# REPORT ON RESULTS OF MONITORING THE ROMANIAN ELECTRICITY MARKET JANUARY 2013

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

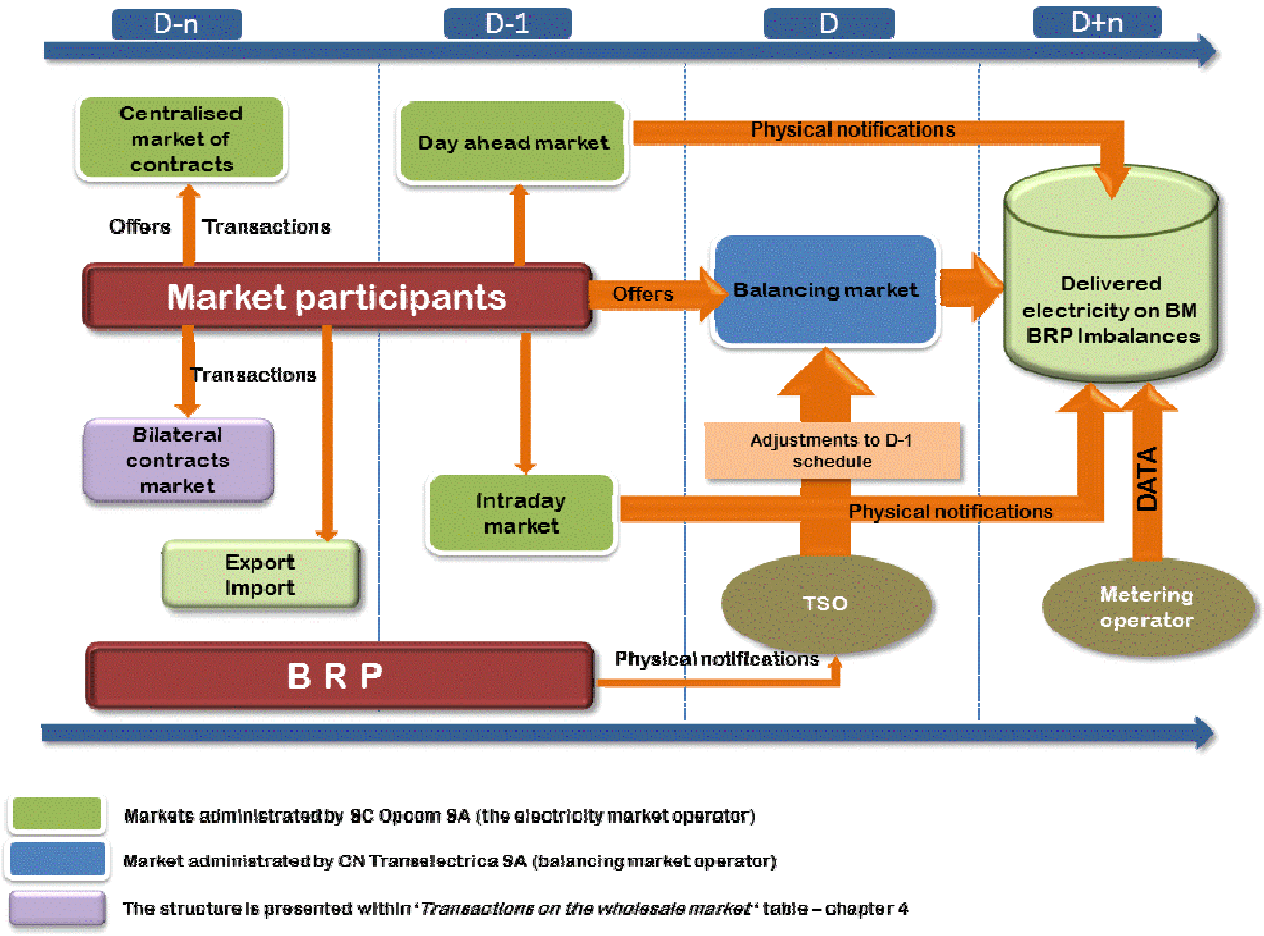
# TABLE OF CONTENTS

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

- GD 365/1998 – vertically integrated monopol – RENEL – was split 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%;
- December 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/December 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 – a new entity obtaines the generation license and enters on the electricity market - Complexul Energetic Oltenia SA, established in a dual system through merger of the former SNLO Tg. Jiu, Complexul Energetic Turceni, Complexul Energetic Rovinari and Complexul Energetic Craiova (GD 1024/2011);
- July 2012 – the Law of electricity and natural gas no. 123/2012 has enter into force;
- September 2012 – the application of the first stage from the timetable of phasing out of regulated electricity tariffs to final customers who choose not to exercise their eligibility rights, in accordance with the obligations assumed by the Romanian Government in relation with the IMF, World Bank and European Commission;
- October 2012 – the Law of organisation and operation of the Romanian Energy Regulatory Authority no. 160/2012 has enter into force;
- November 2012 - a new entity obtaines the generation license and enters on the electricity market - Complexul Energetic Hunedoara SA, established through merger of the former Electrocentrale Deva and Electrocentrale Paroseni (GD 1023/2011);
- December 2012 – launch of the organised electricity market for the large customers.

# 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 January 2013 are presented below split into categories:

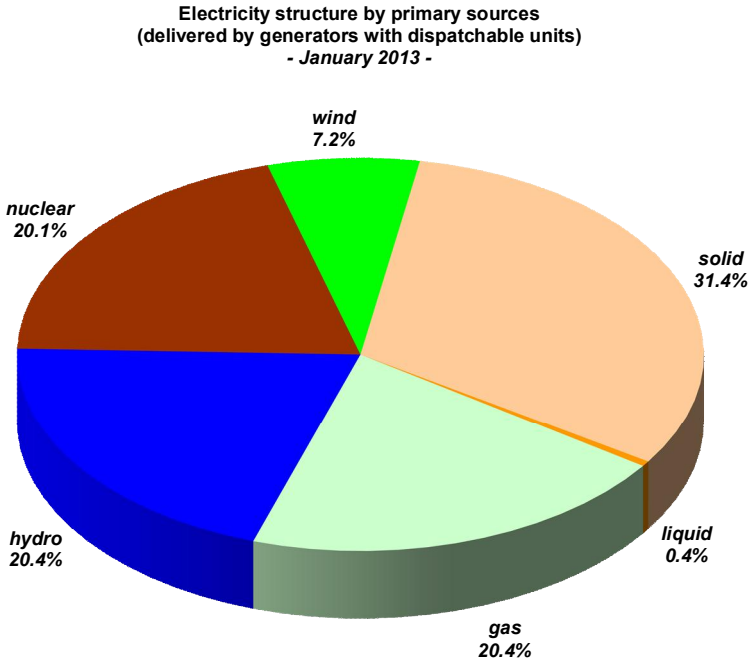
| No. | Name |
|---|---|
| ***A*** | ***Electricity generators operating dispatching units*** |
| 1 | SC Alpha Wind SRL |
| 2 | SC Blue Line Valea Nucarilor SRL |
| 3 | SC CAS Regenerabile SRL |
| 4 | SC CET Bacfu SA |
| 5 | SC CET Govora SA |
| 6 | SC CET Oradea SA |
| 7 | SC Cernavoda Power SRL |
| 8 | SC Dalkia Termo Iasi SRL |
| 9 | SC Dalkia Termo Prahova SRL |
| 10 | SC EDP Renewables Romania SRL |
| 11 | SC Electrocentrale Bucureti SA |
| 12 | SC Electrocentrale Galaş SA |
| 13 | SC Enel Green SRL |
| 14 | SC Ovidiu Development SRL |
| 15 | SC Romconstruct Top SRL |
| 16 | SC Termica SA Suceava |
| 17 | SC Termoelectrica SA |
| 18 | SC Tomis Team SRL |
| ***A1*** | ***Electricity generators operating dispatching units and acting also as suppliers on the competitive market*** |
| 19 | RAAN |
| 20 | SN Nuclearelectrica SA |
| 21 | SC OMV Petrom SA |
| 24 | SC CE Hunedoara SA |
| 22 | SC CE Oltenia SA |
| 23 | SC CET Arad SA |
| 25 | SC Hidroelectrica SA |
| 26 | SC Lukoil Energy & Gaz Romania SRL |
| 27 | SC OMV Petrom Power Park SRL |
| ***B*** | ***Transmission System Operator*** |
| 1 | CN TRANSELECTRICA SA |
| ***C*** | ***DAM, Bilateral Contracts Market, Intra-Day, 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*** | ***Suppliers of last resort*** |
| 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 Aderro G.P. Energy SRL |
| 2 | Alpiq Energy SE |
| 3 | SC Bitt-Reen SRL |
| 4 | CEZ as |
| 5 | SC CEZ Trade 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 | SC Energy Market Consulting SRL |
| 12 | SC Entrex Services SRL |
| 13 | E.ON Global Commodities SE |
| 14 | SC Ezpada SRL |
| 15 | Ezpada SRO |
| 16 | Freepoint Commodities Europe Ltd |
| 17 | GEN-I trgovanje in prodaja elektricne energije |
| 18 | GEN-I Bukarest Electricity Trading and Sales |
| 19 | SC Lord Energy SRL |
| 20 | SC Getica 98 COM SRL |
| 21 | SC Iberdola Romania SRL |
| 22 | OMV Trading GmbH |
| 23 | RWE Supply Trading GmbH |
| 24 | Repower Trading Ceska Republica |
| 25 | SC Repower Vanzari Romania SRL |
| 26 | SC Rudnap SRL |
| 27 | Statkraft Markets GmbH |
| 28 | SC Statkraft Romania SRL |
| 29 | SC Verbund Trading România SRL |

| No. | Name |
|---|---|
| ***G*** | ***Electricity Suppliers*** |
| 1 | SC Alpiq RomIndustries SRL |
| 2 | SC Alro SA |
| 3 | SC Arcelormittal Galati SA |
| 4 | SC Arelco Power SRL |
| 5 | SC Axpo Energy Romania SRL |
| 6 | SC Biol Energy SRL |
| 7 | SC C-Gaz & Energy Distributie SRL |
| 8 | SC EFE Energy SRL |
| 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 Fidelis Energy SRL |
| 20 | SC GDF SUEZ Energy Romania SA |
| 21 | SC General Com Invest SRL |
| 22 | SC ICCO Energ SRL |
| 23 | ILIOTOMI Impex GRP A |
| 24 | SC ICPE Electrocond Technologies SA |
| 25 | SC Luxten LC SA |
| 26 | Magyar Aramszolgaltato KFT |
| 27 | SC Monsson Energy Trading SRL |
| 28 | OET Obedineni Energini Targovtsi |
| 29 | SC P.C. Management & Consulting SRL |
| 30 | SC Renovation Trading SRL |
| 31 | SC Repower Furnizare Romania SRL |
| 32 | SC Romenergo SA |
| 33 | SC Romenergy Industry SRL |
| 34 | SC TEN Transilvania Energie SRL |
| 35 | SC Tinmar Ind SA |
| 36 | SC Transformer Supply SRL |
| 37 | 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.transelectrica.ro.

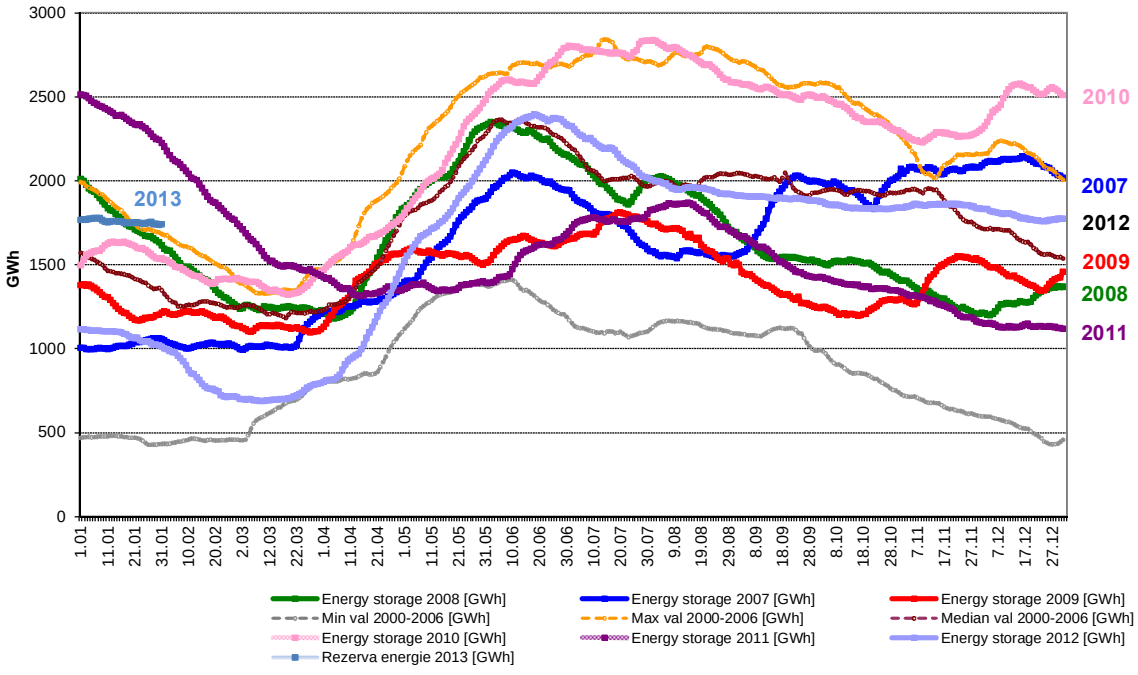
## 3. *Generation structure of National Energy System on resources types*




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

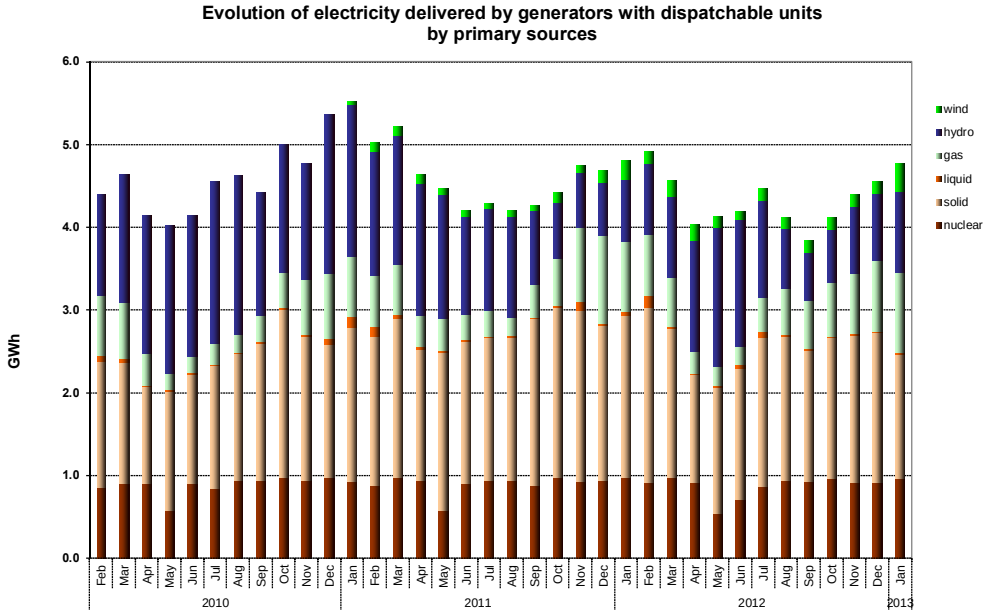
The electricity generated from hydro resources and the energy stored in the main water reservoirs is directly correlated. The following graph presents the evolution of daily amounts of energy storage during 2013 compared to the values of the last 6 years and compared to minimum, maximum and median values 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 January 2013, compared to data for similar period of 2012:

| No. | INDICATOR | MU | January 2012 | January 2013 | % |
|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5=4/3*100 |
| 1 | Generated electricity | TWh | 5.28 | 5.21 | 98.67 |
| 2 | Delivered electricity | TWh | 4.80 | 4.77 | 99.38 |
| 3 | Import | TWh | 0.16 | 0.08 | 50.00 |
| 4 | Export | TWh | 0.11 | 0.09 | 81.82 |
| 5 | Internal consumption | TWh | 4.85 | 4.76 | 98.14 |
| 6 | Consumption of household customers on the regulated market | TWh | 1.08 | 1.12 | 103.70 |
| 7 | Consumption of non-households customers | TWh | 2.87 | 2.82 | 98.26 |
| *7.1* | *on the regulated market* | TWh | *0.79* | *0.82* | *103.80* |
| *7.2* | *on the competitive market* | TWh | *2.08* | *2.00* | *96.15* |
| 8 | Transmissionï Injection component | TWh | 4.92 | 4.87 | 98.98 |
| 9 | Transmissionï Extraction component | TWh | 4.95 | 4.94 | 99.80 |
| 10 | Actual transmission grid losses | TWh | 0.09 | 0.10 | 111.11 |
| 11 | Heat generated for delivery | Tcal | 2506.14 | 2483.85 | 99.11 |
| 12 | Heat in co-generation | Tcal | 2247.75 | 1872.37 | 83.30 |

*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 customers 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 between generators and between suppliers, 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).

When entering into force, the new Law 123/2012 on Electricity and Natural Gas has set as a general principle that energy competitive market and electricity transactions should take place in a transparent, public, centralized and non-discriminatory way. Therefore, all the new transactions have to be the result of the participation on the centralized markets administrated by Opcom, the only owner of a license issued for the electricity market operation in Romania. In this respect, efforts have been made by all the responsible factors for covering the diversity of trade products requested by the market participants. Currently, two new centralized markets are to be implemented at Opcom level as soon as possible ï the organize framework for contracting energy for large end customers and the centralized market trading with continuous double negotiation of bilateral contracts for electricity (developed based on a OTC platform model).

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 January 2013 compared to the month before and January 2012.

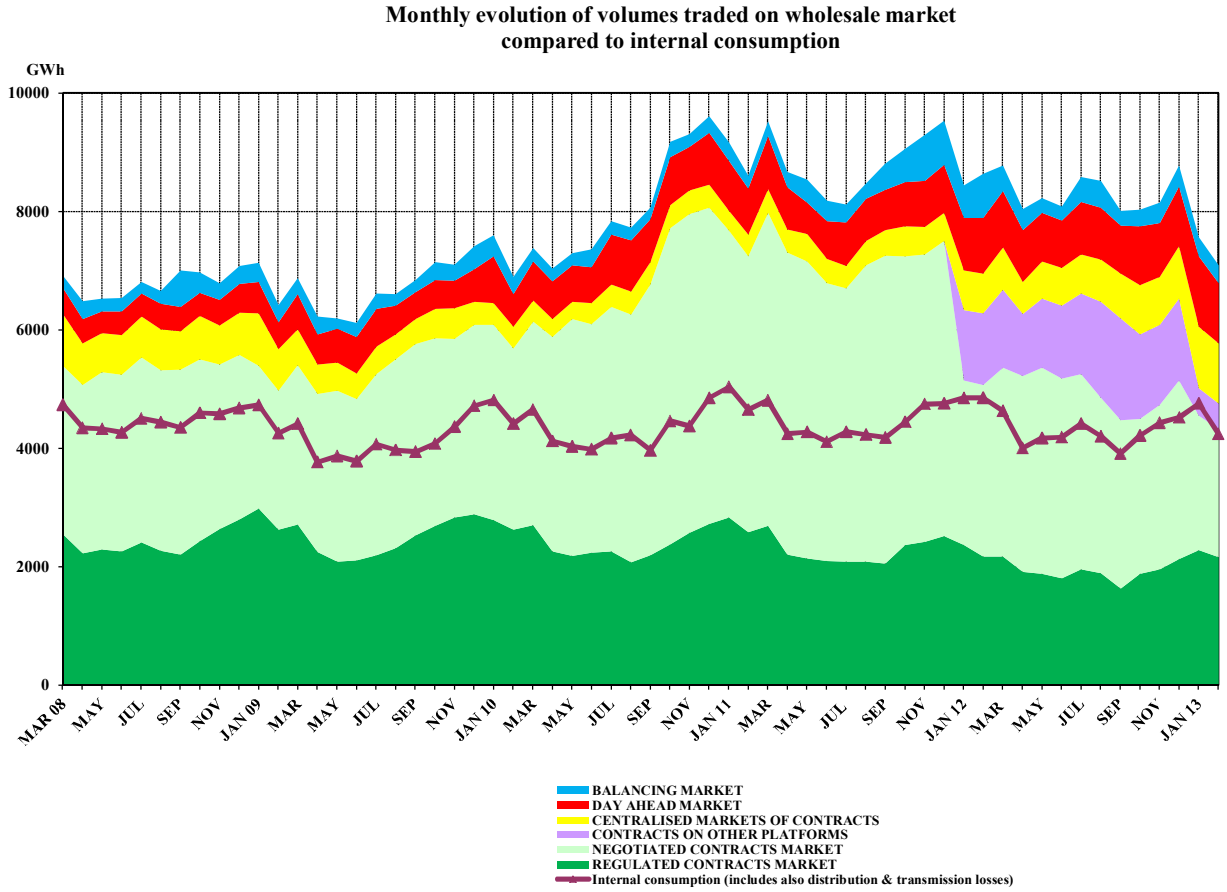
The aggregated volumes and the average prices for December 2012 and January 2013 on OTC contracts and on negotiated contracts are reported by the market participants at their own risk and they should reflect only the ongoing contracts which had been concluded before Law no. 123/2012 entered into force.

| TRANSACTIONS ON THE WHOLESALE MARKET | December 2012 | January 2013 | January 2012 |
|---|---|---|---|
| **1. BILATERAL CONTRACTS' MARKET** | | | |
| traded volume (GWh) | **6529** | **4238** | **6333** |
| % from internal consumption (%) | 188.83 | 194.14 | 193.50 |
| average price (lei/MWh) | 144.5 | 89.1 | 130.6 |
| **1.1. Sales on regulated contracts** | | | |
| traded volume (GWh) | **2125** | **2272** | **2368** |
| % from internal consumption (%) | 150.68 | 186.42 | 164.66 |
| average price (lei/MWh) | 47.0 | 47.8 | 48.8 |
| **1.2. Sales on contracts concluded on other platforms** | | | |
| traded volume (GWh) | **1392** | **469** | 1188 |
| % from internal consumption (%) | 216.74 | 222.90 | 215.70 |
| average price (lei/MWh) | 30.8 | 9.9 | 24.5 |
| **1.3. Sales on negotiated contracts*** | | | |
| traded volume (GWh) | **3012** | **1497** | 2777 |
| % from internal consumption (%) | 202.85 | 196.87 | 208.59 |
| average price (lei/MWh) | 66.7 | 31.5 | 57.3 |
| **2. EXPORT**** | | | |
| traded volume (GWh) | **129** | **95** | **112** |
| % from internal consumption (%) | 372.93 | 194.82 | 228,99 |
| average price (lei/MWh) | 2.9 | 2,0 | 2,3 |
| **3. CENTRALISED MARKETS OF CONTRACTS** | | | |
| delivered volume (GWh) | **886** | **1032** | **669** |
| % from internal consumption (%) | 220.37 | 233,73 | 215.65 |
| average price (lei/MWh) | 19.6 | 21.7 | 13.8 |
| **4. DAY AHEAD MARKET** | | | |
| traded volume (GWh) | **1002** | **1193** | **889** |
| % from internal consumption (%) | 183.62 | 181.31 | 239.64 |
| average price (lei/MWh) | 22.2 | 25.1 | 18.3 |
| **5. INTRADAY MARKET***** | | | |
| traded volume (GWh) | **0.06** | - | **0.59** |
| % from internal consumption (%) | 235.00 | - | 305.40 |
| average price (lei/MWh) | 0.001 | - | 0.012 |
| **6. BALANCING MARKET** | | | |
| traded volume (GWh) | **357** | **323** | **552** |
| % from internal consumption (%) | 7.9 | 6.8 | 11.4 |
| upward volume (GWh) | **221** | **195** | **435** |
| average negative imbalance price(lei/MWh) | 278.15 | 263.52 | 331,08 |
| downward volume (GWh) | **136** | **128** | **117** |
| average positive imbalance price (lei/MWh ) | 41.08 | 46.32 | 49.32 |
| ***INTERNAL CONSUMPTION (includes distribution and transmission losses) (GWh)*** | **4518** | **4756** | **4849** |

| | | |
|---|---|---|
| *Note:* | * | Supply contracts to customers 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 participantsô 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.

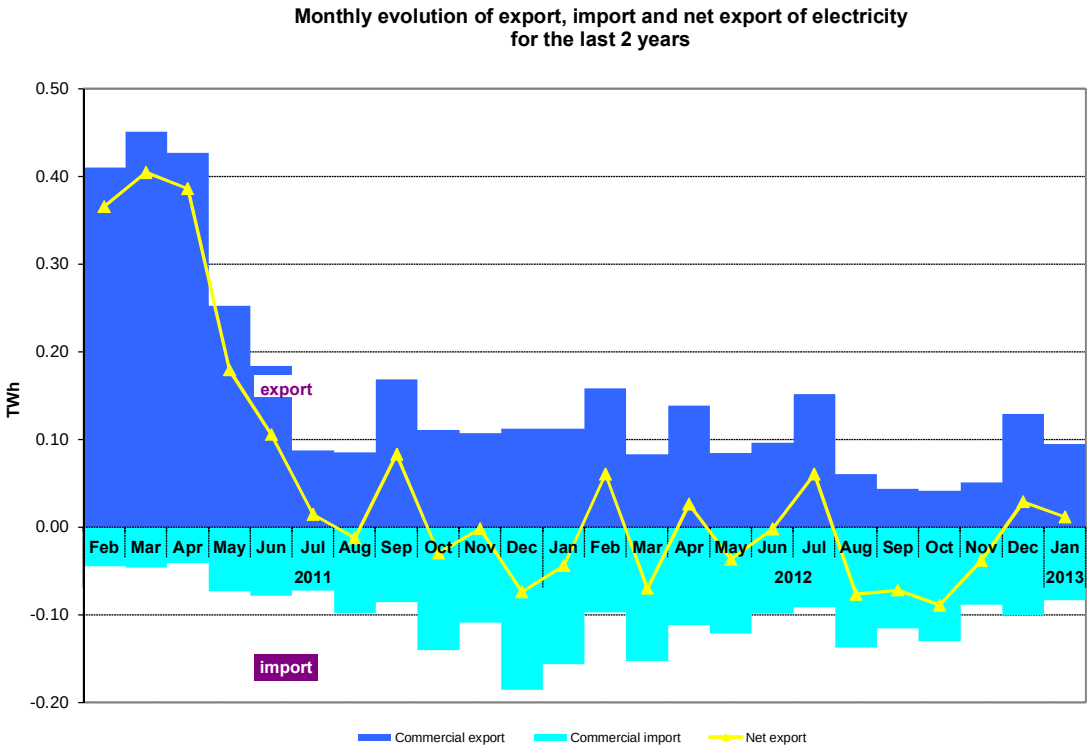
The following graph presents the evolution of the relation between the volumes sold on each market and the estimated internal consumption, during the last 5 years.




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

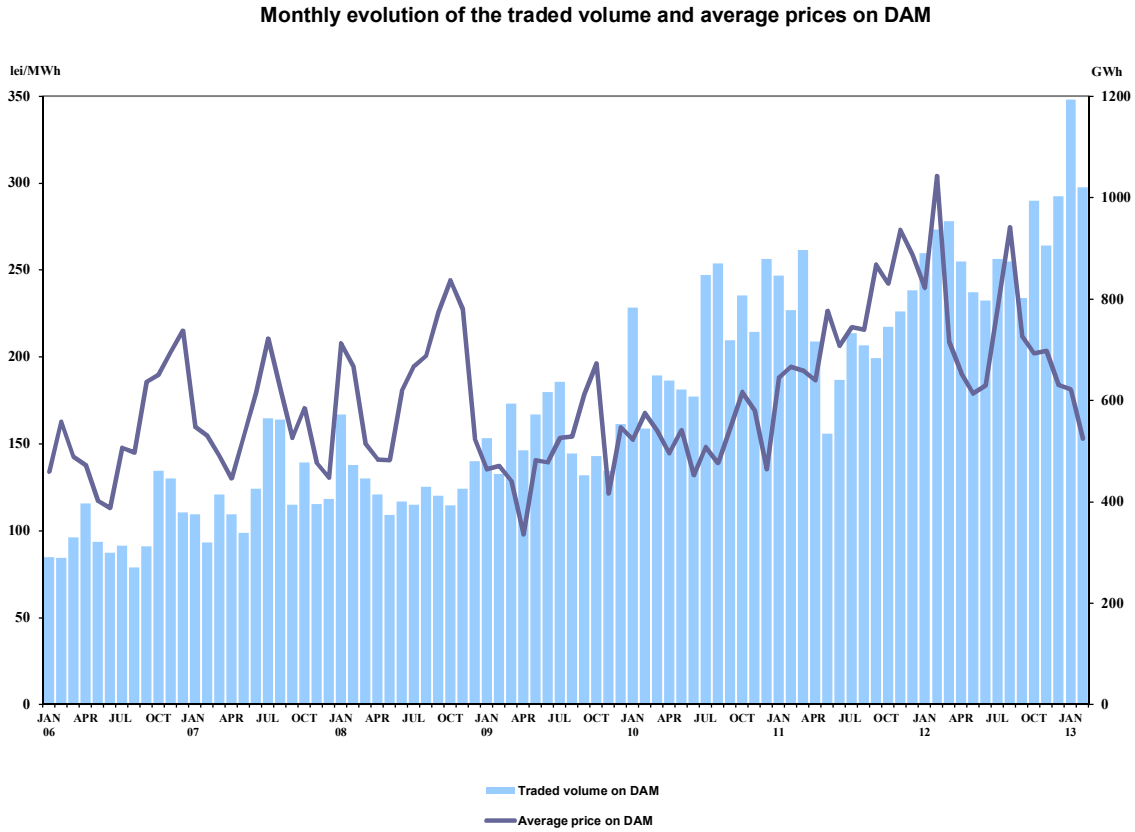
*Note: In the above graph, the volumes traded on negociated contracts' market do not include the export trades*

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.



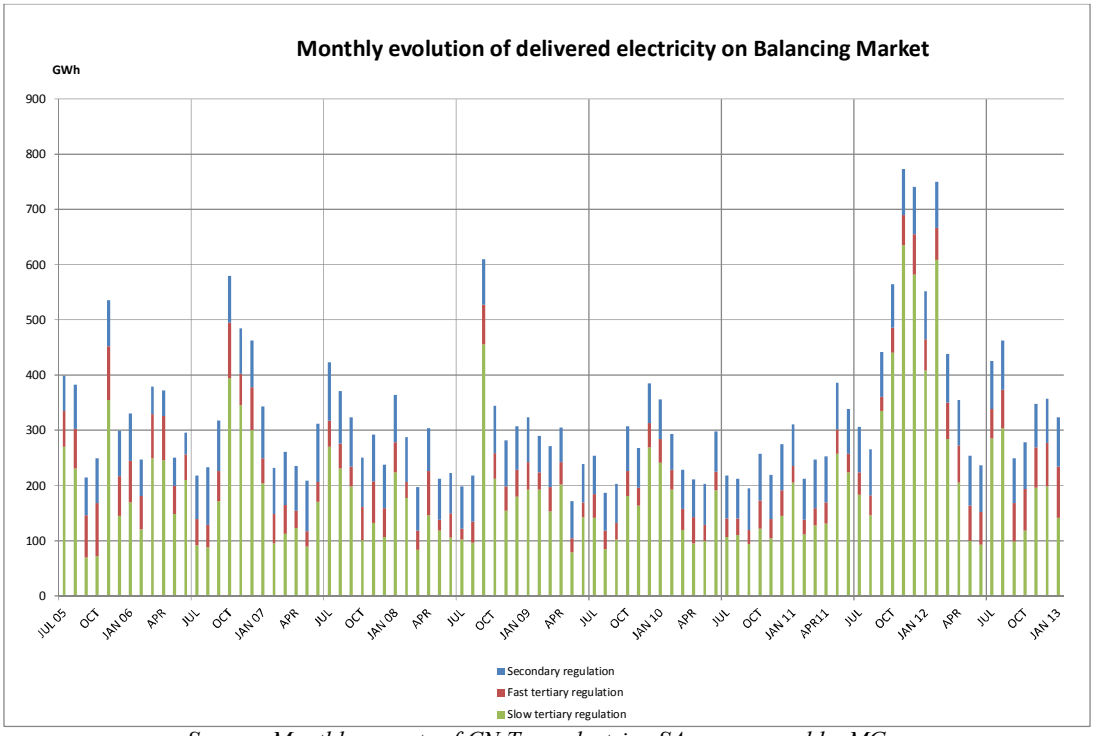

*Source: Monthly reports of SC Opcom SA and CN Transelectrica SA – processed by MG*

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 January 2013 presented in the following table:

| January 2013 | Dispach order (GWh) | Delivered electricity (GWh) | Deviation (%) |
|---|---|---|---|
| **Secondary regulation** | **89** | **89** | |
| *upward* | 42 | 42 | |
| *downward* | 47 | 47 | |
| **Fast tertiary regulation** | **101** | **93** | **8** |
| *upward* | 53 | 51 | 5 |
| *downward* | 48 | 42 | 11 |
| **Slow tertiary regulation** | **149** | **141** | **5** |
| *upward* | 108 | 102 | 5 |
| *downward* | 41 | 39 | 5 |
| **TOTAL** | **339** | **323** | |
| *upward* | 203 | 195 | |
| *downward* | 135 | 128 | |
| **INTERNAL CONSUMPTION** | | **4756** | |
| ***% share of traded volumes from internal consumption*** | | ***6.8%*** | |

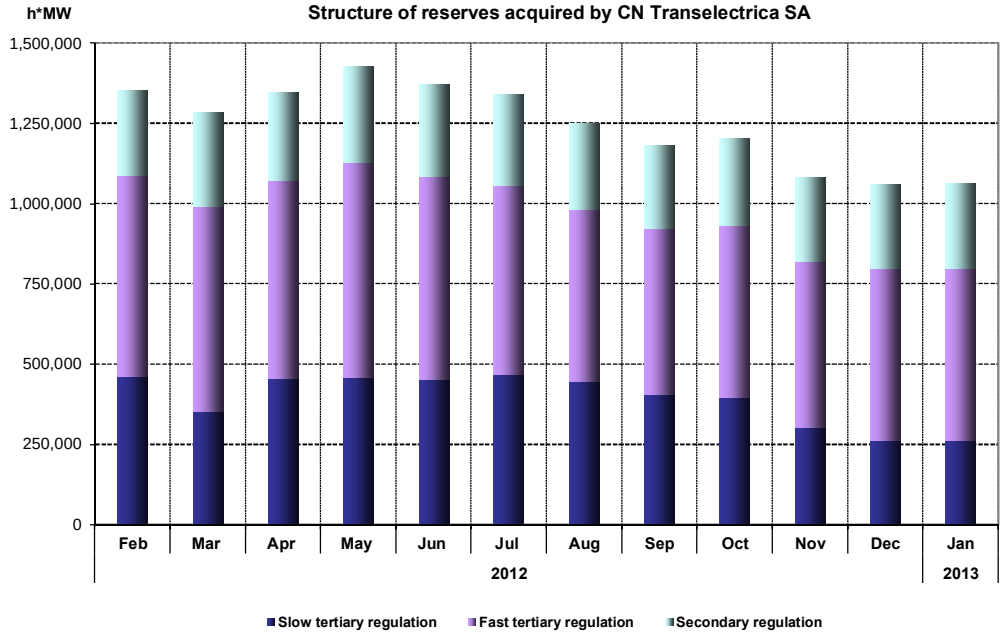
*Source: Monthly reports of CN Transelectrica SA – processed by MG*

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



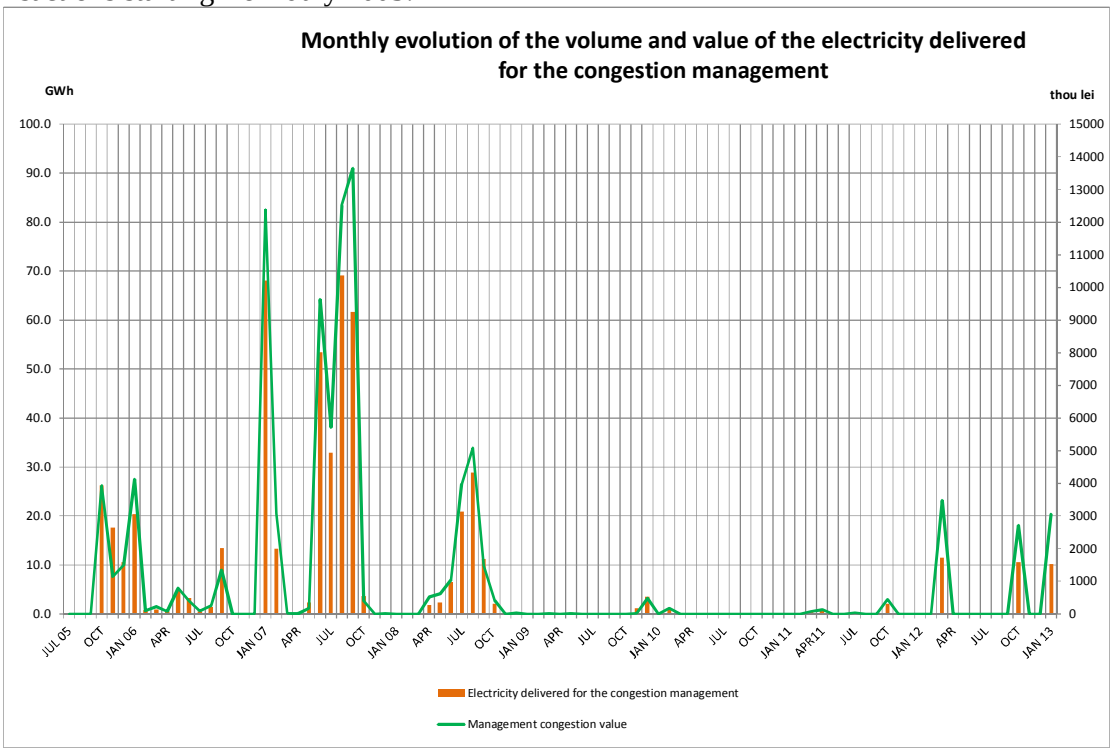

*Source: Monthly reports of CN Transelectrica SA – processed by MG*

For comparison, the following graph presents the evolution of reserves (ancillary services, i.e. obligations of generators to maintain their contracted capacities available for dispatching/offering on BM) acquired/paid by CN Transelectrica SA during the last 12 months:




*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 January 2013 compared to previous month and January 2012 was the following:

**- GWh -**

| Transaction type | December 2012 | January 2013 | January 2012 |
|---|---|---|---|
| **0** | **1** | **2** | **3** |
| Regulated to incumbents, thermal generators | 1023.86 | 844.99 | 1005.03 |
| Regulated to incumbents, hydro generator | 227.55 | 378.05 | 114.97 |
| Regulated to incumbents, nuclear generator | 382.21 | 474.40 | 524.73 |
| Regulated for distribution losses. thermal generators | 479.29 | 575.00 | 383.22 |
| Regulated for distribution losses, hydro generator | 167.47 | 0.00 | 60.62 |
| Regulated for distribution losses, nuclear generator | 190.06 | 0.00 | 190.26 |
| Regulated for transmission losses, thermal generator | 0.00 | 0.00 | 76.99 |
| Regulated to other generators | 18.60 | 0.00 | 11.94 |
| Negotiated to other generators | 0.00 | 0.00 | 2.85 |
| Negotiated to suppliers | 636.85 | 595.21 | 754.45 |
| Contracts concluded on centralized markets (CMBC, CMBC-NC) | 832.30 | 854.18 | 668.59 |
| Regulated and competitive supply to customers | 309.31 | 338.59 | 331.11* |
| Export | 0.00 | 0.00 | 32.18 |
| DAM | 528.10 | 788.64 | 451.66 |
| **Total** | **4795.60** | **4849.05** | **4608.59** |

*Source: Monthly reports of generators – processed by MG*
**corrections due to changes within a number of generators' reports*

### *Suppliers*

In January 2013, 71 companies having as main activity the supply of electricity concluded transactions on the electricity market; from these, 29 suppliers traded electricity exclusively on the wholesale market and 42 suppliers on both retail and wholesale markets (in this category are also included the 5 suppliers of last resort).

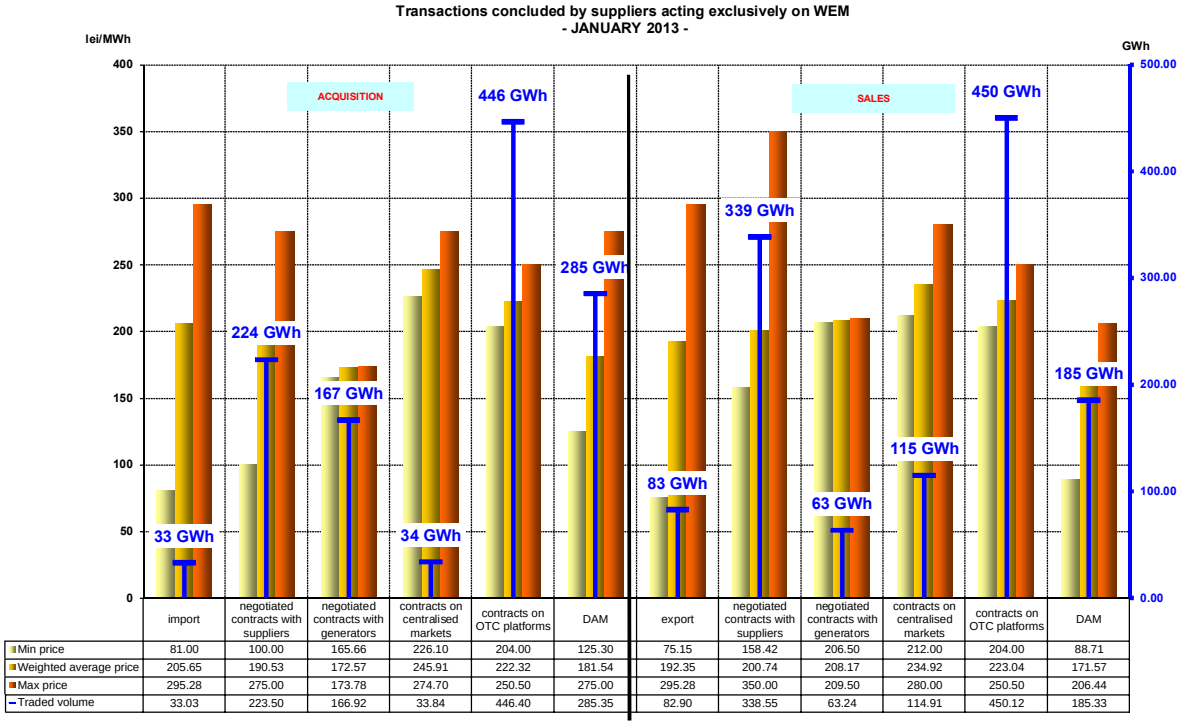
Suppliers acting exclusively on WEM

The following table shows the activity for January 2013 compared to January 2012 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 | January 2012 | January 2013 |
|---|---|---|
| **Acquisitions** | | |
| Import | 73.18 | 33.03 |
| Negotiated contracts with suppliers | 829.24 | 223.50 |
| Negotiated contracts with generators | 151.14 | 166.92 |
| Contracts concluded on centralized markets | 95.98 | 33.84 |
| Contracts on OTC platforms | 1132.32 | 446.40 |
| DAM | 82.51 | 285.35 |
| **Sales** | | |
| Export | 68.42 | 82.90 |
| Negotiated contracts with suppliers | 862.51 | 338.55 |
| Negotiated contracts with generators | 90.68 | 63.24 |
| Contracts concluded on centralized markets | 0.00 | 114.91 |
| Contracts on OTC platforms | 1154.36 | 450.12 |
| DAM | 228.67 | 185.33 |

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 January 2013:




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

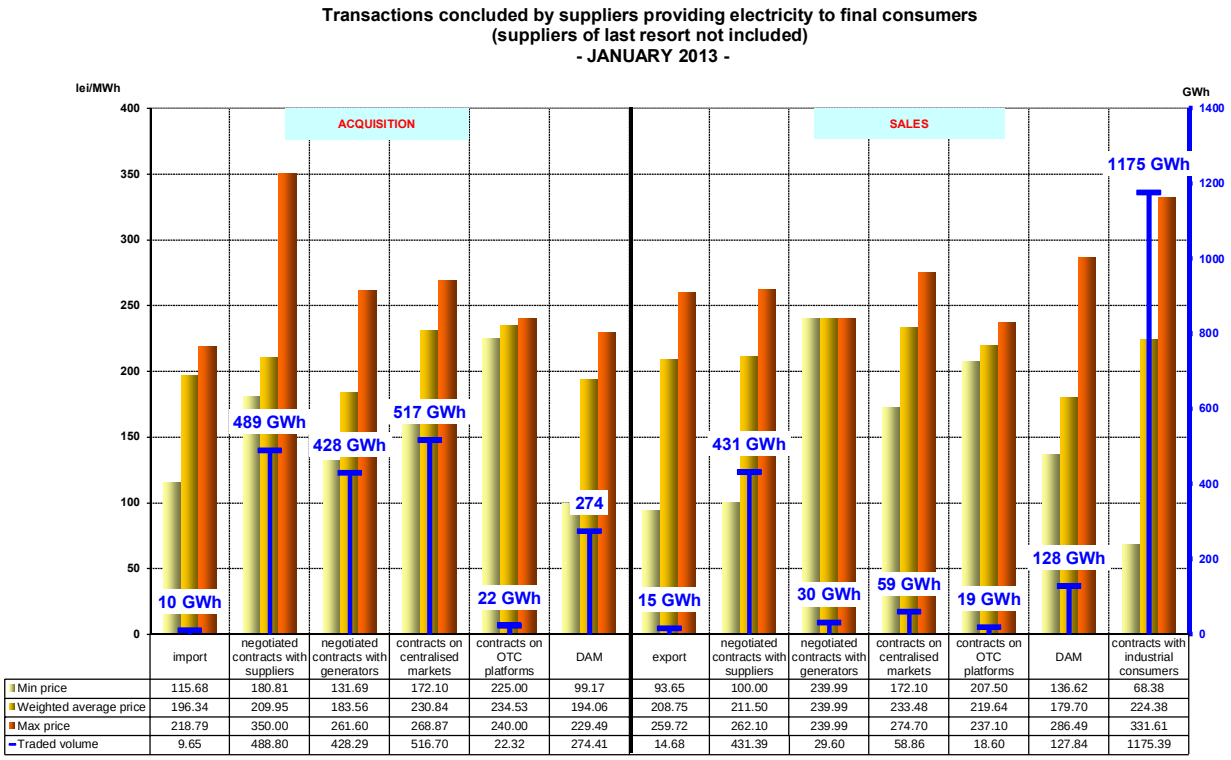
Active suppliers on REM (the suppliers of last resort are not included)

The following table presents aggregated information on transactions volume and structure for suppliers providing electricity to final customers, on the competitive market, for January 2013 and January 2012.

**- GWh -**

| **Transactions' structure of suppliers providing electricity to final customers (the incumbent suppliers are not included)** | **January 2012** | **January 2013** |
|---|---|---|
| **Acquisitions** | | |
| Import | 32.06 | 9.65 |
| Negotiated contracts with suppliers | 714.44 | 488.80 |
| Negotiated contracts with generators | 603.31 | 428.29 |
| Contracts concluded on centralized markets | 466.97 | 516.70 |
| Contracts on OTC platforms | 55.80 | 22.32 |
| DAM | 254.10 | 274.41 |
| **Sales** | | |
| Export | 11.78 | 14.68 |
| Negotiated contracts with suppliers | 777.60 | 431.39 |
| Negotiated contracts with generators | 57.92 | 29.60 |
| Contracts concluded on centralized markets | 0 | 58.86 |
| Contracts on OTC platforms | 33.76 | 18.60 |
| DAM | 184.72 | 127.84 |
| Contracts with industrial customers | 1222.81 | 1175.39 |

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 customers in January 2013:




| | import | negotiated contracts with suppliers | negotiated contracts with generators | contracts on centralised markets | contracts on OTC platforms | DAM | export | negotiated contracts with suppliers | negotiated contracts with generators | contracts on centralised markets | contracts on OTC platforms | DAM | contracts with industrial consumers |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Min price | 115.68 | 180.81 | 131.69 | 172.10 | 225.00 | 99.17 | 93.65 | 100.00 | 239.99 | 172.10 | 207.50 | 136.62 | 68.38 |
| Weighted average price | 196.34 | 209.95 | 183.56 | 230.84 | 234.53 | 194.06 | 208.75 | 211.50 | 239.99 | 233.48 | 219.64 | 179.70 | 224.38 |
| Max price | 218.79 | 350.00 | 261.60 | 268.87 | 240.00 | 229.49 | 259.72 | 262.10 | 239.99 | 274.70 | 237.10 | 286.49 | 331.61 |
| Traded volume | 9.65 | 488.80 | 428.29 | 516.70 | 22.32 | 274.41 | 14.68 | 431.39 | 29.60 | 58.86 | 18.60 | 127.84 | 1175.39 |

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

Suppliers of last resort

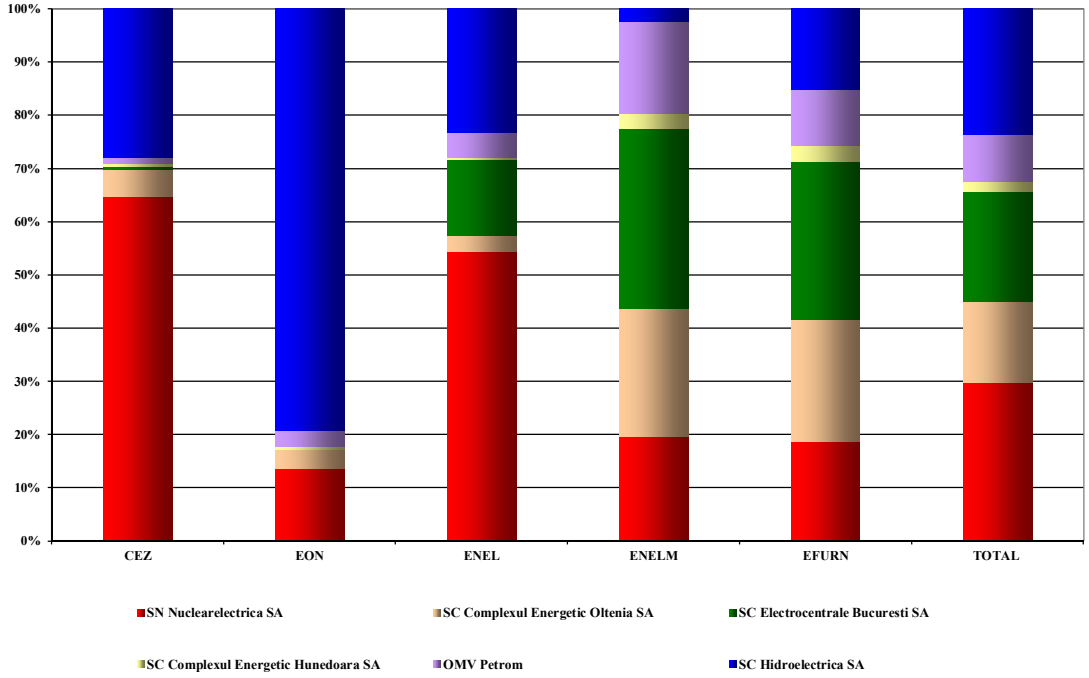
Electricity acquisition structure of incumbent suppliers (before the delivery day), for supplying the regulated market customers, is presented in the table below, for January 2013 compared to the situation of January 2012:

**- GWh -**

| **Acquisition structure of incumbent suppliers for regulated REM component** | **January 2012** | **January 2013** |
|---|---|---|
| Regulated contracts with generators | 1699.07 | 1715.89 |
| Negociated contracts | 6.69 | 40.74 |
| Contracts concluded on centralized markets | 12.01 | 121.59 |
| Intraday | 0.36 | 0.00 |
| DAM | 117.89 | 166.99 |

The structure of the electricity purchased by the incumbent suppliers from the main generators on regulated contracts is presented in the following graph for January 2013:

**Electricity aquisition from main generators, on regulated contracts, of the suppliers of last resort for delivering electricity to final consumers on regulated market**
***JANUARY 2013***




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

The suppliers of last resort apply a new tariff for the active power to the non-household customers who do not exercise their eligibility rights called the ñCompetitive Market Componentò (CMC).

Starting with 1st September 2012, the suppliers of last resort display this tariff component separately in the bills of non-household customers who do not exercise their eligibility rights, which was proposed by each supplier of last resort and finally approved by ANRE, in accordance with the provisions of ANRE Order no. 30/2012 for approving the Methodology to set up prices and tariffs to the final customers who chose not to exercise their eligibility rights.

The following table presents the electricity acquisition structure of suppliers of last resort for CMC (before the delivery day) for January 2013.

| **Acquisition structure of incumbent suppliers for CMC** | **Quantity [GWh]** | **Average price [lei/MWh]** |
|---|---|---|
| Negotiated contracts | 40.74 | 243.19 |
| Contracts concluded on centralized markets | 121.13 | 241.13 |
| Contracts IntraDay | 0.00 | 0.00 |
| DAM | 65.17 | 209.38 |
| **TOTAL** | **225.71** | **232.92** |

Similar to the situation presented for the regulated REM, the table below presents the structure of incumbent suppliersô transactions (before the delivery day), corresponding to the competitive REM (energy supplied at negotiated prices to the customers who renounced to regulated tariffs) for January 2013 compared to January 2012:

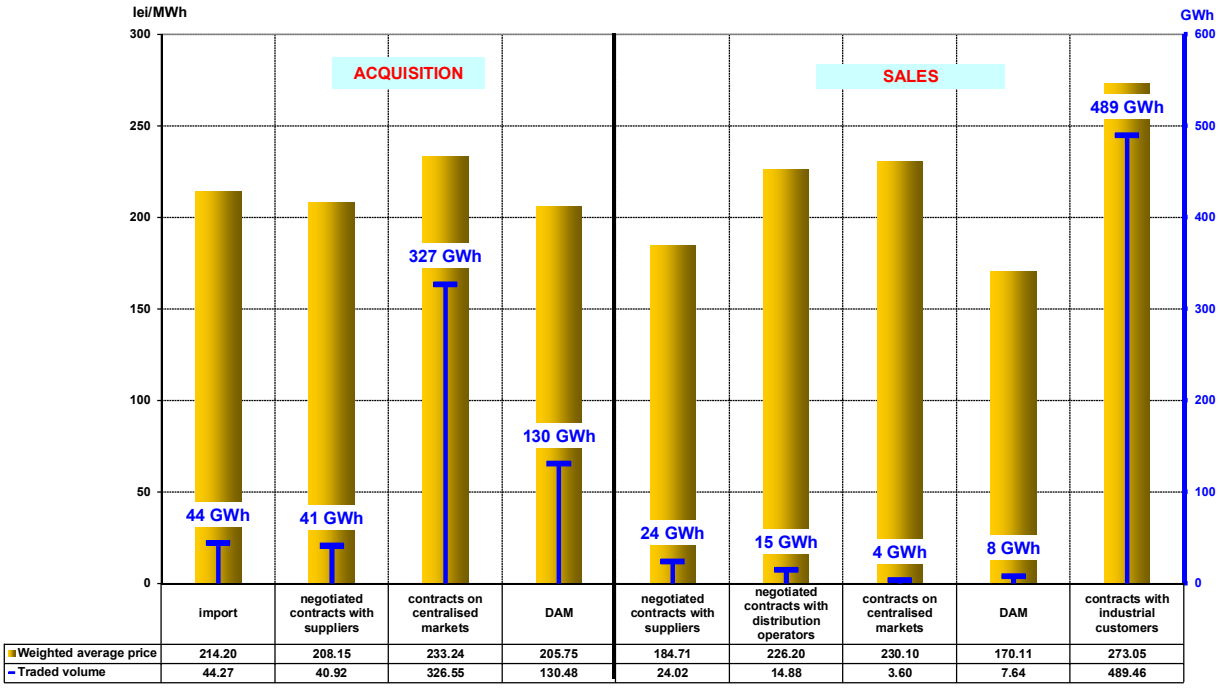
**- GWh -**

| Transactions' structure of incumbent suppliers for competitive REM component | January 2012 | January 2013 |
|---|---|---|
| **Acquisitions** | | |
| Import | 50.98 | 44.27 |
| Negotiated contracts with suppliers | 320.95 | 40.92 |
| Contracts concluded on centralized markets | 93.64 | 326.55 |
| DAM | 272.81 | 130.48 |
| **Sales** | | |
| Negotiated contracts with suppliers | 231.23 | 24.02 |
| Negotiated contracts with distributors | 0.00 | 14.88* |
| Contracts concluded on centralized markets | 0.00 | 3.60 |
| DAM | 5.97 | 7.64 |
| Final customers | 524.09 | 489.46 |

*There exist some report inconsistencies as well as unclarities regarding the type of transaction concluded between a supplier of last resort and the distribution operator between the same group of companies; further clarifications have been required

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 January 2013:

**Transaction concluded by suppliers of last resort providing electricty on the competitive component of REM**
***- JANUARY 2013 -***




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

***Main distribution operators***

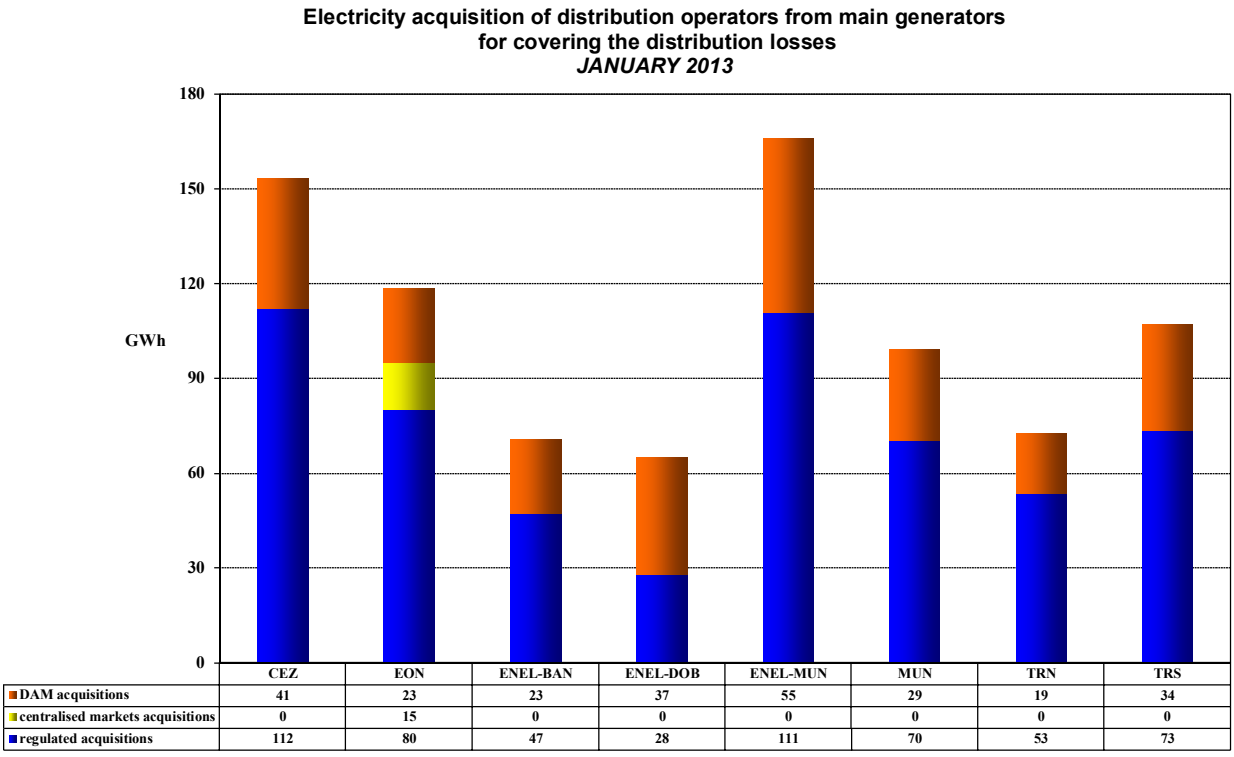
The following table shows the electricity acquisition structure of main distribution operators (before the delivery day), for covering the distribution network losses, for January 2013 compared to January 2012:

**- GWh -**

| Acquisition structure | January 2012 | January 2013 |
|---|---|---|
| Regulated contracts with generators | 640.78 | 575.00 |
| Negotiated contracts with suppliers | 0.00 | 0.00 |
| Contracts concluded on centralized markets | 0.00 | 14.88* |
| DAM | 184.23 | 261.67 |

*There exist some report inconsistencies as well as unclarities regarding the type of transaction concluded between a supplier of last resort and the distribution operator between the same group of companies; further clarifications have been required

The electricity acquisition structure of the main distribution operators in January 2013, is presented below:




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

Regarding the quantities determined to be sold on the electricity regulated market to the distribution operators in 2013, ANRE specifies the followings:

- with address 57256/2012, ANRE has communicated to the distribution operators that, according to art. 45 (3) from Energy Law no. 123/2012, the electricity acquisition for covering

the grid losses has to be made only by transparent and non-discriminatory procedures, in respect with the competitive mechanisms in force, already approved by ANRE;

- with address 58497/2012, ANRE has communicated OPCOM and the distribution operators the set of necessary measures for ensuring the trading environment for the distribution operators on the centralised markets of bilateral contracts organised by OPCOM;

Nevertheless, during the meeting on December 17th 2012, the representatives of distribution operators have expressed their reservation on the competitive acquisition of electricity for grid losses having in mind that until then the distribution operators have never bought electricity directly from the electricity market. Therefore, they asked unanimously regulated quantities for covering the grid losses, at least for the a specific period of time.

After analysing the distribution operatorsô proposal, it has been forwarded to the ANRE Regulatory Committee and approved the proposal of covering from regulated quantities a percent of 66.8% from the acquisition forecast of grid losses for 3 months (January-March 2013).

For January 2013, the percentage of regulated acquisition of the main distribution operators for grid losses is covered by CE Oltenia and CE Hunedoara.

### *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:

Å 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. |

Å C3 = sum of market shares of the main three participants in the market:
The indicator values signify:

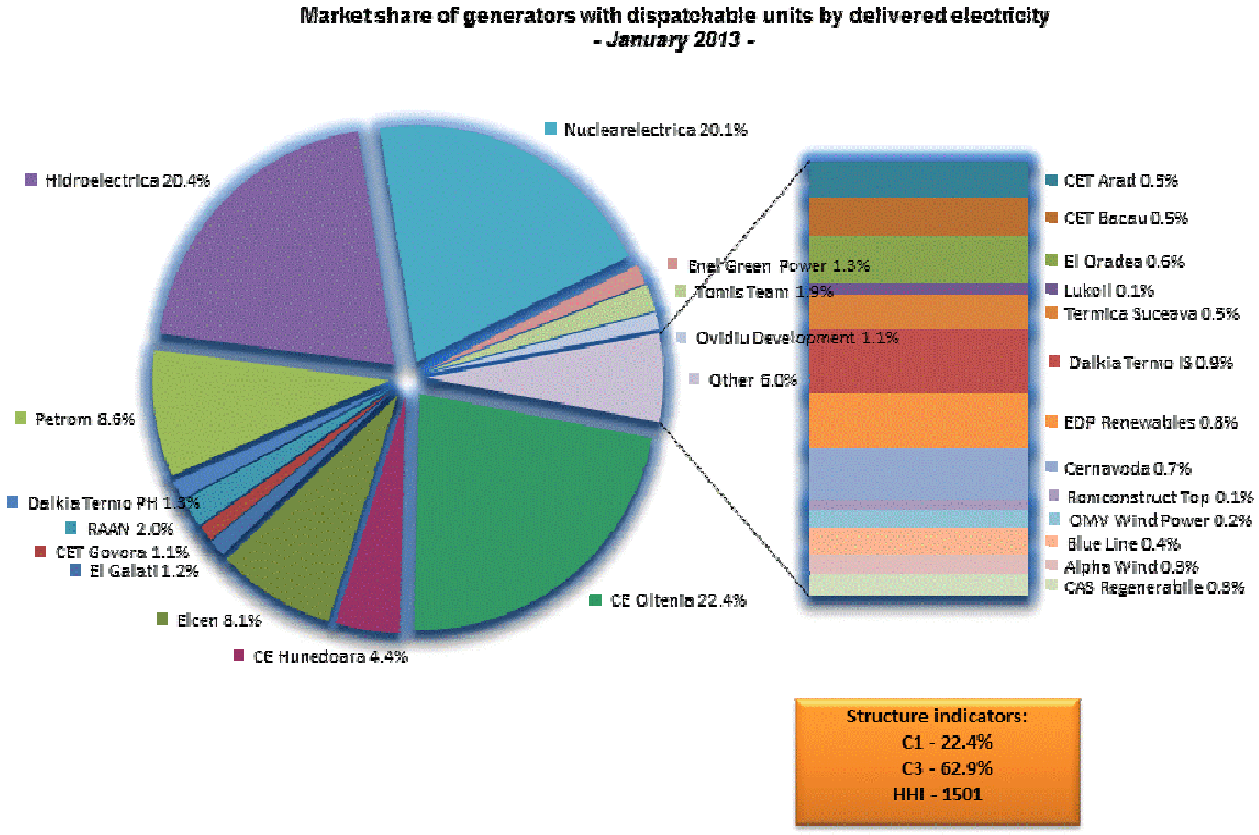
| | |
|---|---|
| 40% < C3 < 70% | moderately concentrated market; |
| C3 > 70% | highly concentrated market. |

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 graph presents the market shares of the electricity generators in January 2013, taking into account all the components of wholesale electricity market and calculated based on the electricity delivered into the grid by the dispatchable generators.




*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 January 2013:

| Structure/concentration indicators of BM - January 2013 - | Regulation | | | | | |
|---|---|---|---|---|---|---|
| | Secondary | | Fast tertiary | | Slow tertiary | |
| | upward | downward | upward | downward | upward | downward |
| C1 - % - | 63 | 57 | 75 | 44 | 49 | 54 |
| C3 - % - | 98 | 99 | 94 | 95 | 92 | 93 |
| HHI | 4856 | 4490 | 5828 | 3339 | 3425 | 3897 |

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

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 January 2013:

| Concentration indicators on ASM - January 2013 - | | Secondary reserve | Fast tertiary reserve | Slow tertiary reserve |
|---|---|---|---|---|
| regulated component | contracted quantity (h*MW) | 266580 | 535680 | - |
| | C1 (%) | 51.8 | 79.6 | - |
| | C3 (%) | 100 | 93.5 | - |
| competitive component | contracted quantity (h*MW) | - | - | 260400 |
| | C1 (%) | - | - | 82.9 |
| | C3 (%) | - | - | 100 |
| | HHI | - | - | 7078 |

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

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 January 2013, based on quantities traded by participants on this market.

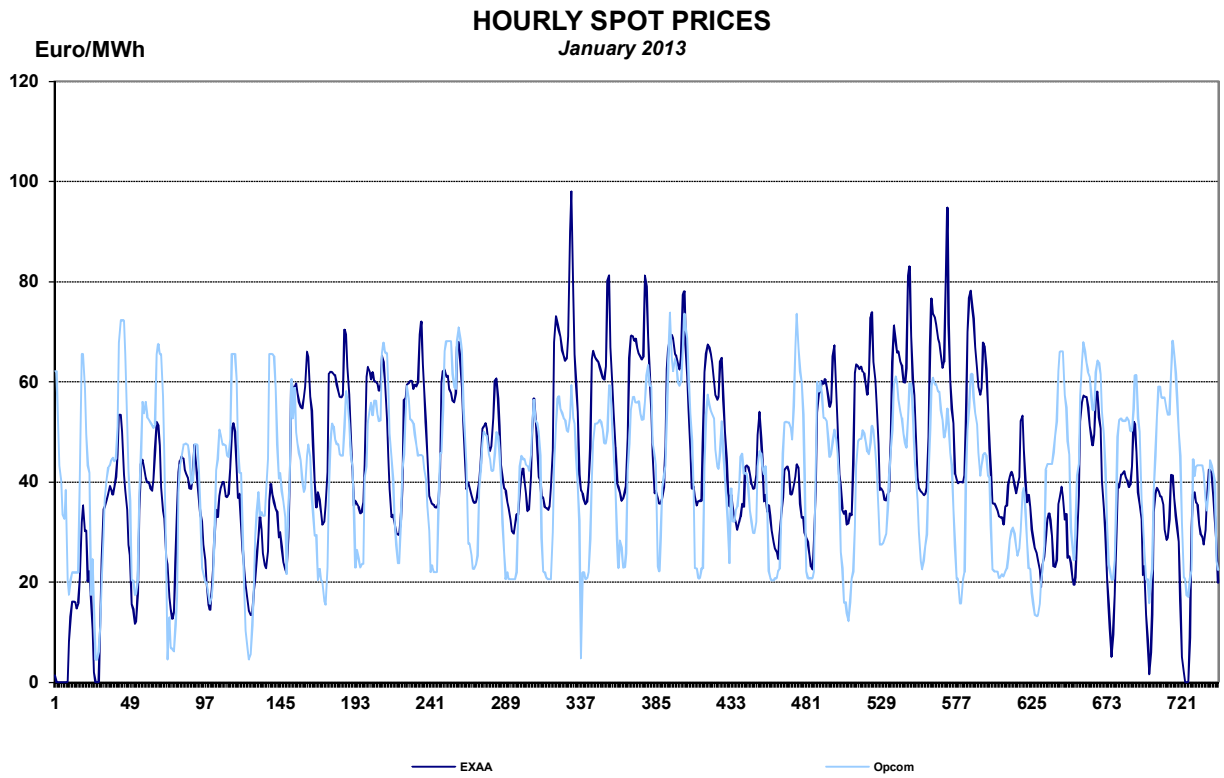
| Concentration indicators on DAM - January 2013 - | C1 (%) | C3 (%) | HHI |
|---|---|---|---|
| Selling | 16.27 | 38.27 | 740 |
| Buying | 10.59 | 28.73 | 569 |

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

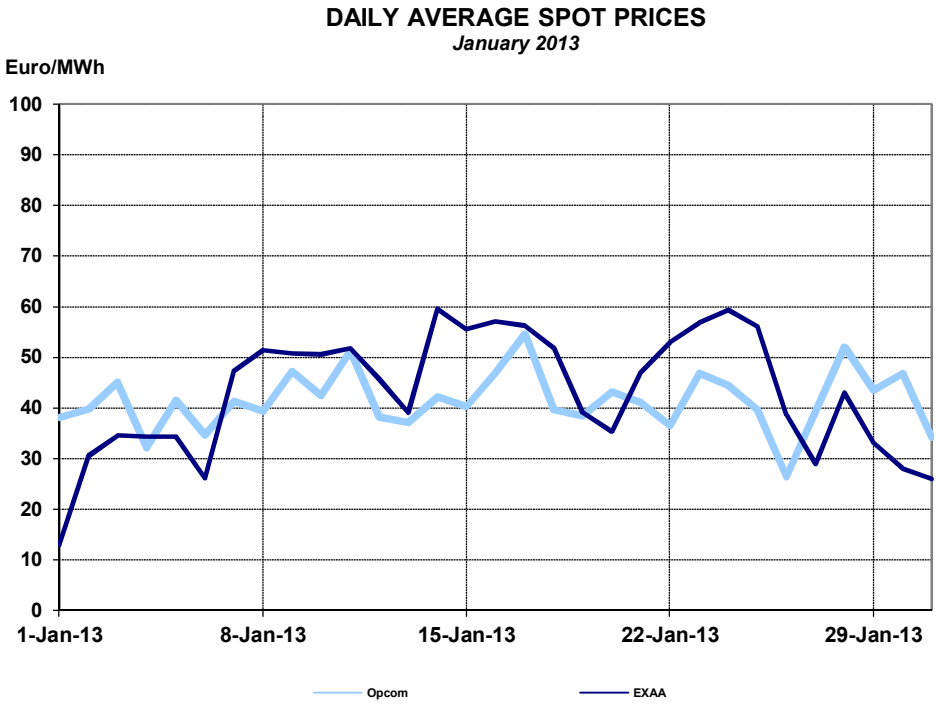
## *7. Price evolution on wholesale electricity market*

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 January 2013 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.

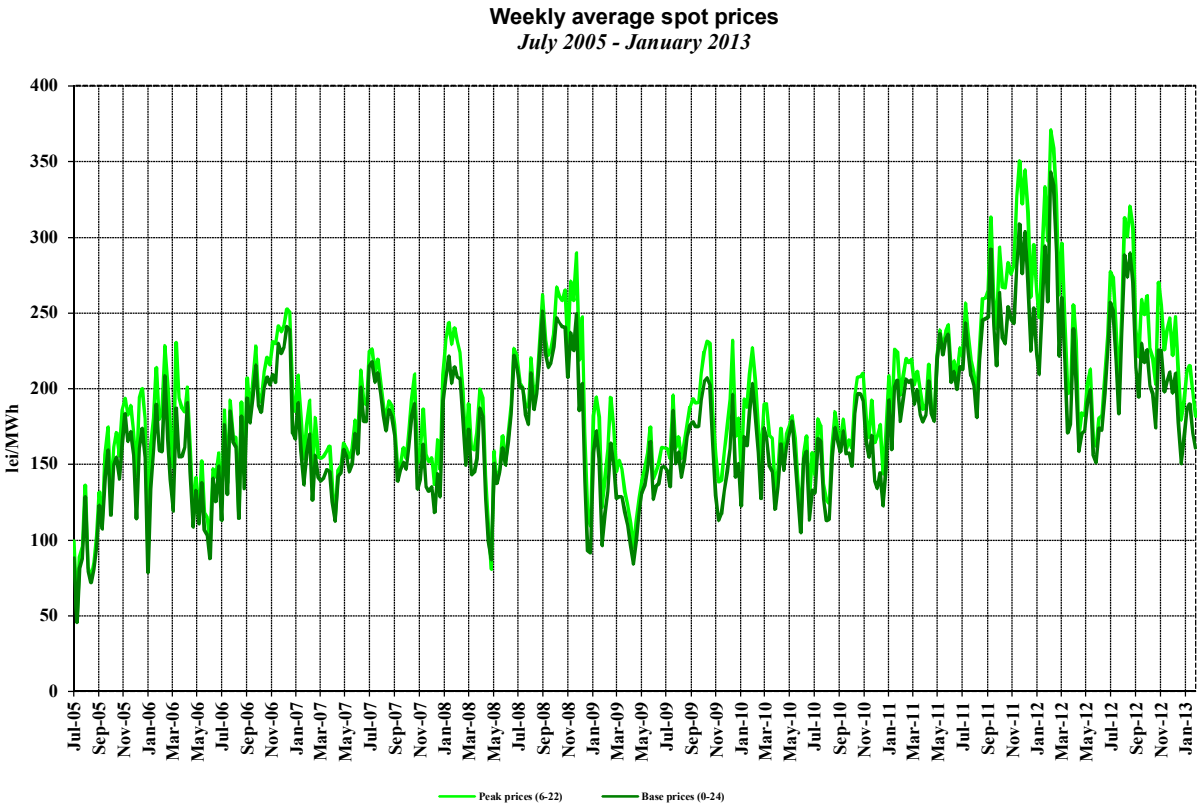



*Source: Daily reports of SC Opcom SA and published data of EXAA – processed by MG*




*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:

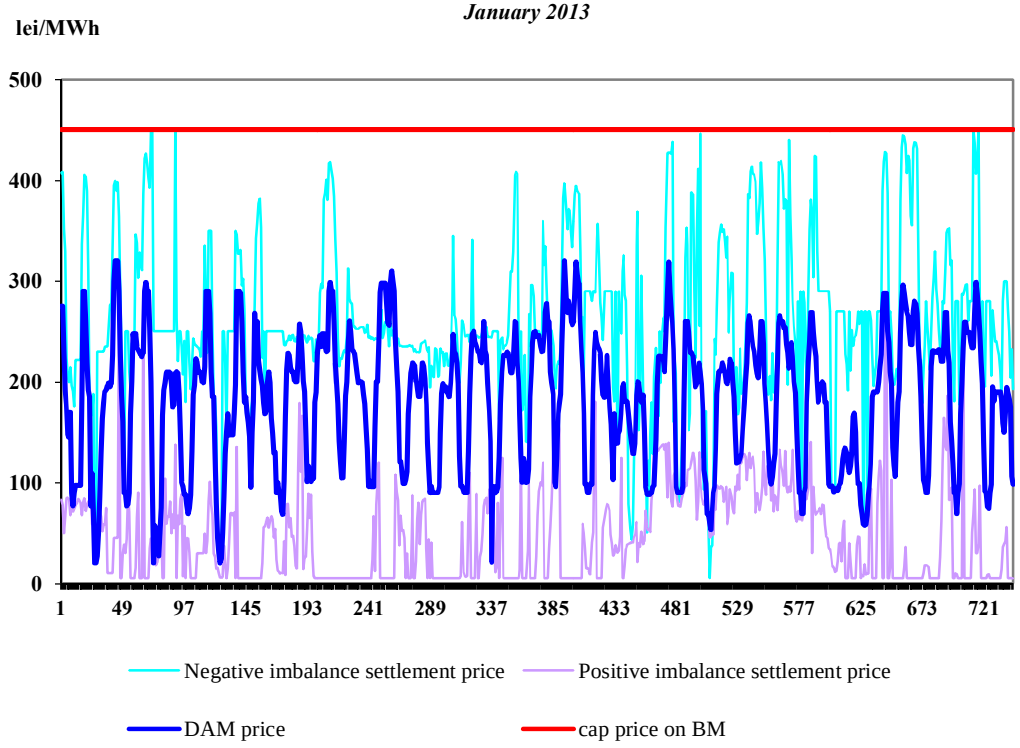



*Source: Daily reports of SC Opcom SA – processed by MG*

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 generatorsô 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.

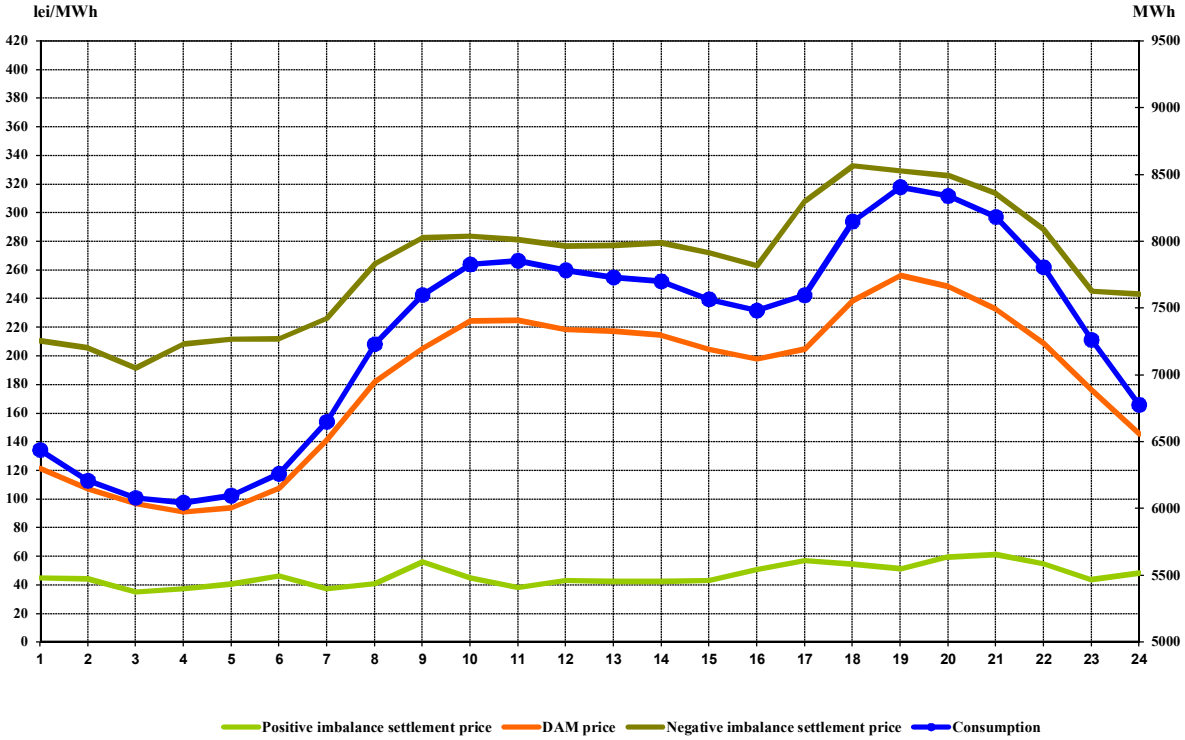
The settlement prices (MCP on DAM, negative imbalance settlement price and positive imbalance settlement price) are represented on the same graph, showing the two markets correlation degree. In the first graph the prices are expressed in hourly values, in the second graph in hourly average values compared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

**Hourly settlement prices**
***January 2013***



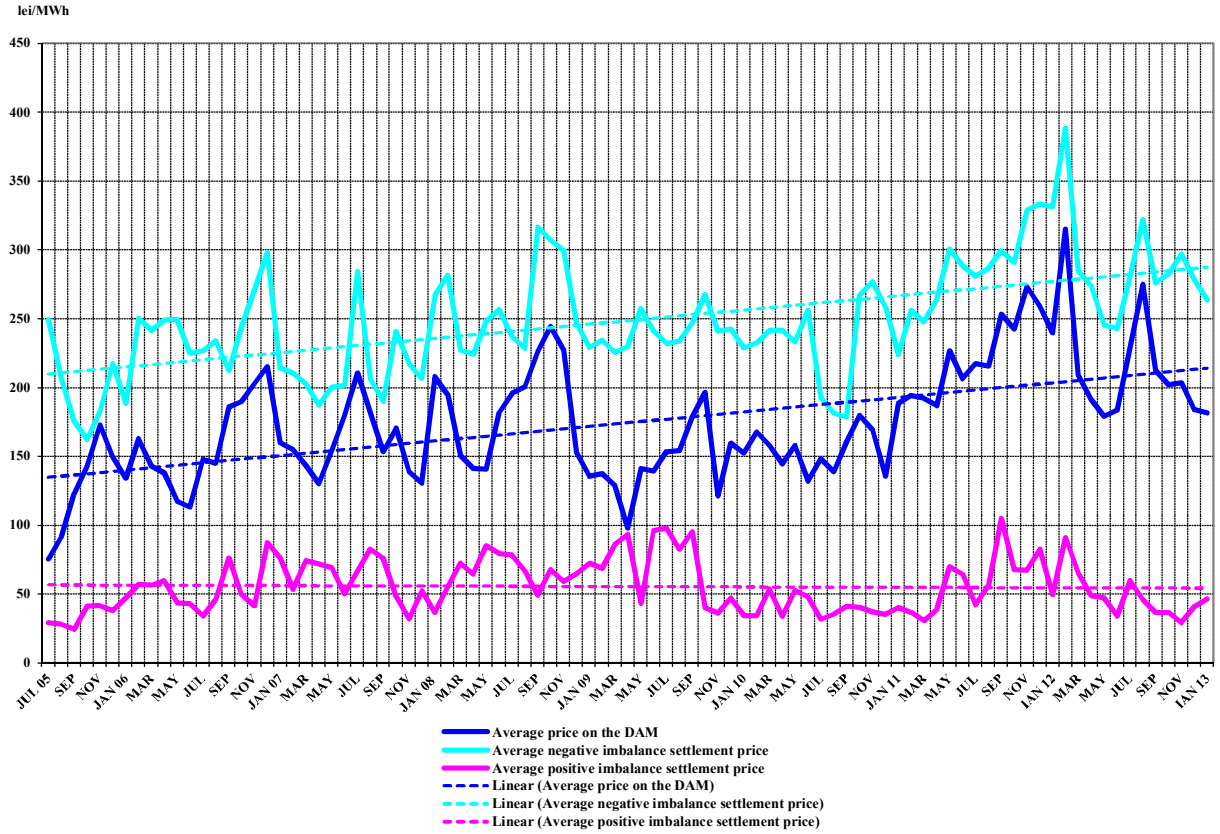

*Source: Daily/monthly reports of SC Opcom SA – processed by MG*

**Hourly average settlement prices and internal consumption**
***January 2013***




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

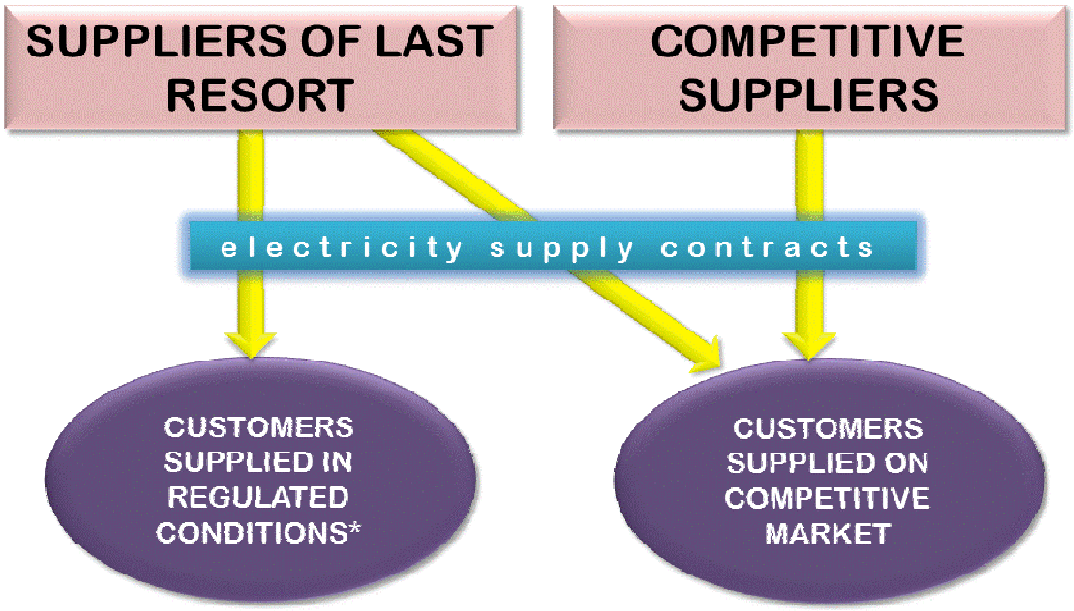
**Monthly average prices on DAM and BM**
***July 2005 - January 2013***




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

# III. RETAIL ELECTRICITY MARKET

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



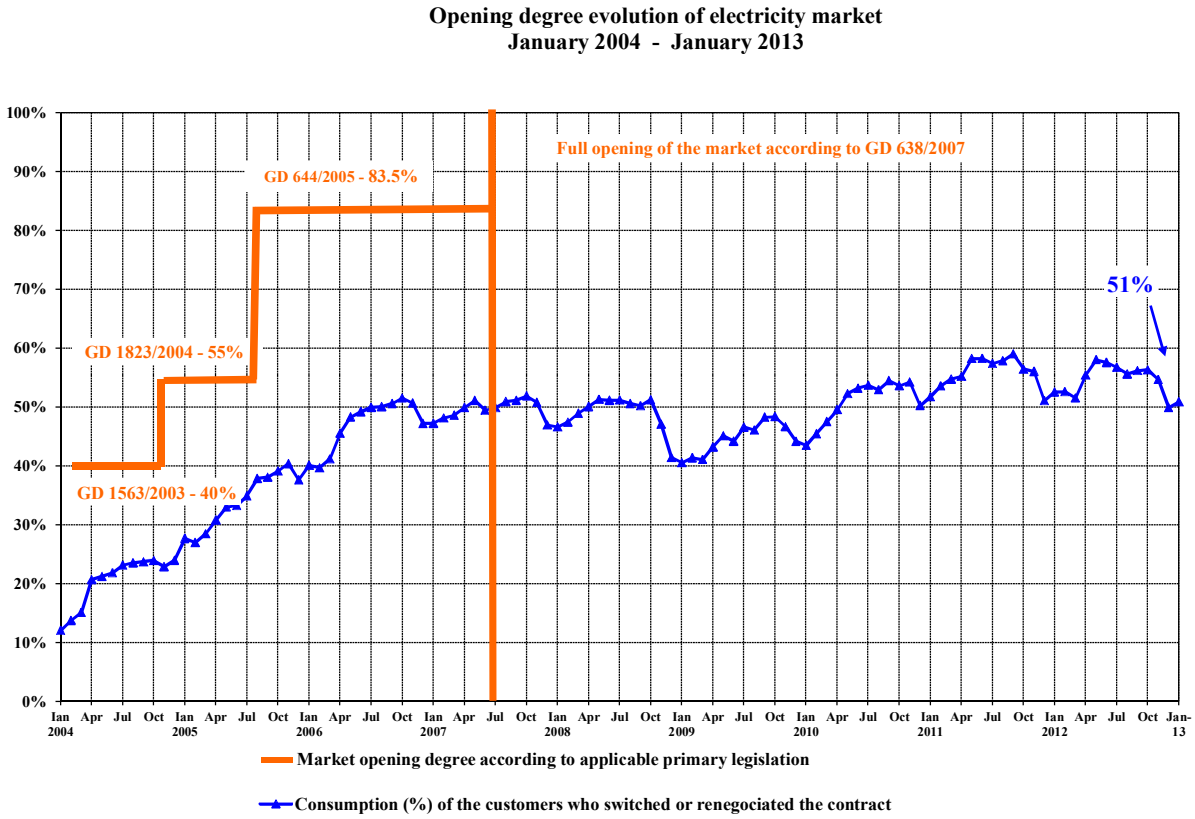

* according to art. 53 (2) and art. 55 (1) from Electricity and Gas Law no. 123/2012

## *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 customers who switched their supplier or renegotiated their contracts with the suppliers operating on the regulated market, during January 2004 ï January 2013. The values presented are cumulated from the beginning of the opening process and are presented monthly:



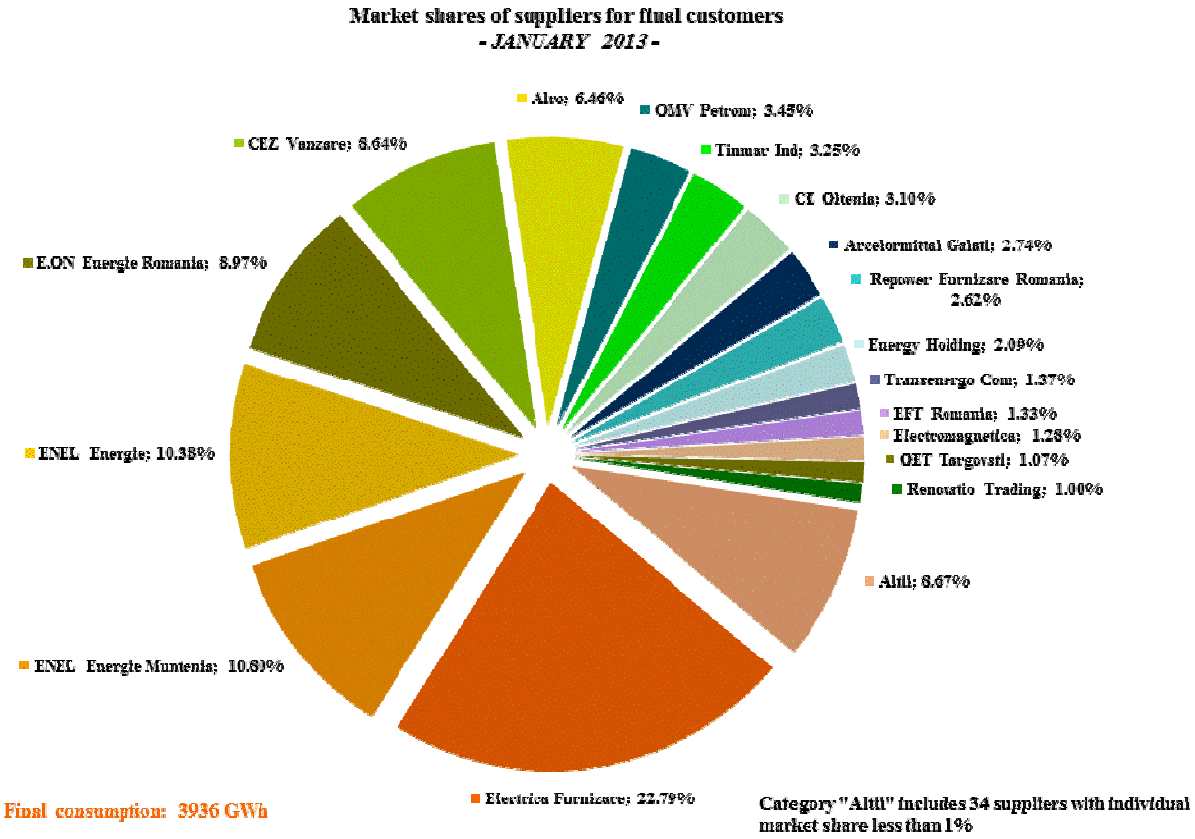

*Source: Monthly reports of the final customers' suppliers – processed by MG*

Under the Memorandum of Understanding approved by the Romanian Government on March 13th 2012 and in accordance with the obligations assumed by the Romanian Government in relation to International Monetary Fund, World Bank and European Commission, there has been approved the timetable of phasing out the regulated tariffs for the final customers who chosen not to use their eligibility rights. In this respect, the deadline for phasing out the regulated tariffs for non-household customers will be December 31st 2013 and for household customers will be December 31st 2017.

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

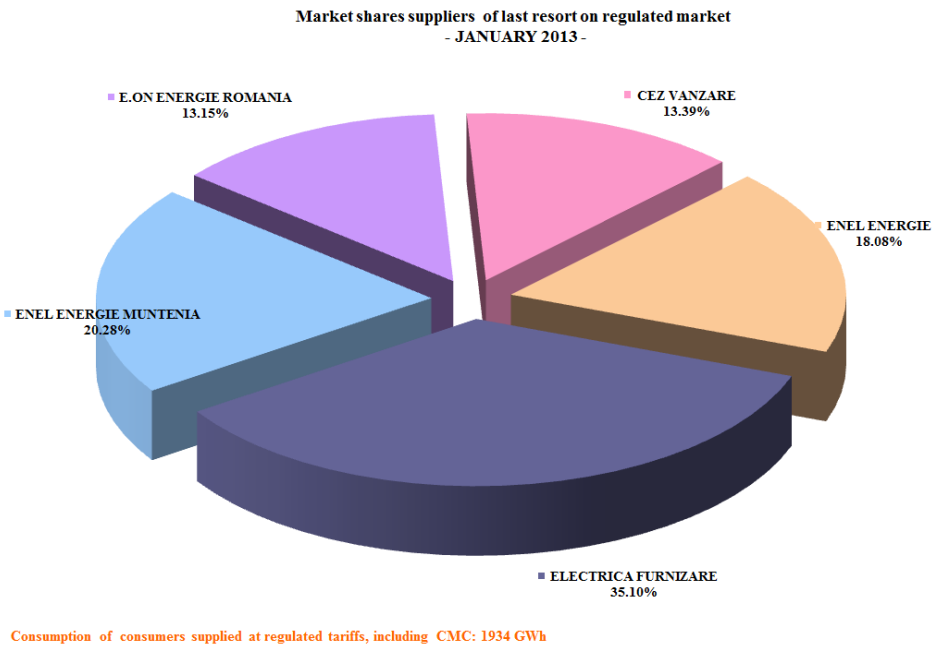
In the following three graphs there are presented the market shares of electricity suppliers on the retail market, calculated:

a) for all suppliers (including the suppliers of last resort) on REM ï based on the electricity supplied to the customers on regulated tariffs (including CMC) as well as to the customers who switched their supplier or renegociated their contract;




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

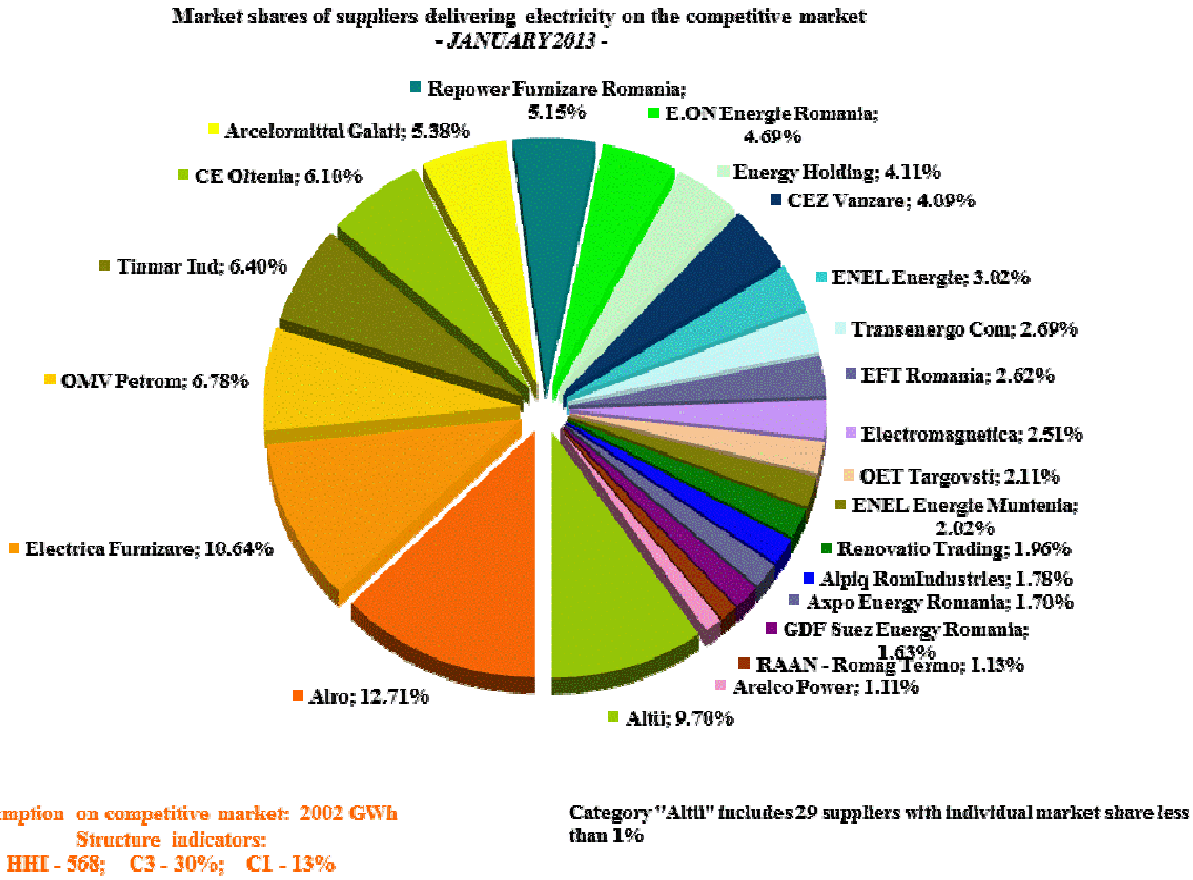
b) for incumbent suppliers - based on the electricity supplied to the customers at regulated tariffs and CMC: customer




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

and

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




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

The values of market indicators were calculated without taking into consideration the dominance principle. The delivered electricity used for determining the market share of each supplier comprises the self-consumption of the largest industrial customer which owns a supply license and based on it acquired its electricity from the WEM as a competitive supplier.

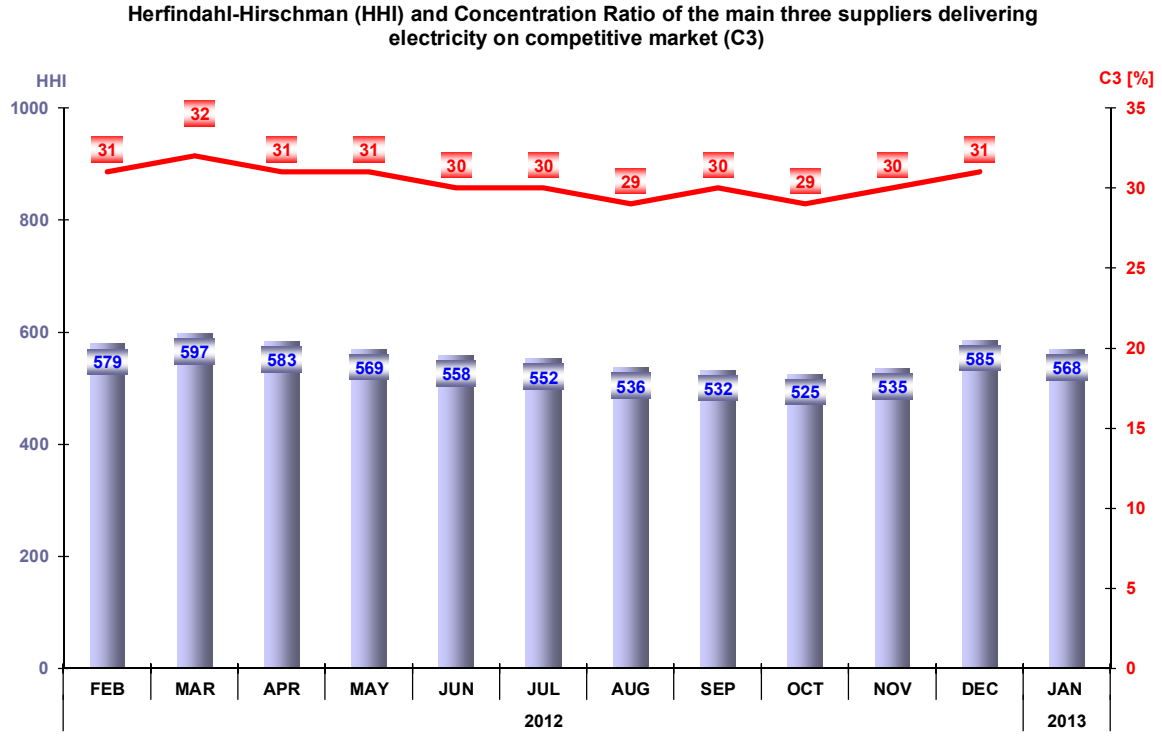
The electricity supplied to the final customers used for calculating the market share of every supplier includes also the self-consumption of that particular supplier (e.g. customers with supply license who buy electricity for themselves from WEM as competitive suppliers).

The analysis of the competitive suppliersô 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 customers in total electricity sales. The table below presents the number of suppliers acting on the REM, grouped into categories of sales weight during January 2013:

| Number of suppliers | Share of sales to final customers from total sales transactions | | | |
|---|---|---|---|---|
| | 100% | 75% - 100% | 50% - 75% | <50% |
| Competitive | 3 | 15 | 7 | 12 |
| Of last resort | 1 | 3 | 1 | 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 February 2012 ï January 2013 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 January 2013, calculated for each customer category as defined by the Directive 2008/92/EC of the European Parliament and of the Council:

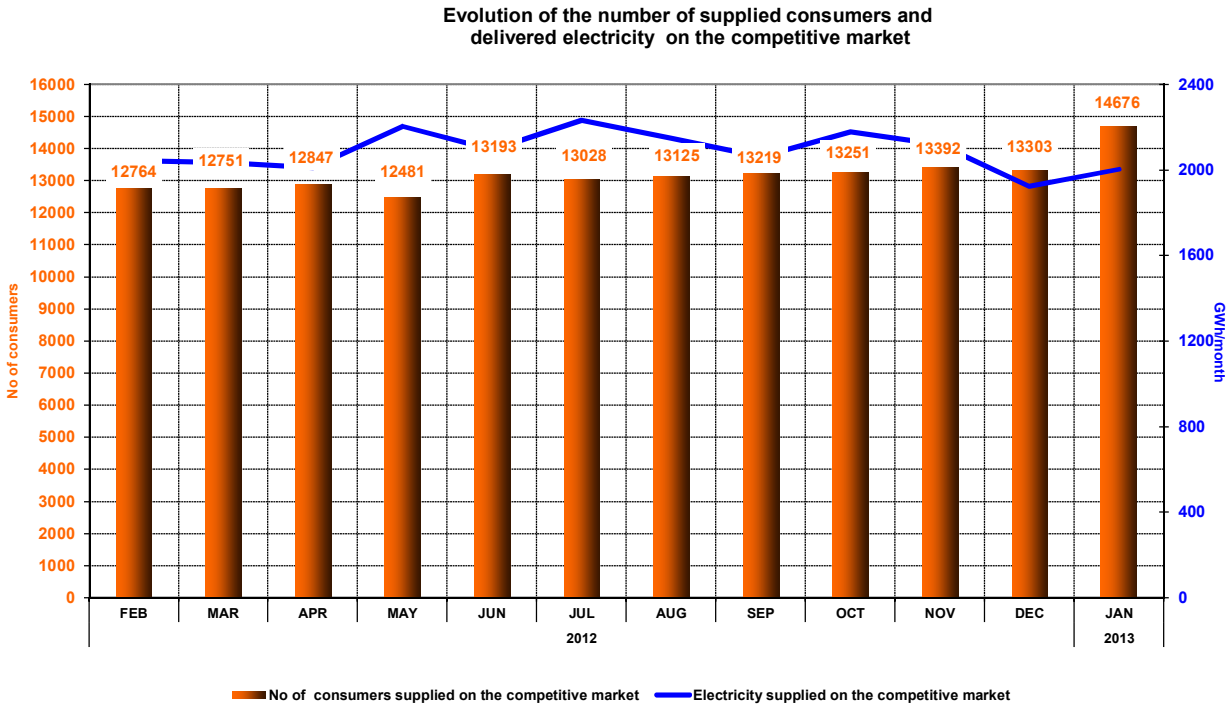
| Indicators - January 2013 | Customer category | | | | | | | Total REM |
|---|---|---|---|---|---|---|---|---|
| | IA | IB | IC | ID | IE | IF | Other | |
| C1 - % - | 52 | 25 | 24 | 15 | 19 | 20 | 32 | **13** |
| C3 - % - | 74 | 51 | 41 | 34 | 39 | 50 | 58 | **30** |
| HHI | 3036 | 1212 | 973 | 689 | 892 | 1242 | 1627 | **568** |
| Consumption - GWh - | 5.4 | 120 | 184 | 475 | 258 | 202 | 758 | **2002** |
| No. of SUPPLIERS | 26 | 41 | 42 | 41 | 20 | 11 | 16 | **51** |
| No. of suppliers of last resort | 5 | 5 | 5 | 5 | 4 | 3 | 2 | **5** |
| No. of competitive suppliers | 17 | 32 | 31 | 32 | 15 | 7 | 7 | **37** |
| No. of producers | 4 | 4 | 6 | 4 | 1 | 1 | 7 | **9** |

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

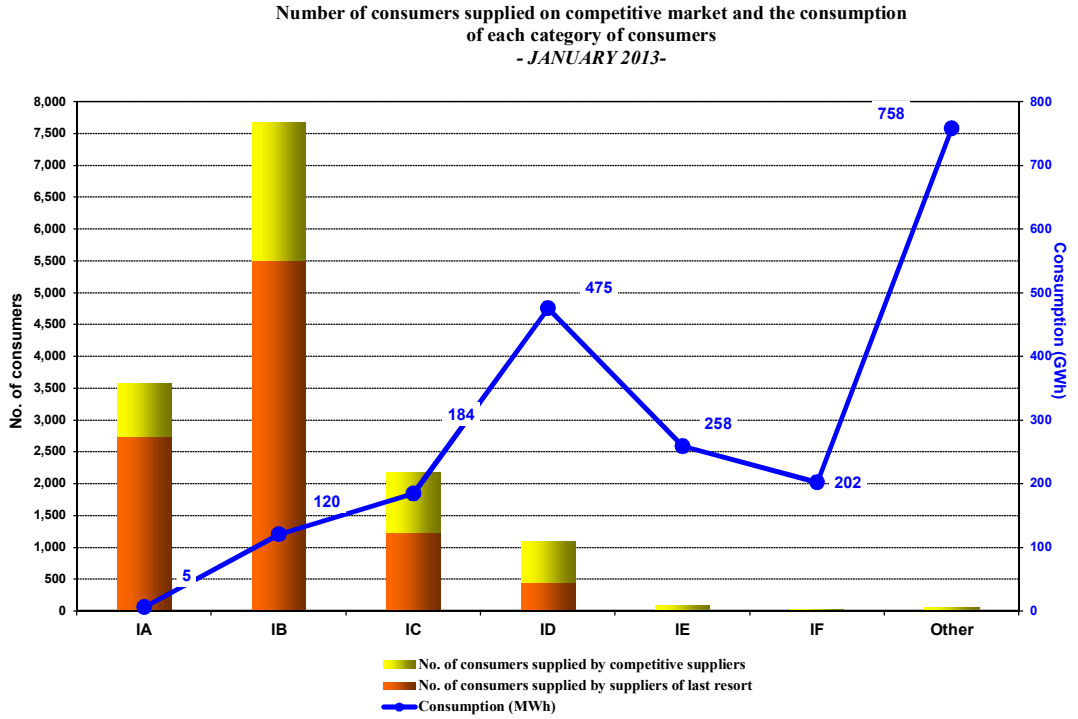
## *6. Evolution of customers' number and of electricity delivered*

Number of customers supplied on the competitive market is presented as total value from the beginning of the market opening process; for January 2013 this number is split into categories, according to the provisions of Directive 2008/92/EC of the European Parliament and of the Council. The table below presents the bands of consumption of each category of customers:

| Non-household customers | Annual electricity consumption (MWh) between: | |
|---|---|---|
| IA | | <20 |
| IB | 20 | <500 |
| IC | 500 | <2000 |
| ID | 2000 | <20000 |
| IE | 20000 | <70000 |
| IF | 70000 | <=150000 |
| Others | >150000 | |



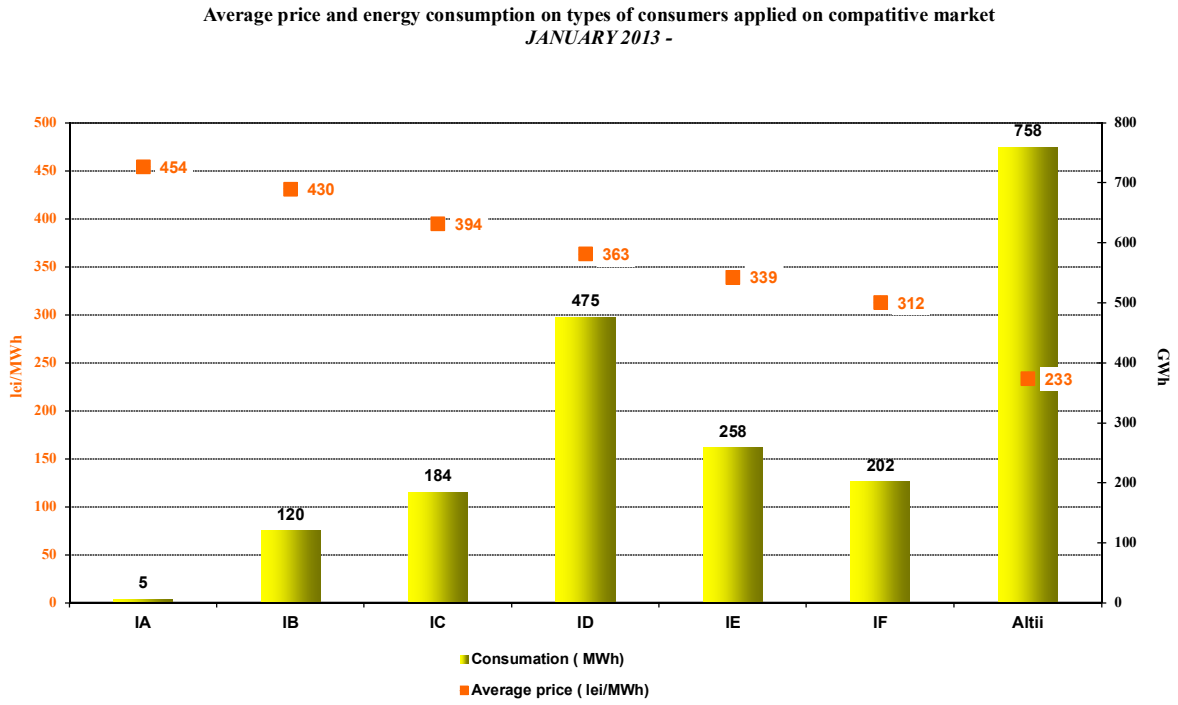

*Source: Monthly reports of the competitive suppliers – processed by MG*




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

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

The following graph presents the average selling prices of customers supplied on the competitive market, based on the structure defined according to the Directive 2008/92/EC of the European Parliament and of the Council.




*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 customers into categories was based on their annual consumption forecast, according to the provisions of above mentioned Directive.*

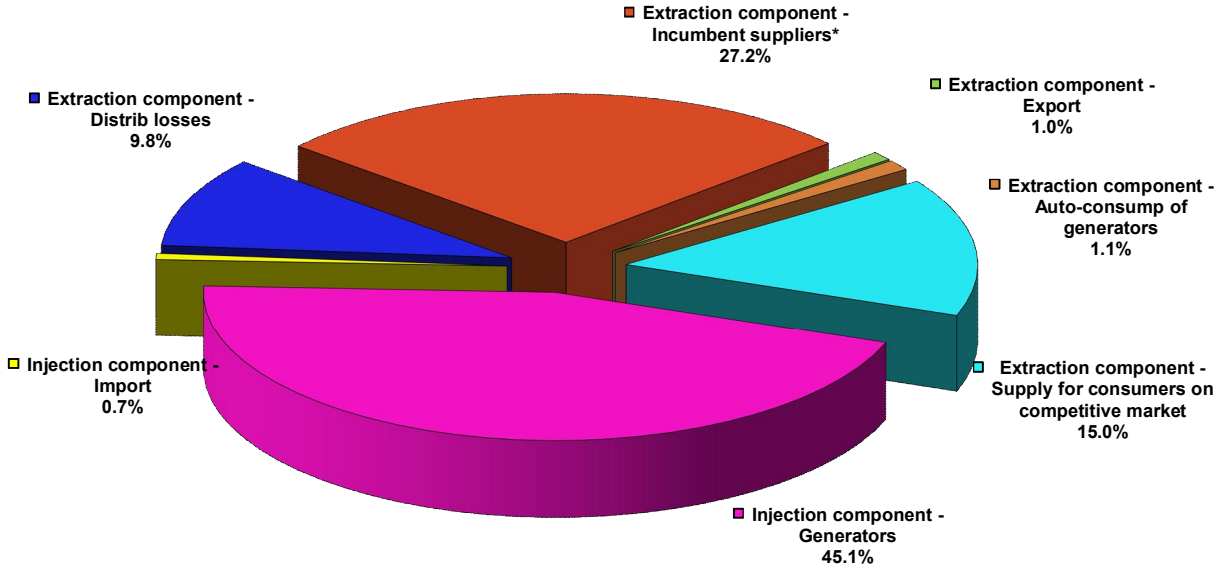
# IV. TRANSMISSION AND SYSTEM OPERATOR C.N. TRANSELECTRICA S.A.

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 customers.

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 January 2013.

**CN Transelectrica SA structure of revenues from transmission services**
***- January 2013-***



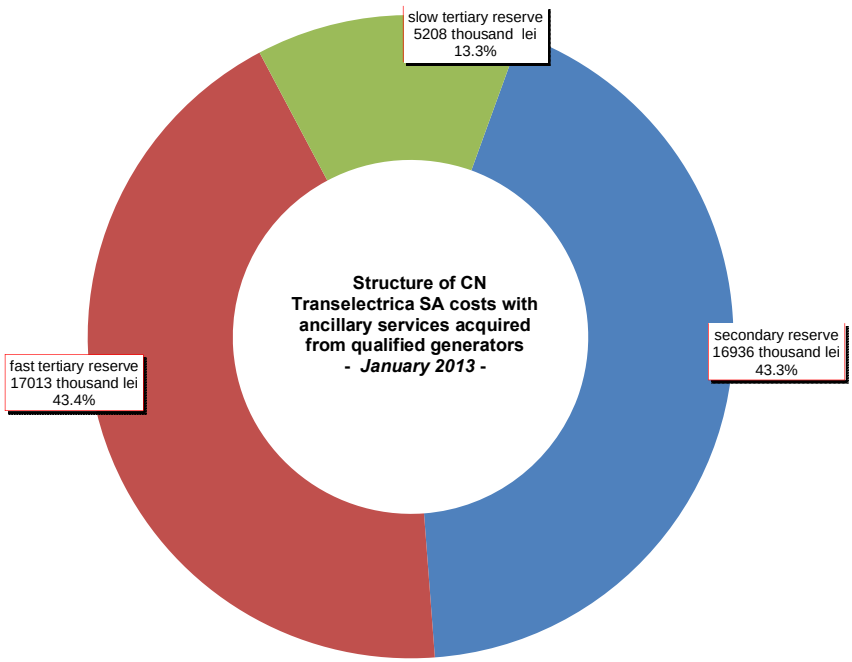

*** for electricity extracted from their own licence areas as well as from other areas**

*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.

The following graph presents the costs of ancillary services that CN Transelectrica SA had to pay in January 2013. 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*

## V. EVOLUTION OF MARKET RULES IN JANUARY 2013

In January 2013, ANRE issued the following regulations with impact on the wholesale electricity markets:

- Order no. 1/2013 of ANRE president regarding the modification of Methodology for setting and adjusting prices for electricity and heat produced and delivered from CHP that receive support scheme and for the bonus for high efficiency cogeneration approved by Order no. 3/2010;
- Order no. 2/2013 of ANRE president for approving the Regulation for authorising the electricity and gas suppliers to participate at bids on the common platform for certificates for greehouse emissions, according to Regulation (EC) no. 1031/2010;
- Decisions no. 8/2013 and no. 89/2013 of ANRE president for the modification of Decision no. 3309/2012 applied to CE Oltenia; both decisions modified the regulated quantities of electricity for grid losses;
- Decisions no. 9/2013 and no. 88/2013 of ANRE president for the modification of Decision no. 3310/2012 applied to CE Hunedoara; both decisions modified the regulated quantities of electricity for grid losses;
- Decision no. 144/2013 of ANRE President for approving the quantities produced in high efficiency cogeneration which benefit of bonus scheme in December 2012.

No regulation with direct impact on retail electricity market was issued.

# VI. EXPLANATIONS AND ABBREVIATION

## 1. Explanations

- *Self-consumption of generators* ï 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 customers on regulated market* represents the consumption of customers supplied at regulated tariffs and CMC by suppliers of last resort.
- *Consumption of customers on competitive market* represents the consumption of customers 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 the supplier which is active on the competitive retail market.

## 2. Abbreviation

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