THE OPENING OF THE ELECTRIC POWER MARKET IN ROMANIA

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Prezenta lucrare se concentrează asupra pieţei de energie electrică din România. Sistemul energetic românesc merge pe un drum lung, de la modelul integrat pe verticală în care responsabilitatea pentru livrarea energiei electrice revenea în exclusivitate RENEL, către un sistem descentralizat.
Scopul lucrării este de a identifica gradul real de deschidere a pieţei de energie electrică şi beneficiile rezultate în urma acestor schimbări. De asemenea, sunt tratate şi câteva aspecte legate de cadrul legislativ care guvernează sectorul energiei electrice şi componentele pieţei de energie.
Sunt prezentate structura consumatorilor, caracteristicile şi tendinţele majore – mergând până la nevoile acestora. Aderarea României la EU nu va avea alte efecte previzibile în afara de accelerarea procesului de privatizare în ceea ce priveşte sectorul distribuţiei de energie electrică.

The paper is focused on the Romanian energy market. Romanian energy system walks a long road, from the vertical model with RENEL bearing all responsibilities and benefits for delivering electrical energy to a decentralized system.
The main goals of the paper are to indentify the aperture of energy market and the benefits. However, some other important aspects, which apparently are related to the theory – legal frame regarding energy sector and the energy market elements – are also considered.
The structure of the consumers, their characteristics and major trends are presented – as far as consumers' needs. The EU membership of Romania has no foreseeable effects – other than acceleration of the privatization process related to the electric energy distribution sector.

Key words: energy market, free market, energy transmission & distribution, eligible consumer, captive consumer, consumers' needs for electrical energy, reorganization, benefits.

1.Introduction: The evolution of the energy system in Romania

With the present paper work we aim to present the evolution of the activity of electric power distribution and supply, in the context of the reorganization towards a free market, open by the energy and the impact of this measure on the Romanian energy system.

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Bucharest was the first capital in the world to be illuminated with kerosene, in the year 1857. We can say that in that moment have begun the concerns for the modernization of the public life in Romania, and of the industrial one as well. Those years marked the beginning of the economical development of the country (the year 1938 is used as a reference for the economical state pf Romania before the changing of the form of government) and one of the directions was the energy system development of the country.

Step by step, depending on the requested work volume and on the industrial development of our country, there were being put in function new production capacities (Hydro power stations, thermo -electric power stations, power station on kerosene, electrical lines of transport and distribution etc.) that brought to the development of the National Energy System; now days, there are still left without electricity appreciatively 300 localities, which represents 2% of the total number of localities in the country [1].

The most important moments in the history of the activity of electrical power distribution and supply have been:

1882, Bucharest – it begins functioning the first public lighting network in the country

1884, Timisoara - it begins functioning the first street electrical lighting in Europe.

1887, Craiova – the electrical lighting of the National Theatre is made.

1894, Bucharest – the first electrical trams in the country

1898, Bucharest – it is created the "Romanian Society for the Industrial Electrical Industry", which in 1921 becomes "S.C. ELECTRICA S.A. – The Romanian Anonymous Society"

1899, Iasi – begins the public distribution of the electrical power in town

1902, Ploiesti – begins the public distribution of the electrical power in town

1913 – the first electrical railway in the country, on the route Arad- Ghioroc - Pincota – Radna

1930-1931, Bucharest – it is put in function the first electrical distribution network on reinforced concrete pillars in the country

1939-1940, Snagov – it is put in function the first underwater cable

1995 – in the design for the electrical networks of medium and low tension have been brought new solutions; the transformation posts have been modernized; the informatical system is developed; the public lighting is modernized.

1998 – begins the freedom of the energy system.

2.Legislative and institutional frame which governs the electrical power field

Romania was the first country in the Central and Eastern Europe to have official relations with the European Community. In January 1974, an agreement included Romania in the Generalized System of Community Preferences, after which it signed o series of agreement with the European Economical Community in order to facilitate the commercial exchanges. Beginning with 1 January 2007 Romania has become member of the European Union.

Beginning with 1998, the Romanian Government policy was to direct the energy system toward its freedom. The freedom process was controlled through legislation.

The intern legislation for the electric power field in Romania is formed by a number of different instruments, as it fallows:

- Laws, Government decisions and emergency decrees of the Government, which represent **the elementary legislation**;
- The Codes of Transport, of Distribution, of Measure and the Commercial Code elaborated on the basis of Government Decisions and of emergency decrees of the Government, together with the other regulations of ANRE and with the license given by ANRE, which form **the secondary legislation**;

The reorganization of the electric power field has begun with **the Government Decision nr. 365/1998** which brought the destruction of the monopoly integrated vertically RENEL and established the creation of the Nuclear electricity and of CONEL and separated the production, the transport, the distribution and the supply. In June 2000, according to the Government **decree nr. 627/2000** the former National Company of Electricity (CONEL) separated into four independent entities: CN Transelectrica SA (for transport) with the branch SC OPCOM SA (market operator), SC Electrica SA (for distribution and supply), SC Hidroelectrica SA and SC Termoelectrica SA (for the production of electric power).

Also, the electric power market has known some modifications in 2003 with a new electric power law. The electric power **law 318/2003** created the framework of regulation for the development of the activities in the field of electric and thermic power produced in con-generator, in conditions of maximum security and high quality standards, for an optimal utilization of the prime resources of energy and respecting the environment protection standards.

Another important document for the electric power field and the natural gases field is "**The evolution sheet in the energetic field in Romania 2003-2015**" **approved with the Government Decision nr. 890/2003**. This is a

document that identifies "the targets and the specific aims, programs, terms, implementation ways, and also the necessary financial sources" for accelerating the community "aquis" implementation in the energy field [2]. This was kept as document of reference by the new Government also. An essential element of the "evolution sheet" was the creation in 2007 of a market based on bilateral contracts and self-programming of the producers, together with a voluntary energy market (The Market for the Next Day) and a balance market. This target was implemented since 1 July 2005. This market structure is similar to the European markets from Scandinavia, England and Cambria, and also to the majority of the continental countries.

In this way, the services of transport and system have been completely separated by the activities of production, distribution and supply. From a technical point of view the energy system is unitary, managed by a single operator, which is Transelectrica. Since 29 August 2006, Transelectrica is listed on the Bucharest Stock Market with 10% of the social capital. Transelectrica develops its activity on the basis of the licenses of transport operator and system operator, and also on the basis of the Code of the Electric Network of Transport (RET).

On the international plan, there were created authorities of regulation in the field of electric power (ANRE) and in the field of natural gases (ANRGN), authorities that merged in 2007. In the final management field of the radioactive waste material was created the National Agency for the radioactive waste material (ANSRAD), managed by the Ministry of Economy and Finance, which develops the system of standards for the final deposit and the safe management of the radioactive waste materials produced by Cernavoda.

In February 2007 comes intro effect **the Law of electric power nr. 13/2007** which abrogates the Law 318/2003. The new thing brought by the new energy law is the separation of the activities of distribution from those of electric power supply [3].

3.The process of energy market opening

The Romanian energy system goes on a long way, from the model vertically integrated where the responsibility for the supply of the electric power belonged exclusively to RENEL, towards a decentralized system, characterized by the decentralization of the production and the transport, respectively of the activities of distribution, from the centralized programming to the obtaining of the right to produce through the offer, the daily auction process referring to the 24 hours of the next day [1].

Romania is the first country in the Eastern Europe to become an official member in the Partnership for the Regenerating Energy and Energy Efficiency (REEEP). Romania must reach in four years a quota of 33% - regenerating energy

of the total national expenditure. Joining REEEP, Romania intends to contribute to the development of the regional policies with the participation at a series of initiatives in Eastern Europe and in West Balkans.

As far as the production of electric power in 2006 is concerned, the data of the National Institute of Statistics show that: the hydro-electric stations generate 29,5% (20.292 GWh), electric stations based on coal, hydrocarbon 61,5% (33.897 GWh), and the nuclear-electric station 9,9% (5 548 GWh). From the infrastructure point of view, the capacity of electric power production is annihilated by the quality of the capacities of engendering and transport. 80% of the thermo engendering capacities in Romania begun their activities in 70-80 and have exceed the normal life duration. The emissions of NOx and SO2 of these capacities are situated over the maximum values accepted by the UE. As regards the hydro engendering, 37% of the total hydro capacities have also the duration of functioning exceeded. According to the ANRE statistics, the total capacity of the electric power engendered in Romania is 18.314MW.

After the process of reorganization of the electric power market, implemented through a series of governmental decisions and emergency decrees, starting with 1998, the electric power market is composed in the present time by 36 producers, one transport operator (Transelectrica), 8 distributor from which 5 are private, one market operator (OPCOM), 120 approved suppliers, from which 118 have license for functioning, 8 million captive consumers and 600.000 eligible consumers. The structure of the Romanian power sector is presented in the **fig. 1** [4].

SC ELECTRICA SA provides the supply with electric power for the clients structured in tree categories, big consumers, little consumers and domestic consumers, on the base of the license for supplying the electric power. Very important for SC Electrica SA in the present time is the achievement of a very important step – the privatization of the field of distribution and supply of the electric power. It is intended the privatization of the Electrica SA branches with strategic investors, that means operators of distribution and supply, which can prove to have enough technical and management capacities, that have also the financial capacity to sustain the development of the societies took over. (**v. fig. 2**)

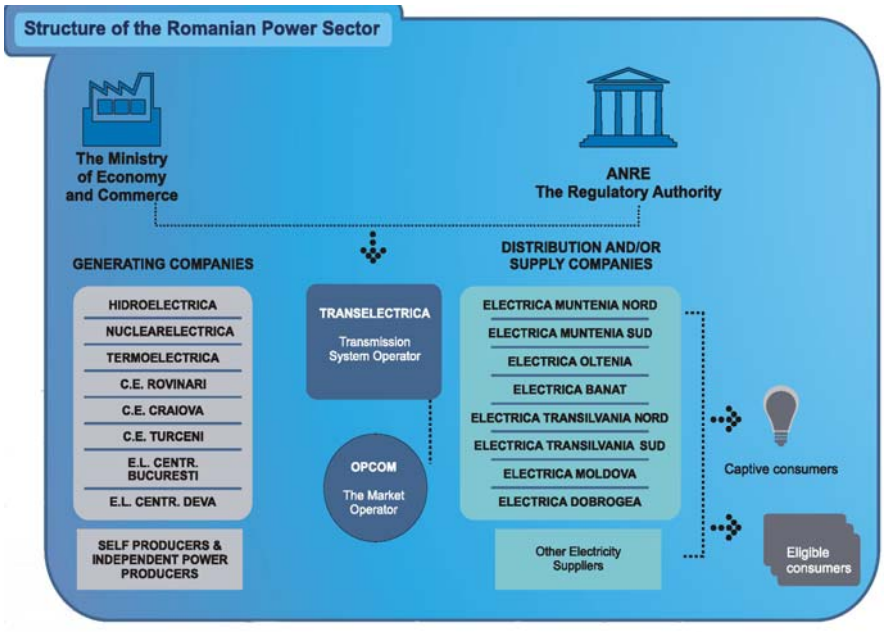

Fig. 1. Structure of the Romanian Power Sector
Source: Transelectrica – Annual report, 2005

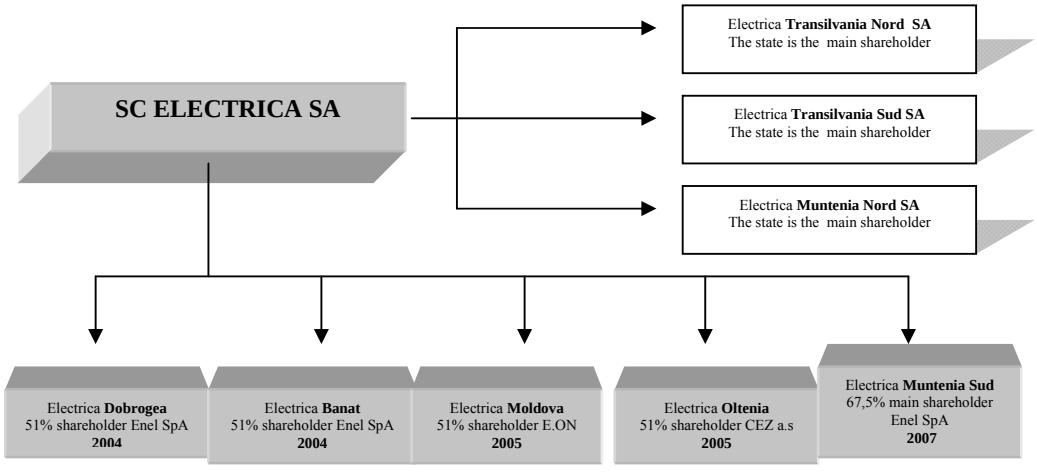

Fig. 2. The privatization of the distribution and supply field of the electric power

4.Electric power consumers

There are two types of consumers:

- **Eligible** consumers – consumers that have the right to choose their supplier

=> **The prices are negotiated between the parties.**

- **Captive** consumers – consumers that because of reasons of network configuration or through regulation do not have the right to choose their supplier.

=> **The prices are established by regulator.**

With the opening of the electric power market we understand o gradual growth of the eligible consumers number and the reduction of the captive consumers number [5].

The norm 2003/54 regarding the internal market of electricity establishes the opening of the electric power market as it fallows:

- For all non-domestic consumers until 2005
- For all consumers until 2007.

The legal degree of energy market opening in Romania didn't correspond to the real opening, imposed by the market, which has registered a slower process. Thus if for 2004[2], the gradual opening of the market opening imposed by Governmental Decision was of 40%, the real one was of 24% (at the end of the year), and for the year 2005, the degree of the market opening imposed by Governmental Decision was of 55% (GD 890/2003), while the real percentage was of 33% (in June 2005). After 1 July 2005 the DG 644/2005 decided the opening degree at 83%, but, in reality, a little number of companies has this right.(**see Table 1**)

Table 1

The indicators regarding the opening of the electric power market in Romania[3]

	2002	**2003**	**2004**	**July 2005**
Opening degree of the market established through GD	33%	33%	40/55%	83,5%
The expenditure of current of consumers that change the supplier(%of the net expenditure))	11%	14%	24%	35%
Eligible consumers with negotiated contracts	13	24	38	147
Number of active consumers	3	5	18	22

Source: ANRE

[2]) According to the data given by ANRE, The Department of Function and development of the Energy Market
[3]) According to the data given by ANRE, The Department of Function and development of the Energy Market

As we can see in the table 1, from the 118 suppliers only **22** are **active** on the market, which means that these have supply contracts with 2000 big industrial consumers and buy for them energy from the Romanian producers and from outside the country, energy that they re-sell at prices lower than the regulated ones.

5.The components of the energy market

There are two energy markets at the time being, a regulated market and a competitive market. The two markets will be united in the moment when the total opening of the market will happen, decided for the year 2007. ANRE applies regulated prices for all the consumers that, although are eligible from a legal point of view shall change their supplier, do not use this option. In July 2007 the domestic consumers will also become eligible and the opening degree will be of 100%.

From the ANRE regulations point of view, the market has, two components:

- **The regulated market**, which covers 85% of the sold electric power**;**
- **The competitive market** of bilateral negotiated contracts and spot market, which covers appreciatively 15% of the sold electric power.

From the point of view of the target that transactions, the energy market can be defined as being composed by two levels:

- **Physical market** (cash or spot) in which is sold and bought the energy (contracts spot, forward);
- **The symbolic or virtual market** (futures or options) in which are sold and bought contracts.

Generally speaking, the electric power market in Romania is based on four types of buying and selling agreements: negotiated bilateral contracts, regulated bilateral contracts, transactions on the market for the next day (PZU) and transactions on the balancing market. The last two types are transparent and are made on the electricity market. The regulated bilateral contracts have prices established by ANRE.

In the year 2007 is the only country in the region that organizes a market for the next day and a balancing market. Thus, besides the contract transaction, the participants on the en-gross market of electric power have the possibility to participate voluntarily on a physical energy market organized on short term, a day before the day of dispatch (PZU), operated by SC OPCOM SA [6]. The balancing market has as a main target the compensation of the digressions from the programmed values of the production and expenditure of electric power, being compulsory for all the available production capacities.

Sustaining the production of electric power from regenerating sources is made through Green Certificates sold on the Green Certificate Competitive market, and compulsory quotes for the supplier. Each supplier is forced to by

annually a quantity of Green Certificates, proportional to the quantity of electric power sold to the consumers by the supplier. The Green Certificate is a document which certifies a quantity of 1 MWh electric power produced from regenerating sources of energy.

6.The opening of the electrical power market – benefits

The increasing of the opening degree of the electric power market has good implications on the internal plan, through the stimulation of the business environment, as a result of the attraction of the foreign investors, and also on the external plan through the consolidation of the Romanian position on the regional market of electric power in the South-East Europe. Practically, an energy free market removes all the legal or administrative natural barriers which could block the access on the market for the companies and could block them to suplly to the consumers the gas and electric power. The consumers will be able to choose freely the supplier of electric power and will have the possibility to change the supplier without any supplementary costs. And not least, the freedom of the market in this field means a better protection of the environment, because the companies are stimulated to invest in the regenerating energies field, and that means the reduction of the prices and better services.

The Italian company Enel, which owns today Electrica Dobrogea, Electrica Banat şi Electrica Muntenia Sud wants to invest over tree million euros, in the next 15 years, in the distribution network of electric power in Romania, network that is obsolete at the time being, registering power failures of four-five hours/client/year. Another domain in which Enel will invest is the one of monitoring the tariff system, so that the clients can control alone the payment of the bills depending on the expenditure[7].

7. Conclusions

Although Europe thinks of a single energy policy in order to assure its own energy sources, at competitive prices and supportable for the consumer, there is a long way till then. The reasons are:

- There is a high degree of concentration on the market of natural gas and electric power. Tree producers of electricity are controlling half of the UE market.
- The big states in the UE continue to see energy as a matter of strategy and national policy. The Governments have presented the purpose of the suppliers to be the protection of the national interests but the analysts are suspecting obscure interests behind all this transactions. France and Germany are not to delighted with the imminent freedom of the energy markets, because their economies are based on energy companies tight related to the national policies elites, and the freedom threatens this comfortable relation.
- The architecture of the energy field varies a lot between the members UE. The Northern states and Great Britain have very free markets, while in France and Germany the energy field is centralized. Thus, the European decisions that have to

level these differences can be only evasive, and are based on general rules of the internal market. Because of the limited capacity of inter-connection the state members have put on the market only 10% of the total expenditure.

OPCOM has a new platform of transaction, which functions from July 2005 and can become in 2008 a regional energy market. Although PZU has hardly reached 7%, the European average is even lower, and that is why OPCOM is one of the best energy markets in the region. At the end of the year 2006, on OPCOM it was made a transaction of higher percentage from the net expenditure of electric power than on the French energy market. From point of view of the prices on KWh, at OPCOM are one of the lowest in Europe and the bilateral contract market put in transaction is of approximate 3%, a good percentage for the first year.

The Operational Regional Program – The Increase of the Economical Competition will finance projects which aim to create generating capacities of conventional energy. The financial plan will bring a support of 32 714 000 Euros, European funds and 56 million Euros national co-financing of Romania [8]. The programme aims to create at least 20 projects of this kind which will generate an energy production of 120 MW.

As a conclusion we can say that Romania, if succeeds to use all its advantages, to formulate a long term strategy which should be consequent, can become a promoter in the region for the European energy policy.

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