47.56 |
| Contracts concluded on centralized markets | 0.00 | 57.78 |
| Contracts on OTC platforms | 0.00 | 71.20 |
| DAM | 58.19 | 143.03 |
| Contracts with industrial consumers | 1446.82 | 1342.01 |

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 July 2012:




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

Incumbent suppliers

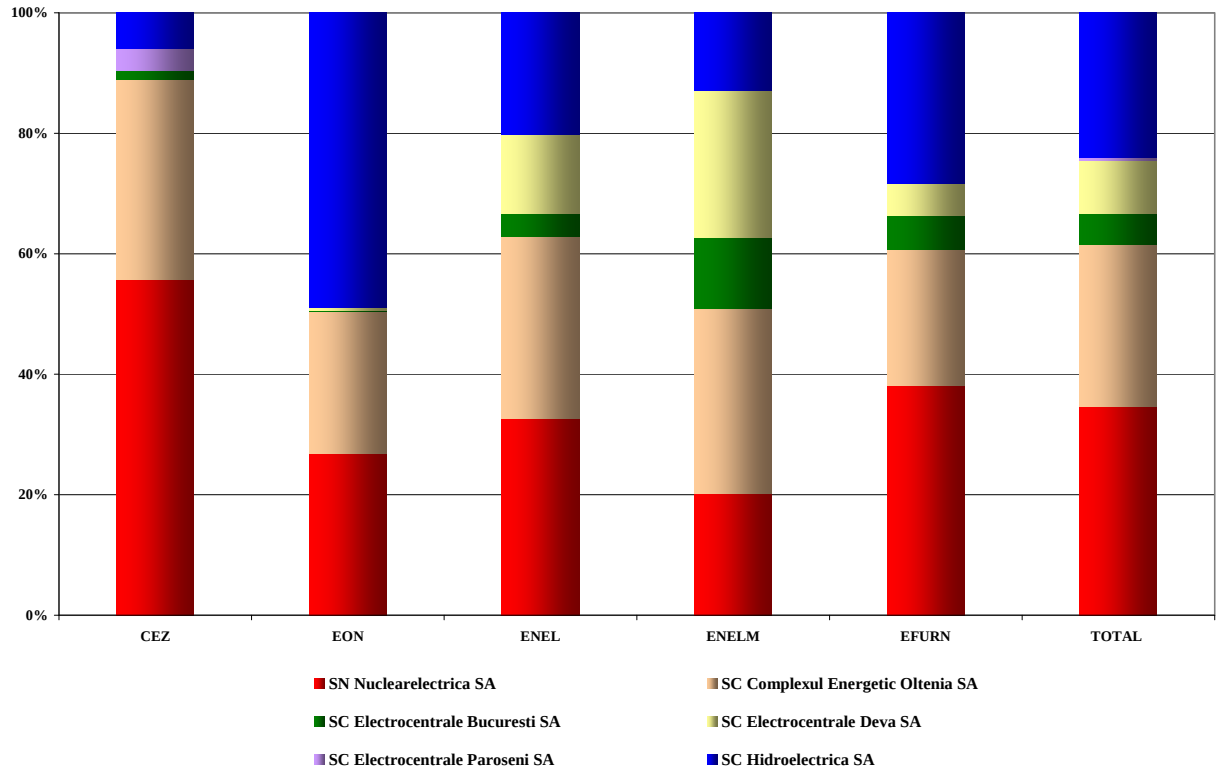
Electricity acquisition structure of incumbent suppliers (before the delivery day), for supplying the regulated market consumers, is presented in the table below, for July 2012 compared to the situation of July 2011:

**- GWh -**

| **Acquisition structure of incumbent suppliers for regulated REM component** | **July 2011** | **July 2012** |
|---|---|---|
| Regulated contracts with generators | 1497.61 | 1557.36 |
| Negociated contracts | 8.43 | 2.95 |
| Contracts concluded on centralized markets | 0.00 | 9.25 |
| Intraday | 0.00 | 0.24 |
| DAM | 95.69 | 150.28 |

The structure of the electricity purchased by the incumbent suppliers from the main generators on regulated contracts is presented in the following graph for July 2012:

**Electricity aquisition from main generators, on regulated contracts, of incumbent suppliers for delivering electricity to final consumers on regulated market**
***JULY 2012***



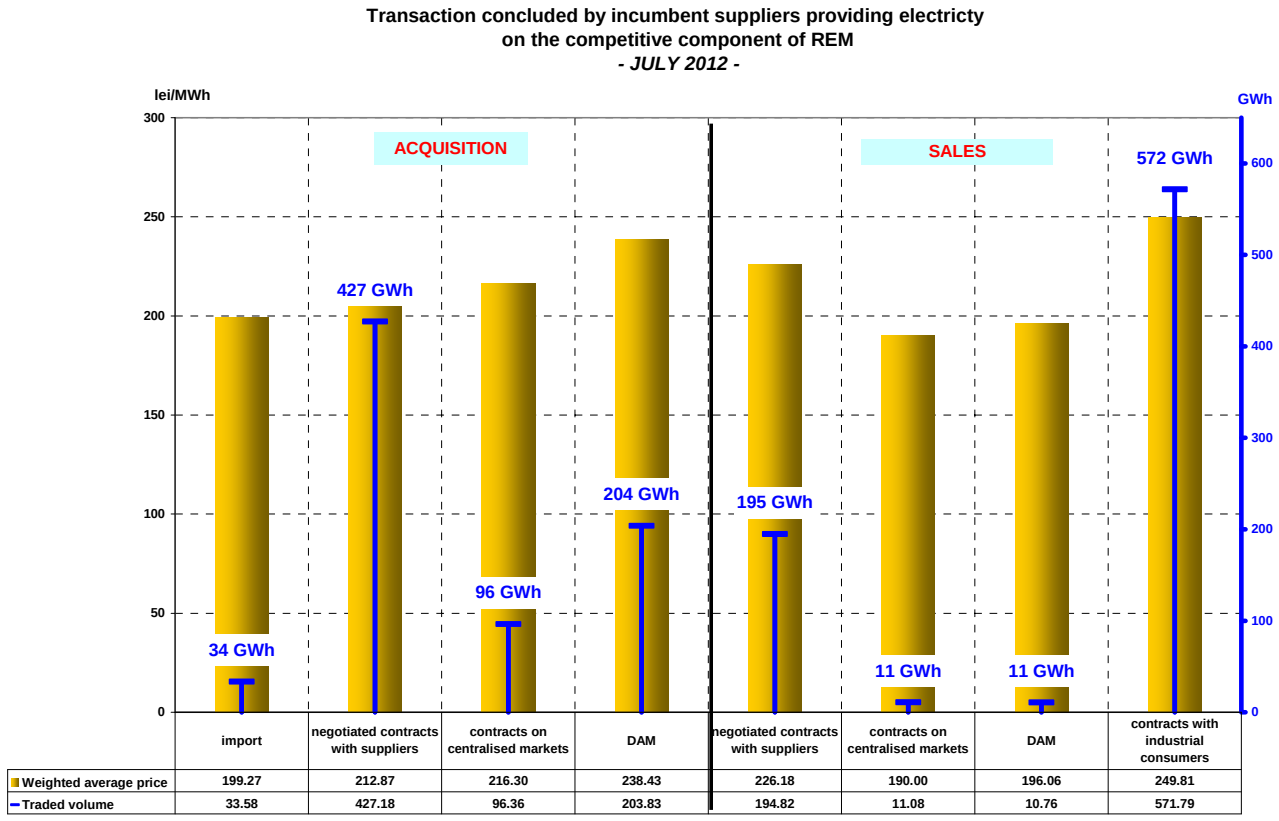

*Source: Monthly reports of the incumbent suppliers – processed by MG*

Similar 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 July 2012 compared to July 2011:

**- GWh -**

| Transactions' structure of incumbent suppliers for competitive REM component | July 2011 | July 2012 |
|---|---|---|
| **Acquisitions** | | |
| Import | 30.06 | 33.58 |
| Negotiated contracts with suppliers | 374.04 | 427.18 |
| Contracts concluded on centralized markets | 0.00 | 96.36 |
| DAM | 111.27 | 203.83 |
| **Sales** | | |
| Negotiated contracts with suppliers | 96.25 | 194.82 |
| Negotiated contracts with distributors | 1.89 | 0.00 |
| Contracts concluded on centralized markets | 0.00 | 11.08 |
| DAM | 2.09 | 10.76 |
| Final consumers | 469.17 | 571.79 |

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 July 2012:




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

### *Main distribution operators*

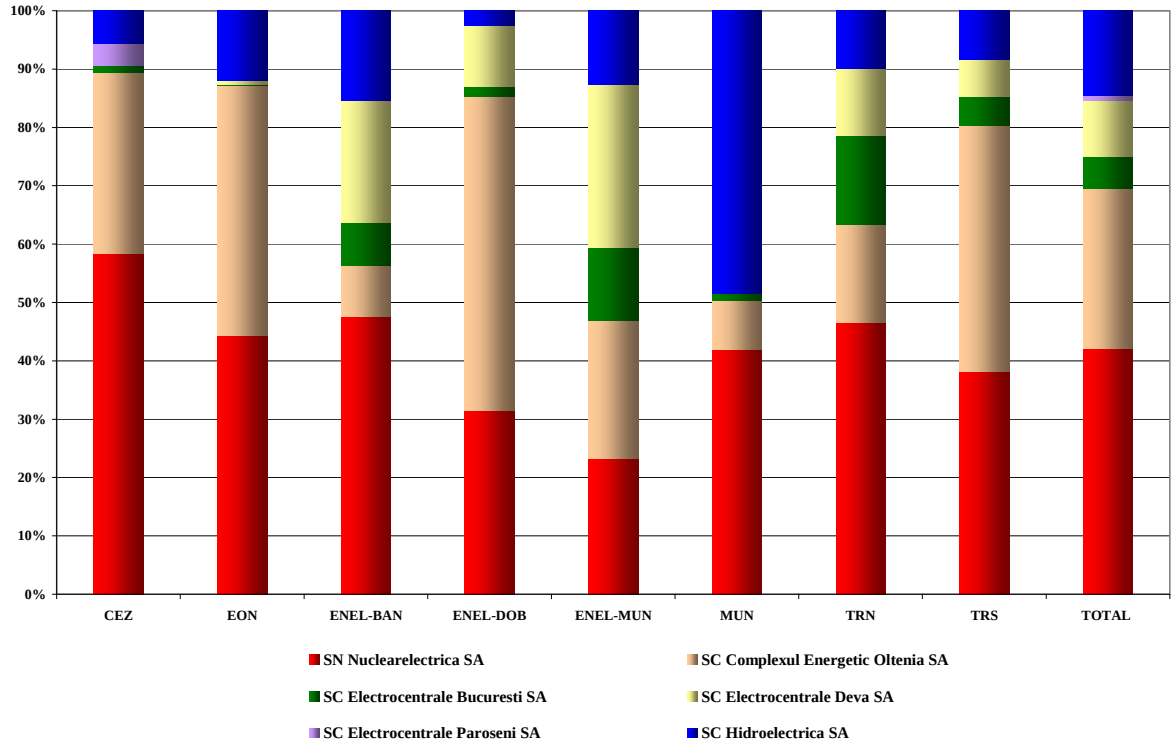
The following table shows the electricity acquisition structure of main distribution operators (before the delivery day), for covering the distribution network losses, for July 2012 compared to July 2011:

**- GWh -**

| Acquisition structure | July 2011 | July 2012 |
|---|---|---|
| Regulated contracts with generators | 312.91 | 403.30 |
| Negotiated contracts with suppliers | 1.89 | 0.00 |
| DAM | 74.10 | 21.69 |

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 July 2012:

**Electricity acquisition of distribution operators from main generators, on regulated contracts, for covering the distribution losses**
***JULY 2012***




*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.

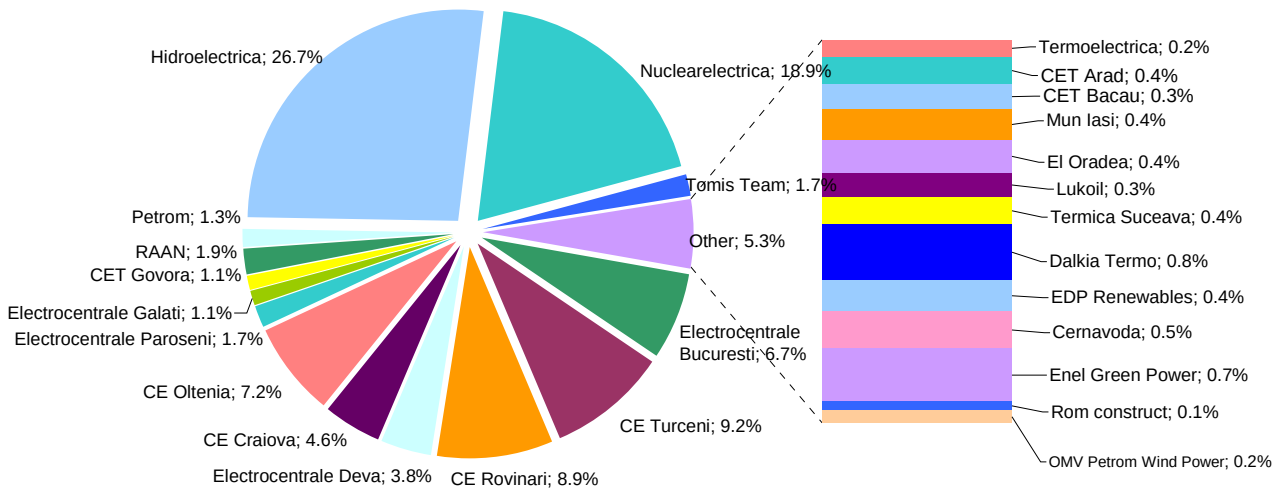
Concentration indicators and market shares of the electricity generators

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 July 2012, calculated based on electricity delivered into the networks by the generators with dispatchable units.

| Concentration indicators - July 2011 - | C1 (%) | C3 (%) | HHI |
|---|---|---|---|
| Value | 31.8 | 77.5 | 2146 |

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 7 months from 2012. These market shares are calculated based on the electricity delivered into networks.

**Market share of generators with dispatchable units by delivered electricity**
***January-July 2012***




**Structure indicators:**
**C1 - 26.7%**
**C3 - 54.8%**
**HHI - 1382**

** for 01 January - 10 June 2012*
*** for 11 - 30 June 2012*

*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 July 2012:

| Structure/concentration indicators of BM - JULY. 2012 - | Regulation | | | | | |
|---|---|---|---|---|---|---|
| | Secondary | | Fast tertiary | | Slow tertiary | |
| | upward | downward | upward | downward | upward | downward |
| C1 - % - | 63 | 61 | 79 | 59 | 51 | 61 |
| C3 - % - | 99 | 99 | 92 | 100 | 94 | 100 |
| HHI | 5072 | 4957 | 6322 | 4545 | 3531 | 4715 |

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 July 2012:

| **Concentration indicators on ASM - July 2012 -** | | **Secondary reserve** | **Fast tertiary reserve** | **Slow tertiary reserve** |
|---|---|---|---|---|
| **regulated component** | **contracted quantity (h*MW)** | **268380** | **535680** | **260400** |
| | **C1 (%)** | **53.1** | **82.0** | **50.0** |
| | **C3 (%)** | **98.3** | **94.5** | **85.7** |
| **competitive component** | **contracted quantity (h*MW)** | **16590** | **51872** | **207979** |
| | **C1 (%)** | **100** | **98.6** | **71.5** |
| | **C3 (%)** | **100** | **100** | **100** |
| | **HHI** | **10000** | **9719** | **5687** |

Concentration Indexes for the Day Ahead Market

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

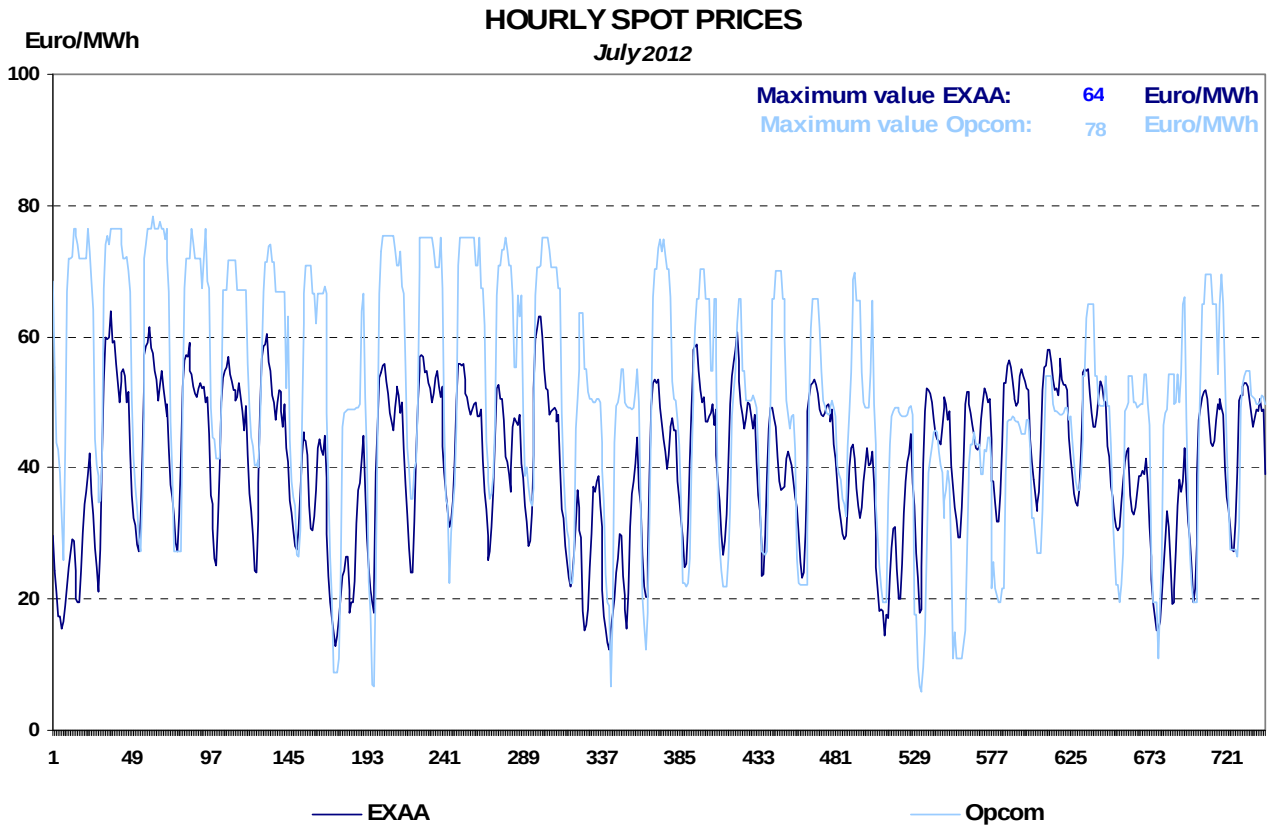
The concentration indicators on DAM reflects the level of competition between sellers and between buyers respectively, the dynamics of both influencing the price level. The following table presents C1, C3 and HHI for buying and for selling side of DAM in July 2012, based on quantities traded by participants on this market.

| **Concentration indicators on DAM - July 2012 -** | **C1 (%)** | **C3 (%)** | **HHI** |
|---|---|---|---|
| **Buying transactions** | **25.78** | **52.14** | **1220** |
| **Selling transactions** | **17.46** | **43.59** | **889** |

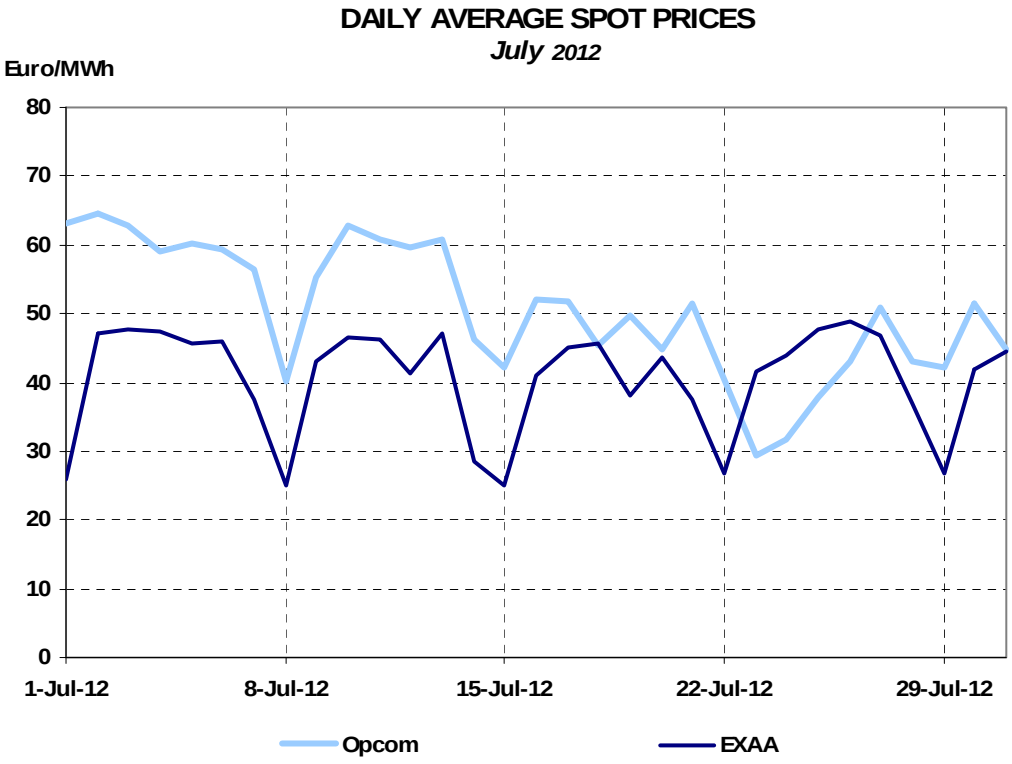
## *7. Price evolution on wholesale electricity market*

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 July 2012 are presented in the following graphs, along with the prices on EXXA.

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

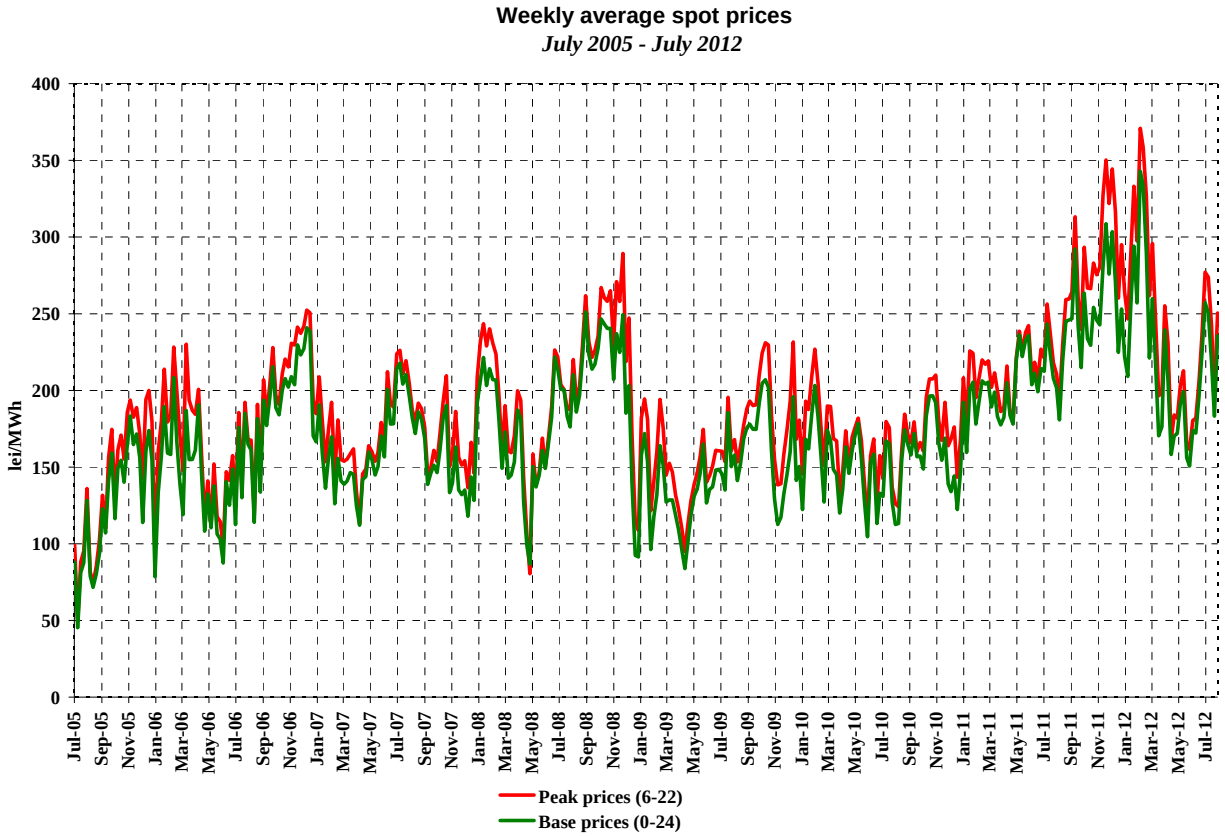



*Source: Daily reports of SC Opcom SA and published data of EXAA – processed by MG*




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

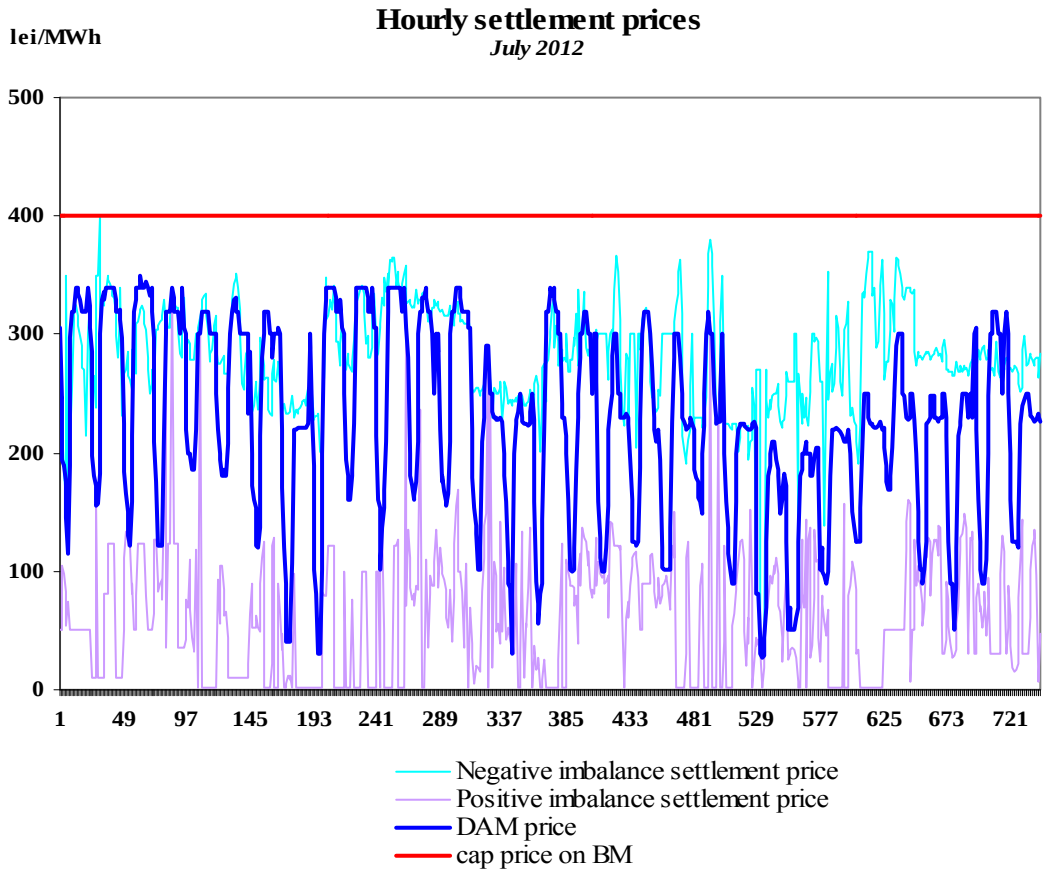
The following graph presents the evolution of weekly average spot prices starting with July 2005:



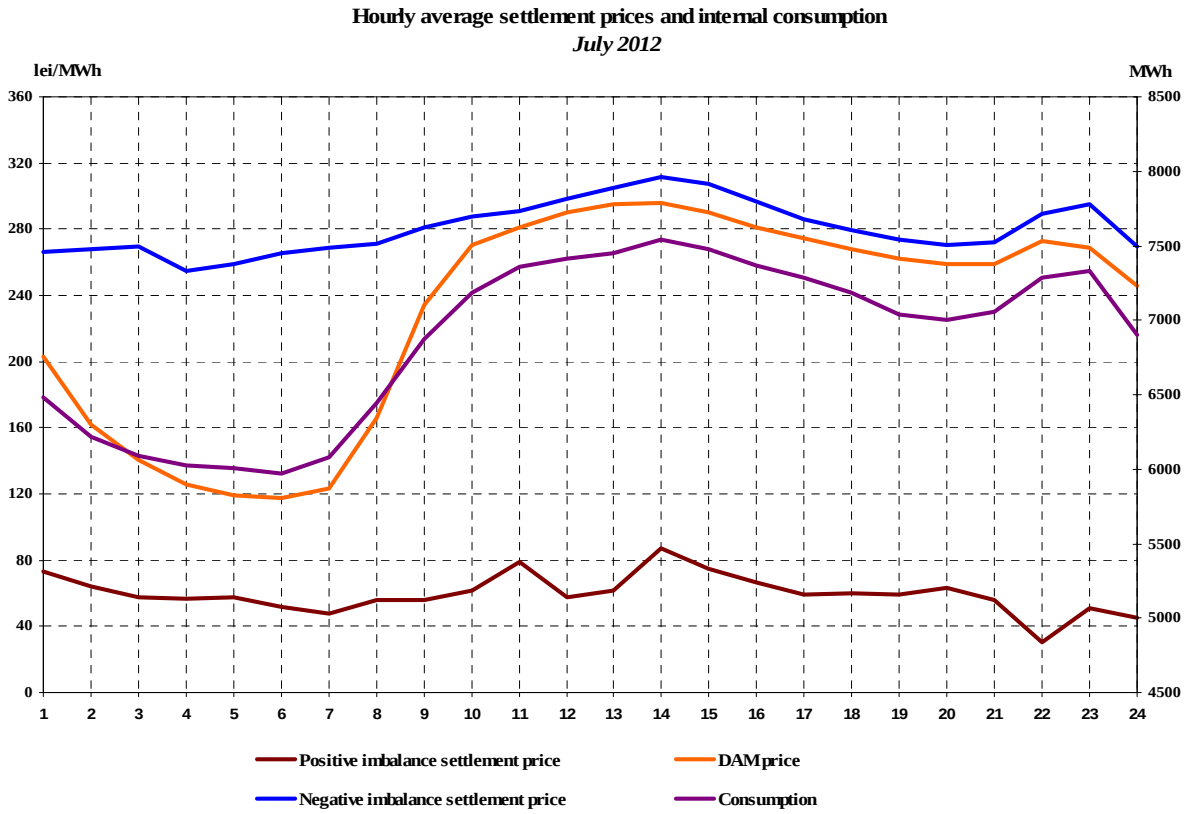

*Source: Daily reports of SC Opcom SA – processed by MG*

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

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

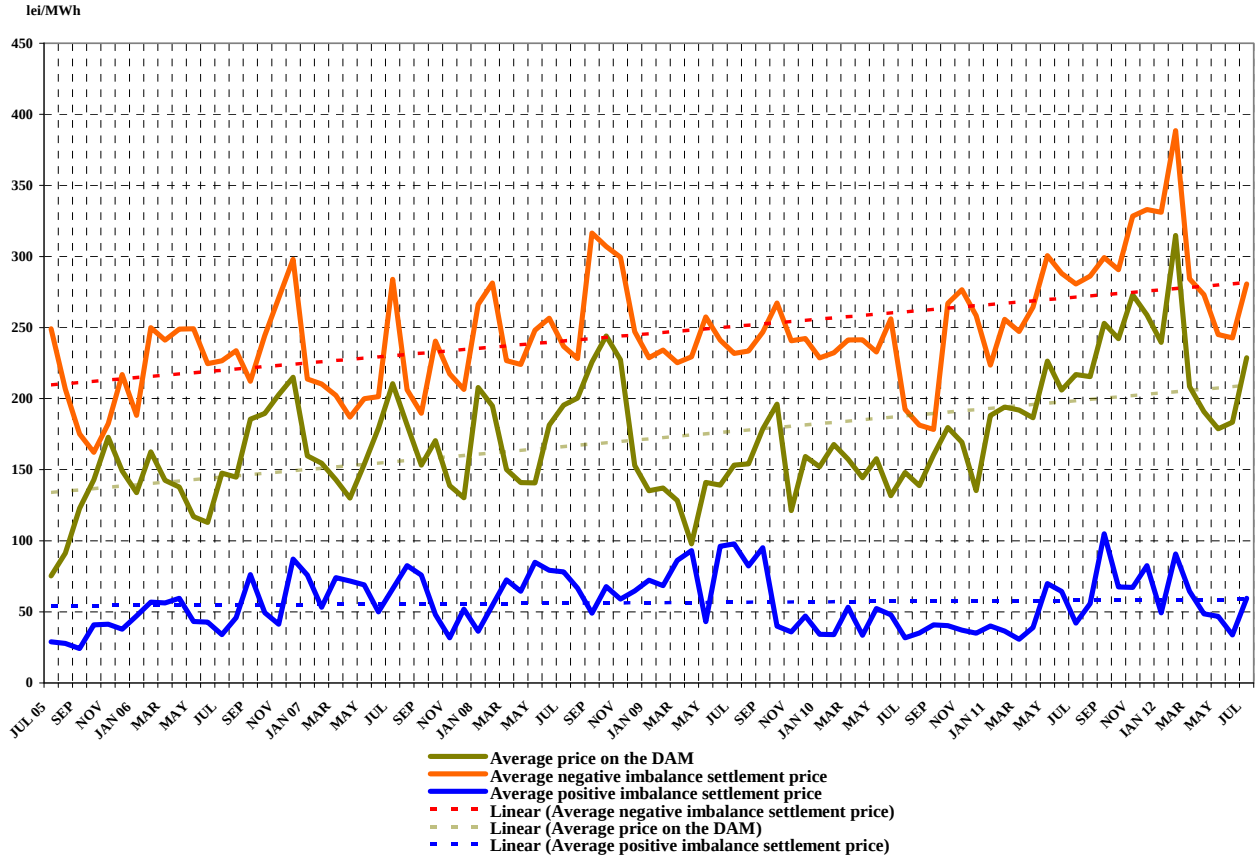



*Source: Daily/monthly reports of SC Opcom SA – processed by MG*




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

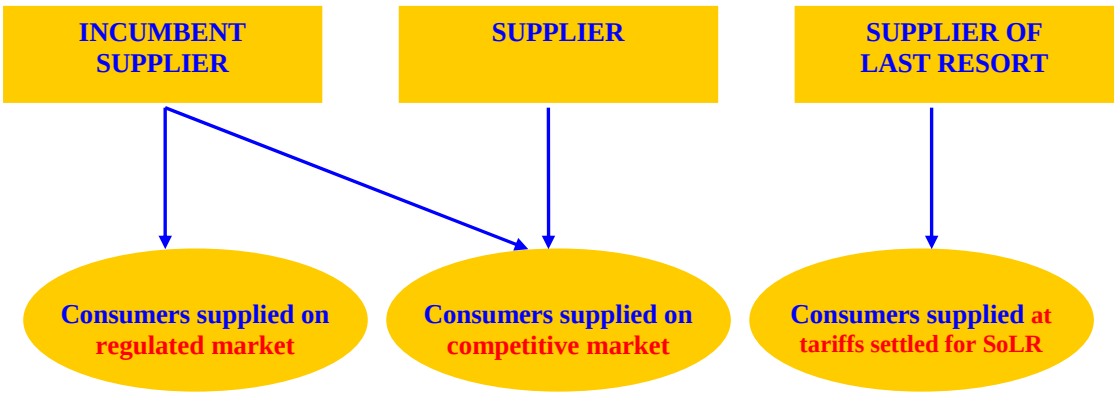
**Monthly average prices on DAM and BM**
***July 2005 - July 2012***




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

# III. RETAIL ELECTRICITY MARKET

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

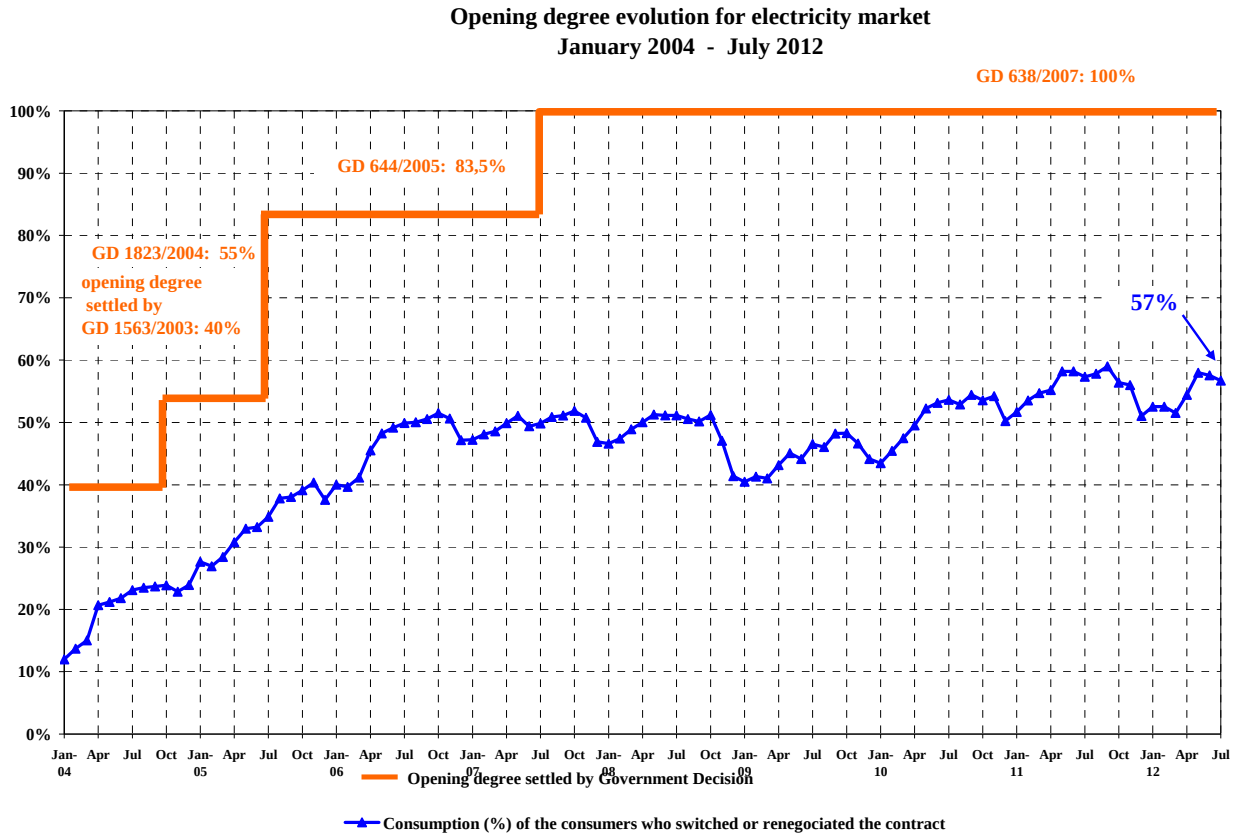



## *2. Steps in the opening process of the electricity market*

| 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 – July 2012. The values presented are cumulated from the beginning of the opening process and are presented monthly:



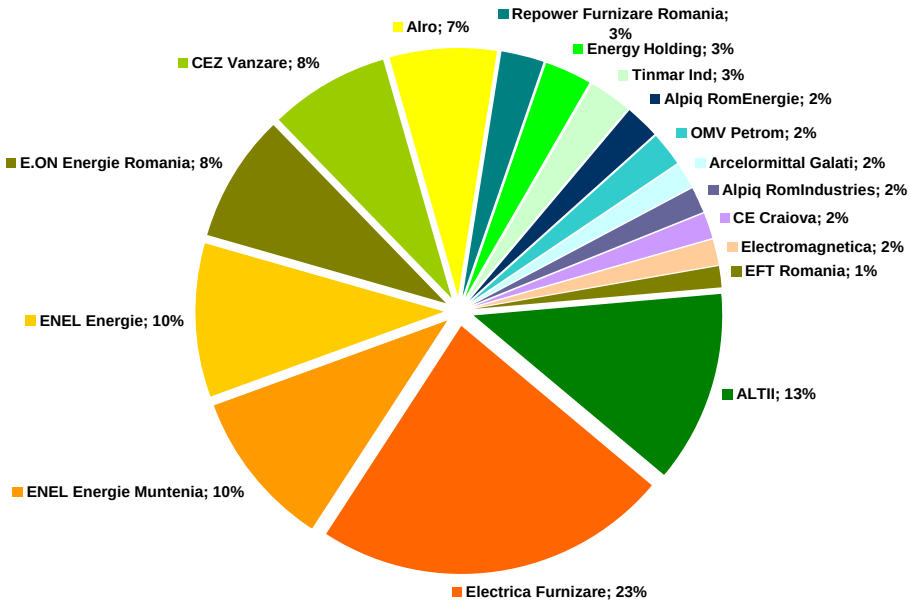

*Source: Monthly reports of the final consumers' suppliers – processed by MG*

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

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

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

**Market shares of suppliers for final consumers**
***- JANUARY - JULY 2012 -***



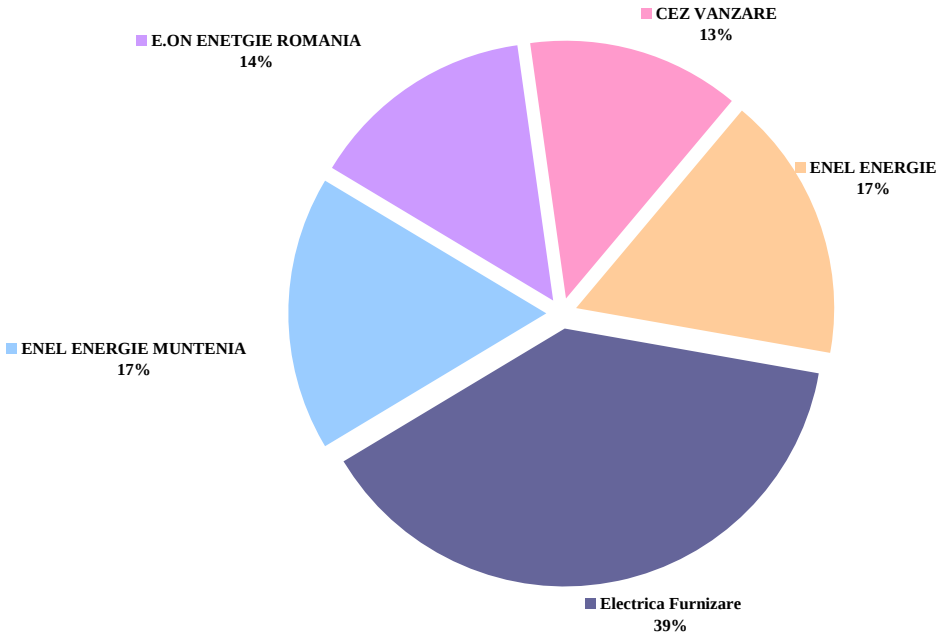

**Final consumption: 26846 GWh**

**Category "Altii" includes 45 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 - JULY 2012-**

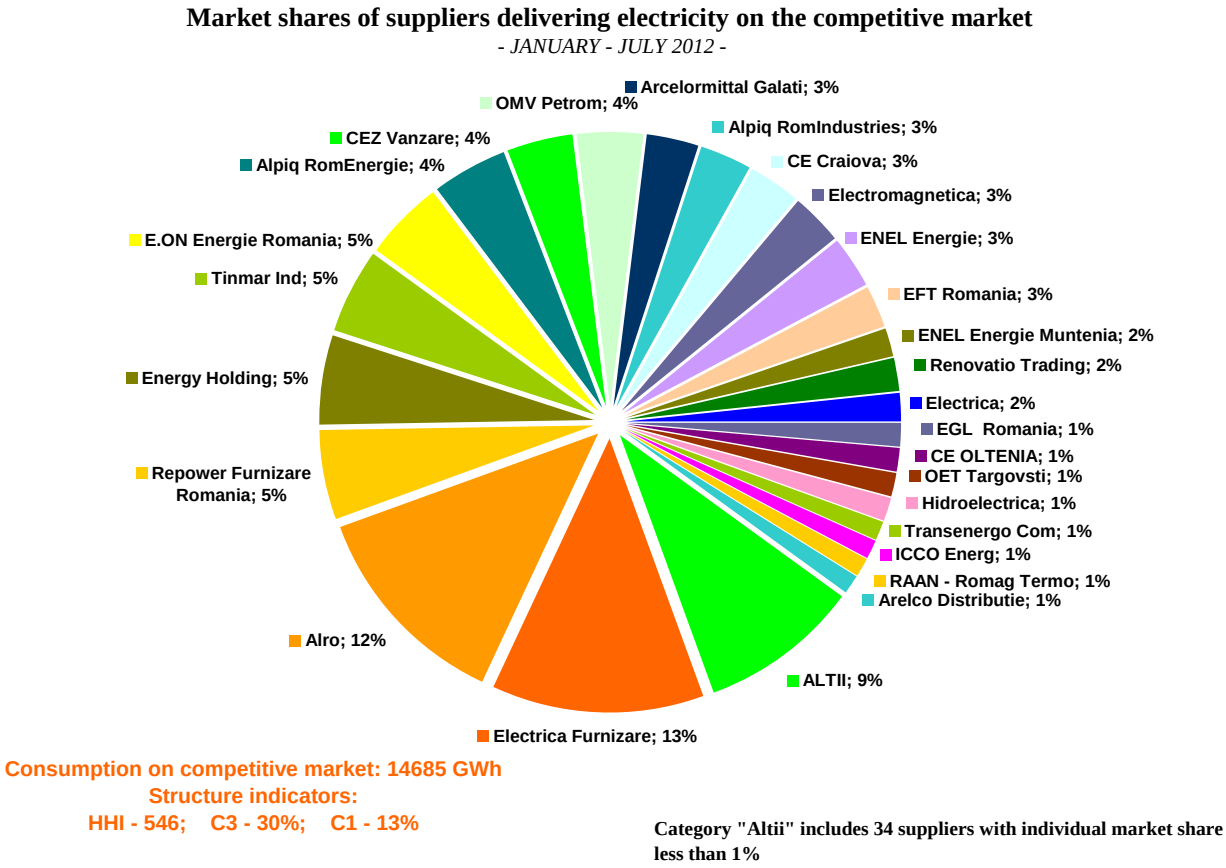



**Consumption of consumers supplied at regulated tariffs: 12161 GWh**

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

and

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




*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.

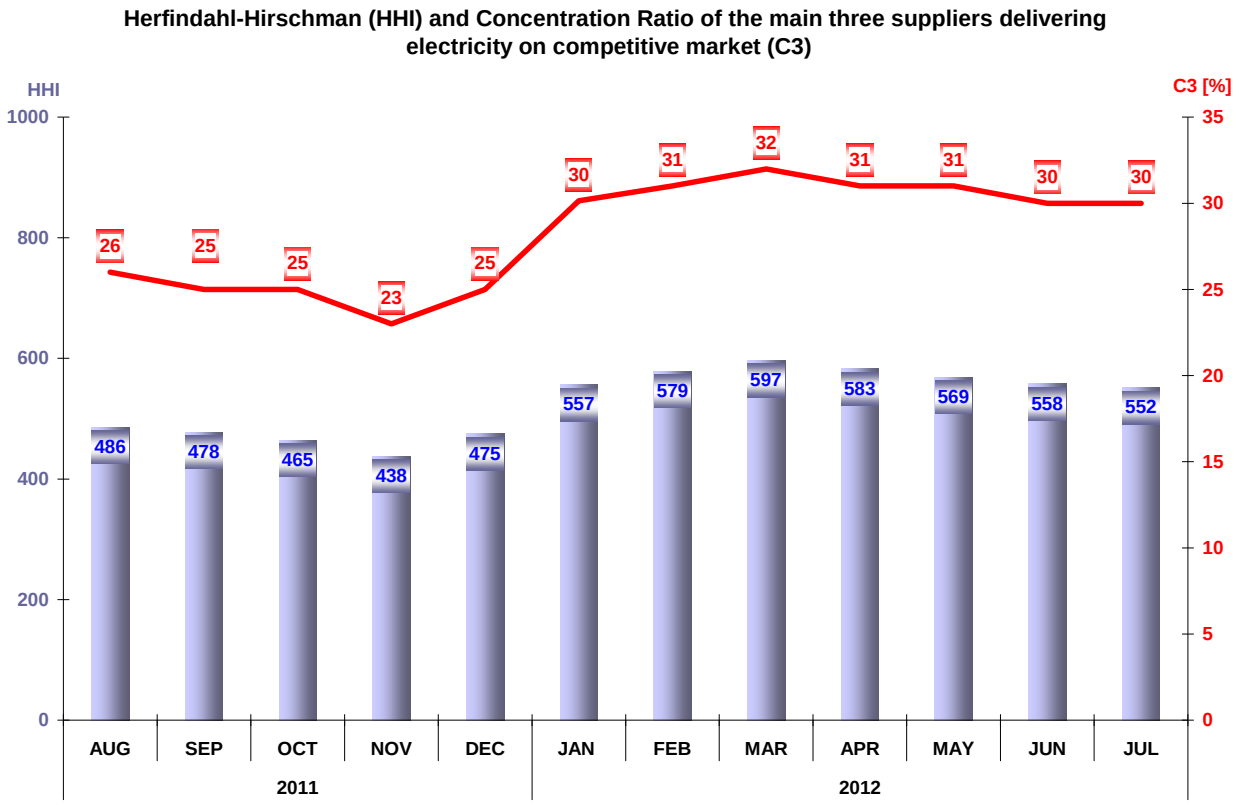
The electricity supplied to the final consumers used for calculating the market share of every supplier includes also the self-consumption of that particular supplier (e.g. consumers with supply license who buy electricity for themselves from WEM as competitive suppliers).

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 July 2012:

| Number of suppliers | Share of sales to final consumers from total sales transactions | | | |
|---|---|---|---|---|
| | 100% | 75% - 100% | 50% - 75% | <50% |
| **Competitive** | **6** | **12** | **3** | **17** |
| **Incumbent** | **1** | **3** | **0** | **1** |

### *5. Concentration indicators of the competitive retail electricity market*

The monthly evolution of concentration indicators (C3. HHI) determined on the competitive component of the REM is presented for August 2011 – July 2012 in the following graph:




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

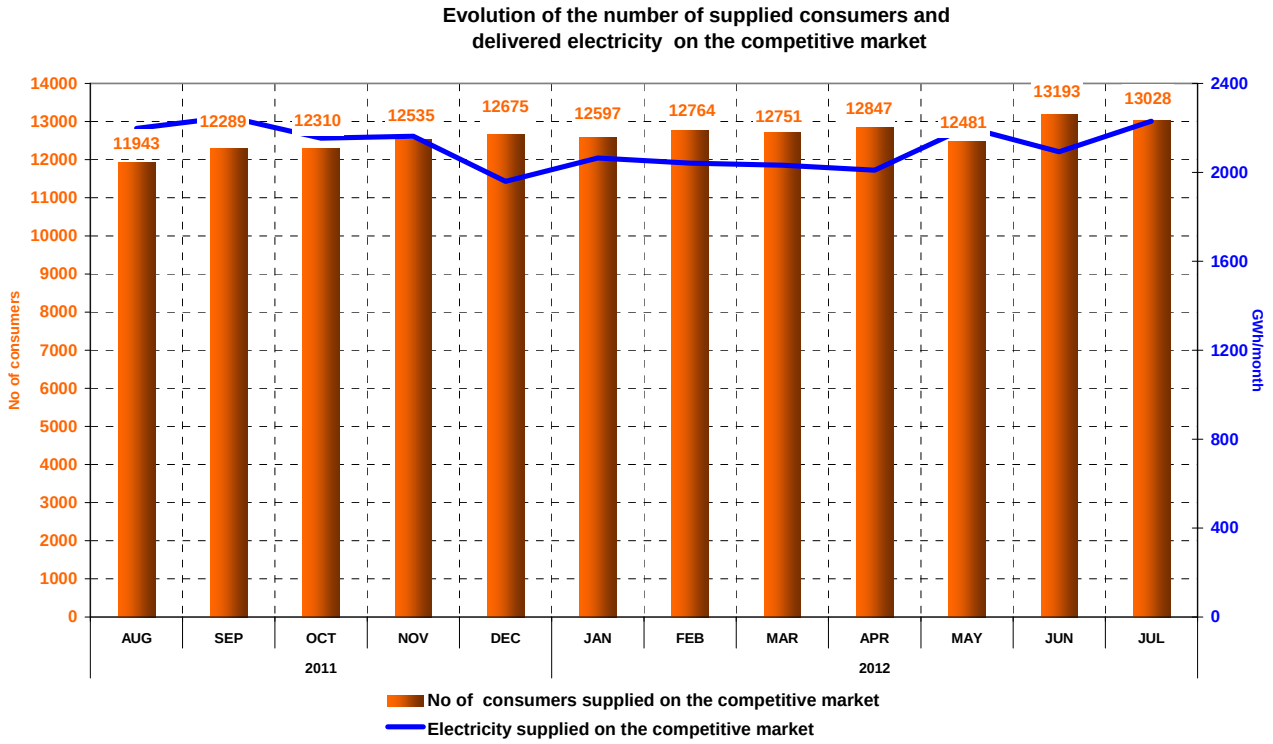
The table below shows the values of structure indicators of competitive component of REM for and the number of active suppliers in July 2012, calculated for each consumer category as defined by the European Council Directive no. 90/377/EEC, modified by the Commission Decision no. 2007/394/EC:

| Indicators - July 2012 | Consumer category | | | | | | | Total REM |
|---|---|---|---|---|---|---|---|---|
| | IA | IB | IC | ID | IE | IF | Other | |
| **C1 - % -** | 41 | 24 | 24 | 14 | 14 | 25 | 28 | **12** |
| **C3 - % -** | 80 | 53 | 43 | 35 | 37 | 50 | 49 | **30** |
| **HHI** | 2697 | 1243 | 1009 | 695 | 839 | 1271 | 1271 | **552** |
| **Consumption - GWh -** | 5.2 | 116 | 186 | 521 | 242 | 213 | 947 | **2230** |
| **No. of SUPPLIERS** | 22 | 41 | 42 | 42 | 20 | 12 | 16 | **52** |
| **No. of incumbent suppliers** | 5 | 5 | 5 | 5 | 3 | 3 | 2 | **5** |
| **No. of competitive suppliers** | 13 | 31 | 31 | 32 | 15 | 9 | 7 | **38** |
| **No. of producers** | 4 | 5 | 6 | 5 | 2 | 0 | 7 | **9** |

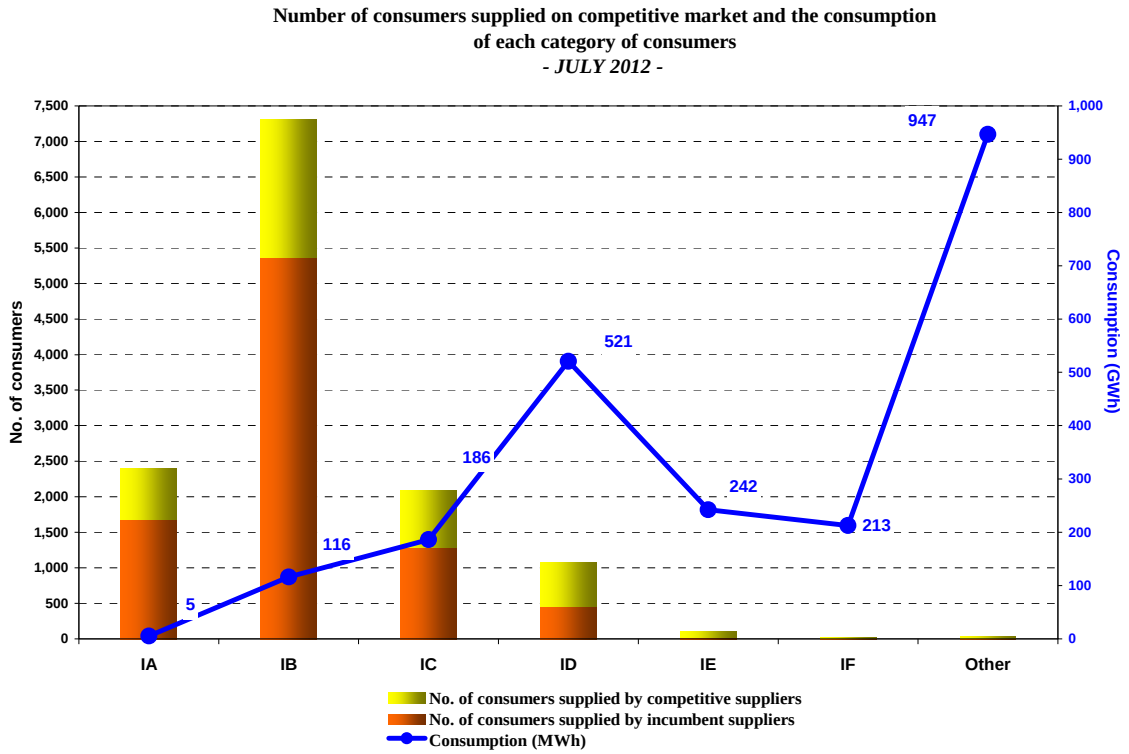
## *6. Evolution of consumers' number and of electricity delivered*

Number of consumers supplied on the competitive market is presented as total value from the beginning of the market opening process; for July 2012 this number is split into categories, according to the provisions of the European Council Directive no. 90/377/EC, with subsequent modifications. The table below presents the bands of consumption of each category of consumers:

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



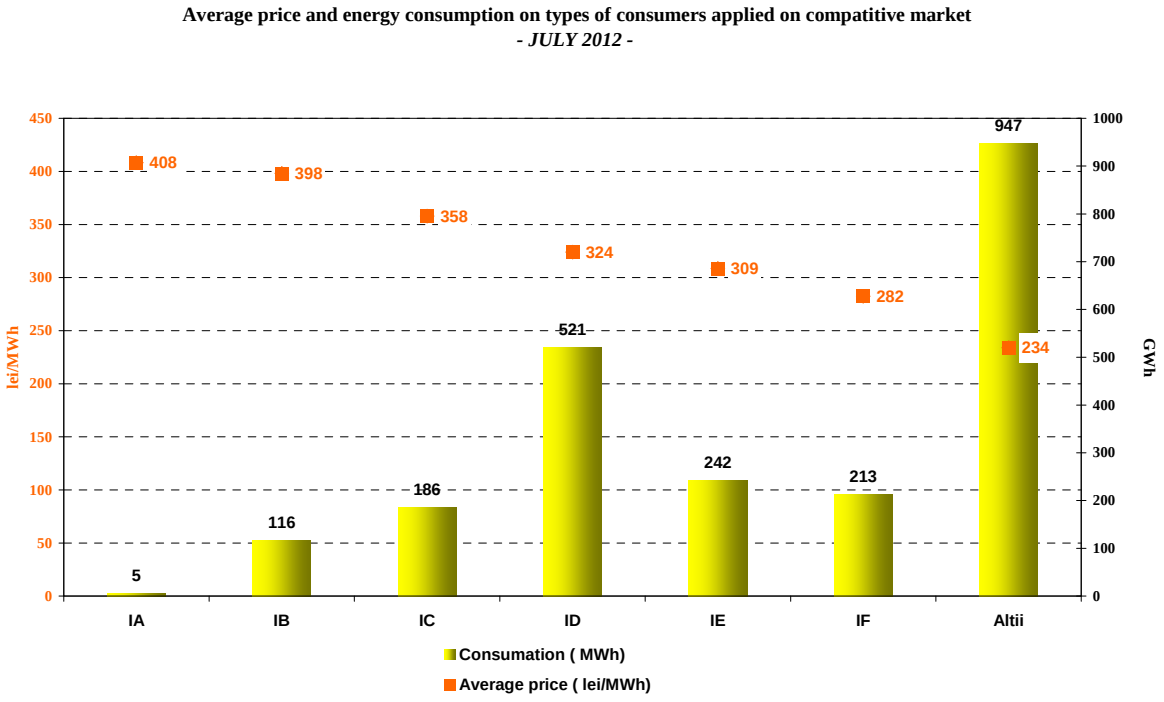

*Source: Monthly reports of the competitive suppliers – processed by MG*




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

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

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




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

*Note: The average selling price on each category was calculated as weighted average of prices applied by suppliers with quantities supplied according to the provisions of the European Directive. The average prices do not include VAT, excise or other taxes but include the supplied services (injection and extraction components of transmission, system services, distributi, market settlement, imbalance, BRP aggregated taxe, metering). Splitting consumers into categories was based on their annual consumption forecast, according to the provisions of above mentioned Directive.*

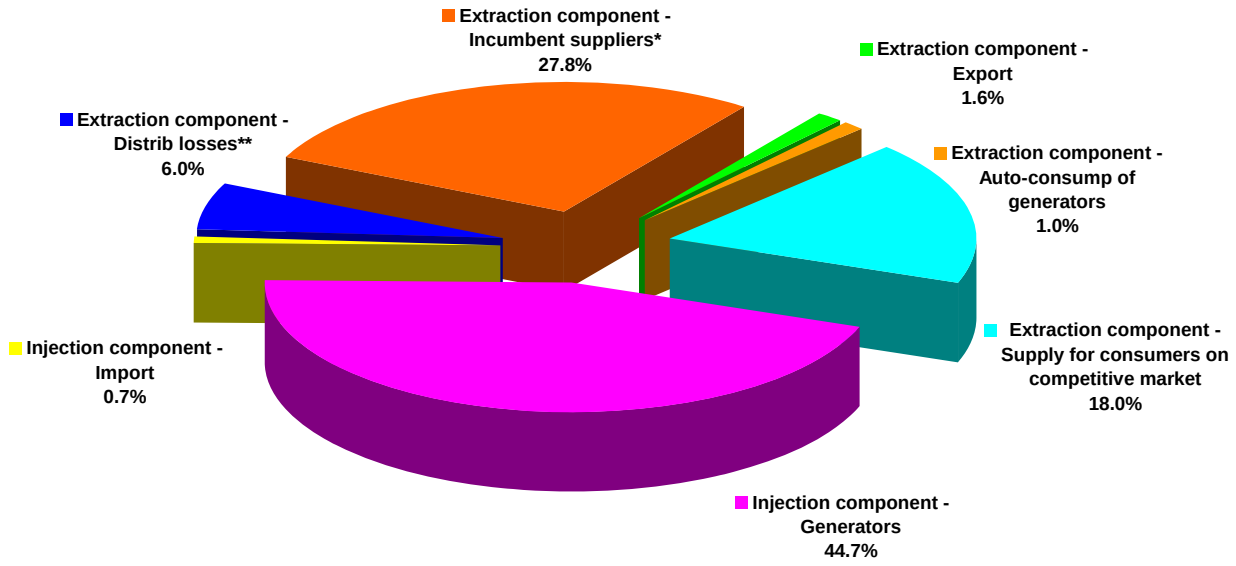
# IV. TRANSMISSION AND SYSTEM OPERATOR C.N. TRANSELECTRICA S.A.

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

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

The following graph presents the structure of CN Transelectrica SA revenues from performing the transmission services and reflects the structure of its clients benefiting from this type of service in July 2012.

**CN Transelectrica SA structure of revenues from transmission services**
***- July 2012 -***

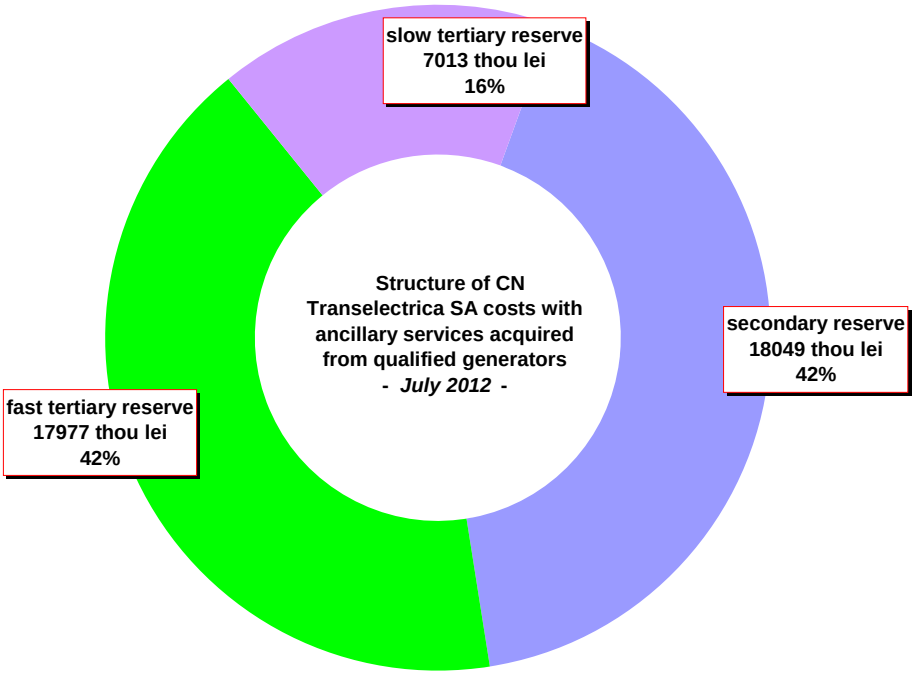



*** for electricity extracted from their own licence areas as well as from other areas**
****for electricity extracted by the 8 main distribution operators for covering distribution losses**

*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 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 July 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 July 2012. In order to cover these costs and it own operating costs. TSO applies a regulated tariff for system services.




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

## IV. EVOLUTION OF MARKET RULES IN JULY 2012

In July 2012, ANRE issued the following regulations with impact on the wholesale and retail electricity markets:

- ✓ Order of ANRE president no. 28 for assigning the suppliers of last resort in electricity;
- ✓ Decision of ANRE president no.1887 for modifying the provisions of Decision no. 3339/2011 for approving the regulated prices and quantities for Electrocentrale Paroseni;
- ✓ Decision of ANRE president no. 1889 for approving the quantities produced in high efficiency cogeneration which benefits from bonus scheme in June 2012.

For your information, the Agency for the Cooperation of Energy Regulators (ACER) has published the 2nd edition of *ACER Guidance on the application of Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency (REMIT).* As stipulated in the Preface by the Director on the 2nd edition, this document has updated the application of the market abuse definitions and has also „extended it to the scope of REMIT in relation to EU financial market legislation, the application of definitions of wholesale energy market, wholesale energy products and market participant, the application of the obligation to disclose inside information and the application and implementation of the prohibitions against market abuse".

The document may be found on the following the link:

http://www.acer.europa.eu/remit/Pages/default.aspx

ACER has also published its *Recommendations to the Commission as regards the records of wholesale energy market transactions including order to trade, according to Article 8 of Regulation (EU) No 1227/2011.* In addition, *Evaluation of Responses* paper on Recommendations to the European Commission as regards the records of wholesale energy market transactions according to REMIT has been published.

Both documents may be found on the following the link:

http://www.acer.europa.eu/remit/Pages/Recommendations-on-REMIT-Records-of-transactions.aspx

# V. 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 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
- EXAA – Energy Exchange Austria. www.exaa.at
- DAM – Day Ahead Market
- BM – Balancing Market
- ASM – Ancillary Services Market
- MCP – Market Clearing Price
- BRP – Balancing Responsible Party
- TG/TL – injection / extraction component of the transmission tariff
- CMBC – centralised market of bilateral contracts
- CMBC-CN – centralised market for partially stardardised bilateral contracts with continuous negociation
- NES – National Energy System
- WEM – wholesale electricity market
- REM – retail electricity market
- RCE – Romanian Commodities Exchange