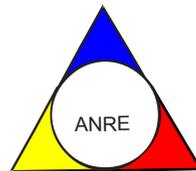




ROMANIAN ENERGY REGULATORY AUTHORITY



NATIONAL REPORT 2008

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1 Foreword

The document is the annual report sent by the Romanian Energy Regulatory Authority (ANRE) to the European Commission in order to fulfil the reporting obligations in compliance with the provisions of the Directives 2003/54/EC and 2003/55/EC.

According to the agreement concluded by The Council of European Energy Regulators (CEER) and by the European Commission, the report contains information on electricity and gas markets for the period January 1 – December 31, 2008.

Consistent in its efforts to implement adequate secondary legislation for the developing of an efficient internal energy market, ANRE continued to improve and complement the regulatory framework in order to harmonize it with the Romanian and European legislation requirements and to adapt it to the developing of the electricity and gas sectors.

In 2008, the total net electricity production increased with 6.5% compared to 2007. Nuclear fuel and hydro resources have covered 46% of the total primary resources used in producing electricity supplied to the system following the entry into operation of the second group at the nuclear plant Cernavoda and the increasing contribution of the hydro resource.

Compared with 2007, in 2008 the volumes traded on the electricity centralized markets were significantly higher which, in turn, led to an increased transparency of the transactions. The transformation of market operator SC OPCOM SA (starting with July, 1st, 2008) in the single central counterpart for the participants on the day ahead market, therefore contributed to a higher level of confidence regarding the transactions on this market by removing the counterpart risk.

Compared to last year the average degree of electricity market opening recorded a decrease of one percent. The analysis of switching from a supplier to another showed that in 2008 the electricity market was less active from this point of view; the very high levels of switching rate on non-household consumers indicate a more intense activity of this type of consumers. Moreover in order to provide better information to the customers concerning the process of switching the supplier, through a Phare project ANRE started an information campaign comprising leaflets, conferences, newspaper articles and information published on its web page.

The experience of 2008 on cross-border capacity allocation leads to the necessity of improving the mechanism in order to better use the existing capacities; in this respect, some aspects have to be taking into account: organising bids nearer to the delivery day, organising secondary market with TSO, or introducing new products for base load/peak/off peak on the market.

In order to deal with congestion it has been taken into account the increase of interconnection capacity. Therefore, at the end of 2008, a new interconnection line was put into place on the Romanian-Hungarian border, Nadab-Bekescsaba. The prospective development of the transmission network for the next 10 years drafted by Transelectrica and approved by ANRE, aims at developing of new interconnections between 2009-2017. An underwater cable to be built between Romania and Turkey (600 MW) is currently under study. Important investments in the transmission grid are required in SE Romania to extract the power

generated in the new generating capacities that are to be developed within 2008 – 2020 (nuclear units 3 and 4 from Cernavoda NPP, wind units and thermal-power units).

Another important issue in ANRE activity was the development and support of the Project for a Government Decision on establishing criteria and conditions necessary for the implementation of the support scheme to promote high efficiency cogeneration based on useful heat demand, a project approved in the first semester of the year by both ministries and Government. In compliance with European rules on state aid, in the 3rd quarter of 2008, this project was submitted to the European Commission.

Consumption of natural gas in 2008 was reduced by 5% compared to 2007. At the end of 2008, there were 1,048 eligible consumers on the natural gas free market, equivalent to a market opening degree of 54.05%. In order to better inform non-household consumers of natural gas, a specific methodology on supplier switching which summarizes the information required in this process was published.

The 1st of July 2008 marked the passage from the billing of gas quantities in volume units to the billing in energy units, a process that required updates to the ANRE's regulations and additional requirements to suppliers of natural gas on familiarizing consumers with the new billing system.

Both electricity and natural gas prices to final consumers, who have not chosen to change the supplier, increased.

In June 2008 ANRE Decision no. 145/2008 grants the exemption of the Romanian sector of Nabucco pipeline from the provisions in the legislation regarding third party access to the natural gas transmission systems and from the tariff methodologies, decision notified to the European Commission.

The promotion of energy produced from renewable sources and high efficiency cogeneration, the ensurance of transparency of trading on the electricity markets, the promotion of competition on the natural gas market are priority objectives of the following period.

Petru Lificiu

President

Abbreviates

AAC – Already Allocated Capacity

ATC – Available Transmission Capacity

BRM - Romanian Commodities Exchange

ETSO – European Transmission System Operator’s association

HHI – Herfindahl-Hirschman index

NTC – Net Transfer Capacity

TSO – Transmission System Operator

DO – Distribution Operator

CMBC – Centralized market for bilateral contracts

CMBC-CT – Centralized market for bilateral contracts with continuous trading

BM - Balancing market

DAM - Day-Ahead market

NPS – National Power System

NGT - National Natural Gas Transmission System

TRM – safety margin of the international interconnection

2 Main developments in the gas and electricity markets

2.1. The electricity and natural gas wholesale markets

Electricity

In 2008, the total net electricity production increased with 6.5% compared to 2007: the electricity delivered from nuclear source increased with approx. 48% (as a consequence of the entering into operation of the second nuclear unit in 2007) and the electricity delivered from hydro sources increased with 8%, while electricity from gas decreased with approx. 16%.

In 2008, there were no significant structure changes in the Romanian electricity sector, except the number of licensed generators and suppliers.

Five generators held more than 5% of the total installed capacity, and the total weight of the installed capacity of the first three largest generators was 70.98% (these values were determined using the dominance principle). Six generators delivered more than 5% of the net electricity generation and the total market share of the first three largest generators was 63.9%.

On the wholesale electricity market, participants conclude the following contracts with delivery on medium and long terms:

- contracts with prices and quantities which are set by the electricity regulator. For this regulated segment of the electricity market, the concentration indicators are not relevant, due to the lack of competition between participants;
- negotiated bilateral contracts and contracts concluded on centralised markets such as the Centralized Market of Bilateral Contracts-CMBC, the Centralized Market of Bilateral Contracts with Continuous Trading-CMBC-CT, and the Electricity Ring organized by the Romanian Commodities Exchange-BRM. Taking into account the non-standard or half-standard type of the products traded on the above mentioned markets, the transactions on these markets are considered to be on Over the Counter -OTC.

HHI for sales on the entire OTC market was 1100 and the market share of the first three main participants (C3), 44%. These values correspond to a moderately concentrated market.

Table 2.1 presents the dynamic of electricity volumes traded in 2008 compared to 2007 on the main components of wholesale electricity market and their value versus the 2008 internal consumption.

In 2008, compared to 2007, there may be noticed an increase of energy volumes traded on the centralised markets (especially on CMBC and DAM), aspect which reveals a positive evolution leading to an increase in transactions transparency.

DAM is a voluntary market, with both side's offers, opened to all licensed participants. DAM gives the possibility of using the additional energy and making a day before the delivery day adjustments of the participant's contractual position versus the possibilities/necessities of the generation/consumption.

The main change occurred in 2008 regarding the DAM functioning was the transformation of market operator SC OPCOM SA (starting with July, 1st, 2008) in the single central counterpart for the market participants. In this way, the participants are obliged to put a guarantee corresponding to the value of 6 calendaristic days of buying offers.

Table no. 2.1

Wholesale market components	Traded volume in 2008 - GWh -	Evolution compared to 2007 - % -	Weight of internal consumption for 2008 - % -
Bilateral negotiated contracts	34745	+28%	63.7%
Bilateral regulated contracts	29104	-1%	53.3%
Centralized Markets (CMBC, CMBC-CT, BRM)	8770	+49%	16.1%
Day Ahead Market - DAM	5208	+3%	9.5%
Balancing Market - BM	3546	+2%	6.5%

Source: data from market participants, CN Transelectrica SA and SC Opcom SA, data interpretation and analysis by ANRE

The settlement with a central counterpart contributed to a higher level of confidence regarding the transactions on this market by removing the counterpart risk. In the same time, the procedure of establishing and presenting the financial guarantees induced additional costs for the participants. In the same time, the quantities allowed to be offered for buying are limited to the level of guarantees, fact that may not permit the participant to quickly adapt to a possible grow of its necessary.

Total volume of electricity traded on DAM in 2008 increased with 3% compared to the one in 2007 and represented 9.5% from the internal consumption.

The following table presents the concentration indicators of electricity traded on DAM which were yearly calculated based on traded volumes and for 2006, 2007 and 2008. The indicators had values specific to a non-concentrated market:

Table no. 2.2

Year	Sales			Buying		
	HHI	C3 [%]	C1 [%]	HHI	C3 [%]	C1 [%]
2006	562	30.54	17.49	902	42.92	22.78
2007	448	26.61	11.64	497	28.86	10.84
2008	573	32.28	16.70	592	32.33	14.00

Source: data and processing by SC OPCOM SA

The concentration indicators calculated on energy volumes of contracts concluded in 2008 on CMBC reflect a highly concentrated market on sales transactions. As far as concern the CMBC-CT, the concentration level is high both on sales and buying.

Table no. 2.3

Concentration indicators on CMBC based on yearly volumes of concluded transactions

Year	Sales			Buying		
	HHI	C3 [%]	C1 [%]	HHI	C3 [%]	C1 [%]
2005	4204	99.68	57.61	3449	93.33	43.21
2006	2657	82.77	38.30	1085	46.58	16.15
2007	2669	87.55	35.21	635	32.52	11.27
2008	3142	95.32	36.51	551	25.00	9.85

Source: data and processing by SC OPCOM SA

Table no. 2.4

Concentrations indicators on CMBC-CN based on yearly volumes of concluded transactions

Year	Sales			Buying		
	HHI	C3 [%]	C1 [%]	HHI	C3 [%]	C1 [%]
2007	6155	100	25.97	6086	100	26.69
2008	10000	100	100	3239	60.07	9.24

Source: data and processing by SC OPCOM SA

Balancing market – BM started to operate on July 2005. BM is a market with hourly settlement where 20 producers with 137 dispatchable units operate (December 2008). There occur no significant modifications of the market model regarding the functioning of the balancing market in 2008.

The monthly volume traded in 2008 was between 4-14% from the internal consumption, with an annual average value of approx. 6.5%. The six-month period evolution indicates a decrease of traded volume on secondary regulation in 2008, while the total traded volume on BM remained almost constant compared to 2007.

As in the previous years, the values of concentration indicators on BM for 2008 (*table 2.5*) showed the existence of a dominant participant (the SC Hidroelectrica SA producer) and an excessive concentration on BM for secondary regulation and fast tertiary regulation on upwards. Therefore, ANRE kept in 2008 an upper limit of the offered prices on BM.

The integration of Romanian electricity market into the regional electricity market has been accomplished by bilateral contracts of export/import concluded between generators and suppliers from Romania with foreign partners. Besides contracts, there were energy unplanned exchanges between Romanian TSO and TSOs from neighbouring countries, based on compensation principle.

A total of **0.94 TWh** of electricity has been imported and **5.39 TWh** has been exported (the values are based on the data reported by the market participants); the physical flows were **2.61 TWh** on import and **7.04 TWh** on export (the figures also include transit flows which did not involve participants from Romania, technical exchanges between TSOs and loop flows).

Table no. 2.5

Concentration indicators on Balancing Market

Year 2008	Type of regulation	Regulation	2008
C1	Secondary	Upward	71%
		Downward	71%
	Fast tertiary	Upward	70%
		Downward	38%
	Slow tertiary	Upward	27%
		Downward	27%
HHI	Secondary	Upward	5438
		Downward	5367
	Fast tertiary	Upward	5065
		Downward	2319
	Slow tertiary	Upward	2021
		Downward	1838

Source: data from CN Transelectrica SA, data interpretation and analysis by ANRE

Compared to 2007, the import has decreased with approx. 29% while the export has increased with approx. 59%.

The allocation of interconnection capacity through the NPS interconnection lines with other neighbouring systems for electricity import/export transactions and for the electricity transit is performed by explicit bids.

Annual bids are organized by Romanian TSO (CN Transelectrica SA) for the following year allocation and monthly bids for the allocation of the remaining available capacities for the following month which may be spread on shorter intervals, depending on the forecasted variations of the ATC level throughout the month. On the annual bids, firm bilateral annual NTC are offered.

A specific element of capacity allocation system in 2008 was the high level of prices of interconnection capacity on export, which resulted at the annual bid (35-77 lei/MWh), especially on the border with Serbia, Hungary and Bulgaria. The prices decreased dramatically at the monthly bids, in most of the months (March-August, November-December); as an exception, in October, the prices at the monthly bid were higher. High prices of the interconnection capacity on export induce high costs for cross border transactions, which might be a significant obstacle for the international trade.

Another element to be pointed out is that the notified cross border exchanges were significant lower than the reserved capacity, especially on import for some borders, during some months.

This situation leads to the necessity of improving the mechanism in order to better use the existing capacities; in this respect, some aspects have to be taken into account: organising bids nearer to the delivery day, organising secondary market with TSO as organiser and participant, introducing new products for base load/peak/off peak on the market.

In order to deal with congestion it has been taken into account the increase of interconnection capacity. Therefore, at the end of 2008, a new interconnection line was put into place on the

Romanian-Hungarian border, Nadab-Bekescsaba. This new capacity and its effects on the electricity flows had been taken into consideration when determining the steady bilateral annual NTC offered at the 2009 annual bid.

Congestions on the internal lines are usually small and they are solved through Balancing Market: TSO orders up warding and/or down warding of generation units capable to eliminate the internal congestion which follows self-dispatching or dispatch orders according to the merit order. The additional costs appeared due to congestion are paid by TSO as they are not included in imbalances prices.

In order to determine the causes of incomplete compliance with the obligations of transparency stipulated in the Regulation CE 1228/2003, as well as the reasons which restrained the development of a daily allocation market of interconnection capacity, ANRE started in March 2009 an audit activity at CN Transelectrica SA.

Natural gas

Up to the present moment, the natural gas market is a national market, marked by a certain concentration degree only regarding the domestic natural gas production, as, although seven natural gas producers operate, only two of them are major producers (Romgaz and Petrom).

The liberalization process of the natural gas market in Romania was accompanied by measures aimed to lead to the development of the national market and its participation at the future single market and which were:

- Granting licenses and authorizations to companies in the sector
- Authorization of the specialty personnel in the sector
- Issuing specific technical and commercial regulations
- Implementation of tariff methodologies, through which it was aimed to stimulate the licensed operators in order to accomplish investments and to reduce operational costs
- Monitoring and control of authorized and licensed companies.

During the reference period, the process to create the premises to encourage the effective liberalization of the natural gas market has been continued. In this regard, the following regulations were added to the regulatory framework in the sector:

- Modification of the Performance Standard for Natural Gas Transmission (Order ANRE no. 45/2008)
- Methodology regarding the exchange of the natural gas supplier by the non-household consumers (Order no. 47/2008) which aims to synthesize the necessary and useful information for the non-household consumers during choosing and changing the natural gas supplier.
- Modification of Natural Gas Distribution Framework Contract and modification and enhancing the General Conditions for contracting the natural gas distribution services (Order ANRE no. 46/2008), in order to implement the provisions of art.17 g) in Gas Law no. 351/2004 regarding the measurement of natural gas quantities in energy units.
- Supplementing by Order 50/2008 the regulation regarding the authorization and verifying of natural persons developing activities in designing, operating and operation in natural gas sector approved by Order no. 55 /2007, meaning adding a new article, by which natural persons living in the European Union may take part the examination sessions organized by ANRE.
- Approval of the Methodology used in order to transit from invoicing natural gas quantities by volume units to energy units, document whose target was to establish the

ways through which regulated prices and tariffs in natural gas sector, expressed by lei /volume unit, are transformed in lei /energy unit.

From July 1st 2007, the market has been fully open for all consumers, these having the possibility to choose a natural gas supplier from those licensed by the regulatory authority and to negotiate directly the clauses and the prices for natural gas supply. The consumer may exercise his eligible status directly, without any administrative formality.

2.2. The electricity and natural gas retail markets

Electricity

Supplying electricity to customers consists in supplying on the *regulated* market (which includes all the small customers and eligible customers that choose not to change supplier) and in supplying on *competitive* market (which includes the customers other than householders that switched their supplier or that negotiated supply contracts with the default suppliers by giving up on the regulated tariff).

In the year 2008, just like in 2007, on the **regulated market**, the customers had mainly 7 default suppliers: 3 state owned companies, SC Electrica SA branches, and 4 majority private owned companies.

On the competitive retail market activated 35 independent suppliers who do not own networks, 4 less than last year, and 5 producers who hold supply licences.

The analysis of the electricity retail market was made both as a whole, and on each of the following three segments (final customers categories), defined by the current supply regulation, according to the contracted power specified in the connection permit:

- households and small non-households (contracted power of 100 kVA or less);
- large non-households (contracted power between 100 kVA and 1000 kVA)
- very large non-households (contracted power of 1000 kVA or more).

Table no.2.6. includes information regarding the suppliers who hold market shares larger than 5%, as well as the market concentration index for each final consumer category for 2008.

Table no.2.6

Item	Type of customers	No. of suppliers with market share higher than 5%	C1	C3	HHI
1.	Households and small non-households (contracted power of 100 kVA or less);	5	37%	72%	2366
2.	large non-households (contracted power between 100 kVA and 1000 kVA)	5	30%	68%	1898
3.	very large non-households (contracted power of 1000 kVA or more).	7	11%	30%	601
4.	TOTAL Retail market	5	24%	48%	1079

Source: data suppliers, data interpretation and analysis by ANRE

Mention should be made that the principle of dominance was taken into account in the estimate calculation of the market indexes in table 2.6. The supplied energy on which the market share for each supplier was established doesn't include the self-consumption of the largest industrial consumer who also holds a supply license and decided to purchase its electricity on the wholesale market, as a competitive supplier.

The market structure indicators calculated for 2008 show:

- a moderate concentration level on the whole retail market;
- a not-concentrated market for the very large non-household consumers market segment
- a high concentration market for both the households and small non-households and the large non-households consumers.

Table 2.7. centralizes the average return prices for 2005, 2006, 2007 and 2008 for the regulated supplied households and non-households consumers and for the competitive supplied non-households consumers. The prices are both in Lei and Euro, by National Bank average monthly lei /EURO exchange rates.

Table no. 2.7

Consumer type	Average return prices							
	lei/MWh				Euro/MWh			
	2005	2006	2007	2008	2005	2006	2007	2008
Regulated supplied consumers	286	316	340	354	79	90	102	96
Competitive supplied consumers	144	168	188	224	40	48	56	61

According to The Electricity Law 13/2007, the default supplier must ensure the supply to the customers until they chose to switch the supplier for the first time.

According to the *Guidelines to switching the electricity supplier* – approved by ANRE Order 21/2005, switching suppliers is free of charge. The new supplier informs the network operators about the change in maximum 5 days from the consumer's application. The meter reading is done by the network operator on the day of the switch or in maximum 10 days after the switch, informing all parts about the date of the reading.

Figure 2.1 shows the annual evolution of the consumption weight of the consumers who switched their supplier or negotiated their contracts (gave up on regulated tariffs), compared to the market opening degree set through Government decision.

The average market opening degree dropped one percentage point in 2008 as compared to 2007. This was due to the increase of households consumption (by approx. 9%) and of non-households consumption on the competitive market (by approx. 1%), while the regulated non-households consumption remained almost unchanged, meaning an increase of the total regulated consumption by approx. 4% as against the consumption on the competitive market.

**Evolution of the market opening degree
2000 - 2008**

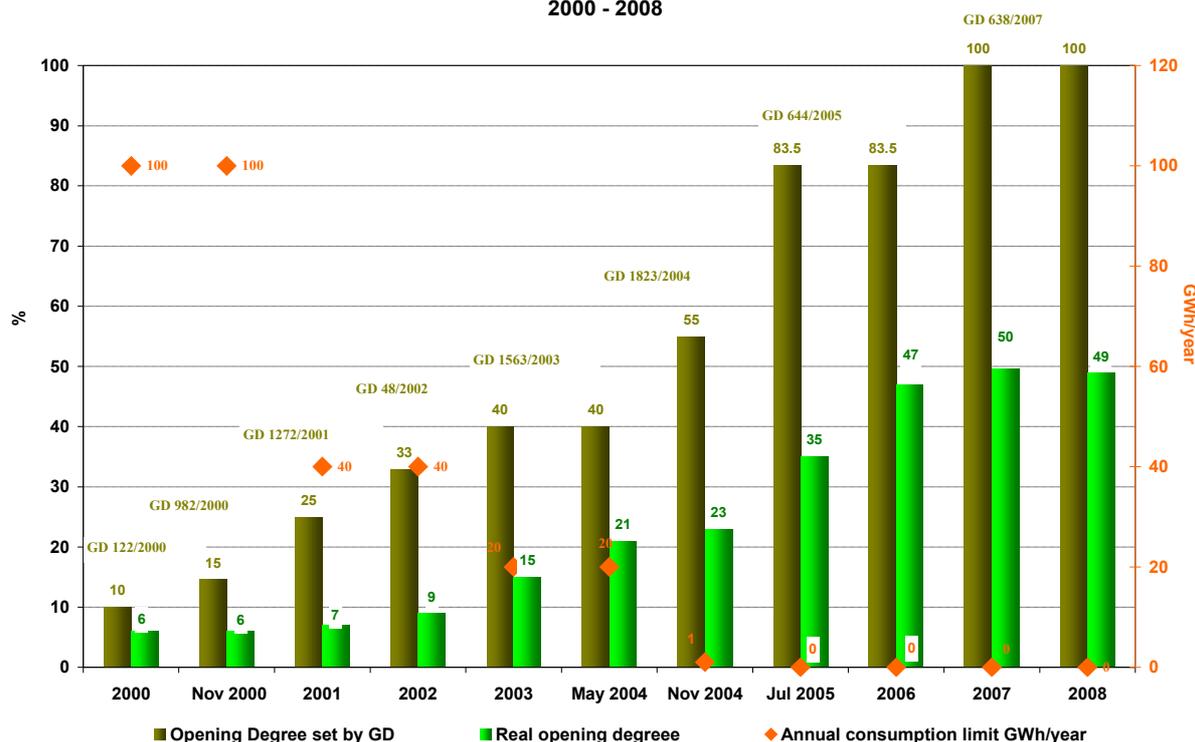


Figure no. 2.1

Source: data suppliers, data interpretation and analysis by ANRE

The supplier switching rate for year 2008 (see table 2.8) is calculated for each type of consumer in two ways: by the consumption places switching supplier during 2008 and by supplied electricity volume. Mention should be made that the self-consumption of the largest industrial consumer, who also holds a supply license and decided to purchase its electricity on the wholesale market, as a competitive supplier is not included.

Table no. 2.8

No.	Consumer type	Switching rate	
		Consumption places	Supplied electricity
1.	Small non-households + households (contracted power of 100 kVA or less)	0,002%	0,116%
2.	Large non-households (contracted power between 100 kVA and 1000 kVA)	2,074%	3,289%
3.	Very large non-households (contracted power of 1000 kVA or more).	4,164%	18,614%
4.	TOTAL Retail market	0,006%	8,965%

Source: data suppliers, data interpretation and analysis by ANRE

The consumer migration analysis showed a less intense activity on the Romanian electricity market as against the previous years; the switching rate figures showed that the most active segment in this respect were the very large industrial consumers.

Mandatory requirements to keep the consumers informed were imposed to the suppliers in several regulations issued by ANRE, such as: *Regulation for the information of the electricity*

and natural gas residential consumers, Regulation for the supply of electricity to the consumers, Conditions associated to the supply and to the distribution licenses, Framework Contracts for the supply of electricity to consumers with regulated tariffs, Performance Standard for the service of electricity supply.

The obligations set in these regulations relates to:

- communication with the consumers (through website, customer service offices, phones, dissemination of informative leaflets, media releases, informative letters, meetings with consumer associations, a.o.)
- time-period within which consumers must be informed on: electricity tariffs and conditions of the supply, new regulations, modification of existing regulations, network connection tariffs and conditions, labelling, forwarding a complaint, resolution of complaints, payment, a.o.
- creation of a dedicated webpage and the minimum information this webpage must include
- creation of a unitary system for the reporting towards ANRE of the informative actions carried out by the default suppliers.

In 2008, the complaints directed to ANRE by legal and natural persons addressed mainly the following topics: billing - 25.27%, networks connection – 8.42%, access to the network– 5.39%, non-observance of the quality parameters – 5.39% etc.

The requests for information under the Freedom of Information Act made via phone, free-toll line, email or post addressed mainly the following subjects of interest: qualification/certification of electricians/contractors – 40.9%, renewable energy sources – 27.7%, prices and tariffs – 16%, contracts and services – 5.7%, license granting – 4.8%, networks connection – 3.3%, metering, disconnections, technical norms – 1.6%.

Natural gas

The most important suppliers on natural gas retail market and the rate they own within the final demand are as it follows:

<i>No.</i>	<i>Supplier</i>	<i>Rate from the final demand (%)</i>
1.	Distrigaz Sud	23.91
2.	E.ON Gaz România	20.18
3.	Romgaz	15.02
4.	Petrom	12.38
5.	Interagro	8.3
6.	Petrom Gas	7.83
7.	Conef Gaz	1.76
8.	Wiee România	3.25
9.	Arelco	1.28
10.	Congaz	0.64

At present, 24 independent suppliers act on the natural gas market in Romania.

Seven companies develop production and supply activities: Romgaz, Petrom, Amromco Ploiești, Amromco New York, Aurelian Oil&Gas, Toreador, Wintershall Mediaș.

Total consumptions in the year 2008 of the main final consumers are:

Consumer categories	MWh
Households	28,745,965.523
Other non-households	6,307,761.212
Commercial	9,817,509.846
Electric and/or thermal power generation sector	38,546,559.343
Other industrials	31,440,103.567
Chemistry sector	31,520,851.569

At the end of 2008, there were 1,048 eligible consumers on the natural gas free market, having a consumption of 89,194,296.913 MWh, equivalent to a market opening degree of 54.05%.

Natural gas consumers are entitled to choose the type of the natural gas supply contract and, according, the natural gas supply for each consumption place. Natural gas consumers have no right to run simultaneously a regulated supply contract and a negotiated supply contract for the same consumption place.

For the final consumers, who did not choose to be part of a negotiated contract, there were approved final regulated prices. During year 2008, the regulated final price increased in average with 21% (8.5% at February, 1 and 12.5% at July, 1). These modifications were done mainly due to the evolution of the import gas prices which reached an historical value in the fourth quarter of 2008.

In 2008, ANRE received 470 complaints from natural and legal persons regarding the natural gas sector. The main aspects referred to were: dissatisfaction regarding the services performed by the authorized companies in natural gas sector - 12.55%, billing aspects – 10.64, connection to the grid issues – 6.81%, not observing the legal provisions in natural gas sector – 5.96%, prices and tariffs – 5.96%, etc.

Public information requests were mainly for: authorizations/certifications – 45.5%, technical norms – 27.5%, contracting and supply – 15%, prices and tariffs in natural gas sector– 9%, licenses – 3%.

2.3. Infrastructure

Electricity

The Methodology for establishing tariffs for electricity transmission service, approved through ANRE order no. 60 /2007, sets up the way to determine the revenues and to calculate the tariffs for electricity transmission service during the second regulatory period.

The electricity transmission tariff is determined based on a revenue-cap methodology.

The transmission tariffs are differentiated by nodes (zones) depending on the impact of the injection or extraction of electricity into/from the nodes of the transmission grid. This impact is shown as the transmission nodal marginal cost.

The transmission tariffs are yearly approved by ANRE and come in force at the beginning of each fiscal year.

In terms of quality of the regulated service, the *Methodology for establishing tariffs for electricity transmission service*, for the second regulatory period (2008-2012), takes into consideration a correction factor for observing an imposed minimum quality level. This factor will be inserted in the calculation formula for the yearly revenues. The level of associated revenues to the penalty-bonus risk due to non-compliance with the quality indicator will not exceed 2.5% of total revenue.

For 2008, the TSO has reported the following indicators related to continuity of the electricity transmission service:

- Unscheduled interruptions due to third parties ENS (kWh) = 2250
- Unscheduled interruptions due to internal causes ENS (kWh) = 164846
- Total duration of consumers interruption D (minutes) = 239

where ENS represents the un-delivered electricity (interrupted to consumers/not generated by power plants)

The investments for network development are recovered through transmission tariff, set up by the competent authority based on justified costs, in the limits of a reasonable profit quota.

For operating the system, the TSO removes the network congestions by selecting more expensive units on the balancing market, with a deviation from the merit order based on the producer offered price criteria. The price difference is covered by the TSO, which bears the incumbent cost. The avoidance of costs designed to congestion management is a part of the investment justification for network development.

Other criterion for investment substantiation consists of providing the electricity market with necessary infrastructure, by raising the net transfer capacity (NTC).

The distribution tariffs are monomial type (lei/MWh), differentiated on distribution operators and on three voltage levels: high voltage (110 kV), medium voltage, low voltage. The distribution tariffs are approved by the regulator for each distribution operator.

Tariffs for electricity distribution service are calculated according to a basket-price-cap methodology according to Government Decision (GD) no. 890/2003 concerning the approval of „The Road Map for the Energy Sector in Romania”. Based on this regulatory method the regulatory periods are set to 5 years, excepting the first period which was of 3 years (2005-2007).

Taking into account that in 2008 the second regulatory period started, through the ANRE *Order no. 39/2007* has been approved *1st revision of the Methodology for setting up tariffs for the electricity distribution service*.

Starting with the second regulatory period main distribution operators taken upon them the responsibility of a program for reducing their own technological consumption (electricity

network losses), divided on voltage levels, such as in 2012, the losses from electricity networks to do not exceed 9.5% of the electricity injected into the network.

Since 1st January 2008 the Performance standard for the electricity distribution service set by the ANRE Order no. 28/2007 has been applied.

The continuity of the electricity supply is monitored through the SAIFI and SAIDI indicators separately calculated for each voltage level for urban and rural areas. The SAIFI and SAIDI indicators are also categorized as follows:

- Scheduled interruptions
- Unscheduled interruptions due to force majeure
- Unscheduled interruptions caused by the users
- Unscheduled interruptions excluding the ones due to both force majeure and users.

The 2008 average values for Romania are given below:

Place	SAIFI (Interruptions/ year) Scheduled interruptions	SAIFI (Interruptions/ year) Unscheduled interruptions due to distribution operator	SAIFI (Interruptions/ year) Total interruptions
Urban	0.86	4.2	5.06
Rural	2.5	9.8	12.3
Country average values	1.6	6.7	8.3

Place	SAIDI (min/yr) Scheduled interruptions	SAIDI (min/yr) Unscheduled interruptions due to distribution operator	SAIDI (min/yr) Total interruptions
Urban	190	314	504
Rural	626	1038	1664
Country average values	385	638	1023

Natural gas

According to tariff methodology, approved by Decision ANRGN no.1078/2003, starting from July 1st 2008, the second year of the second regulatory period started (July 2007 - June 2012) for **natural gas transmission**. The analysis the Prices and Tariffs Department made in natural gas sector aimed to estimate the differences between substantiated directly taken over costs and the effective recorded ones as well as the investments put into operation during the period between establishing the base income in the first regulatory period and adjusting time.

The document analysis finished by establishing the total income and the total regulated income related to the second year of the second regulatory period and by establishing the regulated tariffs for natural gas transmission accomplished Societatea Națională de

Transmission Gaze Naturale TRANSGAZ S.A. Mediaş, all being published in the Order ANRE no. 72/2008.

The adjustment of the unit revenue related to regulated **distribution and supply activities** accomplished by licensees for the second year of the second regulatory period is achieved according to provisions of Decision ANRGN no. 1078/2003 on approval of the “Criteria and methods for approval of regulated prices and tariffs in natural gas sector”.

The analysis the Prices and Tariffs Department made in natural gas sector aimed mainly to:

- estimate the differences between substantiated directly taken over costs and the effective ones in 2008, as well as the values estimated to be accomplished in the last 3 months of 2008;
- assess the investments put into operation during the period between establishing the base income from the first year of the regulatory period and the adjustment moment (accomplished up to September 30, 2008, and estimated to be accomplished in the last 3 months of the year), related to the regulated supply.

Conditions and rules for using the National Transmission System of natural gas (NGT) in Romania, as well as the transparent and non-discriminatory access of third party are regulated by the Network Code, approved by Order ANRE no. 54/2007. The Network Code is to be applied by the gas year 2009-2010.

The Network Code of the NGT stipulates rules and procedures related to access to NGT, from which the most important are:

- procedures on gas system balancing, nominalizations and communication;
- allocation capacities mechanisms;
- procedures for operating the system in emergency.

By introducing penalties for non-observing the Network Code, the discipline will be established among grid users.

As regards investments and provisions of art. 22 from Directive 2003/55/CE (transposed into the national legislation), in 2008 a new stage in developing Nabucco project was accomplished, regarding in handing in the application concerning the exemption from the provisions regarding the third party access, based on the provisions of the previously mentioned article. In compliance with the legal provisions in force, in Romania, the regulatory authority is responsible for granting this exemption. Thus, the exemption application was put down by the solicitor and analyzed by the regulatory authority in Romania. The notification of the application was accomplished in July 2008. The Decision ANRE no. 145/2008 grants the exemption of the Romanian sector of Nabucco pipeline from the provisions in the legislation regarding third party access to the natural gas transmission systems and from the tariff methodologies.

2.4. Regulation/ Unbundling the activities in the electricity and natural gas sector

ANRE is an independent public legal body of national interest totally financed from funds outside the state budget and being under co-ordination of the Vice-Prime Minister.

ANRE's mission is to elaborate, setting up and monitor the implementation of the mandatory regulations at national level, necessary to ensure the proper functioning of the electricity and gas sectors in terms of efficiency, competition, transparency and protection of the customer.

The activities developed in the electricity and gas sectors have the following objectives:

- To ensure the sustainable development of the national economy;
- To diversify the primary energy resources;
- To ensure the gas storage capacity to cover the regular and strategic demand;
- To ensure the safety fuel stocks for electricity generation as well as for thermal energy produced by co-generation systems;
- To create and ensure the proper functioning of the competitive energy markets;
- To ensure non-discriminatory access to gas sources;
- To ensure non-discriminatory and regulated access for all parties to the energy markets and to the electricity networks of public interest; To ensure non-discriminatory access of third parties to the gas upstream pipelines, storage facilities, transmission and distribution systems;
- To ensure transparency of energy tariffs, prices and taxes with a view to increasing energy efficiency in the electricity and gas sectors;
- To ensure the safety and continuity of energy supply to the customers;
- To protect the legitimate interests of the customers;
- To ensure the secure operation of the Romanian Power System -SEN and the interconnected operation of NPS and of the National Gas Transmission System (SNT) with the national systems of the neighbouring countries and with the European systems;
- To ensure the protection of the environment at local and global level, in accordance with legal regulations in force;
- To promote the use of new and renewable energy sources.
- To promote electricity produced in high efficiency co-generation systems, associated to thermal energy delivered to cover a justified economic consumption

From institutional point of view, the competences and attributions for ANRE are clearly stated in primary legislation, with financing from own incomes generated through fees for granting licensees, authorizations and certifications for services supplied as well as from contributions on behalf of operators within the energy sector or through funds granted by international organizations.

ANRE tasks and competencies are explicitly defined in the primary legislation, its activity being financed from funds outside the state budget through fees obtained for granting licenses, authorizations and certifications levied upon the regulated companies and through funds granted by international organizations.

The primary legislation provides distinct criteria under the mandates of ANRE management and of the Regulatory Committee members cease. ANRE implemented consultation mechanisms and information procedures to increase the stakeholders involvement in the decision making process. Regulations of general interest are approved through ANRE orders and subsequently published in the Official Gazette (MO) of Romania, Part I.

The orders and decisions issued by the president in exercising his duties can be appealed in the Administrative Litigation Department with the Bucharest Court of Appeal within 60 days following publication in Romania's Official Gazette, Part I, respectively from the date of

notification of the parties involved. The orders and decisions mentioned are mandatory for the parties until a final irrevocable court sentence is pronounced.

ANRE publishes annual performance reports on its regulatory activities and on the monitoring activities developed.

ANRE is lawfully entitled to apply sanctions if contraventions of its regulations are found.

In discharging its tasks, ANRE works together with the Competition Council, with the National Authority for Consumers Protection, with the ministries and other public local or central administration bodies, with the electricity consumer associations, with undertakings delivering services in the sector, with the professional associations and the employer and trade union associations in the energy field, with regulatory authorities from other countries.

The legal unbundling of electricity generation, transmission, distribution/supply activities in Romania was made according to GD no. 627/2000 and, as a result, the following undertakings were established: CN Transelectrica SA – Romania's sole transmission system operator; SC Electrica SA – distribution and supply operator; SC Termoelectrica SA and SC Hidroelectrica SA – generation companies. Added to these is SNN Nuclearelectrica SA, which was set up according to GD no. 365/1998.

The steps taken following the restructuring of CN Transelectrica SA consolidated the company's position as an unbiased independent transmission system operator. In its capacity as TSO, the company: is the concessionaire of the transmission system service and of the public assets associated to the electricity transmission grid and ensures the safe and stable functioning of the NPS at the required quality standards; at the same time, it ensures the regulated access of all market participants to the public electricity network, in a transparent, non-discriminatory and impartial manner.

In 2008, 35 distributors operated on the Romanian electricity market, 8 of which with over 100.000 customers each.

The 8 main electricity distribution operators are:

1. SC FDEE Electrica Distribuție Muntenia Nord SA, full state-owned capital
2. SC FDEE Electrica Distribuție Transilvania Sud SA, full state-owned capital
3. SC FDEE Electrica Distribuție Transilvania Nord SA, full state-owned capital
4. SC E.ON Moldova Distribuție SA, majority private ownership
5. SC CEZ Distribuție SA, majority private ownership
6. SC Enel Distribuție Banat SA, majority private ownership
7. SC Enel Distribuție Dobrogea SA, majority private ownership
8. SC FDFEE Electrica Muntenia Sud SA, majority private ownership

All eight concluded the legal unbundling of their distribution and supply activities.

During 2008, as regards the obligations of regulated activities unbundling in gas sector, the activity focused on aspects related to assistance and approval of legal, operational, organizational and accounting unbundling reports, as the case, of the regulated activities developed by the licensees in natural gas sector according to art. 101 in Gas Law, in performing its main tasks in order to accomplish the provisions in the Regulation on legal, operational, organizational and accounting unbundling of the regulated activities in natural gas sector, approved by Decision of ANRGN no. 1139/2006, modified and supplemented by

Order ANRE no.51/2008, published in the Romanian Official Gazette, part I, no. 453/18.06.2008.

Thus, as regards the accounting unbundling, all the legal persons responsible have accomplished it.

Regarding the legal unbundling, as it was mentioned in the 2007 report, it was accomplished by S.C. E.ON Gaz Romania, one of the two major distribution system operators and by storage operator S.C. AMGAZ S.A.; the legal unbundling is not necessary for the storage operator S.C. DEPOMUREȘ S.A, as it gave up the natural gas supply license, developing underground storage only. As concerns the transmission operator S.N.T.G.N. TRANSGAZ S.A., the situation is identical, as it gave up the supply license. The legal unbundling process for the last storage operator – S.N.G.N. Romgaz S.A. is developing. The legal unbundling of the other major distribution operator, S.C. Distrigaz Sud S.A, was finished in April 2008.

2.5. Security of the electricity and natural gas supply

Electricity

In compliance with the stipulations of the UCTE study regarding the system adequacy forecast (System Adequacy Forecast 2009-2020), the forecast of the consumption and the net capacity values is given in *Table 2.9*.

Table no. 2.9

	2009			2010			2013			2015			2020		
	3rd Wednesday			3rd Wednesday			3rd Wednesday			3rd Wednesday			3rd Wednesday		
	Jan 11.0 0 am	Jan 7.00 pm	Jul 11.00 am												
Generation net capacity (GW)															
pessimist scenario	16.7	16.7	16.7	17.0	17.0	17.0	18.5	18.5	18.5	18.6	18.6	19.8	18.6	18.6	18.6
optimist scenario	16.7	16.7	16.7	17.0	17.0	17.0	19.2	19.2	19.2	21.5	21.5	22.7	23.2	23.2	23.2
Consumption (GW)															
	8.0	8.6	7.2	8.3	8.8	7.4	8.9	9.6	8.0	9.4	10.1	8.4	10.8	11.6	9.6

It is estimated that two new nuclear power units (650 MW), one pumping storage plant (1000 MW), several hydropower units, fossil-fuelled units (for which the rehabilitation-closing-new units balance is constant) and several units that use renewable energy other than hydro are estimated to be commissioned by 2015.

Judging by the number of establishment authorisations issued so far, it is estimated that by 2015, several hydro units (97 MW) and new fossil fuelled units (60 MW) and several units using renewable energy sources other than hydro (wind and biomass) (633 MW) are to be commissioned by 2015.

Under the Government's strategy to promote the use of the renewable energy sources, it is estimated that, in the future, the installed power of the wind power plants' will totalise about 1000 MW in 2012, respectively 3000 MW in 2017.

Every two years, CN Transelectrica SA issues the prospective plan for the development of the electricity transmission network for the following 10 years. The plan becomes a public document after the approval of both ANRE and the competent ministry and must ensure the:

- System's adequacy, under safe and economically efficient conditions, in line with the national energy
- Correlation between TSO and the electricity market participants regarding any service that may alter the safe functioning of the RPS
- Zone opportunities for the connection of users to the transmission grid depending on the estimated consumption development and the need for new generation capacities;
- NPS reserve for the generation of electricity to meet the sizing necessities.

The second interconnection overhead electric line (LEA) between Romanian and Hungary was built and commissioned (LEA 400 kV Arad – Nădab - Bekescsaba) in 2008. The number of interconnection lines envisaged to be built in order to significantly increase the electricity exchanges in the region are given in the *Table 2.10* below:

Table no.2.10

Overhead Lines or Power Sub-Stations	Voltage level (kV)	Commissioning year	Length (km)
LEA Resița – Timișoara (double circuit currently operating at 220kV)	400	2015	73
LEA Timisoara – Arad (double circuit currently operating at 220kV)	400	2015	54
LEA (România) - (Serbia); the interconnection sub-stations between the two countries are not specified	400	2015	~100
LEA Suceava (RO) – Bălți (MD)	400	2016	150 (93 in RO)
LEA Suceava – Viișoara (Bistrița) - Gădălin	400	2018	260
LEA Cernavodă – Stâlpu	400	2016	156
Sub-station Tarnița (pumping storage hydropower plant)	400	2016	-
LEA Tarnița – Mintia, double circuit	400	2016	145
LEA Tarnița – Gădălin	400	2017	40

Natural gas

The interconnection strategy of the natural gas NGT to the systems from the neighbouring countries was structured into four directions, namely:

a) Strategic interconnection of NGT to the neighbouring countries transmission:

- Interconnection to Hungary – Szeged- Arad pipeline;
- Interconnection to Bulgaria – Russe- Giurgiu pipeline;
- Interconnection to Serbia.

b) Interconnections in order to diversify the gas import sources:

- Interconnection to Bulgaria at Negru Vodă;
- Interconnection to Ukraine at Siret- Bucecea.

c) Interconnections designed to develop new storage capacities:

- Interconnection to Moldova – Margineni store;

d) Interconnection to Nabucco pipeline (natural gas transmission corridor from Caspian Sea to the west of Europe).

During 2008, the natural gas market development considered the following:

- The development of competition between natural gas suppliers;
- The continuous implementation of type “ceiling” tariff methodologies;
- Stimulation of establishment and/or rehabilitation of natural gas deposits, in order to increase the natural gas quantities from internal production and limitation of dependence of import;
- Granting licenses to new suppliers, developing transactions on the wholesale market, aiming to diversify the sources of import.

2.6. General conclusions

Compared with 2007, in 2008 the volumes traded on the electricity centralized markets were significantly higher which, in turn, led to an increased transparency of the transactions. The transformation of market operator SC OPCOM SA (starting with July, 1st, 2008) in the single central counterpart for the participants on the day ahead market, therefore contributed to a higher level of confidence regarding the transactions on this market by removing the counterpart risk.

Compared to last year the average degree of electricity market opening recorded a decrease of one percent. The analysis of switching from a supplier to another showed that in 2008 the electricity market was less active from this point of view; the very high levels of switching rate on non-household consumers indicate a more intense activity of this type of consumers. Moreover in order to provide better information to the customers concerning the process of switching the supplier, through a Phare project ANRE started an information campaign comprising leaflets, conferences, newspaper articles and information published on its web page.

The experience of 2008 on cross-border capacity allocation leads to the necessity of improving the mechanism in order to better use the existing capacities; in this respect, some aspects have to be taking into account: organising bids nearer to the delivery day, organising secondary market with TSO, or introducing new products for base load/peak/off peak on the market.

In order to deal with congestion it has been taken into account the increase of interconnection capacity. Therefore, at the end of 2008, a new interconnection line was put into place on the Romanian-Hungarian border, Nadab-Bekescsaba. The prospective development of the transmission network for the next 10 years drafted by Transelectrica and approved by ANRE, aims at developing of new interconnections between 2009-2017. Another potential improvement refers to the investment in building an underwater cable between Romania-Turkey (600 MW) and a series of investment in the transmission network in the SE of Romania in order to extract electricity generated in new production capacities to be developed during 2008-2020 (nuclear groups 3 and 4 of Cernavoda, wind units and thermo units).

Consumption of natural gas in 2008 was reduced by 5% compared to 2007. At the end of 2008, there were 1,048 eligible consumers on the natural gas free market, equivalent to a market opening degree of 54.05%. In order to better inform non-household consumers of natural gas, a specific methodology on supplier switching which summarizes the information required in this process was published.

The 1st of July 2008 marked the passage from the billing of gas quantities in volume units to the billing in energy units, a process that required updates to the ANRE's regulations and additional requirements to suppliers of natural gas on familiarizing consumers with the new billing system.

Both electricity and natural gas prices to final consumers, who have not chosen to change the supplier, increased.

In June 2008 ANRE Decision no. 145/2008 grants the exemption of the Romanian sector of Nabucco pipeline from the provisions in the legislation regarding third party access to the natural gas transmission systems and from the tariff methodologies, decision notified to the European Commission.

The prospect of applying the provisions of the European Commission third legislative package, evaluation and adaptation of existing regulation should meet the requirements imposed by the liberalization of energy markets and the requirements of providing a predictable regulatory framework and a stable investment climate, without neglecting aspects of energy security and sustainable development.

3. Regulation and performance of the electricity market

3.1. Regulatory issues [Article 23(1) except “h”]

3.1.1. Management and allocation of interconnection capacity and mechanisms to deal with the congestions

The NPS includes the following sections:

1. the Romania – Bulgaria section:
 - LEA 400 kV Isaccea – Dobrudja
 - LEA d.c. 400 kV Țânțăreni – Kozlodui
 - LEA 750 kV Isaccea – Varna (following the commissioning at 400 kV)
2. the Romania – Serbia 400 kV section:
 - LEA 400 kV Porțile de Fier – Djerdap
3. the Romania – Serbia 110 kV section:
 - LEA 110 kV Ostrovul Mare – Kusjak
 - LEA 110 kV Gura Văii – Șip
 - LEA 110 kV Jimbolia – Kikinda
4. the Romania – Hungary section:
 - LEA 400 kV Arad – Sandorfalva
5. the Romania – Ukraine section:
 - LEA 400 kV Roșiori – Mukacevo
6. the Romania – Republic of Moldova section:
 - LEA 400 kV Isaccea – Vulcănești
 - LEA 110 kV Stâncă – Costești
 - LEA 110 kV Huși – Cioara
 - LEA 110 kV Țuțora – Ungheni

Due to the fact that Romania and Moldova belong to different power-supply synchronization areas, the lines allows only imports through passive consumption island schemes with the consent of the distribution operator within that respective island or through tie lines under UCTE conditions.

Evaluation of the level of internal congestion and interconnection lines

Integration of the Romanian electricity market in the regional market was achieved also in 2008, through bilateral export / import agreements signed among producers and suppliers in Romania with foreign partners. Besides these, there were exchanges of mutual links between TSO, performed based compensation.

A total of **0.94 TWh** of electricity has been imported and **5.39 TWh** has been exported (the values are based on the data reported by the market participants); the physical flows were **2.61 TWh** on import and **7.04 TWh** on export (the figures also include transit flows which did not involve participants from Romania, technical exchanges between TSOs and loop flows). Compared with 2007, imports decreased with approximately 29%, while exports increased with approximately 59%.

Allocation of interconnection capacity on the interconnection lines of NPS with neighbouring systems to achieve transaction import / export and transit of electricity is realised via explicit auctions.

Annual bids are organized by Romanian TSO (CN Transelectrica SA) for the following year allocation and monthly bids for the allocation of the remaining available capacities for the following month which may be spread on shorter intervals, depending on the forecasted variations of the ATC level throughout the month. On the annual bids, firm bilateral annual NTC are offered-determined so that it can be used simultaneously to the same level throughout the year - adjusted for all agreed annual repair (in the national energy system and interconnection) and assuring simultaneous TRM agreed by 100 MW on each border (exception: where there are partners in a single line border, the annual NTC firm are guaranteed only as long as the line is in operation).

Just for information purposes, maximum unsecured bilateral NTC are calculated, the seasonal pattern of winter. The goal is to define a credible ceiling for the monthly auctions, which provide realistic guidance to interested parties on the possibility of exchange in advance from calculations made prior to the monthly auction.

The following figures present for each boundary, the corresponding CN Transelectrica's NTC of import and export agreed with neighbours TSOs, compared to the capacity allocated by the CN Transelectrica during the auctions.

Bulgaria:

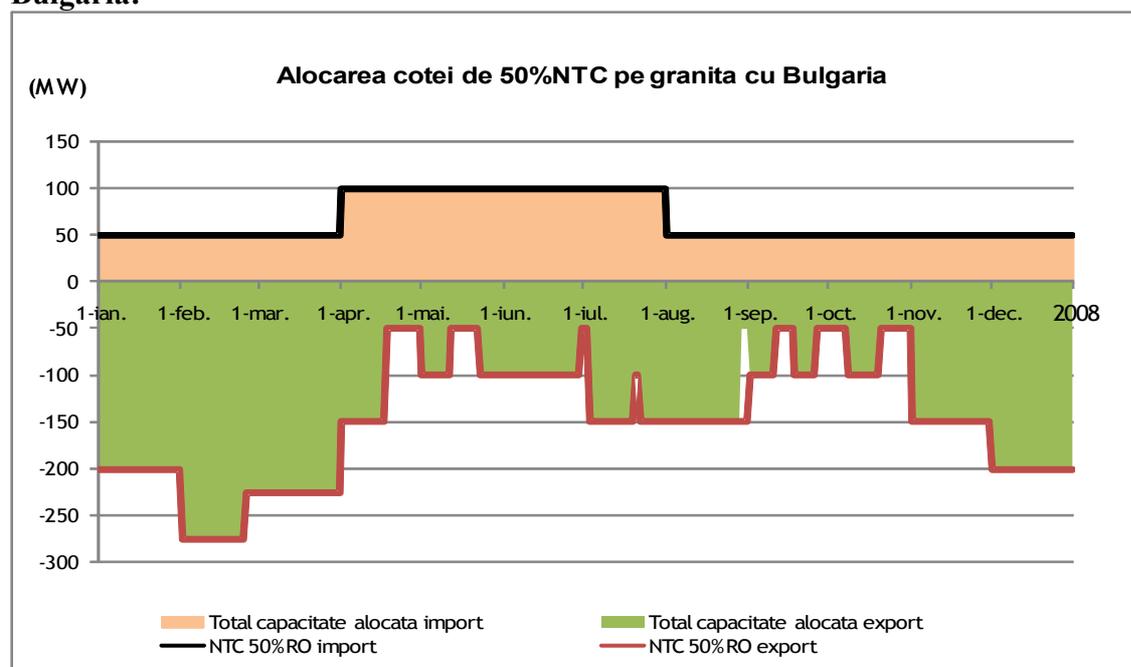


Figure no. 3.1

Source: Data CN Transelectrica

Serbia:

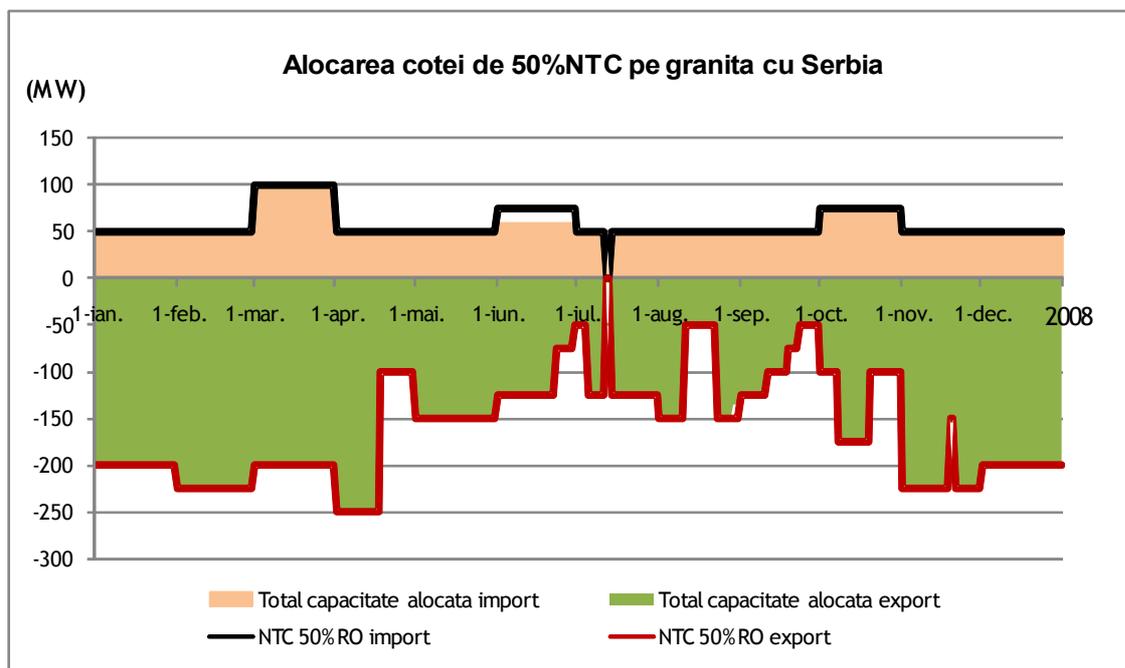


Figure no. 3.2

Source: Data CN Transelectrica

Ukraine:

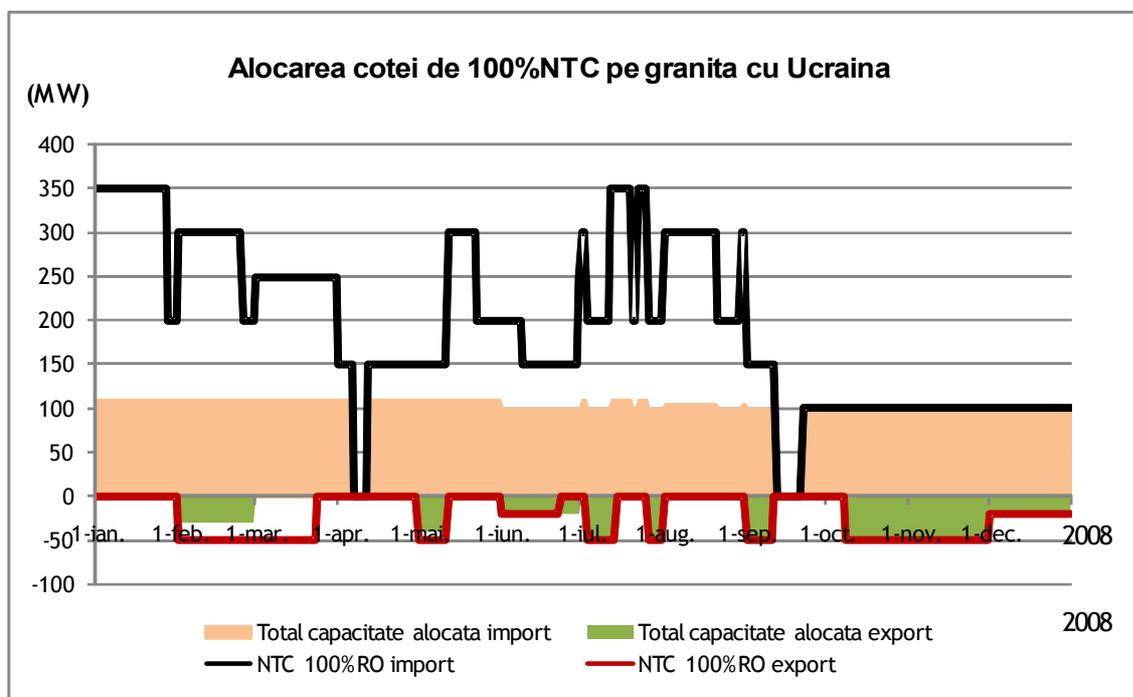


Figure no. 3.3

Source: Data CN Transelectrica

Hungary:

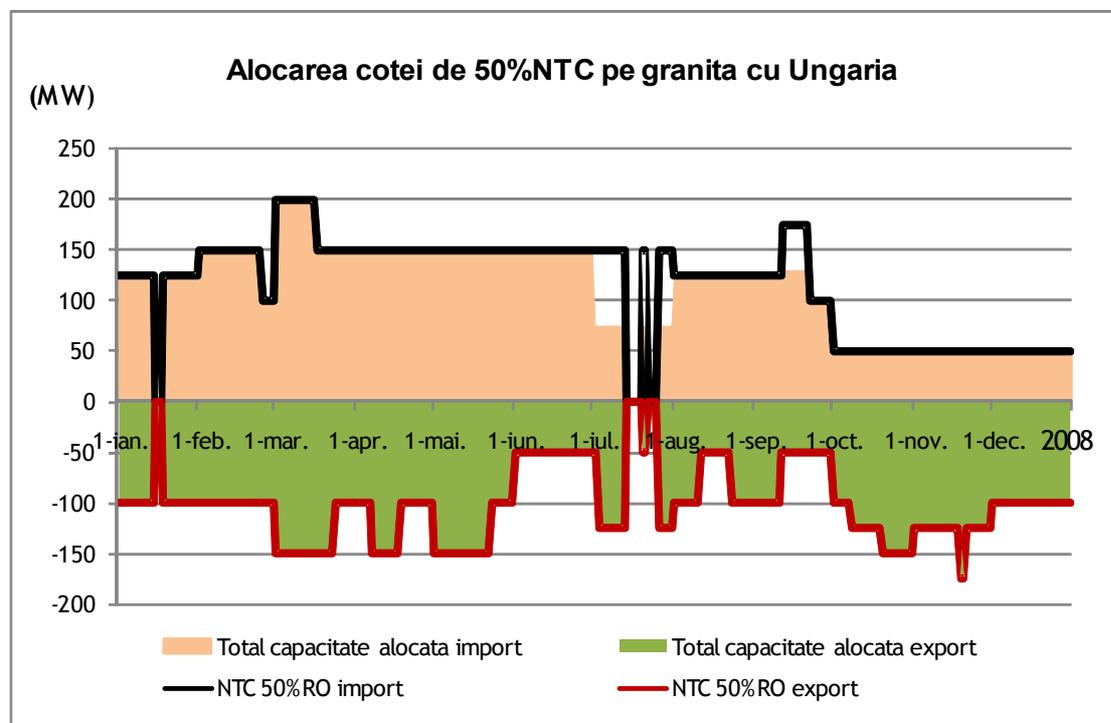


Figure no. 3.4

Source: Data CN Transelectrica

From the above presented graphs results that most of the time the request for interconnection capacity covered CN Transelectrica offer in both directions, on all boundaries (except Ukraine).

The congestion on the interconnection lines were evaluated by percentage, by reporting the amount of capacity allocated (according to annual and monthly auctions) listing NTC offered the market by CN Transelectrica; in *Table 3.1.* is presented the monthly level of congestion on import and export lines for each interconnection:

Table no.3.1

Nivel de Congestie (%) = (Total Capacitate Alocata / NTC RO)* 100														
IMPORT														
Granita	2008	ian.	feb.	mar.	apr.	mai	iun.	iul.	aug.	sep.	oct.	noi.	dec.	2008
BULGARIA		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
SERBIA		100.00	100.00	100.00	100.00	100.00	80.00	100.00	100.00	100.00	100.00	100.00	100.00	98.33
UCRAINA		38.16	39.83	44.00	73.33	55.00	61.33	41.95	39.35	81.67	100.00	100.00	100.00	64.55
UNGARIA		100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	91.43	100.00	100.00	100.00	95.12

Nivel de Congestie (%) = (Total Capacitate Alocata / NTC RO)* 100														
EXPORT														
Granita	2008	ian.	feb.	mar.	apr.	mai	iun.	iul.	aug.	sep.	oct.	noi.	dec.	2008
BULGARIA		100.00	100.00	100.00	100.00	100.00	100.00	100.00	93.55	100.00	100.00	100.00	100.00	99.46
SERBIA		100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.03	100.00	100.00	100.00	100.00	99.92
UCRAINA		0.00	60.00	0.00	0.00	28.39	73.33	54.84	0.00	50.00	77.42	100.00	100.00	45.33
UNGARIA		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: CN Transelectrica

A specific element of capacity allocation system in 2008 was the high level of prices of interconnection capacity on export, which resulted at the annual bid (35-77 lei/MWh), especially on the border with Serbia, Hungary and Bulgaria. The prices decreased dramatically at the monthly bids, in most of the months (March-August, November-December); as an exception, in October, the prices at the monthly bid were higher.

High prices of the interconnection capacity on export induce high costs for cross border transactions, which might be a significant obstacle for the international trade.

In *Figure 3.5* are presented for each interconnection, the degrees of monthly use of interconnection capacity on export, respectively import, calculated by reference to the allocated capacity of the average power notified by participants that trade on the platform (the balancing), it can be observed that there are borders and months in which cross-border exchanges notified were significantly lower than the reserved capacity, especially on import.

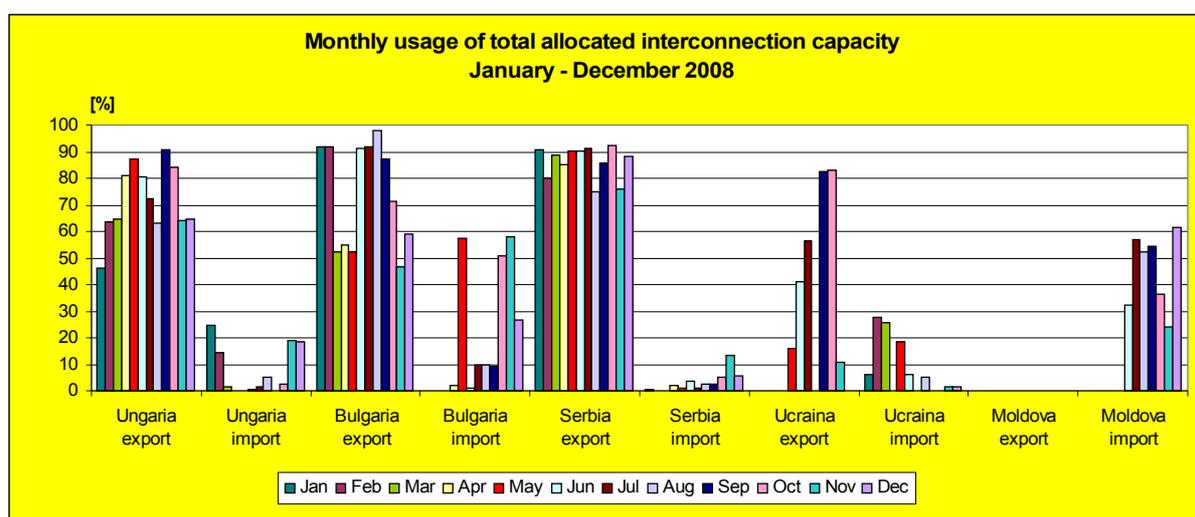


Figure no. 3.5

Source: CN Transelectrica

This situation leads to the necessity of improving the mechanism in order to better use the existing capacities; in this respect, some aspects have to be taking into account: organising bids nearer to the delivery day, organising secondary market with TSO as organiser and participant, introducing new products for base load/peak/off peak on the market.

TSO maximizes the total capacity offered by the division at monthly auctions, monthly periods in sub-periods corresponding variations ATC.

One of the reasons that led to minimal efforts to implement other market mechanisms was in 2008 the creation of a mechanism for coordinated allocation at regional level, as the new mechanisms could prove useful only in the short term.

Another reason for which the allocation system has not evolved is the fact that in order to implement any changes there is a need for cooperation with neighbouring TSO's, making the responsibilities difficult to control.

In addition, in order to deal with congestion it has been taken into account the increase of interconnection capacity. Therefore, at the end of 2008, a new interconnection line was put into place on the Romanian-Hungarian border, Nadab-Bekescsaba. This new capacity and its effects on the electricity flows had been taken into consideration when determining the steady bilateral annual NTC offered at the 2009 annual bid.

Noticing that there have been costs on import, although the utilization degree of the capacity was generally small (as it can be seen above), it is considered that the priority is to improve the mechanisms for allocation, before making decisions to increase physical capacity of the interconnection.

The congestion on the internal lines are usually small and are resolved through the balancing market: TSO command and loading / unloading of units that can remove the congestion resulting from domestic producers or dispatching following orders given under the order dispatcher merit, and the difference in costs associated with these changes are supported by TSO is not included in prices imbalances.

The monthly electricity levels that TSO engages for the internal congestions management together with its associated c/value for the year 2008 are given in Figure 3.6.

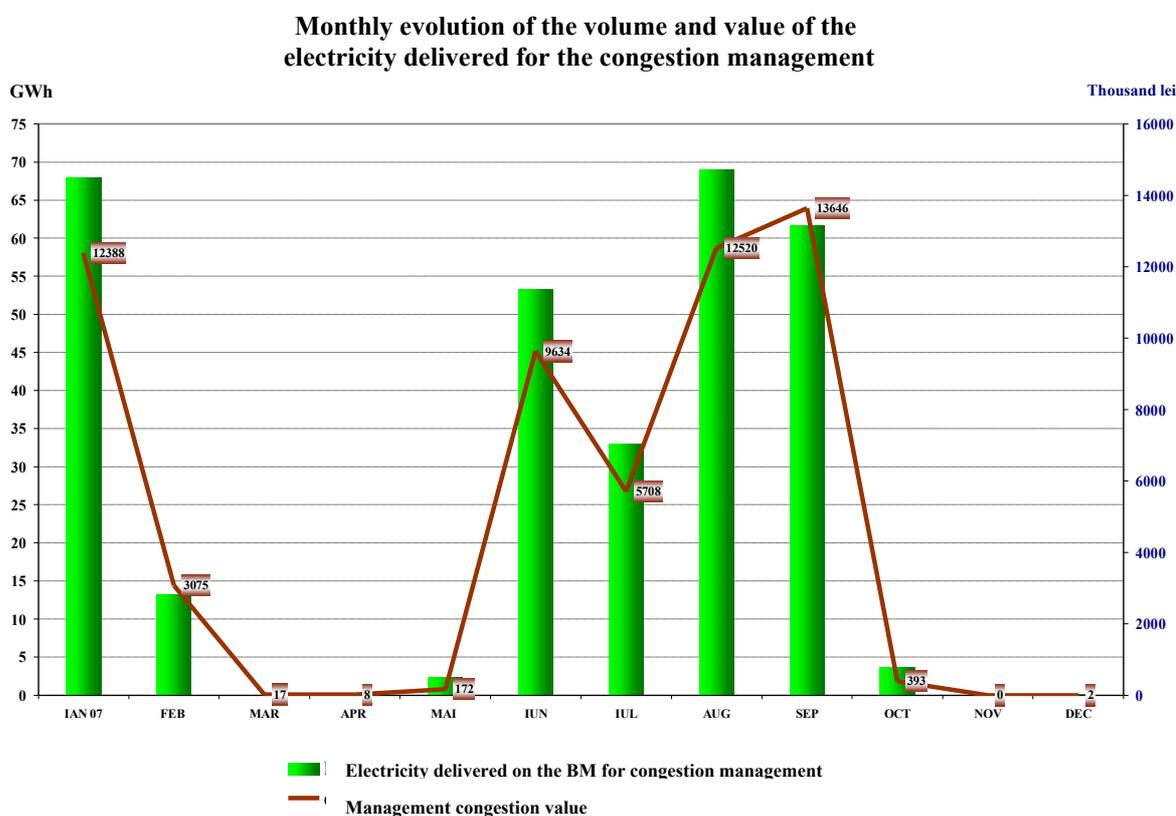


Figure no. 3.6

Source: CN Transelectrica, ANRE

In 2008, recurrent congestions occurred around Romania's capital Bucharest in periods with high summer temperatures due to increased electricity consumption, to the reduced power notified by the generator holding generation units in the area and to the limited possibilities of the networks elements to sustain the energy transfer from other zones.

The congestions were solved mainly within the balancing market, the producer, SC Electrocentrale Bucharest re-dispatched its production to increase energy supply in this area.

The number of dispatch intervals in each month with internal congestion and the balancing energy supplied are presented in Table 3.2, according to data provided by the TSO:

Table no.3.2

No.	Month	Network congestion area	Dispatch intervals	Energy (MWh)	
				Upward	Downward
1	January	There were no congestions			
2	February	There were no congestions		-	-
3	March	There were no congestions		-	-
4	April	Bucharest – safety conditions to be ensured	69	1819.86	-
5	May	Bucharest – safety conditions to be ensured	106	2332.00	-
6	June	Bucharest – safety conditions to be ensured	193	6516.00	-
7	July	Bucharest – safety conditions to be ensured	742	20927.10	-
8	August	Bucharest – safety conditions to be ensured	712	28841.19	-
9	September	Bucharest – safety conditions to be ensured	205	11232.38	-
10	October	Bucharest – safety conditions to be ensured	55	2024.87	-
11	November	There were no congestions		-	-
12	December	Isalnita	2	-	-86.70
	Total		2084	73693.40	-86.70

Source: CN Transelectrica

Rules for allocating of cross-border interconnection capacity; publication obligations of market information that relates to congestion management on the interconnection lines of the TSO

Congestion management and allocation of interconnection capacity are performed in accordance with the *Methodology to setting up the monthly net firm interconnection capacity* and the procedure entitled *Allocation of the Romanian Power System Transfer Capacity to the Neighbouring Power Systems* that was issued by the Romanian TSO and approved by ANRE.

The methodology used by the TSO to calculate the net transfer capacity (NTC) is published on the TSO website www.ope.ro, under the heading: *Other markets/ATC allocation procedure*

Last review of the allocation procedure was endorsed by ANRE in November 2006. The revised procedure is published in both Romanian and English on the same website heading, along with the ATC Allocation Framework Contract between the TSO (CN Transelectrica SA) and the capacity contracting party.

The right to use interconnection capacities for import/export transactions and for the transit of electricity is allocated through explicit bids. The bids are generally organised on monthly or yearly basis or whenever necessary, but not for shorter than a week periods; the period for which the monthly-bided allocation take place can be from 1 day to 1 month, depending on the duration of the maintenance works scheduled for various interconnections.

TSO defines the interconnection line groups, determines and publishes the values of the NTC for the interconnection line groups, taking into consideration the safety criteria when verifying the operation regimes of the NPS (thermal, voltage and steadiness limits, the N-1 criterion, the safety margin of the international interconnection – TSM, the capacity already allocated – AAC).

Because when calculating the annual NTC there are uncertainties related to:

- Finalizing the plan for annual extraction (load) of NPS and coordinated extraction (load) within interconnection;

- Reprogramming of extraction (load) during the year;

- Forecasting production in key points affecting the NTC values,

CN Transelectrica usually estimates, the annual firm NTC based upon current and previous year's experience concerning simultaneous refurbishment programmes of the interconnection and exchange opportunities, therefore proposing, the lowest monthly values of firm NTC made over the last 12 months. Further calculations are carried out only if refurbishment programs are taken into consideration for the following year, which may lead to firm NTC values significantly lower or significant commissioning (lines and stations for interconnection, etc..) in the period between the estimation of the annual NTC and the beginning of next year which may increase firm NTC.

The TSO together with the peer operators from the neighbouring countries agree upon the NTC, which is equally distributed for import and export among the neighbouring TSOs.

Before each auction associated to an allocation period, the TSO determines the available interconnection capacities and identifies any possible congestion in compliance with the provisions of the *Transmission Grid Code* approved through ANRE Order 20/2004, with the subsequent amendments and complementing, and with the UCTE rules and the ETSO practices.

The TSO publishes, before each auction, the values of the TTC, TRM, NTC, AAC and ATC, in compliance with the aforementioned procedure. Following the bid, TSO publishes, for each border and direction, the codes and names of the winning participants, the value of the capacity allocated to each participant and the allocation price within that respective auction.

Also, on TSO's website concerning the balancing market, www.ope.ro, Transelectrica publishes daily reports of the following:

- international trade (exports and imports), according to notifications made by the balancing responsible parties (PRE) as part of the obligations concerning the operation of the balancing market (trade, including transit);

- production and consumption of energy notified by PRE for the following day;

- forecast on the consumption estimated by the TSO for the following day;

- TSO consumption forecast for day D +2;

- consumption in D-2.

- annual and monthly plans to withdraw from operating the equipment of the transmission network and the interconnection lines;
- a report on the analysis of congestion on the interconnection lines in the previous year, and
- studies on the operational planning of NPS in the winter season and summer, which included the consumption forecast by 6 months (average monthly), installed capacity in the forecast, the maximum NTC (indicative unsecured) - used to determine the volume maximum exchange possible.

Also, CN Transelectrica published in real time on site www.transelectrica.ro the level of consumption and production (broken down by main types of fuel), the balance on cross-border trade and the level and direction of these exchanges on each interconnection, this information is not, however, stored / necessary to be stored.

On www.etsovista.org are published the following:

- Physical flows measured on all interconnections;
- Maximum values of unsecured NTC.

In order to determine the causes of incomplete compliance with the obligations of transparency stipulated in the Regulation CE 1228/2003, as well as the reasons which restrained the development of a daily allocation market of interconnection capacity, ANRE started in March 2009 an audit activity at CN Transelectrica SA

As regards the management of internal congestion, on a daily basis are published on www.ope.ro accepted energy (dispatch orders) to solve congestion, for fast or slow tertiary regulation on upward or downward.

CN Transelectrica also publish the site www.ope.ro in its monthly reports on the balancing market, the monthly balance energy for internal congestion management ; information also provided in ANRE public reports concerning electricity market monitoring, posted on the website www.anre.ro.

Distribution operators are not bound to publish information related to congestion management.

Congestion management integration in the functioning of the wholesale electricity market

The cross-border transactions carried out according to the allocated transfer capacity are also notified as block exchanges, thus being integrated in mechanisms that are associated to the balancing market.

Considering the fact that one bid per month was the maximum frequency with which auctions were held, this market does not reflect the wholesale market trends occurred on shorter terms, certain participants reserving their transfer capacities to be used should other market opportunities arise.

The integration of cross border exchanges into the mechanism of the balancing market was another element that allowed these exchanges, whereas deviations from the graphics exchange notified by participants were counted as exchanges in reverse therefore and supported imbalances as by TSO on the Romanian balancing market, the physical flows of energy was provided in the UCTE interconnected system, automatically or in the form of

additional supply requested in advance by neighbouring TSO (which is usually returned in the same time interval).

Congestions on the internal lines are, generally, of a lesser magnitude and are solved on the balancing market: TSO orders the up-ward and/or down-ward regulation of the dispatchable units other than the ones that would follow in the merit order (if the operation of the latter leads to internal congestion) and the costs associated to these modifications are covered by the TSO and are not included in the imbalances price.

3.1.2 The regulation of the tasks of the transmission and distribution operators

Network tariffs

The legal unbundling of electricity generation, transmission, distribution/supply activities in Romania was made according to GD no. 627/2000 and, as a result, the following undertakings were established: CN Transelectrica SA – Romania's sole transmission system operator; SC Electrica SA – distribution and supply operator; SC Termoelectrica SA and SC Hidroelectrica SA – generation companies. Added to these is SNN Nuclearelectrica SA, which was set up according to GD no. 365/1998.

The subsequent restructuring process of CN Transelectrica SA consolidated the company's position as the unbiased independent transmission system operator. In its capacity of TSO, the company: is the concessionaire of the transmission system service and of the public assets associated to the electricity transmission grid; ensures the safe and stable functioning of the NPS at the required quality standards; and, at the same time, ensures, in a transparent, non-discriminatory and impartial manner, the regulated access of all market participants to the public electricity network. CN Transelectrica SA is a member of UCTE since May 2003 and of ETSO since November 2004. The length of the transmission grid is 8920 km.

According to the provisions of the Electricity Law, the TSO performs the following activities, mainly:

- operate, refurbish, rehabilitate and develop: equipment in the electricity transmission networks, equipment for the metering of electricity flow in the transmission network and to the interface with the assigned electricity network users, transmission networks IT and telecommunication equipment relating to NPS
- ensure the public electricity transmission service and the electricity transit on the Romanian territory, according to the contracts concluded;
- examine and endorse the compliance of the electricity transmission network users with the network connection technical conditions, as per the technical regulations in force;
- ensure the transmission of the electricity metering results to the operator of the corresponding centralized market and the access of the transmission service beneficiaries to verify the metering units;
- carry out NPS operational scheduling and operative control through its dispatch centres at central and regional level based on its own forecasts according to the electricity market legal regulations in force;
- authorize the operative control staff according to regulations in force;
- collect, keep records and store statistical data regarding NPS operation;

- exchange information with the interconnection partners and with other collaborators in the energy field, as per the UCTE regulations regarding the information exchange protocols, reports, structure and the access procedures to databases;
- qualify the ancillary services suppliers according to its own procedure that shall be subsequently approved by the competent authority;
- draw up and submit to the competent authority for approval the technical norms and the specific regulations for the operative control activity, after consultation with the electricity market participants;
- draw up, under the terms of the law, the plan for the protection of NPS against major disturbances;
- draw up the studies, programmes and works regarding NPS development.

The Methodology to setting up tariffs for the electricity transmission service that was approved through ANRE Order no. 60 /2007, sets up the method to determining the income and to calculating the electricity transmission tariffs.

Transmission tariffs are determined based on a revenue-cap methodology, which was implemented with a view to ensuring:

- fair allocation, between the TSO and the transmission service beneficiaries, of the proceeds obtained from the increase in efficiency beyond the target set by the competent authority;
- efficient operation of the transmission company, prevention of any possible benefits the transmission system operator may gain from its monopolistic position
- promotion of efficient investments in the electricity transmission grid;
- promotion of efficient maintenance and operation practices;
- efficient use of the existing infrastructure, continuous improvement of the transmission service quality
- financial viability of the transmission company
- public and transparent information on the regulatory process.

The methodology is used by the TSO Transelectrica in order to calculate the regulated income and the transmission tariffs within a certain regulatory period, transmission tariffs that are to be applied to all the beneficiaries of the electricity transmission service: generators, customers, suppliers, distributors.

The regulated income for the transmission service is ex-ante determined by ANRE for a regulatory period of 5 years, with the exception of the first regulatory period of 3 years. The impact of inflation over costs is covered through the annual retail price index applied to tariffs in real terms.

Transmission tariffs differ by nodes (zones) depending on the impact of the injection or extraction of electricity into/from the nodes of the transmission grid. This impact is expressed as the transmission nodal marginal cost.

Transmission tariffs are approved annually by ANRE and come into force at the beginning of each fiscal year.

The following data are requested by the regulator to justify the TSO costs:

- regulated assets base;
- controllable and uncontrollable operation and maintenance costs;

- depreciation of the existing assets and of the investments commissioned annually;
- acquisition costs to cover electricity losses;
- acquisition of electricity costs associated to congestion elimination through re-dispatching;
- costs with the electricity cross-border exchanges.

Regulated revenue cap for the transmission service is ensured taking into consideration the:

- provisions stipulated in the performance quality standards imposed to the TSO through the *Transmission Grid Code*, the Romanian legislation or the contracts signed with the transmission service beneficiaries;
- evolution of the transmitted electricity quantity, estimated by the TSO;
- modification of losses level in the transmission grid;
- profitability of the regulated assets base.
- tariffs evolution, expressed in a smooth manner, within a regulatory period;
- all the transmission service fees paid by the TSO;
- financial viability of the TSO.

No internal comparison with other similar operators can be performed in order to determine the efficiency factor applied to controllable costs as there is only one TSO in Romania. In order to determine the efficiency factor the regulator takes into consideration the improvement of TSO productivity; the modification of initial data regarding costs; the investment programmes approved by the competent authority and the regulated assets base and the smooth revenues within the regulatory period.

In terms of quality of the regulated service, the *Methodology to setting up tariffs for the electricity transmission service* considers a correction factor with respect to the compliance with the minimum performance parameters for the second regulatory period (2008-2012). This factor will be introduced in the calculation formula for the yearly revenues. The level of revenues associated to the penalty-bonus risk due to non-compliance with the quality indicator, will not exceed 2,5% of the revenues.

In 2008, TSO reported the following indicators regarding the continuity of the transmission service:

- Unscheduled interruptions due to others ENS (kWh) = 2250
- Unscheduled interruption due to internal causes ENS (kWh) = 164846
- Total duration of interruptions D (minutes) = 239

where ENS is the non-delivered electricity (interrupted to the customers/non-generated in power plants).

The performance standard for the electricity transmission service was reviewed in 2007 and was approved by ANRE Order 17/2007.

The main performance indicator regarding the continuity of electricity transmission is the **Average Interruption Time –AIT**, representing the equivalent average time period, in minutes, when the electricity supply was interrupted. The evolution of this indicator is provided in the table below:

Year	2005	2006	2007	2008
Average Interruption Time –AIT	4.434	1.187	0.857	1.792

The TSO provides the market participants information regarding the average transmission tariff, zone tariffs for the injection (Generation) and extraction (Load) of the electricity in the transmission network (see figures 3.7 and 3.8), regulations for the connection of users to public electricity transmission network.

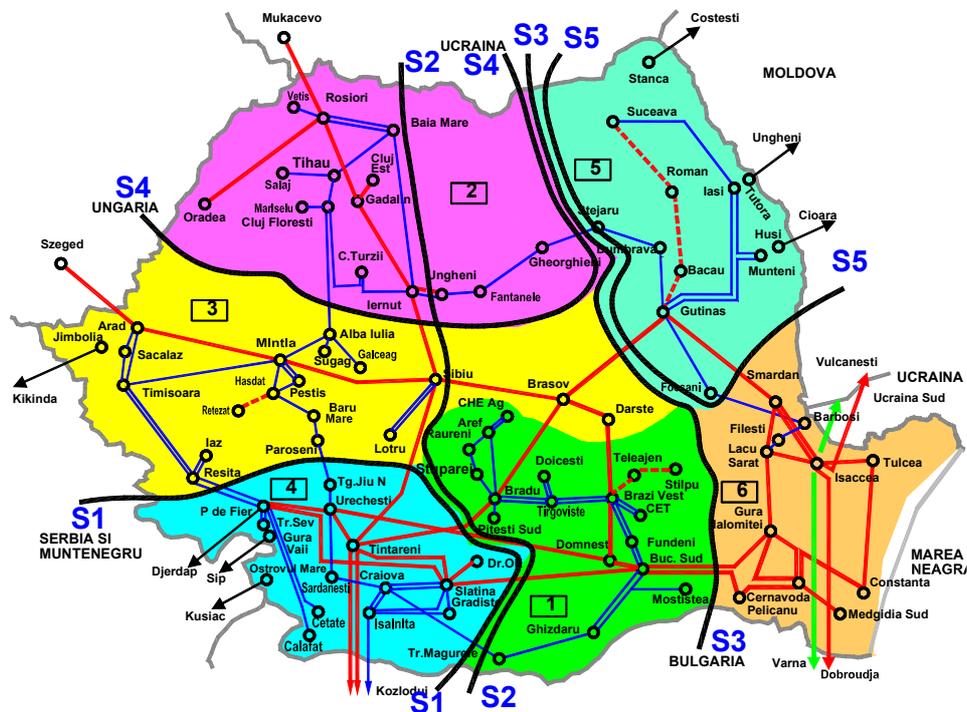


Figure 3.7. Zone tariffs for injection (Generation) of electricity in the transmission network.

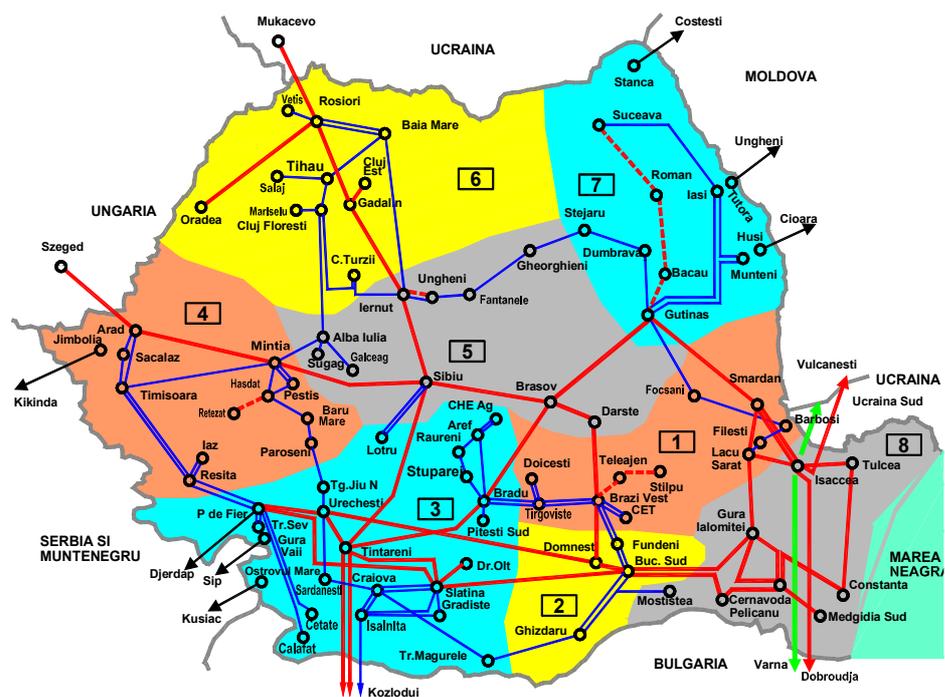


Figure 3.8. Zone tariffs for extraction (Load) of electricity from the transmission network

According to ANRE Order no. 64/2007, the average transmission tariff is 15.33 lei /MWh and the average injection tariff (T_G) is 7.64 lei /MWh (2.075 Euro/MWh). The T_G value for the six injection zones is ranged within [5.69 ... 8.95] lei /MWh, respectively [1.298...2.430] Euro/MWh. The average extraction value (T_L) for the 8 extraction zones is 7.69 lei /MWh (2.088 Euro/MWh) with values ranged within [6.11 ... 10.13] lei /MWh, respectively [1.659...3.025] Euro/MWh. Producers pay about 50% of the network costs while the customers pay the remaining 50%.

The *Methodology to setting up the system service tariff* lays down the rules to determining the income used by C.N. Transelectrica S.A. for the procurement of resources in order to carry out system services and provides the calculation method for the tariff associated to this service.

In 2007, through the *Methodology to setting up, implementing and use of capacity reserve*, an extra ancillary service was added to the power reserves already ensured by the qualified suppliers (secondary regulation, fast tertiary regulation, slow tertiary regulation).

The annual income required to ensure appropriate system services is assessed according to the principle of avoiding costs in NPS and to the customers and is made up of: the annual revenue for services provided by the system operator itself and the annual revenue for the procurement of ancillary services.

The annual income required to provide services by the system operator is determined by C.N. Transelectrica S.A. based on the justified costs associated to dispatching activities (operational control, scheduling and operational planning) and to the management of the balancing market, to congestions management, protections and of the safety works. The activities performed are the ones specific to the system operator. ANRE recognises as justified costs the followings: operation and maintenance costs, depreciation of the existing assets and of the new investments, profitability of the regulated assets base.

The annual income that CN Transelectrica SA requires for the ancillary services procurement is destined to the acquisition of the following resources: secondary regulation, spinning reserve, fast tertiary regulation, slow tertiary regulation, power reserve ensured by the efficient generation capacities of the co-generation units, reactive power required for the voltage control of the electricity transmission network. The required quantities of ancillary services are determined and contracted by CN Transelectrica SA.

In compliance with the provisions of ANRE Order no. 64/2007 subsequently completed and modified by ANRE Order no. 63/2008, in 2008, the tariff for ancillary services equals: 17.66 lei/MWh (4.795 Euro /MWh) respectively 18.62 lei/MWh (5.056 Euro/MWh).

In 2008, 35 distributors operated on the Romanian electricity market, 8 of which having over 100.000 customers each.

The 8 main electricity distribution operators are:

3. SC FDEE Electrica Distribuție Muntenia Nord SA, full state-owned capital
4. SC FDEE Electrica Distribuție Transilvania Sud SA, full state-owned capital

5. SC FDEE Electrica Distribuție Transilvania Nord SA, full state-owned capital
6. SC E.ON Moldova Distribuție SA, majority private ownership
7. SC CEZ Distribuție SA, majority private ownership
8. SC Enel Distribuție Banat SA, majority private ownership
9. SC Enel Distribuție Dobrogea SA, majority private ownership
10. SC FDFEE Electrica Muntenia Sud SA, majority private ownership

All undertakings concluded this process of legal unbundling of its distribution and supply activities.

Having regard to the provisions of Directive 54/2003 regarding common rule for the internal market in electricity, implemented through Electricity Act 13/2007, subsequently modified and completed, distributors having under 100000 customers are not bound for the unbundling of distribution from the other activities of the company.

Distribution tariffs (RON/MWh) are of monomial type and are differentiated by three voltage levels: high voltage (110 kV), medium voltage, low voltage and by distribution operators. The regulator sets up distribution tariffs for each distribution operator.

Distribution tariffs are calculated according to a tariff basket- price-cap methodology, issued in compliance with the GD no. 890/2003 regarding the “Romanian energy sector road map”. Based on this regulation, the regulatory periods are of 5 years, with the exception of the first regulatory period, which was of 3 years (2005 – 2007).

The *Methodology to setting up tariffs for the electricity distribution service* was revised and approved by ANRE Order no. 39/2007 taking into consideration the fact that second regulatory period began in 2008.

The following justified costs are considered when setting up the distribution tariffs:

- Operation and maintenance of the distribution network
- Purchase of electricity to cover network losses
- Depreciation of assets composing the regulated asset base
- Return of assets
- Necessary working capital

The tariff cap for the second regulatory period was 12% .Additionally, distribution tariff caps may be imposed by the regulator for each voltage level.

This type of incentive regulation was implemented in order to:

- a) Ensure an efficient regulatory environment;
- b) Ensure fair allocation of revenues obtained from the increase of the efficiency beyond the targets set by the competent authority between the distribution operator and the distribution service beneficiaries.
- c) Ensure financial viability of the distribution companies;
- d) Ensure efficient operation of the distribution companies;
- e) Prevent the distribution operator’s abuse of dominant position;
- f) Promote efficient investments in the electricity distribution network;
- g) Promote efficient practices for the electricity distribution network operation and maintenance;
- h) Ensure the efficient use of the existing infrastructure;

- i) Ensure the distribution network safe operation;
- j) Improve the quality of the distribution service
- k) Ensure a transparent approach regarding the regulatory process.

For the second regulatory period, the value of the efficiency factor X applicable to the controllable operation and maintenance costs was set by the regulator to 1%.

The regulated rate of return (RRR) is calculated in real terms based on the average weighted cost of capital before tax. For the distribution operators with majority private capital, in accordance with the privatization commitments, the RRR value in real values before tax was 10% for each year of the second regulatory period (2008-2012). For distribution operators with full state-owned capital, the RRR value may be decreased by the country risk component and by the private investor's risk.

The distribution network investment programme is assigned by voltage levels and by three types of categories for investment works as follows: essential fixed assets, required fixed assets and justifiable fixed assets.

The essential fixed assets are related to the safe operation of the distribution network and the continuity of electricity supply. The required assets are necessary for the development and the modernizing of the distribution system to ensure a distribution service that is in compliance with the performance and quality ratios laid down in the existing legislation. The justified assets are those assets for which analyses are performed considering the benefit to the customer.

An annual investments forecast is taken into consideration when calculating the distribution tariffs, a reconciliation of the forecasted and the real investments being made at the end of the regulatory period.

For the second regulatory period losses reduction programmes have been assumed by the main electricity distribution operators so that by the year 2012 the level of losses may be lowered to 9.5% of the electricity injected into the network. Only losses associated to the reduction programme are covered through the distribution tariffs.

Before the beginning of a new regulatory period, the distribution operators submit ANRE, by October 1st of the last year of the preceding regulatory period, the followings:

- a) Tariff approval application specifying the exact values that are requested and observing the cap imposed to the tariff basket
- b) General data on the distribution operator
- c) Regulated costs and revenues for the following 5 years
- d) Investments plan for the following 5 years detailing the estimated costs, the financial sources and the depreciation associated to the new investments
- e) Energy balance for the following 5 years
- f) Data related to the electricity networks
- g) Investment programme detailing the investment goals for the following 2 years
- h) Description and justification of the methods used for costs allocation and the associated support documentation
- i) A notification signed by the manager consenting to the publication of the submitted data or specifying which data are classified according to the existing legislation.

For the annual approval of the distribution tariffs, ANRE performs the correction of the quantities of distributed electricity, of the regulated network losses; electricity purchase price of the regulated network losses and the correction of the uncontrollable operation and maintenance costs.

For the distribution operators with less than 100,000 customers, the tariffs for the service of electricity distribution is calculated according to the *Methodology to setting up electricity distribution tariffs for legal persons, other than the main electricity distribution operators, and the conditions for the retransmission of electricity* (ANRE Order 3/2007). The adopted type of regulation is the “cost plus” method; a maximum rate of return of 5% is considered upon the total justified costs.

The activity developed by the main distribution operators are monitored on monthly basis according to ANRE Decision 570/2008 for the approval of the templates to monitoring the distribution operators’ activity and of the associated guidelines.

The Performance Standard for the service of electricity distribution (ANRE Order no. 28/2007) enters into force starting January 1, 2008.

The continuity of the electricity supply is monitored through the SAIFI and SAIDI indicators calculated for each voltage level for urban and rural regions separately. The SAIFI and SAIDI indicators are also categorized as follows:

- Scheduled interruptions
- Unscheduled interruption due to Force Majeure
- Unscheduled interruption caused by the users
- Unscheduled interruptions excluding the ones due to both Force Majeure and the users.

The average values for Romania are provided in the table below.

Place	SAIFI (Interruptions/year) Scheduled interruptions	SAIFI (Interruptions/year) Unscheduled interruption due to DSO	SAIFI (Interruptions/year) Total interruptions
Urban	0.86	4.2	5.06
Rural	2.5	9.8	12.3
Average values	1.6	6.7	8.3

Place	SAIDI (min/year) Scheduled interruptions	SAIDI (min/year) Unscheduled interruption due to DSO	SAIDI (min/year) Total interruptions
Urban	190	314	504
Rural	625	1038	1664
Average values	385	638	1023

2008 is the year when performance indicators established by the Electricity distribution performance standard are to be monitor, and in 2010 there should be implemented a system of sanctions/ bonuses for distribution operators.

Procedures and steps in the connection process, as well as the connection tariff are set up in the Regulation for the connection of users to public electricity networks, GD no. 90/2008, and secondary legislation issued by ANRE. This Regulation establishes the following:

- costs for upgrading the electricity network upstream the connection point to create the technical conditions required for the connection of the user, shall be incurred by the user and by the distribution operator also.
- for a connection through a direct line from the generation or consumption site of an user to a network works are required for the modification or deviation of the existing power facilities of the network operator in order to connect the user, these works shall be performed by the network operator, as the network holder, on the user's expense, nevertheless costs for the reserved capacity upstream the connection point shall not be incurred to the user.
- was introduced a preparatory stage for research and information of the future user regarding terms and possibilities for the connection to the system
- deadlines for sending the applications, respectively issuing the TPC at user's request, were reduced
- new provisions in order to ensure better information to the applicants for the connection to the network and to reduce time intervals and formalities in the connection stages, were introduced.

The Balancing Market (BM)

BM started operating in July 2005. In December 2008, 98 RBPs (responsible balance parts) were active and the 20 producers that operated on the BM held 137 dispatchable units. No modifications of substance occurred to the market model corresponding to the functioning of the balancing market in 2008.

The only modifications were the followings:

- increase from 350 lei/MWh to 400 lei/MWh of the price upper limit at which offers upward for the balancing market can be made, to correspond to the fuel price increase;
- modification from 60 lei/MWh to 100 lei/MWh of the limit regarding the difference between the maximum price and minimum price offered within one hour for the same dispatchable unit;
- faster preliminary settlements for the balancing market in order to carry out a quota of the payments in a time period that is closer to the delivery month.

The monthly volume traded in 2008 was between 4-14% from the internal consumption, with an annual average value of approx. 6.5%. The six-month period evolution indicates a decrease of traded volume on secondary regulation in 2008, while the total traded volume on BM remained almost constant compared to 2007.

This suggests that, for the time being, not all the necessary incentives were identified to make the participants reduce to the minimum their imbalances, and decreasing in this way the weight of the electricity traded on the balancing market.

The introduction of an organised intra-day market was deemed inopportune at this stage of the energy market development; intra-day bilateral transactions are however possible to be concluded until the closing time of the balancing market. In addition, the producers may also conclude transactions after the closing time, which are to be notified to the balancing market

platform prior to the dispatching interval, according to a specific CN Transelectrica SA procedure approved by ANRE.

The Romanian balancing market is an hourly settlement market.

On the balancing market, producers holding dispatchable units place price-quantity offers for power upward and for power downward as against the notified operation point; TSO (as the balancing market operator) select the necessary secondary regulation, based on the capacity of each unit to carry out this service and on the secondary regulation reserve from each hourly interval (or hourly zone intervals) and gives orders to increase or decrease the power on other types of regulation as per the orderly prices offered by the participants to balance the system.

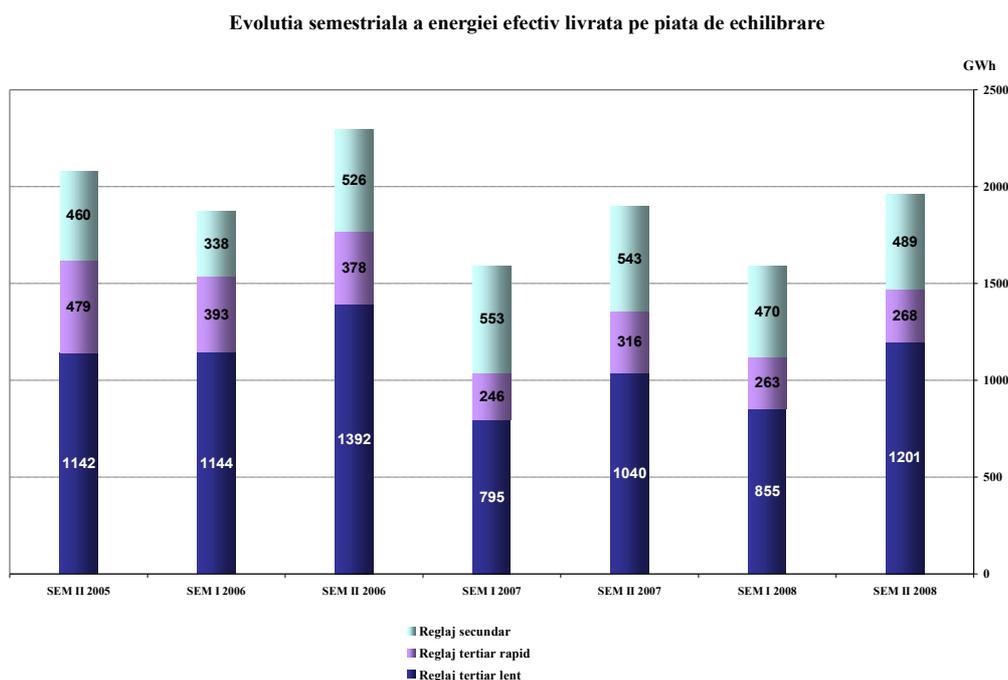


Figure 3.9

Source: CN Transelectrica SA data, data interpretation and analysis by ANRE

The settlement price for the secondary regulation is set at the marginal price level resulting from the offers that form the selected band, while for the remaining offers selected for the fast and slow tertiary regulations, the settlement price is the one requested by each bidder (pay as bid system). The secondary regulation is considered done at the level registered by the automatic control regulator, and the energy delivered by each regulation types for which the unit received dispatch order within that hourly interval is determined on the metering of energy actually delivered by the dispatchable unit in each hourly interval.

The imbalance prices registered by the RBP within each hourly interval is determined as the weighted mean of the balancing energy prices upward (hence the deficit price), respectively the weighted mean of the balancing energy prices downward (hence surplus price.) In case there is no balancing energy in either ways but there are imbalances, the corresponding imbalance price is the one for the Day-ahead Market within that respective interval.

The monthly evolution of the average BM prices (deficit price and surplus price) as compared to the DAM closing price starting July 2005 is given in *Figure 3.10*.

The annual average values of the settlement prices for 2008 were as follows: the deficit price - 278.12 lei/MWh (75.52 Euro/MWh); the surplus price 66.54 lei/MWh (18.07 Euro/MWh). The monthly average values are in a normal structure (imbalance surplus price < average price DAM < imbalance deficit price) and the trend is the improving of this structure especially by imbalance surplus price increasing

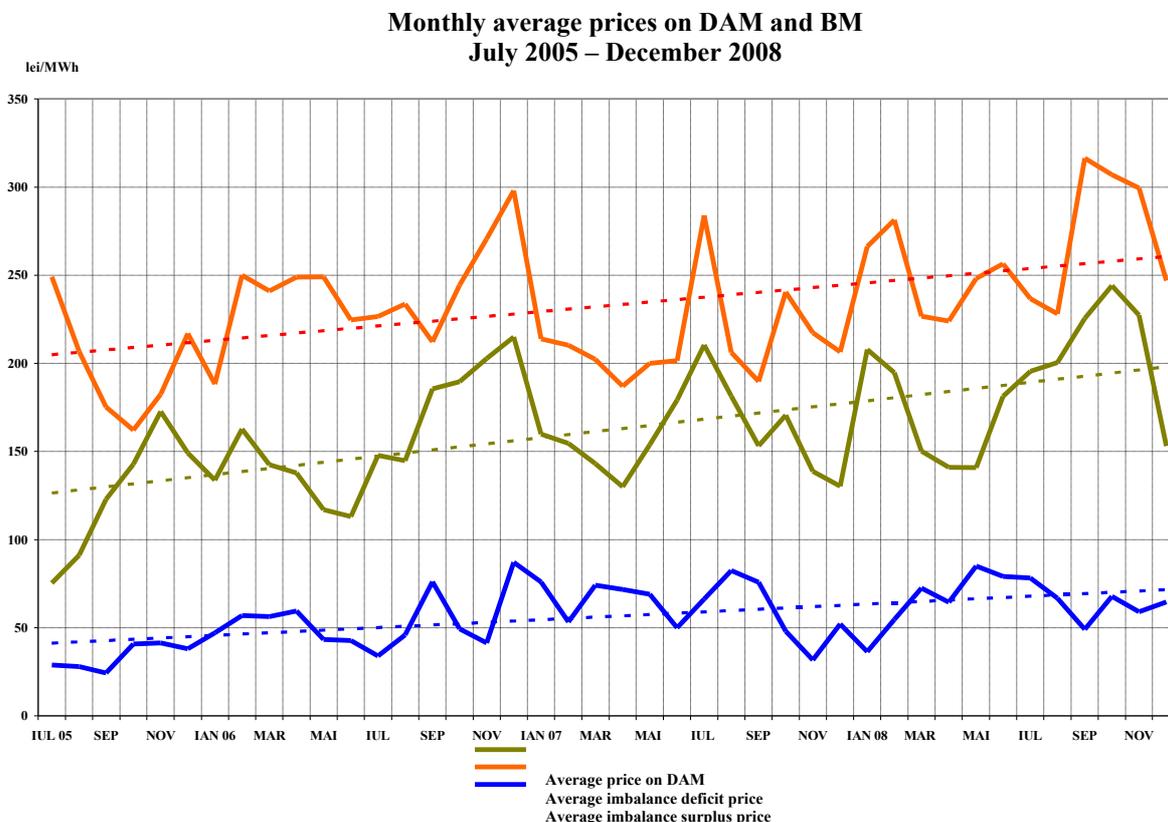


Figure 3.10

Source: CN Transelectrica SA and SC OPCOM SA, data interpretation and analysis by ANRE

As in the previous years, the BM concentration index values for the year 2008 shows the existence of a dominant participant (producer SC Hidroelectrica SA) and an excessive BM concentration for the secondary and the fast tertiary upward regulation.

Table no. 3.3

BM – concentration index values, year 2008	Regulation					
	Secondary		Fast tertiary		Slow tertiary	
	upward	downward	upward	downward	upward	downward
C1, %	71	71	70	38	27	27
C3, %	97	97	86	70	67	63
HHI	5438	5367	5065	2319	2021	1838

Source: CN Transelectrica SA data, data interpretation and analysis by ANRE

Through Order no. 119/2008, ANRE maintained an upper limit of the offering prices on the BM (amounting to 400 lei/MWh starting September 2008), a measure taken in order to limit the possible market power abuses. The limited difference between the maximum and the minimum prices offered by a producer for a dispatchable unit within an hourly interval (set at 100 lei/MWh starting September) was maintained for the same purpose. The limitation was based on the variation of the thermal units' variable costs and was aimed to limit the difference between the deficit and the surplus prices. However, the measure proved to be insufficient because of the producers holding several dispatchable units (the hydro producer especially) for which the variable costs cannot be considered a reference.

As given in the previous graph, following these regulatory measures the deficit and surplus prices varied within a reasonable range, representing both a penalizing factor for the RBP with imbalances and an incentive for other participants to enter this market, thus generating an increased competition on medium and long run.

3.1.3 Effective unbundling

The legal unbundling of electricity generation, transmission, distribution/supply was achieved as far back as in the year 2000 when, following the implementation of GD no. 627/2000, CN Transelectrica SA took over the entire activity of transmission/system services, thus becoming the sole operator in Romania for these kind of activities.

CN Transelectrica SA is the concessionaire of the transmission service and of the public assets associated to the electricity transmission grid (>110 kV) while the eight distribution undertakings are the concessionaires of the distribution service and of the public assets of the distribution network (≤ 110 kV).

CN Transelectrica SA ownership structure is the following: 76.5% of the social capital – the Ministry of Economy and Finance, 13.5% - The Property Fund, 10 % - private ownership, the company being listed to the Stock Exchange since August 2006.

In 2008, all the 8 existing distribution and supply operators completed the legal unbundling of their distribution and supply activities; as a result, in 2008, the activities of distribution, respectively of supply were carried out by legally distinct undertakings, namely: 7 default suppliers and 8 distribution operators.

The 100000-customer rule also applies in Romania, thus the distribution undertakings falling under this rule are not compelled to carry out the unbundling of their activities. To date, 27 such distribution operators are holders of distribution licenses.

The ownership structure of the 8 distribution operators holding less than 100,000 customers are given below:

1. **SC CEZ Distribution SA:** CEZ a.s : 51% of the social capital; S.C. Electrica S.A.-19 % of the social capital; the Property Fund SA – 30% of the social capital.
2. **SC Enel Distribution Banat SA:** Enel Distribuzione SpA – 51.003 % of the shares, S.C. Electrica S.A. – 24.869 % of the shares; Property Fund S.A.- 24.128 % of the shares;
3. **SC Enel Distribuție Dobrogea SA:** Enel Distribuzione SpA - 51.003 % of the shares, S.C. Electrica S.A.- 24.9033 % of the shares; Property Fund S.A. – 24.0937 % of the shares;

4. SC E.ON MOLDOVA DISTRIBUȚIE SA: 51% - E.ON Romania S.R.L.; 27 % - S.C. Electrica S.A.; 22 % - Property Fund S.A.

5. SC FDEE Electrica Distribuție Transilvania Sud SA, SC FDEE Electrica Distribuție Transilvania Nord SA, și SC FDEE Electrica Distribuție Muntenia Nord SA, have the following ownership structure: 78 % S.C. Electrica S.A.; 22 % Property Fund S.A.;

6. Enel Distribuție Muntenia SA : ENEL SpA - 64.43 %, SC Electrica SA - 23.57%, Property Fund SA - 12 % .

All the suppliers that resulted from the unbundling of the supply and distribution activities, called default suppliers, have the obligation to supply electricity at regulated tariffs to final consumers (residential and non-residential) that have not used their eligibility right yet within their assigned license zone.

There are also activities that are carried out by the default supplier on the account of the affiliated distributor, such as the purchase/selling on the DAM and/or the purchase of transmission/system/market settlement services to cover the losses needs.

Both the TSO and the distribution/supply operators have offices of their own as well as logos and internet websites. The new undertakings that followed the legal unbundling of the distribution and supply activities are in the process of creating their own logos and internet websites.

Both the TSO and the DSOs publish their financial reports separately.

The regulator set up detailed rules on the separation of costs. These rules are included in the conditions of the transmission and distribution licenses and in the methodologies for network tariffs calculation. Penalties for non-compliance with the unbundling requirements are laid down in the Electricity Law.

3.2. Competition issues [Article 23(8) and 23(1)(h)]

3.2.1. Description of the wholesale market

Structure of the electricity generation sector

At the end of 2007, there were 84 electricity generation license holders.

The current structure of the electricity generation sector reflects the successive reorganisations put in place during 2000 – 2004, which resulted in a reduced concentration on the wholesale market.

The main electricity producers are:

- 1 hydro producer SC Hidroelectrica SA,
- 1 nuclear power producer, SN Nuclearelectrica SA,
- 3 producers holding condensing turbines and boilers using the local lignite from their own mines covering their fuel demand proportionately: SC Complexul Energetic Turceni SA, SC Complexul Energetic Rovinari SA and SC Complexul Energetic Craiova SA,
- SC Electrocentrale Deva SA, producer holding pit-coal fired condensing turbines and units
- SC Electrocentrale București SA, producer holding both cogeneration and hydrocarbon-fired condensing units;

- SC Termoelectrica SA, that holds condensing and cogeneration units; this operator is the sole owner of SC Electrocentrale București SA, of SC Electrocentrale Deva SA and of one of the local co-gen producers
- 13 producers with dispatchable units holding cogeneration units only; via the district heating pipes, the heat is used to heat the towns in which they are located; these municipality-owned producers are confronted with non-optimal operating regimes and high operating costs due to a decreasing industrial heat consumptions since 1990 and to the heat saving of the population and the disconnections.

Different restructuring scenarios of the power generation were considered in time (taking into account the current disproportion between producers in terms of size, technology and costs) and numerous pros and cons still exist.

The acting Parliament rejected the Government proposal to aggregate the large electricity producers in one undertaking along with the remaining 3 distributors and their associated default suppliers; according to the public statements made, the reconfiguration of the existing producers in two undertakings (the criterion being the combination of generation technologies) to include the main fuel suppliers of each producer is the solution currently under consideration.

The maximum net generating capacity in 2008 was about 16.6 GW (corresponding to the existing capacities at 31.12.2008). The maximum peak demand (including export) was 9.4 GW, of which 8.6 GW is the net internal consumption (without the own power plant's services).

The structure of the net electricity generation (delivered in the network) in 2008 (only for the producers with dispatchable units) is shown in Table 3.4.

Table no. 3.4

Producer	Net electricity generation- 2008	
	TJ	GWh
S.C. „Termoelectrica” S.A.	5463	1517
S.C. „Electrocentrale București” S.A.	20890	5803
S.C. „CE Rovinari” S.A.	21373	5937
S.C. „CE Turceni” S.A.	27652	7681
S.C. „CE Craiova” S.A.	17435	4843
S.C. „Electrocentrale Deva” S.A.	13762	3823
S.C. „Hidroelectrica” S.A.	61215	17004
S.N. „Nuclearelectrica” S.A.	40413	11226
Self producers	8038	2233
Other producers	14188	3941
TOTAL*	230429	64008

* The table does not include electricity delivered by the producers not holding dispatchable units
Source: Producers data, data interpretation and analysis by ANRE

The total net electricity production increased about 6.5% as compared to the year 2007: electricity produced from nuclear power sources increased about 48% (following the operation of the 2nd nuclear unit commissioned in 2007), electricity produced from renewable energy sources increased about 8%, while electricity produced from gas fuel decreased about 16%.

Description of the electricity wholesale market

The wholesale electricity market includes all the transaction of the market participants, with the exception of the final electricity consumers.

The amount of electricity traded on the wholesale electricity market exceeds the amount that is physically transmitted on the generation-consumption chain because the totality of the transactions include the participants' *re-selling* of electricity with a view to adjusting their contracting position and obtaining financial benefits.

On the wholesale market, electricity is traded through:

- Regulated contracts (the regulator sets the quantities and prices, for the uncontrollable priority production – only the prices) and negotiated bilateral contracts between producers and suppliers;
- Regulated contracts between producers and network operators to cover network losses;
- Negotiated producers-producers or suppliers-suppliers bilateral contracts;
- Regulated contracts between producers (at a price equalling the largest of the regulated prices' value corresponding to the two partners, without regulated quantities but with return obligation within a year);
- Contractual obligations concluded on the centralized markets: CMBC (Centralized Market for Bilateral Contracts); CMBC – CT (Centralized Market for Bilateral Contracts with Continuous Trading); BRM (Romanian Commodity Exchange) Electricity Ring.

The wholesale market also includes the transactions concluded on the Day-ahead Market (DAM), where participants adjust their contractual position in order to put themselves near the consumption demand, respectively the generation availability or to gain some profit from the difference between the contract and the spot prices.

The Balancing Market (BM) transactions are part of the wholesale market, as well.

The dynamic of electricity quantities traded in 2008 as compared to 2007 by components of the wholesale market and the value of the transactions as referred to the 2008 internal consumption are given in *Table 3.5*:

Table no. 3.5

Wholesale market components	Traded volume in 2008 - GWh -	Evolution compared to 2007 - % -	Weight of internal consumption for 2009 - % -
Centralized Market for Bilateral Contracts	34745	+28%	63,7%
Regulated Contracts Market	29104	-1%	53,3%
Centralized Markets for Contracts	8770	+49%	16,1%
DAM	5208	+3%	9,5%
BM	3546	+2%	6,5%

Source: market participants' data, CN Transelectrica SA and SC OPCOM SA, data interpretation and analysis by ANRE

In 2008, an increase of the quantities traded on centralized markets was noticed (mostly CMBC but also DAM) as against 2007, a positive evolution resulting in more transparent transactions.

Although the volume traded on the BM increased, the weight of this market in the internal consumption remained the same: 6.5%. The increased volumes traded on the negotiated bilateral contracts means an increased liquidity on this market, on one hand and, on the other hand, adequate margins allowed by the initial acquisition prices.

This assumption is validated by the assessment made on the average supply margin obtained by the competitive suppliers in 2008 and determined as the difference between the average selling price and the acquisition price. The estimations made by ANRE on the participants' reports (with the simplifications and limitation that are inherent to such analyses) showed an average value of about 20 lei/MWh, respectively, 5 Euro/MWh.

From the 58 competitive suppliers that were active in 2008, 48 registered positive values of the supply margins and 31 registered values over 3 Euro/MWh.

A comparative analysis of the transactions closed on all the wholesale market components in 2008 as against 2007 and 2006 is given in *Table 3.6*. As shown in the table, the convergence between the prices of the bilateral negotiated contracts and the ones of the regulated contracts increased, but there are still significant differences between these prices and the average prices of the centralized markets that saw considerable growths.

Table no. 3.6

Average price on the wholesale market components	Year 2008 lei/MWh	Year 2007 lei/MWh	Year 2006 - lei/MWh -	Evolution 2008 as compared to 2007 - % -
Negotiated bilateral contracts market	146.07	125.93	107.53	16.1%
Regulated bilateral contracts market	151.15	157.17	154.40	-3.8%
Centralized Contracts Markets	177.04	166.99	127.81	6.0%
DAM	188.53	161.70	161.06	16.6%
BM (deficit price)	278.12	222.51	248.77	25.0%

Source: market participants' data CN Transelectrica SA and SC OPCOM SA, data interpretation and analysis by ANRE

There are made the following specifications:

- The average prices do not include VAT, excise or other taxes
- The values of the regulated and the negotiated prices and the CMBC prices were determined through weighting the prices by the amounts corresponding to the selling transactions reported monthly by the participants
- The average prices of the negotiated bilateral contracts market are calculated based on 89% of the total amount traded in 2006 (excluding the contracts with eligible

consumers and the export ones) corresponding to the amount for which the participants reported the transactions prices as well, and respectively 99% for 2007 and 100% for 2008

- The annual average DAM and BM prices were determined through the monthly amounts traded on those respective markets weighted by the average monthly prices resulting from the arithmetical mean of the hourly quantities corresponding to one month; the average deficit prices are given for the balancing market
- Prices on the wholesale market components are not entirely comparable because the ones that are regulated reflect only the price of energy, while the DAM and the BM prices include the injection (TG) component of the transmission tariff (incorporated by the bidders in their price), and the negotiated prices and the ones concluded on the centralized contract markets follow a mixed scheme from the point of view of the inclusion of the TG component.

The regulated market of the bilateral contracts

About 47% of the total producers' sales were made on the regulated market and 53% on the competitive market (the calculation does not include the transactions made on the balancing/imbalance market).

The producers' contribution to the total volume of the regulated market sales is given below:

- Thermal – about 59% (of which 11% for the distribution network losses and about 3% for the transmission network losses)
- Nuclear - about 25% (of which about 6% for the distribution network losses)
- Hydro – about 13% (of which 3% for the distribution network losses).

The difference to 100% is represented by the sales made on contracts with regulated prices for mutual-aid between the producers.

For the suppliers of the consumers with regulated supply prices, the acquisition on the regulated contracts represented in 2008 about 95% of the total, the rest being purchased on the competitive market to cover the regulated customers demands.

For the distribution operators, the acquisition on the regulated market represented about 90% of the total; the rest being purchased on the competitive market to cover the distribution network losses.

The competitive market

The competitive market contains all the transactions concluded on bilateral negotiated contracts (including successive re-sales), as well as transactions closed on centralized markets (CMBC, CMBC – CT, DAM, BRM electricity ring) that function on mechanisms such as auctions.

The volume of the transactions concluded in 2008 increased as compared to 2007, mainly due to the revival of the successive transactions between suppliers (before the purchase of electricity by the final consumer), representing about 32% of the internal consumption, as compared to 2007 when they represented approx. 18% of the internal consumption.

The structure of the sales on **the competitive market** (excluding the BM transactions) from the producers' perspective is given in *Table 3.7*.

Table no. 3.7

Total sales of producers on the competitive market in 2008			100%
A.	Total sales of producers on the competitive market in 2008		64.8%
	1.	With competitive suppliers	46.2%
	2.	With external partners (export)	4.7%
	3.	With other producers	5.3%
	4.	With default suppliers and with distributors	0.1%
	5.	With eligible customers	8.6%
B.	Transactions on the centralized markets		26.7%
	1.	With competitive suppliers	23.1%
	2.	With default suppliers and with distributors	3.6%
	3.	With eligible customers	0.0%
C.	Transactions on DAM		8.5%

Source: market participants data, data interpretation and analysis by ANRE

The structure of the sales on **the competitive market** from the suppliers* perspective is given in *Table 3.8*:

Table no. 3.8

Total sales of suppliers on the competitive market in 2008			100%
A.	Total sales of producers on the competitive market in 2008		94.6%
	1.	With other suppliers	42.6%
	2.	With external partners (export)	9.1%
	3.	With the producers	1.6%
	4.	With eligible customers	41.3%
B.	Transactions on the centralized markets		0.3%
	1.	With other suppliers	0%
	2.	With producers	0.3%
C.	Transactions on DAM		5.1%

*includes the activity of the suppliers acting exclusively on the wholesale market (traders/brokers)

Source: market participants' data, data interpretation and analysis by ANRE

The total volume of producers' sales in 2008 on all the transaction categories presented above (namely the *competitive* component of the wholesale and of the retail markets) amounted to about 32.4 TWh, and the total volume for the suppliers to about 44.1 TWh.

Centralized markets for contracts

As markets organized for non-standard electricity products, there are two markets in Romania managed by SC Opcom SA, namely CMBC and CMBC-CT, as well as a similar market managed by Romanian Commodity Exchange (BRM), named Electricity Ring. For the two markets organized by SC Opcom SA, ANRE issued a *Regulation concerning the organized framework for the trading of bilateral contracts for electricity*, as well as a recommended Framework Contracts and agreed the Operational Procedure on *CMBC function for power by public tender*, issued by SC Opcom SA

The CMBC (centralized market of bilateral contracts) works as a market where players may propose contracts containing own delivery graphs (the *Regulation* indicates delivery type graphs, but not compulsory), delivery periods (more than a month), hourly power levels, contractual conditions etc. Although a natural trend of the offers to equalize the delivery period was noticed (for example delivery for a calendar year) and even the delivery graphs (band delivery, delivery at off-hours), there is also the contractual possibility of some variations established during running the contract, and so the products have no more a standard character.

Running the contracts means effective electricity delivery.

The players could propose sale offers at minimal price or buy offers at maximum price. They are published on SC Opcom SA web page together with the contract the initiator proposed, at least 5 work days before tender date, waiting for the answer offers; if they exist, they are declared as winners as a result of an open tender at the highest price (for a sale offer) or at the lowest price (for a buy offer). As a result of offer assignment, the participants sign the contract the initiator proposed, and this will be followed by releasing the financial guarantee for joining the tender (that should be put in favour of SC Opcom SA by all participants at the same time with the offer, in order to valid it).

After the closing of the auction session, the Market Operator publishes the list of market participants who have participated in the auction with responding offers; the traded volumes, opening price, the closing price for the offers, and the delivery period. Also, on the web page www.opcom.ro there are the offers and the contracts proposed by the initiators, in order to offer a better comparison to the interested parties.

On the Centralized Market for Bilateral Contracts with Continuous Trading – CMBC-CT offers include the following standard elements: the offered power for each hour during the delivery period - 1 MW for base load/ for peak load/ for off-peak load; for a delivery period of 1 week, 1 month, 1 quarter, 1 year.

Market participants who answer the initial offer could offer the quantities they want (number of 1 MW contracts), and the offered prices could be lower, equal or higher than the initial offer, and could be adjusted during the *pre - auction stage*; during the *open auction stage* the price of a transaction is established at the level of each answer offer, if it accomplishes the price condition of the initial offer, ordered by the best price.

In case that some quantities remain un-transactioned after the *first session*, a *second session* follows, when, during the *pre - auction stage*, only the initial offer could modify the requested limit price, in order to facilitate the transaction. At the beginning of the *second stage of open auction*, the transactions are established at the level of the price in the system of the counteroffers, if they correspond to the new price condition of the initiator; after that, by successive modifications of the price asked for by the initiator, respectively of the prices proposed by the counter-offers, transactions are continuously established, up to the end of the session.

The electronic development and the anonymous character of the players during the auctions are the characteristics of this market. The information published in case of this market are: the name of the initiator, the product, the number of the offered contracts, the starting price, the date of the auction, the name of the players who entered the auction, as well as the transactioned quantities and the related prices, without mentioning the name of the winners.

Though the higher standard degree should have determined a higher liquidity of this market, the transactions concluded on CMBC-CT represented only about 0,3% from those concluded on CMBC.

The Electricity Ring organised by the Romanian Commodities Exchange (BRM) operates as per the *Procedure for the trading of electricity bilateral contracts ring* issued by BRM and detailing the main trading practices, namely the:

- *double competitive transaction*, with an *opening stage* for the registration of orders placed on the market by the brokers and a *free trading stage* where traders have the possibility to change the price, the quantity and the exclusive option for whole transaction; transactions close at the first price announced and meet the counterpart's conditions;
- *simple competitive transaction* in which the initiating broker has the exclusive right to launch orders for one of the directions (sale or buy). The other brokers have the right to register only responding orders to the order launched by the initiating broker;
- direct transaction, where there is one order for both selling and buying while the two brokers negotiated directly.

As shown in *Table 3.8*, the transactions on the centralized contracts market registered significant growths in 2008, the delivered volume amounting to about 16% of the internal consumption (as compared to the 11% weight registered in 2007), which means a 49% increase as against 2007.

However, the volume of transactions that were closed on Opcom's CMBC in 2008 (for various delivery periods) was about 3% lower than the ones closed in 2007.

The volume of the CMBC transactions reached its peak in October, registering significant values in September and November. The trading prices reflected a high demand within these months. Apparently, the first signs of the economic crisis and of a decrease in consumption were felt only in December, when the volume of closed contracts diminished as against the same month of 2007.

The increased liquidity on the CMBC was mainly due to Order No. 408/2006 issued by the Ministry of Economy and Trade (MEC) in order to oblige state-owned electricity generators to trade all their available quantities on the centralized market as a means to increase the transparency of the transactions and to avoid the closing of preferential contracts.

The transaction of contracts for off hours delivery was the CMBC's characteristics in 2008, together with the transaction of contracts with high flexibility degree of the delivery, which made them less standardised.

Less generous deliveries on the wholesale market occurred in 2008 following certain transactions closed through the BRM electricity ring. As SC Opcom SA was established especially for the organisation of electricity transactions, the Opcom administrated markets became increasingly liquid, gaining high credibility as regards the competition conditions under which prices are obtained.

The increase of the delivery volumes in the centralized markets' contracts is considered a positive evolution for the electricity market due to the transparent characteristics of price formation, which may constitute a solid reference for the negotiated contracts, as well.

The number of participants on the CMBC increased in 2008 reaching 94 operators registered in December 2008 (about 47 of which initiated offers or placed answering offers) as against 91 in December 2007.

In case of CMBC-CT the number of the participants registered in 2008 were 62, and in 2007 only 50; from those, in 2007 were active 9 players and in 2008, 14 players.

On the Electricity Ring organized by BRM there were no wholesale contracts concluded in 2008.

16 new market participants activated on CMBC in 2008 versus 2007. 29 market participants initiated offers, versus 8 in 2007, but only 7 accomplished transactions. The number of the market participants with answering offers was 30, from which 9 are new entry on the market.

One of the explanations for the growth of the CMBC market participant's number is that, in case of many suppliers, the bilateral negotiated contracts they concluded with the producers reached the final term, the producers being allowed to conclude contracts only through auctions on CMBC (according to owner's decision – MEC – expressed by the above order).

On CMBC-CT did not appear new offer initiators, but the number of those who had answering offers grew, 10 being new entry.

On these markets there are no market-maker type participants and, as a result, you cannot speak about differences of price between selling and buying: as it was mentioned, SC Opcom SA and BRM offer only the formal framework for transactions, not accomplishing transactions for their own interest.

The level of transactions with high standardisation degree on CMBC-CT was low enough this year, the participants not being aware of the benefits of standardization. ANRE requested OPCOM to analyze the causes of this situation and have as a goal to promote the standard contract transactions that have a key role in growing the liquidities and the transparency of the power market.

There are no default participants on CMBC and CMBC-CT, as there are no advantages for participating on this market even from its start. But, as only 4 producers (SC CE Turceni SA, SC CE Rovinari SA, SC CE Craiova SA and SN Nuclearelectrica SA) offer usually electricity for sale (as an exemption, in 2008, 2 more producers and 3 suppliers offered small quantities for sale), the situation could be thought as the default participants could significantly influence the results of these markets. The other producers from MEC portfolio did not make offers on this market either due to bilateral negotiated contracts concluded on long term for whole available power (the case of Hidroelectrica SA), or due to very high production costs, that could not ensure competition (SC Electrocentrale București SA, SC Electrocentrale Deva SA, SC Termoelectrica SA).

The following tables present the concentration indexes for CMBC and CMBC-CT during the working years:

Table no. 3.9

Concentration indexes for CMBC, based on transaction volumes yearly concluded

Year	Sale			Buy		
	HHI	C3 [%]	C1 [%]	HHI	C3 [%]	C1 [%]
2005	4204	99.68	57.61	3449	93.33	43.21
2006	2657	82.77	38.30	1085	46.58	16.15

2007	2669	87.55	35.21	635	32.52	11.27
2008	3142	95.32	36.51	551	25.00	9.85

Source: date and process SC OPCOM SA

Table no. 3.10

Concentration indexes for CMBC, based on yearly offers volumes

Year	Sale			Buy		
	HHI	C3 [%]	C1 [%]	HHI	C3 [%]	C1 [%]
2005	4204	99.68	57.61	0	0	0
2006	3664	92.61	46.81	964	44.75	16.94
2007	2557	86.06	34.17	1712	66.88	28.89
2008	3027	89.14	37.46	1523	59.01	26.43

Source: date and process SC OPCOM SA

Table no. 3.11

Concentration indexes for CMBC-CT, based on transaction volumes yearly concluded

Year	Sale			Buy		
	HHI	C3 [%]	C1 [%]	HHI	C3 [%]	C1 [%]
2007	6155	100	25.97	6086	100	26.69
2008	10000	100	100	3239	60.07	9.24

Source: date and process SC OPCOM SA

Table no. 3.12

Concentration indexes for CMBC-CT, based on yearly offers volumes

Year	Sale		
	HHI	C3 [%]	C1 [%]
2007	2759	68.30	41.38
2008	5784	95.06	6.92

Source: date and process SC OPCOM SA

Concentration indexes calculated both for offers launched in 2008, and for volumes of power corresponding to the contracts concluded during this year on CMBC, highlights an excessive concentrated market on the sale side. For CMBC-CT, indexes reflect a high concentration both for sale and for buy side.

Average rated price of deliveries in 2008 for contracts concluded on CMBC was of about 177 lei/MWh, increasing with about 6% versus the similar average in 2007, but with about 6% lower than the average price on DAM.

Day-Ahead Market – DAM

DAM is a voluntary market, with both side's offers, opened to all licensed participants. DAM gives the possibility of using the additional energy and making a day before the delivery day adjustments of the participant's contractual position versus the possibilities/necessities of the generation/consumption.

The main change occurred in 2008 regarding the DAM functioning was the transformation of market operator SC OPCOM SA (starting with July, 1st, 2008) in the single central counterpart for the market participants. In this way, the participants are obliged to put a guarantee corresponding to the value of 6 calendaristic days of buying offers.

The settlement with a central counterpart contributed to a higher level of confidence regarding the transactions on this market by removing the counterpart risk. In the same time, the procedure of establishing and presenting the financial guarantees induced additional costs for the participants. In the same time, the quantities allowed to be offered for buying are limited to the level of guarantees, fact that may not permit the participant to quickly adapt to a possible grow of its necessary.

Up to December 31st 2008, 87 licensed holder's participants signed the convention of participation at DAM, from which about 68 participants were active, concluding at least one transaction. Versus the previous year, a decrease of the registered number of participants were noticed (in December 2007, 99 participants were registered), but an increase of the active ones (in December 2007, about 60 participants were active).

The total volume traded on DAM in 2008 increased with about 3% versus 2007, representing about 9, 5% from internal consumption. *Figure 3.11* presents the evolution of the monthly volumes traded on DAM starting with January 2006. The average price on DAM in the year 2008 was 188.53 lei/MWh (51.21 Euro/MWh).

The average price on DAM (both the one rated with traded quantities and the arithmetic average) increased about 17-18% versus the corresponding values in 2007, but these increases are diminished by the relation between lei /Euro, being about 5-7% at the denomination in Euro.

Monthly evolution of the average prices and traded volumes on DAM

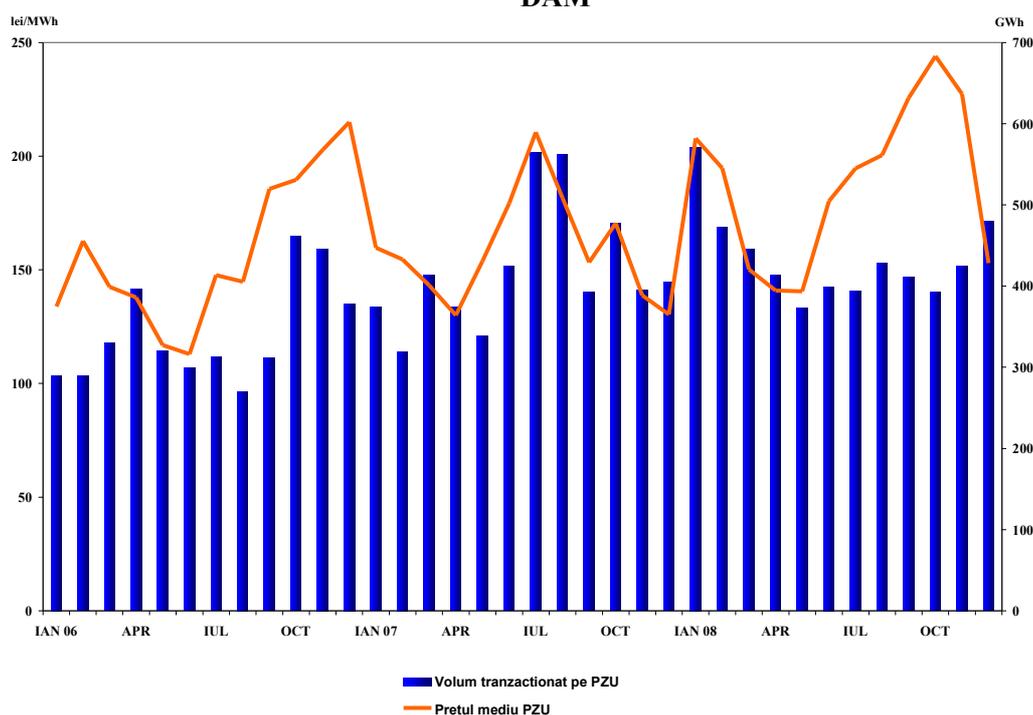


Figure 3.11

Source: data SC OPCOM SA, data interpretation and analysis by ANRE

The monthly average price established on DAM had an increasing trend in autumn 2008, on the background on less resources on the market (because of the limited hydro resources) compared to the necessary, represented by the contract obligations of the operators in the sector. Thus, in October 2008 a maximum was recorded for the average monthly price of about 244 lei/MWh, which is the highest average monthly price from starting the trade on DAM; the lowest average monthly values were in April (140.95 lei/MWh) and May (140.58 lei/MWh), connected to the hydro situation, but a sudden decrease was recorded in December (152.99 lei/MWh), due to consumption decrease.

The price on DAM contain with enough accuracy the available information regarding the level of resources and the need of electricity, also presenting the specific high volatility.

The price on DAM is considered as a reference for the electricity market in Romania. Within this context, ANRE started an analysis in order to investigate the possible connection between the increase of the price on DAM in October 2008 and the increase of the prices for the contracts concluded on CMBC for the next year.

Figure 3.12 presents the evolution of the daily average values of the spot price on DAM in 2008, compared with the evolution of the similar prices established at the power exchanges EEX and EXAA.

Average daily spot prices

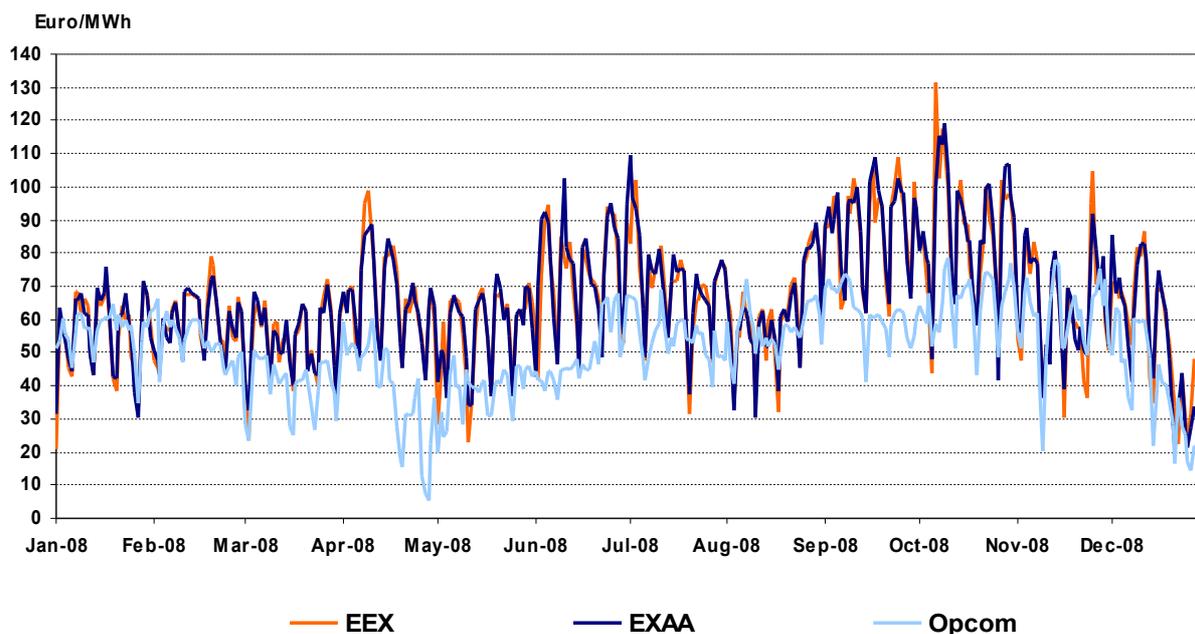


Figure 3.12

Source: data EEX, EXAA and SC OPCOM SA, data interpretation and analysis by ANRE

Integration of the national electricity market to the markets in the neighbouring countries is generally limited to the trade accomplished based on contracts concluded by producers/suppliers from Romania with third party from other countries, before DAM.

But there are clues that the international suppliers reserve their interconnection capacity on the borders also for transferring power to and from Romania in order to trade it on related spot markets (DAM).

It was noticed that in 2008 the development of branches of important international players in Romania carry on, and so the evolution on European markets were also felt on Romanian market.

In order to accelerate the integration of the markets in the region, the following actions were accomplished:

- SC Opcom SA achieved the project of a regional trading platform for transactions on the DAM, the Commercial Code of the Wholesale Market foreseeing market splitting type mechanisms;
- SC Opcom SA won in June 2008, together with Nord Pool, the auction for achieving the trading platform for the electricity exchange in Hungary, HUPX, the project foreseeing the possibility of the DAMs coupling;
- CN Transelectrica SA acted as an active member within the regional group SETSO, being involved in the process of creating the electricity regional market in the SEE area by introducing the coordinated allocation of capacities on the interconnection lines in the region; this process is only a test that could lead to additional adjustments of the mechanisms;

- CN Transelectrica SA, as a member of UCTE, was designed to ensure the management of the project to achieve the study for assessment of the possibilities to connect the Republic of Moldavia and Ukraine to UCTE.

The countries neighbouring Romania have not developed yet power exchanges and so there are no representative prices arising from market mechanisms that could be compared to the market prices in Romania. A comparison of the evolution of the DAM in Romania with the EXAA price from Austria revealed an hourly correlation degree of 0.65, which expresses a moderate integration of the markets in the two countries.

In 2008 there were no significant mergers or acquisitions on the power market, excepting the purchasing of distribution and supply branch of Electrica Muntenia Sud by Enel SpA.

The existing branch of Enel Distribuzione SpA, Enel Energie, is the default supplier for consumers with regulated tariffs in Banat and Dobrogea areas, and the new branch (of Enel SpA), Enel Energie Muntenia is the default supplier for the consumers with regulated tariffs in Muntenia Sud area.

It is estimated that this acquisition did not affect the wholesale market in Romania, as there are no marks regarding a coordinated action of these suppliers on the market.

The evolution of the concentration indexes on the relevant electricity markets

From the geographic point of view, the Romanian wholesale electricity market is a national market (see *Instruction for defining the relevant market in order to establish the significant part of the market*, published in Romanian Official Gazette, part I, no. 288/01.04.2004, issued by the Competition Council) because:

- in 2008, the share of import in the internal consumption was very small (around 2%);
- the importers have supplementary costs - the costs of capacity reservation on the interconnection lines (for import, in 2008, the prices of the interconnection capacities was lower due to the reduced demand and low prices offered during the bids. The increase of demand will increase these costs).

There are no products/services that could replace the electricity on short and medium term and the consumer's options to replace the use of electricity with other products (energy sources) is limited. Therefore, there were considered as relevant markets for electricity the followings markets:

- a) the *electricity generation market*, as a whole;
- b) the *market for electricity trading through contracts with delivery on medium term* with the components: centralized market of bilateral contracts - CMBC, centralized market of bilateral contracts with continuous trading-CMBC-CT and Electricity Ring of BRM;
- c) *day-ahead market*;
- d) the *secondary regulation component of the BM*: the market for automatic balancing of the NPS in 30seconds to 15 minutes;
- e) the *fast tertiary reserve component of the BM*;
- f) the *slow tertiary reserve component of the BM* ;
- g) the *capacity reserve market*.

The overall evolution of concentration indicators on the electricity generation market

The Romanian electricity sector did not register significant structure changes in 2008, the only registered evolution referring to the number of both production and supply license owners.

The value of the HHI indicator calculated according to the installed capacity was of **2116** in 2008. The HHI calculation took into consideration participations over 50% owned by some operators within other's shareholders, namely: SC Termoelectrica's SA complete ownership of the SC Electrocentrale Bucuresti SA, SC Electrocentrale Deva and SC Electrocentrale Galati SA (the domination principle).

The number of producers that owned, **as installed capacity**, more than 5% of the total capacity was of **5**, while the aggregated quota of the installed capacity of the 3 most important producers was of **70.98%** (values calculated using the above-mentioned domination principle).

Given the use of the domination principle, the number of producers that **delivered** more than 5% of the net electricity production was of **6**, and the aggregated market quotas of the 3 most important producers was of **63.9%**.

Table 3.13 presents the average annual values of the C1 and HHI structure indicators as determined based on the quantity of energy delivered to the grid by producers during 2004-2008 without having applied the domination principle (based on the legal structure). Because most of the electricity producers are either state- or local community-owned (through the Ministry of Economy, The Authority for State Assets Recovery, Local Councils), the monitoring of concentration indicators, those considered sufficiently relevant on the Romanian market, is constantly done based on the sector structure from a legal point of view (as legal entities).

As monthly values, HHI calculated as mentioned exceeded the limit of 1800 in 2008 only in April, May and June when the main hydro resources producer (SC Hidroelectrica SA) benefited from high hydraulicity, exceeding 30% as market quota calculated based on the delivered energy. However, the increase in Hidroelectrica's market quota and HHI concentration indicator did not affect prices on day-ahead market and energy market in those months.

Table no. 3.13

Year	C1	HHI
2004	32%	1573
2005	37%	1831
2006	31%	1562
2007	28%	1404
2008	28%	1523

Source: data provided by producer, data interpretation and analysis by ANRE

On the wholesale electricity market the following medium and long-term delivery contracts categories are closed:

-contracts whose prices and quantities are established by the regulator. For this segment of the electricity market, the regulated one, the concentration indicators are not relevant given the lack of competitiveness between the participants.

-bilaterally negotiated contracts between the participants, as well as contracts closed on the centralized market of contracts previously presented. Given the unstandardized and semi-standardized nature of the products transacted on these markets, the related transactions are considered part of the Over the Counter - OTC category.

HHI concentration indicator for the whole OTC market, at sale, was of 1100, and market quota of the first 3 participants (C3), at sale, was of 44%; these values are moderate concentration market specific.

The day-ahead market is open to all licensed operators, at both sale and buy, which reduces market concentration.

Concentration indicators for the day-ahead market calculated per year based on the transacted volumes registered the following values in 2006, 2007 and 2008.

Table no. 3.14

Year	Sale			Buy		
	HHI	C3 [%]	C1 [%]	HHI	C3 [%]	C1 [%]
2006	562	30.54	17.49	902	42.92	22.78
2007	448	26.61	11.64	497	28.86	10.84
2008	573	32.28	16.70	592	32.33	14.00

Source: data and interpretation by SC OPCOM SA

The same indicators, calculated based on the annual offers, registered the values presented in *Table 3.15*.

Table no. 3.15

Year	Sale			Buy		
	HHI	C3 [%]	C1 [%]	HHI	C3 [%]	C1 [%]
2006	620	37.19	14.43	1601	56.22	35.43
2007	563	31.36	12.75	930	42.04	24.99
2008	756	72.80	17.28	711	37.14	15.58

Source: data and interpretation by SC OPCOM SA

The monthly evolution of HHI index at sale and buy in 2008 is presented in the below graphics (the indicators are calculated based on the transacted volumes) in comparison to the monthly average closing price on the day-ahead market in order to highlight the possible correlations between the two.

The 2008 evolution of the monthly HHI at sale on the day-ahead market (based on transacted quantities) in comparison to the PIP

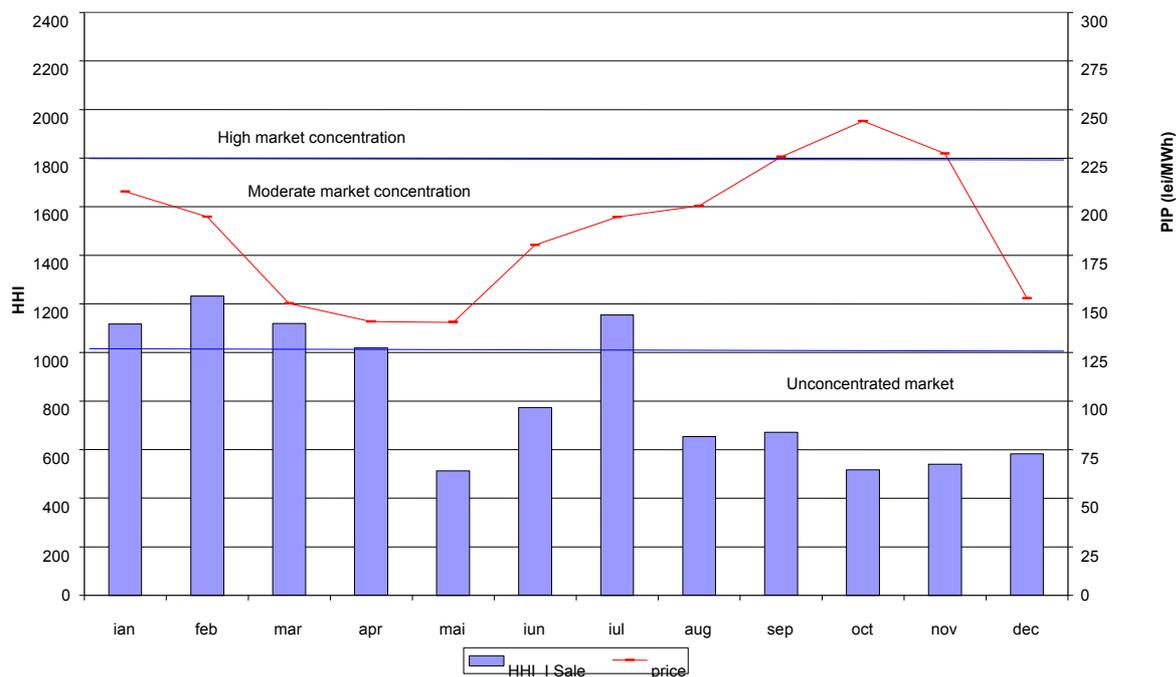


Figure 3.13, Source: data provided by SC OPCOM SA, data interpretation by ANRE

The 2008 evolution of the monthly HHI at buy on the day-ahead market (based on transacted quantities) in comparison to the PIP

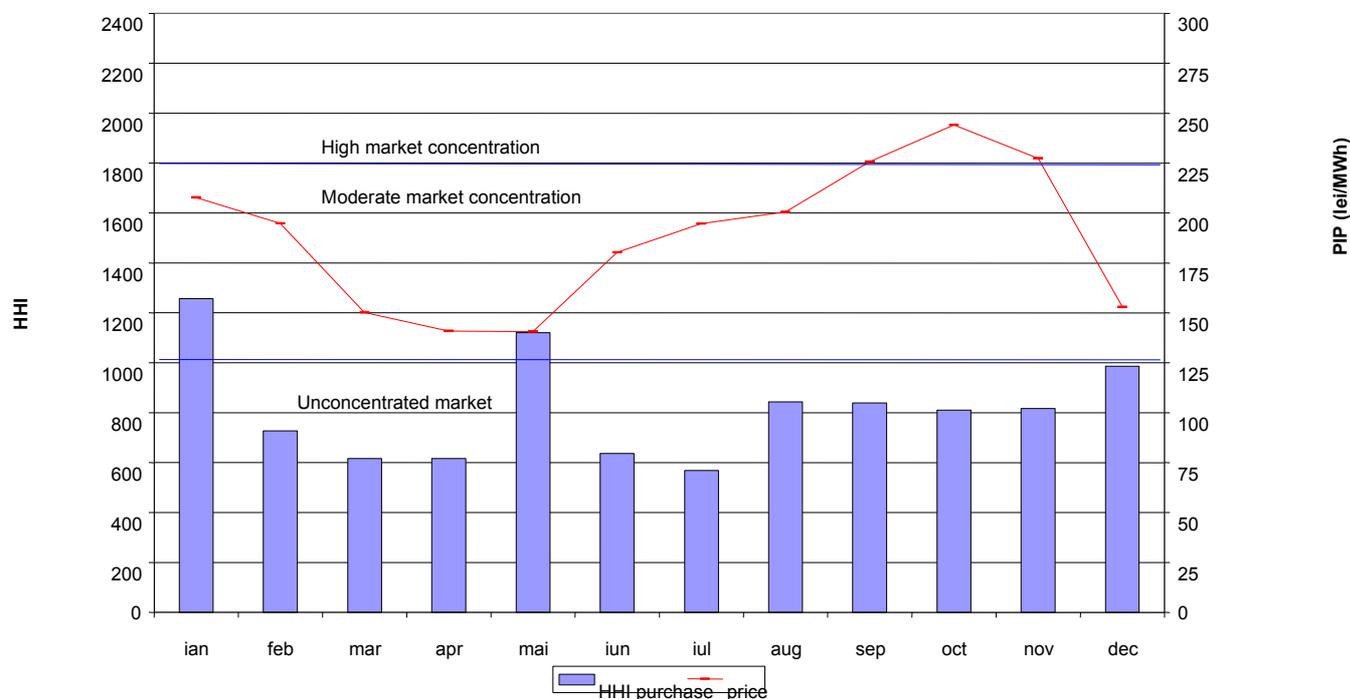


Figure 3.14, Source: data provided by SC OPCOM SA, data interpretation by ANRE

There are no correlations between the price level and the monthly concentration indicator on DAM at sell or buy. The market is not concentrated; the dominant position could emerge only accidentally, without influencing the results of the market.

In 2008, on the BM were traded 3546 GWh (2198 GWh for up-ward regulation and 1348 GWh for down-ward regulation). The competition on the BM has specific characteristics on the three types of regulations due to the specific capabilities of the generators. There are also differences in the competition level for up-ward and down-ward regulation.

In *table 3.17* there are presented the values of the concentration indicators for years 2006, 2007 and 2008. The indicators are calculated based on the electricity delivered by the producers on the BM for every type of regulations and direction.

The 2008 values of the concentration indicators, as in the previous years, show the existence of a dominant participant and an excessive concentration on the BM for the secondary regulation and for up-ward fast tertiary regulation. Due to this reason, ANRE maintained during the 2008 the upper limit for the offering prices on the BM.

Following the provisions of the Commercial Code of the wholesale electricity market, the producers are obliged to offer on the BM the whole available capacities. In order to ensure sufficient electricity for safety operation of the NPS, TSO contracts secondary, fast tertiary, slow tertiary and capacity reserves with the producers able to offer ancillary services, traded and paid on a specific market.

Table no. 3.17

Concentration indicators on the balancing market					
Year	Type of regulation	Direction of regulation	2006	2007	2008
C1	Secondary regulation	Upward	80%	60%	71%
		Downward	80%	56%	71%
	Fast tertiary regulation	Upward	69%	51%	70%
		Downward	53%	30%	38%
	Slow tertiary regulation	Upward	29%	29%	27%
		Downward	31%	19%	27%
HHI	Secondary regulation	Upward	6510	3915	5438
		Downward	6612	3538	5367
	Fast tertiary regulation	Upward	5061	2979	5065
		Downward	3452	1590	2319
	Slow tertiary regulation	Upward	2203	1769	2021
		Downward	2582	1276	1838

Source: data from SN Transelectrica SA, data interpretation and analysis by ANRE

Due to the fact that in Romania, the organization of the electricity generation sector was performed on the basis of aggregation into commercial companies on the criteria of production technology, the producers as legal entities have uneven possibilities of ensuring different types of reserves, and the free completion between them cannot be balanced; as a consequence, the regulator has considered necessary to cover an important part of this market with regulated quantities and prices, the rest being the result of auctions organized by the system operator.

On the *capacity reserve market* participate producers that have generation units in reserve, which are not available effectively, unless there are prior arrangements with the suppliers regarding the fuel (natural gas). In these circumstances, the competition on this market is limited. In 2008, only three producers have participated on the reserve capacity market: SC Termoelectrica SA, SC Electrocentrale Bucuresti SA and SC Electrocentrale Galati SA. The cumulated power of the participants on this market, which was made available for the system,

didn't exceed the necessary of 700 MW/month and, as a consequence, the price was the regulated one (12 lei/MW, according to the Methodology approved by ANRE). Due to the similar operating conditions, the capacity reserve market has diminished the need for slow tertiary reserve in comparison with 2007.

The main concentration indicators for each segment of the *ancillary services market* (reserve for secondary, fast tertiary and slow tertiary regulation, capacity reserve market) for the years 2006, 2007 and 2008 are presented in *table 3.18*.

Table no. 3.18

Concentration indicators on the Ancillary services market			Secondary regulation	Fast tertiary regulation	Slow tertiary regulation	Capacity reserve
2006	Regulated component	C1 (%)	79.3	77.6	48.0	0
	Competitive component	C1 (%)	88.1	97.0	0	0
		HHI	7837	9416	0	0
2007	Regulated component	C1 (%)	81.4	79.9	43.4	0
	Competitive component	C1 (%)	81.3	90.8	59.9	100*
		HHI	6963	8298	4269	10000
2008	Regulated component	C1 (%)	82.6	82.6	78.2	0
	Competitive component	C1 (%)	77.5	92.5	64.3	75.8
		HHI	6516	8605	4765	6130

*sole participant (Termoelectrica), 2 months (November, December 2007)

Source: data from CN Transelectrica SA, data interpretation and analysis by ANRE

3.2.2 Description of the retail electricity market

Short presentation of the retail electricity market

The electricity supply to consumers comprises the supply on the regulated market (for all the final consumers who have chosen to be supplied on regulated tariffs) and on the competitive market (for those who have switched their supplier or they negotiated their contract with the default supplier by dropping the regulated tariff).

Same as in 2007, this year the consumers who haven't used their right to switch the supplier were mainly supplied by the default suppliers which are 7 - 3 state owned companies (branches of SC Electrica SA) and 4 companies mainly privatised.

On the competitive segment of the retail electricity market there were 35 active independent suppliers with no ownership on grids (4 less than in 2007) and 5 generators with supply licence.

Description of retail electricity market

The information available so far does not permit an evaluation of the regional character of the retail electricity market. In order to supply consumers within the national borders, in Romania

a company has to own a supply licence issued by the Romanian electricity regulator; the foreign suppliers preferred to operate through their own Romanian subsidiaries (CEZ, ENEL, E.ON) instead of asking for supply licences by the parent-companies.

Taking into consideration these aspects, it might be considered that the competitive segment of the retail electricity market is spread nationally, because the competitive suppliers ensure electricity delivery for final consumers all over the country, in all 8 distribution areas, no matter their location. Nevertheless, these final consumers are not householders.

For the regulated segment of the retail electricity market each default supplier has its own designated areas where it exclusivity operates. These areas correspond to the areas of the affiliated distribution operators.

Market shares and concentration indicators on retail electricity market

The level of suppliers' activity on the retail market has been evaluated based on share of the electricity sold to final consumers on competitive market from the total sales transactions. *Table 3.19* presents the number of active suppliers in 2008, divided into 4 categories depending on activity volume on the retail electricity market.

Table no. 3.19

Number of suppliers	Share of sales to final consumers from total sales transactions			
	100%	75% - 100%	50% - 75%	<50%
Competitive	6	10	9	10
Incumbents	5	1	0	1

Source: Data reported by suppliers, data interpretation and analysis by ANRE

The analysis of the concentration degree on retail electricity market has been carried out both on this market as a whole and on 3 categories of final consumers, as defined within the in force Regulation for electricity supply. The categories are:

- households + small non-households (contracted power less or equal to 100 kVA);
- large non-households (contracted power between 100kVA and 1000 kVA) and
- very large non-households (contracted power more or equal to 1000 kVA)

The contracted power is specified in the technical permit for connection.

Table 3.20 presents information on the number of suppliers with market shares higher than 5% and the concentration indicators on each type of final consumers, in 2008.

The values of the market indicators here above presented took into consideration the dominance principle. The electricity supplied used for calculating the market share of each supplier does not include the self-consumption of the largest industrial consumer which owns a supply license and decided to buy its electricity from the wholesale market as a competitive supplier.

Table no.3.20

No.	Consumer type	No. of suppliers with market shares higher than 5%	C1	C3	HHI
-----	---------------	--	----	----	-----

1.	households + small non-households (contracted power less or equal to 100 kVA)	5	37%	72%	2366
2.	large non-households (contracted power between 100kVA and 1000 kVA)	5	30%	68%	1898
3.	very large non-households (contracted power more or equal to 1000 kVA)	7	11%	30%	601
4.	TOTAL	5	24%	48%	1079

Source: Data reported by suppliers, data interpretation and analysis by ANRE

The values of structure indicators for 2008 indicate:

- a moderate level of concentration on the retail electricity market;
- a lack of concentration on the very large non-household retail market;
- a high level of concentration on the households + small non-households and large non-households.

If the supplied electricity (used to calculate the market share of each supplier) also includes the self-consumption of suppliers, the values of market shares and concentration indicators on very large non-households and on retail market as a whole will become as follows:

Table no.3.21

No.	Consumer type	Number of suppliers with market shares higher 5%	C1	C3	HHI
1.	very large non-households (contracted power more or equal to 1000 kW)	7	17%	35%	702
2.	TOTAL	6	22%	44%	975

Source: Data reported by suppliers, data interpretation and analysis by ANRE

Information regarding the procedures of switching the electricity supplier

According to the Procedure of switching the electricity supplier, approved by ANRE Order no. 21/2005 the consumer is not obliged to pay when switching its supplier.

The consumer chooses a new supplier and signs a negotiated contract. The switching depends on:

- addressing a notification to the former supplier with at least 30 days before the new contract enter into force;
- paying all their back payments;
- the existence of having hourly meters. The cost of changing the regular meter with an hourly meter has to be in charge of consumer.

The new supplier informs DO/TSO about the switch in maximum 5 days from the consumer requirement.

DO/TSO reads the meter during the switching day or in maximum 10 days from the switching day and has to inform all the parties about the reading date.

The evolution of prices on retail electricity market

The selling prices for consumer categories described below have been calculated by processing both household and non-household consumers

Table no. 3.22

Consumer type	Euro/MWh				
	Network tariff	Taxes on network tariffs	Price of electricity acquisition	Taxes	Total price
Households with an annual consumption between 1000 and 2500 kWh/year	55.3	0	34.6	17.8	107.8
Commercial consumers with an annual consumption between 2000 and 20000 MWh/year	25.35	0	53.74	15.27	94.36
Average industrial consumer with an annual consumption between 20000 and 70000 MWh/year	22.43	0	46.66	13.33	82.42
Large industrial consumer with an annual consumption between 70000 and 150000 MWh/year	16.66	0	41.38	11.24	69.29

Source: Data reported by suppliers, data interpretation and analysis by ANRE

Table 3.23 presents the average prices for 2005, 2006, 2007 and 2008 for households and non-households supplied on the regulated market and for non-households supplied on the competitive market. The prices are expressed both in lei and Euro, the conversion being made based on the monthly average exchange rates Euro/RON published by NBR.

Table no. 3.23

Consumer type	Average prices							
	lei/MWh				Euro/MWh			
	2005	2006	2007	2008	2005	2006	2007	2008
Consumers supplied on regulated market	286	316	340	354	79	90	102	96
Consumers supplied on competitive market	144	168	188	224	40	48	56	61

Source: Data reported by suppliers, data interpretation and analysis by ANRE

Elements which influence the behaviour of switching the supplier

Main problems identified during the switching process are:

- lack of advantageous offers relating to price, especially for the consumers on low voltage with low consumption;
- switching of supplier is possible only if the back payments are solved or taken over by the new supplier;
- lack of consumption loads which can be used in order to avoid the costs of meter switching in case the households and small non-households do not possess hourly meters;

- the date of switching to another balancing responsible party is 1st of each month.

The contract of electricity supply is usually concluded on a time period which is decided by both parties. For households supplied at regulated tariffs the contract is concluded over an unlimited period of time, except the cases when the consumer owns a location on a limited period of time or its technical permit for connection was issued on a limited period of time.

Switching of supplier; procedures and switching rates

The process of switching the supplier from the regulated to the competitive market is similar to the switching process on the competitive market. According to the provisions of Energy Law no. 13/2007, the default supplier is obliged to ensure the consumer supply only until the consumer's first switching.

Figure 3.15 presents the annual evolution of consumption share of consumers which switched their supplier or negotiated their contract with the same supplier (switching from regulated to negotiated tariff), compared to the market opening degree (level established by a Government Decision).

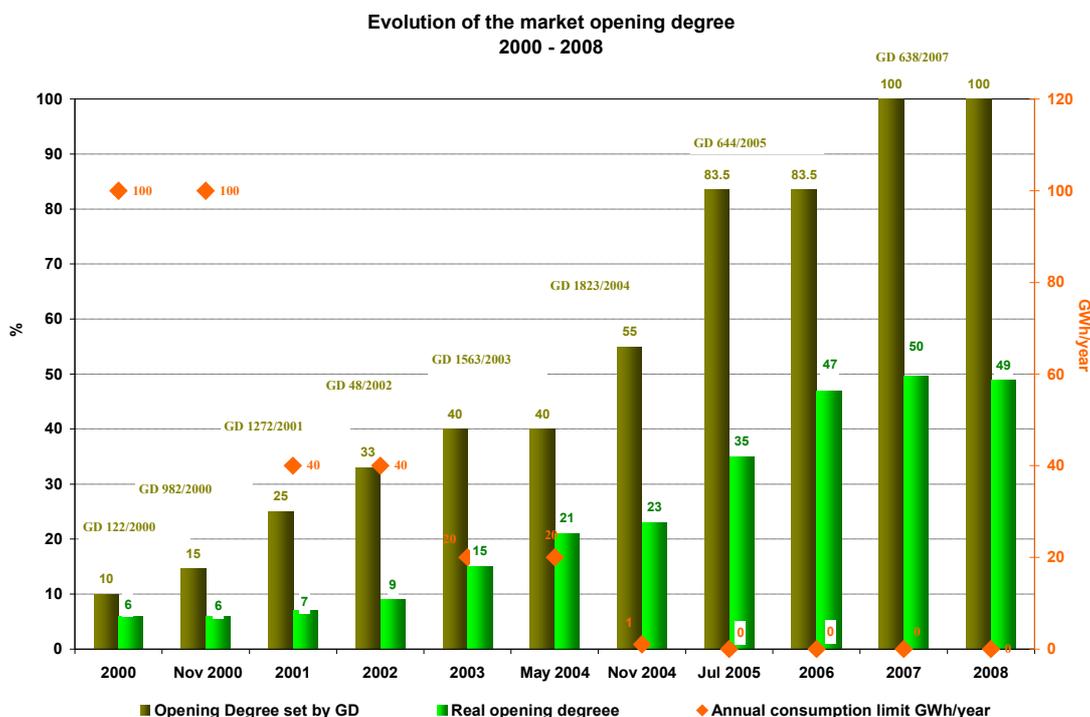


Figure no. 3.15, Source: Data reported by suppliers, data interpretation and analysis by ANRE

In 2008 compared to 2007, the average opening degree of the retail market has fallen from 50% to 49%. This decrease was due to the increase of household consumption (with approx. 9%) and of competitive non-household consumption (with approx. 1%) while the regulated non-household consumption remained unchanged. In this way the total regulated consumption increased with approx. 4%, which represents a higher increase than in case of competitive consumption.

The following graphs present the number of consumers supplied on the competitive market:

- as cumulated value since the beginning of the market opening process and

- data from 2008, structured on consumer type, according to the provisions of the European Council Directive no. 90/377/EC, with subsequent modifications.

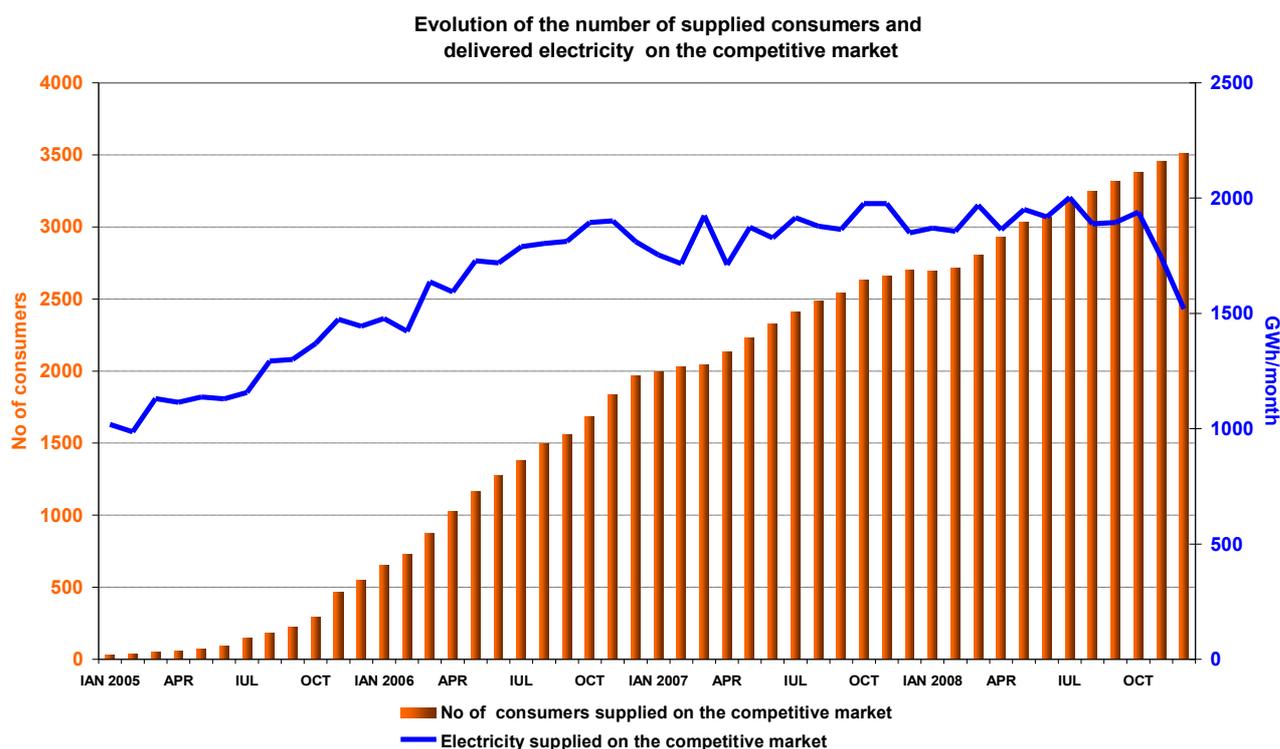


Figure no. 3.16

Source: Data reported by suppliers, data interpretation and analysis by ANRE

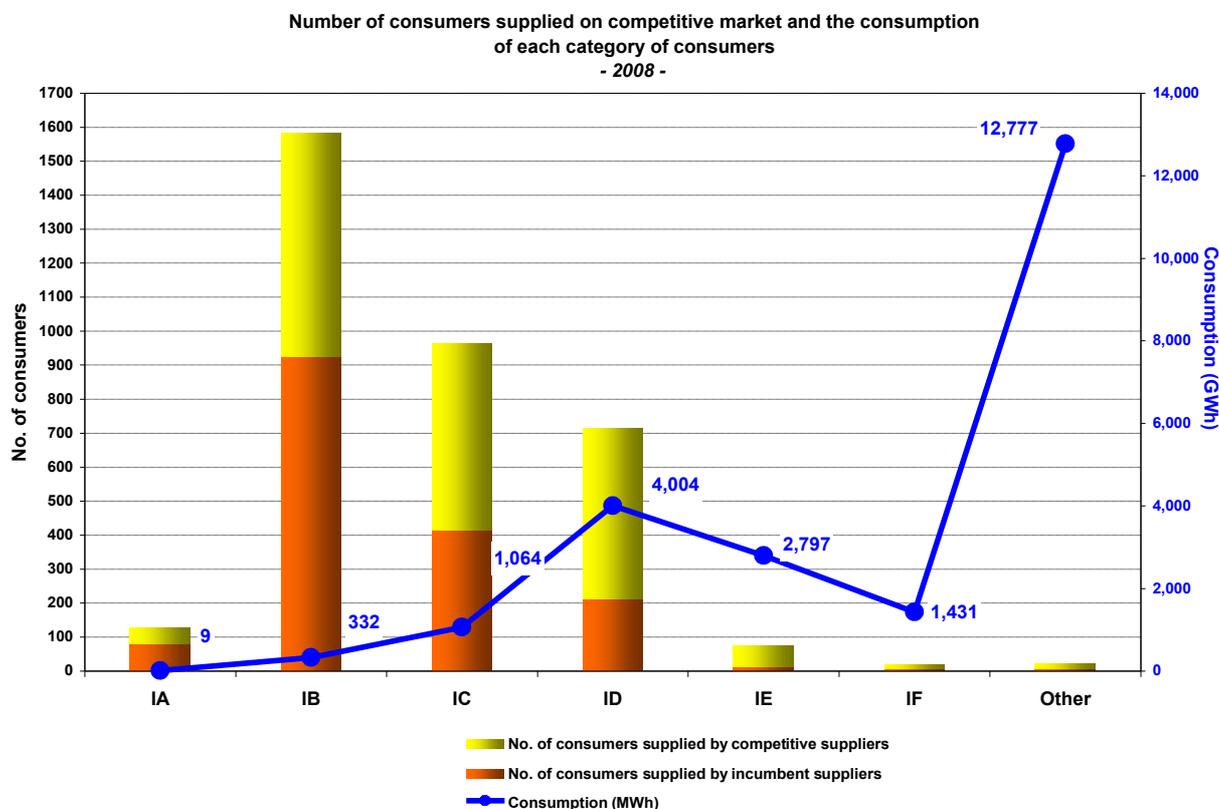


Figure no. 3.17

Source: Data reported by suppliers, data interpretation and analysis by ANRE

It is worth to be noticed that the competitive suppliers, compared to the default suppliers, prefer to supply electricity to consumers from IC, ID and IE consumption categories which determines a high level of competition for these segments of retail electricity market.

The switching rate of suppliers for 2008, presented in *table 3.24*, is calculated for each type of consumers in two alternatives: depending on number of consumption places which switched the supplier in 2008 and depending on electricity supplied to those consumption places. The self-consumption of the largest industrial consumer which owns a supply license and decided to buy its electricity from the wholesale electricity market as a competitive supplier is not included.

Table no. 3.24

No.	Consumer type	Supplier switching rate	
		No. of consumption places	Supplied electricity
1.	households + small non-households (contracted power less or equal to 100 kVA)	0.002%	0.116%
2.	large non-households (contracted power between 100kW and 1000 kVA)	2.074%	3.289%
3.	very large non-households (contracted power more or equal to 1000 kVA)	4.164%	18.614%
4.	TOTAL	0.006%	8.965%

Source: Data reported by suppliers, data interpretation and analysis by ANRE

If the supplied electricity (used to calculate the market share of each supplier) also includes the self-consumption of suppliers, the values of switching rate of supplier will become as follows:

Table no. 3.25

No.	Consumer type	Supplier switching rate	
		No. of consumption places	No. of consumption places
1.	very large non-households (contracted power more or equal to 1000 kVA)	4.156%	15.456%
2.	TOTAL	0.006%	8.202%

Source: Data reported by suppliers, data interpretation and analysis by ANRE

Compared to last year, the value of switching rate of a supplier for non-household consumers based on the number of consumption places has decreased while the value based on supplied volumes has increased. This may indicate the fact that the switching from a supplier to another was not so extended, but the consumers which preferred another supplier have significant consumption levels.

During 2008, 10 suppliers have concluded supply contracts with final consumers located in all 8 geographical areas of consumption, the average number of suppliers being 27 for each area.

The analysis of switching from a supplier to another showed that in 2008 the electricity market was less active from this point of view; the very high levels of switching rate on non-household consumers indicate a more intense activity of this type of consumers.

Mandatory requirements to keep the consumers informed were imposed to the suppliers in several regulations issued by ANRE, such as: Regulation for the information of the electricity and natural gas residential consumers (ANRE Order no. 122/2008), Regulation for the supply of electricity to the consumers, Conditions associated to the supply and to the distribution licenses, Framework Contracts for the supply of electricity to consumers with regulated tariffs, Performance Standard for the service of electricity supply.

The obligations set in these regulations relates to:

- communication with the consumers (through website, customer service offices, phones, dissemination of informative leaflets, media releases, informative letters, meetings with consumer associations, a.o.)
- time-period within which consumers must be informed on: electricity tariffs and conditions of the supply, new regulations, modification of existing regulations, network connection tariffs and conditions, labelling, forwarding a complaint, resolution of complaints, payment, a.o.
- creation of a dedicated webpage and the minimum information this webpage must include
- creation of a unitary system for the reporting towards ANRE of the informative actions carried out by the default suppliers.

The development of a retail competitive market depends on the consumer's means to obtain complete, relevant and comparable information regarding the offers of different suppliers (contractual clauses, prices and tariffs, general conditions for electricity supply). In this respect, ANRE issued a new project regulation for modification of the Order no. 122/2008 regarding the approval of the *Regulation concerning the electricity and natural gas household's information*. The document is under consultation phase. Several new topics were set up:

- a price calculator instrument to be introduced;
- the obligation of the supplier to inform the consumer regarding the contractual clauses before the contract to be concluded and before their modification for the existing contracts;
- supplementary information on the bill such as: the regulated tariffs for network services, the name of the network operator where the consumer's installations are connected, contact information of ANRE, the single identification code of the metering point, the value of the consumer's debts at the issuing date of the bill, comparison of the energy consumptions, general information for consumer, the supplier's obligation to notify the small and households consumers with determined period contracts about the date of the expiry of the contract.

During September – November 2008, ANRE unfold an information campaign for the electricity consumers regarding their rights in a liberalised market. The information campaign was financed through a Phare project, financed by the European Commission. The evaluation of the campaign results was done by a company with experience in market research. The results of the evaluation emphasised a significant growing of the consumers' information level regarding their rights in a liberalised market.

The main topics of the natural and legal person's complaints sent to ANRE during 2008 could be found in *table 3.6*.

Tabel no. 3.26

Topic	No. of complaints	%
Issues regarding billing	117	25.27 %
Issues regarding connections to the network	39	8.42 %
Access to the networks	25	5.39 %
Quality parameters	25	5.39 %
Contracting procedure	22	4.75 %
Disconnections	15	3.23 %
Private property issues	13	2.8 %
Tariffs	11	2.37 %
Procedure for changing supplier	8	1.72 %
Technical norms issues	7	1.51 %
Unproved stilling accusation	5	1.07 %
Operation errors	5	1.07 %
Renewable sources	5	1.07 %
Metering	4	0.86 %
Supply framework contract	4	0.86 %
Compensations	3	0.64 %
DAM settlement	2	0.43 %
Other issues	152	33.03 %
TOTAL	463	100.00%

The requests for information under the Freedom of Information Act made via phone, free-toll line, email or post addressed mainly the following subjects of interest: qualification/certification of electricians/contractors – 40.9%, renewable energy sources – 27.7%, prices and tariffs – 16%, contracts and services – 5.7%, license granting – 4.8%, network connection – 3.3%, metering, disconnection, technical norms – 1.6%.

3.2.3 Measures to avoid the abuse of dominance

In 2002, ANRE established an in-house specialised department with a view to permanently monitoring the functioning of the wholesale and the retail electricity markets by means of technical, commercial and accounting data and information that all the electricity sector participants, including the operators of the centralised markets are reporting periodically to ANRE.

The activity of centralised electricity markets is monitored through the competent departments of ANRE, of SC Opcom SA (the electricity market operator) and of CN Transelectrica SA (the balancing market operator).

The *Methodology for the monitoring of the wholesale electricity market with a view to assessing the level of competition on the market and preventing the abuse of dominance* (ANRE Order no. 57/2005) was issued in order to establish the methods for the monitoring and the assessment of the electricity markets in order to estimate the level of efficiency, competition and transparency and to prevent/discourage anti-competition practices and practices that may affect the safe operation of the national power system. The methodology was reviewed under the technical consultancy of Kema Consulting, through a Phare Programme financed by the European Union and was approved through ANRE Order no. 35/7.12.2006.

In 2008 was approved the *Methodology for the monitoring of the retail electricity market* by ANRE Order no. 60/2008.

When the analyses confirm that there are serious reasons to suspect a possible infringement, by one or more market participants of the legal provisions on competition and transparency or the existence of an abuse of dominant position, ANRE inform the Competition Council.

The markets monitoring activities developed by the ANRE in-house specialised department in cooperation with the competent departments from SC OPCOM SA and CN Transelectrica SA ensured:

- the publishing on the ANRE web page of monthly reports regarding the operation of the electricity markets. The reports have information regarding the operation rules of the markets and aggregated data regarding NPS and market operation. Based on these data, the competition level could be assessed and the stakeholders could develop specific studies. The content of the report was permanently improved based on: the technical consultancy financed by the European Commission and the best practice transparency guidelines issued by ERGEG;
- the periodical assessments regarding the efficiency of the electricity market operation, the regulatory framework and the market participants behaviour;
- some analyses on specific issues in order to emphasise the role of regulations and to ensure the necessary feed-back for improving the regulatory framework.

Some of the topics for such analyses were: how were observed in good faith rules the contractual guaranties, competitive bidding behavior of a participant in a centralized market (Electricity Ring - BRM), correct completion of the offer by a producer in the retail market, achieve responsible management of resources by a market participant with a decisive role in NPS security, reasons for the differences found between the achieved electricity productions for year 2007 and the results of running the program Powrsym for optimization of the system with forecast data, increase compliance with the EC Regulation 1228/2003 guidelines, the average prices analysis on the competitive market, etc.

In order to clarify these issues were required the views of the participants involved and meetings were organized in which operators have presented their arguments. These steps are completed by clarifying the application of regulations in the future, proposals to improve regulations and to discourage participants from adopting inappropriate behavior.

So far, SC Opcom SA, which is the administrator and the supervisor of the electricity DAM made no reports regarding the infringement by any market participants of the competition rules during the periods when the market had high concentration levels that might have led the market participants to exercise their market power.

Regarding the participants behaviour on the BM, where the concentration level is high, ANRE took actions in order to prevent the exercise of the dominant position by imposing cap and floor on prices offered by various categories of producers, described in the previously chapters.

Although no anticompetitive behaviours of the BM participants have been recorded the TSO's competent department constantly noticed the existence of the dominant participant in the secondary regulation (upward and downward) and in the fast tertiary (upward). To avoid the market power, TSO proposed the following distinct solutions:

- A regulated dominant participant, which means the elimination of such a participant from the competitive market and increasing competition among other participants, or
- A restructured generation sector in order to even out the generation costs, to achieve the market quota and to near the degrees of flexibility with a view to strengthening market competition, or

- Modification of the BM bidding rules by widening to 100 lei/MWh the daily limitation between the highest and the lowest price offered in order to group the producer's units that qualify for the secondary regulation.

As mentioned before, the prevention of the dominant position and of the collusions on the ancillary services market, which is also a highly concentrated market, was achieved predominantly through regulated contracts signed by the generators with the TSO for a significant part of the necessary reserves.

To assess the efficient functioning of the electricity wholesale market ANRE initiated a study in 2008 with a view to drawing a comparison between the marginal system costs resulted from the running of the Powrsym programme and the prices resulted from the market functioning (calculation of the a Lerner-type index for 2008). The study is carried out together with Powrsym experts within CN Transelectrica SA and is currently underway.

ANRE made no notifications to the Competition Council on the possibility of competition rules breach on the electricity market and the Competition Council has not disclosed any specific actions for this market in 2008.

On the BM producers are compelled, however, to offer all their available energy and the DAM behaviour is monitored as per the provisions of the Competition Law referring to market power condition according to which it is prohibited to restrict the production, to collude, to impose and to practice extreme prices which may result in the elimination of the competition, the prejudice of the consumers or the disadvantage of the partners on the competitive segment.

There were no restrictions on the Romanian electricity market for the duration of the negotiated bilateral contracts; the only existing limitation related to the duration of the regulated contracts (a 2.5-year period for the recent ones) with the possibility of extension through ANRE Order depending on the evolution of the opening degree of the market. Every year the prices and quantities are analysed so that the significant discrepancies between in-data and prognosis-data (fuel price, hydrological conditions, real opening degree of retail electricity market) may be identified.

The increase in the number and volumes of the contracts concluded through transparent bids on CMBC determined a high degree of convergence between bilateral contracts prices and DAM prices, which indicates an increase of efficiency in the functioning of electricity market and in eliminating disturbances.

Through ANRE Order no. 60/2008 that approved the *Methodology for the retail electricity market monitoring* was introduced the obligation for suppliers to report monthly to ANRE about their activity. ANRE has published monthly on the web site a monitoring report that contains useful information for consumers such as: the list of the active suppliers, the electricity market opening degree, the market shares of the suppliers, the evolution of the consumers number, the average prices for different categories of consumers.

4. Regulations and performances on natural gas market

4.1. Regulatory Issues [Article 25(1)]

Natural gas market development for the next years aims toward:

- Development of competition between natural gas suppliers;
- Continuously implementation of „cap” type tariff methodologies;
- Stimulation of setting and/or rehabilitation of some natural gas deposits in order to increase the internal production and to limit the import dependence;
- Granting new supply licenses to companies trading on wholesale market, targeting to diversify the import sources.

Starting from July 1st, 2007, the market is entirely open for all consumers, they being free to choose a natural gas supplier from those licensed by the regulatory authority and directly to negotiate the clauses and the price for natural gas supply. The consumer may exercise its position as an eligible consumer directly, without any administrative formalities.

At the end of 20087, there were 1,048 eligible consumers on the natural gas free market, having a consumption of 89,194,296.913 MWh, meaning a 54.05% real market opening degree.

4.1.1. Management and allocation of interconnection capacity and mechanisms to deal with congestion

The Romanian natural gas National Transmission System (NGT) has the following features:

- 12,990 km main Transmission pipelines and gas connections;
- 21 control valves stations and/or technological stations;
- 961 adjusting and/or measuring stations for the natural gas operated by NTS;
- 2 measuring stations for the imported natural gas;
- 6 measuring stations placed on the transit pipelines;
- 6 compression stations;
- 857 cathodical protection stations;
- 575 gas odorization facilities.

There also are three transit pipelines, having a total length of 553 km, pressures up to 55 Bars and diameters of 1,000 mm and 1,200 mm. The total capacity of these dedicated main pipelines is 28 billion c.m./year.

The total available capacity of NGT is more than 27 billion c.m./year.

The 6 natural gas compression stations are placed on the main transmission routs and their installed power is about 65,000 HP, being able to compress 5.5 billion c.m./year.

All these components of NGT ensure the taking over of natural gas from producers/suppliers and its transmission toward consumers/distributors or storage deposits.

The Interconnection Strategy of the natural gas National Transmission System with the neighbouring systems has been structured into 4 directions, as it follows:

- a) Strategic interconnections of NGT with the neighbouring transmission systems:
 - Interconnection with Hungary –Szeged - Arad pipeline;
 - Interconnection with Bulgaria –Russe - Giurgiu pipeline;
 - Interconnection with Serbia.
- b) Interconnections in order to diversify the natural gas sources from import:
 - Interconnection with Bulgaria at Negru Vodă;
 - Interconnection with Ukraine at Siret- Bucecea.
- c) Interconnections dedicated for developing new storage capacities:
 - Interconnection with Moldova – Margineni storage;
- d) Interconnection with Nabucco pipeline (natural gas transmission corridor from Caspian Sea region to Western Europe).

The Network Code, approved by ANRE Order no. 54/2007, settles the conditions and rules for using the natural gas National Natural Gas Transmission System in Romania, as well as transparent and non-discriminatory access of third parties. The network code is to be applied starting with the natural gas year 2009-2010.

The network code of the natural gas National Transmission System establishes rules and procedures regarding the access to NTS, among them the most important are:

- a) Procedures for balancing the natural gas system, nominalizations and communication;
- b) Mechanisms for allocate capacities;
- c) Procedures for operating the system in emergency situations.

By introducing penalties for non-observing the provisions of the Network Code, it will introduce discipline among the network users.

According to the provisions of the Network Code, the users may request the capacity of the NTS:

- a) Before May 15, every year, for a natural gas year or a multiple of a natural gas years;
- b) After May 15, every year, for periods less than a natural gas year and only until the end of the current natural gas year.

The network users request the booking of NGT capacity by filling in and transmitting toward the NGT Operator (TSO) the „Capacity request” form together with the proposal of Transmission schedule.

TSO is obliged, within maximum 30 days period, to answer the network user regarding the access to NGT or to communicate the reasons for refusal (total or partial), as well as some observations on the proposed Transmission schedule.

TSO grants the available capacity from NGT to the network users (Transmission agents) based on the principle „first come, first served”. Priority shall be granted for the capacities requested in order to fulfil the public service obligations.

In order to settle the congestions, approved but unused capacity may make up the object of:

- a) Voluntary return to the TSO;
- b) Capacity transfer facility (CTF);
- c) Mandatory transfer from one network user to another by the TSO.

In order to transmission natural gas under safe conditions through NGT and to allocate the natural gas quantities to the network users, TSO defines some activities and procedures for balancing NGT (physically and commercially).

4.1.2. Regulation of TSO and DO activities

In Romania there is a sole **operator for the natural gas National Transmission System**, which is also system operator. By the government decision no. 334/2000, SNTGN Transgaz - S.A. Mediaş has been designed as the operator of the national transmission system and is responsible by its operation under quality, safe, economic efficiency and environmental protection conditions.

According to the Gas Law No. 351/2004, with subsequent amendments, the NGT operator shall ensure:

- a) NGT operation and physical balancing, namely programming, dispatching and safe functioning of the NGT;
- b) Maintenance, rehabilitation, upgrading and development of NGT whilst observing the principles of safety, efficiency and environmental protection;
- c) Setting up, maintenance and development of an IT system for surveillance, control and acquisition of data, that will allow for the monitoring and real time management of the functioning of the gas transmission system;
- d) Third party access to the NGT in compliance with the specific regulations, in a non-discriminatory manner, in the limits of the transmission capacities and observing the technological regimes;
- e) Elaboration and implementation of optimal transmission and delivery regimes for the volumes of gas notified by producers, suppliers, storage operators and/or customers, for a certain period, in accordance with signed contracts;
- f) Elaboration and update of the technical agreements for exploitation at the border, in case the supplier is an exporter or beneficiary of the transit of gas through Romanian territory;
- g) Drafting and surveillance of the balance of the gas that got in and out of the system;
- h) Drafting of NGT's own development program – for the undertakings not mentioned in the concession agreement, in relation with the actual level of the consumption and taking into consideration the development of new consumption areas and the evolution of the existing ones under safe and economically efficient conditions;
- i) Storage in the underground storages of the volumes of natural gas needed to secure NGT permanent physical balance, as per specific regulations issued by regulatory authority;
- j) The level of odorization of gas in compliance with the regulations in force.

Also, the regulator drafted and approved in 2006 the Conditions on validity of the license for gas transmission (ANRGN Decision No. 1362/2006), detailing the rights and obligations of the transmission system operator. Transmission licensee's obligations mainly refer to:

- Operation of the natural gas National Transmission System
- Contracting of the gas transmission service in a non-discriminatory manner to all market participants, on the basis of the framework-contracts issued by the regulator
- Access to the natural gas National Transmission System, under equal and non-discriminatory terms

- Development of the natural gas National Transmission System, according to the clauses and terms of the concession agreement, and to NTS's own development program
- Measurement of natural gas volumes
- Delivery of information to applicants/users with a view to efficient development of access process to the system
- Observance of the transparency requirements in compliance with Regulation 1775/2005/EC
- Observance of the Performance Standard for gas transmission
- Ensuring of a competitive environment and non-discriminatory treatment of system users
- Unbundling of the financial-accounting registers, as well as legal, functional and organizational unbundling
- Ensuring the confidentiality of the information gathered during the performance of activity.

Distribution operators are titular of distribution licenses, having as a main activity natural gas distribution, in one or more limited areas. At present, 39 companies own distribution licenses on natural gas in Romania.

The total length of the distribution networks is about of 38,000 km. The operation of distribution networks in Romania is as it follows:

No.	Distribution network operated by:	Distribution network length (km)	Property
1.	Amarad	11	Private
2.	Apopi&Blumen	12	Private
3.	Auraplast	7	Private
4.	Ben & Ben	37	Private
5.	Berg Sistem Gaz	32	Private
6.	Congaz	650	Private
7.	Contract P&G	14	Private
8.	Cordun Gaz	33	Private
9.	Coviconstruct 2000	110	Private
10.	CPL Concordia Filiala Cluj Romania	782	Private
11.	Design Proiect	15	Private
12.	Distrigaz Sud Rețele	14,400	Mainly private capital
13.	Distrigaz Vest	49	Private
14.	EON Gaz Romania	17,671	Mainly private capital
15.	Euroseven Industry	23	Private
16.	Gaz Est	108	Private
17.	Gaz Nord Est	29	Private
18.	Gaz Sud	312	Private
19.	Gaz Vest	644	Private
20.	Grup Dezvoltare Rețele (GDR)	111	Private
21.	Hargita Gaz	225	Private
22.	Intergaz	1	Private
23.	MM DATA	29	Private

24.	Megaconstruct	57	Private
25.	Mehedinți Gaz	5	Mainly private capital
26.	Mihoc Oil	9	Private
27.	Nord Gaz	3	Private
28.	Oligopol Brasov	20	Private
29.	Ottogaz	23	Private
30.	Petrom	1.553	Mainly private capital
31.	Prisma Serv	8	Private
32.	Progaz P&D (former Progaz Distribution)	86	Private
33.	Romgaz	17	State owned
34.	Salgaz	57	Private
35.	Timgaz	38	Private
36.	Tulcea Gaz	46	Private
37.	Vega 93	67	Private
38.	Vital gaz	282	Private
39.	Wirom	51	Private

As per Gas Law No. 351/2004, with subsequent amendments, the natural gas distribution system operators have mainly the following obligations:

- a) To operate, maintain, repair, upgrade and develop the distribution system, whilst observing the principles of safety, economic efficiency and environmental protection. The activities shall be performed on the basis of specific authorizations for the design and execution of gas supply systems, and the operation on the basis of the distribution license;
- b) To ensure the gas odorization level according to regulations in force, on the basis of service rendering contracts, signed with NGT operator, and, where appropriate, by additional odorization in gas adjusting stations;
- c) To perform interconnections with other systems, as the case may be, and ensure the long term capacity of the distribution system;
- d) To ensure third party access to the distribution systems, under non-discriminatory terms, within the limits of the distribution capacities, observing the technological regimes, in compliance with the specific regulations issued by the regulatory authority;
- e) To draft and oversee the balance between the gas that got into and out of the system;
- f) To avoid cross subsidization between categories of customers with regard to the division of costs for the booking of distribution capacity;
- g) To take over, for an undetermined period, upon request and in compliance with regulations, the operation of a certain distribution system, whose initial operator was penalized with withdrawal of the license;
- h) To ensure the permanent balancing of the system operated;
- i) To ensure the conditions for security of natural gas supply.

According to the provisions of the Gas Law No. 351/2004, with subsequent amendments, the regulatory authority elaborates, approves and applies criteria and methods for approval the prices and for setting the regulated tariffs setting in natural gas sector, including transmission and distribution tariffs.

For the setting of regulated tariffs, ANRGN drafted in 2003 a new methodology on calculation of gas prices and regulated tariffs - „Criteria and methods for approval of gas prices and setting of gas regulated tariffs”, approved by ANRGN Decision No. 1078/2003.

The mechanisms for calculation of prices and regulated tariffs are of „revenue-cap” type for regulated underground storage, and „price-cap” for regulated distribution and supply.

The regulatory period for any of the regulated activities is 5 years, except for the first regulatory period (transitory stage), which was established for 3 years.

The pricing system for transmission comprises a set of *revenue cap* tariffs, establishing overall regulated revenue covering the overall costs of one year of the regulated period.

For the first regulatory period, the tariff for transmission through the national transmission system is unique and has a two-part structure as follows:

$$T_t = RC_t + V_t$$

where:

T_t – transmission tariff

RC_t – fixed component for booking of capacity in the transmission system, expressed in lei / 1,000 cm

V_t – volume-related component for the use of the transmission system, expressed in lei /1,000 cm.

The fixed component for the booking of capacity in the transmission system (RC_t) covers fixed costs, related to the development of the transmission system capacity. The volume-related component for the use of the transmission system (V_t) covers the costs generated by the use of the system, including the costs generated by the performance of services ancillary to the use of the system.

For the second regulatory period, until the “entry-exit” pricing system shall be introduced, the tariff for the transmission through the national transmission system is unique and has the same binomial structure as above.

Afterwards, the transmission activity shall contain a set of “entry-exit” tariffs, established for the delimitation points at the inlet of the transmission system where the capacity is booked and also at the outlet of the transmission system where the capacity is booked, as well as for using the system. The structure of this kind of tariff shall be as it follows:

$$T(t) = RC(ti) + RC(te) + V(t),$$

where:

$T(t)$ – transmission tariff;

$RC(ti)$ - fixed component for booking of capacity in the inlet priced points

$RC(te)$ - fixed component for booking of capacity in the outlet priced points

$V(t)$ - volume-related component for the use of the transmission system

The pricing system for storage contains a set of “revenue cap” tariffs, through which a total regulated revenue is established that covers all the costs related to a year activity of the regulatory period.

In the first, as well as in the second regulatory period, the tariffs for storage shall be established for each underground storage and have the following structure:

$$T(ds) = RC(ds) + I(ds) + E(ds)$$

where :

T(ds) – storage tariff

RC(ds) – fix component for booking the capacity into the underground storage, in lei /1,000 c.m./complete storage cycle

I(ds) – volume component for natural gas injection into the underground storage, in lei /1,000 c.m.;

E(ds) – volume component for natural gas extraction from the underground storage, in lei /1,000 c.m.

The fix component for booking the capacity into the underground storage RC(ds) quantifies the fix costs, generated by booking the capacity into the underground storage for a complete storage cycle.

The volume component for natural gas injection into the underground storage I (ds) quantifies the variable costs generated by natural gas taking over, measurement, treatment and circulation through the surface facilities and put into the underground storage.

The volume component for natural gas extraction from the underground storage E (ds) quantifies the costs generated by natural gas extraction from the underground storage, its treatment, circulation and measurement through surface facilities and its deliver to transmissioner and/or beneficiary.

The pricing system for distribution comprises tariffs that are differentiated on categories of customers and homogeneous distribution systems, in relation with the technical characteristics and exploitation regime of each distribution system.

Unitary regulated revenue is established for distribution, covering the unitary costs of one year of the regulated period.

Distribution tariffs are “single-part” kind and quantify fix and variable costs related to the distribution activity. Distribution tariffs apply to the delivered volumes of gas.

The efficiency increase rate of the regulated activity reflects regulator’s estimations with regard to the improvement over time of operators’ economic performance. The X term of the adjusting formula reflects the estimated annual efficiency increase rate and ensures the transfer of economic efficiency raise achieved by each operator towards customers.

The efficiency increase rate of the regulated activity is established in the beginning of each regulatory period, for each regulated activity and for each operator. The rate remains unchanged over the regulatory period.

Economic efficiency returns related to the regulated activity are determined separately for each operator using the methods described below:

- a) Extrapolation of the increase rate of efficiency resulted from the long-term gas sector productivity, plus an elasticity factor reflecting each operator's specific situation;
- b) Detailed technical analysis of operators' operation and capital costs, highlighting additional savings that may be achieved by the operator.

When establishing regulated activity's efficiency increase rate - X, for each operator, the following are considered:

- a) Economic efficiency raise highlighted by the methods presented and generated by the increase in the performance of operator's management;
- b) Efficiency increase rate of the related industry and national economy;
- c) Full deduction by the operator of economic efficiency raise from investments.

For the first regulatory period, regulated activity's efficiency increase rate is null for all activities and operators.

The substantiation of the regulated revenue in the first regulatory period requires the assessment of operation and capital costs generated by the performance of the regulated activity. From this point of view, the regulator's methodology aims to ensure the recovery of invested funds, including associated capital costs, prudently accomplished and within an optimal financing structure.

The assessment of the cost of capital and the establishment of the regulated rate of return - RoR, recognized by ANRE for each regulated activity, uses the "weighted average cost of capital" (WACC) methodology. WACC is determined in nominal terms, after the tax on profits, and RoR in real terms, prior to the tax on profit. RoR (real, prior to taxation) was determined as equivalent to WACC (nominal, after taxation) using an equivalent formula, ensuring the equality between invested capital and cash flow (in present values), available for the period of regulated depreciation of tangible and intangible assets, discounted with WACC.

For the second regulatory period, certain calculation elements taken into consideration for the first regulatory period remain unchanged. Because the companies performing regulated activities in Romania are not quoted on the stock exchange, WACC is calculated using the information available for other companies used as buyers. These companies are selected from the ones quoted on the international markets, that perform as main activity a regulated activity and that operate under a regulatory regime similar to the Romanian one.

The mechanisms for calculation of the distribution tariffs and the regulated supply rates are "price-cap" kind.

The value of the distribution services for a user of the distribution system is monthly billed and is determined with the following formula:

$$VT^d = T_d * Q$$

where:

VT^d – total value of the bill, without VAT, representing the distribution service value, in lei ;

T_d – regulated distribution tariff, in lei /1,000 c.m.

Q – distributed quantity, in 1,000 c.m.

The value of supply services for a final consumer is monthly billed and is determined with the following formula:

$$VT^f = Pf * Q$$

where:

VT^f – total value of the bill, without VAT, representing the regulated supply service value, in lei ;

Q – supplied quantity, in 1,000 c.m;

Pf – final regulated price, in lei /1,000 c.m.

The regulator is entitled to refuse the operators the recognition of some costs or parts of them, which have not been prudently generated, considering the conditions and information available at the time they were accomplished.

The categories of consumers for which they establish the final regulated differentiated prices and distribution tariffs are the following:

A. Final consumers directly connected to the transmission system

A.1 Annual consumption no more than 1,162.78 MWh

A.2 Annual consumption between 1,162.79 MWh and 11,627.78 MWh

A.3 Annual consumption between 1,240,000 c.m and 12,400,000 c.m

A.4 Annual consumption between 11,627.79 MWh and 116,277.79 MWh

A.5 Annual consumption more than 116,277.79 MWh

B. Final consumers connected to the distribution system

B.1 Annual consumption no more than 23.25 MWh

B.2 Annual consumption between 23.26 MWh and 116.28 MWh

B.3 Annual consumption between 116.29 MWh and 1,162.78 MWh

B.4 Annual consumption between 1,162.79 MWh and 11,627.78 MWh

B.5 Annual consumption between 11,627.79 MWh and 116,277.79 MWh

B.6 Annual consumption more than 116,277.79 MWh

The regulatory authority drafted and approved Performance Standards for natural gas distribution and transmission (ANRGN Decision No. 1361/2006).

The performance standards regulate the commercial quality criteria, defined by performance indicators, for the transmission and distribution services and other affiliated services performed by the transmission and distribution operators.

For **natural gas transmission**, the Performance Standard sets performance indicators for quality of service, and safety of service.

The performance indicators regarding the quality of service refer to:

- Handling of access applications with a view to connection to the NGT
- Connection to the NGT of access applicants
- Notification regarding restoring of service
- Notification of scheduled interruptions and of service restoration following scheduled interruption
- Handling of NGT users' complaints regarding the measurement of natural gas
- Handling of complaints regarding the integrity and functioning of the NGT under safety conditions

- TSO obligation to inform applicants/users arising from other regulations issued by the regulatory authority

The safety indicators established for the natural gas transmission operator system performance standards regarding the of service are as follows:

- Annual percentage of network subject to control using gas leakages detecting devices
- Annual number of failings causing losses localized per one kilometre of checked network
- Annual number of failings causing losses signalled by third parties per one kilometre of active network
- Annual number of failings causing losses generated by third party actions signalled by third parties per one kilometre of active network

In performing the service, the transmission system operator shall carry out its activity so that the performance indicators regarding the quality of service fall within the percentages set up in the Standard, and the safety indicators under the limits set in the regulation.

For natural gas distribution, the Performance Standard sets guaranteed and overall performance indicators.

The guaranteed performance indicators set minimum performance levels in delivering the service. In case of non-observance of these standards, the distribution system operator shall pay to the affected customer penalties in amount and within the terms specified in the regulation, starting with January 1st, 2008.

The guaranteed performance indicators refer to:

- Handling of access applications with a view to connection to the distribution system
- Connection of access applicants to the distribution system
- Reinstatement of locations affected by the works performed on distribution system undertakings
- Obligation to notify about the service resumption date and time
- Service resumption following unscheduled interruption
- Notification of unscheduled interruption
- Service resumption following scheduled interruption
- Payment of the penalties due under the Performance Standard

The general performance indicators relating to natural gas distribution, mentioned in the Performance Standard, refer to the quality of service and safety of service, respectively.

The safety indicators set for the quality of the natural gas distribution service refer to:

- Handling of access applications with a view to connection to the distribution system
- Obligation to notify customers about scheduled or unscheduled interruptions of the service
- Obligation of the distribution system operator to inform applicants/customers arising from other regulations issued by the regulatory authority
- Information on the Performance Standards

The safety indicators set for the natural gas distribution system operator are as follows:

- Annual percentage of network subject to control using gas leakages detecting devices

- Annual number of failings causing losses placed per one kilometre of checked network
- Annual number of failings causing losses signalled by third parties per one kilometre of network
- Annual number of failings causing losses generated by third party actions signalled by third parties per one kilometre of network

In performing the service, the distribution system operator shall carry out its activity so that the performance indicators regarding the quality of service fall within the percentages set in the Standard, and the safety standards are below the values set in the regulation.

At the end of 2007, the Performance Standard for the distribution service has been modified and completed by ANRE Order no. 59/2007, considering the obligations of suppliers toward natural consumers, also being necessary to impose some obligations of the natural gas distributors toward natural gas suppliers. The modification and completion of the Performance Standard for natural gas distribution service was also needed because of the obligation of the supply licensees, and distribution licensees, respectively, who serve more than 100,000 consumers, to ensure the legal, functional and organizational unbundling of the regulated activities.

For **natural gas supply activity**, the Performance Standard sets the commercial quality criteria, defined by performance indicators for ensuring the natural gas supply service, as well as for establishing the reporting needs for the suppliers (ANRE Order no. 37/2007).

The standard sets two categories of indicators, as it follows:

- Guaranteed indicators – indicators that establish the minimal performance levels for performing the service by the supplier and for whose un-observance the supplier shall pay penalties to the affected consumer, as the standard sets;
- Yearly performance indicators – performance indicators that establish the yearly performance levels for natural gas supply service.

The guaranteed performance indicators refer to:

- Handling the applications of applicants/consumers, referring to completion /modification of a contract regarding regulated/negotiated natural gas supply;
- Handling the billing items of the consumers;
- Handling the information regarding the supplied natural gas quality;
- Handling the information regarding the natural gas measurement.

The yearly performance indicators refer to:

- Processing the contract applications;
- Handling the consumers' requests;
- Recommencement of supply in case of limitation/interruption due to non-payment.

In order to make aware the customers of their rights regarding the quality of the services the suppliers get the obligation to draft and publish a synthesis of these obligations. Thus, suppliers are obliged to publish on their web page, as well as, if the case, at their call-centres, a summary of their obligations and to notify it to each of customer they have.

Transmission and distribution tariffs for the most relevant categories of customers are as follows:

Cons Tariff	I4 – annual consumption 418.6 TJ		I1 – annual consumption 418.6 GJ		D3 – annual consumption 8.37 GJ		Typical household	
	Lei/ MWh	EUR/ MWh	Lei/ MWh	EUR/ MWh	Lei/ MWh	EUR/ MWh	Lei/ MWh	EUR/ MWh
Transmission Tariff	7.25	1.97	7.25	1.97	7.25	1.97	7.25	1.97
Distribution Tariff	17.10	4.64	20.12	5.46	22.54	6.12	22.54	6.12

In 2008, the average storage tariff was 10.31 lei /1000 c.m.

At present, no imbalance charges are applied on the Romanian gas market. Imbalance charges shall be put by implementation of the NGT Network Code.

The NGT Network Code will comprise requirements and rules on access to the natural gas National Transmission System, with particular focus on:

- Detailed description and regulation of the TSO, DSOs, SSOs functions, differentiating between normal operation and emergency operation
- Description of services delivered by infrastructure operators
- Establishment of mechanisms on capacity allocation
- Establishment of communication and nomination procedures
- Elaboration of manuals and procedural norms on management of potential crisis in the market
- Elaboration of procedures on gas system balancing (A high profile will have the setting up of the Gas Balancing Operator – independent body, that will manage in a non-discriminatory and impartial manner the interests of all market participants, observing the competitive rules, applied through regulations issued by the regulatory authority, based on mandatory framework-contracts on balancing)
- Elaboration of procedures to be applied for the communication between TSO, other operators and users
- Elaboration of detailed rules on the exchange of information between suppliers and distribution companies with regard to customer migration.

As regards the balancing of the gas system, it is envisaged the introduction of weekly balancing, with daily tolerance margins.

4.1.3 Effective unbundling

As per Gas Law No. 351/2004, with subsequent amendments, corroborated with the provisions of the Rules regarding the accounting, legal, functional and organizational unbundling of the regulated activities in natural gas sector, approved by ANRGN Decision

no. 1139/2006, gas operators performing regulated activities (transmission, storage, distribution) shall ensure accounting, legal, functional and organizational unbundling of these activities. Distribution companies serving less than 100,000 customers are exempted from the provisions on legal unbundling.

Also, in accordance with the legal provisions in force (Gas Law No. 351/2004, with subsequent amendments), in order to ensure the independence of the transmission system operator and distribution system operator, minimum criteria shall apply, as provided by EU legislation. Thus, for the transmission operator:

- a) Those persons responsible for the management of the transmission system operator may not participate in company structures of the integrated natural gas undertaking responsible, directly or indirectly, for the day-to-day operation of the supply of natural gas;
- b) The transmission system operator shall have effective decision-making rights, independent from the integrated gas undertaking, with respect to assets necessary to operate, maintain or develop the transmission network.
- c) The NGT operator shall establish a compliance program, which sets out measures taken to ensure that discriminatory conduct is excluded, and ensure that observance of it is adequately monitored.

For the distribution operator:

- a) Those persons responsible for the management of the distribution system operator may not participate in company structures of the integrated natural gas undertaking responsible, directly or indirectly, for the day-to-day operation of the production and supply of natural gas;
- b) The distribution operator shall have effective decision-making rights, independent from the integrated gas undertaking, with respect to assets necessary to operate, maintain or develop the distribution network.
- c) The distribution operator shall establish a compliance program, which sets out measures taken to ensure that discriminatory conduct is excluded, and ensure that observance of it is adequately monitored.

The transmission system operator, S.N.T.G.N. Transgaz S.A., according to the above legal provisions, as a licensee for both natural gas transmission and supply, was obliged to ensure accounting, legal, functional and organizational unbundling between transmission and supply. As the company gave up the supply license, the unbundling was not necessary anymore.

The two big distribution system operators, S.C. E.ON Gaz România S.A and S.C. Distrigaz Sud S.A. were obliged to ensure accounting, legal, functional and organizational unbundling between distribution and supply. Following the legal unbundling of E.ON Gaz România, two legally independent companies are currently operating - E.ON Gaz România S.A., specialized in the supply of natural gas and E.ON Gaz Distribuție S.A., specialized in the distribution of natural gas, as well as operation and maintenance of the distribution network. The two new companies have separate headquarters. The procedures on the legal unbundling of the other large distribution operator, Distrigaz Sud, have been finalized in April 2008, being established S.C. Distrigaz Sud Rețele S.R.L. and S.C. Distrigaz Sud S.A. (later on S.C. GDF SUEZ ENERGY ROMANIA S.A.).

Regarding the obligation of legal unbundling of the underground storage activity, it was accomplished in 2007 by the storage operator S.C. AMGAZ S.A.; for the storage operator S.C. DEPOMUREȘ S.A, the legal unbundling was not necessary anymore, as it gave up the

natural gas supply license, developing only underground storage activity. The legal unbundling of the last storage operator – S.N.G.N. Romgaz S.A. is still in process.

The other 36 distribution system operators, who serve less than 100,000 consumers connected to the network, which, according to the legal norms, have been except from the obligation of legal unbundling, accomplished even since 2007 the accounting unbundling for the regulated activities they develop.

The property structure of S.N.T.G.N. Transgaz S.A is: 75.01237 % from its nominal share capital – Minister of Economy and Finances, 14.98762 % from its nominal share capital - Property Fund, 10.00001% from its nominal share capital – natural and legal person shareholders.

The two large distribution system operators, E.ON Gaz Romania and Distrigaz Sud, are mostly (51%) private companies, with E.On Ruhrgas Germany and, respectively, Gaz de France, as main shareholders, the Romanian State holding the rest of shares through the Authority for State Assets Recovery (AVAS) – 37% and the Property Fund – 12%. With the exception of Romgaz, entirely state owned, the other small distribution companies are entirely or mostly private.

In case of two large distributors system operators, E.ON Gaz Distribuție S.A and Distrigaz Sud Rețele S.R.L. the ownership structure is:

- **E.ON Gaz Distribuție S.A.:** E.ON RO SRL – 51%, Authority for State Assets Recovery (AVAS) – 37% and the Property Fund – 12%
- **Distrigaz Sud Rețele S.R.L.** – GDF Suez Energy România S.A.-100%.

With the exception of Romgaz (85.1% - Ministry of Economy, 14.9% - the Property Fund), the other small distribution companies are entirely or mostly private.

The licensed operators annually submit, to the authority, financial reports and regulated accounting records for the regulated activities they develop in natural gas sector.

The regulatory authority has not established detailed guidelines regarding the organization of the unbundled accounting records.

Prior to submission to the regulatory authority, requested registers are audited/checked in compliance with the legal provisions in force, mainly observing the obligation on avoiding cross subsidies between activities performed is particularly monitored.

4.2. Competition Issues [Article 25(1)(h)]

4.2.1 Description of the wholesale market (any transaction between market participants, excepting final consumers)

In 2008, natural gas consumption was 165,015,354.982 MWh, the internal production 124,014,645.401 MWh, and the import 46,767,341.165 MWh. The sole import source is the Russian Federation.

The average calorific power at country level is 10.6 KWh/c.m.

Three companies account for shares above 5% from the gas available on the market.

In the Romanian gas market, all foreign companies acting in the natural gas sector are registered in Romania's Trade Register.

46,767,340 MWh of gas are supplied to the Romanian market through long-term contracts (for more than 1 year).

The peak of maximum consumption is 74 million c.m./day and the daily production amounts to 32,044 million c.m.

The share of top 3 suppliers, calculated on the basis of the number of transactions on the wholesale market, is 83.19% and on the retail market it is 59.11%. There are 24 independent suppliers, separated on the property basis from other activities in the field.

On the competitive market, producers traded gas from domestic production and storage by bilateral negotiated contracts with other suppliers, accounting for about 47% of the total amount of gas supplied in 2008.

The internal production of natural gas in 2008 is presented below:

	Amromco Ploiesti	Amromco Energy New York	Petrom	Romgaz	Winthersal I Holding	Toreador	Aurelian Oil&Gas	Total
Total MWh	1,697,246.673	473,137.005	58,925,125.977	62,437,531.698	91,460.310	138,492.169	251,651.569	124,014,645.401

The status of the companies supplying gas to the most relevant categories of customers is presented below:

Customers	Suppliers	Number of companies with a share of above 5%	Shares of top 3 companies (%)
Gas fired power plants		6	66.53
Large industrial customers		6	60.73
Commercial customers		3	86.18
Household customers		2	95.03

The Romanian gas market is a national market.

In order to ensure an appropriate basis for a fair and non-discriminatory allocation of natural gas from domestic production and import, the Market Operator has been set up within the Gas Dispatching Center located in Bucharest, as part of SNTGN Transgaz SA Mediaș. In this regard, the current Market Operator:

- Establishes on a monthly basis the domestic production - import quota for all licensed suppliers/distributors, as well as for eligible customers
- Monitors on a daily basis the gas domestic/import purchases/consumptions
- Draws up on a monthly basis the report on gas purchases from domestic production and import of each Romanian gas operator and of each eligible customer, and sends them the import/total consumption quota for gas invoicing purposes

Natural gas production programs originate in the energy strategy and the conditions under which this production is accomplished are stipulated in the licenses granted to producers by the National Agency of Mineral Resources.

The regulatory authority drew up and approved the Methodology on monitoring the domestic natural gas market (Order no. 62/2007), establishing the following objectives:

- a) To monitor and control the observance by natural gas licensees of the criteria and methods for prices and regulated tariffs calculation;
- b) To secure that natural gas licensees observe the security, continuity and balance in the supply of gas to customers;
- c) To apply an equal and non-discriminatory treatment to all gas customers;
- d) To promote and secure competition on the domestic natural gas market;
- e) To secure the transparency of gas prices and tariffs;
- f) To set up a database and to submit information on the domestic market and natural gas foreign trade.

Also, the methodology establishes the unitary system based on which natural gas licensees report the following information:

1. the structure of natural gas customers, the volumes of supplied natural gas to different categories of customers and applicable prices;
2. system-related services provided to users of natural gas transmission, transit, storage and/or distribution systems;
3. fulfilment of obligations concerning third party access to natural gas transmission, distribution networks and/or underground storages;
4. the volumes of gas stored in underground storages and variations of line pack.

The procedure is applied in the relation between gas licensees and the regulatory authority with regard to submitting data on customer structure, prices and volumes of gas contracted according to the contracts for purchase, supply and/or sale-purchase, as well as data on the breakdown of beneficiaries of transmission, transit, storage and/or distribution, and data on services provided and tariffs applied.

The access to underground storages is regulated.

The structure of the regulated tariffs for gas underground storage comprises two elements:

- 1- a fixed component for capacity booking [Lei / MWh / full storage cycle]
- 2 – volume-related component for injection / extraction of gas [Lei / MWh]

In order to fulfil the obligations related to the safe operation of the underground gas storages, the storage operators have to establish and maintain a unitary and flexible structure for dispatching, and for the process monitoring, data and specific parameters communication, as well as for the prompt intervention where needed.

With a view at guaranteeing the security of supply during the cold season, suppliers have the obligation to have in underground storages, by the end of the annually injection activity, a minimum amount of gas.

The storage operators have the obligation to guarantee non-discriminatory access to underground storages to gas suppliers, and in particular to those with public service obligations.

Gas storage is regulated – *Regulation on the programming, functioning and dispatching of gas underground storages*. This Regulation establishes technical, technological and commercial rules and requirements, aimed at a transparent, objective and non-discriminatory gas storage activity.

The programming of the storage activity is based on the contracts signed by storage operators with gas storage beneficiaries.

For each storing year, the deadline for the beginning of the programming of gas injection / extraction in / from underground storages is the date when the final list for the reallocation of available capacities as stipulated in the Regulation on access to gas underground storages is published. When establishing the storage programs for each storage, and for each cycle, month, day, hour, the storage operators take the following elements into consideration:

1. observance of the priority order according to the Regulation on access;
2. technological regimes as agreed with the transmission system operator for each storage, for both injection and extraction;
3. optimum technological regimes for the NGT, for both injection and extraction.

Storage operators publish on their own Internet websites the public information needed, including:

- Initial list of available capacities for gas storage for the 2009 injection cycle
- Register of the applications for access to the gas underground
- Initial list of storage capacities allocation
- Initial list of storage capacities reallocation
- Final list of storage capacities allocation
- Final list of storage capacities reallocation
- List of remaining capacities for reallocation
- Weekly report concerning the capacity of gas underground storages

4.2.2. Description of the retail market

The main suppliers and their shares in total demand are presented below:

<i>No.</i>	<i>Supplier</i>	<i>Rate from the final demand (%)</i>
1.	Distrigaz Sud	23.91
2.	E.ON Gaz România	20.18

3.	Romgaz	15.02
4.	Petrom	12.38
5.	Interagro	8.3
6.	Petrom Gas	7.83
7.	Conef Gaz	1.76
8.	Wiece România	3.25
9.	Arelco	1.28
10.	Congaz	0.64

At present, 24 independent suppliers are active on the Romanian gas market.

7 companies perform the activities of production and supply:

- Romgaz, Petrom, Amromco Ploiesti, Amromco New York, Aurelian Oil&Gas, Toreador, Wintershall Mediaş.

The annual consumptions in 2008 of the most important final consumers are:

Categories of consumers	MWh
Household	28,745,965.523
Others non-household	6,307,761.212
Commercial	9,817,509.846
Electric and/or thermal power generation	38,546,559.343
Others industrial	31,440,103.567
Chemistry	31,520,851.569

On the **regulated market**, in 2008, the captive consumers were served by 38 suppliers, the total number of captive consumers was 2,832,142, and the quantity of gas supplied has been 50,920.211 GWh.

Market shares held by the three main suppliers are listed below:

<i>Cr. No.</i>	<i>Supplier</i>	<i>Share in total demand (%)</i>
1	Congaz	1,454
2	Distrigaz Sud	46,443
3	E.On Gas Romania	45,583

On the **competitive** segment of the free market activated 32 suppliers. In the table below are presented the suppliers which supply eligible consumers, whose market shares are more than 5%, from which two are producers (SC Petrom SA and SNTGN Romgaz SA). The total consumption was 89,194.3 GWh.

<i>Supplier</i>	<i>Share in total demand (%)</i>
Distrigaz Sud	12.726
E.On Gas Romania	7.087
Interagro	13.620

Petrom	8.613
Petrom Gas	12.854
Romgaz	24.653
Wiece	5.333

Final prices applied to the most relevant categories of customers are presented below:

Custo mer Tariff	I4 – yearly consumption 418.6 TJ		I1 – yearly consumption 418.6 GJ		D3 – yearly consumption 8.3 GJ		Typical household	
	Lei/ MWh	EUR/ MWh	Lei/ MWh	EUR/ MWh	Lei/ MWh	EUR/ MWh	Lei/ MWh	EUR/ MWh
Regulated price (VAT not included)	98.14	26.65	101.61	27.59	124.42	33.79	124.42	33.79
Transmission Tariff	7.25	1.97	7.25	1.97	7.25	1.97	7.25	1.97
Distribution Tariff	17.10	4.64	20.12	5.46	22.54	6.12	22.54	6.12
Regulated price (including VAT 19%)	116.78	31.71	120.92	32.83	124.42	33.79	124.42	33.79

Natural gas consumers are entitled to choose the type of supply contract and, according to it, the natural gas supplier for each consumption place. Natural gas consumers are not entitled to simultaneously develop a regulated supply contract and a negotiated supply contract for the same consumption place.

As regards the customer-switching rate, this is aprox. 0.006%, meaning that 159 consumers switched the supplier during year 2008.

The supplier receiving an application for the signing of a regulated supply contract is not allowed to turn down the signing of the contract, except where the signing of the contract significantly impedes on the fulfilment of obligations arising from the already signed regulated supply contracts. Any refusal of the signing of a regulated supply contract shall be justified to the non-household customer in maximum 10 days from the receipt of the application. Within the same timeframe, the supplier shall inform the regulatory authority about the refusal, as well as the justification submitted to the applicant.

In 2008, ANRE received 470 complaints from natural and legal persons, regarding the natural gas sector. From these, 398 were sent directly to ANRE and 72 were directed to ANRE from the Romanian presidency, Parliament and Govern, Association for Citizen Protection, ministers, National Authority for Consumers Protection, Competition Council.

The main items of the complaints are presented below in *table 4.1*.

Table no. 4.1

Items of the complaints	Percentage
Liberalisation of gas market	0.21%
Migration of consumers from the distribution system to the transmission system	0.43%
Breach of the ownership right	0.64%
Setting up of new gas distributions	0.64%
Categories of gas consumers	0.64%
Gas detectors	0.85%
Gas convectors	1.06%
Gas quality	1.28%
Refusal of access to the distribution system	1.28%
Gas metering	1.28%
Technical and legal suggestions	1.49%
Heating plants, evacuation kit, burned gases	1.49%
Technical solutions for gas supply	1.70%
Billing of gas consumption in energy units	1.91%
Share in the gas use installation	2.34%
Extension from extension (gas distribution)	2.55%
Technical verifications	2.77%
Contract-related (supply, co-financing contracts etc.)	3.19%
Passing metering	4.47%
Cut of gas supply	5.11%
Complaints about the services provided by gas distribution operators	5.11%
Others	5.75%
Gas prices and tariffs	5.96%
Share in the gas distribution pipeline	5.96%
Non-observance of the gas-related legislation (technical norms, regulations, Gas Law etc.)	5.96%
Request for information	5.96%
Connection to distribution, transmission (connection contract, tariff for connection etc.)	6.81%
Gas bills	10.64%
Dissatisfaction regarding the services provided by natural gas operators	12.55%
Total	100.00%

The requests for public information aimed at the following topics: authorization – 45.5%, technical norms – 27.5%, contracts and supply – 15%, gas prices and tariffs – 9%, licenses – 3%.

4.2.3. Measures to avoid the abuse of dominance

Dominant position abuse is defined by art. 6 in the Competition Law no. 21/1996 republished, with subsequent amendments, which forbids: „the abusive use of a dominant position by one or more companies on Romanian market or on a great part of it, through anti-competition deeds which aim to alter or could affect the economic activity or prejudice consumers”.

The Competition Council is the entitled institution to investigate the infringement of the Competition Law. ANRE is obliged to notify the Competition Law regarding dominant position abuse on the market and the infringement of competition legal provisions, as many times as the legal provisions on competition and transparency are non-observed.

As regards the dominant position abuse prevention, ANRE concerns about it by the regulations it issues. Therefore, ANRGN decision no. 62/2004 approves the “Norms regarding the dominant position abuse prevention”.

5. Security of supply

5.1. Electricity [Article 4 of Directive 2003/54/EC and Article 7 of Directive 2005/89/EC]

The responsibility to ensure the generation/system adequacy on medium and long run stays with the Ministry of Economy and Finance, which is the issuing body of the national energy strategy (approved through GD no. 1069/2007). The strategy creates the appropriate framework for strategic investments in electricity generation and in networks and provides energy efficiency and demand-side-management actions with a view to ensuring the security of supply.

According to the Electricity Law 13/2007, with subsequent amendments, the TSO issues the Development Transmission Plan on medium and long – run (10 years). The Development Transmission Plan is sanctioned by the regulator and approved by the competent ministry. On short run, the TSO is also responsible for the transmission networks operational planning and running while meeting the criteria set in the Transmission Grid Code, which is issued by the TSO and approved by the regulator (ANRE Order 20/2004, with the subsequent amendments and complements).

Through the licenses and authorisations granted, though the tariff & prices methodologies issued or approved, through its commercial and technical regulations and through its rules for network connection and access, the Romanian Energy Regulatory Authority (ANRE) provide the necessary framework to promote investments in the sector.

In 2008, the electricity production increased by approximately 6% as compared to 2007, and the electricity supplied to networks by the main generators (that own dispatchable units) increased by about 6.5%, thus amounting to about 59 TWh.

Domestic consumption calculated based on the data reported by the generators owning dispatchable units amounted to about 54.61 TWh, by approximately 2.3% higher than in 2007. It has an uneven evolution during the year, with major increases in the first part of the year, and decreases starting with November.

If we take into consideration also the production of the generators owning non-dispatchable units, the net consumption reaches about 55.21 TWh.

In 2008, the peak load occurred on 10 January 2008, at 17.00 CET hours, when it reached a net value (non-inclusive of the plants' own services) of 9406 MW; this was a result of an internal consumption of 8589 MW and a net export of 817 MW.

CN Transelectrica SA forecast on the net domestic consumption, net peak consumption, export-import balance, and net electricity production is shown in the following table:

Table no. 5.1

	U.M.	2009	2010	2011	2012	2013
Net domestic consumption	TWh	46.7	51.4	52.0	53.3	54.6
Net peak load (consumption)	MW	7486	8000	8120	8336	8612
Export – Import balance	TWh	2.5	2.5	3.0	3.0	3.0
Net electricity production	TWh	49.2	53.9	55.0	56.3	57.6

Net maximum capacity on 31 December 2008 was, according to CN Transelectrica SA assessments, 16.58 GW. According to the same source, in 2008 the value of the net maximum production capacity of wind power plants amounted to 7 MW, accounting for only 0.04% of the total net maximum production capacity. It is estimated however that the prospects for the development of wind power energy are pretty good considering that, in 2008, there have been many applications for access to the grid of wind power plants (about 11 GW). CN Transelectrica SA undergoes an analysis over the possibility to integrate them into the NPS, considering the impact on the development of transmission networks, size of system services and NPS safe functioning.

If we consider the significant size of the installed capacity of the wind power plants according to the applications for access to the grid and their placement in the same geographical area, CN Transelectrica SA developed a method to determine the maximum level of the installed capacity of wind power plants that is acceptable in terms of NPS safe functioning.

According to the findings of UCTE study on the system adequacy forecast (2009-2020), the forecast for Romania's net generation capacity and consumption is shown in *table 5.2*.

Table no.5.2

	2009			2010			2013			2015			2020		
	3rd Wednesday			3rd Wednesday			3rd Wednesday			3rd Wednesday			3rd Wednesday		
	Jan	Jan	Jul												
	11.0	7.00	11.00	11.0	7.00	11.00	11.0	7.00	11.00	11.0	7.00	11.00	11.0	7.00	11.00
	0 am	pm	am												
Generation net capacity (GW)															
pessimist scenario	16.7	16.7	16.7	17.0	17.0	17.0	18.5	18.5	18.5	18.6	18.6	19.8	18.6	18.6	18.6
optimist scenario	16.7	16.7	16.7	17.0	17.0	17.0	19.2	19.2	19.2	21.5	21.5	22.7	23.2	23.2	23.2
Consumption (GW)															
	8.0	8.6	7.2	8.3	8.8	7.4	8.9	9.6	8.0	9.4	10.1	8.4	10.8	11.6	9.6

Two additional nuclear power units (650 MW) are estimated to be commissioned by 2015, namely one pumping storage power plant (1000 MW), hydro units, units on fossil fuels for which the balance rehabilitation-closing-new units is constant, renewable units others than hydro.

From the establishment authorizations granted so far by ANRE, hydro units (97 MW), new unit on fossil fuels (60 MW), units on renewable sources other than hydro – wind and biomass (633 MW) are estimated to be commissioned by 2015.

Wind power plants are estimated to account, in the future, for an installed power of 1,000 MW in 2012, and 3,000 MW in 2017, given the implementation of the government strategy on promoting the use of renewable energy sources.

The structure by type of fuels for electricity injected in the networks by the Romanian producers with dispatchable units is given in *figure 5.1*.

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

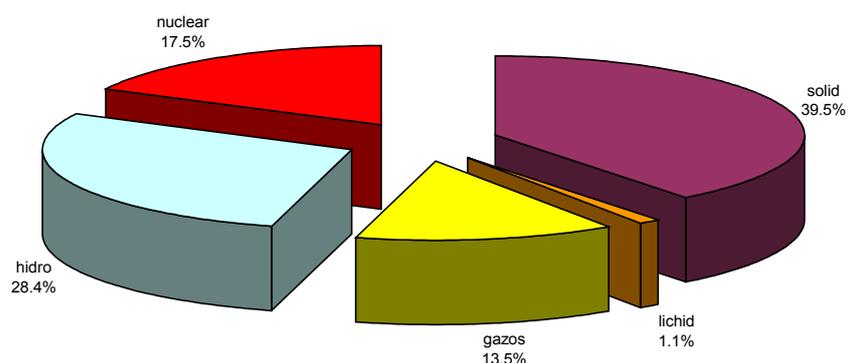


Figure 5.1

As compared to 2007, nuclear energy increased by about 48%, hydro energy by about 8%, whilst the electricity produced from gaseous fuel decreased by about 16%.

Figure 5.2 shows the structure on 2008 of the net maximum generation capacities on types of resources. Given that many of the generation units are flexible in terms of the mix of fuels used, the liquid fuel and the gaseous fuels were included in one single category, hydrocarbons:

2008 structure of the net maximum generation capacities on types of resources

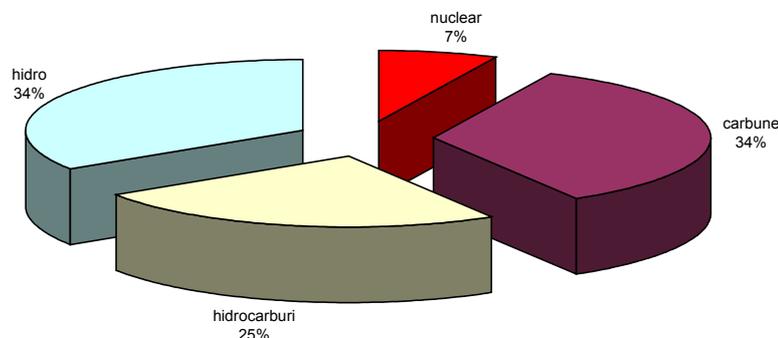


Figure 5.2.

According to ANRE data, 59.5 MW in hydro power plants, 93.2 MW in thermo power plants and 0.85 MW in wind power plants were licensed and commissioned for the electricity market in 2008.

Establishment of new capacities and the retrofitting of the existing capacities are carried out based on establishment authorisations issued by ANRE. The granting procedure as well as the conditions of the establishment authorisations (criteria, power levels, approvals, differentiated by categories of powers and by activities) are stipulated in the *Regulation for the granting of authorisations and licenses in the electricity sector*, issued by the regulator and approved by the Government (GD no. 540/2004, amended and complemented by GD no. 1823/2004 and GD no. 553/2007). Refusal to grant an authorisation, lack of response within deadline and any ruling of the regulatory authority judged illegal and prejudicial by the applicant, can be appealed in the Bucharest Court of Appeal, according to the law.

In developing their activities, the holders of establishment authorisations shall observe the public service obligations regarding safety, quality, continuity of supply, energy efficiency and environment protection as well as the conditions of the contracted services.

If, following the authorisation procedure, the generation capacities under construction or the actions taken in terms of energy efficiency/demand side management are not enough to ensure the security of supply for the internal consumption, the competent ministry can initiate a tender procedure or any other contract granting procedures that are transparent and non-discriminatory and based on published criteria, through which new commercial operators or default license holders may place offers for the construction of new generation capacities.

The *Methodology to setting up, implementing and use of capacity reserve* was approved through ANRE Order no. 19/2007. The capacity reserve is the additional power reserve ensured upon the TSO's request by generating units with start-up and load take-over times

lower than 72 hours in order to cover the consumption under extraordinary conditions. The capacity reserve demand is set by the TSO, and during the period ranged July 2007-June 2008, the maximum price and the necessary quantities for the capacity reserve are set through ANRE decision based on the data provided by the TSO and by the participants on the Romanian electricity market. The units selected to ensure the capacity reserve are listed on monthly basis on the TSO website. The methodology will operate until the market mechanism for ensuring the capacity reserve is defined and implemented.

To promote energy produced from renewable energy sources (E-RES) such as wind, solar, geothermal, biomass, waves, hydrogen and in hydropower units with installed powers of 10 MW or below, put into operation or modernised after 2004, a green certificates market was introduced that became operational in November 2005.

Also, in 2008, the technical norm on *Technical requirements for connection to the electricity networks of public interest of wind power plants* was drawn up. The norm sets minimal technical requirements for wind power plants/units connected to the electricity networks of public interest so that to guarantee both the safe functioning of the energy system, as well as the prerequisites for the installation in the wind power plants of power as big as possible. The norm brings completions to the technical codes for the transmission and distribution networks. The draft was notified to the European Commission as per Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998, amended by Directive 98/48/EC (directives transposed into national legislation by Government Decision no. 1016/2004). The draft received no comments and it was approved by ANRE Order no. 51/2009.

Through GD no. 443/2003, that was amended and complemented by GD no. 958/2005, Romania transposed the provisions of the EC/2001/77 Directive into the national legislation. The national target representing the E-RES ratio in the final consumption was set to 33% of the final consumption for the year 2010. E-RES producers can sell the produced energy on the market and the difference between the selling price and the total costs of the generation is covered through the commercialisation of the green certificates either through bilateral contracts or on the green certificates market organised and administrated by SC Opcom SA. The suppliers purchase a mandatory E-RES quota, the compliance with this quota being reflected in the number of the green certificates they acquired.

The main results delivered by the first stage of the qualifying for the priority generation of electricity from renewable sources (E-RES) for 2009 were as follows:

- Installed electrical capacity in the E-RES generation units qualified for priority generation in 2009 amounts to 378.650 MW and includes wind power plants and hydro power plants with installed power up to 10 MW ;
- E-RES production forecast for 2009 amounts to 628,275.1 MWh;
- Out of the E-RES production forecast for 2009, about 2.74% will be produced based on wind and the rest of 97.26 from hydro.

A “bonus-type” support mechanism is intended to be introduced for co-generation capacities starting with 2010. The mechanism is to be notified to the European Commission according to the European regulations on state aid; the pre-notification stage will end in June 2009.

The planning for the development of the electricity transmission grid is based on the provisions of the Transmission Grid Code. The Code details the tasks, competencies and responsibilities of CN Transelectrica SA and determines the principles, the criteria and the obligations regarding the unfolding of the transmission service.

The transmission grid development planning seeks to:

- Ensure the appropriate sizing of the transmission grid for the transmission of the generated, imported, exported or transited electricity and determine the prospective development plan;
- Ensure the safe operation of the NPS and the transmission of electricity at high quality standards in compliance with the Grid Code requirements;
- Ensure the development planning activities by: initiating the procedures required for the promotion of new investments in the transmission networks, estimating the marginal costs on long run for each node of the transmission network, providing information for the design of the transmission tariff systems.

CN Transelectrica SA shall ensure the transmission service so as to fulfil the technical conditions for the synchronic interconnected functioning according to UCTE requirements. To this purpose, it shall ensure that the transmission network is equipped with protection, automatization, broadcasting systems that guarantee the quick and efficient isolation of incidents and avoid the propagation thereof.

The works & modernisation programme is a major factor in the company's investment policy.

The hierarchical order of the power stations rehabilitation works is based on multi-criteria analyses having in view the:

- interconnection with the neighbouring power systems under UCTE requirements,
- technical state of the power stations with a view to increasing the quality of the delivered service and of the operation efficiency,
- significance of the stations,
- volume of the transmitted electricity, etc.

Every two years, CN Transelectrica SA issues the prospective development plan of the transmission grid for the following 10 successive years. Following the endorsement and the approval of ANRE and, respectively of the competent ministry, the plan becomes a public document to ensure the followings:

- Covering of safe and cost-effective electricity consumption by observing the national energy policy.
- Correlation of the activities of the TSO and of the electricity market participants with respect to any requested service that may affect the safe operation of the RPS.
- Zone opportunities for the electricity transmission network connection and use depending on the consumption forecast and on the need for new installed capacities required for an efficient and safe operation.
- Setting up the reserve level in NPS for electricity generation and transmission under peak load conditions according to the sizing requirements.

The electricity grid is sized in compliance with the requirements of the N-1 criterion. Verification of the N-1 criterion is performed for the maximum forecasted power transfer through the grid. For the transmission grid (400, 220 kV), the N-1 criterion is applied to the sizing of the NPS sections for a time interval corresponding to the most difficult operating

conditions, by taking into consideration: the unplanned outage of the largest generating unit in an area with power deficit and the maximum power generated in an excess area. The N-2 criterion is used upon the sizing of the NPP power eviction.

Among other criteria are the technical criterion for the verification of the size of the network in terms of NPS stability, as well as verification and determination of the short-circuit ceiling and nominal flow of equipments.

System or zone studies, pre-feasibility, feasibility studies and technical projects are carried out for each identified objective.

In determining the technical and organisational solutions for investment in new transmission capacities one must take into consideration the system restrictions that may occur in order to be avoided.

Yearly analysis are also performed to consist of:

- Simulated specific regimes of the optimal functioning of the generation units through the running of the PowrSym3™ software;
- An annual planning of both the transmission grid lines and the power plants' units according to the Transmission Grid Code requirements.

Finally, through scheduling based on the prospective plan and on the yearly or quarterly plans, solutions are found in order to spread out the works to avoid system congestion. Deviations from the initial schedules may however occur with respect to the functioning of the network elements as well as to the functioning of the generators, deviations that cannot be accurately identified and which can lead to congestions that are solved by using the existing reserves activated through the balancing market.

The main investments in the transmission infrastructure envisaged for the period 2009-2011 are given in *Table 5.3*; the deadlines for commissioning may nevertheless change according to the new latest plan about to be approved by ANRE.

Tabel no. 5.3

Overhead Lines or Power Sub-Station	Voltage level (kV)	Commissioning year	Length (km)
LEA Resița – Timișoara (double circuit currently operating at 220kV)	400	2015	73
LEA Timisoara – Arad (double circuit currently operating at 220kV)	400	2015	54
LEA (România) - (Serbia); the interconnection sub-stations between the two countries are not specified	400	2015	~100
LEA Suceava (RO) – Bălți (MD)	400	2016	150 (93 in RO)
LEA Suceava – Vișoara (Bistrița) - Gădălin	400	2018	260
LEA Cernavodă – Stâlpu	400	2016	156
Sub-station Tarnița (pumping storage hydropower plant)	400	2016	-
LEA Tarnița – Mintia, double circuit	400	2016	145
LEA Tarnița – Gădălin	400	2017	40

A underwater cable to be built between Romania and Turkey (600 MW) is currently under study. Important investments in the transmission grid are required in Dobrogea (SE Romania) to evict the power generated in the new generating capacities that are to be developed within 2008 – 2020 (nuclear units 3 and 4 from Cernavoda NPP, wind units and thermal-power units)

Investments in network development are covered by the transmission tariff, established by the competent authority based on the justified costs and ensuring a reasonable profit share.

When operating the system, the transmission and system operator eliminates congestions in the network by selecting on the balancing market more expensive units, with a deviation from the merit order based on the generator's offered price criterion. The price difference is covered by the transmission and system operator and it is thereby included in its costs. Avoiding the costs for congestion management is a component of network investments justification.

Another criterion for investment underlying consists of the offering on the electricity market of the necessary infrastructure by increasing the transfer capacity.

The implementation of these mechanisms led to the commissioning in 2008 of two interconnection lines between Romania and Hungary (LEA 400 kV Arad - Nădab - Bekescsaba) and to the promotion of a future commissioning of another line of importance to the development of the South-East electricity market: LEA 400 kV (Romania) –(Serbia). These contribute to a significant development of energy trading in the region.

5.2. Natural gas [Article 5 of Directive 55/2003/CE and Article 5 of Directive 67/2004/CE]

Total gas consumption in 2008 amounted to 165,015,354.982 MWh, out of which 28,745,965.523 MWh was household consumption (17.79%). Domestic gas production in 2008 was 124,014,645.401 MWh, and import 46,767,341.165 MWh.

In 2008, there were 2,833,190 gas customers, out of which 2,674,407 were households.

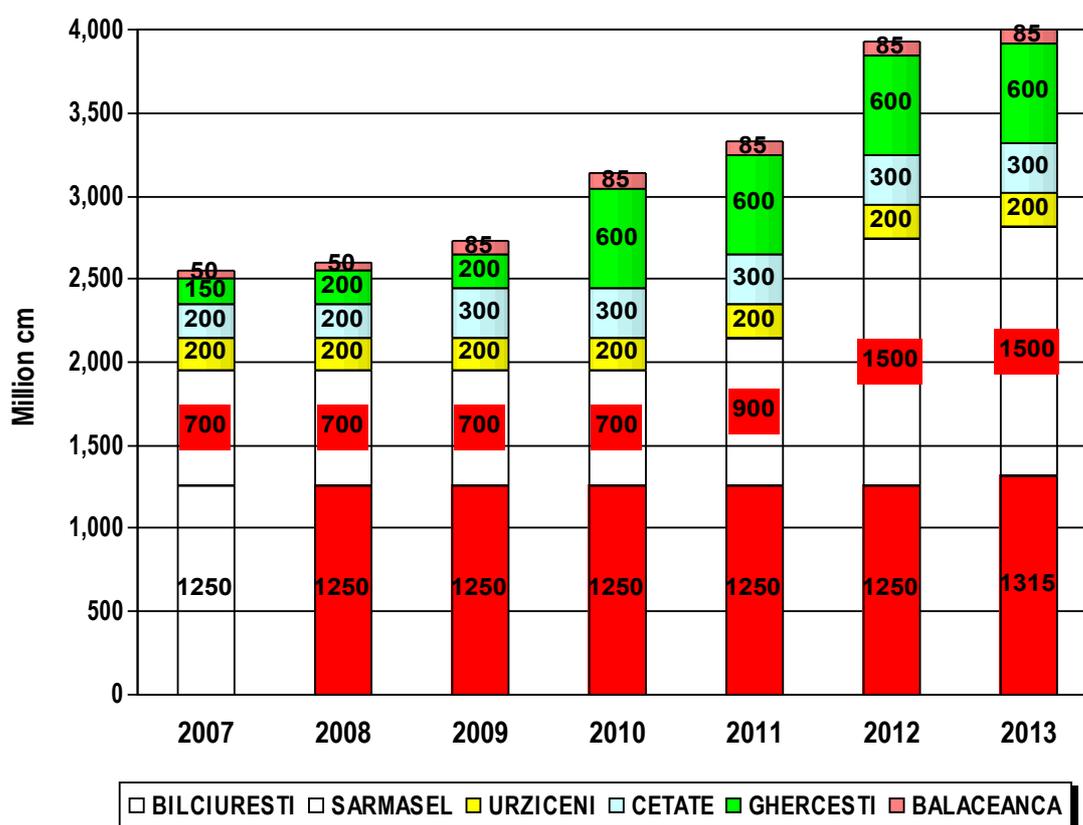
Regarding the security of natural gas supply, in 2007 Law no.346/2007 – regarding measures for security of natural gas supply - has been adopted, to transpose within national legislation the provisions of Directive 2004/67/CE. The aim of this law is to ensure a proper safety level for natural gas supply through transparent, non-discriminatory and compatible measures in compliance with the existence of a competitive natural gas market.

In this way, the law sets up the role and responsibilities of authorities and operators acting on natural gas market and the implementation of special measures taken in order to ensure a proper safety level for natural gas supply. A Coordination Commission has been established with the objective to elaborate an annual Action Plan for emergency cases and to endorse and to monitor the implementation of the required measures for ensuring the security of natural gas supply.

In Romania there are 8 underground storages with a total capacity, in 2007, of 2.85 billion cm. Their situation is presented below:

No.	Storage	Capacity (million cm)
1.	Bălăceanca	50
2.	Bîlcuirești	1.250
3.	Cetatea de Baltă	150
4.	Ghercești	150
5.	Sărmășel	700
6.	Târgu Mureș	300
7.	Urziceni	200
8.	Nadeș	50

The forecast of the gas underground storage capacity evolution is presented below:



Moreover in order to increase security of supply and reduce dependency on a single import source of natural gas, new import connections are to be materialized as follows:

- An interconnection pipeline between the national transmission system with the Bulgarian one, in Giurgiu-Russe area
- Completion works for the interconnector Szeged (Hungary)- Arad (Romania)
- A new import point in Negru Voda area, in order to supply Dobrogea with natural gas.

Medium-term development of gas interconnection capacities (2007 – 2013)

Objective	Physical dimension	Monetary dimension
	Km	Million lei
Romania-Bulgaria, Russe-Giurgiu interconnection pipeline	8	3.40
Nădlac-Arad transmission pipeline	27	35.00
Romania-Ukraine interconnection pipeline	41	36.20
Negru-Vodă IV measuring station	-	5.50
Total		80 (Eur 25 million)

Given the security of supply goal and Directive 2004/67/CE, with a view to ensuring the consumption of all categories of customers and removing the malfunctioning in the gas market that occurred during 2005-2006 winter, the interruptible customer concept was promoted. The interruptible customer has a significant contribution towards maintaining the safe functioning of the natural gas National Transmission System and distribution systems, by accepting a decrease in consumption up to full stop.

The regulatory authority elaborated and approved (ANRGN Decision No. 1000/2006), with a view to ensuring the security and continuity in natural gas supply, as per the Gas Law No. 351/2004, with subsequent amendments, and Directive 2003/55/CE, a Regulation regarding the conditions and procedures on the appointment of the supplier of last resort. The Regulation is applicable to gas supply and distribution licensees, as well as to gas customers.

The supply of last resort represents the supply of natural gas by a gas supply licensee, appointed or selected under the terms of this Regulation, with a view to supplying a customer entered into a gas supply negotiated contract, whose current supplier is about to have its license withdrawn by the regulator.

Mandatory supply of last resort represents the supply of natural gas by a gas supply licensee, appointed under this Regulation, with a view to supplying gas to customers falling into the following categories:

- Household customers;
- Hospitals, schools, kindergartens;
- Public institutions;
- Non-household customers, other than the ones above-mentioned, with a consumption of up to 12,400 cm³/year/consumption site.

The mandatory supply of last resort shall not prevail over current contractual obligations of the appointed supplier of last resort.

Voluntary supply of last resort represents the supply of natural gas by a gas supply licensee, selected under this Regulation, with a view to supplying gas to non-household customers with a consumption of above 12,401 cm/year/consumption site.

Distribution operators shall keep track of all customers switching in their distribution area and submit to regulatory authority, on a quarterly basis, a report in this respect, drafted in compliance with the template included in the Regulation. The data included in the report is public information.

In the context of ensuring the volumes of gas needed to fulfil the public service obligation, in accordance with the energy programme for the cold season (October current year – March the following year), suppliers performing regulated supply shall store in underground storages, until the end of the injection cycle, a minimum stock of gas. The minimum gas stock is determined by the Market Operator of the Gas National Dispatcher, for each supplier, so that it covers about 12.5% of the volume of gas to be supplied to captive customers.

The volume of gas to be yearly supplied by each supplier, underlying the calculation of the minimum stock, is the one taken into consideration when establishing the unitary regulated revenue and the unitary overall revenue related to gas regulated supply, and that is included in the individual Orders on the setting of the regulated tariffs for gas regulated supply.

The suppliers compelled to set up minimum stocks shall send the data needed by the Market Operator. Also, in order to ensure the security of the gas national transmission system functioning, SNTGN “Transgaz” S.A. Mediaş shall undertake the necessary measures so that, during the cold season, it has free and operative access to a minimum volume of gas meant to ensure NGT physical balance.

Internationally, the most important interconnection project Romania is participating in is the Nabucco project. The latest stage in the development of this project consisted in the submission of the request for exemption from the provisions on third party access, as per article 22 of Directive 2003/55/EC (transposed into national legislation). According to legal provisions in force, in Romania, the regulatory authority is the responsible body for granting the exemption. Thus, the above-mentioned request was submitted and analyzed by the regulatory authority in Romania. The notification of the request was done on July 2008.

The Ministry of Economy and Finance is responsible for establishing the priority gas-related investments.

ANRE provides for the regulatory framework needed to promote investments by issuing authorizations and licenses, issuing and approving methodologies on prices and tariffs setting, issuing commercial and technical regulations, elaborating rules on network access and connection of users.

In the gas sector, the regulator approves, for each regulatory period for which regulated tariffs and prices are established, licensees' investment programmes, with a view to recognizing the costs and framing them into approved tariffs and prices.

6. Aspects regarding the public service [Article 3(9) electricity and 3(6) natural gas]

6.1. Electricity

According to the provisions of the Directive 54/2003/CE, the Romanian primary and secondary legislation imposes the electricity market participants to observe some requirements regarding the public service. The requirements are set in the Electricity Law 13/2007, in the *Regulation for electricity supply*, approved by GD 1007/2004, in the electricity supply framework contracts, in the conditions of electricity supply licenses and in the *Methodology for setting up tariffs to residential customers*, approved by ANRE Order 11/2005. The applicants go through rigorous verification procedures within the license granting process and, after obtaining the license, ANRE monitors the compliance with the conditions of licenses and with the system of regulations.

According to the *Regulation for the labelling of electricity supplied to the consumers*, approved through ANRE Order no. 41/2004, starting January 2005, the electricity suppliers must include in the invoice they send to each customer, once a year, no later than April the 15th, the electricity label supplied the year before.

Based on the producers' statements, the supplier includes in the electricity label the following information:

- The weight of each primary energy source in order to cover the supplier's electricity acquisition
- The level of CO₂ emissions and the radioactive waste associated to the delivered electricity
- The comparison between the aforementioned data and the national average values.

The average CO₂ emissions at national level were 496 g/ kWh in 2008 as compared to 566 g/ kWh in the year before. The radioactive wastes at national level were 0.02 g/ kWh in 2008, the same as in 2007.

The vulnerable customer is defined in the Electricity Law 13/2007 as the residential consumer who, for reasons of illness, age, or of other nature and through decision of Government and of the local public administration benefits from facilities in connection with the electricity supply service". Through the Performance Standard for the Service of Electricity Distribution (Order no. 28/2007), ANRE imposed the distribution undertakings the obligation to provide the vulnerable customers who are ill or physically disabled a series of services such as an emergency phone number, registration as a medical equipment that needs special attention with a view to avoid disconnection.

ANRE provided for consumer protection measures for financially vulnerable consumers as well; these consumers shall benefit from social assistance programs. Until these programs are introduced, the social tariff will be the social protection instrument used in order to guarantee a minimum level of consumption for electricity. According to the *Procedure concerning the requirements and methodology for applying the social tariff to electricity household consumers*, approved by ANRE Order no. 38/2005 with subsequent amendments, vulnerable consumers with an average monthly wage per capita smaller or equal to the minimum wage as

established by Government Decision are entitled to the social tariff. The social tariff was established on blocks of consumption with differentiated and gradually increasing prices, so that, up to 90 kWh/month, the average return price is below the price resulting from the application of any other tariff to household customers with low voltage supply. 1.3 million consumers out of a total of 8.18 household consumers are benefiting from the social tariff. The amount of electricity consumed at this tariff represented 8.15% of the total household consumption.

To ensure the continuity of electricity supply to the consumers in case their supplier is no longer able to fulfil its contractual obligations (license suspended/withdrawn) ANRE issued the Order no. 14/2007 - *Regulation regarding the supplier of last resort*.

ANRE issues on an annual basis an Order designating the suppliers that have the obligation to provide, when activated, the service of supplier of last resort. For very large consumers (with a power approved by the connection approval of more than 1 MW), the suppliers with a market share bigger or equal to the market share of the default suppliers are designated as supplier of last resort. For the other consumers, (household consumers and non-household consumers with powers smaller than 1 MW), the supplier of last resort is the default supplier in the distribution area of the consumer.

The supply of last resort contract shall comply with the framework-contract approved by ANRE. The contract shall automatically be enforced starting with hour 0 of the day when the supplier is activated. The contract does not require to be signed by the parties and is valid for a maximum 6 month period.

The tariffs/prices for the supplier of last resort are as follows:

- For household customers the tariff is equal to the undifferentiated regulated tariff,
- For small and large non-household customers, the tariff is equal to the undifferentiated regulated tariff plus 10%, and 15% respectively
- For large non-household customers, the price is 5% above the hourly price on the day-ahead market.

If, after 6 months, the customer did not find another supplier, the supplier of last resort shall sign a contract at regulated tariffs in the case of household customers, and a contract at a negotiated price in the case of non-household customers.

For appropriate information of electricity consumers, all suppliers have the obligation to publish on their own website page, as well as at the public relations centres, the supply of last resort framework-contract. Also, they have the obligation to insert in the supply contracts clauses on the acceptance or refusal of their own consumers to be taken over by the suppliers of last resort activated by ANRE.

ANRE regulations stipulate that if the customer fails to pay the electricity bill within 30 days from the due date, the supplier charges a percentage of the sum due as a penalty. If the dues are not paid within 45 days from the date of payment, the supplier is entitled to cut the electricity supply of the said customer, after sending a 5 days' notice prior to the disconnection date. The deadline is 10 days from the issuing of the invoice for nonhousehold consumers, respectively 15 days for household consumers.

In 2008, 215643 customers have been disconnected for non-payment, as follows: 211253 customers connected to low voltage, 4124 customers connected to medium voltage and 266 customers connected to high voltage.

The network operator re-connects the customer disconnected for non-payment the next working day following the full payment of the amounts due to the supplier. In addition, the customer shall pay the network operator for the connection-disconnection works performed.

There are several categories of consumers exempted from disconnection for non-payment, i.e.: hospitals, sanatoria, salvation spaces, elderly houses, nurseries, air, navy and railway services contributing to the security of traffic.

As concerns the number of consumption sites, the non-household customers supplied under a regulated regime account for 6.5% of the total number of final customers, and the household customers for 93%; the amount of energy supplied in 2008 at regulated tariffs amounts to 23,416 GWh, accounting for 49% of Romania's final consumption. A consumer is always free to change the supplier. Until his first option to change the supplier, the consumers is supplied at regulated tariffs.

The supply of electricity to household and small industrial/commercial customers shall be based on the framework-contracts. These contracts are issued by the regulator for each category of customers and include minimum terms/clauses concerning the duration of the contract, requirements for extension and denunciation, tariff, deadline for reading the meter, billing period and payment conditions, multiple payment methods (at the customer's site, in the case of some of the household customers, by readers-cashiers, at the supplier's payment desk, by bank or postal offices), compensations for the deviations from the nominal value, supplier's obligation to inform the customer on programmed interruptions.

Also, the Electricity Law, the Regulation on electricity supply and the Conditions associated to supply licenses comprise a series of contractual obligations of the supplier vis a vis customers. It is forbidden to insert contrary provisions in the negotiated contract signed with the eligible customers. To this purpose, ANRE works together with the Customer protection Authority and the Competition Council.

The customers play an active role in the regulation issuing process. Prior to the regulatory committee approval, ANRE submits all the draft regulations to the attention of the Advisory Council members who are representatives of both the license holders and the customer association/organisations. The draft regulations of general interest are then published on ANRE web site for public debate.

Provisos regarding the customer complaints management are stipulated in the conditions of the license, in the framework contracts and in the *Standard for electricity supply at regulated tariffs*.

The supply license holders must register, investigate and solve all the customer complaints relating to the quality of the delivered service, the calculation and/or the billing of the electricity consumption. To this purpose, each license holder must organise a Customer Service in order to register all the complaints of the customers who deem that the actions of the said license holder are prejudicial to him/her. The Customer Service keeps records of all the complaints, petitions and requests submitted by the customers and of the way in which they were solved.

Through the control activities it develops, the regulator must ensure that license holders comply with the conditions set in the licenses. If a customer is not satisfied with the answer received from the commercial operator, he can petition ANRE on the grounds of GD no. 27/2002.

6.2. Natural Gas

Natural gas storage, transmission, distribution and supply licensees, according with the provisions of the Gas Law no. 351/2004 with the subsequent modifications, have the following obligations:

- a) to ensure the security and continuity of supply, in compliance with the legal provisions in force;
- b) to deliver the service observing the principles of energy efficiency and environmental protection;
- c) to observe the Performance Standards;
- d) to ensure third party access to the system.

Apart from the above-mentioned legal provisions, these requirements are provided in the Framework Conditions on the validity of distribution and supply licenses, in the Framework Conditions on the validity of the authorization for the functioning of gas distribution undertakings/systems (ANRGN Decision No. 1271/2004), as well as in the Conditions on validity of gas transmission license (ANRGN Decision No. 1362/2006).

Law no. 346/2007 – regarding measures to ensure the security of natural gas supply – which transposes within national legislation the provisions of Directive 2004/67/CE stipulates mandatory obligation also, for all licences holders within the natural gas sector and for all gas producers:

- The operation of facilities and equipment from this sector in conditions of integrity protection for persons and their goods, environmental protection and energy efficiency;
- During the cold season to ensure the security and continuity of natural gas supply for the following categories of consumers:
 - Household consumers
 - Entities which provide medical service care and educational units, social protection units dedicated to children, old or people with different disabilities
 - Generators for thermal energy supply which do not have possibility to use alternate fuels
 - Public institutions of central and local interest, cultural and worship institutions, non-governmental organizations of public interest

For these categories of consumers the law stipulates that in emergency cases the suppliers and domestic natural gas producers have the obligation to make available natural gas amounts in order to cover their consumption in the above mentioned order. Also, to these categories of consumers and to the beneficiaries of social protection programmes or disabled people the suppliers of natural gas will not cut the supply during the emergency cases, and during the cold season as well, from October to March.

The mechanisms for calculation of regulated final prices are „price-cap”.

The value of the distribution services delivered for a distribution system user, are invoiced on a monthly basis, using the following formula:

$$VT^d = T_d * Q$$

where:

VT^d – total value of the bill, VAT not included, representing the value of the distribution service, expressed in lei ;

T_d – regulated distribution tariff, expressed in lei /MWh.

Q – distributed volume, expressed in energy units (MWh).

The value of the supply services, delivered to an end customer, is invoiced on a monthly basis, using the following formula:

$$VT^f = P_f * Q$$

where:

VT^f – total value of the bill, VAT not included, representing the value of the regulated supply service, expressed in lei ;

Q – supplied volume, expressed in energy units (MWh);

P_f – regulated final price, expressed in lei /MWh.

The regulator is entitled to refuse to operators the recognition of certain costs or of part of these costs in case the costs are not incurred in a cautious manner, given the conditions and the information available at the time the costs were incurred.

For 2008, the categories of customers for which differentiated regulated final prices and distribution tariffs are set are the following:

A. Final customers connected directly to the transmission system

A.1 Annual consumption of up to 1 162.78 MWh

A.2 Annual consumption between 1 162.79 MWh and 11 627.78 MWh

A.3 Annual consumption between 11 627.79 MWh and 116 277.79 MWh

A.4 Annual consumption between 116 277.80 MWh and 1 162 777.87 MWh

A.5 Annual consumption of above 1 162 777.87 MWh

B. Final customers connected to the distribution system

B.1 Annual consumption of up to 23.25 MWh

B.2 Annual consumption between 23.26 MWh and 116.28 MWh

B.3 Annual consumption between 116.29 MWh and 1 162.78 MWh

B.4 Annual consumption between 1 162.79 MWh and 11 627.78 MWh

B.5 Annual consumption between 11 627.79 MWh and 116 277.79 MWh

B.6 Annual consumption of above 116 277.79 MWh

In 2008, about 89% (in terms of the amount of energy consumed) of the consumers directly connected to the transmission system chose to enter a negotiated supply contract. This figure increased in the first six months of 2009 to about 91% of customers, thus stating that ANRE regulations and communication strategy regarding market conditions delivered positive results.

Also, in 2008, the share of the non-household customers connected to the distribution system that chose to enter a negotiated contract is high, amounting to about 52% of the total non-household customers ((in terms of the amount of energy consumed), increasing from the 2nd half of 2007.

With regard to the transparency of contractual terms, in the regulated market, contracts are concluded in compliance with the Framework-contracts, elaborated and approved by the regulatory authority, published in Romanian Official Gazette, as follows:

- ANRE Order no.70/16.07.2009 approving the Framework-contract for natural gas regulated supply to captive customers
- ANRGN Decision No. 183/2005 approving the Framework-contract for natural gas distribution, with subsequent amendments and ANRGN Decision No. 309/2005 approving the General Contracting Conditions for natural gas distribution, with subsequent amendments
- ANRGN Decision No. 460/2006 approving the Framework-contract for natural gas transmission with booking of capacity in the National Transmission System, with subsequent amendments and ANRGN Decision No. 528/2006 approving the Framework-contract for natural gas interruptible transmission services through the National Transmission System, with subsequent amendments
- ANRGN Decision Nos. 480/2004 approving the Framework-contract for natural gas underground storage, with subsequent amendments.

The above-mentioned regulations include mainly provisions regarding: regulated final price, length of the contract, rights and liabilities, contractual responsibility.