

# **NATIONAL REPORT 2009**

August 31, 2010

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## 1 Foreword

The document represents the national report for the European Commission in order to comply with the reporting obligations as per 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 the European Commission, the report contains information on electricity and gas markets for the period ranged January 1 – December 31, 2009.

As an autonomous public body, the activity of the Romanian Energy Regulatory Authority (ANRE) is governed by the Electricity Law 13/2007, with the subsequent amendments and complements and by the Natural Gas Law 351/2004, with the subsequent amendments and complements as well as by the Organisation and Operation Rules approved through Government Decisions (HG) No. 410/2007 and No. 1428/2009, the latter entering into force on December 12, 2009.

According to Law 329/2009 on the reorganisation of certain public authorities and bodies, on cutting public spending, sustaining the business environment and on the compliance with the stand-by arrangement signed with the European Commission and the International Monetary Fund, ANRE took over the activity of the Romanian Agency for Energy Conservation (ARCE). As such, by assuming the responsibility to monitor and implement energy efficiency measures and promote the use of renewable energy sources to the final consumer, ANRE position as the national energy regulator has emerged stronger.

Without the motivation of a satisfied consumer benefiting from quality energy services to be added to the sustainability of sector companies, the regulatory framework cannot produce sustainable effects. Therefore, a special attention was paid in 2009 to correlate the liberalised market principles to the concept of public service obligation.

ANRE decisions made in 2009 to successively reduce natural gas prices by 8% ( 3% and 5%) was primarily a consequence of the operator costs reduction due to increased efficiency.

Also in 2009, ANRE revised the *Framework contracts for the regulated supply of natural gas to residential and non-residential consumers* by introducing or amending clauses and terms to better suit the realities of a changing industry and to protect the natural gas consumer. The quality of electricity supply was another issue addressed by ANRE in the past year. Thus, ANRE issued the *Performance standard for electricity supply* its importance consisting mainly in determining the guaranteed performance indicators and the amount of compensation paid by the suppliers for their own faults as well as handling of consumer complaints.

To increase the accountability of the electricity and natural gas suppliers for accurate and complete information of their customers, ANRE has issued the *Regulation on consumer information activities in electricity and natural gas* setting up the main areas the energy suppliers may tackle when conducting their information tasks.

The year 2009 was also the year when the European Commission sent ANRE the official notification of acceptance on the draft Government decision regarding the *Bonus-type support* scheme for the promotion of electricity produced in high efficiency cogeneration based on

*useful heat demand*. By introducing the bonus scheme for the promotion of electricity produced in high efficiency cogeneration, a transparent and predictable mechanism was sought to ensure long-term stability for investors, compliance with the European State aid rules and mitigation of the carbon dioxide emissions nationwide.

Of crucial importance for the European energy security and for the EU policy of diversification of gas supply and transport routes is the signing - on July 13 2009 - of the intergovernmental agreement to launch the Nabucco project. Signed by Turkey and four other EU member states - Bulgaria, Romania, Hungary and Austria – the project is an European foreign policy success to which ANRE brought its contribution by participating in the negotiation and technical analysis processes and by providing explicatory information related to the applicable pricing methodologies and bidding of capacities.

In 2010, ANRE intends to continue the process of harmonization and implementation of the appropriate secondary legislation to develop an internal energy market. In this respect, the Authority will monitor the implementation of the best practices in the field while adjusting them to the specific parameters of the national energy sector within a consultation process that observes the transparency principles of the decision making practice. ANRE will act towards promoting efficiency, competition and consumer protection in the Romanian energy sector within a regional and European context. Assessing and adapting the existing regulatory system should meet the requirements imposed by the liberalization of energy markets and the ones required to ensure a predictable regulatory framework in a stable investment environment, without neglecting issues related to energy security and sustainable development. In the spirit of development and functioning of the internal market, ANRE will maintain and strengthen relations of cooperation and engagement with both national and European structures and organisations.

## Abbreviations

- AAC Already Allocated Capacity
- ATC Available Transmission Capacity
- BM Balancing Market
- BRM Romanian Commodities Exchange
- CMBC Centralized Market of Bilateral Contracts
- CMBC-CT Centralised Market of Bilateral Contracts with Continuious Trading
- DAM Day Ahead Market
- DO Distribution Operator
- ENTSO E European Network of Transmission System Operators for Electricity
- ENTSO-G European Network of Transmission System Operators for Natural Gas
- HHI Herfindahl-Hirschman Index
- NPS -- National Power System
- NTC Net Transfer Capacity
- NTS Romanian Natural Gas Transmission System
- TRM Safety Margin of the International Interconnection
- TSO Transmission System Operator

# 2 Main developments in the gas and electricity markets

#### 2.1. The electricity and natural gas wholesale markets

#### Electricity

The present structure of the electricity generation sector reflects successive reorganizations that occurred during 2000 - 2004 and which led to a reduced concentration on the wholesale market. In 2009 there were no changes in the structure of the electricity generation capacity.

Net maximum capacity on 31.12.2009 was about 16 GW.

In 2009 electricity production fell by 11% since 2008 and the electricity delivered to the networks by major producers also decreased by 11%. As compared to 2008, energy delivered from liquid fuel increased by 47%, nuclear energy increased by 5%, while hydro energy decreased by 8%, whilst the electricity produced from solid and gaseous fuel decreased by about 17%, respectively 27%.

The wholesale market includes all the transactions conducted between participants, except the ones for electricity to final consumers. *Table 2.1* shows the dynamics of electricity volumes traded in 2009 on the main components of the wholesale market compared with 2008 and their value versus the 2009 internal consumption.

The increase of the traded volumes on the Day-Ahead market is considered a positive development due to the competitive and transparent nature of this market; during 2009 the volumes traded on the centralized market contracts have known a significant reduction, the suppliers have renounced at many of the contracts, because of high prices obtained at the bids in autumn 2008 in conjunction with the decrease of the final consumption.

The economic crisis was also reflected in reducing values of exports. Trading volumes on contracts negotiated bilaterally were not affected; they remained at a level comparable to that of 2008.

Wholesale market components	Trade volumes in 2009 - GWh -	Evolution compared with 2008 - % -	Weight of internal consumption for 2009 - % -
Negotiated bilateral contracts market	34587	▼0,5%	69,3%
Regulated bilateral contracts market	30334	▲4%	60,8%
Export	3154	▼41%	6,3%
Centralized market contracts	6329	▼28%	12,7%
Day-ahead market	6347	▲22%	12,7%
Balancing market	3206	▼10%	6,4%

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

Comparative analysis of the average prices resulting from transactions concluded on wholesale market components in 2009, and 2008, show increasing convergence between the

prices of bilaterally negotiated contracts and the prices of regulated contracts, but emphasizes the difference between them and average prices related to centralized market.

Average prices on the wholesale market components	2009 - lei/MWh -	2008 - lei/MWh -	2009 Evolution compared with 2008 - % -
Negotiated bilateral contracts market	158,68	146,07	▲9%
Regulated bilateral contracts market	164,44	158,15*	▲4%
Centralized market contracts - PCC	192,54	177,04	▲9%
Day-Ahead market	144,77	188,53	▼23%
Balancing market (deficit price)	243,05	278,12	▼13%

Table 2.2

\* Includes medium TG

#### Specifications:

Average prices do not include VAT, excise or other taxes and were determined by weighting prices with the corresponding quantities of the sales transactions reported monthly sales by market participants.

Annual average prices corresponding Day-Ahead Market and Balancing Market were determined by weighting of the monthly traded amounts on those markets with the monthly average prices resulting from the arithmetic mediation of the monthly schedules; for the balancing market the average prices are deficit prices.

Prices shown on the components of the wholesale market for 2008 were made comparable by inclusion of injection component of transport charge, TG, about 7lei / MWh, in regulated average prices, it does not contain; Day-Ahead Market and Balancing Market prices includes TG component of transport charge (included by bidders in the price), and those negotiated and the ones concluded on centralized market contracts have a mixed regime regarding the inclusion of the TG component.

From the comparison of the Day-Ahead Market closing prices with spot prices set by other European power exchanges during January to April and November-December 2009 is noted the fact that the decrease registered at OPCOM was significantly higher than the EPEX Spot (Germany / Austria), spot EPEX (France) and EXAA, as in the remaining months of 2009 price values registered at OPCOM, often exceed those power exchanges values.

HHI indicator value calculated according to net maximum generation capacity was 2104 in 2009. 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, who held, as net maximum generation capacity, more than 5% of total generation capacity, was 5, and cumulative share of installed capacity of the first three largest producers was 69.53% (values calculated using the principle of dominance).

In terms of considering the same principle, the number of producers who have delivered more than 5% of net electricity production was 6, and the cumulative shares of the market for the first three largest producers was 55.24%.

In *figure 2.1*, is presented the monthly evolution of the generation HHI indicator, calculated based on the delivered electricity to the networks, compared to 2004, 2005, 2006, 2007, 2008 and 2009.

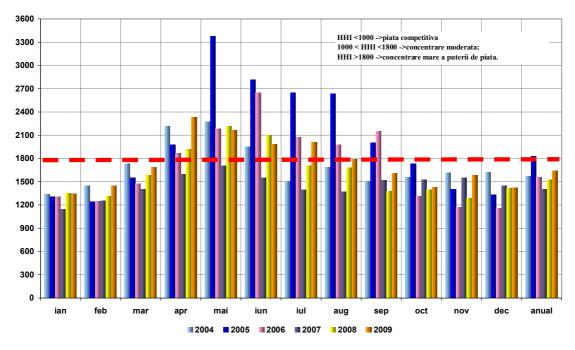


Figure 2.1

The HHI values generally are less than the moderate market concentration limit (<1800) with the exceptions of the months when the market share of SC "Hidroelectrica" SA increases significantly, because of the high hidraulicity.

In 2009 SC "Hidroelectrica" SA had market shares in excess of 40% in the months of April and May, which corresponded to the HHI values above 1800 limit. Compared with most European electricity markets, the specified values show that the market in Romania (on generation site) has a medium level of concentration.

HHI indicator concentration on the Day-Ahead Market had values, which, generally, indicate a lack of concentration both on purchase (monthly values between 625-964) and on the sale side, except the months of May and June (monthly values between 441 - 1210).

In the *table 2.3* are the comparative values for the years 2006, 2007, 2008 and 2009 of market concentration indicators on the Balancing Market determined based on actually electricity delivered by the producers.

The integration of the Romanian electricity market in the regional market was achieved, also in 2009, through the bilateral export / import contracts between the producers and the suppliers from Romania with foreign partners. Besides these, there were exchanges of mutual links between TSO, performed based compensation.

A total of **0.68 TWh** of electricity has been imported and **3.15 TWh** has been exported (the values are based on the data reported by the market participants); the physical flows were **2.38 TWh** on import and **4.86 TWh** on export (the figures also include transit flows which did not involve participants from Romania, technical exchanges between TSOs and loop flows).

Table	2.	3
10000		-

Year	Type of regulation	Direction of regulation	2006	2007	2008	2009
C1	Secondary	Upward	80%	60%	71%	64%
U	regulation	Downward	80%	56%	71%	64%
	Fast tertiary	Upward	69%	51%	70%	55%
	regulation	Downward	53%	30%	38%	47%
	Slow tertiary	Upward	29%	29%	27%	39%
	regulation	Downward	31%	19%	27%	32%
	Secondary	Upward	6510	3915	5438	4526
	regulation	Downward	6612	3538	5367	4501
нні	Fast tertiary	Upward	5061	2979	5065	3543
нні	regulation	Downward	3452	1590	2319	2843
	Slow tertiary	Upward	2203	1769	2021	2478
	regulation	Downward	2582	1276	1838	2017

#### Concentration indicators on the balancing market

The monthly electricity levels that TSO engages for the **internal congestions management** together with its associated c/value for the year 2009 are given in *figure 2.2*.

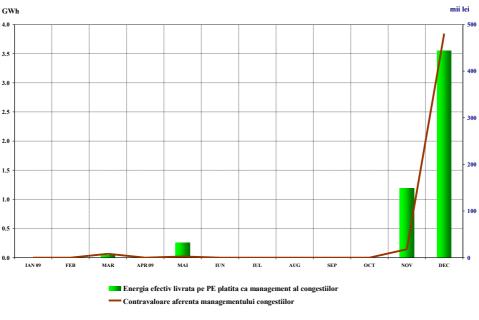


Figure 2.2

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

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

Auctions are held, usually for monthly and annually periods or whenever necessary, but not for shorter periods of one week. The net capacity of interconnection is determined by TSO and it's equally divided with the neighbouring TSO's for both sites.

After the concluded agreement between CN Transelectrica SA and MAVIR (Hungarian company for electricity transmission) starting with December 2009 came into force the rules of annually, monthly and daily coordinated allocation of interconnection capacity between Romania and Hungary. According to the agreement between the both TSO's, the daily allocation of interconnection capacity on that border is organized by MAVIR and annually and monthly auctions by Transelectrica SA for all net interconnection capacity. On the border with Bulgaria, the common coordinated allocation of interconnection capacities take place starting with April 2010.

Regarding the export congestions, the most congested borders were those with Hungary and Bulgaria (100%), for the borders with Serbia and Ukraine the values were approximately equal reported throughout the entire year 2009 (96-98%).

Regarding the import congestions, the most congested border was the one with Serbia (98%) and the least congested was the border with Ukraine (33%).

The transparency of transactions on the interconnections is ensured de CN Transelectrica SA by publishing the information on the websites <u>www.transelectrica.ro</u> and <u>www.ope.ro</u>.

In order to determine the causes of incomplete compliance with the obligations of transparency stipulated in the Regulation 1228/2003/EC, as well as the reasons which restrained the development of a daily allocation market of interconnection capacity, ANRE has decided to control the TSO activity, which took place during 2009.

The bilateral cooperation relations of CN Transelectrica SA with neighbouring countries during 2009 have the following results:

- in December 2009 has been signed the Joint Position Paper 2 which approved the results of pre-feasibility studies and the development of the 400 kV, double circuit, interconnection line between Reşiţa (Romania) Pancevo (Serbia);
- cooperation in the allocation of interconnection capacities with Bulgaria, Serbia, Hungary. Signing with Hungary a memorandum through which CN Transelectrica SA organizes the joint monthly auctions and MAVIR organizes daily auctions starting with the first day of December 2009. It has also agreed that the annual auction to be held by CN Transelectrica SA. A similar memorandum was signed by CN Transelectrica SA with the Bulgarian counterpart in April 2010;
- supporting the import-export activities with Ukraine (Island Bursthyn);
- investments on the Oradea-Nadab-Arad-Bekescsaba interconnection line;
- the start of developing the feasibility study for the interconnection project with Republic of Moldavia through a future 400 kV line between Suceava and Balți;
- designation of the winning company and the signing the contract, in July 2009, for developing the feasibility study for the HVDC submarine cable link with Turkey.

#### Natural Gas

The natural gas market from Romania is composed of **competitive segment**, which includes natural gas trade between suppliers and between suppliers and eligible customers and the **regulated segment**, which includes natural monopoly activities performed under the framework contracts and the supply activity at regulated price.

The natural gas market from Romania was fully opened on first of July, 2007 when all the natural gas consumers had the possibility to choose their own supplier.

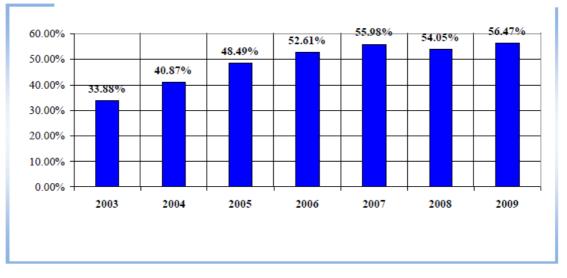
Natural gas consumption remained relatively constant in recent years, at the level of 150-160 million MWh, with a reduction of 15% in 2009, amid economic crisis who triggered a decline of the natural gas demand:

- natural gas consumption was 140,058,492.990 MWh, of which 111,835,111.171 MWh was household consumption (79.84%),
- number of natural gas consumers was 2,941,734, of which 173,993 household customers,
- natural gas internal production which has entered into consumption was 119,447,781.889 MWh, and imports of 20,610,711.101 MWh.

The number of market participants has constantly increased so that at the end of 2009 there were:

- a National Transmission System operator SNTGN Transgaz SA Medias
- 7 producers: Romgaz, Petrom, Ploiesti Amromco, Amromco New York, Aurelian Oil & Gas, Toreador, Wintershall Medias
- 3 operators of the underground storage facilities: Romgaz, Amgaz, Depomureş,
- 39 distribution and supply gas companies,
- 90 suppliers on the wholesale market.

In late 2009, there were 1.234 eligible customers on the natural gas free market, with a consumption of 77,604,552.506 MWh, which amounted to an effective rate of market opening of 56.47%.



#### Natural gas market opening degree 2003-2009



The natural gas market from Romania continued even in 2009 to be a national market.

During 2009, the activity of developing specific regulation regarding the organization, operation and development of national natural gas market has resulted by adoption of several orders and decisions of regulatory authority President regarding:

establishment of natural gas stock which supply licensees are required to hold in the underground storage facilities at the end of injection activity in 2009;

• amending and completing Decision no. 1.228/2008 of the ANRE President, regarding the exemption of the Romanian sector of Nabucco pipeline from the

provisions in the legislation regarding third party access to the natural gas transport systems and from the tariff methodologies;

- the approval of the framework contract regarding regulated supply of natural gas for the households consumers and the Standard conditions for regulated gas supply to households consumers;
- the approval of the framework contract regarding regulated supply of natural gas for the non-households consumers and the Standard conditions for regulated gas supply to non-households consumers;
- amending and completing of the Order of Minister of Economy and Trade, the ANRGN President and the ANRM President no.102.136/530/97/2006 regarding the recovery of the natural gas from the internal market and measures to strengthen the discipline in natural gas sector.

#### 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 final customers that choose to purchase electricity at regulated rates) and in supplying on *competitive* market (which includes the final customers that switched their supplier or that negotiated supply contracts with the default suppliers by giving up on the regulated tariff).

In 2009 on the retail market activated 47 suppliers, of which 4 of them are generation license holders, and 7 are default suppliers – 4 state-owned and 3 with majority private ownership.

In December 2009 the total number of consumers supplied under regulated prices was 8,833,375 of which non-households consumers - 583,432 and households consumers - 8,249,943. The total amount of electricity supplied was about **23 313 GWh**, which means a decrease of about 2% compared with 2008, given that the total final consumption decreased by about 9%.

In December 2009, 4877 eligible consumers were present on the competitive market, the electricity supplied to this category of consumers in 2009 was of 18,536 GWh, with a decrease compared with the same period of the previous year by about 17%.

*Table 2.4* contains information regarding the number of suppliers with market shares greater than 5%, and market concentration indicators for each category of end users, for 2009.

We note the fact that the principle of dominance was taken into account in the calculation for determining the values of market indicators presented in *table 2.4* and the energy provided by which was set the market share of each supplier, does not includes the own consumption of the largest industrial consumer who holds license supply too, and who decided to buy energy from wholesale market as a competitive supplier.

Values of market structure indicators calculated for 2009 show:

- a non-concentrated market for the retail market segment corresponding to very large non-households consumers;
- a moderate level of concentration on the whole retail market and on the large non-households consumers segment;

# a high concentrated market for the retail market segments corresponding to small nonhouseholds consumers and households.

				140	el 2.4
No.	Type of consumer	Suppliers with market shares greater than 5%	C1	С3	HHI
1.	Small non-households + households (contracted power less than or equal to 100 kV)	7	37%	73%	2374
2.	Large non-households (contracted power between 100 kV and 1000 kV)	8	27%	67%	1753
3.	Very large non-households (contracted power greater than or equal to 1000 kV)	8	14%	34%	707
4.	Total retail market	6	26%	51%	1211

Source: data from suppliers, data interpretation and analysis by ANRE

In December 2009, the electricity consumption supplied to competitive prices (who have changed their supplier or they give up to their regulated prices) registered a 44% share of total final consumption, which represents an increase of 3% compared with the one registered at the end of 2008.

Mention should be made the positive evolution recorded by the increase of non-households consumers acting on the competitive market, particularly the small non-households consumers; these consumers gave up to the regulated price but electricity supply is further ensured by the default suppliers.

The supplier switching rate for year 2009 (see *table 2.5*) 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.

Т	able	2.5	

		Switching rate		
No.	Type of consumer	Consumption places	Supplied electricity	
1.	small non-households + households (contracted power less than or equal to 100 kV)	0,004%	0,143%	
2.	large non-households (contracted power between 100 kV and 1000 kV)	4,169%	5,677%	
3.	Very large non-households (contracted power greater than or equal to 1000 kV)	13,317%	12,720%	
4.	Total retail market	0,013%	5,715%	

Source: data from suppliers, data interpretation and analysis by ANRE

The switching rate for non-households consumers on consumption places increased in 2009 and the one determined on the supplied electricity volumes decreased compared to last year figures. This means that switching from one supplier to another increased, but those who choose another supplier had significantly lower consumptions.

*Table 2.6* presents the average prices for 2005, 2006, 2007, 2008 and 2009 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 2.6

Consumer type		l	ei/MWh		Average	prices	E	ıro/MW	ĥ	
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Consumers on regulated market	286	316	340	354	370	79	90	102	96	87
Consumers on competitive market	144	168	188	224	242	40	48	56	61	57

On the regulated market ANRE approved an increase of the electricity price around 4.88% in late 2009, applicable starting with 1 January 2010. The selling prices for the consumer's categories from *table 2.7* have result from the synthesis of data concerning eligible consumers and those who choose not to change the supplier.

				7	Table 2.7
			Euro/MWh		
Type of consumer	Network tariffs	Taxes on network tariffs	Price of electricity acquisition	Taxes	Total price
Households with an annual consumption between 1000 and 2500 kWh / year	49,16	0	32,45	16,38	97,98
Commercial consumer with an annual consumption between 2000 and 20,000 MWh / year	21,69	0	49,86	14,04	85.59
Industrial consumer with an annual average consumption between 20 000 and 70 000 MWh / year	18,03	0	44,60	12,34	74,85
Large industrial consumers with a consumption between 70,000 and 150,000 MWh / year	13,52	0	43,73	11,30	68,55

Annual average rate of Euro in 2009: 4.2376 EUR

#### Natural gas

In 2009, by consumer type, natural gas consumption in Romania was the following:

			Tabl	e 2.8
Consumer category	Consumer group	Percent consumption	from	total
TOTAL, from witch:		100 %		
NON-HOUSEHOLD	Consumers who choose not to change their supplier	21,31 %		
	Eligible consumers	56,46 %		
HOUSEHOLD	Consumers who choose not to change their supplier	22.40 %		
	Eligible consumers	0.01 %		

In 2009, on the **regulated market**, 38 suppliers delivered natural gas for the consumers under a regulated regime, in total there were 2,940,500 consumers under a regulated regime, having

a consumption of 49,117.9 GWh. Market shares of the three main suppliers are presented in *table 2.9* 

No	Supplier	Market share (%)
1	GDF SUEZ Energy Romania	49,173
2	E.On Gas Romania	42,729
3	Congaz	1,631

Upon ANRE decisions, in 2009, natural gas prices for the consumers which choose not to change the supplier successively decreased with 8% (3%, respectively 5%) being mainly a consequence of the reduction of costs of the operators due to a more efficient functioning.

On the competitive sector operated 31 suppliers. In *table 2.10* can be found the suppliers for the consumers of the competitive market with a market share above 5%, two of them being also producers (S.C. Petrom S.A. şi S.N.T.G.N. Romgaz S.A.). Total consumption was 77,604.6 GWh.

	Table 2.10
Supplier	Market share (%)
Romgaz	27,472
Interagro	16,107
OMV Petrom	11,207
GDF SUEZ Energy Romania	10,840
Petrom Gas	10,811
EON Gaz Romania	5,782

At the end of 2009, there were 1.234 eligible consumers on the competitive natural gas market, with a consumption equivalent with a percentage of market openings of 56.47%.

Natural gas consumers have the right to choose the type of supply contract and, consequently the natural gas supplier for each consumption place. Consumers don't have the right to develop simultaneously a regulated supply contract and a negotiated supply contract for the same consumption place.

#### 2.3. Public service obligations and consumer protection

In order to ensure that electricity and natural gas suppliers provide complete and correct information to their consumers, ANRE reviewed the *Regulation for the information of the electricity and natural gas residential consumers,* establishing the main areas where electricity and natural gas suppliers should provide more detailed information.

Also in 2009 was reviewed the *Regulation for the labelling of electricity supplied to the consumers*, approved through ANRE Order no. 69/2009. Electricity suppliers must include in the invoice they send to each customer, once a year, no later than April 15th, the electricity label supplied the year before.

The annual list of last resort suppliers was updated.

The provisions of the performance standard for electricity supply were also reviewed, that is, monetary compensations are incurred to the supplier for non-observance of the quality parameters.

In the **natural gas sector** the provisions of the framework supply contracts were reviewed in order to provide a better protection for the consumers and in the same time the content of the invoices sent to the consumers was improved.

The activity of pre-contractual disputes and complaints settlement consisted of solving complaints received by ANRE from citizens and legal entities concerning access to the electricity network and natural gas infrastructure, and complaints related to the conclusion of contracts in the electricity and natural gas sector.

In 2009, ANRE registered and solved **741 complaints** from legal and natural persons benefiting from services provided by **electricity undertakings**.

Complaints were addressed directly to the National Energy Regulatory Authority or to the Presidential Administration, Government, Ministry of Economy, National Authority for Consumer Protection, and other bodies of the central or local administration and redirected to ANRE for analysis.

The main problems were related to non – observance of quality standards, billing and network connection.

In the **natural gas sector** ANRE received **605 complaints** from natural and legal persons. Some of them were redirected to ANRE for analysis from the Presidential Administration, Parliament and Government, the Association for Citizen Protection, Ministries, the National Authority for Consumer Protection, and the Competition Council.

The main aspects referred to were: dissatisfaction regarding billing aspects, quality of supply, contracts and network connection issues.

The column created for consumers on the web page of the institution was permanently updated and completed, with useful data and information regarding mainly: connection/access to the electricity and natural gas network/grid, contracting procedure, billing, non – observance of quality parameters, curtailments, disconnections, framework supply contracts for electricity and natural gas for residential consumers, conditions and granting of the social tariff for electricity residential consumers, electricity and natural gas.

#### 2.4. Infrastructure

#### Electricity

The Methodologies for establishing tariffs for electricity transmission and distribution service were not modified in 2009. Network operators continued the refurbishment process in order to increase performance and comply with the quality and technical standards.

#### Natural gas

Having regard to the fact that **the Nabucco project** is of crucial importance for the European security of supply and for the European policy for extending the natural gas supply sources and transit routes, the fact that on July 13 2009 Romania, Bulgaria, Hungary and Austria

signed the Intergovernmental Agreement represented a success of the European external affairs policy.

In the same context in 2009 was amended and completed ANRE Decision no. 1228/2008 granting the exemption of the Romanian sector of Nabucco pipeline from the provisions in the legislation regarding third party access to the natural gas transport systems and from the tariff methodologies.

#### 2.5. Security of supply

#### Electricity

In 2009, the electricity generation was 57.7 TWh, decreasing by approximately 11% as compared to 2008. Domestic consumption amounted to about 55.20 TWh, by approximately 8.5% lower than in 2008 having an uneven evolution during the year.

As compared to 2008, energy delivered from liquid fuel increased by 47%, nuclear energy increased by 5%, while hydro energy decreased by 8%, whilst the electricity produced from solid and gaseous fuel decreased by about 17%, respectively 27%.

In 2009, in compliance with the provisions of ENTSO-E – System Adequacy Retrospect 2009 study, were commissioned hydro-groups with approximately 50 MW. Also, was decommissioned a coal plant of 75 MW.

It is estimated that nuclear units 3 and 4 (650 MWe) at CNE Cernavodă will be commissioned by 2020.

It is estimated that in the future the installed power in wind plants will amount to about 4000 MW in 2020, taking into consideration the implementation of the government strategy for promoting renewable energy sources.

Establishment of new generation 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.

The main regulatory activities concerning the promotion of electricity from renewable sources (E-RES) for 2009 were as follows:

- setting up the regulatory framework subject to Law no 220/2008 for establishing the system to promote the production of energy from renewable energy sources
- drawing up a proposal for the modification of Law no. 220/2008;
- establishing the documentation for the pre-notification at the European Commission of the E-RES green certificates support scheme provided by Law 220/2008 and for the clarification of several aspects emphasized by the European Commission;

• monitoring the functioning of the regulation and legislative systems concerning the promotion of E-RES and the behaviour of operators, that is highlighting possible problems and improving the existent regulatory framework.

The interest for investments in wind power plants increased in 2009. In April 2010 ANRE had granted establishment authorizations for 1045 MW and for 17.7 MW, by comparison with 2008 when only 591 MW held establishment authorizations and 11 MW licenses. For 2010 this trend remains. In July 2010 were concluded connection contracts for 3376 MW installed power in wind plants.

Starting with 2010, for cogeneration capacities is intended to introduce a bonus type support scheme. The scheme was notified to the European Commission in compliance with European regulations concerning state aid.

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 NPS.
- 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 main investments in the transmission infrastructure envisaged for the period 2009-2020 are given in *table 2.11*; the deadlines for commissioning may nevertheless change.

*Table 2.11* 

Overhead Lines or Power Sub-Stations	Voltage level ( kV)	Commissioning year	Length (km)
LEA Arad – Nadab (RO) – Bekescsaba (HU)	400	2009	85
LEA Resița – Timișoara double circuit currently operating at 220kV)	400	2015	73
LEA Medgidia (RO) – Varna (BG)	400	2013	54
LEA Medgidia (RO) – Dobrudja (BG)	400	2014	72,5
LEA Timisoara – Arad double circuit currently operating at 220kV)	400	2015	54
LEA Resita (RO) – Pancevo (Serbia)	400	2014	~100
LEA Suceava (RO) – Bălți (MD)	400	2020	150 (93 în 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

Also LEA interconnection Isaccea- Varna shall be decommissioned in 2010 and LEA Isaccea – Dobrudja, in 2014. Thus LEA interconnection with Bulgaria moves from Isaccea in Medgidia.

#### Natural gas

Total gas consumption in 2009 amounted to 140,058,492.990 MWh, out of which 28,223,381.819 MWh was household consumption (20,16%). Domestic gas production in 2009 was 119.447.781,889 MWh, and import 20.610.711,101 MWh.

The European Ten Year Network Development Plan established by the European Network of Transmission System Operators for Gas and which can be found on their web page <u>www.entsog.eu</u>, forecasts the evolution of consumption for the period 2010-2019.

In Romania there are 8 underground storages with a total capacity, in 2009, of **3.135** billion cm.

The gas underground storage capacity for the period April 2009- April 2010 is presented in the *figure 2.4*:

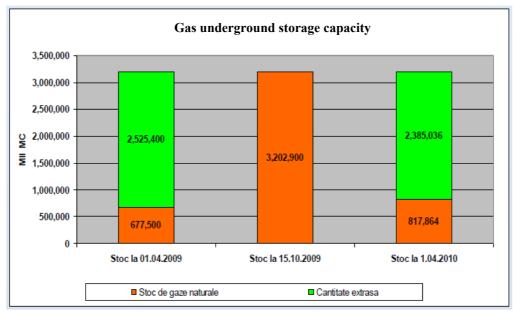


Figure 2.4

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 interconnection Szeged (Hungary)- Arad (Romania)
- Nabucco Project.

For projects regarding the interconnection Romania-Hungary, Bulgaria –Romania and Nabucco the European Union provides financial support of 16.7; 8.9 respectively 200 billion Euros through the European Energy Programme for Recovery.

The gas supply crisis at the beginning of 2009 emphasized once again the importance of the Nabucco Project for the security of the natural gas supply. The Gas Supply Coordination Committee ( in which are also members representatives of the Authority) met several times in order to analyze the situation of the natural gas supply, given the situation of the interruption in the Russian gas supply. Having regarded to the information received from representatives of sector undertakings the Committee adopted several emergency measures, so that the pressure in the national grid remains within the normal parameters, and the national consumption to be entirely covered. The Committee above mentioned, was set up according to Law no 346/2007 concerning measures to safeguard security of natural gas supply, law transposing directive 2004/67/CE approved April 26 2004, concerning measures to safeguard security of natural gas supply, published in the Official Gazette of the European union no 27, April 29 2004.

#### 2.6. Regulation/ Unbundling

Until December 2009 ANRE was 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.

Given the provisions of Law no. 329/2009 concerning the reorganization of public authorities and institutions, cutting back public expenses, supporting the corporate sector and complying with the framework-agreements with the European Commission and the International Monetary Fund was published Government Decision no. 1427/2009 concerning the organization and functioning of the National Energy Regulatory Authority. Consequently, starting with December 2009, ANRE is an independent public legal body of national interest, under co-ordination of the Vice-Prime Minister, financed from the state budget through the Secretariat General of the Government, all income according to legal provisions go directly into the state budget.

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.

In its mission ANRE tries to integrate the regulation process with the actions of other regulatory authorities and harmonizing it with the objectives and priorities of the Government.

From institutional point of view, the competences and attributions for ANRE are clearly stated in primary legislation.

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 breaching of its regulations is 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.

As regards the obligations of unbundling, ANREs activity focused on aspects related to assistance regarding legal, operational, organizational and accounting unbundling also a monitoring activity so that license conditions are met.

#### 2.7. General Conclusions

The year 2009 brought several modifications to the organization of ANRE. Thus, Law 329/2009 concerning the reorganization of public authorities and institutions, cutting back public expenses, supporting the corporate sector and complying with the framework-agreements with the European Commission and the International Monetary Fund provided for the taking over by ANRE of the tasks and competences of ARCE – Romanian Agency for Energy Conservation.

Thus, ANRE strengthened its position as regulatory authority in the energy field, assuming the role of creating and implementing both the necessary regulations for the functioning of the sector and electricity and natural gas markets, within a competitive, transparent and consumer protection framework, and that of monitoring implementing measures of energy efficiency and the promotion of electricity produced from renewable energy sources.

Starting with December 2009, ANRE is an independent public legal body of national interest, under co-ordination of the Vice-Prime Minister, financed from the state budget through the Secretariat General of the Government, all income according to legal provisions go directly into the state budget.

In 2009, by comparison with 2008 the effects of the economic crisis consisted of a decrease in electricity production by approximately 11% and a reduction in gas consumption by approximately 15%.

The supplier switching rate for year 2009 for non-household electricity consumers calculated by the consumption places recorded an increase of 117% by comparison with 2008, and the one calculated by supplied electricity volume a decrease of 36% by comparison with the values of the previous year, which indicates that the migration of consumers from a supplier accentuated, nevertheless those choosing another supplier had significantly lower consumptions.

The number of consumers which switched the natural gas supplier increased, so the degree of market opening at the end of 2009 was 56.47%.

Modifications occurred also in the capacity allocation mechanisms at the Hungarian border. Starting with December 2009 entered into force the *Rules for annual, monthly and daily interconnection capacities coordinated allocation between Romania and Hungary*. In accordance with the Agreement between the two TSOs daily allocation of the interconnection capacity upon that border is organized by MAVIR, and monthly and annually auctions by CN Transelectrica SA for the total net interconnection capacity of the border. Upon the border with Bulgaria, the common coordinated allocation started in April 2010.

Also in 2009, ANRE reviewed framework contracts for regulated natural gas supply for the households and non-household consumers and introduced or modified some terms or clauses in order to better correspond to the continuous changes of the sector so as to protect gas consumers.

The quality of electricity supplied was another aspect taken into consideration in 2009. Thus, The Performance Standard for electricity Supply became subject for public debate, its importance residing in the establishment of guaranteed levels of the performance indicators and compensations incurred to the suppliers for non-observance, as well as the methods for consumer complaint settlement.

In order to safeguard that electricity and natural gas suppliers provide complete and correct information to their consumers, ANRE reviewed the *Regulation for the information of the electricity and natural gas residential consumers,* establishing the main areas where electricity and natural gas suppliers should provide more detailed information.

The year 2009 was also marked by the accept of the European Commission concerning the official notification of the Draft Government Decision concerning the establishment of the Support scheme bonus type for the promotion of electricity produced in high efficiency cogeneration upon useful heat demand. The introduction of the support scheme for the promotion of high efficiency cogeneration aims at creating a mechanism transparent, predictable and for a sufficient period of time in order to sustain the stability necessary for investments, to comply with European regulations concerning state aid and to reduce carbon dioxide emissions at national level.

The fact that on July 13 2009 Turkey and other four members of the European Union-Romania, Bulgaria, Hungary and Austria signed the Intergovernmental Agreement for the Nabucco project represented a success of the European external affairs policy. ANRE representatives contributed within the negotiation and technical analysis process, for the clarification of aspects regarding applicable tariff methodologies and capacity auctioning.

In order to apply the provisions of the 3rd energy package the evaluation and modification of the current regulatory system must comply also with the energy market liberalization and requirements for safeguarding a predictable regulatory frame and a stable investment climate without neglecting security of supply and sustainable development aspects.

# **3. Regulation and performance of the electricity market**

## **3.1. Regulatory issues**

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

The NPS includes the following sections:

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

Due to the fact that Romania and Moldova belong to different power-supply synchronization areas, the lines allow 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.

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 since July 1, 2005.

Bids are generally organized on monthly or annual basis or whenever necessary but not for periods shorter than one week. The net interconnection capacity is determined by the Romanian TSO (CN Transelectrica SA) and is shared equally with the neighbouring TSOs for both directions.

Following the Agreement between CN Transmelectrica SA and the Hungarian Electricity Transmission Company (MAVIR), the *Rules for the Annual, Monthly and Daily Coordinated Allocation of Interconnection Capacity between Romania and Hungary* entered into force as of December 2009. According to the Agreement, the daily allocation of the interconnection

capacity on the respective border is organised by MAVIR, while the monthly and annual bids are organised by CN Transelectrica SA for the entire net interconnection capacity of the border.

As a general functioning characteristic of the interconnection capacity allocation system the 2009 monthly bids showed a significant price decrease as compared to the prices resulted from the annual bids on export on the Serbian-Hungarian border, but also a price increase on the Bulgarian border. Another characteristic was the reservation of the exchange capacity simultaneously on the both sides of a border that numerous participants made in order to create opportunities to transfer power in any of the directions depending on the level of prices on the corresponding markets. Such a policy was also possible due to the low prices on import. Lower prices on export were also noticed from month to month (on monthly bids), which probably reflected the limited export opportunities towards zones with known deficits at regional level due to the economic crisis.

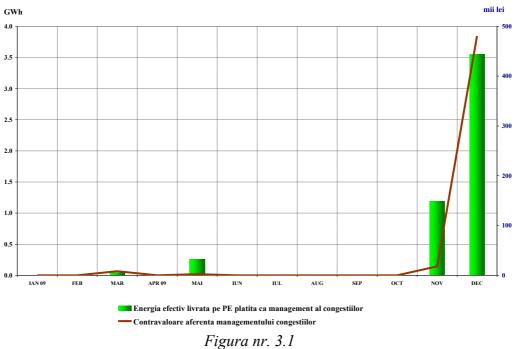
#### Evaluation of the congestion level of the internal and interconnection lines

Through the bilateral export / import agreements that the Romanian producers and suppliers signed with foreign partners, integration of the Romanian electricity market in the regional market was achieved in 2009, as well. Added to these, there were exchanges of mutual links based on compensation between the TSOs.

A total of **0.68 TWh** of electricity has been imported and **3.15 TWh** has been exported (the values are based on the data reported by the market participants); the physical flows were **2.38 TWh** on import and **4.86 TWh** on export, figures that also include transit flows which did not involve participants from Romania, technical exchanges between TSOs and loop flows.

#### **Iinternal congestion level**

The monthly electricity level engaged by the TSO for the internal congestion management and its associated c/value for the year 2009 is given in *Figure 3.1*.



Source: CN Transelectrica SA, data processed by ANRE

As per the TSO data, the number of dispatch intervals in each month with **internal congestions** and the value of the delivered balancing electricity are given in *Table 3.1*.

			10	ble nr.3.1
Month	Network congestion area – cause generating the Network Restriction	Dispatch intervals [h]	Energy	[MWh]
			Upward	Downward
January	No congestions	0	0,00	0.00
February	No congestions	0	0.00	0.00
March	S4 Transilvania Nord – LEA 400kV Rosiori- Mukacevo withdrawn from operation	3	41.89	0.00
April	No congestions	0	0.00	0.00
May	Isalnita – rehabilitation of 220kV Isalnita Sub-station	2	0.00	260.00
June	No congestions	0	0.00	0.00
July	No congestions	0	0.00	0.00
August	No congestions	0	0.00	0.00
September	No congestions	0	0.00	0.00
October	No congestions	0	0.00	0.00
November	220kV Isalnita sub-station – the TA8 generator owned by SE Isalnita withdrawan from operation within Isalnita sub-station rehabilitation programme.	9	0.00	1196.00
December	Dobrogea – Extreme weather conditions (heavy snow and snow storms) leading to disconection of the 400 kV lines in Cernavoda area	40	0.00	3550.00
Total		54	41.89	5006.00

Table r	ır.3.1
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Source: CN Transelectrica SA data and processing

#### **Congestion level on the interconnection lines with the neighbouring countries in 2009**

Border congestion is considered when access to the market of all the requesting participants is not guaranteed.

	Hun	gary	Bulg	Bulgaria Serbia		Ucraine		
2009	export	import	export	import	export	import	export	import
Number of congestion days	365	353	365	287	359	359	350	122
Number of days with withdrawal of inteconnection lines (on the borders with a single interconnection line)					6	6	15	15
Annual frequency of congestion (%)	100	97	100	79	98	98	96	33
Severity index	5	4	5	4	4	4	4	2

Severity index	0	1	2	3	4	5
Annual frequency of the congestion	0%	1-25%	26-50%	51-75%	76%-99%	100%

The formula used for the calculation of the *Annual Frequency of the Congestion (FaC)* is FaC (%) = NzC\*100/(365-NzR)

where:

- NzC is the number of congestion days
- NzR is the number of days with zero NTC value corresponding to the withdrawal from operation on borders with a single interconnection line (Serbia, Ukraine).

FaC was calculated by taking into consideration only half of the monthly NTC value that was agreed with the neighbouring TSOs, which represents the quota allocated by the OTS. CN Transelectrica SA signed mutual agreements with the neighbouring TSOs (except Western Power of Ukraine) in order to calculate and to mutually agree on the border NTC values, each TSO offering then only a 50% quota on the market.

The NTC value that CN Transelectrica SA allocates on the border with West Ukraine is 100% (with participants presenting the confirmation of Ukraine's approval) and FaC was calculated correspondingly.

Conclusions regarding export congestion are the followings:

- The borders with Hungary and Bulgaria were the most congestioned (100 %);
- The values recorded on the borders with Serbia and Ukraine were nearly equal throughout the entire year 2009 (96-98%)

Conclusions regarding import congestion:

- The border with Serbia was the most congestioned (98%);
- The border with Ukraine was the less congestioned (33 %).

The highest FaC value (100 %) in 2009 was reached on the export line towards Bulgaria and Ukraine.

The 2009 NTC values were mainly influenced by the factors below:

#### a) general:

•Withdrawal of certain internal and interconnection lines;

- •Seasonal temperature differences determining:
  - Summer regulation reduced by about 25% to prevent overloading in Serbia for the period May October;
  - Thermal limited currents for 20°C admissible on various NPS lines influencing the NTC values in January February and November December;

•Production in hydropower plants Porțile de Fier (Iron Gates) and Djerdap especially in summer

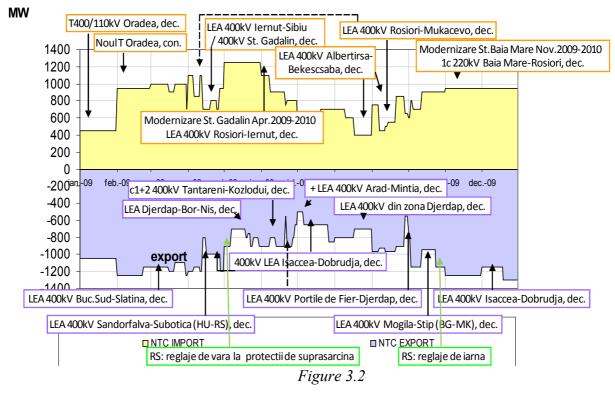
•Deficit in the NPS north area for import.

#### b) Specific to the year 2009:

•Rehabilitation of Gadalin sub-station and the disconnection of the temporary long line 400kV Iernut-Roșiori to range voltage values within the normal bands under the Transmission Grid Code;

•The putting into operation of a T400/110kV in Oradea sub-station led to increased import capacity.

*Figura 3.2* shows the monthly NTC values on export and import, the decrease of export and import values in summertime and the determining factors:



In the light of the aforementioned, the variation analysis of the NTC values on each border showed that in 2009:

•The border with the largest decrease of the NTC summer export values was the border with Serbia (by nearly 63% as against the winter export NTC values).

•Export to Hungary reached the smallest values in August (about 37,5 of the values recorded in April)

•Export NTC value on the border with Bulgaria in the  $2^{nd}$ ,  $3^{rd}$  and  $4^{th}$  quarters was by about 43% smaller than its February value.

Figure 3.3 shows the utilisation degree of the interconnection lines.

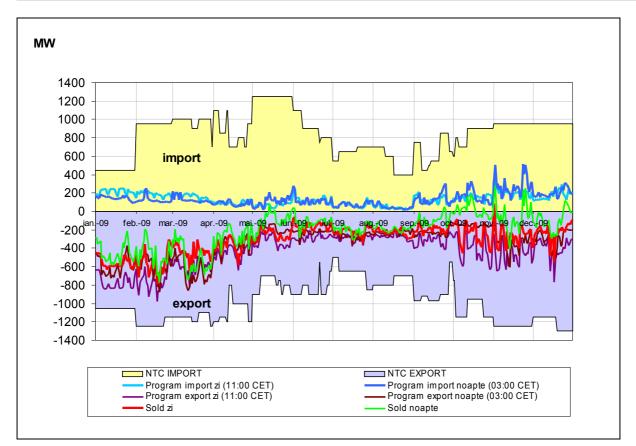


Figura 3.3

Daily bilateral bids organised by MAVIR for the interconnection capacity allocation are jointly developed on the Romanian – Hungarian border starting December 1, 2009.

The formula used to calculate FaC on the Daily Frequency of the Congestion (FzC) is the following: FzC (%) = NhC\*100/24

where: - NhC is the number of congestion hours in the analysed

Figure 3.4 shows the FzC on the the Romanian – Hungarian border in December 2009.

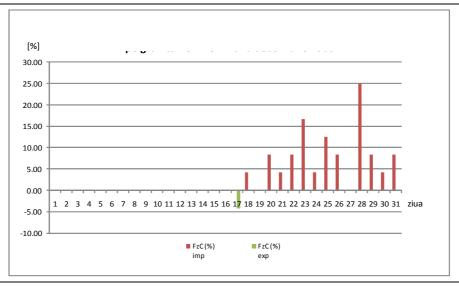


Figura 3.4

# 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 <u>www.ope.ro</u>, under the heading: *Other markets/ATC allocation procedure/Info/Procedures*.

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 – TRM, 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 methodology has been developed by CN Transelectrica SA based on the ETSO recommendations on the interdependent exchanges in loop networks: in case the exchange capacities between more partners are interdependent, ETSO recommends to calculate NTC between zones, in interfaces including more bilateral borders. The bilateral NTC on NPS borders are co-ordinately determined through the calculation of composite NTC in the interconnection interface of NPS and other interfaces used commonly with partners later on distributed on bilateral borders.

The TSO publishes, before each auction, the values of the TTC, TRM, NTC, AAC and ATC, in compliance with the related 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, <u>www.ope.ro</u>, Transelectrica publishes daily reports of the following:

- aggregated international exchanges (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.

At the same address <u>www.ope.ro</u>, there are published for 2009 the following:

- 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 <u>www.transelectrica.ro</u> the level of consumption and production (broken down by main types of fuel), the balance on crossborder trade and the level and direction of these exchanges on each interconnection, this information is not, however, stored / necessary to be stored.

On <u>www.etsovista.org</u> 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 decided in March 2009 an audit activity at CN Transelectrica SA.

As regards the management of domestic congestions, 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 <u>www.ope.ro</u> 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 planning activity for grid development is targeted for an optimal size of the network in order to ensure the transmission of the forecasted electricity to be produced, imported, exported and transited. CN Transelectrica SA periodically elaborates system studies for analysing conditions for future functioning of the transport network.

At each application for connection to the network issued by a new client or for an increase of the installed power at a producer or at an existent consumer CN Transelectrica SA elaborates studies for analyzing their system framing. In this studies it is checked the fulfilment of the performance standard for transport and system service, are identified the possible congestions and the necessary network backups required for their elimination.

According to present regulations and based on these studies, CN Transelectrica SA elaborates an outlook plan for the next consecutive 10 years, with an update at each two years, concerning the actual status and future evolution of the electricity production and consumption.

#### General assessment of the registered progress on bilateral relationship with neighbouring countries which produce and export or transport electricity, including the progress on markets integration, social and environmental consequences of the electricity trade and their access to the network

During 2009 based on the bilateral co-operation relationships between CN Transelectrica SA and neighbouring countries has been achieved:

- LEA 400 kV Reşiţa (România) Pancevo (Serbia); in December 2009 a Joint Position Paper 2 has been signed for the approval of the prefeasibility studies results (including system studies) for the construction of Reşiţa – Pancevo interconnection, option double circuit;
- Co-operation with Bulgaria, Serbia and Hungary for capacity allocation on the interconnection lines. Based on a MoU signed with Hungary stating with December 2009 CN Transelectrica SA organized monthly auctions in common at the border Romania/Hungary and starting with 1 December 2009, MAVIR organized daily auctions. Per the same agreement it was decided that CN Transelectrica SA organizes the annual auction;

- Supporting of the export-import activities with Ukraine (Bursthyn Island). As boundary country the Ukraine's access to the network is done based on the ITC contract and a transit tariff is applied both ways.
- The investment made for the interconnection line Oradea-Nadab-Arad-Bekescsaba;
- The kick-off for the elaboration of the feasibility study for the interconnection with Republic of Moldavia through a future 400kV line between Suceava and Balti;
- The appointment of the winner company in July 2009 and signing the contract for the elaboration of the feasibility study for the interconnection with Turkey via the HVDK Link undersea cable;
- CN Transelectrica SA performs as active member of the regional ENSO-E group and is involved in the process for the establishment of a regional electricity market in SEE setting up coordinated allocation for capacities on the interconnection lines in order to solve congestion management in the region and the Coordinated Action Office-CAO for the SEE region;
- As member of the ENTSO-E, CN Transelectrica SA has been appointed to provide project management for assessing the options study on the interconnection between Republic of Moldavia and Ukraine, on behalf of ENSO-E.

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

#### Issues on 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 9029 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 redispatching;
- 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.

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	2009
Average Interruption Time –	4.434	1.187	0.857	1.792	0.81
AIT					

For 2009, the TSO has reported the following relevant data related to the transmission activity:

Transported electricity :	u.m.	Total 2009
Received (brut) in the grid	GWh	38 950
Delivered (net) from the grid	GWh	37 957
Coefficient for losses	%	2.55

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 3.5 and 3.6*), regulations for the connection of users to public electricity transmission network.

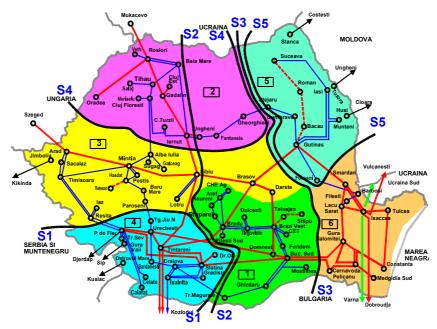


Figure 3.5. Zone tariffs for injection (Generation) of electricity in the transmission network

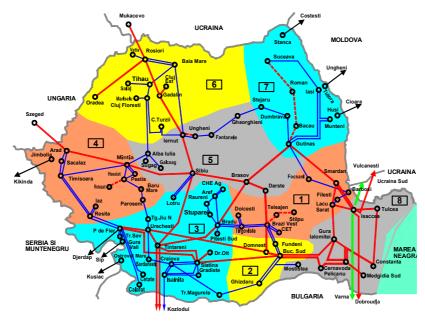


Figure 3.6. Zone tariffs for extraction (Load) of electricity from the transmission network

According to ANRE Order no. 132/2008, modified by ANRE Orders no. 79/2009 and 94/2009 the average transmission tariff is 16.13 lei /MWh and the average injection tariff ( $T_G$ ) is 7.60 lei /MWh. The  $T_G$  value for the six injection zones is ranged within [1.82 ... 9.64] lei /MWh. The average extraction value ( $T_L$ ) for the 8 extraction zones was 8.53 lei /MWh with values ranged within [6.19 ... 17.92] lei /MWh.

The evolution of the average tariffs for transmission and system services are presented in *Tabel 3.2*:

			Tabel 3.2
Indicator	Year 2008	Year 2009	%
	[lei/MWh]	[lei/MWh]	
1	2	3	4=3/2
Average tariffs for electricity transmission service	15.33	16.13	5.22
Tariff for system services, out of which:	17.66	20.08	13.70
- for ancillary services	0.82	1.00	21.95
Tariff for services provided by the market operator			
to the participants on the markets administated by	0.23	0.30	30.43
this one			
Average injection tariff	7.64	7.60	0.05
Average extraction tariff	7.69	8.53	10.92

In 2009, 36 distributors operated on the Romanian electricity market, out of which 8 having 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 these 8 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".

For the second regulatory period (2008-2012), through the ANRE Order no. 39/2007, First Revision of the *Methodology to setting up tariffs for the electricity distribution service* was revised and approved.

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%.

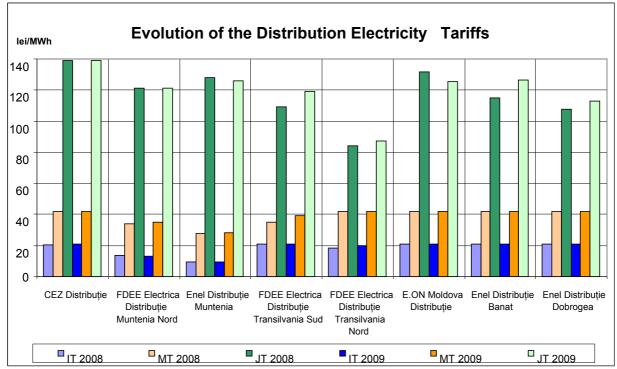
The regulated rate of return (RRR) is calculated in real terms based on the average weighted cost of capital before tax. For the distribution operators with majority private capital, in accordance with the privatization commitments, the RRR value in real values before tax was 10% for each year of the 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 vital investment is 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 investment is 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 power purchasing costs required to balance the CPT associated to the reduction programme are covered through the distribution tariffs.



IT - high voltage, MT - medium voltage, JT - low voltage

### Figure 3.7

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	0.65	4.2	4.85	
Rural	2.5	9.1	11.6	
Average values	1.5	6.4	7.9	

Place	(min/year) Scheduled interruptions		SAIDI (min/year) Total interruptions	
Urban	147	319	466	
Rural	540	1026	1566	
Average values	323	635	958	

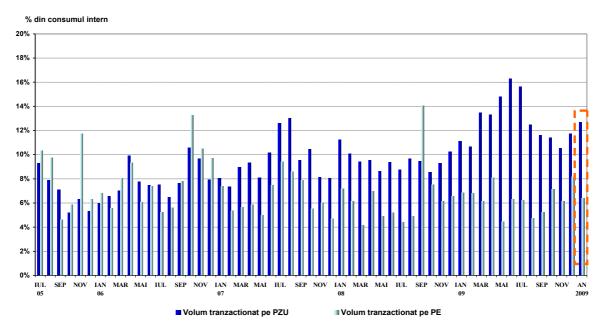
Procedures and steps in the connection process, as well as the connection tariff are set up in the Regulation for the connection of users to public electricity networks, GD no. 90/2008, and secondary legislation issued by ANRE.

### The Balancing Market (BM)

BM started operating in July 2005. In December 2009, 110 BRPs (balancing responsible parties) were active and the 19 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 2009. In order to prevent breaching of payment obligations of the BRPs towards CN Transelectrica SA and the possible propagation to other producers participating on the balancing market was introduced a system of bank guarantees which license holders, registered or on the process of registering as BRP, must provide in favor of CN Transelectrica SA. The procedure was approved by ANRE in December 2009, entering into force on April 15 2010.

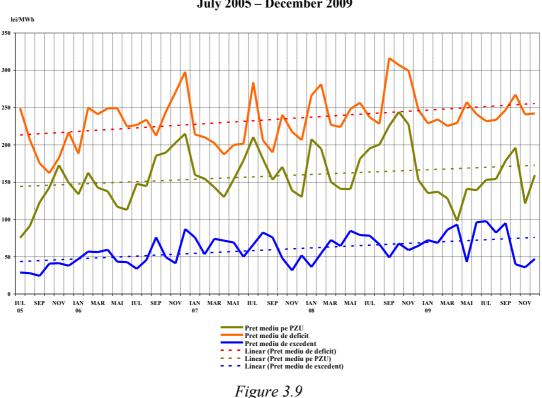
The annual volume traded on the BM in 2009 dropped 10% by comparison with 2008, and the monthly value was constantly below the one traded on the DAM, as shown in *figure 3.8* 



Volumes traded on DAM and BM

Source: data- CN Transelectrica SA and SC OPCOM SA data interpretation and analysis by ANRE Figure 3.8

The annual average values of the settlement prices for 2009 were as follows: the deficit price - 243 lei/MWh (14% lower by comparison with 2008); the surplus price 74 lei/MWh (11% higher by comparison with 2008). In *figure 3.9* is presented the monthly evolution of the average settlement prices on the BM (surplus price and deficit price), by comparison with the closing price established on the DAM, starting with July 2005.



Monthly average prices on DAM and BM July 2005 – December 2009

As in the previous years, the BM concentration index values for the year 2009 (*table 3.4*)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 3.4
BM – concentration index values, year 2009	Regulation					
	Seco	ndary	Fast tertiary		Slow tertiary	
	upward downward		upward	downward	upward	downward
C1, %	64	64	55	47	39	32
C3, %	92	92	83	78	78	70
ННІ	4526	4501	3543	2843	2478	2017

Moreover in 2009, trough 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 *figure 3.9*, following these regulatory measures the deficit and surplus prices varied within a reasonable range, representing both a penalizing factor for the BRP 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 ( $\leq 110$  kV).

**CN Transelectrica SA ownership structure on March 31 2010 was the following:** 73.7% of the social capital – the Ministry of Economy, Trade and Bussiness Environment, 13.5% - The Property Fund, 12.8 % - 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, 28 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 : 100% 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.- 24.903 % of the shares; Property Fund S.A. – 24.094 % 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, and 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.

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 2009, there were 105 electricity generation license holders.

The current structure of the electricity generation sector reflects the successive reorganizations put in place during 2000 - 2004, which resulted in a reduced concentration on the wholesale market. In 2009 there were no modifications in the installed generation capacities.

The maximum net generating capacity in 2009 was about 16 GW (corresponding to the existing capacities at 31.12.2009).

The structure of the net electricity generation in 2009 (only for the producers with dispatchable units-as they are the subject of market monitoring) is shown in *table 3.5*.

Table 3	.5
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	Electricit	y generation
	TJ	GWh
S.C. Termoelectrica S.A.	5595	1554
S.C. Electrocentrale București S.A.	15814	4393
S.C. CE Rovinari S.A.	19274	5354
S.C. CE Turceni S.A.	22392	6220
S.C. CE Craiova S.A.	15727	4369
S.C. Electrocentrale Deva S.A.	9532	2648
S.C. Hidroelectrica S.A.	55848	15513
S.N. Nuclearelectrica S.A.	42306	11752
Other producers	17604	4890
TOTAL	204093	56693

The total net electricity production decreased about 11% as compared to the year 2008, and electricity injected into the network by the main generators (with dispatchable units) dropped about 11% reaching 52,4 de TWh. By comparison with 2008 electricity produced from liquid fuel increased with 47%, electricity produced from nuclear power sources increased about 5%, while electricity produced from hydro sources decreased with about 8%, and electricity produced from solid and gas fuel decreased about 17%, respectively 27%.

### 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 equaling 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 2009 as compared to 2008 by components of the wholesale market and the value of the transactions as referred to the 2009 internal consumption are given in *Table 3.6*.:

Table	3.6
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Wholesale market components	Traded volume in 2009 - GWh -	Evolution compared to 2008 - % -	Weight of internal consumption for 2009 - % -
Bilateral Contracts Market	34587	▼0,5%	69,3%
Regulated Contracts Market	30334	<b>▲</b> 4%	60,8%
Export	3154	▼41%	6,3%
Centralized Markets for Contracts	6329	▼28%	12,7%
DAM	6347	▲22%	12,7%
BM	3206	▼10%	6,4%

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

The increase in quantities traded on the DAM is considered a positive evolution due to the positive and transparent character of this market, in reverse, was noticed a decrease in quantities traded on the centralized market for contracts, suppliers disclaiming many of them due to prices too higher concluded at the auctions in the fall of 2008, corroborated with a decrease of the final consumption.

The economic crisis was reflected also in export reduction, without affecting volumes traded upon bilateral negotiated contracts, which remained at a level comparable with 2008. The increase of their share in the internal consumption (from 64% to approximately 69% in 2009)

is due to the reduction of the internal consumption and offers indications concerning the existence of 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 2009 and determined as the difference between the average selling price and the acquisition price. The assessments made by ANRE on the participants' reports (with the simplifications and limitation that are inherent to such analyses) showed an average value of about 15 lei/MWh, respectively, 4 Euro/MWh. From the 71 competitive suppliers that were active in 2009, 57 registered positive values of the supply margins and 25 registered values over 3 Euro/MWh.

A comparative analysis of the transactions closed on all the wholesale market components in 2009, respectively 2008 emphasizes an increase of the convergence between the prices of the bilateral negotiated contracts and the ones of the regulated contracts, but there are still significant differences between these prices and the average prices of the centralized markets. In the same time, was noticed a divergent evolution of the DAM price by comparison with the price of centralized market for contracts – *table 3.7-* thus, the average price on the centralized markets for contracts, increased 9% by comparison with 2008, reflecting market conditions from the fall of 2008, when these contracts were concluded while the average price on the DAM dropped 23% following a decrease in consumption in 2009 by comparison with 2008. These evolutions suggest that the price on the DAM emphasized better the 2009 market conditions, notwithstanding the economic crisis.

Table 3.7

Average price on the wholesale market components	2009 - lei/MWh -	2008 - lei/MWh -	Evolution 2009 as compared to 2008 - % -
Negotiated bilateral contracts market	158,68	146,07	<b>▲</b> 9%
Regulated bilateral contracts market	164,44	158,15*	<b>▲</b> 4%
Centralized Contracts Markets	192,54	177,04	<b>▲</b> 9%
DAM	144,77	188,53	▼23%
BM (deficit price)	243,05	278,12	▼13%

\* includes average TG

There are made the following specifications:

The average prices do not include VAT, excise or other taxes and were determined through weighting the prices by the amounts corresponding to the selling transactions reported monthly by the participants

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, for 2008, were made comparable by including the injection (TG) component, approximately 7 lei/MWh, in the average of regulated prices which do not include it, the DAM and the BM prices include 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

The regulated component of the wholesale market continued to operate also in 2009 for providing electricity supply at regulated tariffs for consumers who did not use the right to switch supplier and also to cover distribution and transmission network losses.

From the total transactions of the regulated market thermal producers covered approximately 57% (of which 11% for the distribution network losses and about 3% for the transmission network losses), nuclear about 24% (of which about 5% for the distribution network losses) and hydro producers about 13% (of which 2% for the distribution network losses). The difference of 6% is represented by the sales made on contracts with regulated prices for mutual-aid between the producers.

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

In 2009, the default suppliers have purchased 83926 TJ (23313 GWh) for the consumers with regulated supply prices. About 96% of the total electricity was bought on the regulated market, the rest being purchased on the competitive market. The average electricity acquisition price was 165,18 lei/MWh.

For the distribution operators, the acquisition on the regulated market represented about 89% of the total; the rest being purchased on the competitive market to cover the distribution network losses. In total distribution operators purchased on the wholesale market a quantity of electricity equal to 23364 TJ (6490 GWh). The average electricity acquisition price was 161,67 lei/MWh.

### 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). The volume of the transactions concluded in 2009 decreased as compared to 2008, mainly due to the reduction in the volume of transactions concluded on the CMBC and export.

The structure of the sales on the competitive market (excluding the BM transactions) from the producers' perspective is given in *table 3.8*.

			Table 3.8
Tot	al sal	es of producers on the competitive market in 2009	100%
	-		(26588 GWh)
<i>A</i> .	Tra	nsactions closed upon bilateral negotiated contracts	66,5%
	1.	With suppliers	46,4%
	2.	With external partners (export)	4,8%
	3.	With other producers	6,1%
	4.	With distributors	0,0%
	5.	With eligible customers	9,2%
<i>B</i> .	Tra	nsactions upon auctions on the centralized markets	23,6%
	1.	With suppliers	22,3%
	2.	With distributors	0,0%
	3.	With other producers	1,4%
	4.	With eligible customers	0,0%
С.	Tra	nsactions on the DAM	9,9%

The structure of the sales on the competitive market from the suppliers\* perspective is given in *table 3.9*.

Sup	Suppliers sales on the competitive market in 2009			
<i>A</i> .	Transactions closed upon bilateral contracts			
	1.	With other suppliers	48,0%	
	2.	With external partners (export)	4,6%	
	3.	With producers	0,9%	
	4.	With eligible customers	38,1%	
<i>B</i> .	Tra	nsactions upon auctions on the centralized markets	0,1%	
	1.	With other suppliers	0,1%	
	2.	With producers	0 %	
С.	Tra	nsactions on the DAM	8,2%	

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

#### Centralized markets for contracts

The number of participants on the CMBC increased in 2009 reaching 102 operators registered in December 2009 (about 34 of which initiated offers or placed answering offers) as against 94 in December 2008.

In case of CMBC-CT the number of the participants registered in 2009 were 69, and in 2008 only 62; from those, in 2008 were active 14 and in 2009, 13.

The year 2009 registered reductions in the transactions concluded on the centralized markets for contracts, the quantities delivered in 2009 upon prior concluded contracts on these markets representing about 13% from the internal consumption (by comparison with the 16% registered in 2008); the transactions concluded on the CMBC organized by Opcom in 2009 (for different delivery periods in 2009/2010) was about half of the volume concluded in 2008.

One characteristic of this period was that buyers (suppliers) disclaimed many of the contracts concluded on the CMBC one year before the delivery in 2009, as a consequence of both decrease in consumption of the consumers of the competitive market and for the prices much lower on the DAM.

The volume of transactions concluded on the CMBC was at its maximum level in December, due to SC Hidroelectrica SA decision to buy 1737600 MWh at the request of ArcelorMittal Galați, at the price of 138 lei/MWh, and also had significant values in March, June and November, contract prices raging between 140 - 203 lei/MWh, most of them around 170 lei/MWh. The level of the transactions for products with higher standards, to be traded on the CMBC-CT, was extremely low 11 GWh with 133 lei/MWh in June and 36 GWh with 184 lei/MWh in October, the benefits of standardizations were not taken into account by the participants.

The *tables 3.10, 3.11, 3.12 and 3.13* present the concentration indexes for CMBC and CMBC-CT during the working years.

*Table 3.10* 

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
2009	4049	98,28	51,34	1929	66,58	35,93

#### Concentration indexes for CMBC, based on transaction volumes yearly concluded

Source, data, interpretation and analysis - SC OPCOM SA

*Table 3.11* 

#### 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
2009	2250	77,91	30,96	2495	75,22	37,98

Source, data, interpretation and analysis - SC OPCOM SA

*Table 3.12* 

#### 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	
2009	5377	100	63,72	1731	61,13	29,95	

Source, data, interpretation and analysis - SC OPCOM SA

*Table 3.13* 

#### 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
2009	4299	94,64	60,75

Source, data, interpretation and analysis - SC OPCOM SA

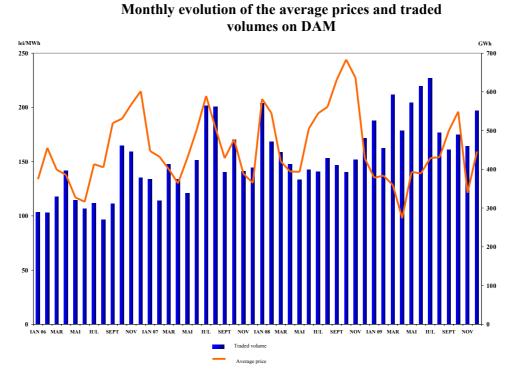
Concentration indexes calculated both for offers launched in 2009, and for quantities of power corresponding to the contracts concluded during this year, highlights an excessive concentrated market on the sale side for CMBC and CMBC-CT, and for the purchase on CMBC.

Average rated price of deliveries in 2009 for contracts concluded on CMBC was of about 193 lei/MWh, increasing with about 9% versus the similar average in 2008, and with about 33% higher than the average price on DAM in 2009.

### Day-Ahead Market – DAM

Up to December 31<sup>st,</sup> 2009, 98 licensed holder's participants signed the convention of participation at DAM, from which about 69 participants were active, concluding at least one transaction. Versus the previous year, an increase of the registered number of participants were noticed (in December 2008, 87 participants were registered), and also an increase of the active ones (in December 2008, about 68 participants were active).

The total volume traded on DAM in 2009 increased with about 22% versus 2008, while the average price on DAM was reduced about 23% versus 2008. *Figure 3.10* presents the evolution of the monthly average prices and volumes traded on DAM in 2006-2009.

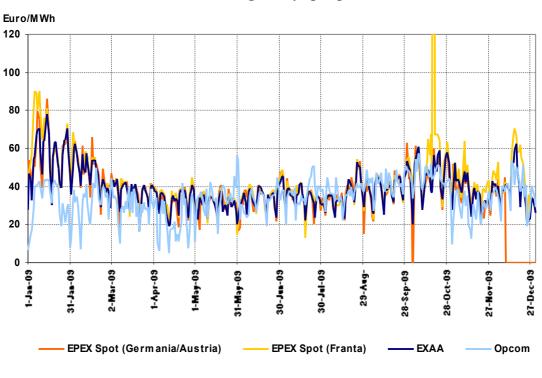




The monthly average price established on DAM was characterized by a pronounced downward trend during March-April, which reflected lower energy consumption and increasing available funds remaining uncommitted due to cancellation of contracts concluded by CMCB.

It is a fact that 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.

Comparing the closing price on DAM with the spot prices set by other European markets in January- April and November-December 2009 (figure 3.11) it is noticed that a significantly higher decrease was registered in Opcom than the one on EPEX Spot (Germania/Austria), EPEX Spot (Franța) și EXAA. In the rest of the months of 2009 the recorded values of the prices by OPCOM often exceeded the values of the mentioned markets.



#### Average daily spot prices



### The overall evolution of concentration indicators on the electricity generation market

The Romanian electricity sector did not register significant structure changes in 2009, 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 **2104** in 2009. 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 **69.53%** (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 **55.24%**.

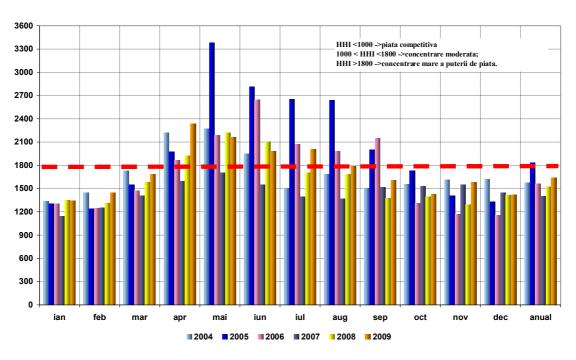
*Table 3.14* presents the average annual values of the C1 and HHI structure indicators as determined based on the quantity of energy delivered to the grid by producers during 2004-2009 without having applied the domination principle (based on the legal structure). Because most of the electricity producers 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

T.1.1. 2 14

		<i>Table 3.14</i>
Year	C1	ННІ
2004	32%	1573
2005	37%	1831
2006	31%	1562
2007	28%	1404
2008	28%	1523
2009	29%	1632

Romanian market, is constantly done based on the sector structure from a legal point of view (as legal entities).

Figure 3.12 presents monthly evolution of HHI on the production (calculated on delivered energy to the grid by generators) compared to 2004, 2005, 2006, 2007, 2008 and 2009.



## Monthly evolution of the HHI on the wholesale market



HHI values on production are located generally in the moderate market concentration(< 1800) limit excepting the months in which S.C. "Hidroelectrica" S.A share market increase significantly due to hydraulic value. In 2009 Hidroelectrica had superior share market, over 40% in Aprilie and May, corresponding to the upper limit of the HHI value 1800; because the increase of Hidroelectrica market share was the result of an excess of energy offered in the market, this did not affect the prices on DAM in that period. Comparing to the most European energy markets, the values mentioned shows that in Romania it is an average level of concetration.

HHI indicator on concentration on DAM had values generally indicating a lack of concentration on buy side (monthly values in 625-964) and sell side, excepting May and June (monthly values in 441 - 1210).

Concentration indicators on DAM, calculated per year based on the transacted volumes, had the following values in 2006, 2007, 2008 și 2009.

Year	Sale			Buy			
	ННІ	C3 [%]	C1 [%]	ННІ	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	
2009	558	29.08	14.22	612	34.88	14.18	

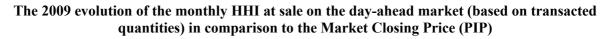
Source: data and interpretation by SC OPCOM SA

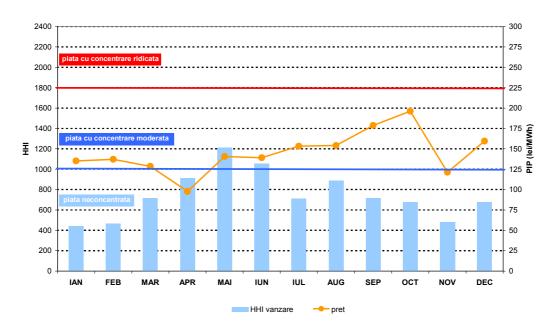
The same indicators, calculated based on the annual offers, registered the values presented in *Table 3.16*.

						<i>Table 3.16</i>
Year	Sale					
	ННІ	C3 [%]	C1 [%]	нні	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
2009	764	41.42	16.33	673	36.44	14.80

Source: data and interpretation by SC OPCOM SA

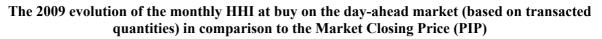
The monthly evolution of HHI index at sale and buy in 2009 are presented in *figure 3.13 and* 3.14 (the indicators are calculated based on the transacted volumes) in comparison to the monthly average closing price on the day-ahead market in order to highlight the possible correlations between the two.

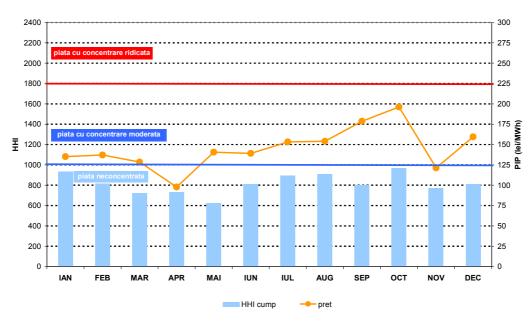




Source: data by SC OPCOM SA, interpretation by ANRE









Source: data by SC OPCOM SA, interpretation by ANRE

In *table 3.17* there are presented the BM values of the concentration indicators for years 2006, 2007, 2008 and 2009. The indicators are calculated based on the electricity delivered by the producers on the BM for every type of regulations and direction.

Table .	3.1	7
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Year	Type of regulation	Direction of regulation	2006	2007	2008	2009
C1	Secondary regulation	Upward	80%	60%	71% 71%	64% 64%
	Fast tertiary	Downward Upward	80% 69%	56% 51%	71%	55%
	regulation	Downward	53%	30%	38%	47%
	Slow tertiary	Upward	29%	29%	27%	39%
	regulation	Downward	31%	19%	27%	32%
	Secondary	Upward	6510	3915	5438	4526
	regulation	Downward	6612	3538	5367	4501
11111	Fast tertiary	Upward	5061	2979	5065	3543
HHI	regulation	Downward	3452	1590	2319	2843
	Slow tertiary	Upward	2203	1769	2021	2478
	regulation	Downward	2582	1276	1838	2017

Concentration	indicators on	the l	balancing market	
Concentration	indicators on		valanting market	

The 2009 values of the concentration indicators on the BM, 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 2009 the upper limit for the offering prices at 400 lei/MWh value.

#### System services market

The contracts, on the ancillary services market, are concluded between qualified producers (according to the types of ancillary services which they can offer) and the TSO. The main goal of the contracts is to ensure to the NPS - against payment - the needed power that can be mobilized at the DEN request in conditions determined by the technical capabilities of these production units. The required capacities are mandatory offered on the BM, while the amount of energy produced / reduced is subject to settlement on the balancing market.

Table 3.18 presents the concentration indicators for ancillary services market in 2009.

*Table 3.18* 

- 2009 -		Secondary regulation	Fast tertiary regulation	Slow tertiary regulation	Capacity reserve
Regulated	Contracted quantity (h*MW)	3418580	5209885	2571450	0
component	C1 (%)	62.2	80.2	71.7	0
	C3 (%)	88.7	90.4	100	0
Competitive	Contracted quantity (h*MW)	0	0	1530106	1987304
component	C1 (%)	0	0	42.1	34.2
I Second	C3 (%)	0	0	82.7	86.1
	HHI	0	0	2869	2692

Because this market has a high concentration degree, for insuring the reserves, hourly regulated contracts have been concluded between TSOs and ancillary services providers. The regulated reserve capacity - asked by the TSO - was approved by ANRE decisions at the beginning of the year and covered 100% of the secondary and fast tertiary reserve and only 50% of the slow tertiary reserve ( for this type of reserve - remainder has to be acquired by market mechanisms). Prices subject to acquisition of ancillary services in 2009 remained at the level of 2008.

In July 2009, the quantities procured under the auction process on slow tertiary reserve have decreased gradually and from August 2009 Transelectrica SA announced on the site www.ope.ro the suspension of the acquisition process for slow tertiary reserve until the end of the year. The prices resulting from the auctions that have been held during the first seven months were in a range from 21.89 to 50.00 Euro / h \* MW (compared to regulated tariff of 23.29 euro / h \* MW ).

The spare capacity required for 2009 was established by ANRE Decision to 400 MW per hour, corresponding quantities will be purchased by auction at the fixed maximum price. Tendering process was however discontinued after 7 months for lack of funds, Transelectrica SA announced on its website suspension of the spare capacity market.

The period when the market was active, there were five electricity producers who participated SC Termoelectrica SA, SC Electrocentrale Bucuresti SA, SC Dalkia Termo Prahova srl, SC Electrocentrale Galati and SC Electrocentrale Deva SA.

## **3.2.2** Description of the retail electricity market

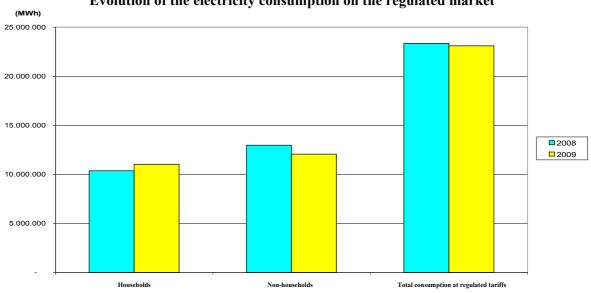
The electricity supply to consumers comprises the supply on the regulated market (for all the final consumers who have chosen to be supplied on regulated tariffs) and on the competitive market (for those who have switched their supplier or they negotiated their contract with the default supplier by dropping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

In 2009 on the retail market were active 47 suppliers, of which four have generation license and 7 are the default suppliers.

**On regulated market**, consumers were supplied with electricity by mainly 7 default suppliers - 4 state-owned and 3 with private majority ownership.

In December 2009 the total number of consumers supplied on the regulated market was 8,833,375 of which non-households - 583,432 and households - 8,249,943. The total amount of electricity supplied on this market was about 23,313 GWh, thus registering a decline of about 2% compared with 2008, in a decrease in total final consumption by about 9%.

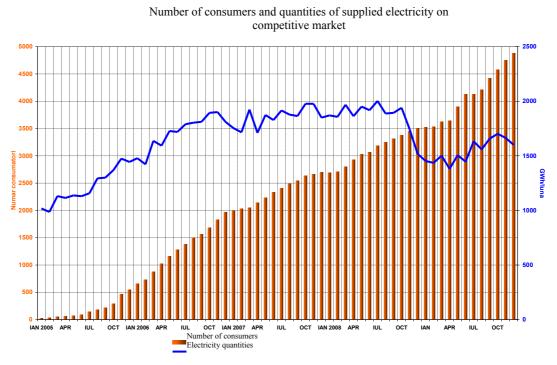
Evolution of the electricity consumption on regulated tariffs and by types of consumers, for year 2009 compared to year 2008 is shown in *figure 3.15*.



### Evolution of the electricity consumption on the regulated market

## Figure 3.15

In December 2009, 4887 eligible customers were present on competitive market, the electricity supplied to consumers in this category in 2009 was of 18,536 GWh, a decrease compared to the same period of the previous year by about 17%. The number of consumers on competitive market is presented graphically as cumulative value from the beginning of market opening (Figure 3.16).



### Figure 3.16

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 3.19* presents information on the number of suppliers with market shares higher than 5% and the concentration indicators on each type of final consumers, in 2009.

				Tab	le 3.19
No.	Consumer type	No. of suppliers with market shares higher than 5%	C1	C3	нні
1.	households + small non-households (contracted power less or equal to 100 kVA)	7	37%	73%	2374
2.	large non-households (contracted power between 100kVA and 1000 kVA)	8	27%	67%	1753
3.	very large non-households (contracted power more or equal to 1000 kVA)	8	14%	34%	707
4.	TOTAL retail market	6	26%	51 %	1211

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

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.

Values of market structure indicators calculated for 2009 shows:

- a non-concentrated market for the retail segment corresponding to very-large non-households consumers;
- a moderate level of concentration throughout the retail electricity markety and for large non-households;
- a high concentrated market for the retail segment corresponding to small non-households + 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 (see *table 3.20*.)

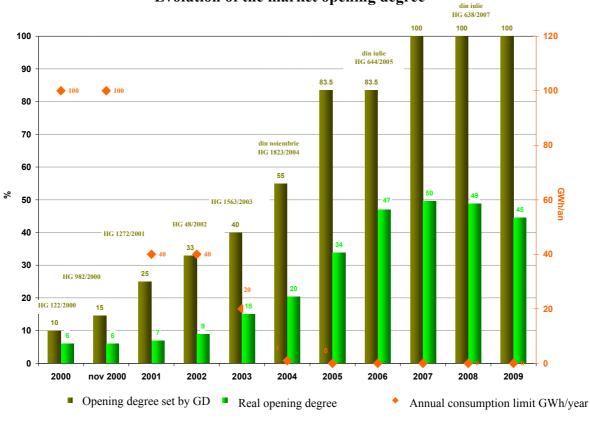
				T	abel 3.20
No.	Consumer type	Number of suppliers with market shares higher 5%	C1	C3	HHI
1.	very large non-households (contracted power more or equal to 1000 kW)	7	17%	38%	778
2.	TOTAL	6	24%	47%	1096
<u> </u>		1 . 1 ())DE			

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

In December 2009, consumers' consumption on competitive market (consumers who have changed supplier or surrendered regulated rates) registered a 44% share of total final consumption, compared with the same period of 2008 when the share was approx. 41% of total final consumption. Regarding the whole year 2009 the average opening degree of the

retail market have decreased with four percentage points compared with 2008, representing approx. 45% of total final consumption.

Annual evolution of the average retail market openning degree is presented in figure 3.17.





The decrease in final energy consumption of consumers on competitive market in conjunction with the upward trend in the number of consumers must be seen as a consequence of economic crisis, not a decrease in retail performance.

It is estimated as positive the developments registred by the increase of non-households on the competitive market, particularly in small consumer groups. These consumers have renounced to the regulated tariff but the electricity supply is further ensured by the default suppliers.

**Procedure of switching the electricity supplier**, approved by ANRE Order no. 21/2005, have been modified in 2009 by Order no. 88/2009. The main changes are:

a) extending the application to all energy consumers;

b elimination of the requirement to pay the outstanding bills after the notification of switching, submitted by the consumer to the current supplier in order to accept the switching;

c) abolishes the consumer obligation to bear the costs for replacing existing meters with hourly meters and place the obligations on network operator;

d) the possibility to determine the quantities of electricity consumed per hour, used for the wholesale market settlement, based on consumer profiles for those measurement points wherein the installation of meters with hourly recording is not compulsory;

Figure 3.17

e) establishing the obligation of each network operator to achieve single national coding for each measuring point for consumer sites connected to its network and the duty to write that code on the invoice;

f) imposition on network operator the obligation to achieve and manage a centralized database containing technical data on the own consumption places;

g) ending the contract for distribution / transmission simultaneously with ending the current supply agreement and not based on notification by the current supplier;

h) the possibility that the final settlement in the case of households and small consumers who change the supplier to be done based on self-reading index or index-based estimated;

i) the requirement for issuing the final settlement invoice, for households and small consumers to be done within six weeks of switching.

Switching the supplier rate for year 2009, presented in *table 3.21*, is determined for each type of consumers in two ways: in terms of number of consumption places that have switched suppliers in 2009 and according to the energy supplied to the consumer places. It is mentioned that the consumption of the largest industrial consumer which owns and a supply license and decided to purchase power on the wholesale market, as a competitive supplier, is not included.

			<i>Table 3.21</i>			
		Rate of switching the supplier				
No.	Consumer type	No. consum sites	Electricity supplied			
1.	households + small non-households (contracted power less or equal to 100 kVA)	0,004%	0,143%			
2.	large non-households (contracted power between 100kVA and 1000 kVA)	4,169%	5,677%			
3.	very large non-households (contracted power more or equal to 1000 kVA)	13,317%	12,720%			
4.	TOTAL retail market	0,013%	5,715%			

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

If in the electricity supplied includes the own consumption of the suppliers, switching rate values are changed as in *table 3.22*.

*Table 3.22* 

No.	Consumer type	Rate of switching the supplier			
110.		No. consum sites	Energy supplied		
1.	very large non-households (contracted power more or equal to 1000 kVA)	13,267%	10,545%		
2.	TOTAL retail market	0,013%	5,309%		

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

Compared with last year's results the switching rate value determined by the number of consumer places for non-households consumers has increased. The switching rate determined by volumes supplied has decreased, which indicates that the switching rate from one supplier to another increased for this category, but those who choose another supplier have significantly lower consumption.

In 2009, three suppliers have concluded supply contracts with retail customers located in all eight geographical areas of consumption, the average number of suppliers being 34 for each area.

In 2009, the electricity market in Romania has recorded an increased activity compared with the previous year regarding the switching activity from one supplier to another; the switching rate recorded for high non-households consumers indicates that they were the most active in this regard, but with electricity volumes much lower than last year.

### Prices and tariffs

*Tabel 3.23* presents the electricity average prices for 2005, 2006, 2007, 2008 and 2009 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 National Bank of Romania.

Consumer type		l	ei/MWh	1	Average prices Euro/MWh					
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Consumers on regulated market	286	316	340	354	370	79	90	102	96	87
Consumers on competitive market	144	168	188	224	242	40	48	56	61	57

Regarding the evolution of the regulated tariffs for consumers who choose not to change the supplier, in 2009, ANRE approved Orders no. 102/23.12.2009 and no.103/23.12.2009 which provisions are based on:

- the provisions of *Methodology for calculating regulated prices and tariffs*, approved by ANRE order no. 133/2008,
- the requests submitted by the default supplies,
- the economic analysis done by ANRE on the activity of the seven default suppliers and their justified costs.

For households ANRE approved an average increase in regulated electricity tariffs by 3.9%. Following the process of differentiation by region of the regulated charges for operators and increase tariffs for households, overall, there was an increase in electricity prices to end consumers of around 4.88% since January 1, 2010.

The selling prices for the consumer categories listed in *table 3.24* resulted from the synthesis of data for eligible consumers and those who choose not to change supplier.

In late 2009, ANRE approved a new Performance Standard for electricity supply (Order no. 1/2010).

The new performance standard regulates the commercial quality of service rendered by supplier to consumers, consisting essentially of: customer relationship intermediation with the distribution operator, billing activity, information of consumers, responses to complaints or petitions, etc..

*Table 3.24* 

Total

price

97.98

85.59

Taxes

16.38

14.04

Average industrial consumer with	18.03	0	44.60	12.34	74.85		
an annual consumption between							
20000 and 70000 MWh/year							
Large industrial consumer with an	13.52	0	43.73	11.30	68.55		
annual consumption between							
70000 and 150000 MWh/year							
Average annual rate of euro for 2009:	4.2376 RON	[					
For the guarantee performance indicators, the standard provides guaranteed levels of quality and compensation that suppliers must pay consumers for breaches of these values.							
Given that in order to develop a competive market, consumers needs to obtain information accurate, complete, relevant and comparable on the diversity of the energy suppliers' offers (contract terms, pricing / tariffs, general conditions of electricity supply), ANRE approved Order no. 86/12.11.2009 - an enhanced version of the Regulation for the information of the electricity and natural gas residential consumers.							

Taxes on

network

tariffs

0

0

Euro/MWh

Price of

electricity

acquisition

32.45

49.86

During 2009, ANRE has registered and resolved a number of 741 complaints from natural and legal beneficiaries of the services provided by operators in the electricity sector. Some of these complaints were directed to ANRE from the Romanian Presidency, Parliament and Govern, Association for Citizen Protection, ministers, National Authority for Consumers Protection, Competition Council.

Network

tariff

49.16

21.69

**Consumer type** 

2500 kWh/year

and 20000 MWh/vear

with

consumption between 1000 and

Commercial consumers with an annual consumption between 2000

an

annual

Households

The main topics in the complaints are found in *table 3.25*.

The request of information under the Freedom of information Act made via phone, free-toll email or post addresse mainly the following subjects of interest: line. qualification/certification of electricians/contractors - 51.8% renewable - 15.4%, network connections - 4.3%, technical regulations - 3.5%, prices and rates - 3.1%, issuing licenses -2.8%, contracting activity - 1.4%, metering- 0.7%.

		<i>Table 3.25</i>
Topics of requests	No. of complaints	%
Different reasons	173	24.80 %
Quality of supply, lack of supply	118	15.57 %
Billing	114	15.04 %
Connections to the network	78	10.29%
Technical permits/approvals	33	4.35%
Contracting procedure	30	3.96%
Metering	28	3.83%
Disconnections	29	3.83%

Prices and tariffs	28	3.69%
Stealing energy	24	3.17%
Property violations	18	2.37%
Distribution network tariffs	17	2.24%
Distribution/supply framework contract	12	1.58%
Facilities state	10	1.32%
Lack of compensation	10	1.32%
Switching supplier	9	1.19%
Renewable sources	5	0.66%
Taxes	4	0.53%
Complaints forwarded to other institutions	1	0.26%
TOTAL	741	100%

## 3.2.3. Measures to avoid the abuse of dominance

Monitoring the functioning of the electricity market is done according to *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 approved by* ANRE Order no.35/2006 and *Methodology for the monitoring of the retail electricity market* approved by ANRE Order NRE Order no.60/2008.

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;
- conducting periodic assessments contained in internal reports on the efficiency of wholesale and retail electricity and thus the effectiveness of the regulatory framework and the behavior of participants in those markets;
- analysing specific issues on the electricity market, highlighting the impact of regulations, the application of market rules and the rules of conduct of the market participants in order to provide feedback on any adjustments necessary of the regulatory framework

Some of the analyses conducted during 2009 were related with:

- accurate clasification of some contracts between producers as regulated mutual aid contracts category to cover technology risk in 2009;
- the influence of the DAM price over the electricity supply activity over the period January to July 2009;
- DAM price evolution in 2009;
- the efects of the exemption from the payment imbalances of the uncontrollable production on system-level costs and the analyze of dimension and responsibilities in the case of the registered imbalances..

In 2009, ANRE verified the application of legal regulations in force regarding cross-border exchanges of electricity by CN Transelectrica SA. The inspection had evaluated the compliance with Regulation EU no. 1228/2003 and Annex thereto, as amended by EC Decision no. 770 of November 9, 2006, the Commercial Code of the wholesale electricity market and TSO procedure regarding allocation of interconnection capacity with neighboring power systems.

# 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 2009, there were 1,234 eligible consumers on the natural gas free market, having a consumption of 77,604,552.506 MWh, meaning a 56.47% 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:

- 13,110 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;
- measuring stations placed on the transit pipelines;
- 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 30 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 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 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 nondiscriminatory 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 nondiscriminatory 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, **38 companies own distribution** licenses on natural gas in Romania.

No.	Distribution network	Distribution	Property
	operated by:	network length (km)	
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.	Contruct P&G	14	Private
8.	Cordun Gaz	33	Private
9.	Coviconstruct 2000	110	Private
10.	CPL Concordia Filiala Cluj	782	Private
	Romania		
11.	Design Proiect	15	Private
12.	Distrigaz Sud Rețele	14,682	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 Retele (GDR)	111	Private
21.	Hargita Gaz	225	Private
22.	Intergaz	1	Private
23.	MM DATA	29	Private
24.	Megaconstruct	57	Private
25.	Mehedinti 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	86	Private
52.	Distribution)		1 II vato
33.	Romgaz	17	State owned
<u>34</u> .	Salgaz	57	Private
<u>35.</u>	Timgaz	38	Private
<u>36.</u>	Tulcea Gaz	46	Private
<u>30.</u> 37.	Vega 93	67	Private
		51	
38.	Wirom	31	Private

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

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:

$$Tt = RCt + Vt$$

where:

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

Vt – 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 (RCt) covers fixed costs, related to the development of the transmission system capacity. The volume-related component for the use of the transmission system (Vt) 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:

$$VT^d = Td^*Q$$

where:

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

 $VT^{f} = Pf * O$ 

where.

VT<sup>f</sup> – 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 where accomplished.

The categories of consumers for which the regulator establishes differentiated distribution tariffs are the following:

### **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, ANRE Order No. 59/2007 and ANRE Order No. 45/2008).

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 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 provisions of the performance standards have imposed obligations for the licenses holders regarding the observance of the guaranteed performance indicators and general performance indicators. ANRE will adapt, if necessary, values of the indicators to the new market conditions through the monitoring of the results by implementing these regulations, through the evaluation of the guaranteed and general performance indicators and the paid compensations.

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	7.98	1.88	7.98	1.88	7.98	1.88	7.98	1.88
Distribution Tariff	18.77	4.43	22.53	5.32	24.35	5.75	24.35	5.75

### Balancing

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 Distributie 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. DEPOMUREŞ 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 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.

In 2009 no legal unbundling of the gas operators activity was registered. For new licensed operators for 2009 only accounting unbundling of the assets of the regulated activity was imposed.

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)

Annually, in Romania around 11 billion cubic meters of natural gas (119,919,449.505 MWh) are produced, out of which 5.7 billion cubic meters (60,809,945.489 MWh) are produced by S.N.T.G.N. Romgaz S.A., 5.3 billion cubic meters (56,214,274.431 MWh) are produced by S.C. Petrom S.A, the rest being produced by 5 small producers.

Natural gas production decreased 36 billion cubic meters produced in mid '80s to 11 billion cubic meters in 2009. This significant decrease of production was mainly caused by:

- the decrease of natural gas reserves;
- the depletion of gas fields, which can lead to annual decreases of gas production of 2-5%.

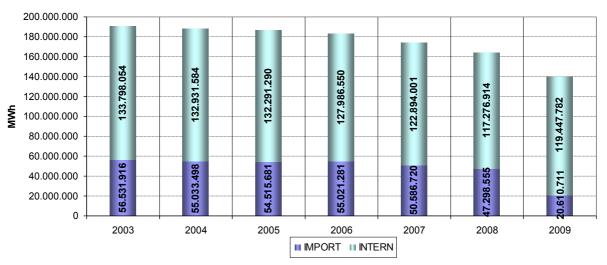
Thus, the decrease of natural gas production determines an increase of import dependency that can be problematic because Romania has, at present, just one import source.

Romanian gas market consists of a **competitive segment**, which comprises the trade of natural gas between suppliers and between suppliers and eligible customers, and a **regulated segment**, which comprises the natural monopolistic activities undertaken on the basis of framework contracts, as well as the regulated supply.

Romanian gas market was completely liberalized from July 1<sup>st</sup>, 2007, so that all natural gas customers have now the opportunity to choose their supplier.

The natural gas consumption decreased with 15% in 2009 as compared with 2008, as a result of the economic crisis that induced a significant decline of gas demand. In figures:

- the total consumption of natural gas was 140,058,492.990 MWh, out of which 111,835,111.171 MWh was represented by non-household consumption (79.84%);
- the total number of gas customers was 2,941,734, out of which 173,993 are non-household customers;
- the domestic gas production that entered into consumption amounted to 119,447,781.889 MWh, while the import amounted to 20,610,711.101 MWh.



#### Figure 4.1

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

Two companies account for shares of more than 5% from the gas available on the market.

All foreign companies acting on the Romanian natural gas market are registered in Romania's Trade Register.

21,251,650 MWh of gas are supplied to the Romanian market through long-term contracts (for more than 1 year).

The peak of gas consumption is 70 million c.m./day and the daily production amounts to 30,900 million c.m.

The share of top 3 suppliers, calculated on the basis of the volumes traded on the wholesale market, is 89.10% and on the retail market it is 54.79%. There are 24 independent suppliers, unbundled, on the property basis, from other activities in the field.

On the **competitive market**, the producers traded gas from domestic production and storage through bilateral contracts negotiated with other suppliers, accounting for about 67% of the total amount of gas supplied in 2009.

The internal production of natural gas in 2009 is presented	l in <i>table 4.1</i> :
	Table 11

	Amromco	Amromco	Petrom	Romgaz	Winthersal	Toreador	Aurelian	Total	
	Ploiesti	Energy		U U	l Holding		Oil&Gas		
		New York			0				
Total MWh	1,604,127.404	609,516.671	56,214,274.431	60,809,945.489	68,792.214	157,526.512	455,266.784	119,919,449.505	

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

		Table 4.2
Suppliers Customers	Number of companies with a share of above 5%	Shares of top 3 companies (%)
Gas fired power plants	5	93.57
Large industrial customers	3	87.59
Commercial customers	3	85.19
Household customers	2	93.33

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 National Gas Dispatching Centre located in Bucharest as part of SNTGN Transgaz SA Mediaş. In this respect, 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 domestic/imported gas purchases/consumption;

 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 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] and

2 - a volume-related component for injection/withdrawal of gas [Lei/MWh].

The average underground storage tariff in 2009 was 10.69 lei/MWh.

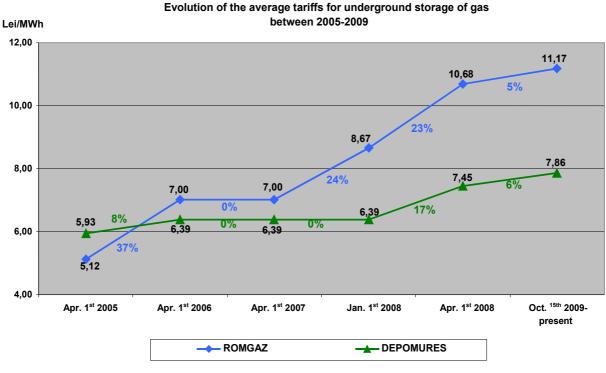


Figure 4.2

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

With a view at guaranteeing the security of supply during the cold season, licensed suppliers have the obligation to maintain in underground storages a minimum stock of natural gas until the end of the annually injection activity.

The licensed storage operators have the obligation to guarantee the non-discriminatory access to underground storages of the gas suppliers, with priority to those with public service obligations.

Gas storage is regulated on the basis of **The 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 made by the storage operators based on the contracts signed by them with gas storage beneficiaries.

For each year of storage, the deadline for the beginning of the programming of gas injection/withdrawal 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 programmes for each underground storage facility and for each storage cycle, month, day and hour, the storage operators take into consideration the following elements:

- 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 withdrawal;
- 3. optimum technological regimes for the NGT, for both injection and withdrawal.

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

- Initial list of available capacities for gas storage for the annual injection cycle
- Register of the applications for access to the gas underground storages
- 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 available capacities for reallocation
- Weekly report concerning the capacity of gas underground storages.

### **4.2.2. Description of the retail market**

In 2009, the gas consumption in Romania, structured on customers' categories was:

Customer category	Group of customers	Share in total consumption
TOTAL, out of which:		100 %
NON-HOUSEHOLDS	Customers who did not choose to change their supplier	21.31 %
	Eligible customers	56.46 %
HOUSEHOLDS	Customers who did not choose to change their supplier	22.40 %
	Eligible customers	0.01 %

The main suppliers and their shares in total sources of gas are presented below:

No.	Supplier	Share in total sources (%)
1.	Romgaz	47.61
2.	Petrom	39.51
3.	E.ON Gaz România	3.71
4.	GDF Suez Energy Romania	3.43
5.	Wiee Romania	2.59
6.	Amromco Ploiesti	1.15
7.	Amromco New York	0.44
8.	Electrocentrale	0.42
9.	Aurelian Oil&Gas	0.33
10.	Conef Gaz	0.31
11.	EGL Gas&Power	0.17
12.	Termoelectrica	0.15
13.	Toreador	0.11
14.	Wintershall Medias	0.05
15.	Alpha Metal	0.03

7 companies perform the activities of production and supply: Romgaz, Petrom, Amromco Ploiesti, Amromco New York, Aurelian Oil&Gas, Lotus Petrol (former Toreador), Wintershall Mediaş.

The total consumption in 2009 of the main final consumers were:

	MWh
Categories of consumers	125,916,875.873
Household	28,223,381.819
Other non-household	5,889,235.705
Commercial	8,290,796.460
Power and/or thermal generation	33,502,225.930
Other industrial	22,610,924.927
Chemical industry	27,400,311.032

On the **regulated market**, in 2009, the consumers on the regulated supply market segment were served by 38 suppliers, the total number of these consumers was 2,940,500, and the quantity of gas supplied to them amounted to 49,117.9 GWh.

The market shares of the three main suppliers are listed below:

No.	Supplier	Market share (%)
1	GDF SUEZ Energy Romania	49.173
2	E.On Gas Romania	42.729
3	Congaz	1.631

On the **competitive market** 31 suppliers have activated. In the table below are presented the suppliers which supply eligible consumers, whose market shares are more than 5%; two of them are also gas producers (S.C. Petrom S.A. and SNTGN Romgaz S.A.). The total consumption was 77,604.6 GWh.

Supplier	Market share (%)
Romgaz	27.472
Interagro	16.107
OMV Petrom	11.207
GDF SUEZ Energy Romania	10.840
Petrom Gas	10.811
EON Gaz Romania	5.782

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

Customer Tariff	I4 – yearly consumption 418.6 TJ		consumption consumption		D3 – y consum 8.3	ption	Typical household		
	Lei/ MWh	EUR/ MWh	Lei/ MWh			EUR/ MWh	Lei/ EUR/ MWh MWh		
Regulated price (VAT not included)	80.94 19.10 98.45 23.23		101.36 23.92		101.36	23.92			
Transmission Tariff	7.98	7.98 1.88 7.		1.88	7.98	1.88	7.98	1.88	
Distribution Tariff	18.77	4.43	22.53	5.32	24.35	5.75	24.35	5.75	
Regulated price (including VAT 19%)	96.32	22.73	117.16	27.65	120.61	28.46	120.61	28.46	

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.

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 customer. Also, the supplier shall inform the regulatory authority about the refusal, as well as about the justification it submitted to the consumer.

In 2009, ANRE received from natural and legal persons **605 complaints** regarding the natural gas sector. Some of these complaints 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 issues raised by the complaints are presented below in *table 4.3* 

		Table 4.3
Type of complaint	No. of complaints	%
Invoices	82	13.55%
Complaints related to the services provided by the authorized companies	76	12.56%
Contracts (supply, co-financing, etc.)	56	9.26%
Connection to the distribution systems, to transmission system (connection contract, connection tariff, etc.)	40	6.61%
By-pass meters	38	6.28%
Requests for information	32	5.29%
Gas supply interruptions	31	5.12%
Gas meters	30	4.96%
Others	26	4.30%
Gas prices and tariffs	23	3.80%
Non-compliance with the legal provisions in the natural gas sector (technical norms, regulations, Gas Law, etc.)	23	3.80%
Consumption invoices in energy units	20	3.31%
Complaints related to the services provided by the gas distribution companies	17	2.81%
Complaints related to the quotas of gas distribution pipelines	15	2.48%
Technical checks and revision works	15	2.48%
Natural gas quality	12	1.98%
Extensions from the extended pipelines (gas distribution)	12	1.98%
Complaints related to the quotas of installations for gas use	11	1.82%
Gas detectors	9	1.49%
Technical solutions for gas supply	8	1.32%
Gas convectors	8	1.32%
Affected ownership rights	7	1.16%

For information	6	0.99%
Technical and legal proposals	3	0.50%
Heating equipment, exhausting kits for burned gas	3	0.50%
Refusal of access to the distribution system	1	0.17%
Gas consumption categories	1	0.17%
Total	605	100%

The requests for public information aimed at the following topics: authorization/certification -50%, technical norms -9.7%, contracts and tariffs -3.8%, grid connection and metering -2.2%, invoices -1.5%, licenses -0.7%.

### 4.2.3. Measures to avoid the abuse of dominant positions

The abuse of dominant position is defined by art. 6 of 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 Council regarding the abuse of dominant position on the gas 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 prevention of the abuse of dominant position, ANRE concerns about it by the regulations it issues. Thus, ANRGN decision no. 62/2004 approves the "Norms regarding the prevention of the abuse of dominant position".

The market monitoring activity is undertaken in compliance with the provisions of the *"Monitoring methodology for the internal gas market"*, approved by the ANRE Order no. 62/2007, with subsequent amendments inserted by ANRE Order no.114/2008.

According to the provisions of the above-mentioned monitoring methodology for the internal gas market, the licensed gas companies have the obligation to submit to ANRE monthly activity reports.

Thus, based on the data introduced by the licensed companies into the on-line collection module, the monitoring activity consisted in the following:

- Evaluation of the functioning of the internal gas market, of the compliance with the regulated prices and tariffs;
- Periodical (monthly and yearly) assessments included in the internal reports on the efficiency of gas market functioning and on the behaviour of market participants;
- Checking of the gas volumes reported in the ANRE database; this process is useful for the licensed companies because it allows them to check the regulated revenues they earned during 2009;

- Identification of the deviations from proper functioning of the gas market and of those cases of non-compliance with the ANRE rules and regulations regarding the market organization and functioning;
- Preparation of annual reports on the gas volumes realized by each licensed company (supply/distribution/underground storage/transmission/transit/dispatch);
- Preparation of yearly statistical reports concerning the gas market;
- Publishing on the ANRE website the monthly reports concerning the gas market functioning. These reports contain information on the gas market functioning rules and contain aggregated data that allow for assessments of the competition level and for specialized analyses;
- Monitoring the acquisition contracts of licensed gas suppliers.

## 5. Security of supply

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

The responsibility of ensuring the demand-offer balance on medium and long run stays with the Ministry of Economy, Trade and Business Environment (MECMA), which is the issuing body of the national energy strategy (approved through G.D. no. 1069/2007). This document provides information on the strategic investments in electricity generation, transmission and distribution and on the energy efficiency and demand-side-management actions with a view to ensuring the security of electricity supply.

According to the Electricity Law no. 13/2007, with subsequent amendments, the TSO issues the Transmission Network Development Plan on medium and long – run (10 years). This Plan is endorsed by the regulator and approved by the competent ministry. The presently in force *Transmission Network Development Plan for 2008-2012 and development guidelines for 2017* was endorsed by ANRE with no. 13/21.08.2009 and approved by MECMA through its letter no. XV/133473/05.10.2009. On short run, the TSO is also responsible for the transmission networks operational planning and running, aiming to meet the criteria and standards set in the Transmission Grid Code, which was issued by the TSO and approved by the regulator (ANRE Order no. 20/2004, with the subsequent amendments and complements).

The Romanian Energy Regulatory Authority (ANRE) provides the necessary regulatory framework to promote investments in the electricity sector by granting licenses and authorisations, by issuing and approving the prices and tariffs methodologies, by issuing commercial and technical regulations as well as rules for network connection and access.

In 2009, the electricity production amounted to 57.7 TWh decreasing with approximately 11% as compared to 2008. Domestic consumption amounted to 55.2 TWh, with 8.5% lower than in 2008, and had an uneven evolution throughout the year.

In 2009, the peak load occurred on December 17<sup>th</sup> at 18.00 CET hours, when it reached a net value of 9,048 MWh.

As compared to 2008, the electricity generated from liquid fuel increased with 47% and the nuclear electricity increased with 5%, while the electricity generated from hydro resources decreased with 8%, as well as electricity from solid fuel (decrease of 17%) and natural gas (decrease of 27%).

The maximum net generation capacity reached 16 GW in 2009.

According to the ENTSO-E study "System Adequacy Retrospect 2009", hydro generation units of a total capacity of about 50 MW were put into operation in 2009, while a coal unit of 75 MW capacity was decommissioned.

Based on the ENTSO-E study "System Adequacy Forecast 2010-2025", the forecast of the net generation capacities and of the electricity consumption in Romania is presented in *table 5.1*.

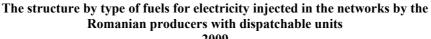
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n capaci	ity (GV	V)												
16.8	16.8	16.9	20.7	20.7	20.9	20.8	20.8	20.9	23.3	23.3	23.3	24.2	24.2	24.4
16.8	16.8	16.9	20.7	20.7	20.7	20.8	20.8	20.9	23.9	23.9	23.9	25	25	25.2
(GW)														
7.15	7.7	6.4	7.49	8.03	7.36	7.68	8.26	7.5	9.13	9.8	8.3	10.32	11.12	9.34
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Table 5.1

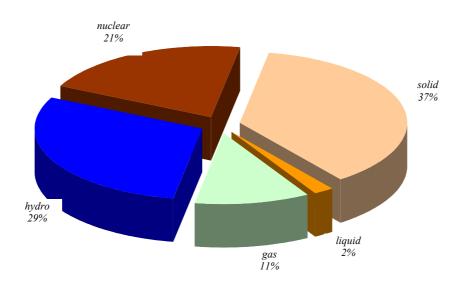
Two additional nuclear power units (650 MWe) will be commissioned by 2020.

Wind power plants are estimated to account, in the future, for an installed power of 4,000 MW in 2020, 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*.



- 2009 -





Establishment of new generation capacities and the retrofitting of the existing ones 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 power 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 considered 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, 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.

Tabel 5.2

No.	Authorised energy capacities	No. of authorisations granted	Installed power of authorised capacities
1.1	Wind capacities – new installations	11	356 MWe
1.2	Hydropower capacities – new installations	10	97 MWe
1.3	New biomass power and thermal energy capacities (cogeneration units)	6	24.124 MWe
1.4	New hydrocarbons power and thermal energy capacities (cogeneration units)	4	873.041 MWe
2.	Electricity transmission capacities	4	1,660 MVA (refurbishment of exiting capacities) 250 MVA (new capacities)
3.	Electricity distribution capacities	12	247 MVA (refurbishment of exiting capacities) 196 MVA (new capacities)
		Total 47	

### Establishment authorisations granted in 2009

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 and became operational in November 2005.

In 2009, in the area of promoting the energy produced from renewable energy sources (E-RES), the regulatory activities were mainly focused on:

- Drawing up the regulatory framework related to the Law no. 220/2008 concerning the establishment of the system of promoting the energy produced from renewable energy sources;
- Drawing up a proposal for amending the Law no. 220/2008;
- Writing up the necessary documentation for pre-notifying the European Commission on the E-RES promotion scheme based on the green certificates mentioned in the Law no. 220/2008; providing further clarifications on some issues noticed by the European Commission;
- Monitoring the functionality of the existing legal and regulatory framework related to the promotion of E-RES as well as the behaviour of the licensed companies in order to identify the possible dis-functionalities and to improve the existing regulatory framework.

Law no. 220/2008 brings up several amendments referring to the existing system of promoting the E-RES, mainly related to:

- The timeframe of the enforcement of the promotion scheme;
- The number of green certificates given for 1 MWh of E-RES, based on the technology and RES used, etc.;
- The trading of E-RES;
- The allocation mechanism for the money collected from the suppliers who will not fulfil their annual compulsory quota for green certificates acquisition.

The interest for investment in wind power plants has increased during 2009. By April 2010, ANRE already granted establishment authorisations for 1,045 MW and operating licenses for 17.7 MW, as compared to 2008 when the establishment authorisations were granted for only 591 MW and operating licenses for 11 MW. The trend will remain the same in 2010. On June 2010 the signed contracts for connection to the grid covered an installed capacity of 3,376 MW in wind power plants.

It is intended to introduce a "bonus-type" support mechanism for co-generation capacities starting with 2010. The mechanism was notified to the European Commission in compliance with the European regulations on state aid.

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 stipulates the principles, the criteria and the obligations regarding the planning activity.

The planning of transmission grid development 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 a quality that is in compliance with the requirements of the Grid Code and of the Performance Standard for transmission and ancillary services;
- Ensure the development planning activities by: initiating the procedures required for the promotion of new and efficient investments in the transmission networks, estimating the marginal costs on long run for each node of the transmission network, providing the database for the design of the transmission tariff systems.

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:

- System adequacy provided that the activity is safely and efficiently performed, in compliance with 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 NPS.
- 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 sizing 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 equipment.

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.

ANRE endorsed the **Transmission Network Development Plan for 2008-2012 and development guidelines for 2017** (ANRE endorsement letter no. 13/21.08.2009). The endorsement of the Plan has been adopted with several conditionalities, mainly referring to the obligation of CN Transelectrica SA to provide further information in the Plan concerning: a) the inventory of NPS zones where the transmission system is not adequate (congestions, non-compliance with the N-1 criterion, exceeding the critical interval for removing the interruptions or defaults, exceeding the power limits of the switches, need for teletransmission in order to avoid the non-synchronization of the generators); b) analysis of the adequacy of energy generation in accordance with the ENTSO-E requirements, for each year of the analysed period; c) analysis of the needed ancillary system services, by reserves categories, during the analysed period, the available system services, solutions for providing these services, including the setting up of conditions/obligations to the new generators connected to the grid, presenting the investments in their priority order and presenting the reasons and justification for each investment.

Also, CN Transelectrica S.A. will start up the necessary studies for the investments that will facilitate the access for the energy generated from renewable sources.

The main investments in the transmission infrastructure envisaged for the period 2009-2020 are presented in *table 5.3*; the deadlines for commissioning may nevertheless change.

Table 5.3

Overhead Lines or Power Sub-Stations	Voltage level (kV)	Commissionin g year	Length (km)
LEA Arad – Nadab (RO) – Bekescsaba (HU)	400	2009	85
LEA Resita – Timisoara (double circuit currently operating at 220kV)	400	2015	73
LEA Medgidia (RO) – Varna (BG)	400	2013	54
LEA Medgidia (RO) – Dobrudja (BG)	400	2014	72,5
LEA Timisoara – Arad (double circuit currently operating at 220kV)	400	2015	54

LEA Resita (RO) – Pancevo (Serbia)	400	2014	~100
LEA Suceava (RO) – Bălți (MD)	400	2020	150 (93 in
			Romania)
LEA Suceava – Viișoara (Bistrita) - Gadalin	400	2018	260
LEA Cernavoda – Stalpu	400	2016	156
Stația Tarnita (pumping storage hydropower plant)	400	2016	-
LEA Tarnita – Mintia, double circuit	400	2016	145
LEA Tarnita – Gadalin	400	2017	40

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 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.

### 5.2. Natural gas

In 2009, total natural gas consumption was about 140,058,492.990 MWh, of which 28,223,381.819 MWh was household consumption (20.15%). 119,447,781.889 MWh was domestic production who entered into consumption in 2009, and 20,610,711.101 MWh was import.

In 2009, total natural gas consumers was 2,941,734, of which 2,767,741 households.

The forecast regarding developments in production and consumption of natural gas for 2010-2019 can be found in the ten-year development plan for gas networks developed by the European Network of TSO's for Gas -ENTSO-G and published on the website <u>www.entsog.eu</u>.

Regarding the security of natural gas supply, in 2007 passed the Law no. 346/2007 on measures to ensure safety in natural gas supply, which transposes into national law the provisions of the 2004/67/EC Directive. The purpose of the law is to ensure an adequate level of safety in natural gas supply through transparent measures, non discriminatory and consistent with the existence of a competitive market for natural gas.

In this respect, the law sets out the role and the responsibilities of the authorities and operators from the domestic natural gas market and the special measures which are required to ensure an adequate level of safety in natural gas supply. A Coordination Commission was established with the aim to develop annually an action plan for emergencies cases and to approve and monitor the necessary measures to ensure safety in natural gas supply.

In Romania there are eight underground storage facilities, which their total capacity in 2009 was 3.135 billion cubic meters. Their present situation is as follows:

No.	Underground storage facilities	Capacity (billion cubic meters)
1.	Bălăceanca	50
2.	Bîlciurești	1.310
3.	Cetatea de baltă	200

4.	Ghercești	150
5.	Sărmășel	800
6.	Târgu Mureș	300
7.	Urziceni	250
8.	Nadeş	75

The stock level of natural gas in the underground storage facilities during april 2009-april 2010 is shown in the *figure 5.2*:

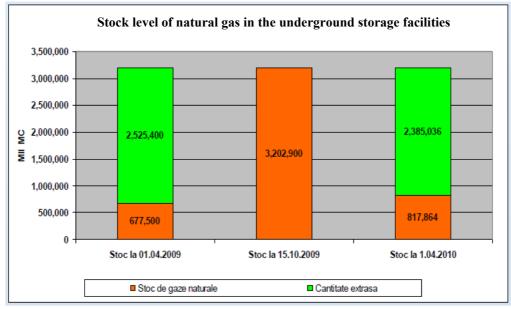


Figure 5.2

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)
- Nabucco project.

For the projects regarding the interconnection Romania - Hungary, Bulgaria-Romania and Nabucco through *European Energy Recovery Programme*, the European Union provides funding worth 16.7, 8.9 and 200 million euros.



Figure 5.3 - Interconnections

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 cm/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.

Public service obligations are properly applied for the mandatory last resort supply.

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

For supply license holders whose activity is regulated and have obligations of last resort supply, the minimum stock of natural gas will be 25% of the amount of natural gas supplied in regulated regime in 2008 for the final consumers. For supply license holders who supply natural gas on the competitive market, the minimum stock of natural gas will be at a level of 12.5% of the natural gas supplied in 2008, on the competitive market, to final consumers. (Anre Order no. 3 / 2009).

The suppliers compelled to have minimum stocks shall send the data needed by the Market Operator. Also, in order to ensure the security of the gas transmission system functioning, SNTGN "Transgaz" S.A. Mediaş will undertake the necessary measures so that, during the cold season, to have free and operative access to a minimum volume of gas meant to ensure the physical balance of NTS.

Because the Nabucco project is crucial for Europe's energy security and the policy of diversifying the natural gas supply sources and transportation routes, the intergovernmental agreement signed by Turkey and four other EU member states - Bulgaria, Romania, Hungary and Austria - on July 13, 2009, is a success of european foreign policy.

The agreement is the result of six months of intense negotiations at the end of many years of intense technical work. The European commission has ensured the regimes compatibility between Turkey and EU. For the Nabucco pipeline is applied the one stop shop principle which simplifies the natural gas transport in different jurisdictions who are crossed by the pipeline, and any company who wants to use the pipeline, has to treat only with a single interlocutor - the Nabucco International Company.

The intergovernmental agreement ensures a coherent legislative project and, also his compatibility with the current legal conditions of EU natural gas market. In the negotiation and technical analysis process, the ANRE representatives participated with representatives of regulators from Bulgaria, Hungary, Austria and Turkey to clarify the issues regarding price methodologies applied and the process of capacity bidding.

With the occasion of signing the agreement, was also signed and the Joint Declaration of States Parties to the Agreement containing the political commitment to take the necessary measures for the entry into force of the agreement and making the necessary efforts for concluding the Project Support Agreement.

The importance of the Nabucco project was once again highlighted by the crisis that occurred in early January 2009 in the natural gas supply. The Coordination Committee assigned to ensure the security of natural gas supply (which includes regulatory authority representatives) has met several times to analyze natural gas supply situation in the context created by the interruption of natural gas imports from the Russian Federation. Following the information provided by the representatives of natural gas companies, the Commission adopted several emergency measures, so that the pressures from the national natural gas transport network to record normal values and the national consumption of natural gas to be fully covered. Above-mentioned Commission was founded under Law no. 346/2007 regarding the measures to ensure safety in natural gas supply activity, law which transposes the EU Council Directive 2004/67/EC of 26 april 2004 concerning measures to safeguard the security of natural gas supply activity, published in the Official Journal of the European Union no . 1 127 of 29 april 2004.

The Ministry of Economy, Trade and Bussiness Environment is responsible for setting priorities regarding the investments from natural gas sector.

ANRE ensure the regulatory framework needed to promote investments by issuing authorizations and licenses, issuance and approval of price and tariffs methodologies, the issuance of commercial and technical regulations, develop rules on network access and connection of users.

Thereby, in natural gas sector, the regulatory authority endorse, for each regulatory period, the investments programs of licensed operators in order to recognize their costs, and include them in the prices and tariffs approved.

# 6. Aspects regarding the public service

# 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 regulated prices and tariffs*, approved by ANRE Order 133/2008. 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 and revised by ANRE Order no. 69/2009, 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  $CO_2$  emissions and the radioactive waste associated to the delivered electricity
- the comparison between the aforementioned data and the national average values.

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 form the application of any other tariff to household customers with low voltage supply. 1.266 million

consumers out of a total of 8.25 household consumers are benefiting from the social tariff. The amount of electricity consumed at this tariff represented 7.94% 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 that 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 dayahead 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, au 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.

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.

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.

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, acoording 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:

where:

$$VT^d = Td^*Q$$

 $VT^{d}$  – total value of the bill, VAT not included, representing the value of the distribution service, expressed in lei ;

Td – 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:

$$VT^{f} = Pf_{*}Q$$

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);

Pf – 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.

In 2009, 92% (in terms of the amount of energy consumed) of the customers connected to the national transmission system have chosen to sign a negotiated contract. This percentage rose in the first 6 months of 2010 to around 95.8%, hence highlighting that ANRE regulations and communication strategy on the free market conditions delivered positive results.

In 2009, the share of non-household customers from the final customers connected to the distribution system that chose to sign a negotiated contract amounted to around 45% (in terms of the amount of energy consumed) of the total non-household customers.

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. 77/2009 approving the framework-contracts for gas regulated supply,
- ANRGN Decision no. 183/2005 approving the framework-contract for gas distribution, republished, and ANRGN Decision no. 309/2005 approving the general conditions for contracting gas distribution services, republished,
- Gas transmission framework-contract approved in annex no. 1 of ANRE Order no. 54/2007 approving the network code for the gas national transmission system,
- ANRGN Decision no. 480/2004 approving the gas storage framework-contract, with subsequent amendments,
- ANRE order no. 74/2009 approving the regulation establishing certain legal relations between gas suppliers and customers.

The above-mentioned regulations include mainly provisions regarding: regulated final price, length of the contract, rights and liabilities, contractual responsibility.