1. INTRODUCTION

The paper presents aspects of the current status of the Romanian Electricity Market from the point of view of the electricity distribution and supply company SC Electrica SA. There are underlined some issues that have to be considered for the future evolution of the electricity market in order to facilitate the privatization of the electricity and supply companies created in Romania as a result of a continuous restructuring process.

2. THE ELECTRICITY MARKET IN ROMANIA - MAIN FEATURES

The electricity market in Romania may be described considering the following elements and aspects. The electricity generation is performed by TERMOELECTRICA SA grouping the majority of the thermal power plants in the country, HIDROELECTRICA SA based on the existing hydropower plants, SN NUCLEARELECTRICA SA, which owns and operates the 600 MW nuclear unit in Cernavoda, independent power producers, companies formed after the restructuring process in the Romanian power sector and self producers that belong to different commercial companies in Romania.

Because of a significant lack of financial resources, the majority of the new investments in the power sector have been delayed or abandoned. This reality is illustrated mainly in the hydropower sector.

At present, the government policy tries to stimulate this kind of investments in the Romanian power sector. According to the provisions of the government strategy [1], during 2001 - 2005 it is considered the rehabilitation of 10 thermal power plants with an installed capacity of 1360 MW, the necessary investments for this projects representing $ 450 millions.

The strategy also provides the completion of the rehabilitation works in the PORTILE DE FIER I and LOTRUTU hydropower plants which represent together 1300 MW and require $ 240 millions. There will be continued other important investments for the hydropower plants representing a total capacity of 110 MW / 730 MWh annual production, the value of the necessary investments being $ 225 millions. Until 2005, there will be continued the second nuclear unit of 700 MW in CERNAVODA power plant using CANDU technology, the value of the investments being $ 750 millions.

In direct link with this project is considered another important investment in the 300 MW pumped storage power plant in Tarnita-Lapusesti with an investment value of $ 500 millions.

The contribution in generation on the Romanian electricity market is: hydropower plants – 31,9 %, nuclear power plants – 11,37 %, thermal power plants – 55,9 %, independent power producers – 0,12 %, self producers – 0,69 % and other sources – 0,02 %.

The electricity transmission services are performed on the Romanian electricity market by TRANSELECTRICA SA, using 400 kV and 220 kV overhead lines and, in special situations, by SC ELECTRICA SA through its 110 electricity high voltage lines. In this period, a main priority for the Romanian Power System is represented by the interconnection with the UCTE electric networks. The strategy [1] foresees that the necessary financial resources for the above mentioned investment projects should be assured as follows: 48% from external credits, about 33 % from own resources and the remaining from the special funds of the state budget.

TRANSELECTRICA has also the role of independent Transmission System Operator TSO as well as the role of Commercial Electricity Market Operator through its Central Electricity Network Dispatch and trough its subsidiary OPCOM SA.

The electricity supply and distribution for the captive customers in the country is provided by SC ELECTRICA SA, which operates the whole electricity distribution networks up to 110 kV. From a geographical point of view, the electricity market served by SC ELECTRICA SA covers the whole territory of the country; our company provides distribution services both for the final users and for other users of the distribution network that participate in the electricity market.

Such users are the electricity suppliers licensed by the National Electricity Romanian Authority which supply electricity for the eligible customers. SC ELECTRICA SA is using in the contracts concluded with its electricity customers and with the electricity distribution network users, regulated tariffs defined by the National Electricity and Heat Regulatory Authority (ANRE). The tariffs for the captive customers are established on the base of
the cost structure presented by the generating companies SC TERMODELECTRICA SA, SC HIDROELECTRICA SA, SC NUCLEARELECTRICA SA, independent producers and selfproducers, the TSO, CN TRANSELECTRICA SA and the distribution operator SC ELECTRICA SA. The electricity tariffs for the final users are of different types, uniform tariffs, time of use tariffs, block rates tariffs, differentiated by the voltage levels: low voltage, medium voltage and high voltage.

According with the Romanian legislation [2], electricity customers have the right to choose the tariff system fitted to their own consumption profile and the electricity tariffs used should be the same on the whole Romanian territory for the same type of consumer. For the residential consumers, there is offered a lower tariff for the first 60 kWh on a monthly basis.

According to [1], the most probable scenario for the electricity evolution provides an annual increase of 2%. This evolution of the consumption may be considered acceptable for the potential investors, because it reflects a relative economic growth and stability.

The electricity supply for the eligible customers, which represents 33% of the total market according to the Government political decision is provided by the licensed suppliers. This suppliers use negotiated bilateral contracts on the base of a framework contract and the rules provided in the secondary legislation issued by National Regulatory Authority.

The administration of the wholesale electricity market is provided by OPCOM, a subsidiary of CN TRANSELECTRICA as it was mentioned before. For the operation of this market and for the operation of this market an important role is played by the Romanian state institutions represented by the Ministry of Industries and Resources and the regulatory authority, which decide the regulations for the electricity market.

The primary legislation on the basis of which the electricity market and its operation have been construct and defined issued by the Government and the Romanian Parliament are represented by [2,4,5,6,7,8,9,10].

The access to the electricity market transmission and distribution network is guaranteed and the connection of an electricity market participant to the grid is considered as a public service obligation for the transmission and distribution companies. Participant in the electricity market is considered any investor or commercial company which has a license granted by the National Electricity Regulatory Authority for generation or supply business or any eligible customers accredited by the same authority.

The organization and the operation of the Romanian electricity market is based on a market model with central scheduling and dispatching of the generation power plants, achieved by a cooperation between OPCOM and the National Dispatch Center[9]. The transactions for selling and purchasing electricity are concluded on the basis of bilateral contracts signed between the market participants.

According to the legislation in force, we can identify three main segments of the Romanian electricity market.

The regulated market, on which the transaction are concluded using regulated tariffs and prices defined by the National Electricity Regulatory Authority.

The market of the bilateral contracts concluded between the market participants in the wholesale electricity market and between the eligible customers and the licensed suppliers. The electricity spot market, on which the electricity is transacted at the system marginal price determined by OPCOM on a merit order basis.

According to the Government political decision, the retail electricity market in Romania is opened 33%, existing 47 large industrial customers accredited by NERA, but in reality only 13 of them are using the right to choose the suppliers they have got through accreditation. The other 34 still prefer to keep the position of captive customer supplied by SC ELECTRICA SA at regulated prices.

It is important to mention that there have been elaborated the secondary legislation and rules required for electricity market operation, such as commercial code of wholesale electricity market, the scheduling and dispatching code, the transmission and the distribution electricity codes and others.

There have been also issued methodologies for electricity tariffs design as well as tariffs design for different kind of services existing on the market.

As an example of such contracts, we may present the possibility of an Independent Power Producer to sign a direct long term contract with a supplier, or with an eligible customer, for maximum 20 years.

As special secondary legislation, we have also to mention technical regulations and standards regarding the electricity metering.

The Government goal is to create a diversified structure of the market, encouraging a range of business and transaction meant to allow the promotion of the competition in the electricity generation and supply business.

3. STRUCTURAL CHANGES REGISTERED IN THE ROMANIAN POWER SECTOR IN THE LAST TWO YEARS.

3.1. Changes that occurred in the structure of the main power companies.

After their creation through the provision of a governmental decree in 2000, the commercial companies which used to be part of the former National Electricity Company CONEL, have registered a number of significant structural changes meant to allow them to operate on the market in a competitive environment. The main ideas which guided this restructuring process were:

- Focus on the core business
- Splitting the support services and activities into legal independent companies or in relative independent
As a result of this structural changes, it has been increased the number of the participants on the electricity market and the obtained complexity is in favor of the competition development.

3.2. Changes registered in the distribution and supply

The major strategic objective of SC ELECTRICA SA is the restructuring and the management capabilities improvement and the development of the company activities with a high economic efficiency. In order to achieve this objective, it was issued a government decree [11] that has defined the structure which will be presented in the following lines.

In order to achieve the major objective defined above, we have initiated the following actions:
- a clear separation of the specific costs for the core business distribution and supply
- the consolidation of the structure of the company in the territory by creating a smaller number of subsidiaries as independent legal companies.
- the revenue increase through diversification of the services
- attraction of the private capital, through initiation of the privatization process

According to the provision included in [11], SC ELECTRICA SA has been transformed from only one company serving all the captive customers in a Group of commercial companies. They have been created 8 local Electricity Distribution and Supply companies legal persons and 8 branches for maintenance and energy services subordinated to the main office of SC ELECTRICA SA.

This transformation represented a significant increase of the speed of the restructuring and the reform of the Romanian Power Sector, meant to attract the private capital in this sector.

SC ELECTRICA SA owns all the shares 100% of the new created companies as a unique shareholder. Each subsidiary works with the branches on a contractual basis for performing the repairs and maintenance works. The main results of this new structure is significant increase in transparency of the costs and in the possibilities to control and manage the costs.

In order to get the same results of cost reduction the meter reading activities as well as the activities of money collection from the more than 8 million residential customers, this activities have been outsourced, through the creation of two specialized companies SINDSERV and SINERCOM.

In order to simplify the activity and to concentrate on the core businesses distribution and supply all the 200 small power hydropower plants that Electrica used to have in operation, have been transferred to SC Hidroelectrica.

4. THE PROSPECTS OF THE FUTURE EVOLUTION OF THE ROMANIAN ELECTRICITY MARKET.

4.1. Problems Which Have To Be Addressed In Order To Facilitate the Privatization

In this period SC Electrica is facing the challenges of the future privatization of the electricity distribution and supply sector in Romania. According to the actions of the Romanian Government, reflected in political declarations and through the provision included in the Government program. For the success and the stability of the evolution of the privatization process, we consider that there have to be achieved the following general objectives:
- assurance of a electricity customer protection through the creation of a free electricity market.
- maintaining the security of electricity supply in the whole country.
- constitution of the necessary financial resources to achieve a proper level of investments in the power sector.
- optimizing the social security for the personal who is working in the power sector in Romania.
- optimizing the reverses for the state budget as a result of the privatization process.

Before starting the privatization, it should be accomplished the following requirements:
- Creation of a transparent and stable legal and regulatory framework.
- Definition of a structure of the power sector which meant to create the premises of a real competition in the electricity sector.
- A fair assessment of market value of the business to be privatized.

All this steps are now pursued simultaneously, but from the point of view of SC Electrica, the greatest responsibility was to establish a competitive structure of the electricity distribution and supply business which has to consider the following restriction:
- To consider all the legal provisions which may affect the distribution and supply sector.
- To achieve fair commercial practices and mechanisms.
- To generate a pressure on the costs for the reduction of the electricity prices and tariffs as an effects of the competition.

At the real moment the privatization process in well advanced the following stages have been already performed:
- There have been elaborated, approved and published by the Government the privatization strategies for the Banat and Dobrogea subsidiaries.
- There are already many strategic investors who have expressed their interest in this two distribution subsidiaries.
- The consultant BNP Paribas must finalize in the first quarter of 2003 the tendering process for selection of the future investors for these subsidiaries.
- It has been selected through a tendering process the consultant for the privatization process of the third subsidiary Muntenia Sud which include the Bucharest
town area.
The next phase will be the preparation of the privatization of the Oltenia and Moldova subsidiaries.

5. THE PRESENT STATUS AND THE ISSUES FACING THE ELECTRICITY DISTRIBUTION AND SUPPLY SECTOR

5.1. Changes in the structure of the retail electricity sales.

In Table 1 is presented the structure of the electricity sales of SC Electrica SA during 2001. In the last years the evolution of the electricity consumption presents an increase of electricity sold at the low voltage level and medium voltage level as a results of the structural change which have been registered in the whole Romanian economy.

<table>
<thead>
<tr>
<th>Total electricity Sales 2001</th>
<th>High voltage MWh</th>
<th>Medium voltage MWh</th>
<th>Law voltage MWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>37,321,328</td>
<td>10,740.574</td>
<td>12,463.324</td>
<td>14,117,430</td>
</tr>
</tbody>
</table>

This reality outlines the important role of the electricity distribution network in the future. As a result one of the main priority in the corporate strategy [12] an main objective is the rehabilitation of the electricity network infrastructure at the medium voltage and low voltage level. We estimate that the importance of this networks will increase in time when the degree of liberalized market in Romania will increase. The volume of the distribution services in a future liberalized market will be developed as independent business very profitable and fully separated from electricity supply business.
The necessary investments necessary funds to improve the electricity distribution network performance should be provided by a fair tariff policy which has to reflect real costs levels including both the operational and maintenance costs as well as the investment costs.

5.2. Aspects regarding the electricity bills payment.

One of the greatest problem SC Electrica is facing is the lack of normal cash-flow, generates problems for the power system value chain including all the phases generation – transmission – distribution and supply of electricity. The developing of this activities on a through commercial basis, it is compulsory to a real liberalized electricity market.

In the last periods Electrica has decided to cut off electricity to the customer who are not paying their electricity bills in due time. They are used the contractual provisions and the primary and secondary regulations regarding the payments. In order to improve the money collecting systems, and the payments, SC Electrica is investing in the metering, billing and collection systems developing modern computer dedicated systems.

5.3. Threats and opportunities associated with the existing electricity market rules.

From Electrica’s point of view, the existing electricity market model is generating significant commercial risks. This risks are determined by the existing commercial instruments, like the portfolio contracts.

Also, the fact that the market is declared opened in a percentage of 33%, without the obligation for the eligible customer, accredited by National Regulatory Authority to use competitive bilateral contracts is a source of commercial risks and supplementary costs for SC Electrica SA, [13]. Electrica is obligated to buy electricity at a variable negotiated price for the eligible customer who are not using their right to buy from the competitive market, and to sell at a regulated price, that is designed for the captive customers.

The obligation to pay, the so called connection and transformation services as well as, the lack of possibility to recoup the costs of the transmission services performed by SC Electrica using its 110 kV electric lines, represents also threats created by the rules of the whole sale electricity market.

As opportunities SC Electrica may hope to increase its revenues by contacting distribution services for the licensed suppliers and the eligible customers who are using the electricity distribution networks.

There is also a possibility for Electrica and its subsidiaries to sell electricity to eligible customers on a negotiated bases using bilateral contracts as commercial instrument.

6. THE FEATURES OF THE ELECTRICITY ROMANIAN MARKET MODEL FROM THE POINT OF VIEW THE EUROPEAN MARKET MODELS.

6.1. Strength of the evolution already achieved in Romania

The Romanian electricity market model has been designed and implemented very ambitious and has registered a very fast evolution, from a monopolistic structure, very centralized, and almost completely closed, operating, mainly on the base of administrative rules, to a model based on the fully unbundling of the generation, transmission, distribution and supply activities, operating on a commercial bases.

It has been introduced the competition for the electricity generation and supply activities, and it was created an independent regulatory authority.
The entire development has been done with the help of foreign consultants, and an the bare of studies financed through funds provided by EU PHARE programs and USAID as grants [14].

In the last five years there have been achieved the followings:
• It was created the institutional structure for operating the electricity market.
6.2. Weak points, barriers and difficulties

If we are trying to identify the weak points of the Romanian market model, we can mention as the most important:
- The speed of the development of this model it was in on our opinion to high, and did not properly considered specific aspects as: the infrastructure development level, peoples mentalities, other specific aspects of the Romanian economy transition to a market model.
- The legal framework represented by the primary legislation is even today not completed, the whole model being built on a Government Emergency Decree issued in 98 which isn’t steel approved as law by the Romanian Parliament.
- The management of the changes was not systematic and the whole complex process developed did not succeed to concentrate all the existing Romanian competencies.
- They have not been enough and properly considered and used the conclusions of the studies of the foreign consultants who have shown the risks which may be induced by the increase of the speed of the changes.
- As obstacles or barriers for the future development of the process they may be emphasized.
- There is an inertia climate of self-sufficiency in the development of the primary and secondary legislation, in order to adapt the market rules to the changes that will be brought by the privatization process.
- The lack of the telecommunication, and metering infrastructure necessary to manage and process the information related with the electricity transactions, and the high level of the costs to improve this systems.
- The necessity to improve the market model and to create an adequate balancing market, a real market for the ancillary services, which require the development and the acquisition of professional hardware and software tools.
- The poor economic performance of some large industrial customers state owned, who are not able to pay regularly their electricity bills.
- The resistance to the changes, as well as the social impact of the changes associated with the electricity market liberalization, both from the point of view of the professionals and worker from RPS as well as from point of view of the population capacity to pay their electricity bills.

7. THE FUTURE OF THE ROMANIAN ELECTRICITY MARKET IN VIEW OF ROMANIA ACCESSION TO EU.

In EU, the issue of electricity market liberalization was in the last year, and it still is, a major concern and goal of the EU policy. The 96/92 Directive is to going to be revised with the purpose to accelerate the degree of market opening, and to eliminate all the existing, technical, international an national barriers. There are significant concerns regarding the international electricity changes and the cross border tariffs. From this prospective of all the developments, the changes registered in the last years in Romania are very promising in our view. The results achieved are remarkable both from the point of view of the effort for Romanian electricity market creation and from the point of view of the investments done in order to prepare the Romanian Power System for interconnection with UCTE.

For Electrica SA an important moment is the beginning and the future developments of the privatization process, which we hope it will being the necessary investments funds, an important improvement in the management, know-how transfer, all this elements contributing to the increase of the credibility, the attractiveness, and the promises for investing in the whole Romanian economy.

8. CONCLUSIONS

The present paper represents just a point of view in the wide framework of the Romanian policy in the energy field, with the declared goal to be admitted in the great EU family.

We are sharing the values promoted by EU in the field of electricity market liberalization, but we have to emphasize that all the internal developments should be promoted prudent with a real and professional concern for the assessment of the social and economic consequences associated with such a complex process.

REFERENCES