COMPETITIVE CONDITIONS IN THE ELECTRICAL MARKET FOR THE COMPANIES, FOR THE DISTRIBUTION OF ENERGY, IDENTIFICATION OF COMPARATIVE ADVANTAGES, AND MARKETING STRATEGIES.

Eduardo Omar DE AGOSTINO
EDEA S.A.
Fax: 054-0223-4654720, E-mail: edea-tec@statics.com.ar

1. INTRODUCTION

The basic subject of this paper is related to the identification of the possible comparative advantages of the electricity distribution companies regarding their competitors. Such analysis shall be performed using the Porter model.

The new alternatives and competition possibilities generated by the new regulatory framework, allows the identification of new possibilities, challenges and dangers for the participants in the activity, specially for the electricity distribution companies.

2.- GENERAL OBJECTIVE:

The proposed work consists in discovering and analysing the forces which move the competition within the Electrical Sector in Argentina.

2.2- Specific objectives:

2.2.1.-To identify the competition signals and conditions of the electrical market, in accordance with the possibilities granted by the present legal framework.
2.2.2.-To identify the measurable attributes which, being potentially valued by the customers with "election" possibilities within the new legal framework, generate differentiation conditions, which can be weighted for the selection of the supplier of energy.
2.2.3.-Identify the characteristics of the service rendered associated to the product, which the distributors due to their nature could develop in a different way in order to satisfy the needs of the customers.

3. THE ELECTRICAL SECTOR BEFORE THE TRANSFORMATION

In order to attain a better interpretation of the challenges that the distribution companies have had to face and which shall continue to face in the immediate future, it is convenient to overview briefly which were the conditions before the transformation, with which we may measure conveniently the impact produced by the change experienced.

We shall carry out this analysis using Porter[1]'s model. Observing the participants which constitute the electrical market (Generators, Energy Transmission and Distribution Companies) it is noticed that although we are not talking of only one participant, we fall within the definition of monopoly, since each one of them acts exclusively within a specific geographic area given by national, provincial or municipal concession, as the case may be. Furthermore, we are in the presence of **natural monopolies** in all these cases.

It is specially interesting to analyse the operation in time and the results of the operation of this Government monopoly, studying the possible causes which justify such behaviour.

Recently, the **Government** reserved for itself the tasks of:

- Defining the short, medium and long term energy policy.
- Acting as a Control Agency.
- Rendering the public service or utility.

Since all the activity was concentrated in the Government, and the concession areas granted were absolute, the existing competition forces were not present, nor did the customers have any negotiation power, nor was there any threat of substitution. We shall see all this in the model of the next page, focusing our attention on the **electricity distribution company.**

3.1. Consequences of the model.

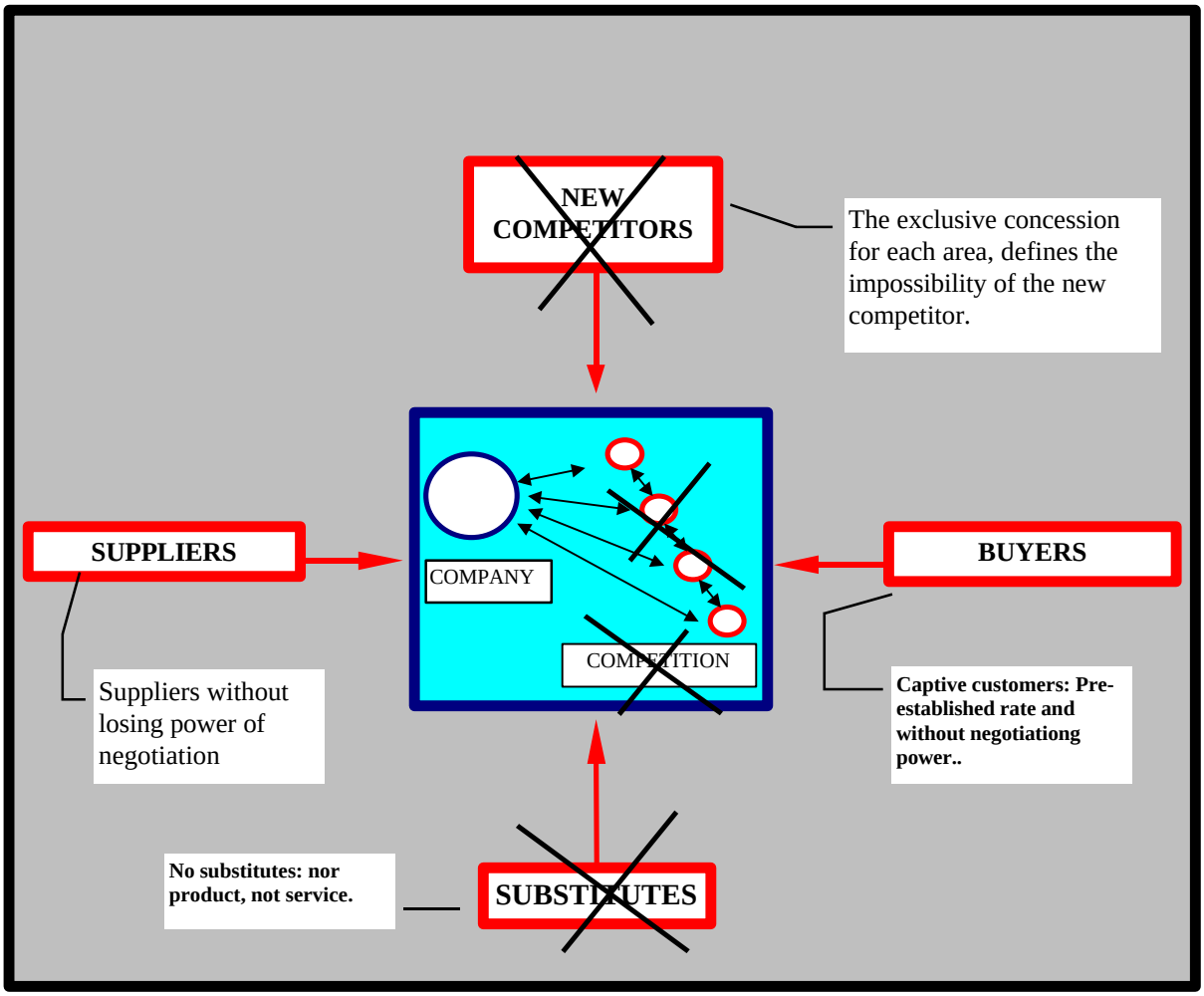
- Energy crisis.
- A high unavailability of thermal generation.
- Insufficient resources for maintaining the expansion of the sector.
- A deficient maintenance of the existing infrastructure.

Summarising, the lack of the presence of the forces which drive the competition generated a framework with no incentives for the activity, which finally originated a strong inefficiency in the Sector. Porter's diagram summarises this situation.
.

[1] PORTER, Michel E. Estrategia Competitiva-Técnicas para el análisis de los sectores Industriales y de la Competencia. CECSA, pages 23-53

PORTER's MODEL APPLIED TO THE ELECTRICAL MARKET

(Before the transformation of the sector)
(Graph 1)



4. THE ELECTRICAL MARKET AFTER THE TRANSFORMATION

The main lines which define the transformation of the electrical sector of Argentina are the separation of the functions of defining the energy policy and control from the production. The first two remain in the ambit of the National and Provincial Governments, and the second one in the private ambit.
Conceptually, the legal figure in the transformation of the agency rendering the service, passes from being a non profit Government agency to a company rendering the service which shall develop, within the new legal framework, a technical commercial profitable activity.

4.1. Objectives of the Regulatory Framework Law

Law 20.065 constituting the New Regulatory Framework of the Electric Industry defines the objectives, which may be summarised as follows:

- Protect the rights of the users.
- Promote the competition.
- Encourage investments which may ensure the supply in the long term, carried out by private capital.
- Free access to the power transmission and distribution facilities, for their use in the specific function of power transmission.

4.2. The spirit of the regulatory framework: The economic signals of regulation:

The general spirit of the regulation in the new economic - institutional order of the electric sector in Argentina incorporates new elements in the regulation, in order to control the regulated companies through the verification of the compliance of their obligations, subject to penalties and incentives, without any need of interfering in the production function of the company, nor in its cost structure or investment goals.
With this the objective pursued is to increase the efficiency in the delivery of the services, and to

generate competitive conditions which may produce economic signals which may encourage a reduction in the prices of energy.

4.3. Participants recognised in the new Wholesale Electrical Market

- Generators.
- Power Transmission Companies
- Distributors.
- Large Great Users (GUMA), power demand =>1MW.
- Small Great Users (GUME), power demand => 100kW.
- Large private users (GUPA), power demand 50kW=<P<100kW.

And their activities present the following characterisation or nature:

- In the case of the Generators:
  - ✓ Public interest.
  - ✓ Free competition.
  - ✓ Slight (some) regulation.
- In the case of the Power Transmission Companies and Distributors:
  - ✓ Public service.
  - ✓ Monopoly subject to concession.
  - ✓ Strong regulation.

4.4.- Competitive Conditions in the new model:

It has been mentioned that the new model presents competitive conditions. This condition applies to the generators, the distributors, and the large and small great users. The generators have the option of selling to any distributor and/or large or small user, according to the conditions of their best offer. The distributors are subject to the competition of the generators and self-generators, which can use the installations of the distributor to deliver their energy to the customer. The competitive conditions which benefit the consumers of energy, are reflected in the possibility of choosing the supplier of energy, according to the following figures or alternatives:

The great users may chose between:

- Buying from their distributor
  - ✓ at the established rate.
  - ✓ by contract.
- Buying from a Generator
  - ✓ by contract."

When the Great User buys at the established rate, it pays for the energy used and for the power committed, an amount which is calculated on the basis of the unit values set in the rate approved by the applicable Government Control Agency. When the purchase is by contract between the Great User and the Distributor, the parties can agree special supply conditions which may consider improvements in the quality of the service, lower prices than the established rates, or other conditions beyond the minimum requirements that the distributor is obliged to guarantee.

4.5. Analysis of the forces which move the competition in the market after the transformation.

Applying Porter's Diagram to the situation after the transformation (Graph 3) we can analyse the situation of each one of the participants of the electrical business.

4.5.1. Analysis of the Competition:

The generators act in a free market, with the possibility of selling through term contracts or in the wholesale electrical market by order of merit regarding the generation costs.

The generators, in order to transport the energy from the plant where they produce it to the point of consumption of the customer, use the infrastructure of the other agents of the WEM, amongst these those of the distributor. For this concept the generator pays a "toll" for the use of these "energy corridors", and this value is subject to regulation..

The distributor must maintain a large infrastructure in installations in order to comply with his duty, since he must cover all the geographical area covered by the concession with electrical lines, transforming stations and distribution centres wherever there are customers, independently from the amount of energy he can distribute and "sell" through them.

This reality imposes on the distribution company **high fixed costs**, due to the value of assets and to the minimum personnel required.

The implementation of actions tending to convert the **fixed expenditures to variable ones**, and the technical implementation of the processes, allows the Distributor to improve its position regarding the competition, in order to be able to negotiate more "tempting" tariffs for the customers, on the basis of the improvement of the **distribution added value (DAV).**

Unlike the generators, the distributors have strong **outgoing obstacles or barriers (for penetrating into other areas)** since all the assets related to the electricity distribution infrastructure can be classified as **Specialised Assets**, and they cannot be used for any other purpose.

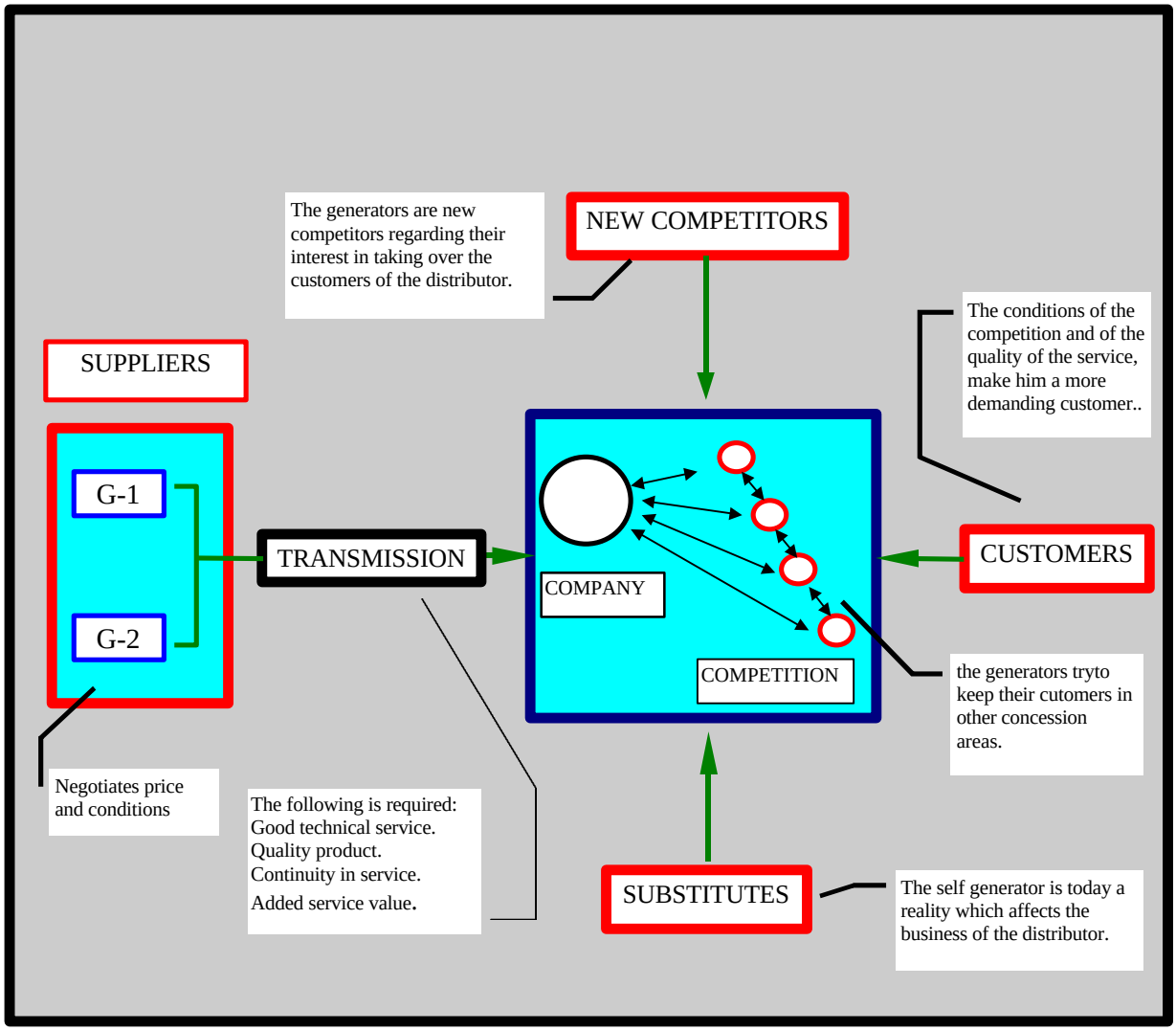
To this we may add the **"image" barriers**, since the loss of a Concession contract would generate negative antecedents (background) which would prevent the participation of the company in other Concessions.

The National Government qualifies the electricity distribution activity as a Public Service.

The regulations in force and all the actions of the Government tend to oblige the concessionaire to losses

PORTER'S MODEL APPLIED TO THE ELECTRICAL MARKET

(After the transformation of the sector)
Graph 2



of jobs and regional economic maladjustments, but because comply with the concession contract and discourages giving up the concession, not only due to the possible this would also produce a misleading or counter-productive signal, contrary to the purpose of attaining efficient services and producing lower prices for energy. In other words, we identify **social and Governmental restrictions**, through the above mentioned actions.

Lack of differentiation: The main problem that the energy distribution companies face regarding competition, is the lack of differentiation of the product they market, that is electric energy.
In order to understand well the use of this concept in the electrical market, we might well remember the concepts of **technical quality** and **functional quality** and define what is to be understood by **quality of the technical service** and **quality of the technical product** in electric energy distribution.
Slongo[2] defines the technical and functional quality in the following manner:

"TECHNICAL Quality: It refers to the final result of the service in its essence, it means "what is done" for the customer.
FUNCTIONAL Quality: It refers to the manner in which the final result of the service
is achieved, it is "how" the service is delivered."

In distribution, we consider as technical quality the quality of the service and of the product, with minimum levels required in the respective concessions, which are valid when the consumer of the energy is a

[2] SLONGO Luiz Antonio. Logística empresarial (Business Logistics) Post-grade in Marketing. 1996

customer of the Distribution Company, or when he is a customer of a generator. Therefore there is no possibility of distinguishing between the generator and the distributor.
On the other hand, when we consider the quality of the functional service, that is the quality which shall be perceived by the customer or user, the possibility exists of distinguishing between distributor and the generator. We should remember that only the distributor has the great possibility of having a direct contact with the customer, because the distributor does not only share the same geographical area, but there is also an electrical connection between the installations of the distributor and of the customer.
All the areas of the company which have contact with the customer or user (for example, Commercial, Technical), produce an image on the customer, through which he forms his concept of **functional quality**, related to the manner in which he is attended, to the manner in which the product arrives, and in which the main service is rendered, or those complementary services which the company decides to implement.
As far as quality is considered as a strategic value, in order to face the competition which the distributor shall undoubtedly have, the need must be considered of adopting practices which may allow the distributor to distinguish himself regarding the quality of his service for his own customers, compared to the situation in which the distributor must fulfil the functions of Supplier of the Transmission Technical Function.
Other aspects related to the differentiation, are the additional services to the basic function of electric energy distribution, such as:

- Assistance and technical advice to the companies which are customers of the Distributor, in those items in which it is specialised..

- Preventive and corrective maintenance services on the electrical installations of the customers, which serve as a link with the distributor.

- The offer of services of loan or rent of spare parts and equipment which form part of the normal stock of the distributor due to their high use, but not so for the customer.

Another essential point of **differentiation** between the distributor and the generator, is the final price of the energy at the point of supply to the customer. Although this mater is the most critical and the most difficult one to attain, in this type of activity, the Distributor should not give up. Its actions must be reflected in the parameters which influence the cost of the energy for the Distributor:

Parameters which influence the cost of energy.		
1	Purchase of energy in the SPOT market	Price of the power and of the energy at the distribution node.
2	Purchase of energy with a term contract.	
3	Cost of the power transmission.	
4	Distribution costs of the Distributor	Added commercial value.
		Added distribution value
		Value of the losses of energy ($/kWh)

Costs 1 and 3 do not allow a differentiation, but cost 2 does allow the distributor to distinguish himself from the competition.
Costs 1, 2 and 4 allow the distributor to attain a competitive level of rates, even in the case of potential customers connected directly from the installations of the power transmission company.

4.5.2.- New Competitors.

The threat of new competitors is for the distributor an important factor of incidence for his business.
The obstacles or barriers to the entry of new competitors are detailed below:

Government policies: The last changes in the regulations allow to the entry into other concession areas as energy marketing agents, although the entrance obstacle represented by the concession areas is maintained.

Differentiation of the product: As I have already mentioned, the **differentiation of the product** in this case is very difficult to attain, since the final customer shall perceive the “electric energy” product with a certain quality, but always coming from the Distributor, being unable to identify the actual responsible company (companies). In other words, there is no differentiation in terms of being able to assign the quality of the product to the Distributor, to the Generator, or to another marketing agent.

Requirements of capital: This entrance obstacle is present for the Generator, not only for becoming a competitor of the Distributor, but also because the main challenge of the Generator is to compete with his “companions”, the other Generators. The Generation company has the commitment of attaining the latest technology plant, with a high output, which may guarantee competitive energy costs in the WHOLESALE ELECTRICAL MARKET (WEM).

The access to the distribution channels of electric energy are the installations of the Power Transmission Companies, of the Trunk Distribution Transmission Companies and of the Distributors, and the Generator

has the guarantee of their use. Therefore, for the new competitors, this does not represent any obstacle at all.

Substitutes: these are the self generators, for example the factories, which have their own generation with remaining (surplus) capacity. In order to reduce their own production costs, they sell their surplus of energy to the market, specially through term contracts negociated with other companies. Although their participation in the WEM is minimal, they operate with very low energy costs, since their generation costs are absorbed by their main activity, and in the cases of having steam turbines, they use the surplus of the main production process for power generation.

4.5.4. Suppliers: Constituted by the generators. Their negotiating power competing with a distributor, when negociating a term contract, is limited by the incidence of the reference prices generated by the MEM, due to the participation of all the generating companies, due to the relationship between the global offer and demand of energy, and due to the characteristics of the generating installation.

4.5.5. Buyers: The new legal framework has given them the possibility of choosing, and therefore they exert pressure in order to obtain better prices and better service and product quality. Generally speaking, the buyers have very low costs for changing the supplier, so this does not constitute any obstacle for leaving.

5. Competitive strategies:

In the marketing ambit we recognise three basic strategies:

1. General leadership regarding costs.
2. Differentiation.
3. Focusing or high segmentation.

Considering the operation of the WEM and the competitive strength of each one of the participants of the WEM, the election of the strategy to be implemented by the Distributor to attend the segment of the Customers with the capacity of election, is the **leadership in costs.**

For the customers, the price is the most important value in the election of the "final consumers", beyond those related to the quality of the product and of the service, for the above mentioned reasons.

Additionally to this strategy, consideration should be given to the development of the above mentioned actions so that the customer may perceive an added value to the product through a service which is adequate to the needs of the consumer. With this we would be applying **differentiation strategies,** taking advantage of the opportunity that these are out of the reach of the Generator.

6. Conclusions

The power distribution company subjected to real competition conditions, in spite of its monopolic condition, must consider the implementation of commercial and marketing strategies in order to improve its business, to have competitive prices for energy, to avoid losing customers, and to recover the lost customers.

All this, with the objective of establishing comparative advantages, which may be perceived by the customers with a higher negotiation power and with possibilities of choosing.

7. Bibliography.

-BASTOS, C.M.; ABDALA, M.A.; Transformación del sector eléctrico argentino. (Transformation of the electrical sector in Argentina) (Pugliese Siena SRL, 1995).

-DAMONTE, M.; Análisis de las reformas del sector eléctrico en la argentina. (Analysis of the reforms in the electrical sector in Argentina)(Mimeo, 1992).

-GONZALEZ, Hugo, El Mercado Eléctrico Mayorista (The Wholesale Electrical Market). Realidad económica. Nº 108. Mayo-Junio, 1990.

-Law 24.065 of Argentina ELECTRICAL REGULATION FRAMEWORK

-RESOLUCIÓN ex-SEE 61/92 (RESOLUTION OF THE FORMER DEPARTMENT OF ENERGY) LOS PROCEDIMIENTOS (THE PROCEDURES OF CAMMESA) and complementary publications.

-HYMAN, L.; WEST, H.. Diversification, Deregulation and Competition: Cost of Capital Implications for Electric Utilities. Deregulation and Diversification of Utilities. Kluwer Academic Publishers. Boston, 1989.

-GIRALDO, Jesús. Union Fenosa. Un futuro escenario para la distribución. CIRED, ARGENTINA'96.

-SCOTT HOWELLS, Kim. Energing Strategies In A Global Market Environment. Transmission and Distribution, Europe'96, Conference and Exhibition.1996.

-KERSZBERG, Ernesto. Technical Function of Power Transmission in the Electrical Market of Argentina. Electrotécnia. V.4, p.124-142, Jul/Agosto. 1996.

-WINDSOR, Peter. New Business Opportunities In A Changing Word. Transmission and Distribution, Europe'96, Conference and Exhibition.1996.

-CARTER, Nick. New Strategies in a Restructured Utility Environment. Transmission and Distribution, Europe'96, Conference and Exhibition.1996.

-RHYS, John. Deregulation. The new economic realities. Transmission and Distribution, Europe'96, Conference and Exhibition.1996.

PORTER, Michael E.; "Estrategia competitiva", 1985; Edit. Continental S.A.