Thorough Analysis of the Current Brazilian Electric Industry Model

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ABSTRACT

The purpose of this analysis is to evaluate the new institutional model of the Brazilian electric sector, based on the confirmation of its implementation, aiming at the comprehension of the agent point of view, who are in charge of the sector expansion of supply needs. Thus, the new model and the government point of view are presented, as well as their meaning for investors and issues related to their implementation. This highlights the assimilation, of sector agents, of evidence on the most important critical factors and significant issues that need to be addressed for a successful implementation of the new electric sector model.

The most visible result of this purpose is the identification of the following crucial factors: the impact of the new model on new investments; implications of the implementation of the new model for both new and old investors and regulation agencies; and the feasibility of economic back-up for new projects (taking old projects into account as well).

As a result of this evaluation, we conclude that the formal introduction of new agents determines the full feasibility of the new model in its process of consolidation, as in the case of planning through the EPE (Empresa de Planejamento Energético – Energy Planning Enterprise). A second important conclusion is that the new model can be classified as a “third generation reform”, that in fact brings in the institutionalized reduction of risks and a consequent limitation in financial earnings.

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1. INTRODUCTION

Electric energy, as an indispensable element in the social economic activity, is definitely settling more and more as one of the main factors of development, causing governments to take strategic positions. In this sense, electricity, rather as an instrument than an end in itself, enables the improvement in the life quality of populations, especially in developing countries.

The impressive fact of the hydroelectric power generation predominance in Brazil brings additional implications, since the general implementation period superior to five years (despite shorter periods of time in recent undertakings) compels the SEB (Setor Eletrico Brasileiro - Brazilian Power Sector) to contemplate larger periods of time in its operation and expansion modelling. The new SEB, formulated and approved by the new Brazilian government administration, highlights the accounting of those requirements in the
formulation of its new institutional arrangement regarding a larger stay in time. However, it is important to mention that introducing a new model to the SEB adds the uncertainty of its success in the future, for it contradicts the record of changes in that sector (when viewed from market and especially investor’s environment).

The new SEB model, regardless of the country’s political slant, permeates the idea of enhancing the previous proposal, for it moulds itself from what was achieved so far by institutions and sector agents. One can’t deny that, despite taking up non-traditional means at times, there was an information interchange and discussion process among the Electric Industry stakeholders (government, generator associations, independent power producers, transporters, traders, utilities, large consumers, class and union associations, federations, congress members, governors, forums of state energy ministries, universities, etc.).

Despite all that, the new model, still in implementation process, bears uncertainties as for future solutions and evidences of modification in the short run. As usual in a competitive market environment, there are more specific requirements linked to some of the SEB actors who seek for a larger share of the market or, even in some cases, to restore a genuine gain. This issue appears inevitably as a faint demonstrative of some long run directives of the model.

This analysis of the new Brazilian Electric Sector –SEB institutional model is developed around its conception and implementation, gathering the critical aspects according to the view of the actors responsible for the expansion of energy supply for the maintenance of the socioeconomic activity and the fulfilling of society needs as a whole. Thus, the paper presents initially the architecture of this new model and the governments’ position, issues related to the implementation and its meaning to investors, regarding the current Brazilian energy matrix. It also seeks to elicit how the actors in the power industry, mainly the privates, assimilate the most significant aspects required in the implementation of the model structure, since they are in charge of this expansion. In short, this document reflects the impact of the new model in the enlargement of investment and its implications to investors.

2. THE NEW MODEL OF THE SEB AND THE GOVERNMENT ADMINISTRATION SLANT

The Model proposed by the MME (Ministério de Minas e Energia – Ministry of Mines and Energy), that is to the SEB (Setor Elétrico Brasileiro – Brazilian Power Sector) new structure, defines its essence according to the following primary aims:

- Assure the security of the power supply;
- Promote a reasonable tariff policy (moderate rate), through efficient energy contracts to regulated customers;
- Assure the stability of the regulatory mark, aiming at attractive investments for the expansion of the system;
- Promote the social insertion in the Electric Sector, especially through programmes for the universalization of energy supply.

Obviously, the primary reference is an enhancement of the unfinished model, still in force in 2004, aiming at a competitive market with no participation of the enterprise state, and a thoroughly unbundling SEB. Under these premise and conditions, the fundamental elements of the new SEB model are:

- Restructuring of mid and long term planning;
- Monitoring, in the short run, of supply conditions;
- Redirecting of energy hiring in the long run, compatible with the instalment payment of executed investments;
• Competition in generation with energy biddings according to the lowest tariff criterion;
• Coexistence of two energy contraction environments, a regulated (Regulated Contraction Environment – ACR), protecting the captive consumer, and a free one (Free Contraction Environment – ACL), encouraging the initiative of free consumers;
• Establishment of a regulated hiring pool to sell energy to distribution companies (utility);
• Separation of the distribution service from any other activity;
• Prediction of a situational backup for the recovery of supply and demand balance conditions;
• Restoration of the executive power’s role of concession.

To enable the SEB directives, main elements or supportive points to the Model can be highlighted, such as:

• Supply security;
• Reasonable tariff policy;
• Hiring and competition environments in generation;
• Hiring of new energy in an Regulated Contraction Environment – ACR;
• Hiring of energy existent in the ACR;
• Free consumers;
• Access to new hydroelectric power plants by independent energy producers;
• New institutional agents.

2.1. Supply Security and Reasonable Tariff Policy

When it comes to the development of a country in terms of energy, one must certainly concern about the security of energy supply and, at the same time, reasonable tariffs (moderate rate).

A.- Security of Electricity Supply

In the current and still valid regulation, it is impossible to identify instruments able to directly assure the supply security. There is, in turn, an indirect guarantee, derived from the demand of an assured energy margin for contracts of purchase and sale of energy. For instance, if 100% of the demand is hired by generators whose assured energy corresponds to a 95% security index, there will be, in theory, a maximum risk of 5% for any kind of supply problem.

For a broader comprehension of the new structure, it is important to stress how the foundations of the former model, still in force in 2004, regard these indirect schemes of inducing supply security, which could even be taken as limitations:

• It is presently (regarding the recent old SEB model) required that 95% of the demand must be hired, and not 100%, causing, as a consequence, a generation supply inferior to the necessary level;
• The calculation of the assured energy of hydroelectric power plants doesn’t take into account the effects of many operational restrictions, causing an underestimation of the real risk of supply problems, even if a 100% of the demand is hired;
• The differential contribution of thermal power plants to the security of supply is not taken into account, particularly in the mitigation of severe deficits, in case of extremely unfavourable hydrological conditions.
The new model, in final stages of implementation in the second semester of 2004, foresees an integrated joint of measures to assure the security of supply, such as:

- Necessary hiring of the total demand;
- Realistic calculation of generation margins (assured energy);
- Adjustment of the current criterion of structural supply security, set over twenty years ago, to the rising importance of electricity to both economy and society, with the setting of stricter criteria of supply security;
- Hiring of hydroelectric and thermal plants in proportions that assure an optimum balance between guarantee and cost, which, combined with the new supply criteria, will result in the same security provided by present criteria with an externally set backup, doing without the allocation of a joint of backup projects;
- Permanent monitoring of supply security, allowing the detection of situational unbalances between supply and demand and enabling preventive measures capable of restoring the assurance of supply at the lowest cost to consumers.

The Executive Power, based on studies of the Energetic Research Enterprise - Empresa de Pesquisa Energética (EPE), will offer options of undertakings, listed by price, including a supply superior to the predicted demand in processes of bidding. The goal, thus, is to encourage competition for more efficient plants. In special cases, the National Board of Energy Policies - Conselho Nacional de Política Energética (CNPE) can allow the bidding by single plants.

B.- Reasonable Tariff Policy (Moderate Rate)

The main point of reasonable tariffs is the efficient hiring of energy to regulated consumers. The main actions to promoting this efficiency are:

- Always proceed to the purchase of energy through auctions, in the “lowest tariff” mode;
- Hire energy through joint bids of utilities (pool), aiming at a scale economy in hiring energy from new undertakings, risk and contractual benefits sharing and equalize supply tariffs; and
- Hire energy from new plants separately from energy hired from existing plants, both through auctions.

2.2. Hiring and Competition Environments in Power Generation

Within the new SEB model, the need for competition in the production of energy is admittedly known. Therefore, two environments of contraction are defined:

- **Regulated Hiring Environment** – ACR (*Ambiente de Contratação Regulada)*.- comprises the hiring of energy for the supply of regulated tariffs consumers (utilities consumption), or captive consumers, through regulated contracts with the purpose of assuring moderate rate (reasonable tariffs). In this environment, energy is purchased by the utilities joint, in auctions, in various terms. All generators – including independent producers – will sell energy to all utilities. The existing energy auctions will be separated from expansion auctions.

- **Free Hiring Environment** – ACL (*Ambiente de Contratação Livre)*.- comprises the hiring of energy for the supply of free consumers, through freely negotiated contracts. In this environment, generators and independent producers will trade energy, at prices and amounts freely negotiated with free consumers (according to
the legislation, the ones with a capacity above 3 MW). The character of the trader is still kept in the new model with a restricted action in the ACL.

Bilateral contracts in force, involving utilities, will be fully respected and treated in the ACL until their expiration. All generators, whether public generation service companies or independent energy producers, including autoproducers with surplus energy, will be able to trade energy in both environments, featuring generation, marking generation as a competitive segment. Rules of expense accounts and liquidation of purchase and sale of energy will be essentially the same applied presently.

In commercial terms, the ACR could be viewed as a “cooperative” that gathers the demands of several utilities and keeps contracts with a joint of generators. Accounting and liquidation of these contracts will be identical to the ACL agents and follow basically the current rules. In particular, differences between hired values and effectively consumed values in the ACR will be accounted and liquidated based in the marginal cost of operation (CMO), subject to a maximum value.

A.- New Contraction in Regulated Contraction Environment – ACR

The main features of hiring energy from new generation plants are: bidding process in two steps; offer of bidding projects, selection of winning projects, bilateral contracts of every generator with all utilities and incentives to utilities for efficient hiring.

Given the five year term for the maturity of new hydroelectric power plants, the hiring of energy to call for the predicted demand rise shall preferably be accomplished with the same anticipation. However, due to the great uncertainty as to this demand growth, caution is needed in this hiring. Actually, if energy corresponding to a specific growth scenario were hired, and the actual growth resulted much smaller, an excessive capacity would have been installed, burdening consumer’s tariffs. In this sense, this kind of hiring is safer to the consumer than the contraction of energy, to attend the expansion of demand, made in two biddings:

1. **Initial bidding**, takes place with five years of anticipation, in which the amount of hired energy meets a given prediction of demand growth, and
2. **Complementary bidding**, takes place with three years of anticipation (two years after the initial bidding), for the hiring of demand increases derived from the revision of the initial bidding projection.

The MME (Brazilian Ministry of Mines and Energy) will offer the bidding (initial or complementary) a collection of projects (hydroelectrics and thermoelectrics) studied by the Energetic Research Enterprise – EPE (*Empresa de Planejamento Energético*) and considered the most economic in terms of demand meeting. With the purpose of increasing the efficiency of the bidding process, the total amount of capacity (assured energy) of the offered projects shall exceed substantially the amount of bided energy. Besides that, offered hydroelectric projects will have the previous environmental license and the declaration of hydro availability.

Any agent will be able to offer freely, for the biddings, alternative projects to the collection proposed by the MME.

The criterion of selection is the lowest global cost (investment and operational cost that meets a security of supply criterion). The projects will be selected through the following procedures:

1. Initially, in biddings of energy from new undertakings, contracts will be of “available energy”, in which energy produced by the plant, according to the ONS (*Operador Nacional do Sistema Elétrico* – Power System National Operator) instructions of dispatch, will be made available to the ACR. This means that
generator’s gains and risks are transferred to the ACR consumers. The result of this decrease of generator’s risks is a reduction in offered tariffs, contributing to the lowest global cost;

2. Bidders will propose tariffs (R$/MWh of assured energy) for the available energy of the project (hydroelectric or thermal). If there is more than one bidder for a same plant, the one with the smallest tariff will be chosen;

3. Hydroelectric generation is currently the most competitive source; thus, it shall prevail in the lowest cost expansion. However, experiences in planning show that a smaller global cost expansion can include a part of thermal generation. Due to this possibility, a considerable proportion of thermal generation will be accorded to, in complementation with the hydro generation, lead to the lowest global cost for the consumer, with a greater supply security;

4. The hiring of hydroelectric or thermoelectric plants will always be carried out in growing order of respective tariffs. Power plants will be hired in this order, keeping a hydro-thermal proportion, until the last one to equal the accumulated assured energy to the bided demand. If including a thermal portion proves to be economical, the hiring will be taken in separate lists.

Each generator hired in the bidding will sign separate bilateral contracts with each distributor. The sum of assured energies hired with the utilities will be equal to the generator’s assured energy. As mentioned, the purposes of this kind of contraction is to provide scale economy in the bidding for new energy, share the risks and the benefits of the contracted parts and equalize supply tariffs of utilities.

There will be a single price of transferring energy to all utilities, given by the average of initial and complementary biddings, in which the average factors will be the total amounts (sum of assured energies contracted by utilities) acquired in these auctions. However, the price that each distributor will pay to hired generators will be an individual average, in which the ponderation factors will be the amounts of energy acquired by that particular distributor in auctions. In other words, if the individual price of energy purchase from the distributor is inferior to the single transfer price (more efficient than the market average), the distributor would have earned for a period of three years. Besides that, other mechanisms of incentive to reduce the price of energy in auctions of pool purchase might be admitted.

Utilities will also have instruments of risk and uncertainty management at their disposition, such as the hiring of adjustments in the ACL, with an anticipation from one to two years, the recontraction of existing energy in annual auctions and the transferring, without costs, of energy contract surpluses from other utilities.

The mentioned risks relate to the exposition in which utilities can incur in the liquidation. This risk is associated to uncertainties in the demand prediction related to the regulated consumption, of distributor’s responsibility.

B.- Contrataction of Existing Energy in the ACR

Annual biddings for existing energy contraction will be held. Contracts will be bilateral (as current contracts), with different terms of length, between five and ten years.

C.- Free Consumers

Consumers who are qualified to opt for their supplier (free consumers) must notify the intention to the local distributor, according to the following price chart:

<table>
<thead>
<tr>
<th>Demand (MW)</th>
<th>Anticipation</th>
</tr>
</thead>
<tbody>
<tr>
<td>between 3 and 5</td>
<td>1 year</td>
</tr>
<tr>
<td>between 5 and 10</td>
<td>2 years</td>
</tr>
<tr>
<td>above 10</td>
<td>3 years</td>
</tr>
</tbody>
</table>
The notification to the previous condition of local distributor’s supply shall be done with an anticipation of five years. Despite this requirement, the distributor will have the prerogative to attend the consumer in shorter terms.

**D.- Access of Independent Producers (PIEs) to New Hydroelectric Generation**

In essence, independent energy producers (PIE) are the dynamizers of the generation market, therefore it is important to understand the access to this market. A generator agent, to have access to a new hydroelectric project, for own use or trade in the ACL, shall:

1. Take part in the bidding of the respective process in the ACR, and supply the lowest tariff to the whole assured energy of the undertaking;
2. Pay a compensation for the portion of the plant intended to own use or trading in the ACL.

The compensation, to be payed annually during the entire concession period of the undertaking, will be destined to the reasonability of tariffs, calculated according to the following expression:

\[(TL - To) \times EA \times X\]

Where:

- \(TL\) – lowest value between the marginal reference tariff of bidding projects and the marginal tariff obtained in the bidding for demand meeting, in R$/MWh;
- \(To\) – Tariff of assured energy supplied by the project in the bidding, in R$/MWh;
- \(EA\) – Assured energy of the undertaking in MWh/ano;
- \(X\) – Proportion of the assured energy of the project destined to the ACL (the difference will be hired with the ACR).

**2.3. New Institutional Agents**

New institutional agents are introduced, and shall constitute the new MME committee. It is interesting to stress that these agents are nothing else than the enhancement of complexities not addressed by previous models (as for example, the energy rationing in 2001 and its consequences). The new institutional agents are three, as elicted next:

- **Energetic Research Enterprise - Empresa de Pesquisa Energética – EPE.**- technical institution specialized in developing studies required to the MME exercise of carrying out the energetic planning.
- **Electric Energy Trade Council - Câmara de Comercialização de Energia Elétrica – CCEE.**- institution that will succeed the Energy Wholesale Market - Mercado Atacadista de Energia – MAE, incorporating relevant organizational and operational structures, especially the accounting and liquidation of contractual differences in the short term, besides taking up the role of administrator of contracts of energy purchase for the supply of regulated consumers.
- **Electric Sector Monitoring Committee - Comitê de Monitoramento do Setor Elétrico – CMSE.**- instituted in the scope of the MME, with the function of permanently assessing the security of supply. In case of situational unbalances between supply and demand caused, for instance, by delays in the timetable of generator’s construction, the CMSE will be able to propose preventive measures such as price signals or constitution of situational backup, to restore adequate security levels, at the lowest cost for the consumer.
3. THE NEW MODEL AND THE INVESTORS IN THE ELECTRIC INDUSTRY

In fact, the new model can be contemplated in the direct or indirect perspective of new investments presented and represented in the implementation process and its effective functioning. These opportunities are certainly different in both moments and risks are also consequently different, given the greater uncertainty in the first moment (process of implementation).

The new SEB model for the EI (Electric Industry), as mentioned, aims at three primary goals: assuring the supply, promoting a reasonable tariff policy and universalizing the access to electricity. In fact, an analysis of the details of the model shows that the two first goals imply a complex situation that introduces uncertainties and hinders their accomplishment, especially when it comes to a developing country.

Thus, for instance, universalization, an issue of a working ongoing process, is not treated directly in the implementation scope of the new model (provisory measures). However, the so called program “Luz para Todos” (Light to All), aimed at the universalization, remains hindered and uncertain because of a lack of visible criteria to reach the universalization. In this sense, there is a possibility of directing, somehow, sectorial funds resources such as the CDE (Conta de Desenvolvimento Energético – Energetic Development Account) and the RGR (Reserva Global de Reversão – Global Reversion Backup) to cover investments necessary to the universalization.

The main question of the moment is whether the new SEB model will attract investments.

The evaluation of investment criteria in private enterprises takes the indication of the present macroeconomic situation into account, as for political stability, interest, inflation and exchange rates; unbalance between supply and demand and the market structure and foundations; and legal/regulatory risks, critical aspects to the decision taking. Some additional parameter can complement the final evaluation such as the counterbalance of the criteria associated in the risk/return as well as the risk/return of opportunities of alternative investments.

Investors in general express their discontent as part of looking for a good business, and the new SEB model brings certain grudges related mainly to modified questions from the previous model. Since the implementation of the new SEB model, different conflicts, unresolved issues and several surprises ended up influencing the decision taking of investor agents. So, for instance, the centralization of key factors in the hands of the MME raises uncertainty related to the susceptibility of the electric sector to government changes. The implementation of the model through a provisory measure decreases investor’s confidence, for it gives the impression that rules can change anytime in Brazil without the interference of an independent organization, role to be taken by the National Agency of Electric Energy - Agência Nacional de Energia Elétrica – ANEEL. This gets a little confusing when it comes to the perception and reading of the previous unfinished “new model”, for one can’t deny that in the implementation process of the new model, there is a full ANEEL exercise included.

In both market and investor’s view, the guarantee of electric energy supply will hardly occur, and the valid argument is that the model raises the regulatory risk (not five years have passed since the last rule changes), burdens capital costs and would, thus, keep off private investment. This becomes clear when we, as previously mentioned, look at the excessive centralization of power in the Ministry of Mines and Energy - Ministério de Minas e Energia (MME), leading to a possible tendency for politization and instability of rules with the government alternance. Therefore, it’s good to remember that a concession contract lasts usually for about 30 years, going through at least 7 governments and at least 7 ministers of Mines and Energy.
Still under the perception of not assuring the offer, it is fairly claimed by the involved parties that the rules of the model penalize existing generators in favour of new ones (in terms of the concept of old and new energy). There is also an evident though relative perception that the return of average cost tariffs would discourage the trade to free consumers and autoproducers.

In global accounts, in case the economy shows a yearly growth between 3.5% and 4%, around R$ 15 to 20 billions worth in investments in the electric sector will be necessary for the next ten years. The state capacity is surely limited and meets at most half of this demand, respecting the harshness of taxes. Taking these premises as valid, along with the inhibition of private investment, that needs to answer for the other half of resources required for the sector, we must count that Brazil will be at the mercy of new rationings.

In the many ways of appreciating the new model as for reasonable tariff policies, there’s the market slant, by which the pragmatic perception is that this proposal can only be achieved if the government introduces some kind of stratagem. In this pragmatic reality attributed to the market, the new model, while proposing structuring projects, energy backup, keeping of sectorial responsibilities and the creation of a new state enterprise, presses costs, doesn’t favour efficiency, constituting a real risk to reasonable tariffs.

Regarding the investor’s aim at profits, the artificiality of the new model’s tariff policy is shown by the fact that it is based in the pool mechanism. With the creation of the pool, two new concepts arise: the single purchaser (all utilities) and the mix of old and new energy. The character of the single purchaser, according to the MME interpretation of the new model, will promote scale economy, pressing prices down. In the same direction, old energy auctions will be held, at lower energy prices, given the fact that there’s presently spare energy in the system. While favouring new energy and an artificial reduction of old energy, therefore building an artificially lower tariff mix, the government provides a wrong price signal to consumers and basically bans existing private generators from investing in new energy. It should be clear, though, that this analysis, in spite of being coherent, is based upon recent events and limited to the short term.

The creation of long term rules, to avoid energy scarcity risks, as in 2001, is extremely complex, given particularities in the Brazilian sector. The privatizing of state companies began before the existence of a regulatory mark and was interrupted halfway through (the previous unfinished new model). As a result, generation (80%) concentrates in state companies and distribution is basically in private control. In the absence of a resume in privatization –impossible under the new Brazilian government administration – the model should take an interventionist character, what, among many other unbalances, would separate energy producers dominated by the state from utilities. In fact, the main prices regulator, the free supply and demand of energy in a free market, doesn’t exist, and opportunities for arbitrarities grow significantly in its absence. These requirements, despite critical in the scope of recent happenings in electric markets such as the Californian and the Argentinean, are investor’s biggest fear. In this sense, the fact that the free market doesn’t prove invariably efficient, neither in South America nor in several developed countries must be mentioned. Thus, a perception is stressed in the investor environment; the premise that “a mix of interference and state planning with an amount of freedom in prices constitution, as long as rules are clear, can work and consequently bring the injection of investments from the private sector.

As privatization and the free market are out of discussion in the features of the previous unfinished new model, this new model tends to be mythically assimilated in search of a large scale intervention. This is so because, judging from the record of the enterprising state in Brazil, a large competition between state companies is very unlikely, for they are mostly confined to the supply of old energy to a pool that will also receive new energy at a higher price. Researching carefully old ideologies – Communism versus Capitalism – with certain logic, though, one can say that there’s an intention attached to the new administration of the Brazilian government, in which the final result will always be between a higher cost
new energy arriving to the market and that already paid energy in possession of state companies. This effect of weakening the cost of new energy is viewed as a possible element to avoiding peaks and valleys in quotations, as it happened in the MAE (mercado atacadista de energia / Wholesale Power Market). In this game between private and public affairs, as an effective demonstration of dialogue, there were recent concessions to generators and private investors as to regard new energy the one coming from plants who started operating in 2000, although this agreement hasn’t been assured yet.

In practical terms, in the essence of the new model, the government will be in charge of determining future consumption needs (through a state research company); regulation (utilities will have contracts reducing drastically their chances of having energy without a purchaser), and surveillance over prices. Into the narrow steering margin for private initiative, which withdraws a considerable amount of incentives to the independent production of energy, private agents are seeking, as usual, to open possible breaches to assuring greater profits in the short run. They look for permission to incorporate the additional cost of adjustment auctions in tariffs. But the model was made to reinforce the planning and these auctions will happen in case of agent’s prediction errors on long term demands. Agents will shoulder the costs. Nevertheless, one can argue that demands are way too strict for a country whose long term planning is too feeble and the error margin is too narrow. In short, to make matters more complicated for the search of better profits to investors in the process of implementation of the new model, it became clear that the transferring demand must be approved in Congress – what is very unlikely.

Since there’s an energy surplus, its prices will be under control for a long time and the fear of scarcity won’t be around for at least two or three years. This won’t be the proof of the new model efficiency, but the future biddings for future plants. In the absence of heavy investments in the sector, the regulatory mark will bring serious inconveniences to the system.

The new proposed model, always in the private view, presents positive points. When it comes to attracting private investments, these points can be cited as:

- Obligation of long term agreement for utilities;
- Process of purchase through biddings (auction);
- The market will always be hired;
- Return of the long term planning.

But the assertion that these elements will lead to investments in the SEB depend on the readjustment of the proposed model and the detailing of the regulamentation that really bears the possibility of agent and society participation. Therefore, among the challenges faced by the New Model in its implementation and consolidation process, are:

- Financial difficulties of utilities and generators;
- The guarantee of reasonable tariffs;
- The maintenance of competitiveness in the industrial sector;
- The control of assignments and transportation costs;
- The insertion of natural gas in the energy matrix, and
- The macroeconomic policy and the need of investments (inflation goals and maintenance of the primary surplus).

The implementation of the new SEB model bears the uncertainty of its functioning especially when it comes to novelties related to so far known procedures. It is also unstable, until credibility from investors is obtained, as for the regulatory risk during the stage of transition.

Initially, for resorting to public funds is not wholesome anyway, the expansion will demand private financing and the MME will be compelled to advance in some points of the
model to meet market needs of private companies and financers. The great challenge of the new model will be enabling the expansion of the supply with the confidence of the investor/financer. Everyone agrees in this point, because the syndrome of the polluting “not in my yard” generation, despite a single meaning, works for the investor/financer as well, for they’re always expecting the other part to invest first. If it really becomes a delicate issue, at least in the private investor’s side, in case he is the only source and there are no investments, the risk of rationing is imminent and it represents losses to all of us.

4. THE REGULATORY AGENCY AND PRIVATE INVESTMENTS

The importance of the regulatory agency to the attraction of private investments stems from the fact that regulation is essential in circumstances of market flaws, natural monopolies and investments that require a long maturation term. A well structured regulatory agency, able to fulfil its role with autonomy, based in general political definitions from the legislation and the Executive Power, is a pre-condition to the expansion of the electric sector and the attraction of investments. The quality of the institutional outline, in which each institution has its functions, and clearly defined attributions, is an essential condition for the functioning of the system according to its efficiency goals.

In this sense, the regulator becomes one of the contributing factors for the attraction of investments. Its importance is potencialized by the scene to which it is applied. The analysis of associated investment risks and return possibilities achieves the quality of the regulatory mark as a whole, the government’s behaviour, decisions of the Judicial Power, and even tendencies of change present in the Legislative Power.

In general, the regulatory entity, when independent, has an outstanding importance regardless of the adopted model. Furthermore, the regulator will become more important the more private investments are aimed at, the more it is understood that market agents are able to manage risks inherent to investments and the more efficiency is pursued through the competitive process and the innovation it promotes.

In fact, concession contracts have a corresponding length of eight government administrations (there’s a new election every four years). This maintains the importance of a regulatory agency, what differentiates it is exactly the long term view that favours the stability of rules. This is because, by the own definition of market, quality and stability of rules and associated risks define the attractiveness of investments and its costs.

There is a particular importance of regulatory agencies in Brazil. Given Eletrobrás (Holding State Owned power enterprise) and Petrobrás (State Owned oil enterprise), the government can also be seen as an agent too, with a remarkable presence in the sector. The energy segment in Brazil is also a great tax collector and conductor of public policies. Changes in rules and in the environments of system operation and contraction can produce deep impacts, given the complexity of the Brazilian Electric System and its hiring environment.

The present stage of the regulatory agency in the evolution of the Brazilian electric sector is of resources collection and contingency. The Agency consolidated its position as an important instrument for the attraction of investments from the legal mark, in processes carried out with independency, autonomy and transparency, resulting from public auditions, with consumer’s resources, supported by a specialized board and directors with the necessary profile for the task. This instrument is very important for the country and for the electric sector.

4.1. Relevant Aspects on Legal Issues

The decision of investing in entrepreneurs is generally attached to factors as the favourable analysis of macroeconomic environment, demand growth for the product and legal
stability. These factors bear risks, estimated by entrepreneurs, which determine how much an investment is attractive to them. Macroeconomic risks will certainly be sorted out in a short period of time. Exchange risk will be certainly introduced in contracts. Legal stability, however, goes further than a simple reflection and must be discussed more deeply in the case of the new model.

To assure the stability of the regulatory mark, the new electric sector model sets:

- The clear definition of functions and attributions of the different existing institutional agents, clearly setting their responsibilities and enhancing their leadership:
  - Restoration of the Conceding Power of the MME;
  - Reinforcement of the regulatory, supervising and mediating functions of the ANEEL;
  - Improvement of the leadership of the ONS, with emphasis on its independency;
- The creation of new institutions, with the purpose of complementing the regulatory mark, setting new functions and activities:
  - The Energy Research Enterprise - Empresa de Pesquisa Energética – EPE
  - The Electric Energy Trade Chamber - Câmara de Comercialização de Energia Elétrica – CCEE
  - The Electric Sector Monitoring Committee - Comitê de Monitoramento do Setor Elétrico – CMSE

In this legal universe, investors disagree little, as it could be no different, though, show more depth in legal stability requirements, in topics such as:

- Good and stable rules
- Strong institutions
- Respect to contract (equal treatment)
- Efficient dispute resolution
- Transparency in processes (for both public and private sides)

Stable rules create a legal safety, which means a safety assured by law. The new model is still in the pipeline and has just been regulated by a decree. However, the possibility of changing this decree raises the investor’s distrust. Although these requirements are correctly situated, only time will tell whether there will be a continuity of rules.

Regulatory institutions must be strong and solid. Formality is not enough, they shall be and act with independency and political autonomy.

Contracts shall be respected in their effects, in a proactive position. In Brazil, there’s a certain difficulty in regulating the electric sector market because the system presents a hybrid and therefore ambiguous regime. Contracts must be treated unequally in unequal conditions. Consistency and non discriminatory implementation shall be obtained in order to provide credibility to all agents.

The issue of conflicts resolution is easily solved if an unbiased arbitration system is applied.

Transparency of the regulation and bidding processes is another decisive factor to the stability of the regulatory mark. The government shall grant the task of taking charge of regulation factors in these processes.

Thus, regulation is a primary point of the new model of the electric sector, bringing security to investors as it reduces capital costs and consequently consumers tariffs. It’s a mechanism that promotes transparency, long term contracts guarantee and market stability. Regulation always needs to be properly defined, in order to create a legal stability of investments.
4.2. The Regulatory Structure and the Private Sector

Regarding the role of the regulatory agency structure and the market in the perspective of the private sector, it is inevitable to notice that the editions of the energy market structure (basically in its regulatory aspects) affect the activity of private investors. Generally, this alterations in the model of the electric sector bring distrust and generate risks that hinder and can even disable certain investments and unbalance market uncertainties among new and existing agents.

Regulatory risks are still high, as usual in developing countries. Good examples demonstrating this are: the government’s imposition on a fixed price in specific distribution companies transactions, in March 2003, the incident of April 2003, when state generators were given the exclusive right to extend Initial Contracts, and in January 2004, when costs associated to the operation of emergency thermal plants were, contrary to the law, passed to generators instead of final users.

The privileged treatment to future investments, that constitute a market reserve of the new model, generate more risks to existing investments and a potential for lower prices. The equation of the risk prize has changed. Besides that, around 80% of the generation is under state control, causing private companies to dread the idea of not being able to compete with state companies and being treated differently by the government (in the case of the extension of Initial Contracts, for instance).

The private investor’s perspective is that the most recent editions of the regulatory risk structure of the SEB present negative potential consequences, since raise the awareness of risk and investors and final energy users costs. Problems, however, can be surpassed through measures that recognize and accept the connection between the treatment to existing investors and the ability to attract new investments through the implementation of regulation, in order to eliminate the discrimination and raise a level of competition among them, as well as the safety that regulatory bodies will be truly independent and autonomous and the guarantee of transparency and opening to discussions in the development of initial regulations and future changes, forming a stable environment.

5. NEW INFRASTRUCTURE, CAPITAL AND FINANCING

The new model bears considerations of a new development infrastructure and capital market, that implies, in any case, a financial decision slant. It is advisable to recognize, though, the main actors who will determine the future scenario of the national energy matrix expansion:

- The government, formulator of politics and rules;
- Federal generators, natural sector investors;
- Private and state generators, companies that already work in the sector;
- Project financers, still a big uncertainty;
- Risks associated to the investment decision.

There are many factors to be taken into account in the developing and financing of the national energy matrix, by investing and financing companies in the Brazilian electric sector. Firstly, private entrepreneurs are not satisfied with the obtained return of their investments and the record of sector problems raises a mood of uncertainty and affects the decision taking. On the other hand, financers present critical points that increase risks and aggravate capital availability for the investment in the expansion of the system.
National and foreign investors that placed a bet on the sector privatization didn’t get the expected investment exchange and had their assets devaluated. The energy rationing compromised the investment and payment capacity of companies, who ran into debt. At the moment, the sector has gone into a recovery period: a larger cash flow is expected for 2004 and 2005, with the recovery of the demand, reduction of interests and low exchange volatility. Investor’s priority is to reduce debts. Thus, the generation of future cash versus compromising cash with payments can affect the availability of resources to investments.

Regarding a number of past problems such as the ambiguity of success in the previous model and results of other implemented programs (for instance, the Prioritary Thermoelectric Program - Programa Prioritário de Termelétricas - PPT that achieved insufficient results), the constant alteration of rules, causing distrust as to the quality of the regulatory mark and a risk prize given to uncertainties not compatible with risks associated to the projects (rentability is smaller, but risks aren’t) cause financers to act cautiously. Several aspects are still under observation, among which the regulatory mark that hasn’t been practically tested, the susceptibility of the new model to political influence due to a greater concentration of power in the MME, the possibility of economical unbalance of utilities, which could compromise the expansion of generation and the vulnerability of the sector to the volatility of financial and credit markets (country and companies exposition to interest and exchange rates).

The critical points that affect financers are related to the risks of making funds available to projects. Financers worry about the quality of the credit and the amount they’ll receive in the end, the quality of the mechanisms of transferring risks of generator’s unmanageable costs and the attraction of the local market in local currency. These points apparently obscure the attraction of financing and investment capital.

The expansion of the national energy matrix is indispensable and without the necessary investments, the eagerly anticipated economic growth might be compromised. The lack of investments can bring risks to all the companies in the sector, including the risk of a new rationing, in the mid and long terms. The record of rules alteration can disable the long term planning of companies. Only the constant keeping of rules will bring confidence and stability so that companies and financers could invest in the sector. Risks to which they are subject are also high. Thus, a strong presence of the BNDES (National Bank for Economic and Social Development) and of Federal state companies is expected in the process of the national energy matrix expansion.

6. THE GAS AND ELECTRIC ENERGY MARKET

The present and future situation of the gas and electricity market must be very clear, aiming at the concentration of converging elements for the thermal generation. In this sense, it is possible to notice that the expansion of thermoelectric generation will be endangered if the MME doesn’t define properly the laws, tariffs and planning criteria of the electric and energetic sector as a whole. Article. 17º of Law 10.848, for example, shows unclear conditions that can be misinterpreted in a harmful manner to generators. Another important point refers to the new composition of transmission tariffs and the calculation of the amount of thermoelectric generation for the supply expansion, which need to be well cleared, since financial return relies upon this kind of generation. At last, a definition of a complementary energetic policy associated with the natural gas market hasn’t been created yet, difficulting the investment in both sectors.

Article 17º of the Law 10.848 says that “In biddings for the hiring of energy predicted in the Fifth § of article 2º of this Law, electric energy can be offered, if provenient from existing generation undertakings or enlargement projects that attend to the following requirements:
I. That were granted a concession or authorization until the date of publication of this Law;

II. That had initiated commercial operation starting from January 1st 2000;

III. Whose energy hadn’t been hired until the date of publication of this Law.

In which, items I and II of the fifth § 5º of article. 2º of Law 10.848 are, respectively, the existing generation and the new generation. According to item III of Article 17º that defines the participation of thermoelectric plants in the Prioritary Thermoelectric Program - Programa Prioritário de Termelétricas – PPT in new energy auctions, it can be interpreted that the first auction of new energy will occur in 2009 and that the energy shouldn’t be hired until the date of publication of the law. In the past, PPT investors were encouraged to start operation in a critic hydrological moment and collaborated to diminish the losses of rationing. Now, the law hasn’t apparently included these plants, for, according to the description, they won’t be able to participate in new energy auctions and will be unhired from 2009 on.

According to the new model, the transmission system must be neutral and allow free access to the net. Presently, the transmission tariff has a methodology that contains two components, being 80% postal stamp and 20% knotted. The composition of the new transmission tariff shall suppose some points such as the recovery of transmission costs, the charging for transmission services according to the use of the net, the promotion of proper economic signals aiming at optimizing generation planning and adjustment to the loss factor. Another important point is the determination of the proper amount of thermal generation (by the EPE) for the expansion and the guarantee of the Brazilian electric system safety. This problem is not trivial and requires a definition of deficit risk, imposed to consumers, and deficit cost, too high for the country. The current planning criteria determines that hydro generators trade their energy based in their assured energy certificates, which means the energy that can be delivered by the hydroelectric within a 95% probability of being able to generate this amount. Still, defines the energy deficit risk in 5%. This planning criteria regards the lowest expansion value as the investment value added to an operation and maintenance cost, regardless of the deficit cost and setting a 13% of thermal generation for the optimum expansion of the system. A proposal suggests to determining the unitary energy deficit cost and including it in the system expansion value. This would lead to an increase of 10% in thermal participation (from 23% to 33% of the total Brazilian generation) and a deficit risk of 0,3%, much lower than the previously mentioned. A new proposed planning criteria, whose non supplied energy cost is also included in the calculation, doesn't take into account the electric reliability, but the energetic reliability, which means the ability to supply energy in unfavourable hydrological conditions. In fact, the planning criteria shall regard, besides the energetic criteria, the electric criteria as well(reduction of loss in transmission), for this is an important feature in thermoelectric plants and must be included in considerations of the planning to be carried out by the EPE.

Natural gas shows a deficit in present necessary amounts and the necessity of a regulamentation and complementary expansion with the Electric Sector. The equivalent physical backup and the gas regulamentation are important to guarantee free access, open competition and locational signal. The challenge is to encourage the entrance of new agents and investments and assure payments and rights for agents who had already invested in the transport infrastructure of the sectors. Natural gas shows a problem of incompatibility between sectors. Selling contracts are based on take or pay or deliver or pay, increasing thermoelectric firm costs, and leading to loss of flexibility and market. Thus, there is no investment in thermoelectrics and there’s a raise in the system deficit risk. Consequently, the gas sector, up until now, doesn’t invest in production, processing or transportation. Natural gas must be inserted through a locational optimization of thermals, where either proximity to natural gas reservoirs and thus lesser utilization of transport infrastructure or proximity to consuming centers, in which there’s a low utilization of the transmission infrastructure, must be taken into account.
The final definition of investments in thermoelectrics also relates to the regulamentation of the new model, in elaboration by the Ministry. Thermoelectric generation problems are still far from being solved. It should be known against whom they will compete; against hydro or just thermal projects, at new energy or capacity expansion auctions. Thermoelectric plants, even disconnected, are maintaining the safety and the reliability of the system. It is also important to clearly know the financial and physical guarantees and how much will be charged for transmission services. Besides that, the amount of thermal generation to be calculated by the EPE demands not only an electric sector view, but an energetic sector view, as a whole. In this sense, the natural gas sector needs to be treated with more importance, for great part of future energy investments, in thermoelectric generation, will come from this market and will guarantee the expansion and the optimum security of the SEB.

7. PERSPECTIVE OF THE INDEPENDENT PRODUCER AND THE LARGE CONSUMER

The new SEB model, besides bearing investment implications, enables new perspectives to the Independent Energy Producer - Produtor Independente de Energia (PIE) and to Large Consumers as well.

7.1 PIE –Independent Energy Producer

It is important to stress that an important aspect of the new SEB regulamentation is transition, in what refers to the treatment applied to the existing energy (the so called “old energy”), and guarantees the supply of energy in the country. Obviously, the current entrepreneurs in the electric energy production sector are the natural “players” for the expansion of the generation base in the country, and that the suitable rewarding of existing generation investments is necessary. In this transition, independent producers can obtain profits.

The proposal of the new model contains, at start, a mistake that could discourage private capital to invest in generation. By blocking PIE’s existing energy, obtained from the processes of privatization and plants recently built or in process of implementation process plants, from taking part in biddings destined to the supply expansion (new undertakings), the model saves all the predicted market growth to new plants. This means that the energy from current independent producers could be disregarded in favour of a new plant, of a certainly higher price than an existing energy.

As all market growth will be destined to new undertakings, who will have long term contract guaranteed throughout the concession, in case this five years anticipated predicted market doesn’t come true, the spares will always fall on existing generators, who won’t be able to justify new investments, once they will have unhired energy.

The model, could somehow shun existing generation undertakings from taking part in the bidding of new power plants, keeping away current private investors, naturally the first ones to continue investing in the country, for having their structures already settled in Brazil, reducing thus credibility in the electric sector regulation.

The model as proposed will cause existing PIE’s energy to have a little attractive price, incapable of paying the values payed in the privatization of plants or in recently built plants, being obliged to dispute the existing energy market with federal generation companies whose investments are mainly payed off, what will probably turn off private investments in the electric sector generation.

Law 10.848/04 contains important transition devices that will enable the participation of existing energy in minimally equal conditions to the new energy. The new model foresees that new concessions shall happen according to the lowest price offered in the regulated
bidding for distributor’s energy purchase, aimed specifically at new undertakings, through the payment of a reference “Public Welfare Use -Uso do Bem Público – UBP”, defined by the Conceding Power. It also allows owners of burdening concessions to offer energy in biddings, for the pool’s supply, at a lower price. In this case the entrepreneur will be compensated for the difference between the value of UBP payed at the time of the concession bidding and the reference UBP value. This device will allow entrepreneurs of burdening concessions to participate in the bidding contest in equal conditions with the other projects.

The new model allows an exceptionality for the participation of existing undertakings in “new energy” biddings. According to the devices of the new law, recently built projects (from January/2000 on) will be able to take part in the above mentioned biddings. This device will allow the sector to own an average of 3.500 MW of recently built undertaking’s energy in new energy auctions that occur until 2007.

The new model opens a gate to new biddings for “old” energy in the years of 2004, 2005 and 2006, to be delivered until the years of 2009, 2010 and 2011, respectively. This device constitutes an exceptionality towards the permanent regime of the new model, that foresees that except for adjustment auctions, old energy will only be able to participate in selling energy biddings in the year prior to its delivery, as for new energy, the start of delivery can occur in the third and fifth years after the bidding.

Independent producers have pointed to the MME some important regulamentation aspects of Law 10.848/04, among which:

- Regulamentation shall establish that the hiring of old energy precedes the hiring of new energy, thus assuring the economic efficiency of the use of available resources and consequently achieving reasonable tariffs;
- There’s a necessity of creating devices that assure the advanced hiring of old energy – in parameters allowed by law;
- It must be allowed that the average 3.500 MW of energy from recently built undertakings are really available in new generation auctions held until 2007;
- The marginal cost of the bidding process must be defined prior to the energy auction, making possible for the concession owner entrepreneur to make his offer;
- Procedures in order to minimize option terms for consumers to quit the distributor must be determined, enlargening the Free Hiring Environment – ACL (in compatibility with the risk management mechanisms available to agents) and, thus, stimulating the efficiency in the Regulated Hiring Environment – ACR;
- It is necessary to define payment guarantees in supply contracts of energy to the pool;
- The treatment to expositions by price difference between submarkets must be defined, for they will grow substantially compared to the present ones, as a consequence of the law device that predicts that regulated hiring will be formalized by contracts between each generator and all utilities.

### 7.2 Large Power Consumer

Within the perspective of large power consumers, the degree of opening in the market is the main control to reducing prices through competition. In a free market (eligible), the free consumer can look for optimized solutions in price and flexibility, renegotiate with the supplier and purchase or build assets (as an autogenerator). The remaining agents, in turn, either transfer with profits in this operation or are producers worried in maximizing their profit. Captive consumers, however, have no choice.

The goals of the industrial consumer are to assure an energy supply in the long run with quality and competitive prices, preserve efficiency measures as free access, isonomy, independent regulatory agencies, existence of free consumers and reduction of the installed
kW, decrease of the burdening of tributes, maintenance of autogeneration conditions and obtaining distributed risks in the productive chain.

Discussions with the MME stretch beyond the regulamentation of the model. Among the raised points is the tendency of overhiring with a 100% of hiring, centralized planning (excessively optimistic predictions), the possibility of the consumer connecting to the high voltage net in present conditions, structural projects and responsibilities and sectorial taxes that promote the loss of competitiveness.

Free consumers worry about the portion of new generation dedicated to the ACR because they fear that the balance might harm the ACL and autoproducers in the acquisition of new energy. The definition of contractual surpluses and the application of penalties is also a point of discomfort, for, as previously mentioned, the compulsority of hiring 100% with no flexibility can lead to overcontractions, implying additional costs. It must be stressed, however, that consumer’s access to federal and state generators in exclusive auctions and the migration terms for the ACL provide a commercial flexibility and optimize the process of energy acquisition.

One of the major concerns of large consumers is the high level of sectorial burdens. Tributes cause an impact of 52% in the value of energy, complicating the competitiveness of industries.

Distribution and transmission tariffs increased about 250% in the last two years. This rise brings a high impact to production, for it raises industrial costs. Many industries opt to invest around US$ 10 to 15 millions, to connect to the basic transmission net. Although not advisable in this segment, tariffs are more reasonable than in distribution. Utilities claim that this possibility decreases their income. However, it is important to mention that not all consumers would choose the high voltage connection, also because of the high cost and the necessity of the project’s approval by the National Operator of the System – ONS. It is believed that in case utilities manage to apply present distribution rules to high tension, they would receive an annual R$ 1 billion, too big an impact to industrial consumers. The incorporation of nets will cause hopeless damages to consumers because of an irrational possession that privileges the distributor’s monopoly and causes an excessive charging of transportation tariffs.

There’s a punctual issue, related to the payment of the Energetic Development Account - *Conta de Desenvolvimento Energético* – CDE by autoproducers. During the negotiations of the new model law, autoproducers were granted isention in the charging of the CDE, but the text brought an ambiguity to the issue. Autogenerators worry about the CDE payment, for it deepens even more the problem of technical and economical viability of the maintenance in autogeneration investments.

Captive consumers stress the types of contracts of new energy in the regulated market. The contract of energy availability transfers to consumers of the regulated market all the risks of production variation. The volume and length of the contracts with the existing generation in the ACR allows utilities to have an efficient contract portfolio providing flexibility to the energy traffic between free and regulated traffics. The definition of the Reference Value as a limit for the transferring of prices in the regulator market is a main point to the efficiency incentive. Contracts with state generators must be respected and committed to the interests of consumers and generators involved.

There are profits that shall, though, be preserved, as the reduction of the generation cost through the entrance of private capital, a substantial portion of autogenerator’s energy liberating the system, systemic efficiency gain due to a bigger freedom of choice for consumers and economic viability of the open access transmission.

Thus, there are immediate problems to the industrial consumer that must be sorted out despite the restructuring of the sector, such as high transportation tariffs and taxes, tariffary realignment and maintenance of the free access. The regulamentation of the new model shall guarantee the preservation of attractiveness in the autoproduction, the efficient hiring for the captive market, the enlargement of the free market and the avoidance of risk of unnecessary
transferable costs. Two points were identified; one is the strong dependency of a maximum price definition by the EPE for each of the hydroelectric plants and the other is the compensation calculation for the energy outside the ACR that doesn’t stimulate autoproducers and PIE’s to sell for prices inferior than the ACR.

8. CONCLUSIONS

The new institutional model of the SEB (Setor Elétrico Brasileiro – Brazilian Power Sector), launched in 2003, must be regarded as an event of the long process of the transition of the power industry, not only in Brazil, but throughout the world. However, with the imminence of restructuring, despite being consecutive to the recent unfinished model, oriented to revealing a stable process in the long run, given that this model incorporates the institutionalized planning for and in the market.

In the history review, the exhaustion of the virtuous trajectory, in the seventies, put an end to a combination of technological, organizational, regulatory and political-institutional elements that have driven the expansion of the electric industry for a long time. Afterwards, the power industry enters a period of search for a foundation of a new electric industry based in more modern technological, organizational, re-regulatory and political-institutional, with a perspective of commodity even though special. However, this task resulted, in all countries, much harder than previously imagined, at the beginning of the restructuring. These aspects are illustrated by the actions of error and trial attempt, that have been observed in the restructuring carried out in Europe – both for what concerns to the liberalization of specific national markets, as for the construction of an European electric market – and in several North-American states.

In this context, not only market structures, originated in the reform, don’t behave as a perfectly competitive market, but governing structures themselves generated to reduce those “market flaws” aren’t either provably compatible at times, for the market always finds its way of imperfect gain.

Thus, the new institutional model is conceived from these failures. It is the great crisis that crosses the electric sector, translated into the 2001 Brazilian energy rationing, that excites the conception of the new model, looking forward to answering not only unanswered questions from the agonizing hybrid model, but also questions that remain open since the old model. In this sense, the new institutional model is the result of a long learning process over the restructuring of the Brazilian electric industry, as well as the recognition that competition among agents, through the most diverse ways (as in the competition for new projects), can constitute one of the instruments of the institutional organization.

The main issue of the new SEB model is to create conditions for assuring supply and moderate rate (reasonable tariffs). In this sense, the recovery of planning and coordination mechanisms of agent’s decisions, and the arrangement of the free and regulated hiring environments, form the basis for the elimination of distortions present in the industry and the setting of a higher degree of predictability in trading relations (lower risks).

Normal solutions can become emergencial if they don’t happen at the right time. Nothing better for suppliers than purchasers with no time for negotiations. The industry, in turn, has a limited capacity for providing equipments. Thus, prices rise naturally and the probability of failure rises when decisions are delayed. It is important to stress that this habit is usual in emergent markets and even more when it comes to developing countries. This reinforces the awareness that institutional changes are part of a long learning process, therefore, don’t intrinsically portray retreats, but possibilities of advance and maturing, from the awareness that goals and strategies will be in an ongoing adjustment process.

Definitely, expectations towards the new SEB model and actions in course that determine an irreversible implementation process, confirm the fact that we are standing before third generation reforms in the wide range of the energetic industry, more specifically the
SEB. In this sense, it is important to highlight two requirements that substantiate those third generation reforms, which are: the concern for the ones who own less and the introduction of safety through a physical limitation in investment profits. Both points signal clearly a long term vision aimed at the sustainable development of Brazil. We must also point that, from what was exposed so far, it remains clear that if financers and local or global investors insist on zero risk and explosive profits, the conceding power demonstrated efficiently that it has the ability and the resources to inject public funds (managed by and/or through BNDES – Banco Nacional de Desenvolvimento Econômico e Social / Brazilian Development Bank) if necessary.

9. BIBLIOGRAPHY


