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DIAGNOSTIC PROCESS OF THE CONCESSIONS RENEWAL DISTRIBUTION IN 2015 - 2017

By

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SUMMARY

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To my wife Andrea and my daughters Helena and Isadora, who always increasingly motivate me to move in search of what I believe in.

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1 INTRODUCTION

We can consider that the extension of the concessions by the Brazilian government for distributing companies of electricity services will be another step in the process that covered the Brazilian Electric Sector from 2012, the year that the conditions surrounding the contracts were defined referring to the renewal of generation and transmission of electric power companies, whose extensions were due for more than a period of 30 years.

41 of 63 concessionaires of the distribution service of electric energy will have their contracts terminated between the years 2015 - 2017, all of which have shown interest in renewing their contracts, however, on what terms it will be done has not yet been revealed since the conditions for these renewals have not been disclosed by the Brazilian government.

The aim of the present study is to examine possible actions and paths in the power distribution segment, starting from the hypothesis that the Brazilian government, following the example applied to the segments of generation and transmission, will propose the renewal of such concessions.

The first stage of the work will consist of a retrospective exhibition on training in the power distribution market in Brazil, the profound transformations that occurred since the 90s, taking into account the process of privatization of power distribution companies that had begun in 1995 and the establishment of the New Model of the Brazilian Electrical Sector.

In the next step, we will see how the drafting of concession contracts were made and provided the renewal process of generating and streaming contracts, we will present an overview about the main decision-making aspects and their possible ramifications surrounding the renewal process of concessions in the distribution segment.

Finally we will point out a configuration that could become the new contractual parameter of the regulatory framework, focused on the analysis of indicators and warn of possible new perspectives that could be used, and others that could be used, to establish the new concession contracts.

2 THE EVOLUTION OF THE BRAZILIAN ELECTRICITY DISTRIBUTION SECTOR.

2.1 The beginning of the electricity distribution sector in the country.

In the late nineteenth century, electricity distribution companies were structured in the form of monopolies and began to be regulated in order to prevent such monopolistic exploitation of consumers, safeguarding, however, adequate returns to investors.

Despite the strategic importance of the Brazilian Electric Sector (SEB) it only became a priority because of the efforts of industrialization that occurred in the country under the government of JK from the Target Plan (1956-61), when there was a great incentive within the sector as a way to achieve modernization. At that time, there was a joint effort between state, private, national and foreign companies, aimed at expanding credit operations for the feasibility of investment required in the said sector.

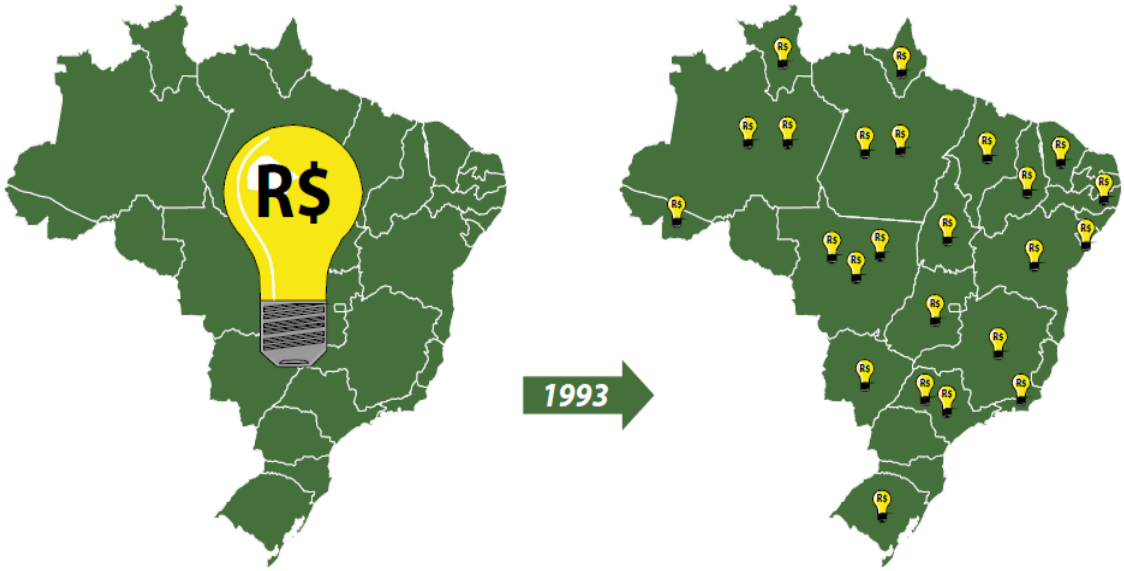
In the 1970s there was already a great expansion of the economy with emphasis on income-generating capacity of internal resources, enabling auto financing SEB, in addition to external resources that joined the Brazilian economy. Before that, the less developed regions, especially the North, had a high cost of electricity due to the generation of matrices in those states, which were essentially thermal, and thereby investment projects in those regions are often presented unviable. Thus, the government instituted a rate equitable to the entire country by transferring resources from surplus distributor companies to deficit utilities companies, through the formation of sector funds managed by the state power plants Brasileiras SA - Eletrobras, as well as the fuel consumption account (CCC) and the global reversion reserve (RGR).

During the 1980s, the Brazilian economy gradually went into decline, eroded by high inflation and high interest rates. "With the discontinuation of credits from international organizations, SEB now has negative flow between external loans and the payment of debt service", causing a deep crisis, which resulted in the growth of default on the part of the distributors of electrical energy, whose claim was that the fixing of tariffs enacted by the government had harmed obtaining resources for their investments.

2.2 – The 90's: the beginning of the power sector reform

The 90s was a period of profound change for the SEB. Until this decade there was a single tariff for electricity in Brazil that guaranteed the remuneration of the concessionaire, regardless of its level of efficiency. This system did not encourage the pursuit of efficiency on the part of the distributor, since the completeness of its cost was transferred to the consumer. One such change and which served as the first step was taken in 1993 with the enactment of Law No. 8,631, of March 4, 1993.

As can be seen in Figure 1.1, the rates began to be fixed by the company according to specific features of each concession area - for example number of consumers, miles of transmission and distribution network, market size (the number of consumer units met by a particular infrastructure), purchased power costs and state taxes, among others.



With the extinction of tariff equalization and the creation of the supply contracts between generators and distributors, the process of privatization had begun and the bidding for new generation projects started. Then along came the creation of the Independent Power Producer (IPP); the determination of free access to transmission and distribution systems and the freedom for large consumers to choose where to get their energy supplies.

The same law allowed, with more immediate effect, the reorganization of the SEB within a business philosophy, allowing less compressed rates. However, while it was discussed how to implement the guidelines of this new legal framework, administrative

problems persisted as the lack of certain state concessionaires who squandered resources on investments with dubious results and with wage spending inconsistent with the seriousness of the financial situation. This situation occasioned a cycle of defaults in the sector and affected the obtaining of resources to invest in system expansion.

Started in the Collor government in 1995, the National Privatization Program (PND) was designed in two stages, the first was privatization of state companies in the industrial sector and the second was intended to transfer to private sector companies providing state and federal sanitation, water and electricity distribution services.

The goal was to create conditions for the financial restructuring of state-owned utilities and recovery of the management capacity and administrative technique that had been lost.

In the Power Sector, especially, this process was motivated by the exhaustion of the capacity of state funding and the intention to stimulate increased efficiency with the competition by restructuring the sector.

In 1996, the Ministry of Mines and Energy (MME) deployed the Restructuring Project of the Brazilian Electrical Sector (Project RE-SEB). One of the main consequences was the "deverticalization" of the production chain: generation, transmission, distribution and sale of electricity have become areas of independent business. The generation and marketing were progressively deregulated to encourage the competition; transmission and distribution (which are natural monopolies) continued to be treated as regulated utilities.

Faced with this new configuration, in 1996 the federal government created the National Electric Energy Agency (ANEEL), whose function was to regulate the activities of the Sector. Other changes were implemented with the objective of organizing the market and the structure of the Brazilian energy matrix, with emphasis on the creation of the National System for Water Resources Management in 1997 and in 1998, the Wholesale Energy Market (MAE) and the national operator system (ONS).

2.3 - 2000s: blackouts, rationing and the beginning of change

With a model of essentially hydroelectric generation, Brazil saw itself in emergency situations through a period of low rainfall which considerably lowered the

power plants reservoirs. In May 2001 the government was forced to adopt emergency measures to avoid a collapse in the energy supply. The rationing period delayed the growth of the sector.

The crisis warned of the need to introduce new ways of generating the national energy matrix. It had gained prominence of thermoelectric operating with fossil fuels, especially natural gas whose participation in the country's energy supply jumped from 2.2% in 1985 to 6.6% in 2001 and sugarcane bagasse (biomass). The Federal Government has also taken steps to support the development of projects of Small Hydroelectric Power (SHP), unconventional sources and energy conservation.

Between 2003 and 2004 the Federal Government took a number of important steps to become less vulnerable to SEB. The Energy Research Company (EPE) was created to plan the Power Sector in the long-term. The Monitoring Committee of the Electric Sector (CMSE), responsible for continually assessing the security of the electricity supply in the country and the Electric Energy Commercialization Chamber (CCEE) replaced the old Wholesale Energy Market (MAE), to organize energy trading activities in the interconnected system.

2.4- The new institutional model for the Electricity Sector

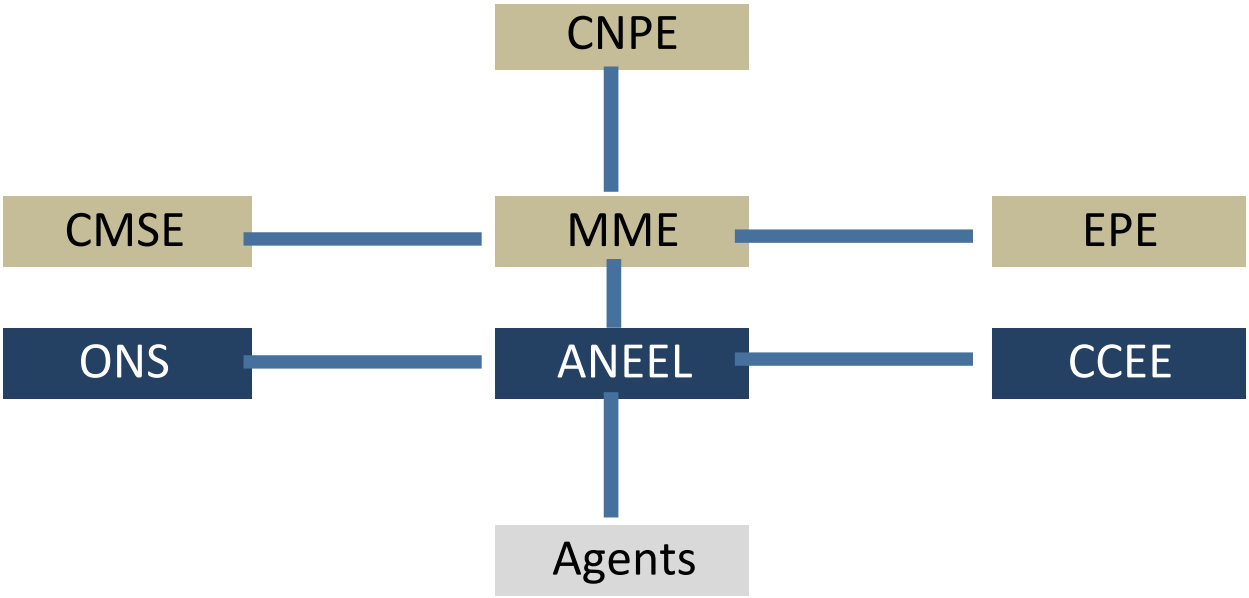
In 2004, Law nº10.848 of 15.3.2004 was proclaimed, subsequently regulated by Decree No. 5163 of 30.7.2004, whose goal was the restructuring of SEB and to offer consumers a secure electricity supply with adequate rates (low tariffs).

The same law introduced significant changes in the standards of the Electricity Sector with the objective to provide incentives to private and public companies to build and maintain generation capacity and ensure the supply of energy in the country with adequate rates through competitive bidding processes.

The new arrangement has redefined the role of some agents in addition to creating three new institutions. As can be seen in the description below, this new structure broadens the powers of the Federal Government, which reassumes the central role in the planning and implementation of energy policy for the country.

Furthermore, MME resumes the powers and granting concession or permission that were previously the responsibility of ANEEL.

Figure 2 – Institutional Model



The general responsibilities of each agency are as follows:

- **MME** - Ministry of Mines and Energy: The new model broadens the powers of the MME, which returns to have an important role in the planning of the sector. The power of granting and concession, previously attributed to ANEEL, returns to the Ministry. The definition of preventive actions to restore and maintain the balance between supply and demand is also up to the MME. The main functions of the Ministry are as follows: the formulation and implementation of policies for the energy sector in accordance with the guidelines of **the National Council for Energy Policy - CNPE**, exercising the function of sectoral planning and to exercise the power of granting and monitoring security of supplies through **the Monitoring Committee of the Electricity Sector - CMSE.**
- **EPE** - Energy Research Company: The Energy Research Company, created by Law 10.847 in March 2004, will serve to prepare studies to support the entire energy sector planning, not only electricity, but also from other sources. Among other activities which will compete with EPE: conducting planning studies for the expansion of the electricity sector, both generation and transmission, studies of energy potential, including inventories of watersheds and conduct studies /projections for the definition of the energy matrix.

- **ANEEL** - National Electric Energy Agency: responsible for the regulation defined by the concession authority and monitoring of the electric sector. Among the duties of ANEEL which stand out are mediation, regulation and supervision of the functioning of the sector, conducting auctions for granting generation and transmission by MME delegation and bidding for energy acquisition for distributors (new feature).
- **ONS** - National System Operator: Responsible for the centralized dispatch of each power plant maximizing the intertemporal use of the reservoirs of hydroelectric plants, as well as the supervision and coordination of the operation centers of power systems and the definition of rules for the operation of the transmission facilities in the basic network of the systems which are electrically interconnected.
- **CCEE** - Electric Energy Commercialization Chamber: Is the successor to the Wholesale Energy Market - MAE, absorbing its functions and organizational structure. Among the functions of CCEE is to ascertain the rates of the supplies of distributors to be considered by ANEEL in the formation of tariffs for regulated consumers.

It is important to point out, however that major changes were in the mechanisms of contracting energy. The primary goal of these changes was to promote the reduction of investment risks in order to facilitate the expansion of the generation segment through long-term contracts. Another highlight in the new model are the energy auctions, which will be presented in chapter 3.2.

3 – THE CURRENT DISTRIBUTION MARKET

3.1 - Characteristics of the New Model

In 2014, according to the Brazilian Association of Electricity Distributors (ABRADEE), the market for electricity distribution consists of 63 dealerships,

responsible for serving 74 million[1] Consumer Units (CUs) and, of this total, 85% are residential.

The controlling interest of these companies may be state or private. In the first case, the majority of shareholders are of federal, state and/or municipal government. The control groups of several private companies are checked for the presence of national, American, Spanish and Portuguese investors.

With the advent of the New Model, the activity distribution has become a service-oriented network, with energy sales only available to consumers with tariffs and other conditions regulated by ANEEL. Distributors can only sell electricity to free consumers in regulated conditions. In the case of free consumers who choose other suppliers, distributors will have the function to provide the network and must be remunerated by the User Tariff of -TUST Distribution System.

The generation for self-supply (self-dealing), previously limited to 30%, will not be permitted. The current self-dealing contracts will be monitored until the end of the set period. However, distributors should divide the activities of generation and distribution, providing the very companies with each one of them that establish contracts covering the period of the current self-dealing. The methodology for calculating tariffs remains unchanged, ie, the structure remains based on marginal costs of supply.

In this way the distributors eventually become large companies that act as a link between the electric energy sector and society. Seeing as its facilities receive supplies from the transmission companies all of the supplies that are intended to supply the country.

The rights and obligations of these companies are established in the Concession Agreement entered into with the federal government to operate the public service in its concession area - the geographical territory of which each one has a monopoly on the electricity supply.

The fulfillment of the Concession Agreement, and developed activities are strictly regulated and supervised by ANEEL. The purpose of the Agency in this case is, on one hand, to assure the consumer the payment of a fair value and access to seamless

[1] *Term that corresponds to the set of facilities/electrical equipment characterized by the receipt of electric energy in just one point of delivery, with individualized measurement corresponding to a single consumer.*

service and quality and on the other, to guarantee the distributor financial equilibrium needed to fulfill the concession Contract.

Among the variables regulated by the Agency are the rates and quality of service - both from a technical standpoint as well as customer service. One example is the Distribution Procedure (Prodist), which offers courses, conditions, responsibilities and penalties relating to the connection, expansion planning, operation and measurement of electricity. Prodist also establishes criteria and quality indicators for consumers and producers, distributors, and import and export energy agents.

It is important to highlight that the new model to sell energy began to be performed in two different environments: **the Free Market - ACL**, destined to attend free consumers by way of bilateral contracts with independent energy producers, trading agents or state generators and the **Regulated – ACR,** it is destined to meet the distribution utilities which are met through contracts with state compulsory generators or independent producers.

It can be said, finally, that the distribution sector is one of the most regulated and supervised in the electricity sector; besides rendering public service under contract with the regulatory agency, ANEEL, the Agency itself and its Resolutions, Ordinances and other rules for the proper functioning of the Distribution sector, being very strict with their supervision.

3.2 - Energy Auctions

The electricity auctions are a bidding process promoted by the public authorities in order to obtain electricity at a predetermined future time pursuant to public notice, either by building new generation plants, transmission lines, or even the energy itself is generated in functioning power plants. The purchase auctions/sale of electricity are conducted under the Regulated Contracting Environment (ACR). Most of the energy contracted under this credit goes to its own distributors to distribute power to consumers in the geographic area in which they operate.

The auctions, conducted from 2005 introduced competition among generation agents in the contracting of electric energy, serving the principles of security of supply and reasonable tariffs, for example: the contracted energy from this model resulted in purchases at the lowest price.

There are three types of auction modes, besides adjustments for a specific (small amounts of energy), as follows:

- **Auction A-5:** Bidding process for the procurement of electricity from new generation projects conducted with five (5) years prior to the start of the supplies. This was created for developing certain long maturation, for example: hydroelectric developments ;
- **Auction A-3:** Bidding process for the procurement of electricity from new generation projects conducted with three (3) years prior to the start of the supplies. This auction is designed to enable enterprises of average maturity, for example, thermal power projects;
- **Auction A-1:** Bidding process for the procurement of power from generation projects accomplished with existing one (1) year prior to the start of the supplies. Exceptionally, in 2013, the early delivery will power-up to the bidding of the year; and
- **Adjustment Auction:** Bidding process that intends to complement the energy load required to meet the consumer market distribution agents, up to the limit of 1% of each distribution market.

3.3 – Rates Of Electricity

According to ABRADEE, the simplified electricity tariff is the price charged per unit of energy ($/kWh). In essence, it is expected that the price of electricity is formed by the costs incurred from its generation to its availability to consumers, the electrical outlet. You also need to understand - since electricity is an essential commodity – that you not only pay for actual consumption, but also for its availability - 24 hours a day, 7 days a week. Thus, it is expected that the price of energy is sufficient to meet the costs of operation and expansion of all elements that make up the electrical system from the power plant to the branch connection of low voltage consumers. Basically, these costs must cover investments in the network and its daily operation, which should result in lower failure rates and shorter times for possible repairs.

It shouldn’t go unsaid that, beyond those costs that are directly related to the physical components of the system, there are charges and taxes, which are not low in Brazil. In September 2012, the Federal Government proposed the elimination of

sectoral Fuel Consumption Account charges - CCC and Global Reversion Reserve - RGR, as well as reducing the Energy Development Account - CDE.

- There are several types of taxes / taxes and charges imposed on electricity rates. At the federal level, we highlight the Corporate Income Tax taxes - income tax, Social Contribution on Net Income - social contribution, Social Integration Program - PIS / Training Program Heritage -PASEP Civil Servants and Contribution for the Financing of Social Security - COFINS. However, the higher tax rate impact belongs to the state level, the tax on circulation of goods - ICMS. In the municipal sphere, levied service tax - ISS, urban-territorial building tax and property tax Contribution to Funding of Public Lighting Services beyond the industry charges, namely:
- Inspection Fee Electricity Services - TFSEE
- Energy Development Account - CDE
- Incentive Program for Alternative Sources - PROINFA
- Research and Development - R & D
- National Electric System Operator - ONS
- Financial compensation for use of water resources
- Service Charges System - ESS
- Power Reserve Charge - EER
- Payment for the Use of Public Property - UBP
- Use of Facilities of Basic Transmission of Electric Energy
- Use of Connection Facilities
- Use of Distribution Facilities
- Transmission of Electrical Energy from Itaipu

It is important to highlight that the rate of energy goes go through adjustments set out in the Concession Agreement, where the methodologies of changes in the highest price of electricity rates are set. The Energy Rates are not readjusted by the inflation indexes such as I-GPM[2] or IPCA[3]

[2] *General Market Price Index, cumulative annual index and calculated by Getúlio Vargas Fundation - FGV.*

in fact they follow a complex calculation methodology, led by ANEEL itself and with different periodicities for each socio economic objective that the Energy Tariff should seek. Thus, changes in rates are basically divided into Tariff Review, Adjustment Annual and Extraordinary Tariff Review:

- **Tariff Readjustment:** restores the purchasing power of the prescribed dealership, following a forecast formula in the Concession contract. It is awarded annually on the anniversary date of the contract, except in the year in which the mechanism of tariff review occurs;
- **Tariff Revisions:** permits repositioning of the tariff after completing an analysis of efficient costs and remuneration of prudent investments, at intervals of four or five years. This mechanism differs from the annual adjustments to be wider and to take into account all costs, investments and revenues to set a new level appropriate to the structure of tariffs and the company and its market
- **Extraordinary Tariff Review:** is designed to meet special cases of justified imbalance. Can occur at any time when an unpredictable event is affecting the economic and financial balance of the concession.

The Tariff Revision is very important due to the preservation of low tariffs, which induces the distributors to be efficient in service delivery and also to constantly modernize, providing better public service in terms of quality of supply. Note that one of the key points of the new model proposed by the Government is to just promote low tariffs, considered by industry experts as essential to the fulfillment of the social function of energy and contributes to the improvement of competitiveness of the economy.

4. THE CONCESSION OF ELECTRICITY.

Concession contracts are the instruments provided by Law No. 8.987 / 95 and adopted by the Grantor and ANEEL, in which relations are established with the agents for distribution of electricity. These contracts are set with rules about the regime concessionaires and licensees companies, the tariff, the appropriate service (regularity,

[3] *The Broad Consumer Price Index, a monthly indicator measured by the Brazilian Institute of Geography and Statistics - IBGE.*

continuity, efficiency, safety, timeliness, generality, and courtesy in providing reasonable rates), as well as the obligations concerning the care provided to consumers.

The aforementioned Law, known as the General Law of Concessions, came to regulate art. 175 of the Federal Constitution of 1988 and brought relevant provisions regarding concessions of public services[4], fitting to highlight the following points:

I. Established in its Art.43 extinction of the concessions granted without bidding in force and before the enactment of the Constitution, whose works or services had not been started or that had stalled when it entered into effect.

II. Established in its Art.42 that concessions granted to bidding before its term were valid for the period specified in the contract or at the act of granting, after which they would be auctioned.

III. Regarding the tariff policy, it was established:

a) That the awarded public service rate was fixed at the price of the winning bid proposal;

b) the maintenance and preservation of the tariff review rules stated in the announcement and in the concession agreement, and;

c) the regulation of the tariff review rules are aimed at maintaining the economic and financial equilibrium of the concession contracts.

With the enactment of Law 8.987/95 and subsequently the Provisional Measure No. 890, of February 13, 1995, converted by Law No. 9,074 / 95, the public service concessions were placed at a new legal level.

Due to the complexity that the subject demanded, it is worth mentioning the articles cited below in said Act, where the conditions for the extension of existing concessions were established. These articles enabled:

• Article 4, paragraph 2, stated that the concessions of power generation, contracted by Law, would have the timeframe required for amortization of investments, limited to thirty-five years from the date of the signing of the essential contract and can

[4] *Public service concession is "the transfer, temporary or resolvable by a juridical person of public law, the powers of which they are responsible for another public or private natural or legal person in order to perform this service on their own account and at their own risk, but in general interest "(Joseph Cretella Jr., Administrative Law Treaty, v. III, Ed. Forensic, p. 121, 1967).*

be extended, at maximum, for a similar period at the discretion of the grantor under the conditions stated in the contract;

• Article 4, paragraph 3, stated that the granting of transmission and distribution of electricity, contracted by law, would have the timeframe required for the amortization of investments, limited to thirty years from the date of the signing of the necessary agreement and can be extended for a maximum of the same period, at the discretion of the grantor under the conditions stated in the contract;

• Article 17, paragraph 5: allowed the extension of the concessions of existing transmission and, finally;

• Article 19: allowed the extension of concessions for electricity generation, achieved by art. 42 of Law 8.987 / 95 (concessions available);

• Article 22: made possible the extension of the then existing distribution concessions.

In all these cases (Articles 17, 19 and 22) it was established up to 20 years as the maximum period of the respective extensions.

Within this scenario, on December 26, 1996, Law No. 9427 was signed that besides creating the National Electric Energy Agency - ANEEL introduced the possibility of successive extensions of concession contracts conditional on offering a quality service to consumers as provided in Article 27, described below:

"The concession contracts of the public service of electric energy and the use of public property entered in this Law and those resulting from the application of the Arts. 4 and 19 of Law No. 9,074, of July 7, 1995, will contain the extension of the concession clause, while services are being provided under the conditions established in the contract and the legislation sector, will meet the interests of consumers and the required dealer ".

With the enactment of Law No. 10,848 on March 15, 2004, Art. 27 of Law No. 9,427/96 was repealed, thereby inhibiting the possibility of legal challenges as to its effectiveness in the achievement of contracts under the rules of previous laws.

5 - EXTENSIONS OF THE CONCESSIONS IN GENERATION AND TRANSMISSION.

In 2012, through Provisional Measure No. 579 converted into Law No. 12.873, of January 14, 2013, the process of renewal of concessions in the areas of generation and transmission occurred. With the main objective to reduce the cost of electricity in Brazil the aforementioned MP focused directly on the two blocks of the tariff structure costs: charges and the electric power industry. Regarding the charges, they determined the end of the collection of CCC and RGR and decreased the value of CDE in rates to 25%. The burden of reduction proposal represented, according to the Study Group of the Electricity Sector UFRJ - GESEL, an average reduction of R$18BR/MW in the electricity tariff.

In parallel, the MP also had a proposal to reduce the cost of the electric power industry from the proposed renewal of concessions to hydroelectric plants and transmission lines with contracts that would expire between 2015 and 2017. The physical volume of awards is impressive: 22,341 MW and 73,000 km of transmission lines. In this sense the law defined two options: to bid or renew contracts in a costly way of assets below:

Table 1:

SEGMENTS	QUANTITY CONCESSIONS	TOTAL AMOUNT ON
GENERATION	58 Generating Units	Equivalent to 21.5 GW 12.9 Gw average (20% of electricity generation in the country)
TRANSMISSION	73,000 km of transmission lines	53% of Basic Network National Integrated System - SIN
DISTRIBUTION	41 Companies	30% of the distribution market

SOURCE:ANEEL

By the way of MP 579, the government opted for the renewal of concessions, but within a strictly legalistic approach: the return of the assets to the Union with the option of keeping the existing dealerships concession assets, provided that they accept the anticipated expiry date of the contract and pass on the condition of simple operators and maintainers of hydroelectric plants. They would be awarded a fee for the costs of these activities. Thus, the holders of the generation assets of the companies are providing services but will no longer sell electricity at the market price.

As an illustration, the reduction is significant going from a position of R$95.00 per MW/h to less than R$30.00 per MW/h. The same happened with the transmission

utilities, which are now paid for a tariff that once only contemplated the costs of operation and maintenance.

The calculation of O & M (Operation and Maintenance) was defined by ANEEL based on a nearby methodology that is applied to the distribution companies and using information from the database that underpins the pricing ceiling energy auctions and transmission. It is worth noting that the impact of the renewal of concessions that first time was restricted essentially to generators and transmitters leaving distributors in the second phase.

As an illustration of how this reduction can have a significant commercialization of renewable energy generation coming from a position of R$95.00 per MW/h for values less than US $30.00 per MW/h. The same applies to the transmission concessionaires, who have to be paid by a tariff that includes only costs of operation and maintenance, O & M, where this calculation assumed a methodological base next to which is applied to the distribution companies, i.e. using information from a database that serves as the basis for fixing the ceiling prices of energy auctions and transmission.

It is worth noting that the impact of the referred law that approved the renewal of the licenses was restricted in the first instance directly to the concession contracts for generation and transmission leaving open what would be done regarding the distribution segment.

6. PERSPECTIVES FOR DIRECTIONS IN THE RENEWAL OF THE CONCESSIONS OF DISTRIBUTION.

6.1 – THE EXTENT OF THE PROBLEM:

As discussed in the previous chapter, the decision for such an extension represented, in fact, a decision that changed some structural aspects of the Brazilian Electric Sector Model (SEB), 2004, as pointed out by Castro Brandão and Das (2013). However, the Government has so far failed to take immediate action in relation to concessions for the distribution segment, which had contracts maturing in the coming years and, according to law, without the right to the extension. This position, differentiated in relation to the generating units and transmission, can be attributed to

the fact that there would be an immediate effect in favor of low tariffs, the greater goal of Brazilian and existing contracts in current energy policy.

The concession contracts whose expiration will occur between 2015 and 2017 to include all 41 distributors, ie, 33% of existing concessionaires in the country, covering 17 states as shown in Table 2 Highlight for Companhia Energetica de Minas Gerais - CEMIG and the Companhia Paranaense de Energia - COPEL and the six state federalized Eletrobras companies - Alagoas, Roraima, Piauí, Rondônia, Acre and Amazonas, which together account for 27.5%.

Table 2:

Contracts Terminated

Companies	State	terminated	Companies	State	terminated
Hidropan	RS	2015	Nova Friburgo	RJ	2015
Celesc	SC	2015	São Patrício	GO	2015
Celg	GO	2015	Paulista	SP	2015
CEB	DF	2015	Santa Cruz	SP	2015
CEEE	RS	2015	Iguaçu	SC	2015
Copel	PR	2015	Bragantina	SP	2015
CEA	AP	2015	Caiuá	SP	2015
CER	RR	2015	Paranapanema	SP	2015
ED Alagoas	AL	2015	Forcel	PR	2015
ED Roraima	RR	2015	Jaguari	SP	2015
ED Piauí	PI	2015	Santa Maria	ES	2015
ED Rondônia	RO	2015	Sulgipe	SE	2015
ED Acre	AC	2015	Nova Palma	RS	2015
Amazonas Energia	AM	2015	Cooperaliança	SC	2015
Cocel*	PR	2015	Nacional	SP	2015
Eletrocar*	RS	2015	Mococa	SP	2015
DMPEC*	MG	2015	Cemig Leste	MG	2016
CFLO	PR	2015	Cemig Norte	MG	2016
EFLUL	SC	2015	Cemig Oeste	MG	2016
João Cesa	SC	2015	Cemig Sul	MG	2016
Sul Paulista	SP	2015	Demei*	RS	2016
Cat. Leopoldina	MG	2015	Muxfeldt	RS	2017

Source MME
(*) Municipal companies

As disclosed in a report on 19/02/2012, all 41 concessionaires already formally declared to ANEEL - without exception - the interest to renew their contracts, even without knowing under what conditions to be defined by the Brazilian government.

At least something has been made clear by ANEEL and signaled that in the process of renewal of contracts of concessions generation and transmission, there was an "economic bias" resulting in reducing tariffs.

According to the Regulatory Agency, the rules for the distribution "will certainly have a trailer to the quality of service provided to the consumer bias", being analyzed, for example, aspects such as the duration and frequency of cuts in power supply, Average service time for rewiring, history of complaints in *call centers* and indicators of conformity voltage level available to consumers in 110 or 220 volts, considering a fluctuation margin of ± 5 volts.

The objective of this exercise in academic analysis of the SEB regulatory policy is to examine not only the possible actions and changes in the power distribution segment, starting from the hypothesis that the Government, following the example applied to segments of generation and transmission, will propose the renewal of these concessions, as well as the possible points that can be inserted in the new contracts to be signed and the alternatives that arise, given the current scenario in the power distribution market in Brazil.

6.2 – A NEW MILESTONE IN SEB FROM THE LAW No. 12,783, 11:01:13.

Until 1995 The Brazilian Electricity Sector was characterized as a hybrid state model whose distribution companies were, mostly, owned by the federal and state governments. From 1995, after the enactment of Law No. 8987 of December 13th 1995, the delegation to the concessions of public services by the grantor, would be made through a bidding process, in the form of competition, legal entity or consortium companies that demonstrate capacity to perform, at their own risk and for a specified period.

In 2013, Law No. 12,783 came to create the legal basis for the extension of concessions for the distribution segment, following the same logic applied to generation and transmission, as indicated in its Article 7 below: (...)

Art. 7 - From September 12, 2012, grants of power distribution achieved by art. 22 of Law 9074 (1995), **may be extended at the discretion of the grantor**, just once for a period of thirty (30) years, in order to ensure continuity, efficiency of service, reasonable tariffs and the fulfillment of criteria for operational and economic rationality. (Our emphasis)

The extension of concessions for electricity distribution depends upon the express conditions established in the concession contract or addendum acceptance.

The possibility of allowing the extension of concessions for the distribution segment is already an almost unanimous consensus among SEB agents. This consensus is based on the premise that there would be virtually no gain in the short term for consumers, in bidding for these concessions, this position is based on the central argument that the economic regulatory framework is applied to distributors to induce a utility tariff with efficiency and affordability.

There is an understanding already exposed by the Brazilian Government, that the extension to be adopted will be more pragmatic for the energy policy path, especially when we consider a very important point: the conditioning of Law No. 12,783/2013 which determined that the extension of concessions distribution will occur "at the discretion of the grantor", i.e. the Government will establish new conditions for new contracts with 30 years duration, and it will be up to current dealers to accept or not the new conditions, in legal procedure similar to what occurred in the renewal of generation and transmission contracts.

Additionally, it is worth noting that the process of renewal of the concession which occurs is not a sale of the dealership itself completely, but simply the transfer of assets in service, leaving the old controllers with responsibility towards employees and facilities and not associated with the provision of public services, which could create major problems regarding the care of appropriate quality service to customers.

Accordingly, from this new legal context in which the grantor will determine and format a new contract for concessions distribution opens up the possibility of examining, not intending to exhaust the subject, what new conditions may select new contracts. Some ideas are already being discussed internally within the Government, in which the quality of service will be prioritized and new contracts will have more preventive, more a guideline and less punitive focus.

6.3 - ANALYSIS OF PERFORMANCE INDICATORS

Before entering the background in the diagnosis related to analytical aspects surrounding the renewal of the concession contracts process, the indicators used in the analysis should be performed in detail and explain their importance in the executed research.

Such analysis is extremely important because, as will be detailed later, this will be a decisive point in the renewal of concessions in the distribution process. According to the Foundation for the National Quality Award - FPNQ (2010), "performance index is a mathematical ratio that measures, numerically, attributes of a process or its results, with the objective of comparing this measure with pre- established numerical targets. "It is important to note that performance mentioned here is focused as much on economic-financial as operational scope and quality of service.

Indicator analysis is considered a widely used technique in the management area and more specifically for the assessment and valuation of businesses. For Geisler (2000), an indicator is a measure reserved for the representation or description of a particular event or phenomenon. According to De Rolt (1998), performance indicators "are elements that measure levels of efficiency and effectiveness of an organization, ie, measuring the performance of processes related to customer satisfaction." Pegoraro (1999, p.19) uses the same concept to define quality indicators.

According to Padoveze (1994): "Performance indicator is a number that helps in the process of clarifying the understanding of the situation of the company whose objective is to detect cases, verifying the trend of events and give subsidies in the administration of the company, emphasizing the remedial efforts in the necessary directions. "Thus enabling a better understanding of the advances, in terms of the outcomes or impacts of company management."

An indicator consequently becomes a measurement tool used to perform quantitative and / or qualitative diagnosis of a given phenomenon, in order to support the evaluation and decision making. According to Kaplan and Norton (1997) indicators are used to monitor and improve the quality and performance of products and processes. The calculation of results through indicators measure performance in relation to the goal and the other benchmarks, allowing control and managerial decision making, providing an important role in establishing the situation you are in an industry, a sector, a company or even a functional area, and can be used to determine whether a particular company is complying or not their performance targets.

We can separate the analysis of the performance indicators on two fronts, Operational and Economic Analysis and financial performance. As detailed below:

6.3.1 Indicators of Operational Performance

Measure the quality of service provided by electricity distributors to its direct consumers, which can be classified in residential, commercial, industrial, rural, public power and others. The choice of indicators of operational performance was due mainly in an attempt to cover the main indicators used by ANEEL to measure the effectiveness of the distribution companies, which are:

- **Loss Indicator:** This commercial indicator shows how much business the company ceases to invoice for estimated losses. This indicator is fractionated into **Technical and Commercial Losses**. Technical losses are generally inherent to the activities of the transport of electricity on the network while the Commercial Loss is related to the rest of the difference between the Required Energy, Injected or Supplied and Sold or Billed, examples are theft or fraud energy. ***Losses = (Loss Techniques + Commercial Losses)***
- **System Average Interruption Duration Index (SAIDI):** This indicator expresses the operational period of time which, on average, each consumer unit was deprived of electricity supply in the considered period, usually one year. ***SAIDI = (total time of interruptions seen in a year/total number of consumers), and is measured in minutes or hours.***
- **System Average Interruption Frequency Index (SAIFI):** expresses the number of outages, on average, each consumer unit suffered during the consideration period, usually a year. ***SAIFI = total number of interruptions seen in a year/total number of consumers.***

According to LaCOMMARE and ETO, 2006, low quality service generates large costs, especially in classes of commercial and industrial consumption (LaCOMMARE and ETO, 2006). The adequacy of the investments for subtransmission and distribution systems are able to improve these indicators in the medium and long term.

It is important to highlight two points, firstly in Brazil, the SAIDI and SAIFI indicators have their definitions in the Ordinance of the National Department of Water and Power - DNAEE No. 46, of April 17, 1978, and rectified by ANEEL Resolution No. 12 of January 27, 2000 and secondly that such technical indicators are considered to this day by ANEEL as excellent power quality of service provided by the distribution of electricity to

its consumers. The smaller these indicators are, the better the quality of service provided is by the companies and vice versa.

6.3.2 Indicators of Economic and financial performance:

For distributors, the financial indicators tend to improve as a function of increasing operational efficiency, indicators were chosen taking as a base the adherence of each to the propositions of the study (determined in the Introduction), as well as their use and perception by the market. The choice was to seek the most widely used indicators in business, preferring the currently used not only by companies in the energy sector, but also by agents of the distribution market. In this sense indicators that will be used this academic work were:

- **EBITDA - Earnings before interest, taxes and depreciation:** The indicator stands out for its importance as an indicator of financial performance as well as help for valuing companies and supporting the decision-making process indicator. EBITDA is a measure of the performance evaluation part of that profit and adjusts some values of the result, estimating the cash flow generated by operating activities. These are deducted from the profit figures that do not affect cash, such as depreciation and amortization, still-interest expenses are deducted from loans and financing (interest), including rebates to customers, interest paid to suppliers and others (the bigger the better);
- **EBITDA Margin:** Through this window it is possible to ascertain the impact of revenues from energy supply distributors in the company's cash, i.e. the revenue is in fact reflected in the company's box (the bigger the better). Ebitda margin = EBITDA / Net operating revenue;
- **Profit for the Year:** considered beyond the operating result (expressed by EBITDA), financial results, taxes and depreciation and is therefore a more economic indicator, but still very popular in business circles. Expressed, beyond the operational picture of the distributor, the full panorama, including those factors that also impact your bottom line for the year, and for these reasons is also very important in this analysis.
- **Debt/EBITDA:** Through this indicator it will be possible to evaluate the real capacity of a given company to pay its debt with its operating cash flow for the year, so we can get a good indication of how is the financial health of a particular

company. All the liabilities that a company owns defines itself as debt such as loans, accounts payable to suppliers, debt with investors and many other kinds of debt (The smaller the better).

6.4 - QUALITY OF SERVICE AND OPERATION

The historical series of quality services gathered and published by Aneel demonstrate that there is a set of distribution companies which have comparatively bad performance indicators of service quality. It can easily be verified by observing the operational and business indicators of such companies, which most of them will have their concession contracts expiring in the next two years.

For purposes of analysis were selected, as shown in Table 3 below, 22 distribution companies which together account for 43.4% of the concession area of the country covered by the distribution system.

Table 3:

CONCESSION AREA AND NUMBER OF CITIES

Companies	Concession Area km2	Nº of Cities em 2013
Bragantina	3.493	15
Caiua	9.149	24
Ceb	5.822	1
CEEE	73.626	72
Celesc	88.094	282
Celg	336.871	237
Cemig	567.478	774
CFLO	1.200	1
Copel	194.854	395
DMED P. Caldas	547	1
Distribuidoras Eletrobras	2.267.636	462
Eletrobras AC	164.220	22
Eletrobras AL	27.933	102
Eletrobras AM	1.577.820	62
Eletrobras PI	254.400	223
Eletrobras RO	237.576	52
Eletrobras RR	5.687	1
Iguacu	1.252	9
Nacional	4.500	15
Nova Friburgo	935	1
Paranapanema	11.770	27
Santa Maria	4.994	11
Sulgipe	5.764	14
Total Group	**3.577.985**	**2.341**
Brazil(*)	**8.237.788**	**5.570**
Participation	**43,4%**	**42,0%**

Source: Aneel
*(*)Source: IBGE*

41 of the energy distributors may have their concession contracts renewed by the government from 2015, 11 of the 22 major dealers analyzed breached frequency range (FEC) or duration of interruptions (SAIDI) in the power supply light in 2013 (Figure 1 and 2), and these, approximately 80% had recurrence in some negative indicators. Also emphasizing that some dealerships had a worsening in the financial year 2012 (underlined in red in Tables 3 and 4) with some of them even featuring consecutive exacerbations in the last two years in at least one of these two indicators, such as businesses CEE , CELG and Eletrobras Alagoas, which submitted from 2011 - 2013 a worsening average of 20.3% in the SAIDI indicator (Table 4 and 5).

Another point of possible analysis of the grantor is the weight that these companies represent Brazil by analyzing the indicator of these indicators, This is because some companies will have their contracts expiring in 2015 are far below the indicators recorded in 2013, which the SAIDI and SAIFI in Brazil recorded were 18.7 and 18.3, respectively. The comparison criterion, CELG, for example, reported in 2013, 40.3 to 26.2 SAIDI and SAIFI.

Chart 1:

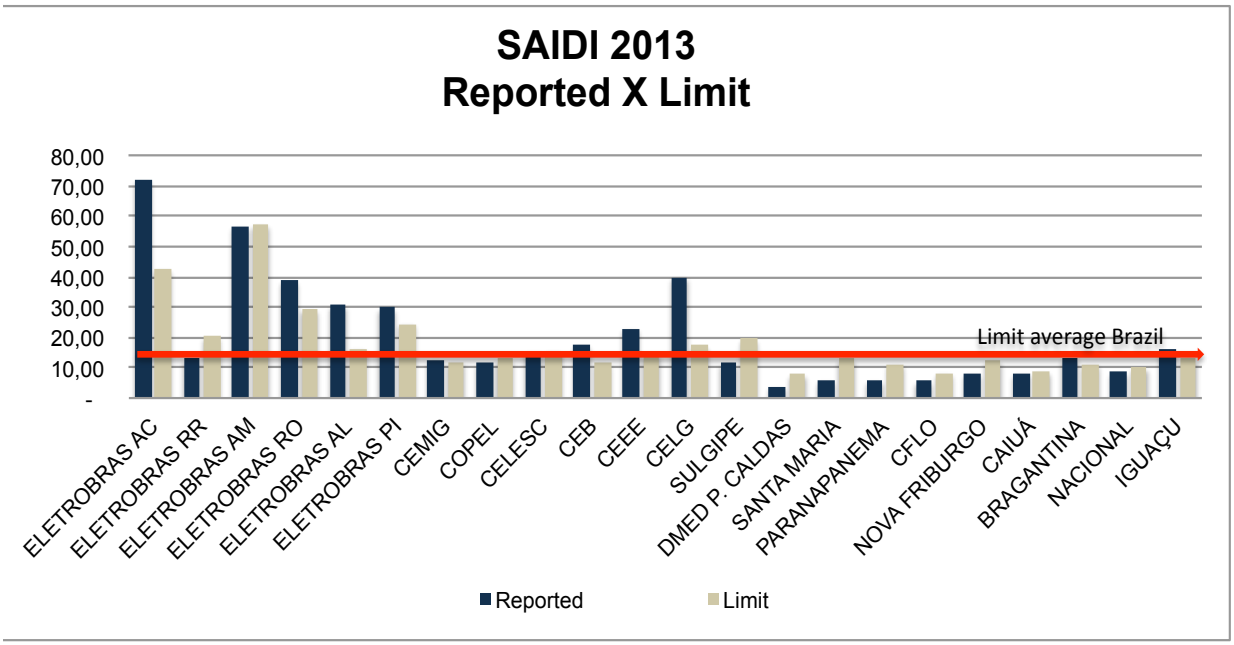


Table 4:

System Average Interruption Duration Index - SAIDI

HOURS IN A YEAR

Companies	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
CEB	10,58	10,81	11,04	13,29	14,77	16,06	16,26	14,81	15,68	20,16	17,73
CEEE	20,86	16,87	20,51	26,54	25,79	24,51	26,99	21,63	17,57	19,36	23,15
CELESC	23,74	18,28	16,33	15,20	16,40	14,39	13,56	13,53	17,15	16,51	15,50
CELG	23,61	21,64	25,75	21,39	24,44	23,43	24,90	20,84	22,27	35,72	40,03
CEMIG	10,74	10,93	12,21	13,03	13,14	13,66	14,09	12,99	14,32	14,73	12,49
COPEL	18,90	14,04	13,48	14,79	13,54	12,19	12,91	11,46	10,64	10,25	11,63
ELETROBRAS AL	28,20	23,56	23,20	22,75	20,99	19,62	20,82	20,58	25,66	26,24	30,73
ELETROBRAS AM	35,64	45,08	65,57	48,09	66,58	64,58	69,88	72,03	54,89	65,20	56,79
ELETROBRAS PI	50,68	50,85	52,21	51,67	45,04	51,55	43,62	40,81	41,83	34,16	29,78
ELETROBRAS RO	52,03	37,02	38,20	38,28	38,16	36,80	37,00	31,73	38,48	31,40	38,87
BRAGANTINA	6,42	7,29	7,58	8,55	11,44	11,60	11,23	11,43	12,32	14,43	13,36
CAIUÁ	7,15	5,11	6,75	7,21	8,04	7,23	7,30	6,98	6,48	7,20	8,30
DMED P. CALDAS	4,37	8,97	5,81	3,26	3,15	5,45	3,50	3,12	4,09	3,32	3,95
ELETROBRAS AC	20,87	16,23	14,09	12,45	16,62	15,29	36,75	45,05	46,23	65,94	71,99
ELETROBRAS RR	8,17	7,06	16,47	12,37	13,92	13,74	9,80	17,89	14,88	11,61	13,04
IGUAÇU	17,27	7,55	4,71	9,27	8,79	7,64	8,15	11,65	10,91	36,09	15,89
NACIONAL	4,67	7,29	4,17	6,76	7,97	8,04	7,30	8,22	8,58	7,38	8,68
NOVA FRIBURGO	18,53	14,47	18,77	18,76	17,97	20,58	24,03	13,48	13,36	9,17	8,29
PARANAPANEMA	10,17	6,61	7,82	7,90	7,29	6,33	7,14	6,20	4,85	5,88	5,88
SANTA MARIA	9,03	8,06	9,23	7,78	8,52	10,57	14,64	9,35	10,33	7,59	5,92
SULGIPE	14,41	13,78	19,76	21,21	19,73	21,52	17,72	13,76	15,45	16,99	11,55
BRASIL - 63 Companies	16,37	15,81	16,75	16,04	16,14	16,65	18,77	18,42	18,40	18,67	18,27

Chart 2:

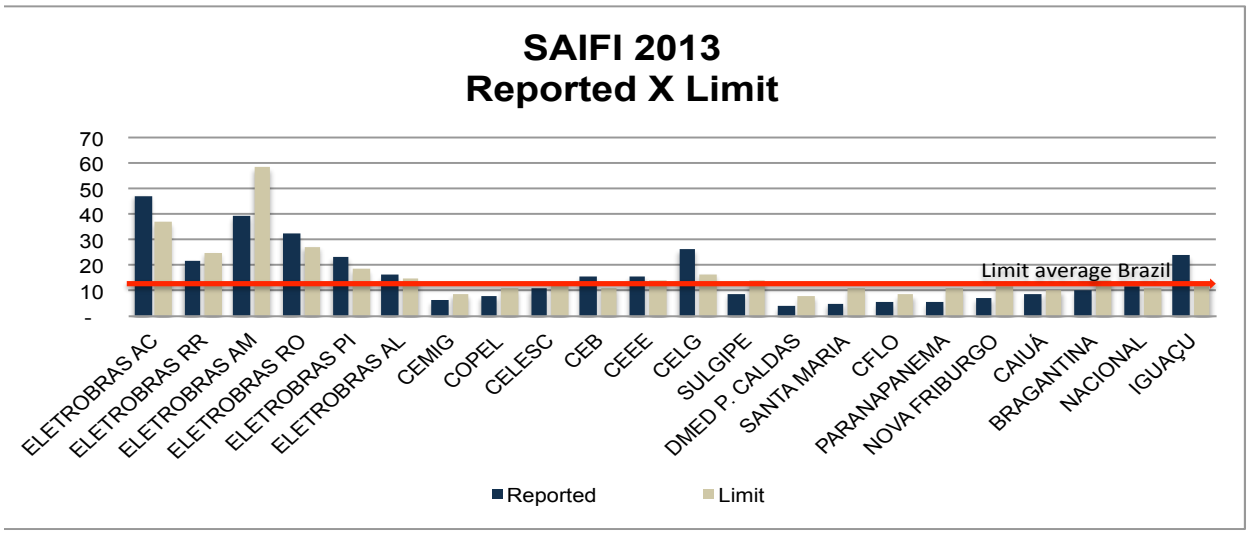


Table 5:

System Average Interruption Frequency Index - SAIFI

NUMBER OF INTERRUPTIONS IN A YEAR

Companies	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
CEB	11,65	13,94	10,54	11,54	15,97	16,95	15,21	14,79	13,00	17,98	15,72
CEEE	18,99	14,32	15,60	16,98	18,63	16,52	15,18	15,03	13,21	12,96	15,75
CELESC	15,66	13,48	12,85	12,15	12,45	10,54	9,79	10,22	11,82	11,81	10,63
CELG	24,14	19,26	22,69	20,15	20,27	21,05	20,72	16,03	18,51	24,21	26,24
CEMIG	6,42	6,58	6,78	6,43	6,40	6,53	6,76	6,55	7,00	7,03	6,26
COPEL	16,55	14,19	13,51	13,66	12,41	10,69	11,03	9,46	8,26	7,84	8,07
ELETROBRAS AL	21,68	18,74	18,52	16,92	17,24	15,32	15,68	14,31	16,71	20,03	16,04
ELETROBRAS AM	36,21	49,03	56,89	48,94	56,53	49,31	56,95	59,82	51,23	51,12	39,19
ELETROBRAS PI	35,45	41,66	44,99	40,44	36,91	36,35	32,80	32,15	29,96	26,08	23,35
ELETROBRAS RO	64,26	50,19	48,85	42,70	52,30	45,66	43,77	29,73	28,90	26,03	32,44
BRAGANTINA	9,59	9,66	10,48	10,21	11,70	11,54	8,81	10,67	8,92	11,40	10,30
CAIUÁ	7,78	5,83	6,78	7,92	7,90	5,87	6,96	9,01	7,16	7,47	8,87
DMED P. CALDAS	7,61	7,26	6,93	7,06	3,76	6,43	2,85	3,47	4,33	3,25	3,70
ELETROBRAS AC	34,59	22,99	23,10	18,44	22,18	19,61	40,74	43,51	45,25	55,28	47,47
ELETROBRAS RR	20,80	16,85	42,64	30,15	39,38	35,60	21,10	24,26	21,27	21,45	21,77
IGUAÇU	25,73	16,64	8,46	10,51	10,04	11,46	12,57	13,57	14,12	34,36	23,68
NACIONAL	6,96	8,58	5,16	8,91	10,56	13,98	9,59	11,52	9,23	9,29	11,41
NOVA FRIBURGO	11,28	10,29	14,96	12,34	11,91	22,99	15,84	11,78	10,33	7,60	7,17
PARANAPANEMA	9,88	6,24	8,39	9,06	7,90	6,91	7,74	5,97	5,25	6,46	5,52
SANTA MARIA	5,34	5,60	5,11	4,28	4,93	8,25	9,99	8,59	7,70	6,79	5,17
SULGIPE	16,53	15,08	17,04	16,76	17,75	17,63	18,96	12,81	14,26	13,31	8,98
BRASIL - 63 Companies	**12,89**	**12,12**	**12,53**	**11,53**	**11,81**	**11,37**	**11,72**	**11,31**	**11,15**	**11,11**	**10,49**

Aneel has highlighted the importance of operational indicators have for their analysis, One of these indicators was the creation in 2011 of the Aneel Consumer Satisfaction Index Award - IASC, which is nothing more than another tool aimed at the enhancement of the reasonable tariffs principle. Besides those already mentioned above are also indicators of satisfaction work survey together with consumers as one of the indicator components.

Another point of extreme importance and that directly affects business and consequently the quality of service provided by the utility is the question surrounding the loss indicator, either technical or commercial. In both cases the management of the company has an even greater responsibility to control this indicator that directly affects their cash flow and may, depending on the degree of losses registered, impair the

financial ability of a given utility to the point of affecting the sustainability of a program of adequate investments.

It is noteworthy that in 2015 the companies in the northern region will still have a greater focus and pressure on the need for improvement in their levels of efficiency to combat commercial losses. That's because on 11/11/14 ANEEL regulated a law article requiring utilities to reimburse some of the expenses associated with the purchase of fuel oil and diesel power plants that supply the isolated systems (locations that do not receive the energy produced in other regions of country).

The regulation of Aneel takes effect from the tariff adjustment cycles in 2015, and this gradual return, according to a report from the Economic Value[5] Initially, only 25% of the expenditures will be charged in 2015, R$ 161 million for the year 2014, and the other installments of 25% will be added within three years. From 2018, these distributors will pay 100% of the cost of energy wasted for non-commercial losses. This regulation will affect all concessionaires that operate in the isolated system that is public or private.

The commercial energy losses and defaults of consumers, for example, according to Nelson Hubner former Director of ANEEL[6], generate significant losses for both the distributors and for the consumers investments in fighting the increasingly important losses to decrease both the risk of accidents and the rates paid by customers.

In the last rate process, in the third cycle, the variable quality of service, which impacts the pricing process already had a considerable weight and everything indicates at this point that the fourth cycle will be further intensified. The tendency is to be even more intense and that is the point of discussion in the same public hearing, quality and rate as already stated by ANEEL itself through its Director Romeo Rufino[7].

A path to be followed and which already has the sympathy of some agents of the department, such as GESEL, would be to condition the extension of the concession to a serious and temporarily consistent commitment in operational improvement on the part of the current licensee. From this perspective, power would include the new concession clauses allowing the grantor, or more specifically Aneel, to declare the forfeiture of the lease. If the commitments made operational improvement in the new concession

[5] *Produced Report on 11/12/14*

[6] *Withdrawal statement from Channel Energy site on 10/09/2014*

[7] *Interview on the Channel Energy site on 12/19/2013*

agreements and do not present results in fixed terms, determining the rules for immediate bid, which would limit the potential lawsuits and the possible political pressure. In this direction, one could establish the criteria to associate the demand for faster results and the concessions with the worst levels of service quality.

6.5 - ECONOMIC AND FINANCIAL BALANCE:

Inside the little that has been defined as the renewal of concessions in the distribution segment, an aspect that drew attention to the wording of the law nº 12,783 was the inclusion of a binding constraint to the economic aspect: "... may be extended at the discretion of the grantor, once only for a period of thirty (30) years, in order to ensure continuity, efficiency of service, **reasonable tariffs and compliance with** operational and **economic criteria of rationality** "(our emphasis) . This mention could eventually show a possible trend of the Brazilian government to consider this perspective and to analyze the assumptions which would serve as the basis in the possible renewal process.

As previously featured in the Distribution segment, there is a convergence feedback and poor quality of services provided by the deterioration of the financial position of the Companies. Aneel and financial agents that act in the SEB are expanding the ability to detect problems in management that result in financial imbalances.

Examples abound that this aspect should not be overlooked by agents of the Department, the last of which was the case involving the Centrais Elétricas do Pará SA - Celpa, the Network Group company, who left the group "trapped" between the financial market, which started charging ever higher interest rates on its debt, which only its Celpa debt revolved around R$ 3.4 billion, and Aneel, which imposed increasingly heavy fines due to recurrence in penalties committed by the Company, that after going through a court-supervised reorganization must be acquired by another Industry Group.

Surrounding the case exemplified, Aneel also approved the intervention of eight other distribution companies in the same group due to the high degree of identified problems and risks that they could cause in the quality of service delivery in the areas of energy provided that these companies serve.

Therefore, it must be noted that currently a regulatory framework does not exist for the regulator of the sector that enables it to act and interfere directly in order to avoid the financial problem which, as noted, leads primarily to deterioration in the quality of services there seeing the need for ongoing investments that the sector of distribution demands. The 22 main dealers, which will have their contracts ending within the next two years, now account for 37.3% of total investment from the sector in 2013, with the Eletrobras System responsible for 13.7% (Table 6).

Table 6:

INVESTIMENT (ADDITIONS TO FIXED ASSETS)

(Current values in R$ thousand)

Companies	2010	2011	2012	2013	Variation 2013/ 2012
Bragantina	17.098	27.344	12.148	28.542	134,95%
Caiua	14.829	17.176	21.038	22.813	8,44%
Ceb	267.200	202.175	145.500	162.600	11,8%
CEEE	97.300	118.100	147.000	244.917	66,6%
Celesc	382.200	352.953	353.168	336.463	-4,7%
Celg	154.427	149.128	189.959	176.905	-6,9%
Cemig	448.000	462.000	1.195.400	884.000	-26,0%
CFLO	4.094	3.559	916	4.813	425,4%
Copel	594.163	754.500	809.000	977.100	20,8%
DMED P. Caldas	10.700	11.180	15.128	12.000	-20,7%
EDP BANDEIRANTE	204.434	210.122	155.056	206.580	33,2%
EDP ESCELSA	214.600	157.705	141.633	203.645	43,8%
ELEKTRO	354.800	328.200	304.400	315.600	3,7%
Distribuidoras Eletrobras	1.124.170	1.258.465	1.471.911	1.679.673	14,1%
Eletrobras AC	176.613	176.613	57.400	62.656	9,2%
Eletrobras AL	138.032	86.110	104.961	112.382	7,1%
Eletrobras AM	499.700	503.900	751.000	1.045.000	39,1%
Eletrobras PI	146.000	299.974	299.974	207.085	-31,0%
Eletrobras RO	153.555	159.188	225.896	219.870	-2,7%
Eletrobras RR	10.270	32.680	32.680	32.680	0,0%
Iguaçu	ND	ND	ND	3.737	ND
Nacional	10.338	9.201	7.252	14.014	93,2%
Nova Friburgo	8.000	20.300	10.700	8.500	-20,6%
Paranapanema	12.289	14.873	3.377	19.991	492,0%
Sanat Maria	ND	ND	11.102	14.488	30,5%
Sulgipe	ND	294	287	287	0,0%
Total Group	**2.845.253**	**3.404.081**	**4.396.719**	**4.579.188**	**4,2%**
Total of 63 Distribution Companies	**10.930.728**	**11.254.506**	**13.254.265**	**12.272.939**	**-7,4%**
Participation	**26,0%**	**30,2%**	**33,2%**	**37,3%**	**12,5%**

Source: Abradee and CVM

Based on the experience of the financial problems that have hit companies in the Grupo Rede, an alternative already discussed would be to create an improvement by ANEEL, to establish the new contracts derived from a formal renewal of concessions and routine monitoring mechanism of leading indicators of financial health of the distributors, allowing the regulator to act preemptively if a financial capacity degradation is found in a utility company.

Indicators are important because they provide conditions for establishing diagnosis and prognosis of companies regarding their economic and financial situation. For example, in 2013, the 22 utilities analyzed summed a generated EBITDA of R$385.6 million, representing only 3.5% of all EBITDA generated by the distribution sector, while the distribution sector has lost 32.1% in the last four years of its ability to fit, measured by the indicator, these added companies recorded a drop of 75.7% negatively highlighting the Eletrobras System, which together in 2013 had a negative cash generation of R$ 1.23 billion, worrying, if we analyze the degree of investment of those companies, R$ 1.67 billion showing clearly that there is the need to seek funds from the financial market or its parent in order to meet its investment program

Table 7:

EBITDA

(Current values in R$ thousand)

Companies	2010	2011	2012	2013	Variation 2013/ 2012
Bragantina	29.641	40.286	30.997	17.794	-42,6%
Caiua	23.220	30.679	18.707	47.787	155,4%
Ceb	58.527	135.575	43.286	-84.256	-294,6%
CEE	-95.214	-29.319	12.528	-232.245	-1953,8%
Celesc	421.685	542.052	-244.632	289.318	-218,3%
Celg	32.569	-8.423	97.200	272.200	180,0%
Cemig	1.176.991	1.613.000	889.311	1.287.000	44,7%
CFLO	21.793	7.204	7.997	4.719	-41,0%
Copel	542.298	645.952	115.688	-138.112	-219,4%
DMED P. Caldas	-6.075	7.232	4.207	24.227	475,9%
EDP BANDEIRANTE	498.531	481.363	217.089	420.225	93,6%
EDP ESCELSA	356.386	273.542	350.203	365.333	4,3%
ELEKTRO	862.398	935.129	667.100	647.100	-3,0%
Distribuidoras Eletrobras	-737.579	-393.066	-755.001	-1.225.507	62,3%
Eletrobras AC	13.580	13.580	-51.730	-42.780	-17,3%
Eletrobras AL	-35.140	-53.277	-104.138	-85.060	-18,3%
Eletrobras AM	-643.015	-156.910	-292.662	-541.293	85,0%
Eletrobras PI	-24.154	97.092	19.280	-329.267	-1807,8%
Eletrobras RO	32.230	-212.471	-221.516	-122.872	-44,5%
Eletrobras RR	-81.080	-81.080	-104.235	-104.235	0,0%
Iguacu	-1.469	-1.469	1.157	1.722	48,8%
Nacional	17.403	23.968	26.167	22.810	-12,8%
Nova Friburgo	20.100	14.300	10.600	15.600	47,2%
PARANAPANEMA	32.804	39.273	23.372	40.286	72,4%
SANTA MARIA	30.464	23.791	49.732	26.420	-46,9%
SULGIPE	16.336	16.336	16.336	15.805	-3,3%
Total Group	**1.583.494**	**2.707.372**	**347.652**	**385.568**	**10,9%**
Total of 63 Distribution Companies	**15.567.366**	**17.206.843**	**9.974.259**	**10.563.649**	**5,9%**
Participation	**10,17%**	**15,73%**	**3,49%**	**3,65%**	**4,7%**

Source: Abradee and CVM

What makes this an even more relevant issue is that many of these companies already have a high degree of indebtedness and thus the chances of repeating episodes such as the case involving Grupo Rede end up becoming even more real. If we look at the actual ability of a given company to pay its debt with its operating cash

flow for the year, for example, we see that many of them don't have conditions (Table 8 and Figure 3), noting that 55% are below the index industry and 75% of don't even have positive cash generation (highlighted in orange). It all adds up to the contemplation that the strangulation between the financial market and the regulator has possibilities of repeating.

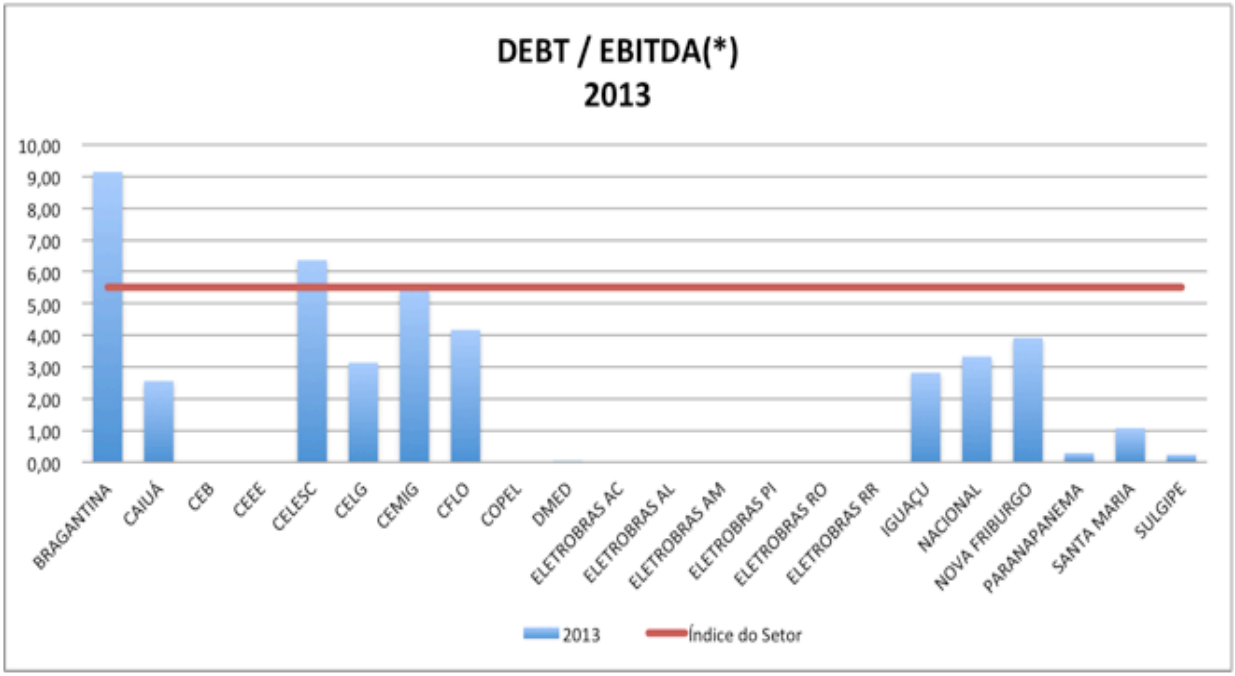
Table 8:

Debt/EBITDA(*)

Companies	2013
BRAGANTINA	9,14
CAIUÁ	2,55
CEB	NA
CEEE	NA
CELESC	6,36
CELG	3,13
CEMIG	5,45
CFLO	4,16
COPEL	NA
DMED	0,04
ELETROBRAS AC	NA
ELETROBRAS AL	NA
ELETROBRAS AM	NA
ELETROBRAS PI	NA
ELETROBRAS RO	NA
ELETROBRAS RR	NA
IGUAÇU	2,81
NACIONAL	3,32
NOVA FRIBURGO	3,91
PARANAPANEMA	0,28
SANTA MARIA	1,07
SULGIPE	0,23
Total Group	**45,33**
Total of 63 Distribution Companies	**5,50**

Source: Abradee and CVM

Chart 3:



(*) In case of a negative EBITDA, the indicator may not be calculated, showing the inesxistencia cash generation.

Some alternatives already present in the market that could be adapted in order to establish control of monitoring by the regulator, one would be to establish "Covenants" for these companies. Covenants are instruments that banks, for example, use in order to draw some guidelines where the borrower is required to comply or fail to comply with certain aspects that give the lender more security, directly or indirectly, from receiving the amount loaned. Noncompliance with these covenants (default) generally gives rise to penalties for the borrower, such as becoming a long-term debt as due immediately. What could be done in this case would be to establish financial covenants for utilities inserting clauses in order to achieve good practice monitoring.

Another instrument of financial supervision could be inspired by the model of regulation that is adopted in the insurance and banking sector. The regulator (SUSEP - Superintendence of Private Insurance - in the case of insurance companies and BACEN - Central Bank - in the case of banks) monitors and verifies the condition of the asset companies systematically and routinely according to clear, transparent and objective criteria. Depending on the performance of the company it may ask the regulator, for example, for a capital increase if it finds that the proper resources are incompatible with the size of the business and, ultimately, can come to state intervention even before the regulated company becomes insolvent.

Given that the activity of distribution of electricity is an essential service and cannot be stopped, it would provide an important regulatory progress for Aneel instruments to detect not only financial problems but, more importantly, act in time to correct them before the financial position of the distributor becomes precarious when the most prejudiced is the consumer in order to prevent cases like Grupo Rede to reoccur.

Indeed, it was due to the case involving Grupo Rede that this path is now more feasible, given that the institutional framework for dealing with crises of concessionary companies of the electric utility industry has recently undergone substantial changes by the enactment of Law No. 12,767/12, resulting in Provisional Measure No. 577/12.The main one was to ban the concessionaries resort with judicial recovery companies to negotiate with their creditors for reorganization, to the extent that it created the possibility of intervention by the grantor, the concession of public services, by appointment of intervenor by Aneel. The legislative change was reactive to the contingency of judicial recovery of Celpa and the harbinger of the possible legal recovery Grupo Rede companies that has in fact just been confirmed.

6.6 NEW CONTRACTUAL GUIDELINES AND COUNTRY MOMENTUM

The points outlined above demonstrate the excellent opportunity that the Brazilian government has to revise aspects today present in existing concession contracts that are somewhat way outdated, so much so, for example, that such contracts were entered into in the privatization process, in 1995, when not even the regulatory agency existed, which at that time a set of generic clauses were introduced, difficult to manage.

Logically that over time, these contracts received amendments and additives in the search to make some conditions clearer, particularly those relating to annual adjustment processes and periodic tariff revision, however it ended up somehow causing a high degree of contractual complexity that hinders necessary regulatory evolution and maturity.

With the process of license distribution renewal, where the granting authority will dictate new conditions for the renewal of contracts, it is expected that these conditions can be better defined, especially because of the knowledge that Aneel has today about utilities and difficulties to manage contracts with so many loopholes and obscurities.

The Electric Energy Sector has undergone several transformations over the past decades, the last of which was the renewal process in the generation and transmission segment which directly affected, for example, the economic and financial balance of some companies.

A situation that already demonstrates necessity is to simplify the basis of the distributors concession contracts, when defining the A[8] and B parcels. Parcel B is related to controllable costs of distribution, being determined by the result of the difference between the revenue and Parcel A.

This calculation formula was defined as a function of the prevailing philosophy at the time the contracts were signed, when knowledge about business costs and how to monitor their progress was very limited. Moreover, on the basis of the concession contract model was the responsibility of the distributors of the acquisition of energy required to meet its market, having, as a parameter, the initial rate agreed upon by the contracting parties and contractors.

One consequence, accordingly highlighted by GESEL, was the "nourishment" crisis installment B, which was amplified with the Parliamentary Commission of Inquiry - CPI Energy Account held in 2009, which sought to investigate the criteria used by Aneel to establish values of Brazilian light energy bills.

The current time setting in the new distribution market should also be considered an aspect of greater relevance today, and was evidenced by the water crisis that hit the country in 2014, is the methodology of calculating the Settlement Price Differences - PLD.

Even now Aneel is discussing a revised methodology for calculating the maximum and minimum values of the PLD, which with the water crisis varied between R$ 16 and R$ 822 according to data from GESEL. The agency board even considered at a public meeting held on 10/14/14 a proposal to open a public hearing to gather input for the establishment of the new limits of the PLD. The possibility of changes in the methods of price formation limit underwent public consultation in which agents of the sector, 30 in total, presented their views on the extent and possible impacts.

[8] *Parcel A is composed of uncontrollable costs that the utility company only charges the end user required to reimburse the necessary values of amount spent. The components of Parcel A can be grouped into Power Purchase, Industry Charges and Transmission Charges.*

The proposal Aneel has to change the criteria for defining the minimum and maximum values of the PLD came at the right time and gives security to the market, in the opinion of the director Tiago Correia. The decision of the agency, according to the Director, including among other points that he argues, in an interview with Channel Energy in 10/15/14, there is a Technical Note - NT available from the Aneel site that highlights the fact that the proposal for public hearing "preserves the concept of thermal relevance, but re-discusses, which makes sense in light of relevant changes in national thermal power stations between 2003 and 2014."

And so, the general perception is that a change is needed in the methodology of the value of the the PLD, but at the same time, all preach caution due to the consequences for the market, change the rules in the middle of a game, where players have already taken short and long positions based on the PLD present can be seen to as sign of insecurity by the market, more something else that only comes to confirm how this time of renewal becomes even more relevant for the Distribution sector.

7. CONCLUSIONS

Most likely the decision about how the renovation process of the old distribution concessions that will expire in the next two years will be held will be taken in the first quarter of 2015. For various reasons, however, in view of the renewal of the licenses for generation and transmission, we can conclude that the government should propose renew these concessions aligned with certain conditions.

And with this renewal comes the possibility of clauses to improve the quality of service rendered today to be incorporated into these instruments and contracts, not to mention the necessity that these contracts have to be updated taking into view the past so many years before the signing of the previous contract, where the industry as a whole scenario was quite different. A prime example of this transformation was the creation of the figure of the regulatory agent, Aneel.

Among these clauses are three noteworthy ascertained questions in the research. The first is an effective compromise of dealerships that have the right to renew the obligation to improve the quality of service, in this perspective, the inclusion of clauses, for example, allowing the grantor, or more specifically Aneel to declare the

forfeiture of the concession if the commitments which made operational improvement in the new concession agreements do not deliver results within set deadlines, especially for those concessionaires who already have critical problems.

The second issue relates to the prevention of economic and financial imbalances. Aneel within the new reality of the distribution market needs tools that not only allow detection of financial problems and, more importantly, act in time to correct them before the financial situation of the distributor becomes precarious in order to prevent cases like Grupo Rede reoccur causing harm to consumers, as an example, the use of financial covenants in new contracts in order to achieve best practice monitoring.

The third issue analyzed was the possibility of simplifications and contract upgrades that enable greater visibility for the regulator to act more directly in both their rights as well as in their obligations. Contractual modernizations such as the calculation methodology of installment B which determines the controllable costs thus so providing greater transparency in the calculations i.e. tariff values and tariff revisions.

Undoubtedly the scenario for the renewal of contracts of distribution utilities is much more favorable when compared with what was the renewal process of the licenses for generation and transmission, with the signing of these new contracts a unique opportunity for the granting power, via agent regulator, leads changes and improvements they can get in order improving service quality and reducing costs.

Especially considering that when everything indicates that we will have a scenario of sectorial changes in 2015 for the sector of distribution and that some concessionaires whose contracts will be expiring currently present problems in its indicators be they operational or economic and financial that ultimately reflect on the the service provided.

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