THE TARIFF'S EVOLUTION WITHIN THE ROMANIAN ELECTRICITY MARKET CORRELATED WITH THE OPENING DEGREE DINAMIC OF THE ELECTRICITY MARKET

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1. INTRODUCTION

New mentalities occur all over the world under the conditions in which the electricity branch has been facing deep reorganizing changes. These new mentalities are typical to the competitional environment, and their aim is both lowering of the costs and consequently of the rates and accomplishing quality delivering services with increasing the eligible consumers' possibility to negotiate the electricity delivering contracts with the electricity providers.

The importance of an efficient negotiation (for both the consumer and the deliverer) of the tariff's value according to which the electricity consume value will be invoiced is underlined by certain facts, such as: avoiding of getting an exaggerated monthly average rate for the consumed electricity, losing eligible consumers due to their receiving other offers from other electricity deliverers, structuring of the electricity offer of a deliverer, a deliverer's changing conditions, the deliverer's reputation.

As the tariffs cover different various costs, the consumer is difficult to be persuaded to believe that the supplier's profit could sometimes be (under certain conditions) minimum. Obviously, an electricity supplier can built his own image as a good negotiator and an honest businessman by offering attractive tariffs. An electricity deliverer can form a group of faithful clients who could understand the uncomfortable situations of tariffs' increasing and could appreciate the efforts made to decrease them.

2. GENERALITIES

A simple tariff's definition shows that the tariff is a system of regulated or negotiated rates, which are structured on the power levels.

The tariff's system allows cashing the electricity consume because the tariffs for the consumer and their structure are well conceived according to the following principles:

- covering of all SEN maintenance expenses
- providing safe electricity transportation and distribution
- providing quality services in fee (fee?)
- multiple negotiation possibilities

Consequently, there occur two problems, at least, which need to be solved by the deliverer:

- the client's persuasion that the negotiated tariff is the best reasonable choice, and
- proving that minimum profit for the given services can be achieved

Facts like:

- avoiding getting an exaggerated average monthly rate for the consumed electricity,
- losing eligible consumers due to their receiving other offers from other electricity deliverers,

- structuring of the electricity offer of a deliverer,
- a deliverer's changing conditions,
- the deliverer's reputation,

show how important a fair negotiation is, for both the consumer and the deliverer.

3. BRIEF FACTS ABOUT THE TARIFF SYSTEM

In present Romania, the tariff's system is based on the methodology of establishing the regulated tariffs for the electricity captive consumers. The qualified Authority for establishing the regulated tariffs for the captive consumers uses this Methodology. This methodology will be applied up to the moment of the total opening of the electricity market and appointing of the final option deliverers according to competing mechanism.

There must be underlined that the deliverer's costs for electricity acquisition (electricity which is later sold to the captive consumers), the costs for its transportation, for the system, for the market offset and for this consume distribution, as well as including the energy taxes, established in accordance with the valid legislation are entirely transferred without any restrictions toward the tariffs for the captive consumers. The delivering service cost mainly includes the costs for contracts' concluding and operating, for invoicing the consumed electricity, for cashing the delivered electricity value (including the consumers whose electricity deliverance is stopped according to the law). The delivering service cost also includes different costs for providing the database concerning the clients' administration, costs for providing the information change with the abilitated institutions, costs with the informatics and telecommunications infrastructure.

Electricity acquisition for the captive consumers' consume is made as follows:

a) by bilateral regulated contracts whose dimensions are in accordance with the real opening degree of the electricity market; the contracts can be yearly resented and every half of year adjusted by the qualified Authority; the contracted amounts can be modified on the supplier's request, too; by market transactions for the following day;
b) by electricity provided by CN Transelectrica SA due to the lack of balance recorded by the captive consumers' deliverers within the time periods settled according to the regulations.

The deliverer is obliged to have a specialized department compatible with the centralized markets' operating requests and with the lack of balance's administration as part responsible for balancing, including also the hour shape establishment of the electricity transactions made on the supplier's level.

The income obtained by the deliverer covers the acquisition's costs for the electricity meant to be used by captive consumers also including transportation, system services, market offset, associated cost for distribution, rightful delivery costs, regulated profit.

The Romanian electricity market liberalization has been a progressive process. The following evolution was possible in terms of further economic development and of the privations process results:

- a 10% opening granted by H.G. 122 /2000, published in M.O. 77 /21.02.2000
- a 15% enlargement granted by H.G. 982 /2000, published in M.O. 529 /27.10.2000
- keeping the opening to 25% granted by H.G. 1272 /2001, published in M.O. 832 /21.12.2001
- a new opening up to 33% granted by H.G. 48 /2002, published in M.O. 71 /31.01.2002
- opening enlargement to 40% granted by H.G. 1563 /2003, published in M.O. 22 /12.01.2004
- a new enlargement to 55% granted by H.G. 1823 /2004, published in M.O. 1062 /16.11.2004
- a final opening to 83,5 % for the economic agents granted by H.G. 644 /2005, published in M.O. 684 /29.07.2005

Obviously the electricity market opening degree is established by government decisions.

4. REGULATED TARIFFS FOR THE ECONOMIC AGENTS

4.1. BINOM TYPE TARIFFS

The tariffs' system for the consumers who are economic agents has been developed starting with the electricity market liberalization. Consequently, in 1998 there were 2 biome tariffs and 2 monomer tariffs which were detailed according to the power levels; in 2005 there were 5 biome tariffs and 4 monomer tariffs with specific values according to the power levels.

The evolution leap was permitted by the establishing of the ANRE (National Authority for Electricity Regulations). ANRE has become both the author and the regulator of the entire tariff's system within the Romanian electricity market ever since. Later on, the opening degree of the electricity market permitted the establishment of the eligible consumers and also generated the competing feature of the tariff's system, thus allowing the deliverer to directly settle the tariffs under the obligation of obeying the ANRE's stipulations and methodologies.

A specific feature within the tariff's system has been the biome tariffs' development. For instance A & C tariffs are the oldest biome tariffs: one is a differentiated tariff, the other one is an undifferentiated tariff. After a time analyze of the structure and value evolution of the biome tariffs the followings can be noticed:

- the value of the peak power is more than double of the value for the balance of the left hours; the rate for the peak electricity is almost three times bigger than for the balance of the left hours; the aim of this value is flattening the burden

curve from within the SEN (National Electricity System); there were several tendencies for decreasing the tariffs' values: one before the opening of the electricity market, decrease which was noticed with all power levels (the period within 11.05.1998 – 15.02.1999); the second one after the big enough leap from 06.06.1999, valid only for j.t. level, both for power and electricity; and the following two within a stagnating period for the market opening (2002 – 2003) when the market-opening grade was of about 33%.

- after each tariffs' decreasing period there followed a tariff increase having a bigger percentage than the previous increasing
- the graphs in figures 1 and 2 show the tariffs' evolution both for power and electricity in connection with tariff A; they also underline the above mentions.

Fig. 1

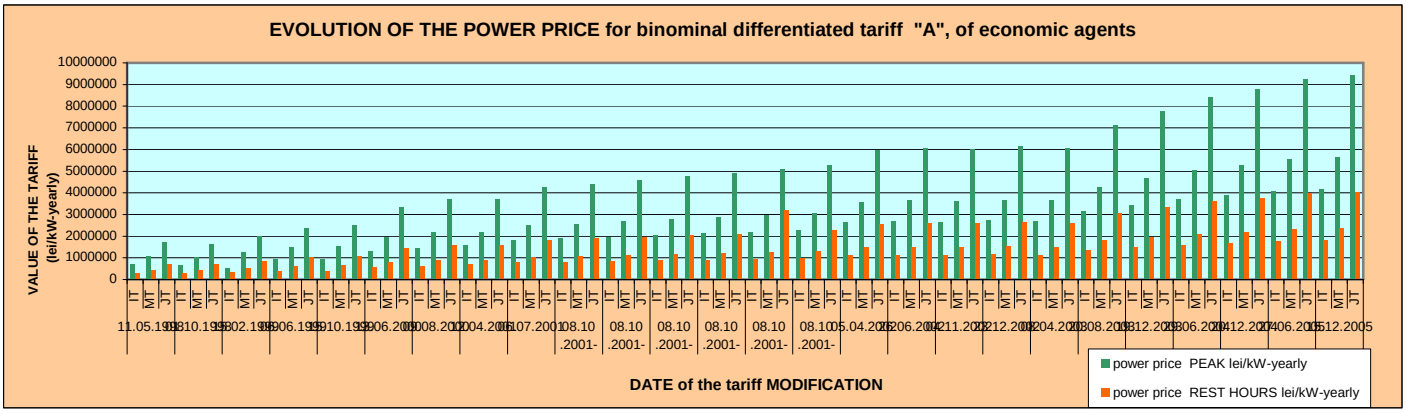
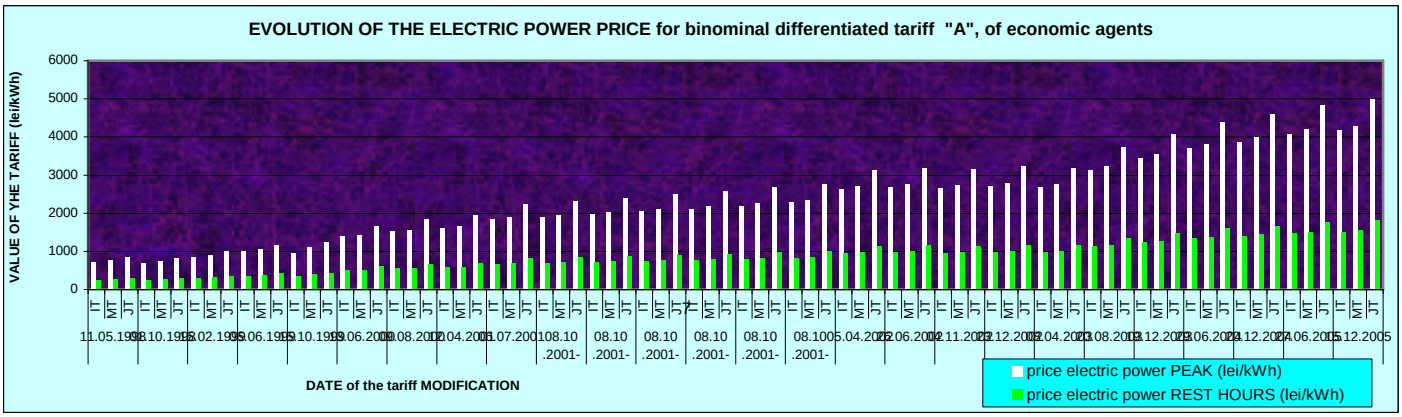


Fig. 2



The tariff system developed a different type of byname tariff: the differentiated A2 binomial tariff, which shaped different types of A tariffs: one with lower power rates but containing higher rates for electricity (A2 - short time period) and another one with higher power rates but containing lower rates for electricity (A2- long time period); A2 tariff also created an adaptation period for A33 tariffs which were not as complex or longeval as the previous ones. A2 tariff was a precursor of the **A33 differentiated binomial tariffs with three using periods** and was valid more than one year. A33 tariffs lived together with A tariff for about half a year.

We also mention the following:

- A33 tariffs have different structures when speaking of electricity and power rates' values on power levels, in connection with the using time: thus, while the A33 tariffs for average and short periods have decreasing values for both electricity and power when the power level increases, the A33 tariff for long using periods has a special way of calculation of the power rate, that is higher rate for high power compared to low power; the lowest rate is for average power. Obviously the structure is supported by the costs, which must be covered by a tariff.
- Within the A33 tariffs there weren't recorded significant lowering periods for the tariffs' values excepting the stagnating period of the electricity market opening
- A33 tariffs are the most appreciated regulated tariffs by the economic agents consumers because of their average low rates for kWh
- A33 tariffs are also a viable alternative when negotiating the tariff used by an economic agent consumer, because the consumers' possibility of using their eligibility right is limited even if the opening electricity market were large
- The graphs in figures no.3 and 4 show these tariffs' evolution and structure.

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Fig. 3

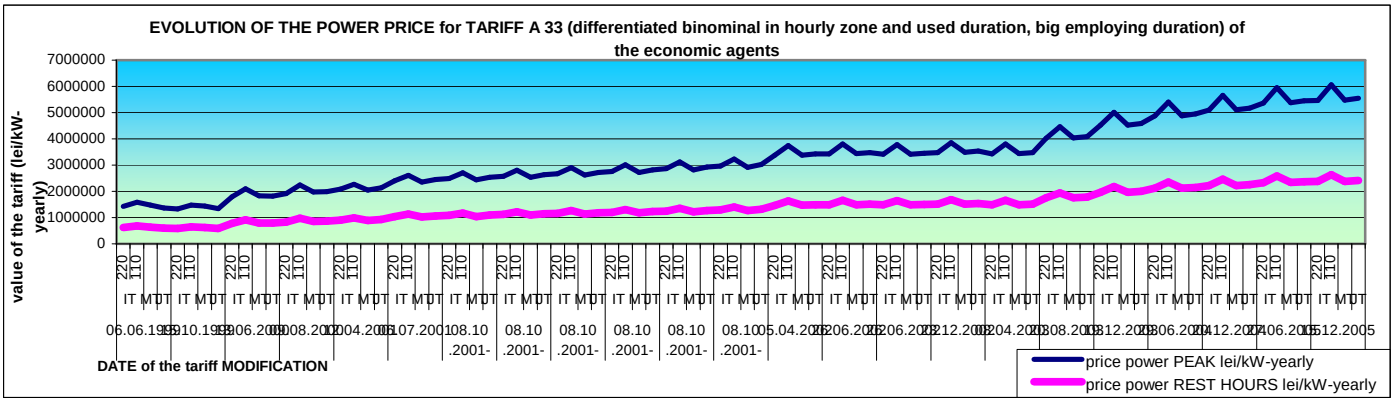
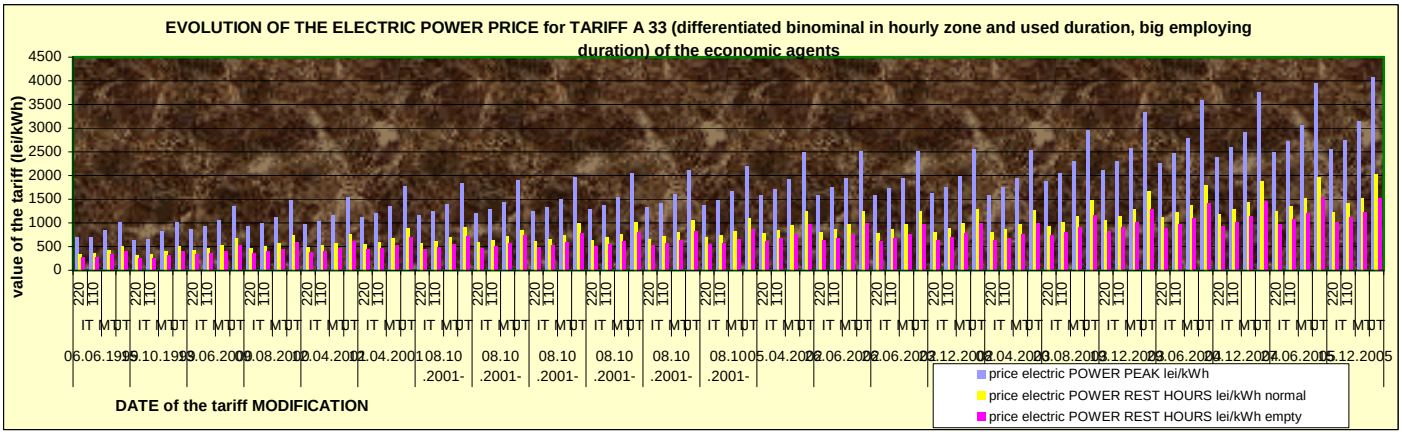


Fig.4



Experience has proved that **C undifferentiated binomial tariff** might be one of the most profitable tariffs which could be used by an economic agent consumer under the condition that the agent should have an enough developed electricity culture in order to follow his consume by himself and to be able to efficiently co-operate with the deliverer; it is better this tariff to be used especially by the consumers who work in the same wave. The evolution was slowly increased with the C tariff, both for electricity rate and for the power rate, yet with a short stagnation period due to the stagnation of the opening electricity market (fig.5, 6).

We must also say that using binomial tariffs depends on the way of monitoring the electricity consume, to be more specific it depends on the group type of consume measuring; binomial tariffs could not be used by the consumers with measuring groups who don't have the possibility to keep the maximum values absorbed for power within a certain period in accordance with the invoiced period.

In the last issue of the Monitor Official (MO) (which is the document to legislate the tariffs' system and rates) 5 types of binomial tariffs, either simple or differentiated, are shown as usable; these tariffs are structured for three power levels (i.t., m.t., j.t.), thus leading to 15 types of binomial tariffs.

fig.5

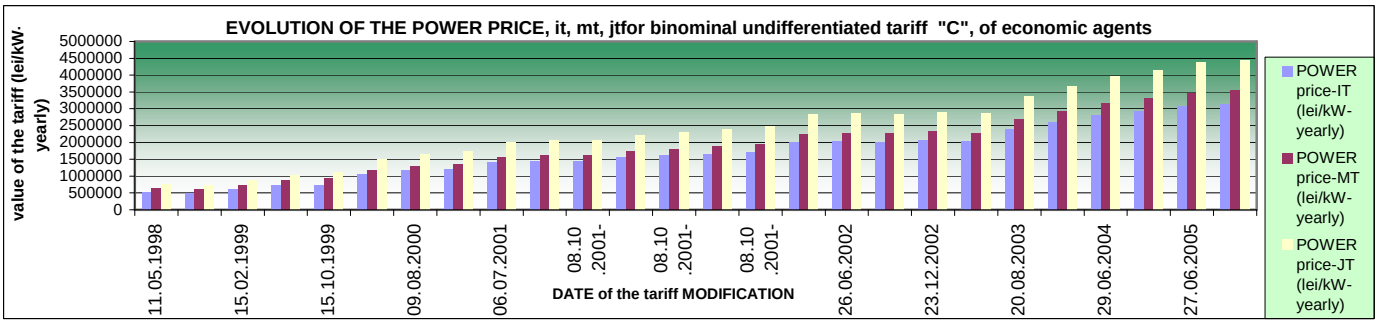


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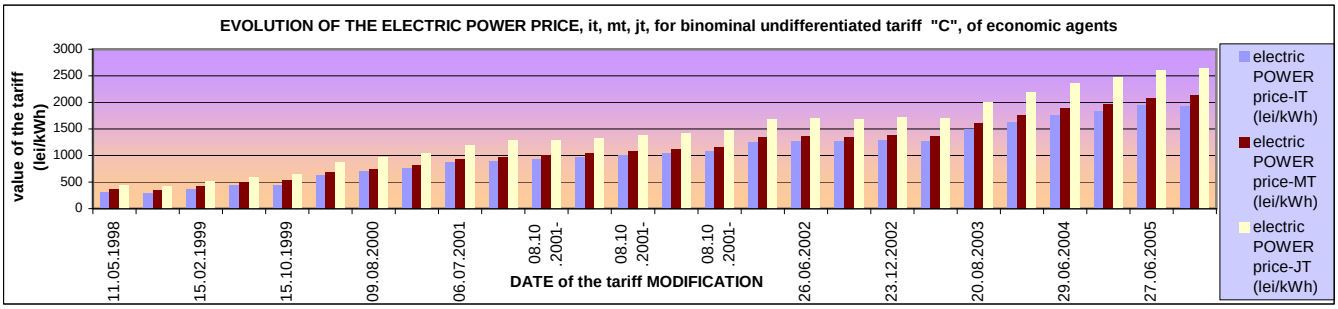
Fig.6



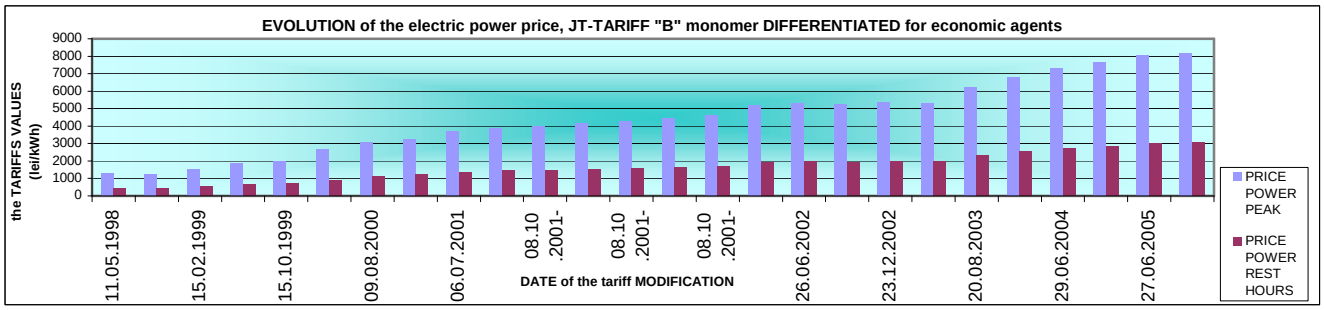
4.2. MONOM TYPE TARIFFS

The B type of monomer-differentiated tariff was the first attempt for a complex monitoring. B tariff appeared as a first possibility of reducing the costs connected to electricity consume. On the other hand, the binomial tariffs appeared because of the need to vary the tariffs' offer while the electricity market had been opened.

At first the **B type differentiated monomer tariff** seemed a long term alternative, and it was used in tariffs' negotiations within the transition period towards the binomial tariffs, especially when the measuring systems did not fulfil the necessary conditions for the binomial tariffs' application. B tariff was affected by the same rates' evolution as the other rates including the same specific stagnation period. (Fig. 7)

According to the last MO issue 4 types of simple and differentiated tariffs are shown as usable; they have definite rates for the three power levels (i.t., m.t., j.t.) thus leading to 12 usable tariffs by the economic agent consumers.

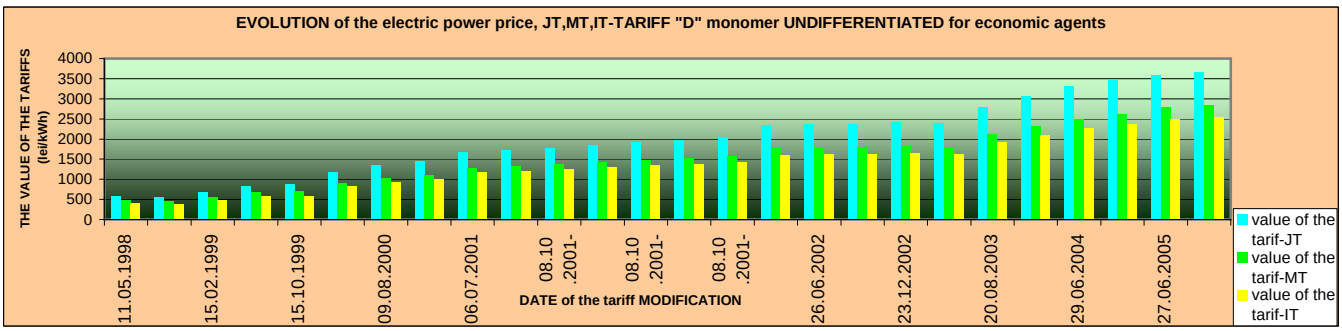
Fig.7



The simplest tariff used when invoicing the electricity consume is **D type monomer tariff**. Some specific comments are needed:

- D tariff for j.t. (low tension) is similar to domestic monomer tariff without subscription when regarding the value of the rate
- D tariff has always been a reference tariff; it is the base from where all types of corrections in invoicing the electricity consume are calculated; these corrections refer to losses, thefts, electricity unrecordings because of the measure group damage, and so on;
- D tariff is the reference element in statistics calculations which are made when calculating the tariffs' increasing, when calculating the warranties, when invoicing the temporary electricity supply on the reserve ways
- D tariff was reduced within the periods when the opening of the electricity market (especially for m.t. (medium tension) and i.t. (high tension) levels) was stagnated) (fig. 8)

Fig. 8



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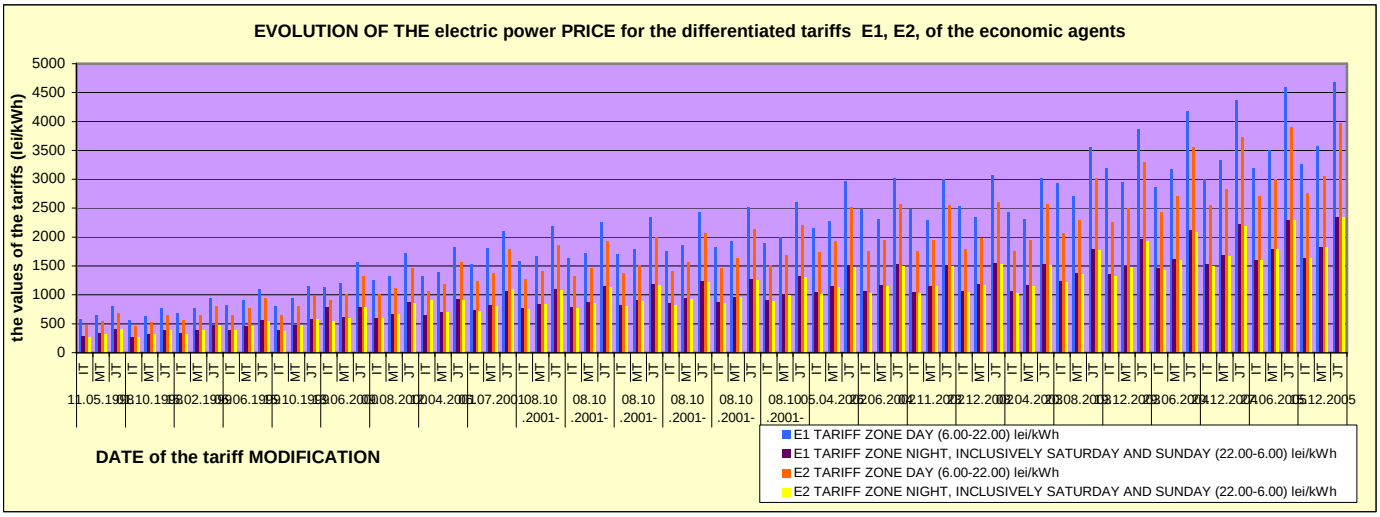
When speaking about monomer tariffs, **E tariffs** are mainly used for invoicing the electricity consumes of the public lighting. Their history is old but their values have been developed in accordance with the social and economic evolution. Concerning these tariffs we can also say that:

- The 2001-2003 period was a special one: the tariffs were structured with lower rates for m.t. than for i.t.
- The rates were mostly increased (fig.9)

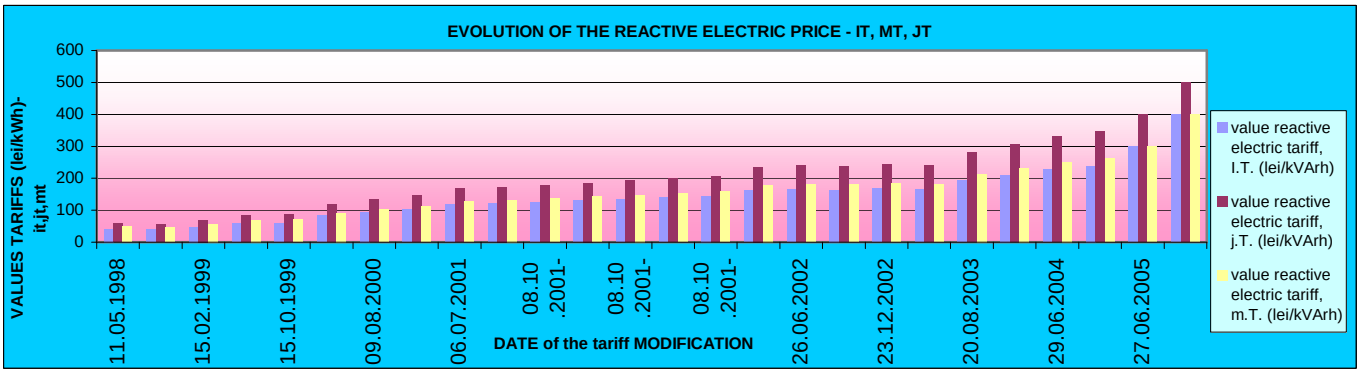
fig.9



Reactive electricity tariff settlement (a long-term used settlement) has been mostly checked in detail from 2000. Then the first regulations concerning the capacitive electricity invoicing were settled; obviously, the reactive/inductive/capacitive electricity invoicing has been possible only where there are measurement groups designated to monitoring the electricity consume; these groups must allow the following and the recording of the consumer's different functioning regimes. The reactive electricity invoicing is used only for the economic agent consumers. Domestic consumers are not invoiced for reactive electricity. The rates' evolution for invoicing the reactive electricity consumes is shown in fig.10.

A special mention for the economic agents' tariffs must be made: they do not include VAT.

Fig.10



A special place within the tariff's settlement system is occupied by **the distribution tariff**. The distribution tariff is important because it settles the rates for the consumers who wish to use the eligibility right. The tariff appeared in 2000 and was reformed in accordance with the moment of energy system restructure and reorganizing: at first it had an unique value within the SEN, but then, due to the organizing autonomy permitted to regional structures, the values were differentiated in accordance with the usage areas.

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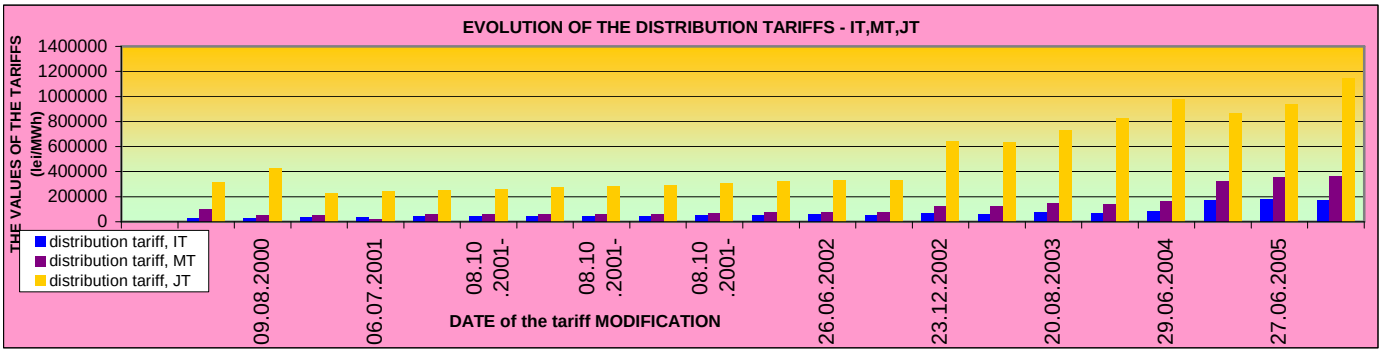
fig.10 bis



5. THE REGULATED TARIFFS FOR DOMESTIC CONSUMERS

Tariffs meant for the domestic consumers have had a long period of forming and structuring in accordance with the social changings, and even today we cannot say they have a stable and somehow definite form for a longer period of time. At first simple tariff settlement formulas were looked for; they were meant also to offer some social protection, thus reaching quite complex forms at present that is many offers which are in accordance with the European tariff settlements.

Consequently:

- research has been made for improving the **social tariff** which has been restructured in accordance with the consumed disjoints, with their electricity and rates values; today it achieved quite a differentiated structure for the users, yet designated only to a certain and quite numerous social category;
- while the electricity market opening was going on, the social tariff's usage conditions and possibilities became more restrictive; consequently starting with November 1, 2005, limitations connected to the user's average income or of his place of residence have been settled;
- being accepted within UE does not favor social tariff usage because these subventions and other so-called social supports cannot compete with the market economy. Starting with July 1, 2006 this tariff's elimination is intended; at the same time other ways of enhancing social protection subventions are looked for;
- an agreeable tariff for the users is the **subscription monomer tariff**, also called (reservation), fig.12, which at present has quite complex variants; these variants arte not largely used; here are some variants: **monomer with included consume, monomer for maximum contracted power disjoints, reservation monomer** (fig.12), **differentiated in two** (fig.14) **or three hour areas;**
- the last MO legislates 10 types of domestic tariffs with specific rates for two power levels (m.t., j.t.); the most used among these tariffs are the social one and the reservation monomer one (also called subscription);
- graphs in fig.13 show a significant rates' decrease within the first two disjoints, starting with 2005; this decrease "is compensated" by a drastic rate increase within the third disjoint; consequently, the last two disjoints (beginning 2005 year) are substantially more reduced owing to appearance of the third disjoint;
- tariffs for domestic consumers included VAT up to 2005, but starting with 2005 VAT has not been included anymore in the tariff; yet, this VAT non inclusion does not compulsory mean a real rate decrease
- fig.11 shows the subscription evolution, settled as a constant value of lei/day and temporarily lei/month; it contains two spectacular decreases, the most important one taking place in March 2001; another one was also the one in 2005 showing a significant decrease;
- the subscription has the same value without considering the domestic tariff types as it structurally includes costs referring to provided services;
- the differentiated tariffs for electricity consume periods also show significant rate decreases within the periods when the consumer's increasing was wished, that is at night, on Saturdays and Sundays; yet these tariffs were not very competitive;
- the present most requested tariffs are: the social tariff, the included consume monomer tariff and the reservation tariff.

fig.11

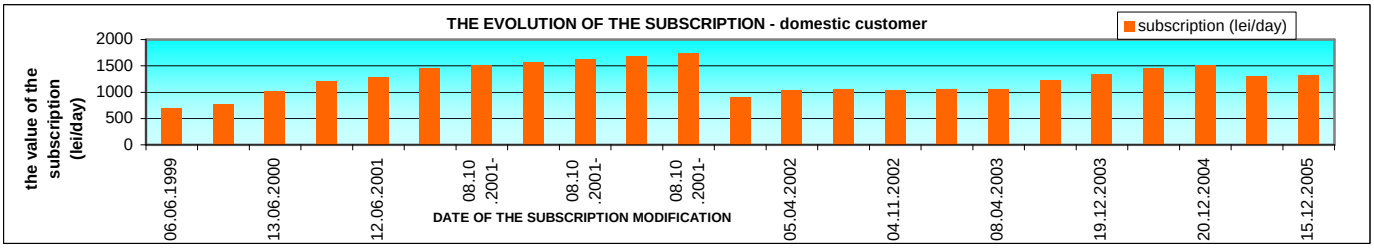


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fig.12

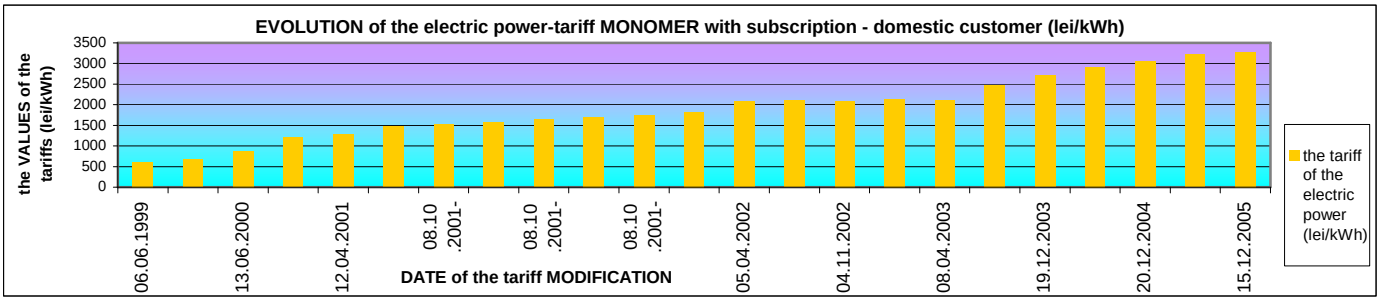


fig.13

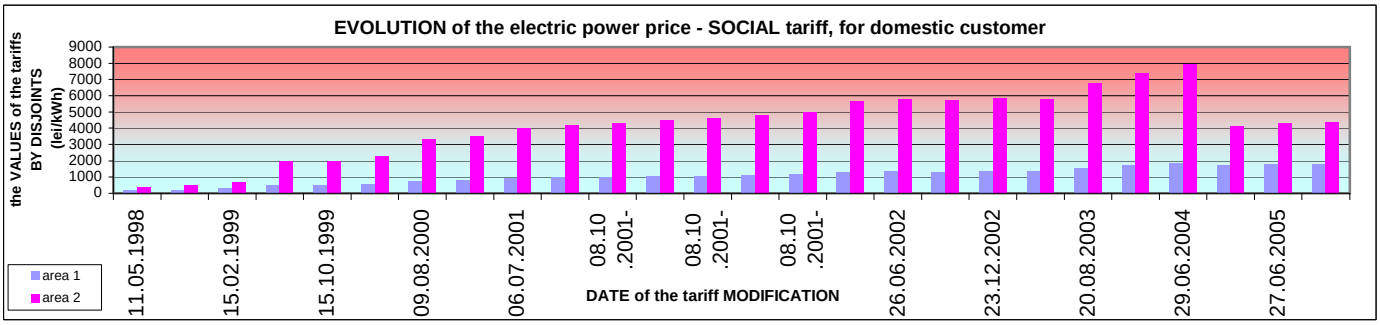
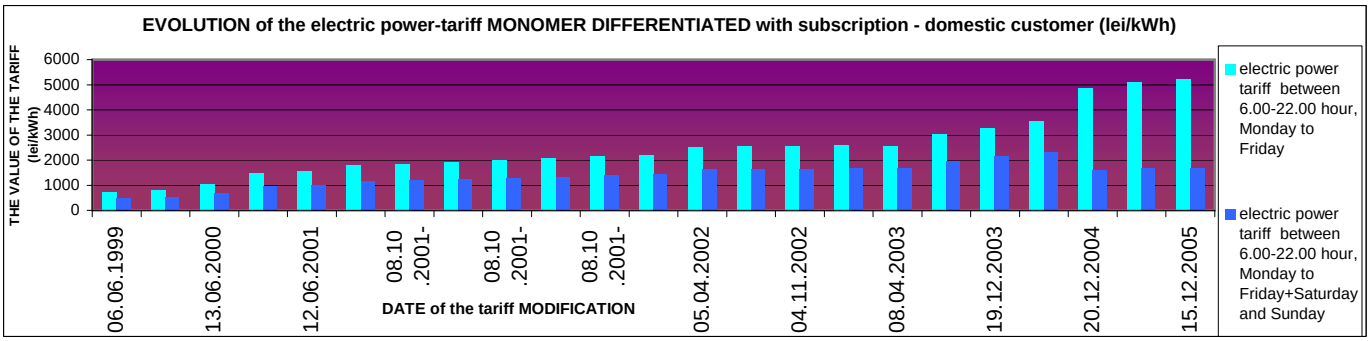


fig.14



6. CONCLUSIONS

Finally we can conclude that:

- the byname tariffs' role was to flatten the burden curve; yet while the market opening and the legislation liberalization changings have been taking place the flattening has been an uninteresting and uncheck able phenomenon;
- 2 – 4 yearly tariff changings of electricity consume invoicing for captive consumers were made and during Oct.2001 – March 2002 these changings were even monthly made;
- most of the tariffs were increased especially for the economic agents; tariff decreases were recorded for domestic consumers;
- yet, an important comment must be made regarding the tariffs' increasing value when a governmental decision has been made; this increasing must be immediately calculated according to an algorithm which takes the tariff's importance and usage value into consideration;
- the tariffs' increasing for JT level is much bigger compared to the other power levels' increasing;
- new tariffs' apparition and their diversifying has started at the same time with the electricity market opening;
- as far as binomial tariffs are concerned their diversifying led to the new A33 tariffs apparition;
- as far as domestic consumers' tariffs are concerned their diversifying led to the reservation tariffs apparition, these tariffs being differentiated according to hour areas;
- within the electricity market opening the evolution direction led to structuring negotiable tariffs for all economic agents as follows;
    - Binomial tariff model, or
    - Monomer tariff model with energy consume zones defined with penalty scale
- on the other hand there must be taken into consideration that a fair tariff negotiation (within the regulated market) between deliverer and consumer will be followed by positive consequences within the electricity distribution delivery by:

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- long term development of energy department by flattening the burden curve within the SEN level;
- electricity final consume rationalization by avoiding uneconomical regimes by means of a reduced electricity consume and great power, and by permitting optimum functioning as far as losses within the installations are concerned;
- producing competition inducement by increasing the producer's interest to produce electricity at as low as possible costs;
- the possibility of electricity acquisition at profitable rates;
- providing transparency and indiscriminative treatment of the eligible consumers by the suppliers;
- eligible consumers' encouraging to self improve their own burden curve;
- safety increasing within electricity supplying of the eligible consumers;
- designing efficient and realistic acquisition forecasts;

- different grounds and consequences are valid when negotiating within the free market because there the most important target is the electricity rate.

Actual the Romanian tariff's system includes:

- 18 binominal tariffs, for the economic agents;
- 12 monomer tariffs, for the economic agents;
- 17 monomer and binominal tariffs, for domestic customers;
- 12 binominal tariffs, for self-producer;
- 24 distribution tariffs, specific each for branch of distribution;
- 6 medium zonal tariffs, for introduction of electricity in network;
- 4 average tariffs, used for transportation, system, en-gross market discounts services.

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