ROMANIAN ENERGY REGULATORY AUTHORITY

NATIONAL REPORT 2010

August 31, 2011

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1 Foreward

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 1st 2009 – December 31. 2010**.

In 2010 the Romanian Energy Regulatory Authority (ANRE) continued to promote efficiency, competition and customer protection in the Romanian energy sector, at national, regional and European level.

In order to create a modern energy sector, in compliance with the principles of the European Union stating the liberalization of the electricity and natural gas markets and capable to meet customers demand in 2010, the regulation activity was principally based on increasing transparency on the electricity and gas markets promoting the electricity produced from renewable sources, and promoting the electricity produced in new cogeneration capacities.

The priorities of the regulatory activity were: electricity and natural gas market monitoring, providing services with affordable prices and providing information to the customers.

Having regard to the development and functioning of the internal market ANRE maintained its collaboration with both national authorities and European organizations.

Recovery of the renewable energy sources represents a major objective within the European Union energy policy aiming at reducing the carbon dioxide emissions and obtaining energetic independency of the member states from the external sources of energy. Thus, in 2010, regulatory activities concerning the promotion of electricity produced from renewable sources (E –RES), was focused mainly on establishing the regulatory framework pursuant to Law no. 220/2008 regarding the system for promoting energy produced from renewable sources and participation in the legislative process for the modification of Law no. 220/2008 from which resulted the adoption of Law no. 139/2010 as well as drafting the pre-notification documents to the European Commission for the support scheme for promoting E-RES by green certificates stipulated in Law no. 220/2008 and clarifying certain aspects reported by the European Commission.

The promotion of high efficiency cogeneration following the transposition at national level of Directive 2004/8/EC of the European Parliament and of the Council of the European Union was another important regulatory activity in 2010. By the *Bonus-type support scheme for the promotion of electricity produced in high efficiency cogeneration* and by establishing and approving the reference bonuses for electricity, the reference prices for electricity and the reference prices of heat produced and delivered from high efficiency cogeneration plants, ANRE created the conditions necessary for stimulating efficient generation of electricity and heat and attracting new investment for refurbishing and upgrading the existing plants.

In order to continue the harmonization and implementation process of the secondary legislation necessary for the development of the internal market of energy, ANRE aims to apply best practices in the field, adapted to national specificities in a consultative process mandatory in the decision-making transparency.

In compliance with measures provided in the third energy package of the European Union, Romania must create the framework necessary to ensure sustainability, competitiveness and energy security of the country.

In this context, priority objectives for 2011 in terms of the activity of the National Energy Regulatory Authority, focus on the harmonization of secondary legislation with the primary legislation, further improving the regulatory framework in the electricity and natural gas sector aiming at increasing energy efficiency, promotion of energy produced from renewable sources and high efficiency cogeneration, improved system of granting authorizations, permits and/or licenses to legal and natural persons developing activities in electricity, natural gas and energy efficiency fields.

PRESIDENT

Iulius Dan PLAVETI

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 reporting period

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. Important investments have been made in new E-RES generation capacities. At the end of 2010 the installed capacity in E-RES generation capacities qualified for priority production was 520.5 MW and included wind, hydropower (under 10 MW installed power), biomass and photovoltaic.

In 2010 electricity production increased with 4.3% compared with 2009 and the electricity delivered to the networks by major producers increased with 4.8%, reaching approx. 54.94TWh.

As compared to 2009, in 2010 the energy delivered from liquid fuel decreased with 47%, the energy from gaseous fuel decreased with 5% and from solid fuel with 4%. Due to an extremely good hydrological year as compared with the last three, hydropower (whose contribution augmented by 28% as compared to the previous year) was the primary source that ensured the increase of the total energy delivered. Electricity produced in RES generation units amounted to 20.264 TWh leading to an E-RES weight in the total gross electricity consumption of 35.24%, with 2.24% more than the 33% target assumed by Romania for the year 2010.

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 2010 on the main components of the wholesale market compared with 2009.

Table no. 2.1

Wholesale market components	Trade volumes in 2010 - GWh -	Evolution compared with 2009 - % -
Negotiated bilateral contracts market	50223	▲ 45.0
Regulated bilateral contracts market	28942	▼ 4.6
Export	3854	▲ 22.2
Centralized market contracts	4386	▼ 30.7
Day-ahead market	8696	▲ 37.0
Balancing market	2965	▼ 7.5

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. The electricity volume traded on Day-Ahead Market in 2010 increased with 37% from 2009 and with 67% from 2008. The volumes traded through regulated bilateral contracts decreased with 4.6% from 2009. The transactions on the competitive market increased in 2010 compared with 2009

with 33% mainly due to the increased volumes through negotiated contracts, export and transactions on Day-Ahead Market.

Comparative analysis of the average prices resulting from transactions concluded on wholesale market components in 2010 show increasing convergence between the prices of bilaterally negotiated contracts and the prices of the centralised markets – bilateral and Day-Ahead Market.

The average closing price on DAM, although approx. 6% higher than the average for the year 2009 was one of the lowest annual average prices in Europe, placing it at a distance of 22% below the European average which was around 47 euro/MWh.

Based on a 2010 prepared plan, it is estimated that a new market - the **Intra-day market -** will gradually develop starting with 2011. The introduction of this new trading mechanism will allow market participants to balance their portfolio closer to the time of the delivery which will lead to the reduction of imbalances.

HHI indicator value calculated according to **net maximum generation capacity** was 1982 in 2010. 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 67.34% (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 65.27%.

The value of the production HHI index for 2010 determined according to the annual electricity delivered into the networks was 1947, over the value of 1800 which is the threshold that separates the markets with moderate market power concentration from the ones with excessive concentration. The increase was mainly due to the increase by approx. 28% of SC Hidroelectrica SA electricity production.

HHI indicator concentration on the Day-Ahead Market had values, which, generally, indicate a lack of concentration on purchase side (monthly values between 474-927), with one exception on November 2010 when the HHI's value was 1177; on the sale side a higher concentrated market is noticed as compared to 2009 with monthly values ranging between 919 – 1385, reaching a peak in August 2010 when it exceeded the 1800 threshold and passed into higher concentration.

The concentration indexes value for 2010 on the balancing market indicates the existence of a dominant participant and an excessive market concentration of the balancing market for the upward secondary regulation, fast tertiary regulation and slow tertiary regulation, showing an increase of the concentration for almost all the components. Taking into consideration the high level of concentration recorded constantly on the balancing market, ANRE maintained in 2010 the upper limit of the bidding price on this market at 400 RON/MWh

A total of **0.943 TWh** of electricity has been imported and **3.854 TWh** has been exported (the values are based on the data reported by the market participants); the physical flows were **1.784 TWh** on import and **4.703 TWh** on export.

Regarding the **export congestions**, the most congested borders were those with Serbia and Hungary (99-100%). For the borders with Bulgaria and Ukraine the values were 92% and 87%.

Regarding the **import congestions**, the most congested borders were those with Serbia and Bulgaria (99-100%) and the least congested was the border with Ukraine (36%). The highest value of the annual congestion-occurrence frequency (100%) was reached on the export line with Hungary and on the import line from Bulgaria.

The transparency of transactions on the interconnections is ensured de CN Transelectrica SA by publishing the information on the websites www.transelectrica.ro and www.ope.ro. Starting with March 2011, CN Transelectrica SA operates a new platform for transactions of interconnections – DAMAS - and the information regarding auctions and their results can be found here.

Natural Gas

Natural gas is traded by the suppliers based on negotiated bilateral contract, as the Romanian wholesale market for natural gas is a competition market.

In 2010, the natural gas consumption was 146,762,322.350 MWh, of which 117,053,537.455 MWh was non-household consumption (79.75%) and 29,708,784.895 MWh was household consumption (20.25%).

The total number of natural gas consumers was 3,031,993, of which 176,334 non-household customers (5.82%) and 2,855,659 households (94.18%).

Consumption is covered from both domestic production and imports. Natural gas internal production which has entered into consumption was 117,897,720.551 MWh, and imports of 24,145,776.911 MWh.

The number of market participants has constantly increased so that at the end of 2010 there were:

- a National Transmission System operator - SNTGN Transgaz SA Medias
- 8 producers: Romgaz, OMV Petrom, Amromco Ploiesti, Amromco New York, Aurelian Oil & Gas, Lotus Petrol, Foraje Sonde
- 2 operators of the underground storage facilities: Romgaz, Depomureş,
- 39 distribution and supply gas companies for captive consumers - the largest being GDF Suez Energy România and E.ON Gaz România,
- 37 suppliers on the competitive sector of the natural gas market.

Domestic production of natural gas in 2010, which came into use, was 82.84% of all sources. The first two producers (Romgaz and OMV Petrom) covered 97.40% of this source.

Imports, which came into use in 2010, current import and extracted from storage, was the difference, 17.16% respectively. The top four importers - domestic suppliers - with a market share of imports over 17% each, made together 87.46%.

TSO grants the available capacity from Natural Gas Transmission System - 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;
c) Mandatory transfer from one network user to another by the TSO.

In order to ensure the transmission of 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).

The official inauguration of the Szeged-Arad pipeline interconnection was held in Csanadpalata, Hungary, on 14.10.2010, in the presence of European Commissioner Gunther Oettinger. The pipeline has a design capacity of 4.4 bcm / year and an operational capacity of 1.7 bcm / year. The pipeline is a strategic interconnection to diversify natural gas sources and to ensure continuity of natural gas supply. The co-financing of the project was provided by the European Union Energy Economic Recovery Programme (EERP).

During 2010, several orders and decisions of the ANRE's President on specific regulations regarding the organization, operation and development of natural gas market have been issued, such as:

- **Establishment of natural gas stock** which natural gas supply license holders are required to hold in the underground storage at the close of injection activity in 2010 to ensure continuity and security of supply – ANRE Order 2/21.01.2010. For license holders providing natural gas regulated supply service, the natural gas stock was at least 25% of natural gas estimated to be supplied under regulated regime in 2010 to end users while for the natural gas supply on the competitive segment a rate of 12.5% of the amount estimated to be delivered in 2010 on the competitive market to end users was considered. The natural gas stock is cumulative if a supplier provides natural gas on both the regulated and the competitive segments;

- Approval of the **Procedure to assessing the conditions required for the conclusion of contracts for interruptible transmission services** through the national natural gas transmission system issued by SNTGN Transgaz SA, in accordance with art. 5. (4^2) of the MEC/ANRGN/ANRM Order No. 102136/530/97 2006, as subsequently amended and complemented by ANRE Decision No. 1137/04.05.2010;

- Amending and complementing ANRE Order 54/2007 for the approval of the National Natural Gas Transmission System Network Code, as subsequently amended and complemented through **ANRE Order 30/11.11.2010, in order to establish the conditions for the capacity reserve and for the use of the national transmission system on short-run and for periods starting with a gas day.**

- Approval of tariffs set out in Annex.10 to the National Natural Gas Transmission System Network Code (**price of non-nomination, price for exceeding the capacity reserved, price for delivery under the nomination approved rate, price for the failure of reserved capacity, daily imbalance price and combined imbalance price**) and the acquisition price of natural gas delivered in excess in NTS through ANRE Order 31/11.11.2010;

- **Approval of the virtual and relevant points** of the national transport system for natural gas through ANRE Orders 9/2010 and 10/2010.

The last three measures are the commitments assumed by ANRE in the response of the Romanian authorities to the letter of European Commission regarding the reasoned opinion on the status of implementation of Regulation no.1775/2005/CE on conditions for access to natural gas transmission networks.

2.2. The electricity and natural gas retail markets

Electricity

Supplying electricity to customers consists in supplying on the *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) and in supplying on the *regulated* market (which includes all the final customers that choose to purchase electricity at regulated rates).

In 2010 on the retail market activated 55 suppliers, of which 6 of them are generation license holders, and 7 are default suppliers – 3 state-owned and 4 with majority private ownership.

The final electricity consumption in 2010 decreased by approx. 5% as compared to 2008 but increased by 4 % as compared to 2009. An increase by 8% as compared to 2008 and by 2% as compared to 2009 of the quantity and the weight of the household consumption in the final consumption was also noticed in 2010.

In December 2010 the total number of consumers supplied under regulated prices was **8,914,618** of which non-households consumers - **591,756** and households consumers - **8,322,862**. The total amount of electricity supplied was about **23,365 GWh** which means a decrease of about 7% compared with 2009, given that the total final consumption increased by about 4%.

In December 2010, **8323** eligible consumers were present on the competitive market; the electricity supplied to this category of consumers in 2010 was of **22,075 GWh**, with an increase compared with the same period of the previous year by about 19%.

As compared to 2009, a six percentage points increase of the real electricity market opening degree was noticed representing about 51% of the total final consumption.

The supplier switching rate for year 2010 (see *table 2.2*) is calculated for each type of consumer in two ways: by the consumption places switching supplier during 2010 and by supplied electricity volume. Mention should be made that the self-consumption of the largest industrial consumers, who also hold a supply license and decided to purchase their electricity on the wholesale market, as a competitive suppliers is not included.

Table no. 2.2

No.	Type of consumer	Switching rate	
		Consumption places	Supplied electricity
1.	small non-households + households (contracted power less than or equal to 100 kV)	0.0539%	0.8583%
2.	large non-households (contracted power between 100 kV and 1000 kV)	4.308%	5.081%
3.	Very large non-households (contracted power greater than or equal to 1000 kV)	21.522%	14.746%
4.	**Total retail market**	**0.066%**	**6.837%**

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

The switching rate on consumption places and supplied electricity volumes for small non-households consumers+households and for very large non-households increased in 2010 compared to last year figures. This means that switching from one supplier to another increased.

Table 2.3 presents information on the number of suppliers with market shares higher than 5% and the concentration indicators on each type of final consumers, in 2010.

Table no. 2.3

No.	Consumer type	No. of suppliers with market shares higher than 5%	C1	C3	HHI
1.	households + small non-households (contracted power less or equal to 100 kVA)	5	38%	73%	2373
2.	large non-households (contracted power between 100kVA and 1000 kVA)	6	26%	59%	1529
3.	very large non-households (contracted power more or equal to 1000 kVA)	4	19%	49%	987
4.	**TOTAL retail market**	**6**	**29%**	**51%**	**1333**

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 consumers which own a supply license and decided to buy their electricity from the wholesale market as a competitive suppliers.

Values of market structure indicators calculated for 2010 shows:

- a moderate level of concentration throughout the retail electricity market and for very large and large non-households;
- a high concentrated market for the retail segment corresponding to small non-households + households.

Table 2.4 presents the average prices for 2005, 2006, 2007, 2008, 2009 and 2010 for households and non-households supplied on the regulated market and for non-households supplied on the competitive market. The prices are expressed both in lei and Euro, the conversion being made based on the monthly average exchange rates Euro/RON published by NBR.

Table no. 2.4

Consumer type	lei/MWh						Euro/MWh					
	2005	2006	2007	2008	2009	2010	2005	2006	2007	2008	2009	2010
Consumers on regulated market	286	316	340	354	370	384	79	90	102	96	87	91
Consumers on competitive market	144	168	188	224	242	244	40	48	56	61	57	58

On the regulated market, for the final consumers, ANRE approved an increase of the electricity price around 4.88%, applicable starting with 1 January 2010.

The selling prices for the consumer's categories from *table 2.5* have result from the synthesis of data concerning eligible consumers and those who choose not to change the supplier.

Table no. 2.5

	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	50.05	0	35.70	21.8	107.53
Commercial consumer with an annual consumption between 2000 and 20,000 MWh / year	22.80	0	47.63	17.48	87.91
Industrial consumer with an annual average consumption between 20 000 and 70 000 MWh / year	20.33	0	42.11	15.58	78.02
Large industrial consumers with a consumption between 70,000 and 150,000 MWh / year	14.37	0	42.37	14.14	70.88

Annual average rate of Euro in 2010: 4.2099 EUR

Natural gas

Romanian retail gas market consists of a **competitive segment**, which comprises the trade of natural gas between suppliers and eligible customers – on the competitive segment the prices are established based on offer and demand - and a **regulated segment**, which comprises the regulated supply.

In 2010, by consumer type, natural gas consumption in Romania was the following:

Consumer category	Consumer group	Percent from total consumption
TOTAL, from witch:		100 %
NON-HOUSEHOLD	Consumers who choose not to change their supplier	18.40 %
	Eligible consumers	59.00 %
HOUSEHOLD	Consumers who choose not to change their supplier	22.59 %
	Eligible consumers	0.01 %

The total 2010 consumption of the main final consumers are given below:

	MWh
Consumer category	**133,364,252.867**
Residential	29,708,784.895
Other non-residential	5,832,576.422
Non-residential	10,667,420.090
Electricity and/or heat generators	32,851,672.255
Other industries	23,691,940.978
Chemical industry	30,611,858.227

In 2010, on the **regulated market,** 39 suppliers delivered natural gas for the consumers under a regulated regime, in total there were 3,030,462 consumers under a regulated regime, having a consumption of 50,611.6 GWh. Market shares of the three main suppliers are presented bellow:

Supplier	**Market share (%)**
GDF SUEZ Energy Romania	48.71
E.On Gas Romania	42.38
Congaz	1.76

On the competitive sector operated 37 suppliers. Bellow can be found the suppliers for the consumers of the competitive market with a market share above 5%. Total consumption was 82,752.5 GWh.

Supplier	**Market share (%)**
Petrom Gas	23.37
Romgaz	22.70
Interagro	20.62
GDF SUEZ Energy Romania	11.85
EON Energie Romania	5.13

At the end of 2010, there were **1531** eligible consumers on the competitive natural gas market, with a consumption equivalent with a percentage of market openings of **56.39%.**

The final prices (VAT excluded) and tariffs that were used by the most relevant consumer categories are given below. Compared with 2009, the prices remained unchanged. The final regulated prices for end-users (VAT excluded) remained at the same level as at July 1, 2009 while the distribution tariffs kept their remained at the same value as at April 1, 2009.

Cons Tarif	**I4 – consum anual 418,6 TJ**		**I1 – consum anual 418,6 GJ**		**D3 – consum anual 8,3 GJ**		**Casnic tipic**	
	LEI/MWh	EUR/MWh	LEI/MWh	EUR/MWh	LEI/MWh	EUR/MWh	LEI/MWh	EUR/MWh
Regulated price (without VAT)	80.94	19.23	98.45	23.38	101.36	24.08	101.36	24.08
Transmission tariff	7.98	1.89	7.98	1.89	7.98	1.89	7.98	1.89
Distribution tariff	18.77	4.46	22.53	5.35	24.35	5.78	24.35	5.78

Annual average rate of Euro in 2010: 4.2099 EUR; Starting with July 1, 2011 the VAT was increased to 24%

2.3. Public service obligations and consumer protection

The annual list of last resort suppliers was updated.

Given the change in the **Procedure to switching the electricity supplier** approved by ANRE Order 88/2009 introducing the possibility to determine the quantities of electricity consumed hourly for settlements on the wholesale market for the metering points where hourly meters are not compulsory based on load profiles and not by imposing the obligation to switch meters, ANRE initiated the process for the approval of the procedures for the development and implementation of specific load profiles. In this regard, during 2010, load profiles were approved for three distribution operators namely: E.ON Moldova Distribuție SA, SC FDEE Electrica Distribuție Transilvania Sud SA şi SC FDEE Electrica Distribuție Muntenia Nord SA.

To support the natural gas consumers needs with the possibility to pay their bills in cash, ANRE amended the Standard –Conditions for the regulated natural gas supply (Annex 2 to ANRE Order 77/2009 – Framework –Contracts for the regulated natural gas supply) by imposing the license holders of the regulated natural gas supply the obligation to put in place with no extra charges cash payments facilities in towns/villages with over 1500 household consumers or in towns/villages that are situated at a 20 km distance from where such payment facilities already exist.

Of the 1821 complaints received in 2010, 1281 were related to electricity and 540 to natural gas. All the complaints were settled within deadline and in accordance with the regulations in force and with the notification of the complainants and the bodies through which they were transmitted to ANRE, as appropriate.

In the electricity sector, according to the Procedure for the resolution of disputes upon the conclusion of the electricity contracts between electricity undertakings, the electricity supply contracts and the network connection contracts (ANRE Order 38/2007) ANRE performs analyses on and settles the:

- pre-contractul disputes occurring upon the conclusion of contracts between undertakings in the electricity and cogeneration sectors
- disputes regarding the connection of users to the public electricity networks and the issuing of the location approvals.

Of the 14 dispute resolution requests received by ANRE in 2010, 6 met the conditions for applying the procedure above, 1 was settled within the preliminary stage and 5 after the conclusion of the preliminary stage.

In the natural gas sector ANRE:

- settles the disputes occurring upon the refusal to grant access to the natural gas transmission/distribution systems as per the provisions in ANRGN Decision 1345/2004;
- accommodates the pre-contractual disputes in the regulated sector as per ANRGN Decision 400/2005 and in the competition segment as per ANRGN Decision 461/2006.

In 2010, ANRE registered 2 accommodation requests filed as per ANRGN Decision 400/2005, 1 of which was settled within the preliminary stage and the other after the conclusion of the preliminary stage.

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 meters, continuity of supply for electricity and natural gas.

2.4. Infrastructure

Investments

In September 2010, ANRE issued Order No. 24/2010 to complement the *Methodology for setting up electricity distribution tariffs – Revision 1* approved through ANRE Order 29/2007. The modification refers to the way in which the competent authority verifies the investment programmes of the distribution operators. Annually (year t), the competent authority verifies the investment programmes for the previous year (year t-1) by making a comparison with the investment programme that was approved for that respective year. If it is found that less than 80% of the investment objectives or less than 80% of the total value of the investments assumed through the annual investment programme have been achieved the competent authority corrects the regulated revenues set for the following year (year t+1) through reducing these revenues by the value in nominal terms of the expenses included in the calculation of tariffs for the previous year (year t-1) corresponding to the unachieved investments.

The network operators have continued carrying out rehabilitation works to increase the performance of the services and to meet the technical and quality norms.

In the natural gas sector, the transmission system operator continued the implementation of the SCADA project for the national transmission system to ensure the compliance with the 1775/2005/EC Regulation provisions. Projects for developing interconnection with neighbouring countries were also initiated. Proceeding to renegotiate three intergovernmental agreements that regulate the legal regime of the three natural gas pipeline linking Isaccea and Negru Vodă were initiated at MECMA level with the Russian Federation.

Interconnection allocation capacity

In 2010, following an agreement signed between CN Transelectrica SA and the Hungarian TSO (MAVIR), the allocation of the transfer capacity on the interconnection lines on the border with Hungary (import and export) was bilaterally coordinated following the ***annual*** and the ***monthly*** bids (organised by CN Transelectrica SA for the entire allocation capacity) and the ***daily*** bids (organised by MAVIR for the entire allocation capacity). Since October 16, 2010 following a MoU signed with MAVIR, an ***intra-day*** bilaterally coordinated transfer capacity allocation is organized by the Romanian counterpart. The trading currency is the euro.

Similarly, according to a MoU between CN Transelectrica SA and the Bulgarian TSO (ESO-EAD) the medium term bids (***annual and monthly***) on the boarder with Bulgaria, on both directions are organised by the Bulgarian counterpart for 100% of the capacity while the responsibility of organizing the ***daily*** bids rests with CN Transelectrica SA for the entire

capacity, as well. Since August 16, 2010 following a memorandum signed with ESO-EAD, an ***intra-day*** bilaterally coordinated transfer capacity allocation is organized by CN Transelectrica SA on the Bulgarian-Romanian border.

On the other borders, with Serbia and Ukraine, respectively, the net interconnection capacity is determined together with the neighbouring TSOs and shared equally in order to allocate it on both directions. On the border with Ukraine, the use of the capacity is still subject to the written consent of the TSO in that respective country.

The available capacity of the national gas transmission system is still allocated on the "first-come, first served" principle.

The transmission and distribution tariffs, both in the electricity and natural gas sectors, were unchanged during year 2010. For the electricity sector, the last increase was done on January, 1, 2010 when transmission tariffs increased, in real terms, with 7% and the distribution ones increased on average with 1.39%.

2.5. Security of supply

Electricity

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).

According to the Electricity Law no. 13/2007, with subsequent amendments, the TSO issues the national Transmission Network Development Plan on medium and long – run (10 years). This Plan is endorsed by the regulator and approved by the competent ministry. On short run, the TSO is also responsible for the transmission networks operational planning and running, 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). As an ENTSO-E member, TSO takes part in the issuing of the 10-Year Transmission Network Development Plan.

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 2010, the electricity generation was 60.8 TWh, increasing by approximately 5.3% as compared to 2009. Domestic consumption amounted to about 57.9 TWh, by approximately 4.9% higher than in 2009.

Due to an extremely good hydrological year as compared with the last three, hydropower (whose contribution increased by 28% as compared to the previous year) was the primary source that ensured the increase of the total energy delivered. A stong growth of the wind power plants contribution (0.5% of the total 2010 production) was also noted compared with 2009 (0,02% of the total production)

The main investments in generation by 2020 that were considered for setting up the power system adequacy forecast are the nuclear power units 3 and 4 (650 MWe) at Cernavoda

Nuclear Power Plant and the pumped-storage power plant Tarnița (1000 MW). In prospect, it is also estimated that wind power plants will total an installed power of about 4000 MW in 2020 following the implementation of the government renewable energy sources promotion strategy.

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.

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.

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.

The modifications brought by Law 220/2008 to the E-RES support scheme were notified to the European Commission in June 2011, following a nearly 2-year pre-notification process. The Commission reply was received on July 2011. It concluded that the notified scheme is in line with the environmental protection aid orientations and is therefore compatible with the internal market in accordance with art. 107, par.3, c) of TFUE.

The interest for investments in RES power plants, especially wind saw an upward trend in 2010. As a proof stands the 520.4 MW installed capacity in the E-RES generation units qualified for priority production at the end of 2010 and including wind, hydro (with installed capacities of up to 10 MW), biomass and photovoltaic if compared to the 113.4 MW recorded at the beginning of the year.

Starting with April 2011, a bonus-type scheme was introduced for the cogeneration capacities. The scheme was notified and approved by the European Commission in accordance with the European state aid regulations.

Eligible for the support scheme are both:

- the co-generation producers, except those using renewable energy sources
- the consumers holding low-power and micro-cogeneration plants and deliver part of the generated electricity into the networks if they use the electricity and heat produced predominantly for their own consumption and if they have metering units that comply with legal metering provisions.

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.

The main investments in the transmission infrastructure envisaged for the period 2009-2020 were given in the previous national report.

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.

Natural gas

Total gas consumption in 2010 amounted to 146,762,322.350 MWh, out of which 29,708,784.895 MWh was household consumption (20.25%). Domestic gas production in 2010 was 117,897,720.551 MWh, and import 24,145,776.911 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 www.entsog.eu, forecasts the evolution of consumption for the period 2011-2020.

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 8 underground storages with a total capacity, in 2010, of 3.135 billion cm.

The gas underground storage capacity for the period April - October 2010 is presented in the *figure 2.1:*

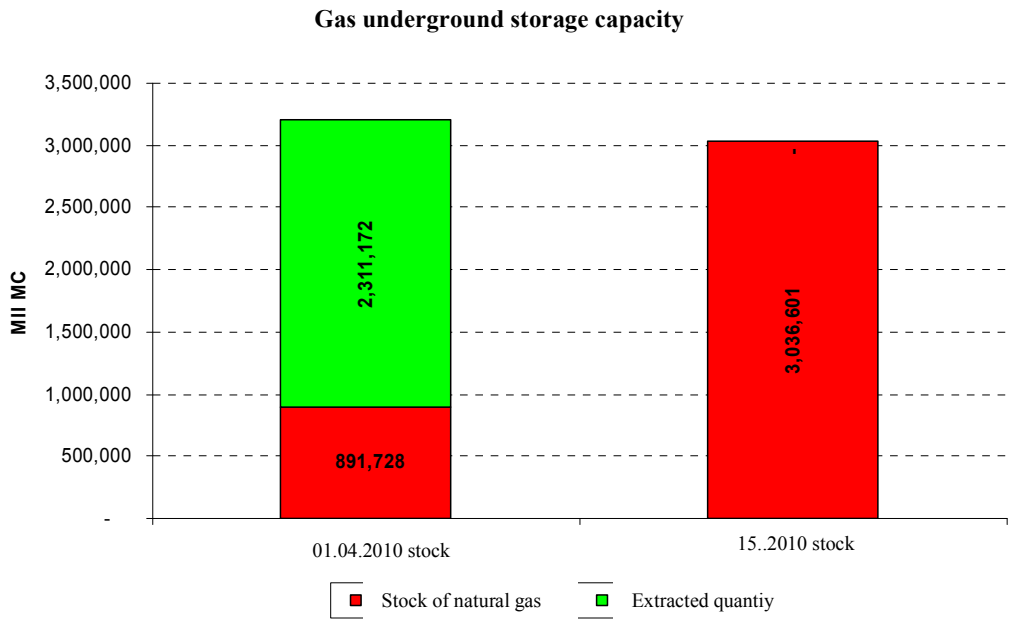


Figure 2.1

Currently, the natural gas import in Romania is carried out through:

1. The natural gas import pipeline Orlovka – SMG Isaccea
2. The interconnection pipeline with the Hungarian natural gas transmission system on the import line Tekovo – Medieşul Aurit Metering Station
3. The interconnection pipeline with the Hungarian natural gas transmission system on the import line Szeged – Arad. The pipline works were completed in 2010.

The main strategic interconnections of the National Transmission System (NTS) with the transmission systems of the neighbouring countries considered for the forthcoming period are the interconnection with Bulgaria and the Nabucco Project. Ensuring the reversible flow of natural gas through the existing interconnections and diversifying the natural gas supply sources – the AGRI project – are permanent concerns of the national transmission system operator.

Through the licenses and authorisations it issues as well as through the tariff and prices methodologies, the commercial and technical regulations, and the network access/connection rules ANRE ensures the necessary regulatory framework to promote investments.

2.6. Regulation/ Unbundling

Competences of ANRE

The Romanian Energy Regulatory Authority (ANRE) role is to regulate, monitor and control the functioning of the electricity and the natural gas sectors and markets in terms of efficiency, competition, transparency and consumer protection and to implement and monitor the energy efficiency measures at national level and to promote the use of the renewable energy sources to final consumers.

As an autonomous public body of national interest under the subordination of the Prime-Minister, ANRE develops its activity according to the tasks set by the Electricity Law No. 13/2007 (with the subsequent amendments and complements), by the Natural Gas Law No. 351/2004 (with the subsequent amendments and complements), by the Government Ordinance No. 22/2008 regarding energy efficiency and promotion of the renewable energy sources to final consumers as well as by the Operation and Functioning Rules approved through Government Decision No. 1428/2009.

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.

TSO and DSO unbundling

Electricity

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.

In applying the 2009/72/EC Directive requirement to opt for one of the three unbundling models for the transmission activity, meetings were held with both TSO and MECMA – the TSO owner in order to identify the applicable model for CN Transelectrica SA. The option was for the independent system operator as TSO is the concessionaire of the electricity grid and not its holder.

In 2010, 37 distributors operated on the Romanian electricity market, out of which 8 having over 100,000 customers each. All the 8 distribution operators concluded the legal separation of the distribution activity from supply. The distributors with less than 100,000 customers are not bound for the unbundling of distribution from the other activities of the company according the provisions of the Directive 54/2003/CE.

Natural Gas

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.

In applying the 2009/73/EC Directive requirement to opt for one of the three unbundling models for the transmission activity, meetings were held with both TSO and MECMA – the TSO owner in order to identify the applicable model for SNTGN Transgaz SA. The option was for the independent system operator as TSO is the concessionaire of the network and not its holder.

2.7. General Conclusions

In 2010, the electricity production grew by approx. 4.3% as compared to the year 2009. Hydropower (whose contribution augmented by 28% as compared to the previous year) was the primary source that ensured the increase of the total energy delivered due to an extremely good hydrological year as compared with the last three. Electricity produced in RES generation units amounted to 20.264 TWh leading to an E-RES weight in the total gross electricity consumption of 35.24%, with 2.24% more than the 33% assumed by Romania for the year 2010.

Based on a 2010 prepared plan, it is estimated that a new market - the **Intra-day market -** will gradually develop starting with 2011. The introduction of this new trading mechanism will allow market participants to balance their portfolio closer to the time of the delivery which will lead to the reduction of imbalances.

Starting with 2010, the interconnection capacities allocation on the interconnection lines with the Hungarian and Bulgarian transmission systems for the import/export trading and the electricity transit are made through bilaterally coordinated allocation following the annual, monthly, daily and intra-day bids. On the other borders, with Serbia and Ukraine, respectively, the net interconnection capacity is determined together with the neighbouring TSOs and shared equally in order to allocate it on both directions. On the border with Ukraine, the use of the capacity is still subject to the written consent of the TSO in that respective country.

The transparency of the interconnection trading is ensured by CN Transelectrica SA by publishing information on the www.transelectrica.ro and the www.ope.ro websites. In March 2011, CN Transelectrica SA put into operation a new trading platform – DAMAS – in order to publish all the information regarding the interconnection capacity bids and the associated results.

In the natural gas sector, the year 2010 brought the official inauguration of the Szeged-Arad interconnection pipeline. The pipeline represents a strategical interconnection with a view to diversifying the natural gas resources and to ensuring the continuity of the natural gas supply. The project was co-financed bu the European Union through the European Economic Recovery Plan (EERP).

The full implementation of the provisions of the 1775/2005/EC Regulation has been a permanent concern of both the regulator and the TSO.

The main legislative changes that were analiyzed and discussed with the market participants in the context of transposing into the national legislation of the 2009/72/EC and 2009/73/EC Directives focussed on:

- TSO Unbundling model
- Regulator's independence
- Dealing with the electricity and the natural gas regulated and competitive markets in the context of establishing a timetable for prices deregulation
- Consumer protection.

In view of implementing the provisions of the Third Package, the current regulatory system must be assessed and adjusted in such a way as to meet the both the exigencies imposed by the liberalization of the energy markets and the requirements to ensure a predictable regulatory framework as well as a stable investment environment, without neglecting the aspects related to the security of supply and the sustainable development.

3 Regulations and performances of the electricity market

3.1 Regulatory issues

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

Allocation of interconnection capacity on the interconnection lines of the National Power System with neghboring systems to achieve the transctions of import/export and transit of electricity is from July 1-st, 2005 through explicit auctions, on medium-term (annual and monthly) and short term (daily and intra-day).

In 2010, following an agreement between CN Transelectrica SA and MAVIR- transmission system operator of Hungary, the interconnection capacities on the Hungarian border (import and export) were allocated by bilateral coordinated auctions on annualy, monthly (organized by Transelectrica) and daily (organized by Mavir) bases. In addition, from the 16-th of October 2010, following the signing of a Memorandum of Understanding with MAVIR, on the romanian-hungarian border is intra-daily done a bilateral coordinated transfer capacity allocation, organized by the Romanian side. Trading currency is euro.

Similary, according to a memorandum of understanding between CN Transelectrica SA and ESO-EAD (transmission system operator from Bulgaria), medium term auctions for capacities interconnections (annualy and monthly) on the border with Bulgaria, in both directions, are organized by the Bulgarian side, for 100% of the capacity, while the daily allocation auctions are the responsability of Transelectrica also for the entire capacity. Starting August the 16-th, according to the memorandum signed by Transelectrica and ESO-EAD, on the Bulgarian-Romanian border is also carried out a bilateral coordinated intra-day allocation of transfer capacity, organized by CN Transelectrica SA

On the other borders, with Serbia and Ukraine, net interconnection capacity is determined with neghboring TSOs and equally shared for the allocation in both directions. In addition, on the border with Ukraine, capacity utilization is subject to written agreement from TSOs.

As a general feature of the functioning of the interconnection capacity allocation market in 2010, it was highlighted booking capacity in both directions for a simultaneously exchange on a boundary, by many participants, in order to create opportunities to transfer energy in either direction, depending the appropriate market price. Following the annual and monthly auctions, there were monthly participants who transferred to the other participants capacity won on this type of auctions.

Another feature of this mechanism has been the increasing interest for annual and monthly auctions, considering the increase of electricity traded across borders (especially in the second half of the year). Also, the downward trend continued for prices achieved at monthly auctions, unlike the annual auction results.

In auctions held for the second half of 2010, monthly average prices on export directions were higher then the same period in 2009, on the borders with Hungary and Seria, while the import directions were low, like the last year. The highest level of total allocated capacity utilization was at the auction on the Hungarian border on exports), followed by the border with Serbia (on export) and the Bulgarian border (on import). Most incomes obtained by CN

Transelectrica SA following the allocation of the interconnection capacity, came, in over 90% cases from medium-term auctions.

Participant's interest on intra-day auctions was low, both on Bulgarian and Hungarian borders, focusing in particular on monthly and rarely on daily auctions.

Calculation procedures, contracts, agreements and rules agreed auction values for calculating interconnection capacity auctions, and the results can be found on the following websites www.transelectrica.ro and www.ope.ro. Since march 2011 it became operational a new trading platform– DAMAS- available at https://www.markets.transelectrica.ro/public.

Assesment level for internal congestion and interconnection lines

The monthly electricity level engaged by the TSO for the internal congestion management and its associated c/value for the year 2010 is given in *Figure 3.1.*

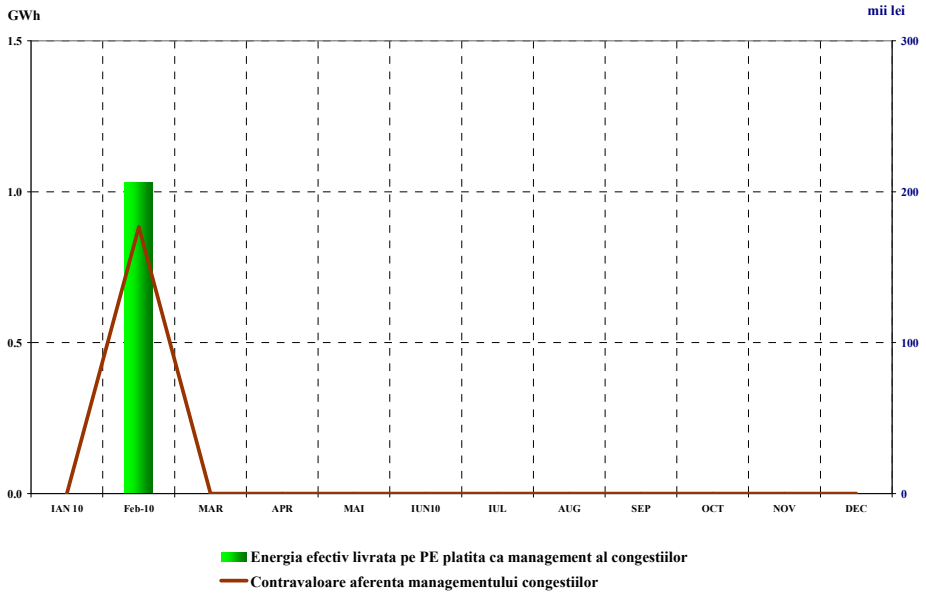


Figure 3.1

During 2010, there was one situation of network congestion. It occured between 24-26 February 2010, during the program of refurbishment of 220 kV station Isalnița, when it became necessary the withdraw of the cell connecting TA8 Isalnița group in order to switch on the newly refurbished cell. According to the final recordings from the balancing market, in order to totally remove the concestion 1030 MWh were reduced, in the total amount of 176642,8 lei.

Congestion level on interconnection lines with neghboring countries in 2010

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

2010	Hungary		Bulgaria		Serbia		Ucraine	
	export	import	export	import	export	import	export	import
Number of congestion days	365	251	334	365	360	360	317	131
Number of days with withdrawal of inteconnection lines (on the borders with a single interconnection line)								
Annual frequency of congestion (%)	100	69	92	100	99	99	87	36
Severity index	5	3	4	5	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).

Based on bilateral conventions and agreements between CN Transelectrica SA and neighboring TSOs, NTC allocation for 2010 on Romanian borders were made as following:
- The border with Serbia – 50% reported congestion from NTC
- The border with Ukraine – 100% from NTC reported congestion
- The border with Bulgaria until 31.03.2010, CN Transelectrica SA allocated half of th NTC value reported monthly. Starting 01.04.2010 TSO Bulgaria organizes common allocation for the whole NTC monthly value. Congestion frequency reported was 50% from NTC until 31.03.2010 and from 01.04.2010 it was 100% from NTC.
- on the border with Ukraine (Burshtyn area), CN Transelectrica SA allocated the whole monthly NTC value with the presentation of the agreement with the local TSO.

On the Ukraine and Bulgarian borders daily common allocations are also organized.

The formula used to calculate FaC on the Daily Frequency of the Congestion (FzC) is the following: FzC (%) = NhC*100/Nh
where: - NhC is the number of congestion hours in the analysed period
- Nh is the total hours from the analysed interval

For Ukraine the analysed interval is 2010 (Nh=8760), and for the bulgarian border is April 2010 – december 2010 (Nh=6600).

Directions	RO-HU (RO export)	HU-RO (RO import)	RO-BG (RO export)	BG-RO (RO import)
Frequency of daily congestion allocation of NTC - FzC [%], reported in 2010	56	10	2	7

In 2010 there were no congestions in common intr-day allocation on the borders with Hungaria and Bulgaria.

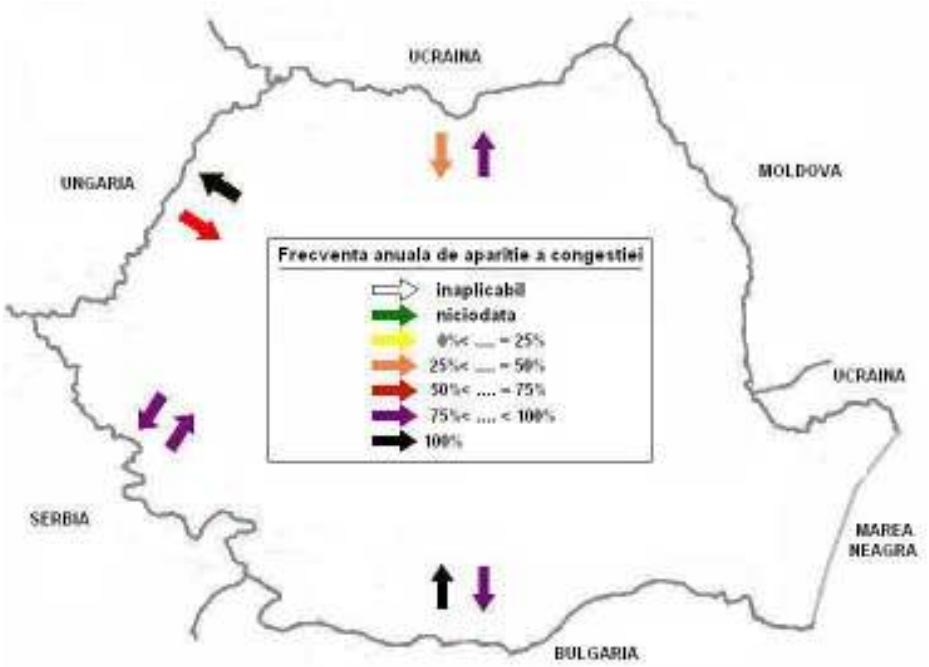


Figure 3.2

Source: Dates and processing from CN Transelectrica SA

Regarding export congestions, most of them were registerd on the borders of Serbia and Hungaria (99-100%), on the border with Bulgaria and Ukraine values were 92% and 87%. For the import congestions, most congestioned borders were with Serbia and Bulgaria (99-100%), and less congestioned was the border with Ukraine (36%). Highest value (100%) of annual congestion frequency was reached on export direction to Hungary and on the import direction from Bulgaria.

In the figures below can be seen:

- profiles of global net monthly transfer capacities on export and import in 2010 and factors determining the reduction of export and import values (settings for summer protection, withdrawls programmes), (*fig. 3.3*);
- profiles of net capacities monthly transfer across borders (*fig 3.4*);
- utilization of available capacity (*fig.3.5*).

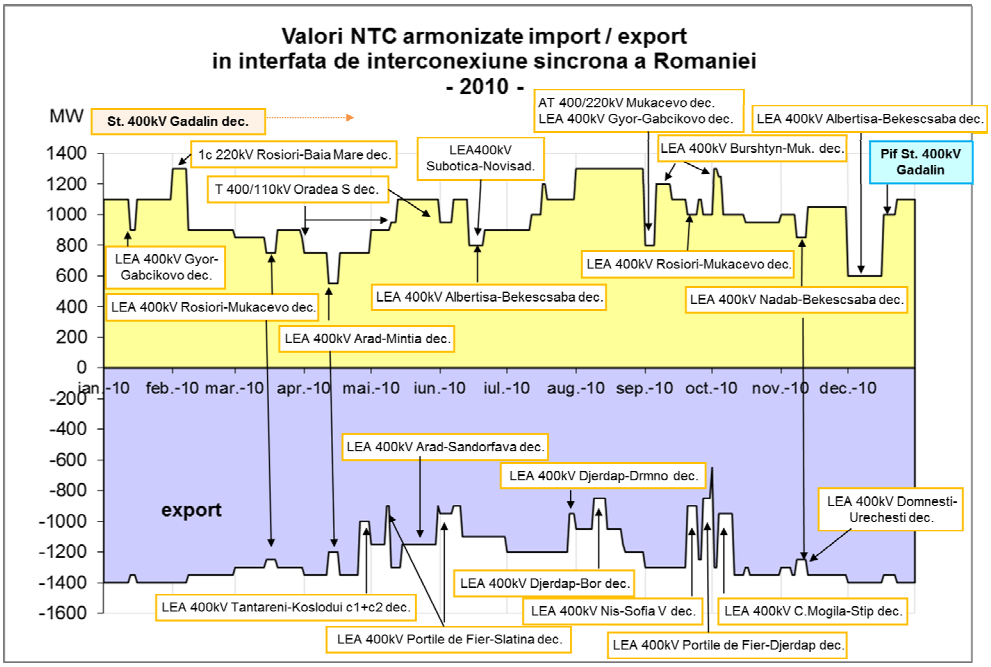


Figure 3.3

Source: Data CN Transelectrica SA

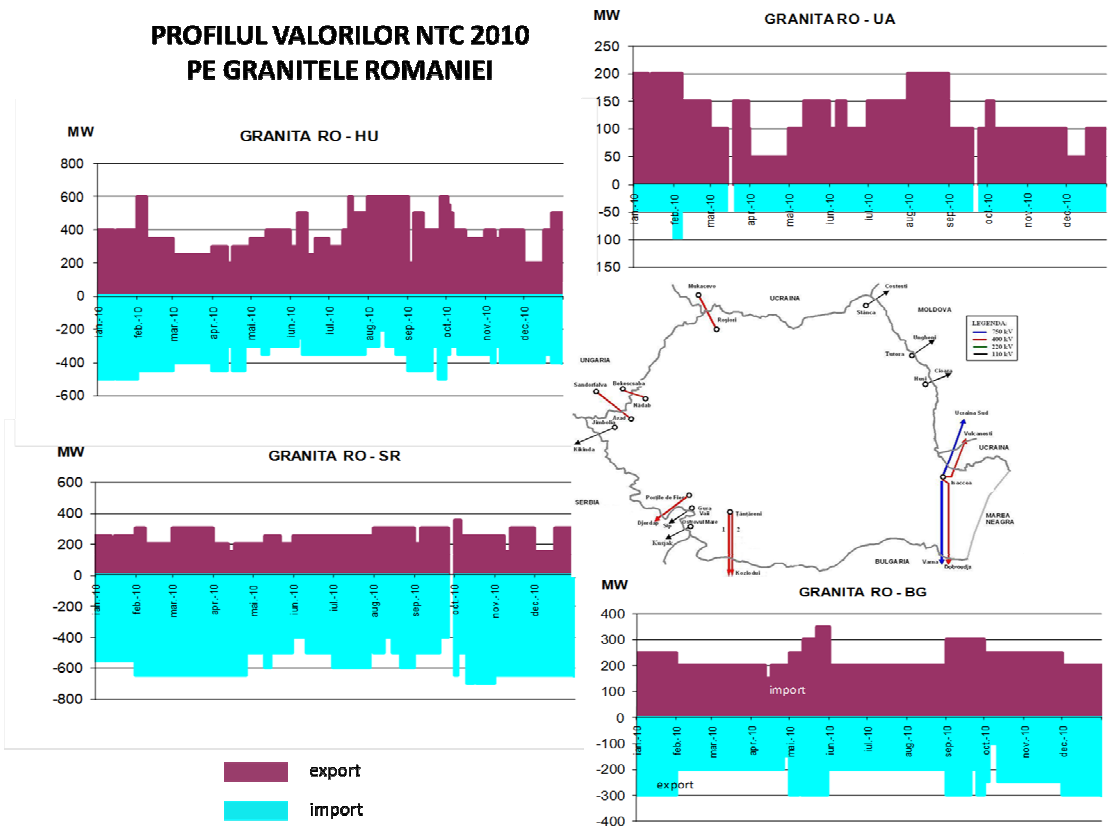


Figure 3.4

Source: Data CN Transelectrica SA

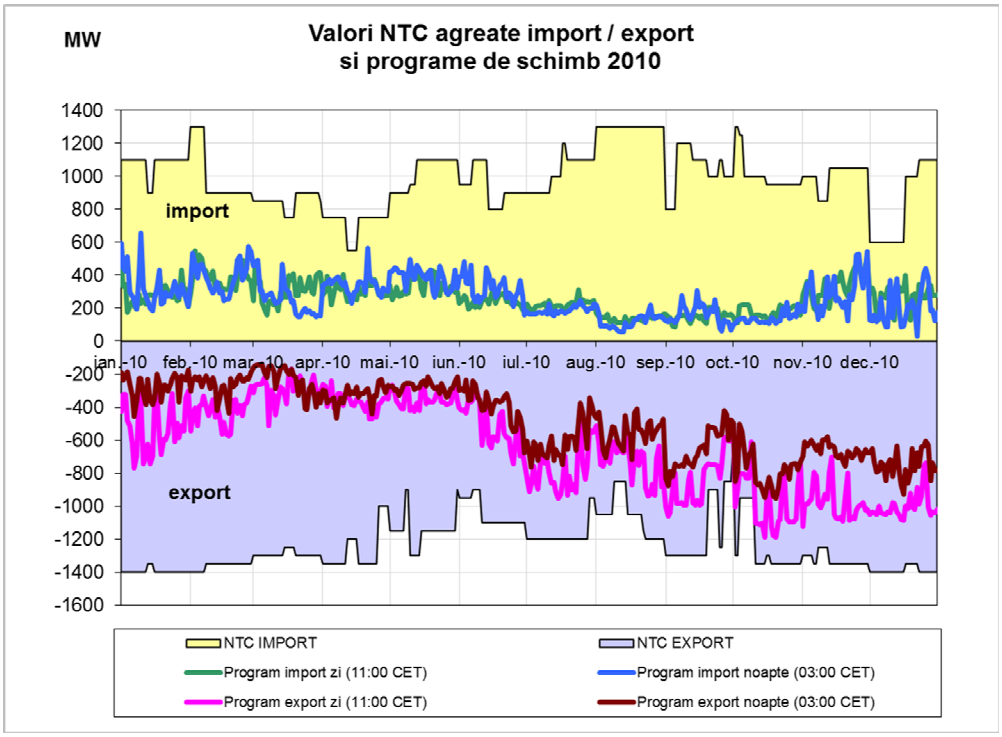


Figure 3.5

Source: Data CN Transelectrica SA

Energy exchange capabilities with other systems, not interconnectd synchronous with NES, conducting islands of passive consumption, were limited by technical possibilities of romanian network and those of Ukraine and Moldavia, to the following values:

- LEA 400 kV Isaccea – Vulkăneşti – 360/200 MW – import/export;
- LEA 110 kV Stânca – Costeşti - 50/50 MW – import/export;
- LEA 110 kV Ţuţora – Ungheni 0/50 MW – import/export;
- LEA 110 kV Cioara – Huşi 50/50 MW – import/export.

The total NTC import sum is definied according to ENTSO-E standards, as average of th amount of total NTC import on borders, in the summer of 2010 and the amount of NTC import on borders in the winter 2010-2011.

Information	UM	Value	Observations
NTC import (maximum value not guaranteed) from which:	MW	2310	
- Intercontinental network synchronous		1850	Maximum seasonal average NTC import in RO interface for normal topology: (NTC V_{2010} + NTC $_{I2010-2011}$)/2 - (1600MW+2100MW)/2=1850MW
- Islands with Republic of Moldavia		460	LEA 110 kV + LEA 400 kV Vulkanesti (50MW+0MW+50MW)+360MW=460MW
NTC export (maximum value not guaranteed) From which:	MW	2225	
- Intercontinental network synchronous		1875	Maximum seasonal average NTC export in RO interface for normal topology: (NTC V_{2010} + NTC $_{I2010-2011}$)/2 - (1700MW+2050MW)/2=1875MW
- Islands with Republic of Moldavia		350	LEA 110 kV + LEA 400 kV Vulkanesti (50MW+50MW+50MW)+200MW=350MW

Information	UM	Value	Observations
NTC import synchronous (average of harmonised and guaranteed)	MW	1057	NTC average monthly guaranteed harmonized with partners and the interconnection RO line interface synchronous. The amount of NTC import all borders in the summer 2010 : 1008 MW. The value is obtained as the average of the NTC profile calculated monthly time resolution coresponding to a day summer period 01.04.2010 – 30.09.2010. The amount of NTC import all boundaries of winter 2010-2011: 1105 MW. The value is obtained as the average of the NTC profile calculated monthly time resolution corresponding to day of winter period 01.10.2010 – 31.03.2011. The amount of imported NTC (1008+1105)/2 = 1057 MW
NTC export synchronous (average of harmonised and guaranteed)	MW	1260	NTC average monthly guaranteed harmonized with partners and the interconnection line interface synchronous RO. The amount of NTC export all borders in the summer 2010 :1144MW. *The value is obtained as the arithmetic mean of the NTC profile calculated monthly time resolution corresponding to a day summer period 01.04.2010 – 30.09.2010* The amount of NTC export all boundaries of winter 2010-2011: 1376MW *The value is obtained as the arithmetic mean of the NTC profile calculated monthly time resolution corresponding to a day of winter period 01.10.2010 – 31.03.2011* NTC total amount of export: (1144+1376)/2=1260MW

Congestion management integration in the wholesale market functioning

Grid development planning activity aims to obtain a proper network dimensioning to ensure the transport of energy expected to be produced, imported, exported and transit. CN Transelectrica SA is producing periodically system studies to analyse functioning conditions of the transmission network in the future.

Also, each time there is a new user or one of the existing ones has enhanced or decreased installed capacity power for producers or consumers, CN Transelectrica SA is developing studies to fit in the system. In such studies the performance standard for transmission is verified and there are identified possible congestions and reinforcements required to eliminate them.

According to regulation and based on these studies, CN Transelectrica SA is developing a perspective plan, for each of the following 10 years, with 2 years update, regarding energy transmission acording to the current state and further evolution of energy consumption and production.

General evaluation of progress regarding bilateral relations with third part countries that produce and export or transport energy, including progress in market integration social and environmental consequences of electricity trade and acces to the networks of third part countries

Coordinated allocation of transport capacity on interconnection lines

CN Transelectrica SA actions on the implementation of market mechanisms for explicitly coordinated allocation of interconnection capacity with Hungary and Bulgaria began as consequence of the letter of formal notice coming from the European Comission on the status of implementation of Regulation *1228/2003* and was accelerated after receiving the reasoned opinion of the European Comission, notice that set a deadline for implementation of those mechanisms on 24-th August 2010.

CN Transelectrica SA has initiated a negociation process at regional level with interconnection partners, members of European Union (Hungary and Bulgaria), achieving a coordinated agreement and implementation of those mechanisms at requested datelines, according to the following principles:

a. Operator allocation function

For each process of allocating transmission capacity on the interconnection lines (yearly, monthly, daily and intra-day) assignment operator function is performed by one of the two TSOs involved, following the regular (annual / according to agreement between the two TSO's) such functions to alternate between the two TSOs. Thus, according to memorandums signed:

I. on the Romania-Hungary border- annual allocation, monthly and intra-day is achieved by Transelectrica and daily allocation is performed by MAVIR

II. on the Romanian - Bulgarian border- daily and intra-day allocation is performed by Transelectrica and annual and monthly allocation is carried out by ESO-EAD.

b. Allocation rules

Each allocation process is done according to national regulations of the TSO's operator which has the allocation function to which were added minimum provisions regarding the revenue allocation between the TSOs involved, VAT treatment, communication rules between TSO's and answering to market participants complaint.

To achieve regional coordination of these processes, it was agreed that each TSO will take steps in addition to the regulatory authority from each belonging country to harmonize the regulatory framework at regional level in order to avoid situations in which a TSO is forced to apply different principles allocation on national borders.

Regarding the allocation of capacity on the interconnection lines between Romania and Serbia, according to the Memorandum signed between Transelectrica and JP Electromreza Srbije EMS the previouse allocation structure was kept, respectively Transelectrica organizes long-term auctions for 50% of total capacity, remaining 50% being allocated to the transmission system in the neighboring country. EMS and Transelectrica teams of specialists discussed technical and financial aspects of moving from individual capacity allocation auction to coordinated capacity allocation auction for interconnection lines.

Regional cooperation

CN Transelectrica SA has participated at two levels:

- National, representing the interdisciplinary teams working between institutions in the field, to establish coordinated action on the development of the electricity market in Romania, and
- Regional, working in the ENTSO-E, by initiating and participating in regional projects (Transelectrica SA is one of the main supporters of the "Coordinated Auction Office Ltd. border- CAO" border- regional project initiated by the European Commission for South East Europe), working groups at regional level regulators, market operators and the TSO's and by organizing workshops to promote the other TSO's experience in implementing European regional market mechanisms.

Approaches to implement the implicit allocation of transmission capacity on the interconnection lines

Allocation mechanisms so far implemented only refers to the allocation of capacity (explicit allocation), this step is the first one in achieving a coordinated allocation of capacity and electricity (the implicit allocation). It is a complex process involving the preparation of the regulatory framework to allow national electricity market coupling (including balancing markets), the coordination with the power exchanges from the region and regional cooperation between TSO's to implement a Regional Allocation Coordinated Center (CAO)

- Organising a “Coordinated Auction Office Ltd. - CAO”

In South East Europe, is expected to be established a regional center - "Coordinated Auction Office Ltd. border- CAO" - aimed at explicit allocation (initially for a NTC subsequently calculated and coordinated bilateral regional level), transmission capacity interconnection lines between the power systems in Southeast Europe, based on the principle of market coupling on energy flows (flow based market coupling). Transelectrica is one of the main supporters of the project.

CAO is a regional project initiated by the European Commission, currently coordinated by the European Commission and the Energy Community of South East European states, being funded by financial institutions that support investment programs in the area and by regional TSOs.

The central location was established in Podgorica (Montenegro). Legal support for the implementation of this center will be a Memorandum of Understanding (MoU) to be signed between regional TSOs after its approval by regulators.

- Implementing a regional coordinated mechanism regarding Day Ahead Congestion Management (DACF)

In the actions of regional coordination carried out by SEE regional group, the working structure created within ENTSO-E requires the implementation of a coordinated program of Day Ahead Congestion Management (DACF).

Implementing a regional mechanism for coordinated congestion management on the interconnection lines is an obligation under European regulations in force and also a political commitment in the terms established by the Treaty establishing the Energy Community in SEE and the decision 2008/02MC-EnC Energy Community Ministerial Council.

- North-South Corridor for energy interconnections

The Infrastructure Package (EIP identified a number of priorities in energy to be implemented by 2020 to enable the EU meet its energy and environmental issues. EIP presented a new method of planning based on regional cooperation as a first step to achieving EU objectives.

North-South Corridor for energy interconnections is an initiative of the European Commission underlining the need to establish a High Level Group (ministries, regulators and TSOs coordinated by the European Commission), to promote regional cooperation, implementation of energy infrastructure projects (electricity and gas) and market development.

The project is also part of the EU strategy for the Danube region, which is developed by the Directorate General for Regional Policy of the European Commission in cooperation with other Directorates of the European Commission, involving stakeholders in the region

Bilateral cooperatin relations with third part countries

Republic of MOLDOVA

a. LEA 400 KV Suceava – Bălți (Moldova)

The feasibility study of this line, determined mainly by the prospect of connecting synchronous Moldova's energy system to the synchronous system of continental Europe ENTSO-E has been completed.

After completion of the feasibility study there will be discussions on the authorities and companies involved to determine the operating system, the financing and implementation of investment. Please note that by integration of Moldova (with Ukraine) in ENTSO-E, the operating system will be the passive island.

On 18.02.2011 was signed Memorandum of Understanding between CN Transelectrica SA and Moldelectrica, regarding the construction of 400kV electricity transmission line between Suceava (Romania) and Balti (Moldova). Through this Memorandum, the Parties agree to cooperate in coordinating construction of this line as follows:

- Each side shall establish financing for the construction contract execution transmission lines 400 kV - Deadline: December 2012
- Each will finalize complete line of design contract in accordance with the law of the country in which they operate - Deadline: July 2014
- each side shall carry out the construction and commissioning of energy transmission line of 400 kV across the country in which they operate - Deadline: December 2019
- for the construction and commissioning of the line the two sides will enter into a construction contract with deadlines and responsibilities - Deadline: December 2014.

Transelectrica is currently under procurement stage of design services to continuing to design for LEA 400 kV Suceava - Bălți, the part of the project ongoing on Romanian territory and will send Moldelectrica following actions needed for the implementation of the project within Moldova

b. LEA 110 kV Falciu – Gotesti

Line has a total length of 28.3 km and is completed only in Romania. In order to complete the line in Moldova it has been signed a memorandum changing the original route of the line

c. Interconnection stage of Moldova and Ukraine to ENTSO-E

After a series of meetings and discussions between experts Moldelectrica, Ukrenergo and Transelectrica, both in Brussels and in Chisinau, Kiev and Bucharest, with support from European authorities, stakeholders (Moldova and Ukraine with Romania's support) decided to apply for funding from regional programs.

A feasibility study for energy systems integration of Moldova and Ukraine in ENTSO-E was approved by the POC Management Unit of the Ministry of Development in Bucharest. In order to complete the approval process in Brussels until July 1, 2011, the parties shall submit no later than June 15, 2011 supporting documentation.

d. Republic of Modova – Member of Energy Comunity Treaty

On December the 18-th, 2010, in Zagreb, at the VII-th Meeting of the Energy Community Ministerial Council, Moldova joined the Energy Community for Southeast Europe. This status will allow the integration of Moldova into the regional energy market; it will increase the energy security of the country and attract foreign investment in the field.

UKRAINE

Fiber interconnection line between Romania and Ukraine on support line Roşiori – Mukachevo is under consideration.

SERBIA

Interconnection line LEA 400 kV Reşiţa (Romania) – Pancevo

The feasibility study was completed and approved by the Board of Directors of Transelectrica. Technical project documentation has been completed (PT) and Specification (CS) for work execution which is under notice at Transelectrica. Declaration proceedings as public utility investment have been initiated. It was initiated action to obtain necessary permits and agreements for construction authorization. Environmental agreement has been obtained. Also, topo-cadastral documentation and identification of land owners has been completed.

In terms of collaboration with Serbian partner - Elektromreza Serbia - so far is has been settled how to make the interconnection, the interconnection point of crossing and some details of carrying out the works at the border crossing point. Completion of the project is estimated for late July 2015.

TURKEY

Undersea cable RO/TR (HVDC Link)

Transelectrica and transmission company from Turkey TEIAS signed on June 1-st 2005, a Memorandum of Understanding for joint development opportunity for a system study on building an undersea cable for interconnecting power systems of Romania and Turkey. On 06/02/2009 Transelectrica signed with the Swedish company Vattenfall Power Consultant AB contract for feasibility study, including environmental studies and the specifications for the project. The deadline for submission of documents is 30.06.2011

CHINA

Memorandum of Understanding on energy cooperation between Transelectrica and Chinese company State Grid Corporation was signed on May, 9-th 2011 in Beijing. The document establishes the legal framework and the areas where the two companies can work together, both in Europe and on third markets.

3.1.2 Activity regulation for TSO and DSO

Aspects regarding network tarrifs

Legal separation of the activities of generation, transmission, distribution / supply of electricity in Romania was made by GD. 627/2000. Thus were established: Transelectrica - the only transmission system in Romania, SC Electrica SA - distribution operator and supplier, Termoelectrica and Hidroelectrica SA - production companies. The latter are added SNN Nuclearelectrica SA, established by GD 365/1998.

Subsequent steps in the restructuring Transelectrica have strengthened the position of this company for transmission system, neutral and independent. As a TSO, the company is the concessionaire of goods transport services and public property for the electricity transmission network and ensures maximum safety NPS conditions and stability, meeting quality standards and ensuring at the same time, regulated access to the grid transport in a transparent, non-fairness for all market participants. Transelectrica is a member of UCTE and ETSO in May 2003 and November 2004. The transmission length is approx. 8931.6 km (overhead lines).

According to the Electricity Law, TSO carries the following main activities:

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

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

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

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

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

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

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

The activity of TSO in 2008, 2009 and 2010 was monthly monitored for the calculation of the corrections for the regulated transmission service tariff from 2011.

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% 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**	**2010**
Average Interruption Time (AIT), min/an	4.434	1.187	0.857	1.792	0.81	3.1

AIT high value of the indicator was significantly influenced by an incident occurred in at a high consumption steel plant (Resita), the incident led to an undelivered energy two times the quantity of whole undelivered energy in 2009.

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 3.6 and 3.7*), regulations for the connection of users to public electricity transmission network.

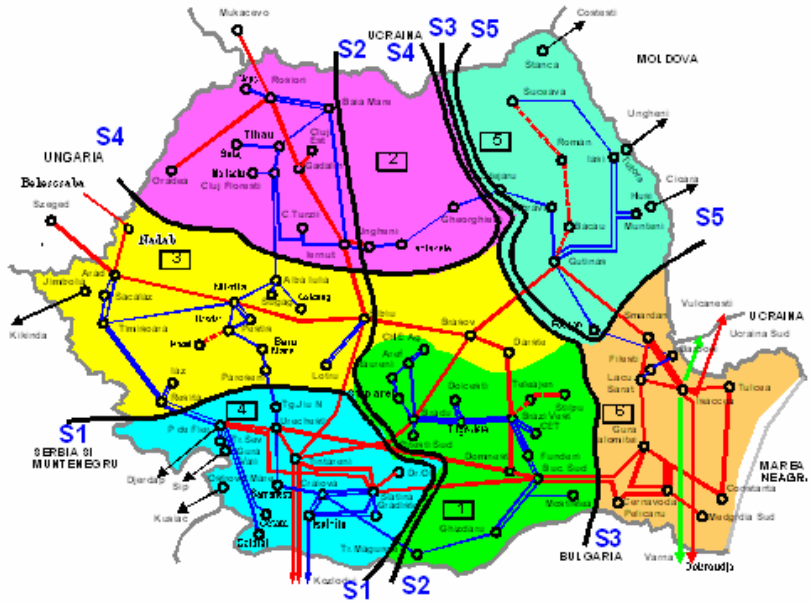


Figure 3.6. Zone tariffs for injection (Generation) of electricity in the transmission network

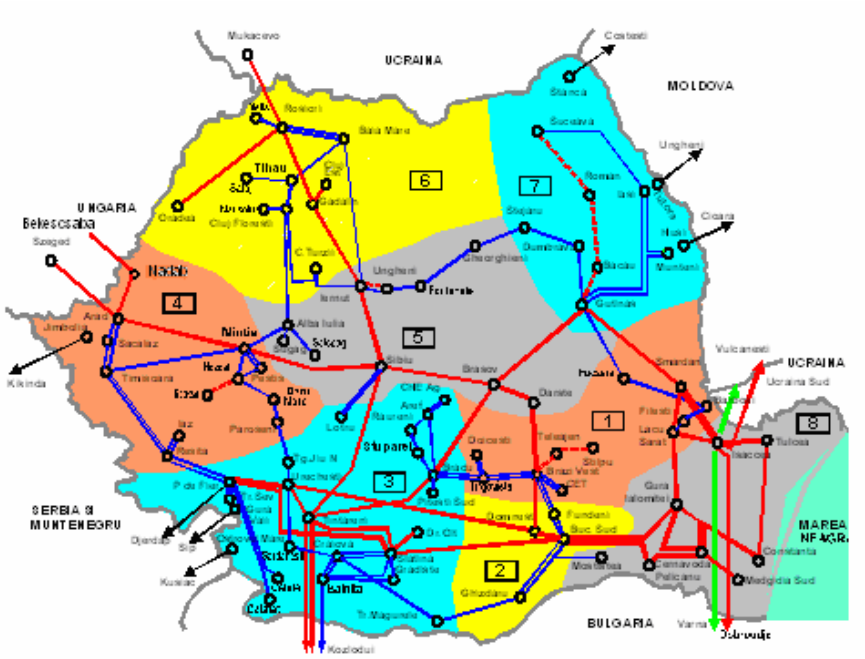


Figure 3.7. Zone tariffs for extraction (Load) of electricity from the transmission network

According to ANRE Order no. 132/2008, modified by ANRE Orders no. 79/2009 and 94/2009 the average transmission tariff was 17 lei/MWh, with an increase of 5.4 % from 2009 (16.13 lei/MWh).

The evolution of the average tariffs for transmission and system services for the second regulation period (2008-2010) are presented below:

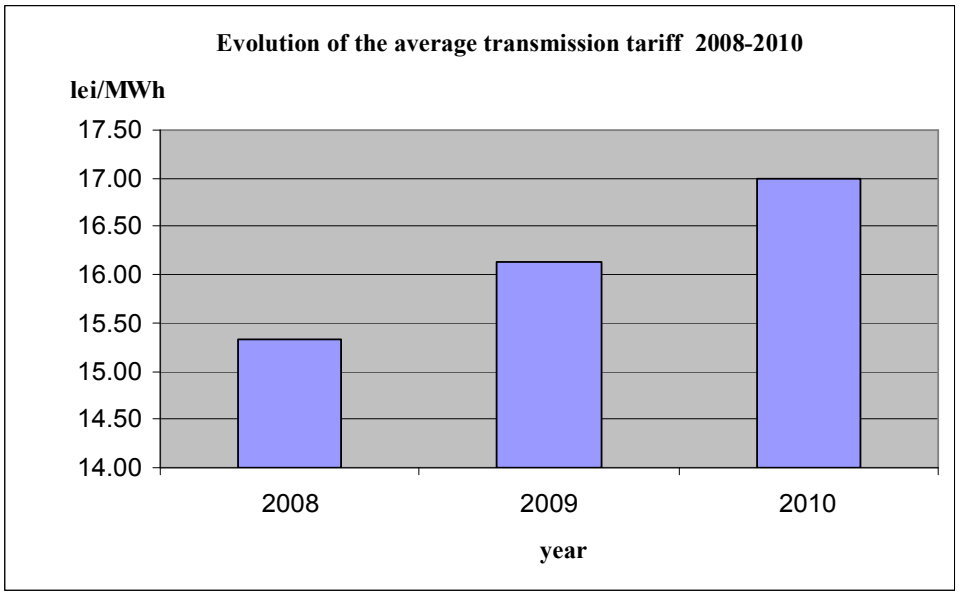


Figure 3.8

According to ANRE Order no.101/2009, the average transmission tariff in 2010 was 17 lei/MWh and the average injection tariff (T_G) was 8.41 lei/MWh. The T_G value for the six injection zones is ranged within 4.76 ÷ 9.96 lei/MWh. The average extraction value (T_L) for the 8 extraction zones was 8.59 lei/MWh with values ranged within 6.63 ÷12.01 lei/MWh.

In 2010, 37 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".

Based on this regulation method, regulation periods are set for 5 years, excepting the first period which was only for 3 years 2005-2007). Considering that since 2008 the second regulation period has started, with **ANRE's Order no. 24/2010** it was acomplished the completion of tarrif setting methodology for energy distribution system / Revision 1, approved by ANRE Order no. 39/2007**.**

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;

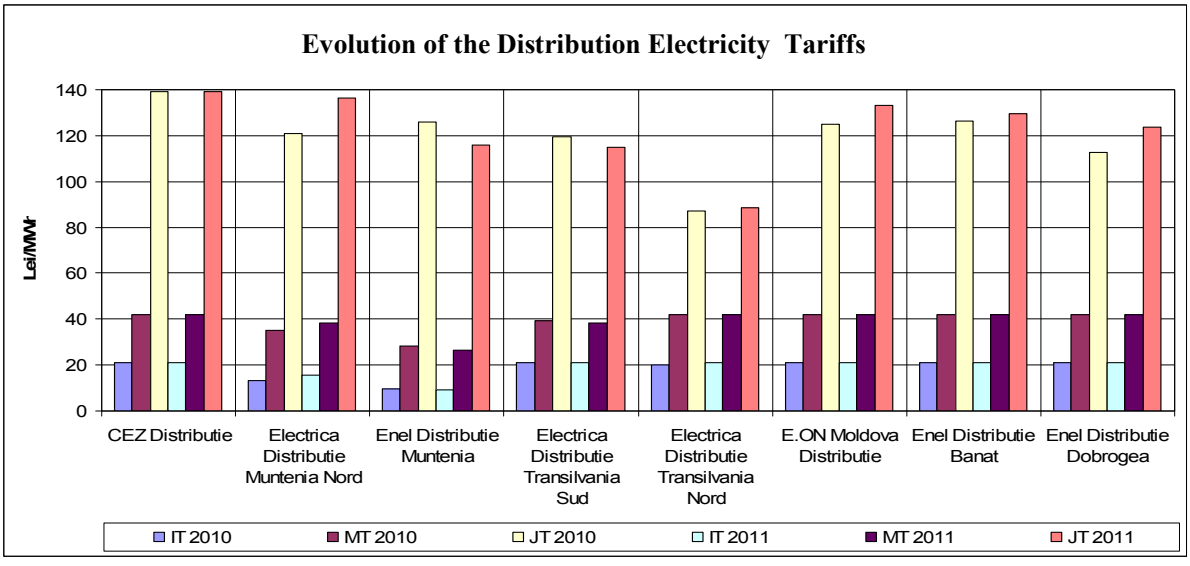
f) Promote efficient investments in the electricity distribution network;
g) Promote efficient practices for the electricity distribution network operation and maintenance;
h) Ensure the efficient use of the existing infrastructure;
i) Ensure the distribution network safe operation;
j) Improve the quality 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.

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 3.8

In 2010 was distributed an amount of 40,851 GWh of electricity, up 4% compared to 2009, when it distributed a quantity of 39 399 GWh

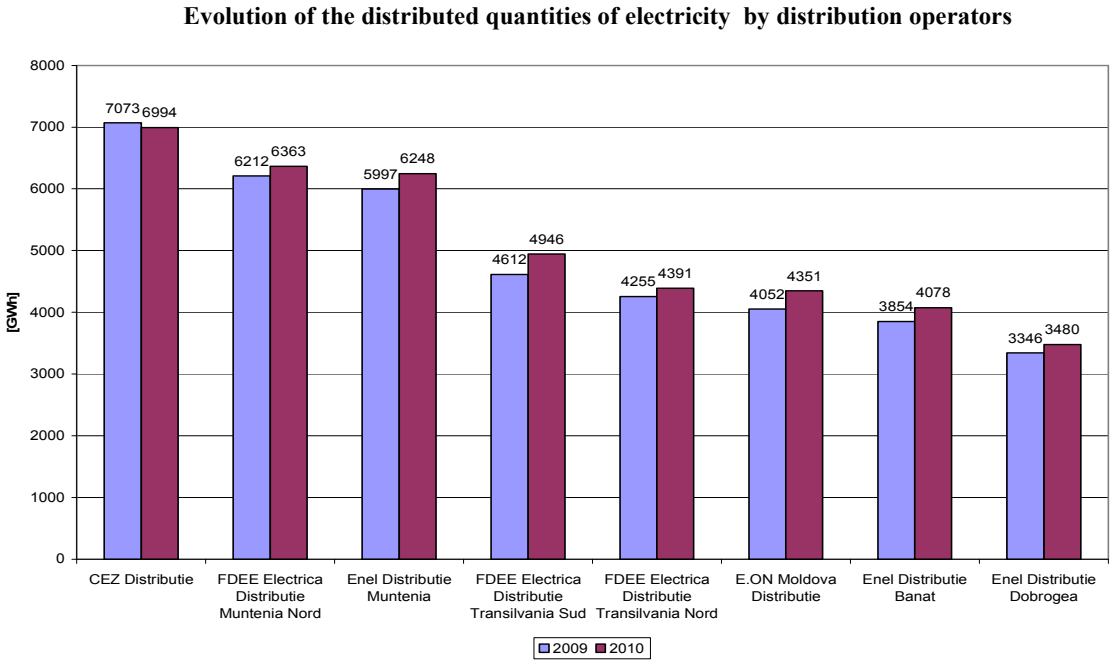


Figure 3.9

Share of electricity distributed in 2010 by main distribution operators.

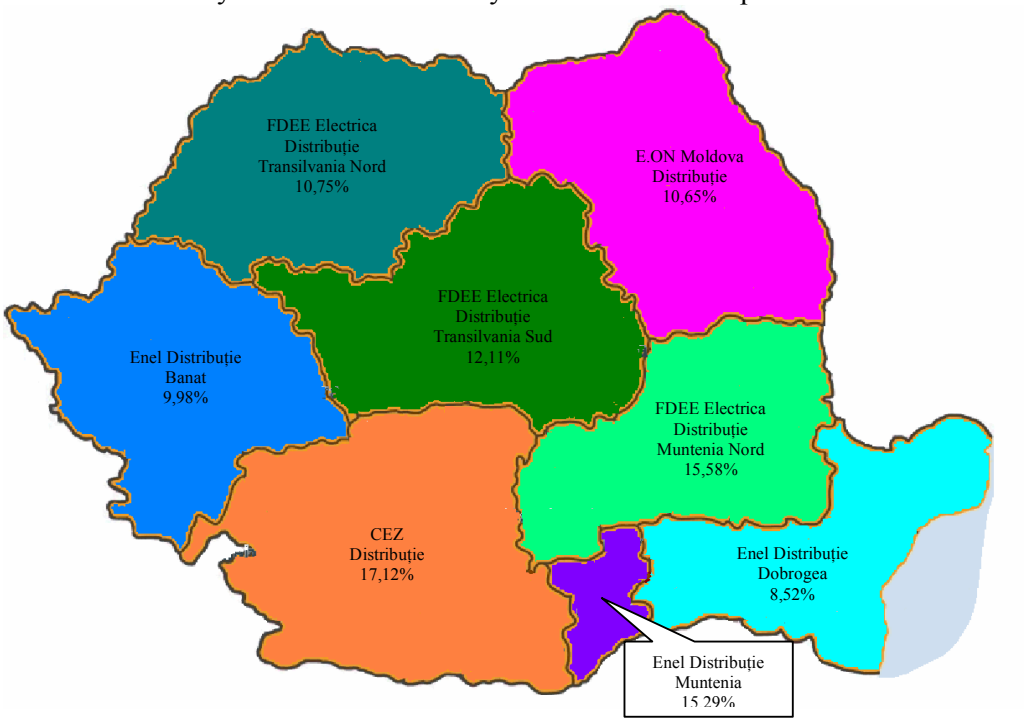


Figure 3.10

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) entered 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 in 2010 for Romania are provided in the table below. Compared to 2009, the number of interruptions per year in urban and rural areas and the number of minutes of interruption per year in urban areas declined, but the number of minutes of interruption per year in rural areas has increased.

Place	**SAIFI (Interruptions/year) Scheduled interruptions**	**SAIFI Interruptions/year) Unscheduled interruption due to DSO**	**SAIFI (Interruptions/year) Total interruptions**
Urban	0,5	4,0	4,5
Rural	2,3	8,6	10,9
Average values	1,3	6,1	7,4

Place	**SAIDI (min/year) Scheduled interruptions**	**SAIDI (min/year) Unscheduled interruption due to DSO**	**SAIDI (min/year) Total interruptions**
Urban	120	316	436
Rural	577	1041	1618
Average values	323	638	961

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)

In December 2010, 19 producers operated on the market helding 137 dispatchable units and 110 BRPs (balancing responsible parties) were active.

Table 3.1. presents 2006, 2007, 2008, 2009 and 2010 comparative amounts for the concentration indicators determined based on actual energy delivered by producers on BM for each type of control and meaning.

Table 3.1.

BM concentration index values

Year	Regulation type	Direction	2006	2007	2008	2009	2010
C1	Secondary	upward	80%	60%	71%	64%	68%
		downward	80%	56%	71%	64%	67%
	Fast tertiary	upward	69%	51%	70%	55%	53%
		downward	53%	30%	38%	47%	62%
	Slow tertiary	upward	29%	29%	27%	39%	45%
		downward	31%	19%	27%	32%	34%
HHI	Secondary	upward	6510	3915	5438	4526	5067
		downward	6612	3538	5367	4501	4943
	Fast tertiary	upward	5061	2979	5065	3543	3320
		downward	3452	1590	2319	2843	4204
	Slow tertiary	upward	2203	1769	2021	2478	2749
		downward	2582	1276	1838	2017	2089

BM concentration index values for 2010 show the existence of a dominant participant and an excessive BM concentration for the secondary, the fast tertiary and slow tertiary upward regulation revealing an upward of the concentration for almost all the components.

Given the high concentration level recorded constantly on BM, ANRE has maintained in 2010 upper limit of the tender pricesin the market on the value of 400 lei/MWh.

The annual volume traded on the BM in 2010 dropped 11% by comparison with 2009, and the monthly value was constantly below the one traded on the DAM, as shown in the next *figure*.

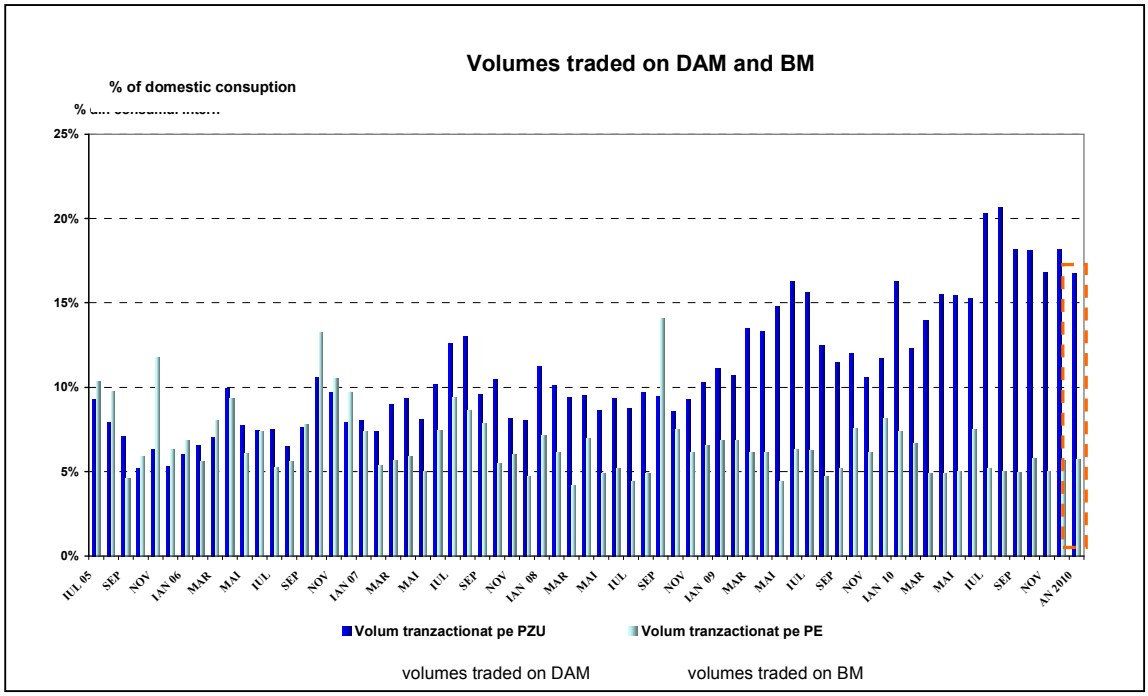


Figure 3.11

The next figure shows the evolutions of the monthly average settlement price for the imbalances recorded by PRE's (surplus price and deficit price) for 2005, June-2010, December.

The average values of the settlement price for 2010 were: 232 lei/MWh the deficit price (by about 4.5% lower than the one in 2009) and 40 lei/MWh surplus price (by about 46% lower compared to 2009).

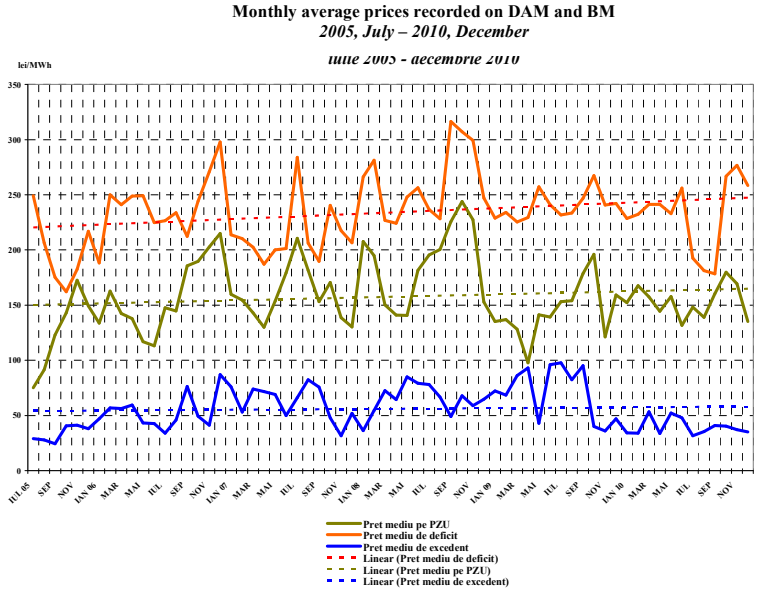


Figure 3.12

3.1.3 Effective unbundling

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

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

CN Transelectrica SA ownership structure 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, 29 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

3.2.1 Description of the wholesale market

Structure of the electricity generation sector

At the end of 2010, there were 128 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 2010, a new installed electricity generating capacity on wind has

emerged. Because the power of these capacities is less than 10 MW installed capacity or they were on probation period, they were not monitored in terms of electricity production.

The structure of the net electricity generation in 2010 is shown in *table 3.2.* - only for the producers with dispatchable units-as they are the subject of market monitoring.

Table no. 3.2

	Electricity generation	
	TJ	**GWh**
S.C. Hidroelectrica S.A.	71467	19852
S.N. Nuclearelectrica S.A.	41843	11623
S.C. CE Turceni S.A.	22201	6167
S.C. CE Rovinari S.A.	18450	5125
S.C. CE Craiova S.A.	16420	4561
S.C. Electrocentrale Bucureşti S.A.	14231	3953
S.C. Electrocentrale Deva S.A.	6656	1849
S.C. Termoelectrica S.A.	3949	1097
Alţi producători	17683	4912
TOTAL	**212900**	**59139**

In 2010 electricity production increased by approx. 4.3% compared to 2009 and electricity supplied by major producers in the network (owners of dispatchable units) increased by approx. 4.8% to about 54.94TWh. Compared to 2009, in 2010 there were decreases in delivered energy based on oil (47%), gas (5%) and solid fuel (4%). The energy produced on nuclear fuel remained approximately constant. Resource that has provided of total energy delivered was the water (whose contribution increased by 28% compared to the last year) due to an extremely favourable hydrological year compared to the last 3 years.

A quantity of 0.943 TWh was imported and 3.854 TWh were exported (values from transactions reported by participants, not including transits of 1.304 TWh); according to reports of the transmission system operator, the physical flows for total import (hours CET) were 1.784 TWh and for export 4.703 TWh.

The structure of the electricity market in Romania

On the electricity market are taking place wholesale and retail transactions.

The **wholesale electricity market** has the following components:

- **Bilateral contracts** (regulated, negociated or contractual obligations concluded through auctions on the centralized markets);
- Transactions concluded on the **Day Ahead Market – DAM**, where participants adjust their contractual position or to gain some profit from the difference between the contract and the spot prices;
- **Balancing Market**, which ensure the covering of the differences between the notified production and the forecast consumption. For the registred imbalances, the participants to the market have the financial responsibility.

For a greater transparency on the competitive market there were introduced two markets: the **Centralised market for bilateral contracts** (PCCB) and the **Centralised market for bilateral contracts with continuouse trading** (PCCB-NC).

In the wholesale market are also included the transactions on the **ancillary services market** and on the **interconnection capacities market**.

Starting with 2011, a new market will be introduced namely an **Intra-day market**. The new market will be developed in stages, according to a plan prepared in 2010. The first phase is expected to be achieved through the first half of 2011and the full implementation is expected within approximately 1 year. The new trading mechanism will allow market participants to balance their portfolio closer to the time of delivery. This will reduce imbalances, even if initially the market will have a simplified version, consisting of opening a single trading session immediately after the closing session of Day Ahead Market.

The wholesale electricity market

The dynamic of electricity quantities traded in 2010 as compared to 2009 by components of the wholesale market is given in *Table 3.3.*

Table no. 3.3

Wholesale market component	Traded volume in 2010 - GWh -	Evolution compared with 2009 - % -
Bilateral contracts market	50223	▲ 45.0
Regulated contracts market	28942	▼ 4.6
Export	3854	▲ 22.2
Centralised Markets for Contracts	4386	▼ 30.7
DAM	8696	▲ 37.0
BM	2965	▼ 7.5

The increase in quantities traded on the DAM is considered a positive evolution due to the positive and transparent character of this market.

A comparative analysis of the yearly average prices of the transactions closed on all the wholesale market components in 2010, emphasizes an increase of the convergence between the prices of the bilateral negotiated contracts and the ones of the centralised markets: bilateral and DAM, the yearly average prices for each of these markets being between 153 – 159 lei/MWh.

Average price on the wholesale market components	2010 - lei/MWh -	2009 - lei/MWh -	Evoluție 2010 față de 2009 - % -
Negotiated bilateral contracts market	158.89	158.68	▲ 0.1
Regulated bilateral contracts market	166.35	164.44	▲ 1.2
Export	170.90	170.23	▲ 0.4
Centralized Contracts Markets	157.01	192.54	▼ 18.5
DAM	153.09	144.77	▲ 5.7
BM (deficit price)	237.41	243.05	▼ 2.3

The regulated market of the bilateral contracts

The regulated component of the wholesale market continued to operate also in 2010 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 22%** (of which about 4% for the distribution network losses) and **hydro producers about 14%** (of which 2% for the distribution network losses). The difference of 7% is represented by the sales made on contracts with regulated prices for mutual-aid between the producers.

About 50% of the total producers' sales were made on the regulated market and 50% on the competitive market (the calculation does not include the transactions made on the balancing/imbalance market).

In 2010, the default suppliers have purchased from the wholesale market 78026 TJ (21674 GWh) for the consumers with regulated supply prices. About 99% of the total electricity was bought on the regulated market, the rest being purchased on the competitive market. The average electricity acquisition price was 166,19 lei/MWh.

For the distribution operators, the acquisition on the regulated market represented about 75% 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 23576 TJ (6549 GWh). The average electricity acquisition price was 160,92 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, BM). The volume of the transactions concluded in 2010 increased compared to 2009 with 33%, mainly due to the increase of the volume of transactions concluded by bilateral negociated contracts, export and DAM transactions.

The structure of the sales on the competitive market (excluding the BM transactions) from the producers' perspective is given bellow:

Total sales of producers on the competitive market			**100% (28847 GWh)**
A.	***Transactions closed upon bilateral negotiated contracts***		***66,7%***
	1.	With suppliers	49,8%
	2.	With external partners (export)	3,4%
	3.	With other producers	5,3%
	4.	With distributors	0,0%
	5.	With eligible consumers	8,2%
B.	***Transactions upon auctions on the centralized markets***		***15,2%***
	1.	With suppliers	13,6%
	2.	With distributors	0,0%
	3.	With other producers	1,6%
	4.	With eligible consumers	0,0%
C.	***Transactions on DAM***		***18,1%***

The structure of the sales on the competitive market from the suppliers perspective is given bellow:

Total sales of suppliers on the competitive market			**100% (59951 GWh)**
A.	***Transactions closed upon bilateral negotiated contracts***		***94,6%***
	1.	With other suppliers	56,0%
	2.	With external partners (export)	4,7%
	3.	With producers	1,0%
	4.	With distributors	0,4%
	5.	With eligible consumers	32,5%
B.	***Transactions upon auctions on the centralized markets***		***0,0%***
	1.	With other suppliers	0,0%
	2.	With producers	0,0 %
C.	***Transactions on DAM***		***5,4%***

Centralized markets for contracts

The year 2010 **registered reductions in the transactions concluded on the centralized markets for contracts**, the quantities delivered in 2010 upon prior concluded contracts on these markets representing about 9% from the internal consumption (by comparison with the 13% registered in 2009).

The volume of the transactions concluded in 2010 on the centralised markets for contracts was under 4 TWh, less with 20% than the previous year.

The average price of the contracts concluded on the CMBC was around 157 lei/MWh, lower with 18% than the similar average price from 2009 and with 3% higher than the average price on the DAM in 2010.

The number of transactions concluded on the CMBC-CT was extremely low, with only 4 transactions concluded in May, October and November, the benefits of standardizations were not taken into account by the participants.

Day Ahead Market – DAM

The electricity volume traded on the DAM in 2010 keeps its increasing trend being with 37% higher than the volume traded in 2009 and with 67% higher than the one traded in 2008. The quantitative increase from earlier periods was reflected in the share of internal consumption, which increased by four percentage points over the previous year, reaching 16.7% of internal consumption. The average closing price on the DAM, although approx. 6% higher than average for the year 2009 was one of the lowest annual average prices in Europe, placing it at a distance of 22% below the average which was around 47 euro/MWh. The following chart presents the evolution of monthly average price and volume traded on the DAM in 2006-2010.

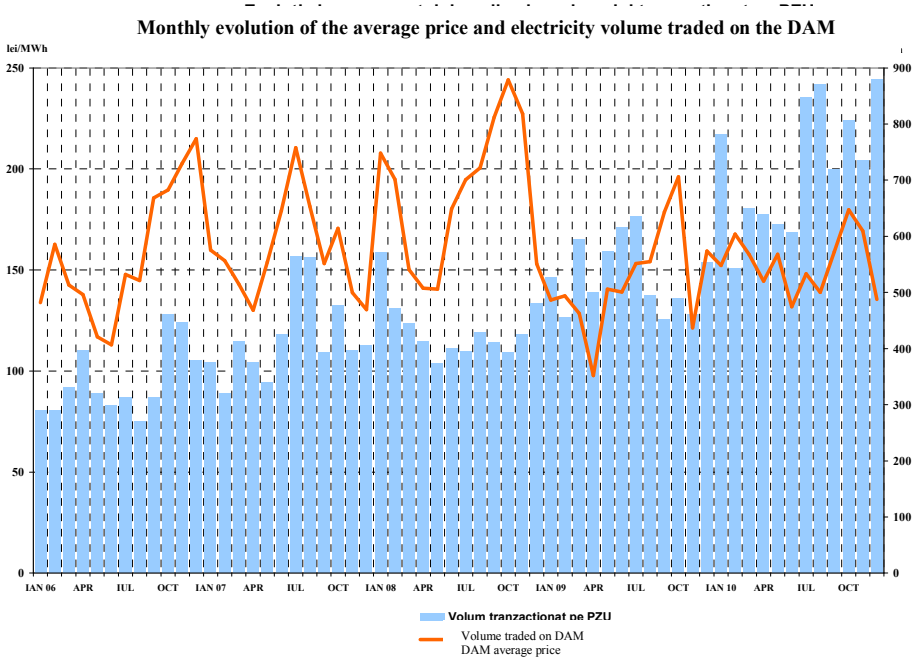


Figure 3.13

The monthly variations of the DAM average price have been in both directions, but with lower values than the monthly variations in 2009. The minimum was reached in June 2010 (about 132 lei / MWh), while the maximum was the average price of October (about 180 lei / MWh).

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 2010 (figure 3.14) it is noticed that the prices on the OPCOM market are significantly lower than the one on EXAA.

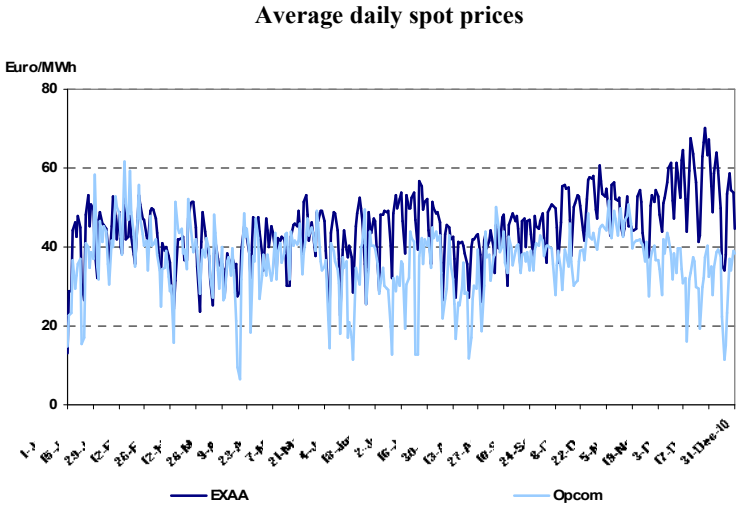


Figure 3.14

Ancillary services market

The ancillary services market works for different types of reserves: secondary, fast tertiary and slow tertiary reserve. On the ancillary services market there is a high concentration due to the hydro producer who is able to ensure a great part of the reserves. So securing the ancillary services is done mainly through regulated contracts concluded between producers and TSO, the rest being provided through contracts on the competitive market, following auctions conducted by the TSO.

The ancillary service market concentration indicators are presented in the following table:

- Year 2010 -		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve
Regulated component	Quantity (h*MW)	3.505.000	6.376.265	5.522.840
	C1 (%)	71,3	83,0	44,2
	C3 (%)	92,5	90,0	90,2

Due to the high concentration degree, the ancillary service market was fully regulated in 2010. Through regulated contracts was ensured 100% of the secondary reserve and 91% of the slow and fast tertiary reserves. The 2010 tariffs for ancillary services acquisition were at the same level with the 2009 tariffs.

The evolution of the market concentration indicators

Generation

The Romanian electricity sector did not register significant structure changes in 2010, 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 maximum net generation capacity was of **1982** in 2010. 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 maximum net 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 **67.37%** (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 **65.27%.**

Table 3.4 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 owning dispatchable units during 2004-2010 without having applied the domination principle (based on the legal structure). Because most of the electricity producers are either state- or local community-owned (through the Ministry of Economy, The Authority for State Assets Recovery, Local Councils), the monitoring of concentration indicators, those considered

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

Table no. 3.4

Average values for C1 and HHI

Year	C1	HHI
2004	32%	1573
2005	37%	1831
2006	31%	1562
2007	28%	1404
2008	28%	1523
2009	29%	1632
2010	36%	1947

F*igure 3.15* presents monthly evolution of HHI on the production (calculated on delivered energy to the grid by generators) compared to 2004, 2005, 2006, 2007, 2008, 2009 and 2010.

Monthly evolution of the HHI on the wholesale market

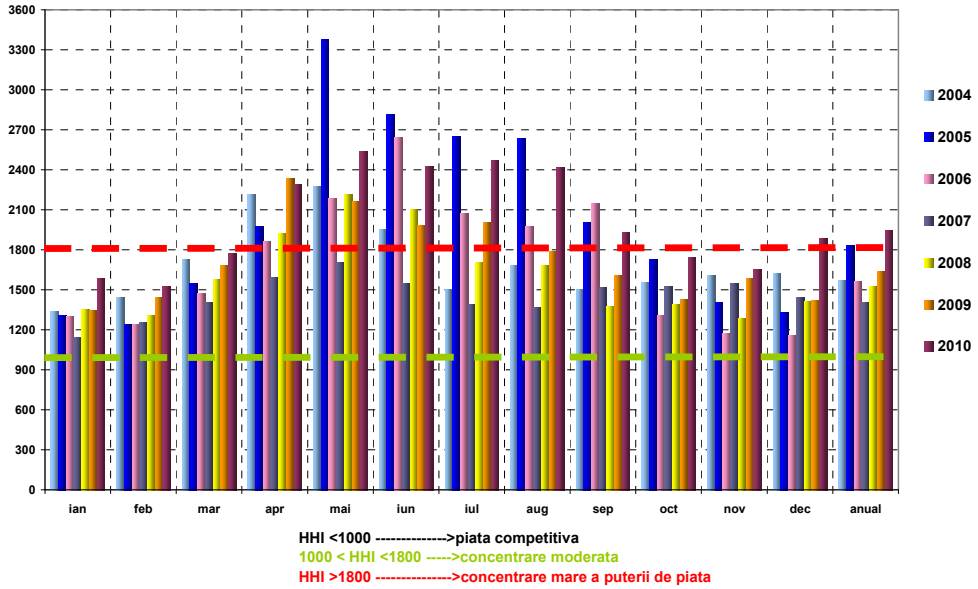


Figure 3.15

The high value of HHI compared with 2009 is due to high electricity production of Hidroelectrica in 2010, higher with 28% than the 2009 electricity production.

Day Ahead Market

HHI indicator on concentration on DAM had values generally indicating a lack of concentration on buy side (monthly values in 474-927) with only exception – month November 2010 – when the HHI value was 1177; on the sell side the HHI values are higher than 2009 with monthly values between 919 – 1385 and a peak in August 2010 when the HHI was higher than 1800.

Concentration indicators on DAM, calculated per year based on the transacted volumes, had the following values in 2006, 2007, 2008, 2009 and 2010.

Table no. 3.5

Year	Sell			Buy		
	HHI	C3 [%]	C1 [%]	HHI	C3 [%]	C1 [%]
2006	562	30,54	17,49	902	42,92	22,78
2007	448	26,61	11,64	497	28,86	10,84
2008	573	32,28	16,70	592	32,33	14,00
2009	558	29,08	14,22	612	34,88	14,18
2010	838	42,41	16,23	461	25,45	11,02

Source: SC OPCOM SA data

The same indicators, calculated based on the annual offers, registered the values presented in *Table 3.6*.

Tabel no. 3.6

Year	Sell			Buy		
	HHI	C3 [%]	C1 [%]	HHI	C3 [%]	C1 [%]
2006	620	37,19	14,43	1601	56,22	35,43
2007	563	31,36	12,75	930	42,04	24,99
2008	756	72,80	17,28	711	37,14	15,58
2009	764	41,42	16,33	673	36,44	14,80
2010	1097	52,89	19,20	433	23,39	10,09

Source: SC OPCOM SA data

The monthly evolution of HHI index at sell and buy in 2010 are presented in *figure 3.16 and 3.17* (the indicators are calculated based on the transacted volumes) in comparison to the monthly average closing price on the day-ahead market in order to highlight the possible correlations between the two.

The 2010 evolution of the monthly HHI at sell on the day-ahead market (based on transacted quantities) in comparison to the Market Closing Price (PIP)

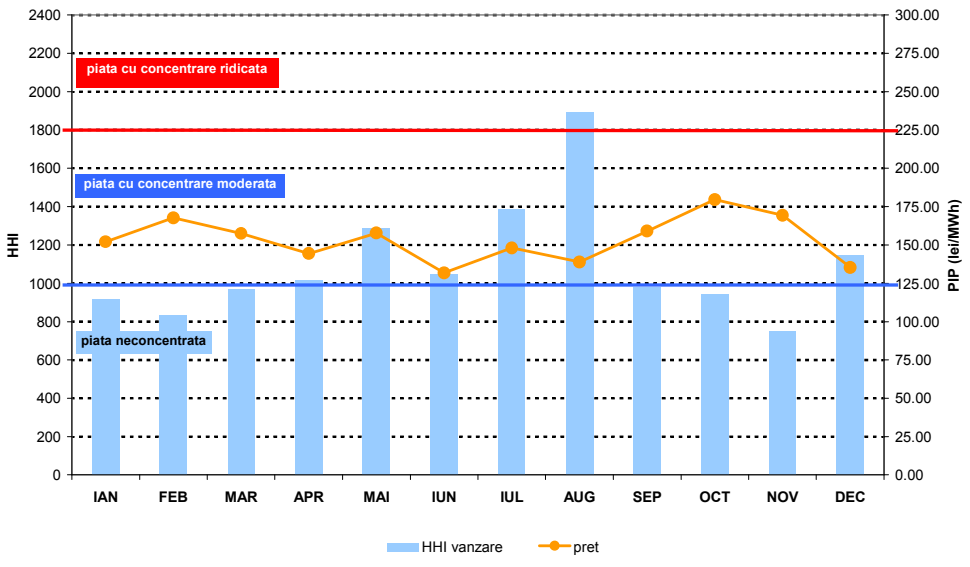


Figure no. 3.16

Source: data by SC OPCOM SA, interpretation by ANRE

The 2010 evolution of the monthly HHI at buy on the day-ahead market (based on transacted quantities) in comparison to the Market Closing Price (PIP)

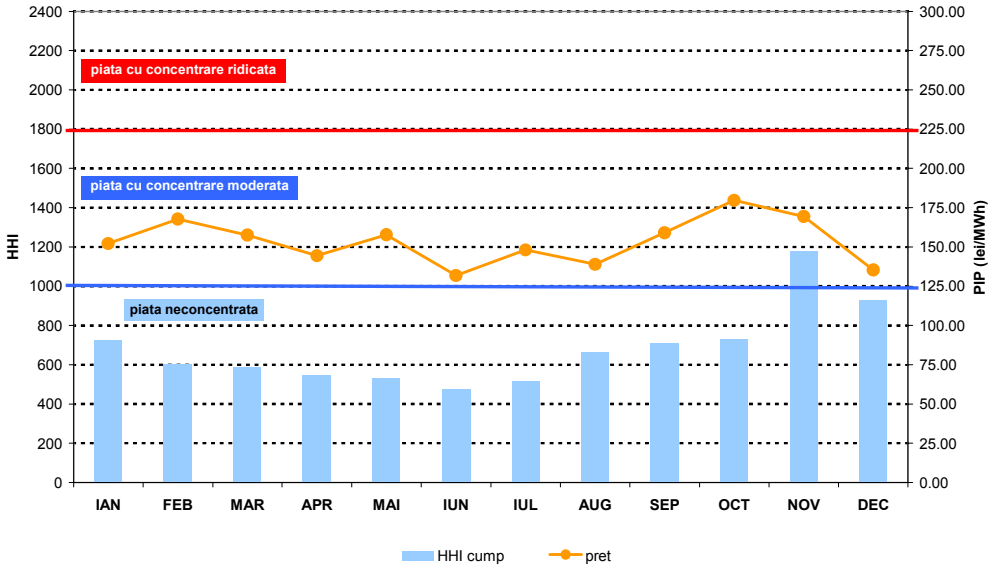


Figure no. 3.17

Source: data by SC OPCOM SA, interpretation by ANRE

Centralised market for bilateral contracts

In the next tables are presented the concentration indexes for CMBC and CMBC-CT during the working years.

Table no. 3.7

Concentration indexes for CMBC, based on transaction volumes yearly concluded

Year	Sell			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
2010	4048	98,80	45,22	2660	76,87	45,22

Source, data, interpretation and analysis - SC OPCOM SA

Table no. 3.8

Concentration indexes for CMBC, based on yearly offers volumes

Year	Sell			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
2010	3194	83,86	49,31	3677	93,67	42,27

Source, data, interpretation and analysis - SC OPCOM SA

Table no. 3.9

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

Year	Sell			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
2010	7806	100	87,93	3312	93,10	46,55

Source, data, interpretation and analysis - SC OPCOM SA

Table no. 3.10

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

Year	Sell		
	HHI	C3 [%]	C1 [%]
2007	2759	68,30	41,38
2008	5784	95,06	6,92
2009	4299	94,64	60,75
2010	4198	96,40	55,20

Source, data, interpretation and analysis - SC OPCOM SA

Concentration indexes calculated both for offers launched in 2010, and for quantities of power corresponding to the contracts concluded during this year, highlights an excessive concentrated market for both markets CMBC and CMBC-CT, with a maximum on the sell side of CMBC-CT.

3.2.2 Description of the electricity retail market

In 2010 on the retail market were active 55 suppliers, of which 6 have generation license and 7 are the default suppliers – 3 state-owned and 4 with private majority ownership.

The economic crisis had a significant influence over the electricity final consumption. In 2010 the final electricity consumption had decreased with 5% compared with the 2008 final consumption and had increased with 4% compared with the 2009 final consumption. In 2010, the household's consumption increased in the final consumption with 8% compared with 2008 and 2% compared with 2009.

In December 2010 the total number of consumers supplied on the regulated market was **8914618** of which non-households – **591756** and households - **8322862**. The total amount of electricity supplied on this market was about **23365** GWh, thus registering a decline of about 7% compared with 2009, in a increase in total final consumption by about 4%.

In December 2010, **8323** eligible consumers were on the competitive market. The electricity supplied to the eligible consumers in 2010 was **22075 GWh**, with an increase of 19% compared with 2009.

The number of consumers on competitive market is presented graphically as cumulative value from the beginning of market opening.

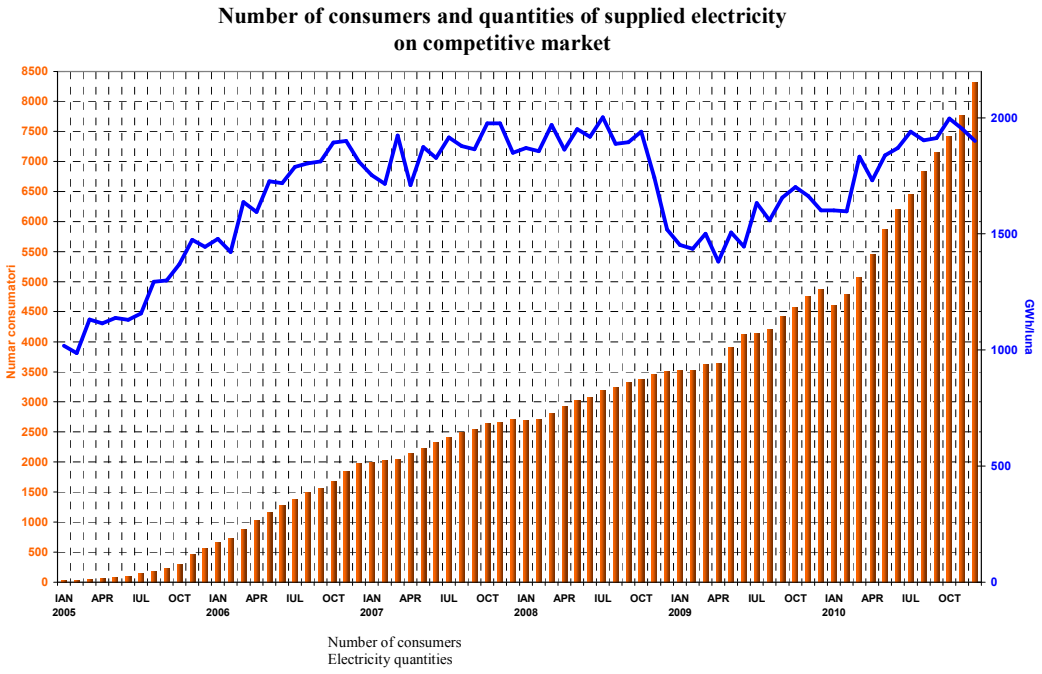


Figure 3.18

In 2010, the real market opening degree increased with 6% compared with 2009, the eligible consumption was 51% from the total final consumption.

Annual evolution of the average retail market opening degree is presented in *figure 3.19.*

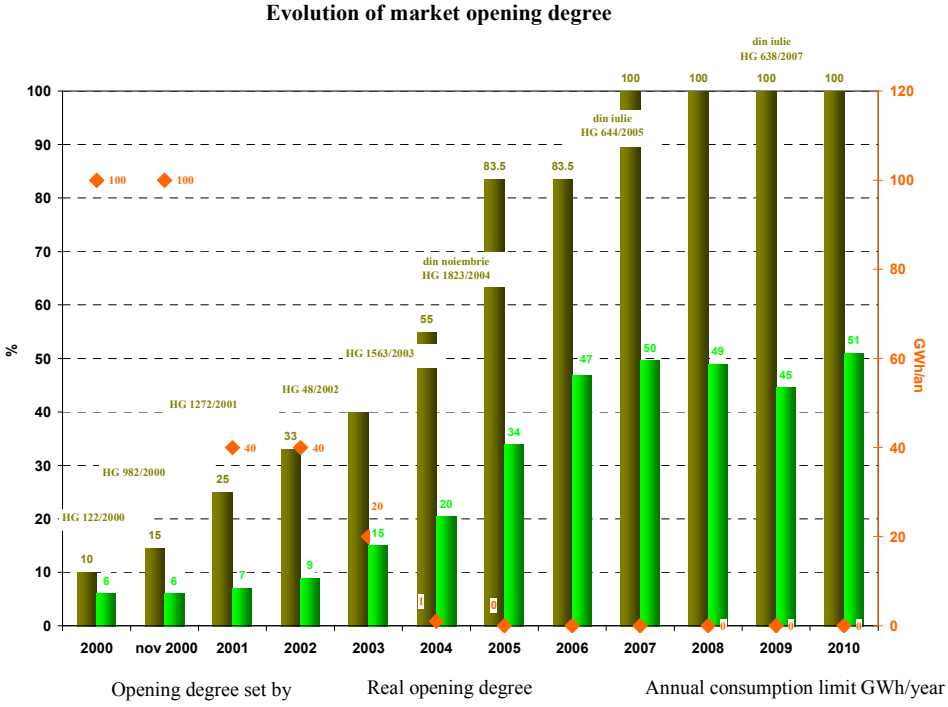


Figure 3.19

The switching supplier rate for year 2010, presented in *table 3.11*, is determined for each type of consumers in two ways: in terms of number of consumption places that have switched

suppliers in 2010 and according to the energy supplied to the consumer places. It is mentioned that the consumption of the largest industrial consumers which own and a supply license and decided to purchase power on the wholesale market, as a competitive suppliers, is not included.

Table no. 3.11

No.	Consumer type	Rate of switching the supplier	
		No. consumer sites	Electricity supplied
1.	households + small non-households (contracted power less or equal to 100 kVA)	0,0539%	0,8583%
2.	large non-households (contracted power between 100kVA and 1000 kVA)	4,308%	5,081%
3.	very large non-households (contracted power more or equal to 1000 kVA)	21,522%	14,746%
4.	**TOTAL retail market**	**0,066%**	**6,837%**

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 and electricity supplied for small and households' consumers and for large non-households consumers have increased, which indicates that the switching rate from one supplier to another increased for these categories.

The evolution of the switching rate determined by the number of consumer places, for 2008-2010 period, is presented in the next figures.

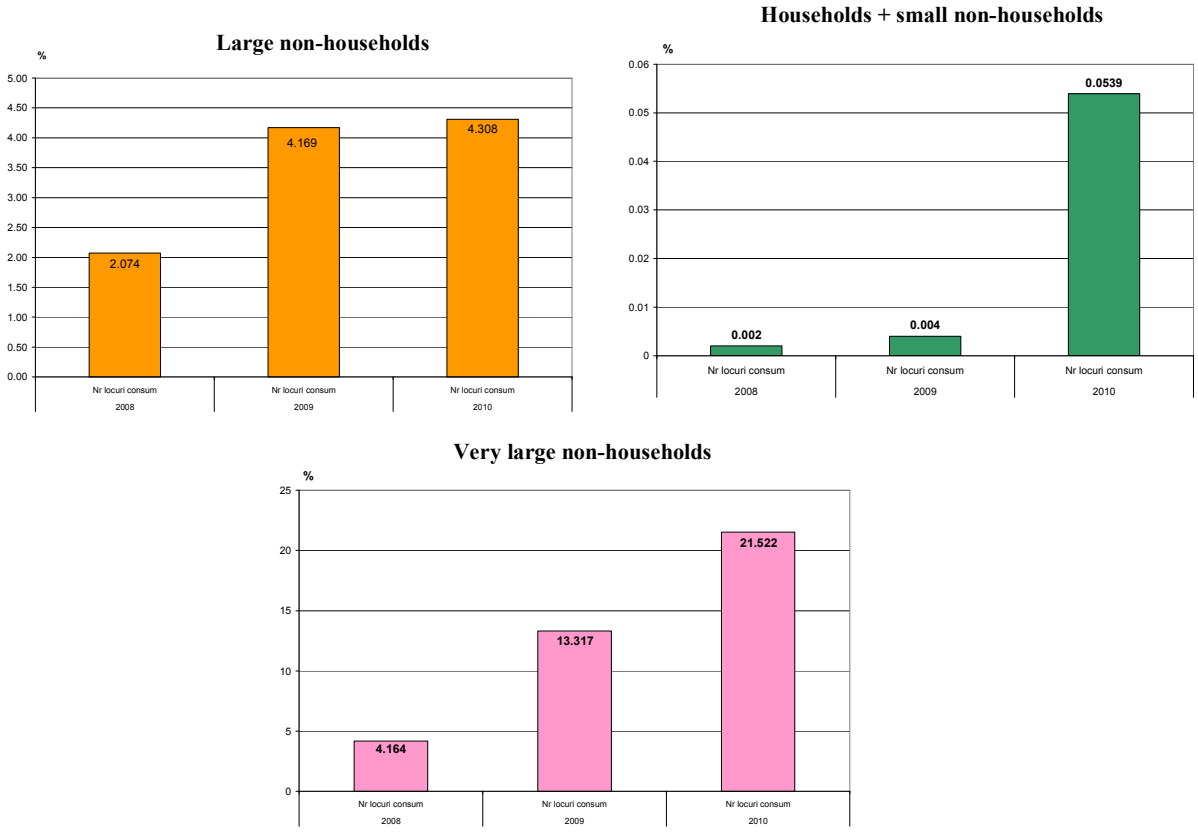


Figure 3.20

Table 3.12 presents information on the number of suppliers with market shares higher than 5% and the concentration indicators on each type of final consumers, in 2010.

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 consumers which own a supply license and decided to buy the electricity from the wholesale market as a competitive suppliers.

Table no. 3.12

No.	Consumer type	No. of suppliers with market shares higher than 5%	C1	C3	HHI
1.	households + small non-households (contracted power less or equal to 100 kVA)	5	38%	73%	2373
2.	large non-households (contracted power between 100kVA and 1000 kVA)	6	26%	59%	1529
3.	very large non-households (contracted power more or equal to 1000 kVA)	4	19%	49%	987
4.	TOTAL retail market	**6**	**29%**	**51%**	**1333**

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

Values of market structure indicators calculated for 2010 shows:

- a moderate level of concentration throughout the retail electricity market and for large and very large non-households;
- a high concentrated market for the retail segment corresponding to small non-households + households.

Prices and tariffs

Tabel 3.13 presents the electricity average prices for 2005, 2006, 2007, 2008, 2009 and 2010 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.

Table no. 3.13

	Average price											
	lei/MWh						Euro/MWh					
	2005	2006	2007	2008	2009	2010	2005	2006	2007	2008	2009	2010
Consumers on regulated market	**286**	**316**	**340**	**354**	**370**	**384**	**79**	**90**	**102**	**96**	**87**	**91**
Consumers on competitive market	**144**	**168**	**188**	**224**	**242**	**244**	**40**	**48**	**56**	**61**	**57**	**58**

The selling prices for the consumer categories listed in *table 3.14* resulted from the synthesis of data for eligible consumers and those who choose not to change supplier.

Table no. 3.14

Consumer type	Euro/MWh				
	Network tariff	**Taxes on network tariffs**	**Price of electricity acquisition**	**Taxes**	**Total price**
Households with an annual consumption between 1000 and 2500 kWh/year	50.05	0	35.70	21.8	107.53
Commercial consumers with an annual consumption between 2000 and 20000 MWh/year	22.80	0	47.63	17.48	87.91
Average industrial consumer with an annual consumption between 20000 and 70000 MWh/year	20.33	0	42.11	15.58	78.02
Large industrial consumer with an annual consumption between 70000 and 150000 MWh/year	14.37	0	42.37	14.14	70.88

Average annual rate of euro for 2010: 4,2099 RON

Complaints and pre-contractual disputes solving activity

During 2010, ANRE has registered and resolved a number of **1281 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.

The main topics in the complaints are found in the next table.

No.	Main topics	Total	[%]
1	Quality of electricity supplied	306	23.89%
2	Billing	263	20.53%
3	Issuing connection permits	126	9.84%
4	Metering	98	7.65%
5	Electricity distribution/supply in residential locations and industrial platforms	93	7.26%

The **request of information under the Freedom of information Act** made via phone, free-toll line, email or post addressee mainly the following subjects of interest: qualification/certification of electricians/contractors – 75.2% renewable – 13.4%, prices and rates – 2.8%, issuing licenses - 2.7%, network connections – 1.6%, billing -1.1%, cogeneration – 0.8%, energy efficiency – 0.8%, technical regulations – 0.6%, switching supplier – 0.6%, contracting activity – 0.3%, metering- 0.1%.

Solving pre-contractual disputes

In the electricity sector, according to the *Procedure for solving disputes about the conclusions of contracts between operators in the electricity sector, the electricity supply contracts and contracts for connection to the network*, approved by Order ANRE. 38/2007, ANRE analyzes and solves:

• pre-contractual disputes arising from the conclusion of contracts between operators in the electricity and cogeneration sectors,
• disputes regarding the users connection to public electricity networks and issuing establishment permits.

In 2010, there were 14 requests for settlement of disputes according to the procedure mentioned above. Six requests have met the conditions for applying the above procedure, one of which was resolved following the preliminary stage and the other 5 after completing the stage itself.

3.2.3. Measures to avoid the abuse of dominance

The concept of **abuse of dominant position** is defined in Article 6 of the Competition Law no. 21/1996 republished, with subsequent amendments, which prohibits: "any abuse of a dominant position by one or more operators on the Romanian market or a substantial part of it, through the use of anti-competitive acts that have object or may result in injury or damage to business or customers. "

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 market and the infringement of competition legal provisions, as many times as the legal provisions on competition and transparency are non-observed.

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. 21/2010 and *Methodology for the monitoring of the retail electricity market* approved by ANRE Order no. 22/2010.

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;
- 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.

Some of the analyses conducted during 2010 were related with:

- **the evolution and management of electricity transits by the TSO**. Analysis was performed for the first four months of 2010 compared with same period of last year. It was found that the share of transit volumes in the final consumption was much higher than the previous year, suggesting a preference of the suppliers to trade electricity on other European markets whose prices were higher than those recorded in Romania;
- **the quantities of electricity purchased and/or sold by the participants to the wholesale electricity market in the second quarter 2010 compared with same period of 2008 and 2009**. In the context of a market that has prevailed offers for sale of

electricity as a result of a hydraulicity well above the normal range an increased buying activity based on negotiated contracts from suppliers and reduced attractiveness of the participants for transactions on centralized electricity market was observed;

- **the activity of some economic operators from MECMA portfolio on the electricity market** between July and September 2010. There were compared some negotiated contracts between producers as well as some contracts negotiated by the SC Electrica SA with its own branches of supply with similar negotiated contracts concluded on the competitive market. As a result of the analysis some remedies have been proposed within the law.

4 Regulations and performances on natural gas market

4.1 Regulatory Issues

In 2010, the activity of setting up specific regulations concerning the organization, functioning and development of the national gas market concentrated on adopting several ANRE orders and decisions , as follows:

-**the establishment of the natural gas stock** that natural gas supply licenses holders is required to hold in the underground storages at the conclusion of the injection activity in 2010 in order to ensure continuity and security of supply- **Order of ANRE President no. 2/21.01.2010.** For the gas supply licenses holders providing regulated supply of natural gas, the minimum stock has been at least 25% of the natural gas estimated to be provided to the end users, under regulated regime in 2010, and for the natural gas supplied on the competitive segment was considered a rate of 12.5% of the amount estimated to be delivered to the end users on the competitive market, in 2010. Natural gas stock is cumulative if a supplier provides natural gas on both the regulated and competitive segment,
-approval of the **Procedure for assessing the conditions for the conclusion of contracts for providing interruptible transmission services** of the natural gas through the National Transmission System developed by SNTGN Transgaz SA in compliance with Art. 5(4^2) of the Order MEC/ANRGN/ANRM no. 102136/530/97 from 2006 subsequently modified and completed – Decision of ANRE President no. **1137/04.05.2010;**

- Performance standard for natural gas distribution amendment, approved as annex 2 ANRGN Decision no. 1361/2006, published in the Official Gazette of Romania , part 1, no 257 and 27 [1] of January 16th 2007, subsequently modified and completed by ANRE Order no 33/11.11.2010, towards establishing the responsability of distribution system operators the obligation to notify/inform consumers affected by the repetition of unplanned interruptios which lasted less than 24 hours of the reasons for the repeted interruption and, where appropriate, the anticipated date for resumption of service provision, within 3 hours of recurrence of interruption,

- amendment of ANRE Order no 54/2007 for the approval of the Network Code for the natural gas National Transmission system as amended and supplemented by **ANRE Order 30/11.11.2010 in order to establish conditions for capacity allocation and short term use of NTS, ie. for periods starting with one gas day,**

- approval of tariffs provided in Annex no 10 of the Network Code for the natural gas National Transmission system(**charge for discompliance with approved nomination, charge for exceeding the reserved capacity**, **charge for deliveries lower than approved nomination, charge for non-assurance of (the reserved capacity, charge for daily imbalance, charge for accumulated imbalance)** and purchase price of natural gas over-delivered (delivered in excess) in the National Transmission System approved through ANRE Order no. **31/11.11.2010;**

-the approval of **virtual and relevant entry/exit** points of National Transmission System by **ANRE Order no. 9/2010 and ANRE Order no. 10/2010**.

Starting with July 1st 2007, the market is fully opened for all consumesrs, enabeling them to choose their natural gas supllier from those licensed by the regulator, thus being able to directly negociate clauses of the contract and the price for the natural gas supply.

Consumers may become eligible consumer directly without having to fulfill any administrative formalities.

At the end of 2010 there were 1.531 eligible consumenrs on the natural gas free market, with a total consumption of 82.728.137,421 MWh, equivalent with a 56,37%.opening of the market.

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:

- **13.641** km main transmission pipelines and gas connections;
- **21** control valves stations and/or technological stations;
- **6** compression stations with an installed power of 30MW;
- **857** cathodical protection stations;
- **575** gas odorization facilities.

There are also three transit pipelines, having a total length of 551 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 NGT has 9 interconnection points with other transmission systems, 8 of them on the transit pipelines.

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 entered into force starting with gas year 2009-2010.

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

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

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

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

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

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

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

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

In order to settle the congestions, approved but unused capacity may make up the object of:
d) Voluntary return to the TSO;
e) Capacity transfer facility (CTF);
f) Mandatory transfer from one network user to another by the TSO.

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

4.1.2. Regulation of TSO and DO activities

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

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

a) NGT operation and physical balancing, namely programming, dispatching and safe functioning of the NGT;
b) Maintenance, rehabilitation, upgrading and development of NGT whilst observing the principles of safety, efficiency and environmental protection;
c) Setting up, maintenance and development of an IT system for surveillance, control and acquisition of data, that will allow for the monitoring and real time management of the functioning of the gas transmission system;
d) Third party access to the NGT in compliance with the specific regulations, in a non-discriminatory manner, in the limits of the transmission capacities and observing the technological regimes;
e) Elaboration and implementation of optimal transmission and delivery regimes for the volumes of gas notified by producers, suppliers, storage operators and/or customers, for a certain period, in accordance with signed contracts;

f) Elaboration and update of the technical agreements for exploitation at the border, in case the supplier is an exporter or beneficiary of the transit of gas through Romanian territory;
g) Drafting and surveillance of the balance of the gas that got in and out of the system;
h) Drafting of NGT's own development program – for the undertakings not mentioned in the concession agreement, in relation with the actual level of the consumption and taking into consideration the development of new consumption areas and the evolution of the existing ones under safe and economically efficient conditions;
i) Storage in the underground storages of the volumes of natural gas needed to secure NGT permanent physical balance, as per specific regulations issued by regulatory authority;
j) The level of odorization of gas in compliance with the regulations in force.

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

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

Distribution operators are titular of distribution licenses, having as a main activity natural gas distribution, in one or more limited areas. At the end of 2010, **39 companies own distribution licenses** on natural gas in Romania.

The total length of the distribution networks at the end of 2009 is about of 40,300 km. The operation of distribution networks in Romania is as it follows:

No.	Distribution network operated by:	Distribution network length (km)	Property
1.	Amarad	35.13	Private
2.	Apopi&Blumen	44.59	Private
3.	Auraplast	7.23	Private

4.	Ben & Ben	24.75	Private
5.	Berg Sistem Gaz	43.29	Private
6.	Congaz	836.69	Private
7.	Contruct P&G	22.20	Private
8.	Cordun Gaz	44.90	Private
9.	Coviconstruct 2000	117.68	Private
10.	CPL Concordia Filiala Cluj Romania	845.02	Private
11.	Design Proiect	30.76	Private
12.	Distrigaz Sud Rețele	15,051.43	Mainly private capital
13.	Distrigaz Vest	147.09	Private
14.	EON Gaz Distributie	19,341.00	Mainly private capital
15.	Euroseven Industry	70.15	Private
16.	Gaz Est	134.67	Private
17.	Gaz Nord Est	27.35	Private
18.	Gaz Sud	371.24	Private
19.	Gaz Vest	742.97	Private
20.	Grup Dezvoltare Retele (GDR)	134.42	Private
21.	Hargita Gaz	205.27	Private
22.	Intergaz	25.31	Private
23.	MM DATA	38.37	Private
24.	Megaconstruct	98.42	Private
25.	Mehedinți Gaz	15.395	Mainly private capital
26.	Mihoc Oil	11.12	Private
27.	Nord Gaz	96.04	Private
28.	Oligopol Brasov	20.80	Private
29.	Ottogaz	77.38	Private
30.	Petrom	1,044.88	Mainly private capital
31.	Prisma Serv	24.46	Private
32.	Progaz P&D (fost Progaz Distribution)	94.54	Private
33.	Romgaz	16.00	Mainly private capital
34.	Salgaz	55.81	Private
35.	Timgaz	48.07	Private
36.	Tulcea Gaz	54.66	Private
37.	Vega 93	109.79	Private
38.	Wirom	196.56	Private

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

a) To operate, maintain, repair, upgrade and develop the distribution system, whilst observing the principles of safety, economic efficiency and environmental protection. The activities shall be performed on the basis of specific authorizations for the design and execution of gas supply systems, and the operation on the basis of the distribution license;
b) To ensure the gas odorization level according to regulations in force, on the basis of service rendering contracts, signed with NGT operator, and, where appropriate, by additional odorization in gas adjusting stations;

c) To perform interconnections with other systems, as the case may be, and ensure the long term capacity of the distribution system;
d) To ensure third party access to the distribution systems, under non-discriminatory terms, within the limits of the distribution capacities, observing the technological regimes, in compliance with the specific regulations issued by the regulatory authority;
e) To draft and oversee the balance between the gas that got into and out of the system;
f) To avoid cross subsidization between categories of customers with regard to the division of costs for the booking of distribution capacity;
g) To take over, for an undetermined period, upon request and in compliance with regulations, the operation of a certain distribution system, whose initial operator was penalized with withdrawal of the license;
h) To ensure the permanent balancing of the system operated;
i) To ensure the conditions for security of natural gas supply.

According to the provisions of the above mentioned law, 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 calculation of gas prices and regulated tariffs ANRE uses its own methodology drafted by ANRGN in 2003 - „Criteria and methods for approval of gas prices and setting of gas regulated tariffs", approved by ANRGN Decision No. 1078/2003 modified and completed and ANRGN Decision No. 311/2003.

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.

In 2010 the regulated prices for the final consumers remained at the level of those approved at July 1st 2009, and distribution tariffs at the level approved at April 1st 2009.

At April 1st 2010, according to the tariff methodology, began the forth year of the second regulatory period 2007-2012 **for the underground storage activity**. To this regard, according to the methodology began the process of adjusting the regulated incomes for the gas storage operators, respectively SNGN ROMGAZ SA –storage branch Ploieşti and SC DEPOMUREŞ SA and were issued **ANRE Order no 12/2010** concerning the extension of the validity period of ANRE Order no. 632009 concerning the setting up of regulated tariffs for the natural gas underground gas storage service performed by S.N.G.N. Romgaz S.A. – Mediaş and **ANRE Order no 13/2010** concerning the extension of the validity period of ANRE Order no. 812009 concerning the setting up of regulated tariffs for the natural gas underground gas storage service performed by S.C. Depomureş S.A. - Târgu Mureş.

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 transmission operator and/or beneficiary.

At July 1st 2010, according to the tariff methodology for the **transmission activity,** the forth year of the second regulatory period 2007-2012 concluded. To this regard began the adjusting process for the total and total regulated income for SNTGN Transgaz S.A and was issued **ANRE Order no. 18/24.06.2010** concerning the extension of the validity period of ANRE Order no. 76/2009.

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 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.

A "price-cap" mechanisms is applied for calculation of the distribution tariffs and the regulated supply rates.

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:

$$VT^f = Pf * Q$$

where:
VT^f – total value of the bill, without VAT, representing the regulated supply service value, in lei ;
Q – supplied quantity, in 1,000 c.m;
Pf – final regulated price, in lei /1,000 c.m.

The regulator is entitled to refuse the operators the recognition of some costs or parts of them, which have not been prudently generated, considering the conditions and information available at the time they 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 ANRE Order No. 45/2008 and ANRE Order No. 33/2010).

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.
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	1.89	7.98	1.89	7.98	1.89	7.98	1.89
Distribution tariff	18.77	4.46	22.53	5.35	24.35	5.78	24.35	5.78

RON-EUR exchange rate for 2010: 4.2099 RON/EUR

Balancing

For 2010 for the natural gas market in Romania, no imbalance charges are applied, imbalance charges shall be comprised in the cost elements of the transmission tariff.

The NGT Network Code comprises the procedures for physical and commercial balancing of the transmission system.
Thus TSO is bound to calculate and inform each user of the network of the following:

- daily- daily provisional imbalance;

- Weekly - the provisional accumulated imbalance of the gas week
- Monthly - final daily imbalance and final weekly accumulated imbalance

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.

Gas undertakings must submit regulated financial-accounting records/registers by July first (for supply and distribution) respectively, August 31 (for storage and transmission) of the regulated year following the reporting year.

The financial-accounting assessment comprise the following:

- Income assessment,
- Expenditure assessment,
- Tangible/intangible assets assessment,
- Inventory assets assessment

42 licensed operators performing regulated activities for natural gas supply, distribution, storage and transmission and 35 licensed operators on the free market were subject to the analysis of the financial-accounting records.

Also, natural gas undertakings must submit to ANRE for analysis and approval, unbundling reports, activity involving verifying the hypothesis, criteria and rules representing the base for drawing up distinct financial-accounting records in order to obtain information regarding: income, expenditure, tangible/intangible assets and inventory assets for the regulated activities performed.

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

Regarding the obligation of legal unbundling of the underground storage activity, it was accomplished in 2007 by the storage operator S.C. AMGAZ S.A.; for the storage operator S.C. 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.

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

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

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

Natural gas consumption has been relatively constant for the past years, around 13-14 billion cubic meters, increasing with approximately 5% in 2010 compared with 2009, due to the increasing number of eligible consumers that have chosen to be interruptible consumer and who, from June 2009 to October 2010 have consumed natural gas only from the internal production, according to the unic article, alin (3) from the Law no. 332/11.11.2009 for the approval of the GEO no. 54/2009 on establishing temporary natural gas measures. Distributing consumption among the two big categories, household and non-household consumers, as well as among household consumers subcategories has maintained on a constant level.

Natural gas production decreased 36 billion cubic meters produced in mid '80s, 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%.

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 1st, 2007, so that all natural gas customers have now the opportunity to choose their supplier.

In 2010, the total consumption of natural gas was 146.762.322,350 MWh, from which 117.053.537,455 MWh represents non-household consumption (79,75%) and 29.708.784,895 MWh represents household consumption (20,25%).

In 2010, total amount of natural gas household consumers was 3.031.993, from which 176.334 non-household consumers (5,82%) and 2.855.659 household consumers (94,18%).

The consumption is supplied both from internal production and from import. In 2010, the internal natural gas production was 117.897.720,551 MWh, and the import amounted to 24.145.776,911MWh.

The number of participants on the natural gas market in Romania has constantly increased while the marked was liberalised, especially in the natural gas distribution and supply sector, having, at the end of 2010:

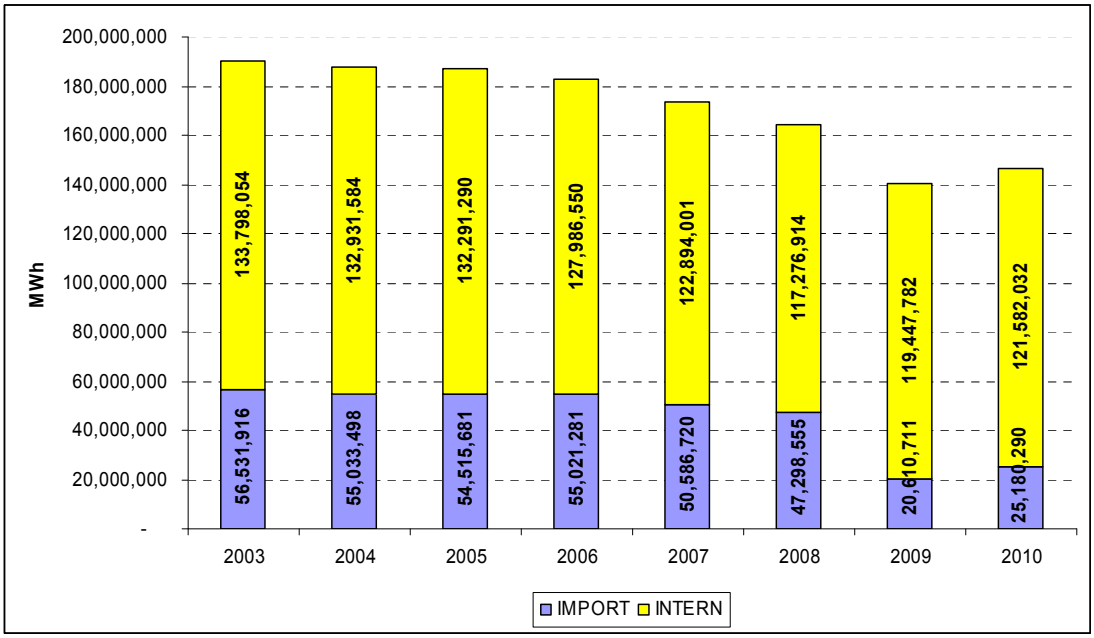
- a National Transmission System operator – SNTGN Transgaz S.A. Medias
- 8 producers: Romgaz, OMV Petrom, Amromco Ploieşti, Amromco New York, Aurelian Oil&Gas, Lotus Petrol, Foraj Sonde
- 2 operators for underground storage: Romgaz, Depomureş
- 39 companies for natural gas distribution and supply to captive consumers – the biggest are GDF Suez Energy România and E.ON Gaz România

- 37 suppliers that act on the competitive segment of natural gas market

The domestic gas production for 2010 that entered into consumption amounted to 82,84% from the total resources. First two producers (Romgaz and OMV Petrom) covered 97,40% out of this source.

In 2010 the import represented the difference – 17,16%. First four importers – domestic suppliers – with a import market quota of over 17% each, covered 87,46%.

Figure 4.1



- the numbers in the figure represent the current and storage extracted domestic production and import

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

The share of top 3 suppliers, calculated on the basis of the volumes traded on the wholesale market, is 84.53% and on the retail market it is 60.47%.

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	4	94.33
Large industrial customers	3	89.74
Commercial customers	3	87.38
Household customers	2	93.00

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 2010 was 11.17 lei/MWh.

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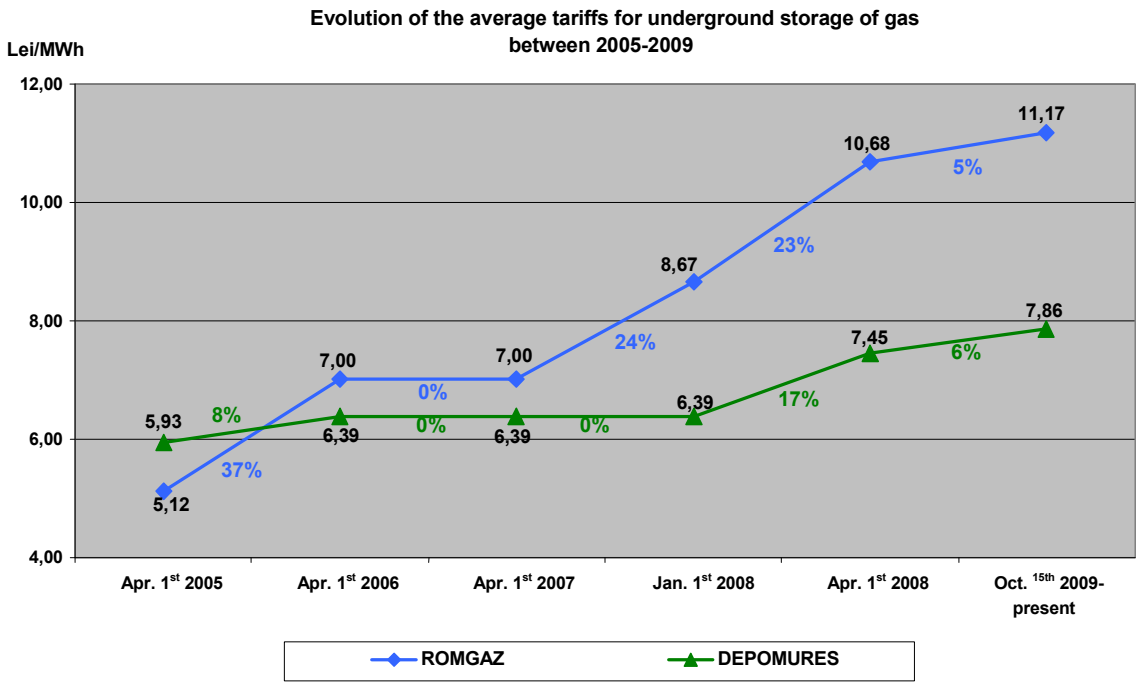


Figure 4.2

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 2010, 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	18.40 %
	Eligible customers	59.00 %

HOUSEHOLDS	Customers who did not choose to change their supplier	22.59 %
	Eligible customers	0.01 %

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

Supplier	***Share in total sources (%)***
Romgaz intern	43.84
OMV Petrom	36.80
Romgaz import	4.59
GDF Suez Energy Romania	4.18
Wiee Romania	3.18
E.ON Energie Romania	3.06
Amromco Ploiesti	1.34
Elcen Buc.	1.23
Amromco New York	0.45
Conef Gaz	0.37
OMV Petrom Gas	0.35
Aurelian Oil&Gas	0.24
Lotus Petrol (former Toreador)	0.10
Termoelectrica	0.07
Tinmar	0.06
Alpha Metal	0.04
Wintershall Medias	0.03
EGL Gas & Power	0.03
Foraj Sonde	0.03
Arelco Distributie	0.01

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

The total consumption in 2010 of the main final consumers were:

	MWh
Categories of consumers	**133.364.252,867**
Household	29.708.784,895
Other non-household	5.832.576,422
Commercial	10.667.420,090
Power and/or thermal generation	32.851.672,255
Other industrial	23.691.940,978
Chemical industry	30.611.858,227

On the **regulated market**, in 2010, the consumers on the regulated supply market segment were served by 39 suppliers, the total number of these consumers was 3,030,462, and the quantity of gas supplied to them amounted to 50,611,6 GWh.

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

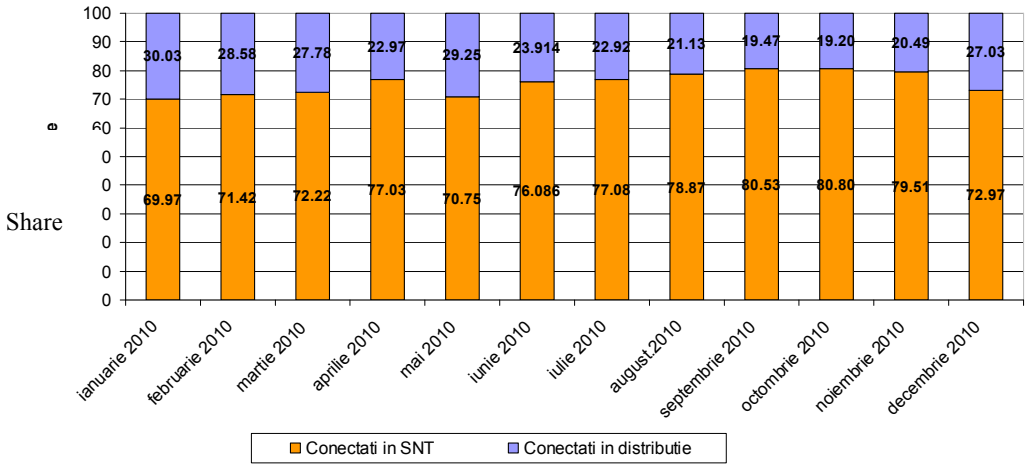
No.	*Supplier*	*Market share (%)*
1	GDF SUEZ Energy Romania	48.71
2	E.On Energie Romania	42.38
3	Congaz	1.76

On the **competitive market** 37 suppliers have activated. In the table below are presented the suppliers which supply eligible consumers, whose market shares are more than 5%; one of them are also gas producer (SNTGN Romgaz S.A.). The total consumption was 82,752,5 GWh.

Supplier	*Market share (%)*
Petrom Gas	23.37
Romgaz	22.70
Interagro	20.62
GDF SUEZ Energy Romania	11.84
EON Energie Romania	5.13

At the end of 2010, 1531 eligible customers were on the natural gas free market, with a total consumption that was equal to the effective percent of market opening – 56.37%.

Share of eligible consumption depending on the connection



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

Customer Tariff	**I4 – yearly consumption 418.6 TJ**		**I1 – yearly consumption 418.6 GJ**		**D3 – yearly consumption 8.3 GJ**		**Typical household**	
	Lei/ MWh	EUR/ MWh	Lei/ MWh	EUR/ MWh	Lei/ MWh	EUR/ MWh	Lei/ MWh	EUR/ MWh
Regulated price (VAT not included)	80.94	19.23	98.45	23.38	101.36	24.08	101.36	24.08
Transmission Tariff	7.98	1.89	7.98	1.89	7.98	1.89	7.98	1.89
Distribution Tariff	18.77	4.46	22.53	5.35	24.35	5.78	24.35	5.78

Average exchange cost RON-EUR for 2010: 4.2099 RON/EUR
Note: starting 1st of July VAT quota was increased up to 24%.

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.

In 2010, ANRE received from natural and legal persons **540 complaints** regarding the natural gas sector. The complaints were sent directly to ANRE or were directed to ANRE from other public institutions.

All the complaints were answered within the legal period of time and accordingly to the actual legal provisions, informing the solicitors and, if necessary, the public institutions that directed the complaints to ANRE.

For the complaints that required more checking control actions were asked, through the Direction for Monitoring and Territorial Control.How to solve these petitions was different depending on the issues addressed: the written answers including explanations, explanations and references to legislation, checks on the spot to direct talks with the parties.

If you noticed problems in the petition for infringement of legal provisions, the operators have proved justified, ANRE has sent letters warning them that established measures of compliance to legal provisions and / or were taken legal measures for the implementation of sanctions.

The main issues raised by the complaints are presented below in *table 4.3*

Table 4.3

Type of complaint	No. of complaints	%
Contracts	63	11.67%
Invoices	62	11.48%
Contracts for connection works	49	9.07%
Compliance to technical norms	47	8.7%
Equipment use	46	8.52%

Resolving disputes in the natural gas sector

In natural gas sector, ANRE:
• resolves disputes concerning the refusal of access to the NTS natural gas / distribution systems, according to President ANRGN Decision no. 1345/2004;
• mediating pre-contractual disputes in the natural gas sector, in the regulated segment (according to Decision No ANRGN President. 400/2005), respectively, in the competitive segment (according to Decision No ANRGN President. 461/2006).

In 2010 there were two requests for mediation according to ANRGN President Decision No. 400/2005, one of which was resolved following the preliminary stage and the other after completing the stage itself.

The main topic addressed in the requests for information was on the authorization/ certification, 89.5% of all requests are on this subject. The remaining requests for information were on the preferred subjects: prices and tariffs - 3.5%, technical aspects of rules - 2.6%, connection - 1.2% change of supplier - 1.2%, invoice - 0, 9%, contract - 0.6%, measurement - 0.5%.

4.2.3. Measures to avoid the abuse of dominant positions

The concept of **abuse of dominant position** is defined in Article 6 of the Competition Law no. 21/1996 republished, with subsequent amendments, which prohibits: "any abuse of a dominant position by one or more operators on the Romanian market or a substantial part of it, through the use of anti-competitive acts that have object or may result in injury or damage to business or customers. "

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 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 active licensed companies into the on-line collection module (73 supply licenses, 39 distribution licenses, 3 underground storage licenses, 1 transport license, 1 transit license, 1 dispatching license), and those received by fax or e-mail and entered into the database of ANRE. It was also verified the compliance of the above data with the data sent by the Dispatch Balancing from the SNTGN Transgaz SA Bucharest, and, where necessary, licensed operators were contacted in order to correct the data collection on online module.

Following the data entered by them in the collection on-line monitoring activity was the following:

- Evaluation of the functioning of the internal gas market, of the compliance with the regulated prices and tariffs;
- Enforcement regulated tariffs and prices;
- 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 2010;

- Preparation of annual reports on quantities of natural gas made by each licensee (supply/distribution/storage/transport/transit/dispatching) to regulate bills issued by the ANRE Department of Economics;
- Preparation of annual statistical reports on the natural 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.

Also, there was a monthly analysis on the substantiating Reports on the request for natural gas and its sources of coverage, developed by Dispatch Balancing the SNTGN Transgaz SA Bucharest and established the structure of the gas mixture for each month, to be published on the website ANRE in accordance with Joint Order MEC / ANRGN / NAMR no. 102.136/530/97/2006 on the recovery of quantities of natural gas internal market and measures to strengthen discipline in natural gas, with subsequent amendments.

5. Security of supply

5.1. Electricity

The responsibility of ensuring the demand-offer balance on medium and long run stays with the Ministry of Economy, Trade and Business Environment, 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. In the last year the Ministry released a draft update of this document, the project was in progress.

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. In short, the TSO is responsible for operational planning and operation of transport networks following criteria and standards specified by Transport Network Technical Code, a document prepared by the TSO and approved by ANRE Order no. 20/2004 with subsequent amendments. The membership of ENTSO-E, OTS participates in the 10 years development plan for the European transmission network.

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 2010, the electricity production amounted to 60.8 TWh increasing with approximately 5.3% as compared to 2009. Domestic consumption amounted to 57.9 TWh, with 4.9% higher than in 2009.

In 2010, the peak load occurred on December 13th at 20.00 CET hours, when it reached a net value of 9,435 MWh.

Compared to 2009, in 2010 there were decreases in delivered energy based on oil (47%), gas (5%) and solid (4%), and nuclear fuel based energy remained approximately constant. Resource that has provided increased total energy delivered was the Water (whose contribution increased by 28%), a situation due to the extremely favorable hydrological year compared with the last 3 years.

It is also noted a strong growth in the contribution of wind power plants (0.5% of total production in 2010) compared with 2009 (0.02% of total production).

The maximum amount of net production of individual plants, available for at least 15 hours per day was on 31.12.2010 of 17.05 GW.

According to the ENTSO-E study on system adequacy prognosis (Scenario Outlook and System Adequacy Forecast 2011-2025), forecast net capacity values for production and consumption in Romania in the version of three scenarios as presented below:

Scenario A	2011		2015		2016		2020		2025	
	January 7:00 pm	July 11:00 am	January 7:00 pm	July 11:00 am	January 7:00 pm	July 11:00 am	January 7:00 pm	July 11:00 am	January 7:00 pm	July 11:00 am
Net generation capacity (GW)	16.20	16.30	16.50	16.50	16.60	16.60	18.30	18.30	17.50	17.50
Consumption (GW)	8.04	7.05	7.80	7.66	8.01	7.87	8.91	8.74	10.05	9.86

Scenario B	2011		2015		2016		2020		2025	
	January 7:00 pm	July 11:00 am	January 7:00 pm	July 11:00 am	January 7:00 pm	July 11:00 am	January 7:00 pm	July 11:00 am	January 7:00 pm	July 11:00 am
Net generation capacity (GW)	16.20	16.30	19.50	19.70	20.20	20.30	24.20	24.40	25.70	25.90
Consumption (GW)	8.04	7.05	7.80	7.66	8.01	7.87	8.91	8.74	10.05	9.86

Scenario EU 2020*	2011		2015		2016		2020	
	January 7:00 pm	July 11:00 am	January 7:00 pm	July 11:00 am	January 7:00 pm	July 11:00 am	January 7:00 pm	July 11:00 am
Net generation capacity (GW)	16.70	16.90	21.50	21.80	22.20	22.40	26.90	26.90
Consumption (GW)	7.82	7.67	8.13	7.99	8.35	8.20	9.20	9.10

*- based on information in the National Action Plan on promoting energy

Scenarios were constructed considering commissioning, until 2020, of the nuclear units 3 and 4 (650 MWe) in CNE Cernavoda and of the pumped storage plant in Tarnița (1000 MW). It was also considered the implications of applying the provisions of Directive 2001/80/EC on the operation of lignite and coal group.

It is estimated that in perspective, wind power will total an installed capacity of 4000 MW in 2020 in the context of implementing the government strategy to boost renewable energy sources.

The structure on types of resources for electricity **supplied by generators with dispatchable units** is shown in *Figure 5.1*

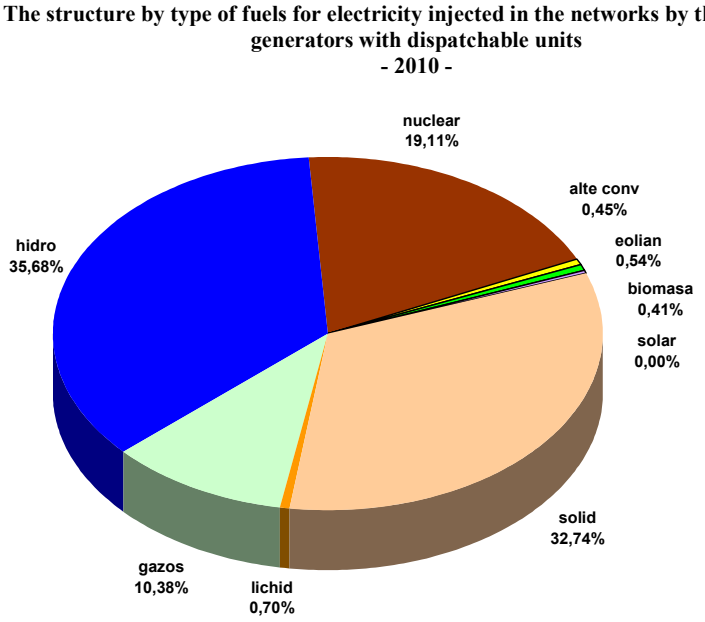


Figure 5.1

Establishment of new generation capacities and the retrofitting of the existing ones are carried out based on **establishment authorisations** issued by ANRE (*table no. 5.1*). 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.

Table no. 5.1

Establishment authorisations granted in 2010

No.	*Authorised electricity capacities*	*No. of authorisations granted*	*Installed power of authorised capacities MW*
1	Wind capacities	14	187,5
2	Hydropower capacities	2	2,55
3	Photovoltaic capacities	2	14,4072
4	Cogeneration capacities	12	119,014
5	**Total**	29 *	**323,4712**

* - a micro hydro capacity and a cogeneration capacity on biogas are in the same establishment authorisation

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.

The amendments to the support scheme brought by Law no. 220/2008, as amended and supplemented, have been notified to the European Commission in June 2011, after a pre-notification stage which lasted approx. 2 years. Commission reply was received in July 2011. It concluded that the notified scheme is consistent with the guidelines on aid for environmental protection and is therefore compatible with the internal market in accordance with Art. 107, para. 3, c) TFEU.

The interest for investments in power plants using renewable sources and especially wind power plants have increased during 2010. The capacity installed in E-RES production units at the end of 2010, qualified for priority production, was 520.4 MW and included wind, hydro with an installed capacity less than 10 MW, biomass power plants and photovoltaic power plants, compared to 113.4 MW recorded at the beginning of that year.

In 2010 were issued 676606 green certificates, from which 43.2% for electricity produced from wind, 40,2% for electricity produced from hydro, 16,6% for electricity from biomass and 0,001% for photovoltaic power plants.

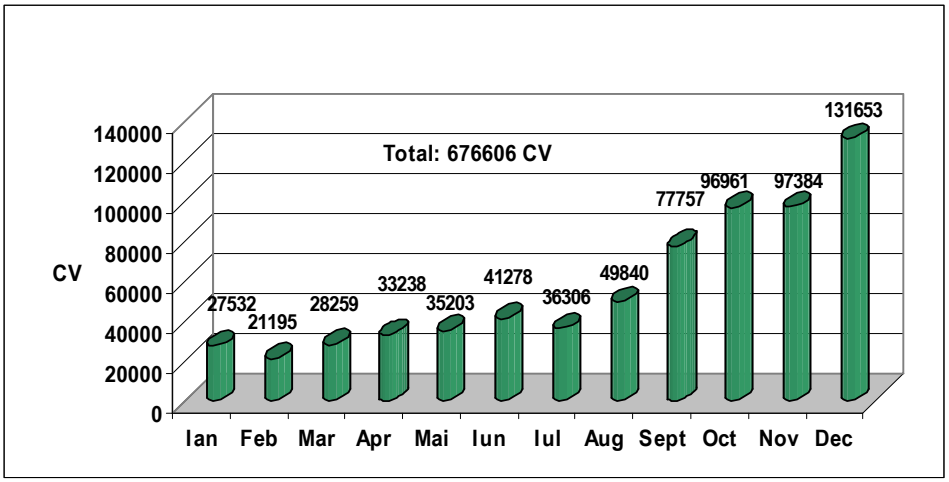


Figure 5.2

For the high efficiency cogeneration power plants, starting with April 2011, a bonus support scheme was introduced. The support scheme was notified to the European Comission according with the European regulations regarding the state aid.

The state aid scheme, approved by the European Comission, is in the next figure:

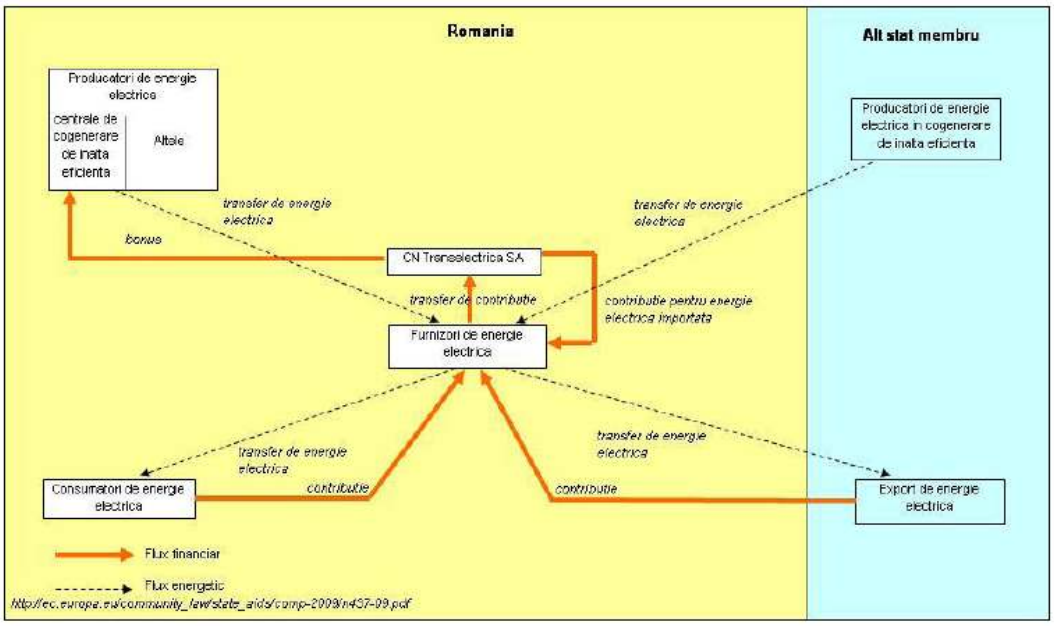


Figure 5.3

Are eligible for the support scheme both **producers**, except those that use renewable energy sources, and **consumers** who:

- have low power and micro cogeneration plants,
- deliver some of the electricity produced in electrical networks,
- use the electricity and heat produced mainly for their own consumption and
- have metering devices that meet the legal requirements.

The support scheme is granted only for the amount of electricity produced in high efficiency cogeneration plant that is delivered to the power grid.

The producers receive monthly for each unit of electricity (in MWh) produced in high efficiency cogeneration and delivered to the National Power System, an amount of money called *bonus*. Bonuses are determined for three type of fuels used to produce electricity and heat in cogeneration: solid fuel, natural gas from the transmission network and natural gas from the distribution network. The bonus amount is the same for all producers of electricity and heat using the same type of fuel.

The scheme budget is 4,751,659,147 € for the 2011-2023 period.

The necessary funds are ensured by collecting a monthly contribution from all electricity consumers and from the suppliers who export electricity. These funds are collected by the scheme administrator, CN Transelectrica SA. The electricity suppliers have the obligation to pay the contribution for cogeneration in the CN Transelectrica SA account. The administrator has the obligation to pay the bonus to the beneficiaries.

The yearly contribution amount is determined annually by ANRE and may be revised quarterly. Given the existing cogeneration technologies that can benefit from support scheme, the maximum number of beneficiaries is estimated at 500.

In the year 2010 the regulatory framework of the support scheme was completed. Thus were established and approved the reference values for: the bonuses, the electricity and heat prices. Conditions were created to attract new investments, refurbishments and upgrades to existing power plants.

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 main investments in the transmission network were presented in the 2009 national report. 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 2010, total natural gas consumption was 146,762,322.350 MWh, of which 29,708,784.895 MWh was household consumption (20.25%). In 2010, the domestic production of natural gas entered in consumption was 117,897,720.551 MWh and the imports were 24,145,776.911 MWh.

In 2010, the number of total natural gas consumers was 3,031,993 of which 2,855,659 households.

Future evolution of natural gas production and consumption during 2011-2020 is reflected in the 10 - years network development plan of natural gas, developed by the European Network of Transmission System Operators in natural Gas -ENTSO-G and published on the website www.entsog.eu.

The yearly evolution of consumption expressed in GWh/year and thousand tep/year, as presented in document ENTSO-G, is given below:

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Romania	107.652	107.652	117.439	117.439	117.439	117.439	117.439	117.439	117.439	117.439
	9258	9258	10099	10099	10099	10099	10099	10099	10099	10099

The evolution of daily consumption expressed in kWh/day is:

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Romania	295	295	322	322	322	322	322	322	322	322

The evolution of domestic natural gas production, expressed in GWh/day is given below:

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Romania	296	297	291	287	279	271	262	252	242	232

Under these conditions the import value for 2020 amounting to 2500-2800 thousand tep (to the value of 2010 to 2.076 million tep).

Regarding the security of supply, in 2007 was adopted the Law no. 346/2007 on measures to ensure safety in the supply of natural gas, which transposes into the national legislation the provisions of Directive 2004/67/EC. The main goal of the law is to ensure an adequate level of safety in gas supply through non-discriminatory and compatible measures with a competitive natural gas market.

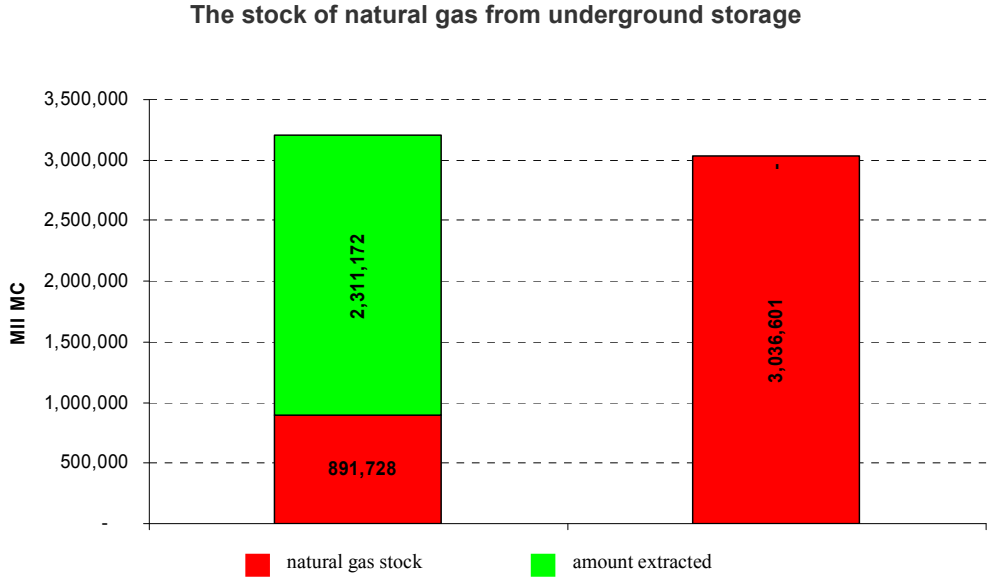
In this respect, the law sets out the role and responsibilities of the authorities and operators on the domestic natural gas market and the implementation of specific measures to ensure an adequate level of safety in the supply of natural gas. A Steering Committee is established, with the role to develop the annual action plan for emergencies and to advise and monitor the safety measures necessary to ensure natural gas supply.

The national legislation will be adapted during 2011 to the requirements of Regulation no. 994/2010/EC on measures to safeguard security of natural gas and repealing Directive 2004/67/EC.

In Romania there are 8 underground storage facilities, which had, in the year 2010, a total capacity of 3.135 billion cubic meters. Their situation is as follows:

No.	Underground storage	Capacity (billion cubic meters)
1.	Bălăceanca	50
2.	Bîlciureşti	1310
3.	Cetatea de Baltă	200
4.	Gherceşti	150
5.	Sărmăşel	800
6.	Târgu Mureş	300
7.	Urziceni	250
8.	Nadeş	75

Stock level of natural gas in underground storage during the period april to october 2010 is shown in the figure 5.4.



Currently the import of natural gas in Romania is conducted by:

1. Orlovka gas import pipeline - SMG Isaccea. Technical parameters of the pipeline are: transport capacity: 8.7 mld.mc/year, design pressure: 55 bar and the nominal diameter: 1000 mm.

2. The interconnection pipeline with the transportation system of natural gas from Ukraine in the direction Tekovo - Gas Measuring Station Medieşu Aurit. Technical parameters of the pipeline are: transport capacity: 4.0 mld.mc/year, design pressure: 70 bar and the nominal diameter: 700 mm.

3. The interconnection pipeline with the transportation system of natural gas from Hungary in the direction Szeged - Arad. The pipeline was completed in 2010. Technical parameters of the pipeline are: the initial transport capacity: 1.7 mld.mc/year - 200 000 m³/h, maximum transport capacity: 4.4 mld.mc/year - 500 000 m³/h, diameter: 700 mm ; design pressure: 63 bar; operating pressure: 40-60 bar; guaranteed minimum pressure - 40 bar; total length: 109 km, measurement control station (srm) located in the adjacent area of the village Horia (north east from arad). The Transgaz contribution to this investment was 33.5 million euro of which 8.28 million are co-financing from European funds through **"Economic recovery program by providing financial assistance to energy projects."** The revenues from natural gas transmission on this interconnection pipeline are regulated revenues.

The main strategic interconnections of national transmission system with the natural gas transmission systems from neighboring countries

Interconnection with BULGARIA

As a result of natural gas crisis in January 2009, there was an urgent need to establish appropriate mechanisms for gas crisis management at the European level, which should lead to constant natural gas deliveries for Romania and Bulgaria and allow the diversification of natural gas supply and transport routes.

Romania and Bulgaria by SNTGN TRANSGAZ SA and BULGARTRANSGAZ E.A.D, have agreed to achieve a reversible interconnection between natural gas transmission systems of the two states in the Giurgiu – Russe area.

The main advantages of interconnection with Bulgaria are:

- Increase security of supply for consumers in Romania and Bulgaria;
- Diversification of natural gas sources for the two countries;
- Ensuring continuity and security of gas supplies to residential and industrial consumers in the event of natural gas supply crisis situations in the two countries;
- Ensuring conditions for bi-directional flow of natural gas;
- Enhancing the regional natural gas market integration in SE Europe;
- Increase the degree of interconnection of natural gas transmission systems in both countries.

On Romanian territory, the interconnecion pipeline will have a length of approx. 8.4 km (including under crossing Danube) and an estimated total of works is 27.6 million of which Transgaz contribution is approximately 46%.

The main technical characteristics are: maximum capacity of transport 1.5 billion cubic meters/year; minimum transport capacity: 0.5 mld.mc/year; pipeline diameter: 500 mm, maximum pressure: 40 bar; minimum pressure: 29 bar; 2 gas measuring stations in Giurgiu and Ruse; a valve control station and a launch station / reception PIG.

Nabucco project

As the Nabucco project is of crucial importance for European energy security and EU policy of diversifying gas supply sources and routes of transportation, intergovernmental agreement signed by Turkey and four other European Union member states - Bulgaria, Romania, Hungary and Austria - on 13 July 2009, was a success of European foreign policy.

Nabucco in Romania

- The total length in Romania: 469 km;
- The route runs through five counties: Dolj, Mehedinti, Caras-Severin, Timis, Arad;
- Technological installations:
  - Compression station with an installed capacity of 31-37 MW;
  - One or two import gas stations;
  - A commercial gas measurement station (in Arad);
  - Two receiving intelligent PIG Launch stations.
- Downloads of natural gas to Romania: 3.5 - 6 billion cubic meters/year.

Project Support Agreements for Nabucco have been completed and signed by the companies and ministries involved from the five transit countries (Austria, Bulgaria, Hungary, Romania and Turkey) in an official event held in Kayseri, Turkey on June 8, 2011.

The main elements of the **Project Support Agreements** are: announcing a regulated advantageous transit under the energy laws of EU and Turkey; the protection of Nabucco pipeline against potential discriminatory legislative changes; necessary support for the implementation of legislative and administrative actions of the project. These agreements are also the commitment of each government in supporting the project.

Works to ensure the reversible flow of natural gas through existing interconnections in order to increase natural gas supply security in crisis situations

Ensuring reversible flow of natural gas through existing interconnections

The project goal is to increase security of supply for the consumers from Romania and Bulgaria who are directly affected in the case of temporary stop of the Russian natural gas imports. The project envisages the creation of an additional infrastructure necessary for the possibility of additional natural gas for either Romania or Bulgaria, as required, on the following relations:

• *for the possibility of additional natural gas to Bulgaria* - the project will provide the opportunity to direct natural gas from the national transmission system of Romania, through the new infrastructure created in the gas metering station at Isaccea in the transit pipeline destined to Bulgaria that crosses Romanian territory between Isaccea - Negru Voda points. The delivery point for the natural gas will be at the measuring station Isaccea;

• *for the possibility of additional natural gas to Romania* – the quantities of natural gas from Greece and / or Turkey can be directed towards the Bulgarian transport system and directed towards Romania. These amounts will be taken by the Negru Voda station and transported by pipeline transit to Isaccea, where they will enter the Romanian national transport system.

Implementation of the project involves a series of changes in the existing infrastructure, as follows:

• in the natural gas measuring station Isaccea: Achieving interconnection between national transmission system of Romania and the transit pipeline crossing the territory of our country to Bulgaria, equipped with a facility for measuring gas flow both ways.
• in the natural gas measuring station Negru Voda: Changes to the current technological system to measure quantities of natural gas flow in both directions.
• in the compression station Siliştea: Increased compression station by installing a group of additional compression in order to ensure pressure parameters required meeting the scope of this project.

The total value of this project is 3.2 million. Documentation of application for obtaining EU funds to cover 50% of the costs of this project implementation was done under the European Energy Recovery (EERP) undertaken by the European Commission.

AGRI Project

On April 13, 2010, was signed in Bucharest, the Memorandum of Understanding on cooperation regarding the liquefied natural gas between Romania, Georgia and Azerbaijan. Through this document, the signatory ministries, namely Ministry of Economy, Trade and Business Environment from Romania, the Ministry of Industry and Energy of Azerbaijan Republic and Ministry of Energy of Georgia pledged to support the establishment of a project company, based in Bucharest, in order to develop a feasibility study and further development of the project AGRI - Azerbaijan-Georgia-Romania-Interconnector.

AGRI project is a way to diversify the transport routes of the energy resources from the Caspian Sea to European Union (Southern Corridor) and is a result of cooperation agreements concluded between the Contracting States.

Azerbaijan-Georgia-Romania Interconnector is complementary to Nabucco, in the Southern Corridor. AGRI aims to connect suppliers of natural gas from the Caspian region to European market. The natural gas would be transported by pipeline between Azerbaijan and Georgia. According to the draft, the gas is liquefied in the future terminal that it will be built on the Georgian Black Sea coast, then crossed over the Black Sea with the help of cryogenic road tankers and regasified in the future terminal that will be built on the Romanian Black Sea coast. The gases are then delivered to the national power system, either for consumption or for transit to Hungary, through the Arad-Szeged pipeline.

Existing and future directions of interconnection of the National Transport System with the natural gas transportation systems from the neighboring countries

Figure 5.5

Legend:

- Nabucco Pipeline
- Existing interconnectations for transport
- Strategic interconnectations – Hungary and Bulgaria
- Interconnectations for diversification of import
- Interconnectations for developing new storage capacities
- Works to provide reversible flow of natural gas
- Diversification of the new import directions
- Other interconnections (Serbia)

Source: SNTGN Transgaz SA

ANRE provide necessary regulatory framework to promote investment by issuing permits and licenses, issuance and approval of methodologies for pricing and tariffs, trade regulations and technical issue, development of access rules and network connection for users.

Thus, in the natural gas sector, the regulator approves for each regulatory period for which rates and regulated prices are set, investment programs of licensed operators in order to recognize the costs and integrating them in the approved tariffs and prices.

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

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 labeling 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. **1.204 million consumers** (5% less than 2009) out of a total of **8.32 million household consumers** are

benefiting from the social tariff. The amount of electricity consumed at this tariff represented **7.32% of the total household consumption**.

In order to gradually eliminate regulated tariffs for electricity supply to final consumers Romanian authorities shall establish a calendar applicable for a period established when drawing up the *Study concerning the impact evaluation of phasing out regulated prices*. Maintaining regulated prices as public or universal service obligations and customer categories for which the regulated tariff is necessary shall be done only when, following annual evaluations, is noticed that such a measure is necessary in order to protect the general economic interest and cannot be identified another measure less restrictive in order to protect the final consumer.

To ensure the continuity of electricity supply to the consumers in case their supplier is no longer able to fulfill 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 day-ahead market.

If, after 6 months, the customer did not find another supplier, the supplier of last resort shall sign a contract at regulated tariffs in the case of household customers, and a contract at a negotiated price in the case of non-household customers.

For appropriate information of electricity consumers, all suppliers have the obligation to publish on their own website page, as well as at the public relations centers, 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 non-household 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 organize a Customer Service in order to register all the complaints of the customers who deem that the actions of the said license holder are prejudicial to him/her. The Customer Service keeps records of all the complaints, petitions and requests submitted by the customers and of the way in which they were solved.

Through the control activities it develops, the regulator must ensure that license holders comply with the conditions set in the licenses. If a customer is not satisfied with the answer received from the commercial operator, he can petition ANRE on the grounds of GD no. 27/2002.

6.2. Natural Gas

Natural gas storage, transmission, distribution and supply licensees, according with the provisions of the Gas Law no. 351/2004 with the subsequent modifications, have the following obligations:

a) to ensure the security and continuity of supply, in compliance with the legal provisions in force;
b) to deliver the service observing the principles of energy efficiency and environmental protection;
c) to observe the Performance Standards;
d) to ensure third party access to the system, in compliance with the provisions of art. 61-63.

Apart from the above-mentioned legal provisions, these requirements are provided in the Framework Conditions on the validity of distribution and supply licenses, in the Framework Conditions on the validity of the authorization for the functioning of gas distribution undertakings/systems (ANRGN Decision No. 1271/2004), as well as in the Conditions on validity of gas transmission license (ANRGN Decision No. 1362/2006).

Law no. 346/2007 – regarding measures to ensure the security of natural gas supply – which transposes within national legislation the provisions of Directive 2004/67/CE stipulates mandatory obligation also, for all licences holders within the natural gas sector and for all gas producers:

- The operation of facilities and equipment from this sector in conditions of integrity protection for persons and their goods, environmental protection and energy efficiency;
- During the cold season to ensure the security and continuity of natural gas supply for the following categories of consumers:
  - Household consumers
  - Entities which provide medical service care and educational units, social protection units dedicated to children, old or people with different disabilities
  - Generators for thermal energy supply which do not have possibility to use alternate fuels
  - Public institutions of central and local interest, cultural and worship institutions, non-governmental organizations of public interest

  For these categories of consumers the law stipulates that in emergency cases the suppliers and domestic natural gas producers have the obligation to make available natural gas amounts in order to cover their consumption in the above mentioned order. Also, to these categories of consumers and to the beneficiaries of social protection programmes or disabled people the suppliers of natural gas will not cut the supply during the emergency cases, and during the cold season as well, from October to March.

The mechanisms for calculation of regulated final prices are „price-cap".

The value of the distribution services delivered for a distribution system user, are invoiced on a monthly basis, using the following formula:

$$VT^d = Td*Q$$

where:
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 2010, 96% (in terms of the amount of energy consumed) of the customers connected to the national transmission system have chosen to sign a negotiated contract.

In 2010, 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.

In the reference period 2012-2015 Romanian authorities shall establish a calendar for the phasing out of natural gas regulated prices for the final consumers, with the exception of vulnerable ones.

To this regard shall be defined the term „ vulnerable consumer" regarding certain household consumers and undertakings performing essential social services, e.g. medical care, children's nursing, educational activities and other social and charity services, as well as other essential services for state functioning. The above mentioned categories shall be established by Government Decision, periodically updated.

Maintaining regulated prices as public service obligations and customer categories for which the regulated tariff is necessary shall be done only when, following every two years evaluations, is noticed that such a measure is necessary in order to protect the general economic interest and cannot be identified another measure less restrictive in order to protect the final consumer.

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 and conditions for the conclusion of contracts.