HOW TO FIT TARIFFS FOR THE ELECTRICITY DISTRIBUTION SYSTEM WITHIN A GLOBAL ECONOMIC AND SOCIAL ENVIRONMENT WHICH SUFFERS FROM SERIOUS DETERIORATION CONDITIONS. THE ARGENTINE CASE.

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Introduction
Situations of crisis alter the rules by which the electrical market works. Being a utility, the possibilities of managing to render a normal supply, even at enormous costs and by resigning efficiency, fall short. Argentina is ruled by an organization of the electrical industry based on the opening up of markets and on a major participation of the private sector in this activity, the path which developed and developing countries have chosen. Devaluation and some political interventions have altered the rules by which the electrical market used to work and, therefore, the economic equation of companies which render this utility – distribution and transmission are regulated – and even of generating companies, a deregulated activity. This has led to internal debts accumulated in the industry and to the need of getting funds from the national state which is external to the industry. The consequences of the lack of adequacy in the earnings of the industry: in the short, medium and long term; the transference of resources from the energy industry to the rest of the economic activity of the country and the effect of measures taken by national authorities, which hinge on the current political scenario, make up a very special situation. This generates difficulties, in cases in which there are prior concession contracts, to reestablish initial contractual conditions which will allow tariffs to be adjusted as needed in order to ensure that the service be sustained in the long term, together with the new socioeconomic conditions. Electrical energy distribution companies, after a profound social and economic crisis which the country went through at the end of the year 2001, must necessarily face an adjustment of tariffs. In this unavoidable adjustment of tariffs, the growing level of poverty recorded over the last years will have to be borne in mind, by implementing a system of Social Tariffs, not considered in regulations currently in force. The authors, in their proposal, include a description of the basic principles which this social tariff should feature.

The Argentine Electrical Model
Law number 24.065 established a national policy for matters related to the supply, transmission and distribution of electricity. According to this law, three activities can be recognized within the electrical energy industry: generation, transmission and distribution. (1) Generation is a risky activity subjected to market conditions. Units are dispatched economically and remunerated at the hourly spot price. Transmission due to technological reasons and to reasons related to scale economy which do not make competition any easier, is monopolic and is subjected to tariffs regulation and quality of service; obligation to provide free access, being exempted from the expansion of the network. Distribution is also a regulated concession. The supply for the whole of demand in a licensed area of distribution is mandatory and responsibility is established based on quality standards and price schemes. The activities of Generation, Transmission and Distribution are performed through what is known as “market agents”, who have rights and obligations. Market agents are “the generator”, “the transmitter”, “the distributor”, “the major user” (acronym in Spanish is GU), “the trader” (the latter having been created later, in 1996 – Decree of the National Executive Power N° 186/96).

Applying a regulatory framework to distribution
In the specific case of energy distribution, contracts entered into granted to concession holders, in exclusivity within a territorial area, the right (and the obligation) to distribute and to market electrical energy for periods of up to ninety five years in some cases, divided into different “management periods”. Concession Agreements include as a general rule the Tariff Regime, its application standards, a Procedure to determine them, the Initial Tariff Chart with Quality Standards of the Utility and Penalties, and they are controlled and verified by Regulatory Entities. The regulatory model for distribution is based on the control of results and on fostering investments.

Obligation to supply and Composition of Tariffs
The obligation to supply pertaining to distributors, within the framework of the regulatory model established by Law 24.065, refers to the responsibility of supplying within their concession area to final users who are not entitled to hire their supply in an independent manner. The economic signals arising from this obligation are oriented towards the expansion of generation and transmission, needed in order to supply demand coming from captive users. Tariffs are composed of two terms, the first one is variable and is represented by the seasonal buying price at the MEM which includes the cost of generation and transmission plus all recognized losses in distribution. The
second term is practically fixed and it corresponds to the added value of distribution (its Spanish acronym being VAD) which remunerates all costs from the distribution and marketing activity included in profitability, a value which until the crisis used to be set up in dollars and then converted into pesos at a 1:1 ratio and used to be updated every semester with inflation indexes from the USA. The VAD had to be reviewed periodically every 5 years (at national jurisdiction the first revision every 10 years), something which was performed in most provincial concession operations but not at national jurisdiction due to the outbreak of the 2001 crisis.

**Accomplishments obtained 10 years after it was enforced**

From 1992 to the year 2001 before the crisis, the regulatory model based on Law number 24065 had paved the way for major achievements among which we can mention: a) reduction in high wholesale energy prices (approx. 50 US$/Mwh) to competitive values at 23.50 US$/Mwh, whereas the final tariff for clients was reduced by 25%; b) a 60% increase in installed capacity; c) the quality of the service improved by 70%; d) the investment made exceeded 12,500 MU$, whereas profitability for the industry reached average values close to 5.6%. (2).

**The economic and political crisis and its impact on the electric industry**

The profound social, economic and political crisis which took place at the end of the year 2001 and which led the country to abandoning convertibility (through which one Peso was the same as 1USS) that had been in force since 1991, and which established “pesificación” and the freezing of tariffs for utilities which had been granted as a concession, seriously affected the electric industry. Law number 25.561 (law of public emergency), insofar as utilities were concerned, had severe consequences since it established: i) the “pesificación” of tariffs which had originally been set up in North American dollars; ii) the prohibition to apply any indexes on them; iii) the likelihood that agreements might be renegotiated: 1) the impact of tariffs on the competitiveness of economy and on the distribution of income; 2) the quality of services and investment plans; 3) the interest of users and the accessibility to services; 4) the security of all systems involved; and 5) the profitability of companies. On the other hand, it became impossible to alter or not to comply with contractual obligations.

This national law only dealt with utilities having national jurisdiction, whereas provinces were left with the possibility to choose whether or not to abide by it, something which most of them did.

With the purpose of complying with what had been established in the Law for all the national jurisdiction, a Commission for the renegotiation of Agreements (the acronym in Spanish being CRC) - which reports to the Ministry of Economy- was created. Later, after a new government took office in May of the year 2003, by means of Decree No 311/2003 issued by the National Executive Power, a new Unit for the Renegotiation and Analysis of Utilities Agreements was created by way of a continuation to the CRC, called UNIREN, and reporting to the Ministries of Economy and Production, and of Federal Planning, Public Investments and Utilities, whose mission, among others, is to carry out the renegotiation of agreements related to works and utilities, and being entitled to subscribe integral or partial agreements ad referendum of the PEN. In October of 2003 law number 25,790 stipulated an extension until 31/12/2004 as deadline for the renegotiation of Agreements which was due at the end of 2003, term which was again extended in December of 2004 until the end of 2005 by means of Law number 25,972.

For the not more than 3 years which have elapsed since the first law was passed, which established the renegotiation of Agreements, the effectiveness both of the CRC as well as, later on, that of UNIREN, has fallen short. Even though there were several attempts to make temporary adjustments to tariffs, they did not succeed due to claims filed by associations of consumers and by the People’s Defense Office from the City of Buenos Aires and from the Nation and justice ruled that they be suspended in all cases.

The situation of devaluation, the “pesificación” and the freezing of tariffs led to a serious deterioration of this industry, which so far had been well-known internationally for its success and had made major accomplishments. The impact produced generated inconveniences in the operation and management of companies, forcing them to reduce maintenance and investments to their minimum level and, likewise, this produced serious problems in management, by breaking the economic and financial balance of companies and pushing them into a financial default. The unilateral change in the rules of the game violated juridical security and altered the regulatory framework established by Law No 24065. Tariffs as an expression of recognition of true operating and maintenance costs has been destroyed; nevertheless, the demands for quality remained in force; besides being internationally competitive, they ended up being the lowest in the world, which resulted in values comparative to 30% of Brazil’s and of those from several European countries.

Within this scenario, the VAD has been frozen since November of 2001 and the renegotiation of agreements has continued to be delayed. Only EDELAP SA, one of the 28 Distributors (national, provincial and cooperative partnerships) with a Concession Agreement who should have renegotiated their contracts, has been able to sign a Letter of Understanding in November of 2004 that, despite not being a comprehensive renegotiation (the latter will only take place after the Agreement which will come out as a result of the Letter of Understanding) to be only applied to temporary aspects, will have to go through a Public Hearing on 13/01/05 and afterwards receive the legislative approval as well as that signed by the National Executive Power (3).

Such Letter sets up the terms and conditions of the Contractual Renegotiation Agreement between the
Distributor and the party granting the concession. Among other issues, the Letter establishes:

- A Contractual Transition Period and Regime for Tariffs (the acronym in Spanish being RTTC) and Guidelines to be applied in the Integral Revision of Tariffs (RTI being its acronym in Spanish) and the establishment of a Regime of Social Tariffs;
- An increase by 23% in the VAD as of 01/02/2005, which shall not end up in an increase over 15% in the tariffs of final users;
- Residential users shall not receive any increase in the VAD, which for the time being shall only be applied to the other tariffs;
- Every six months, the Ente Nacional Regulador de la Electricidad (ENRE, Spanish acronym which stands for National Regulatory Entity for Electricity) shall estimate variations from a General Index of Cost Variation, according to a formula and to parameters which are agreed upon. If the variation exceeds +/-5%, a revision process shall be started, whereas the concession holder will be able to ask for this revision at any time, if the variation should be equal to or greater than +/-10%.
- The RTI shall meet all the criteria set up in Law number 24065 and it will be enforced as of 01/02/2006.
- Specific obligations of investments are established for the concession holder, as well as a system for service quality (with the same levels recorded between 2000 and 2003), for the transition period until the RTI, where the definite ones shall be renegotiated;
- A system to treat outstanding penalties applied to the Concession holder before 6/01/200, payable in installments.
- Guidelines for the Concession holder regarding: improvements in information services of the concession; development of technologies and research; policies for suppliers and national buys; technical and economic audits of essential assets.
- The Concession holder’s commitment to suspend and waive on its behalf and on that of major shareholders any claim (even those already initiated) for indemnity due to presumed contractual non compliance, at administrative, arbitral or judicial seat, in the country or abroad, that if not complied with, the party being awarded the concession shall be entitled to denounce the agreement due to reasons for which the Concession holder can be made accountable for and then proceed to the termination of the contract, the commitment by the Concession holder to hold the party receiving the concession undamaged for any claim or lawsuit filed by its shareholders, and that given the case this were not complied with, the consequent termination of the Contract shall ensue.

Measures adopted to ensure supply
The first important effect of Law number 25.561 for Public Emergency took place in the area of electric generation. Wholesale prices which had been estimated based on marginal dispatching costs, and which had been expressed in dollars and then converted into pesos (1:1 ratio according to the Law of Convertibility), upon the devaluation of the currency up to 300% and after going through the “pesificación” were significantly reduced.

At the beginning the remuneration for capacity which had been 10 uSs per Mw was turned into the same value in pesos and no Variable Production Costs (CVP) were recognized, something which dollarized prices of fuels had. The price of gas was also “pesificado”.

This situation forced generators to produce losses, and since this is a competitive activity, it entailed, in an implicit way, the risk that they might stop producing and therefore that there might be a deficit in the supply within the wholesale market. (5)

Authorities then chose to change the rules and to implement measures, many of which were highly interventionist, and which, although they allowed to prevent a shortage in the supply, also led to the stripping of funds from the MEM. (4)

The main measures applied can be summed up as:
- From March 2002 to December of 2003, the SE issued numerous resolutions which changed procedures insofar as dispatching and composition of wholesale prices, namely, among others:
  - They allowed generators to restate CVP on a two-week period basis and to classify them into: costs for fuel, maintenance and non fuel.
  - They set up a maximum spot price.
  - They established new ways and types in the service of capacity reserves, and cost overruns for the use of fuel were remunerated which implied greater remunerations, and more adjusted to reality. The base capacity increased its remuneration by a 1,2 quotient.
  - For machines operating with costs higher than the maximum spot price, they established that they should receive their recognized cost but without forming a marginal price. The difference between this cost and the price of the node was remunerated by the charge “Temporary Dispatching Cost Overrun”.
- Since seasonal prices were kept almost frozen, while in spot prices – although some limitations were forced-, capacity and connected reserves were increased for their remunerations, the cost overruns of dispatching, what was collected by generators, was larger than what was paid by Distributors at seasonal price. The differences continued to be covered by the Fondo de Estabilización (FE or Stabilization Fund) where at the beginning of the crisis there were over 220 million dollars accrued which were subjected to the “pesificación”. Once this Fund was depleted, the Government financed it by means of loans granted by the Fondo Unificado (FU or Unified Fund) of the MEM from the National Treasury, in a first stage for an amount of 850 M$. Also, some other 183,7 M$ as loans were used coming from the SALEX accounts.
- However, such contributions continued to be insufficient to fully remunerate creditors of the MEM (generators and transmitters), therefore in September of 2003, the SE issued Resolution 406 where it was stipulated which payment priorities had to be applied when resources (income coming from payments of Distributors) were insufficient, and the debts to be consolidated in outstanding debt, the expiration
dates of which were left to be defined by the SE, which as of November of 2004 have reached 739M$. 
- In January of 2004, authorities, bearing in mind that residential demand is not in economic conditions to absorb any further increases in tariffs, it decided to segment wholesale prices based on demand levels, namely: a) residential users up to 10 kW received no increase; b) between 10 and 300 kW, energy was increased by an average 41%; c) over 300 kW, the increase was 66%. This was enforced for the Feb – April 2004 quarter. Afterwards, in the remaining quarters of the year 2004, the residential category was divided into two: residential for housing and general residential, leaving the first one without any increase, while the second one did receive increases. Finally in December of the year 2004, it was modified again being in force as of January 1st of the year 2005, unifying and increasing prices for demands larger than 10 kW, while Public Lighting was separated, thus resulting in 4 differentiated wholesale prices; demands of 10 kW or more and Public Lighting.
- In the first quarter of the year 2004, problems arose with the supply of gas to generators, to such extent that central stations located at well mouth were declared to be unavailable, for which reason restrictions were applied to the exports of gas and to large consumers. In addition, provisions were issued to reassign non utilized gas quotas and to renegotiate additional quotas in the imports coming from Bolivia (until 4MMm3/día). Finally the SE signed an agreement with gas producers to ensure supply, with a price path showing periodical successive increases of gas at well mouth, which will lead it in December of 2006 to approximately 1,10 US$/million of BTU (it had been one third of this value at the beginning of 2002). 
- Likewise, in the winter of 2004, when the supply of gas for domestic use to generating central stations was discontinued due to the increase in gas consumption, central stations started using liquid fuels; however, due to the problems already existing, the SE had to decide on exceptional measures: i) the purchase of 1.055.000 tons of Fuel Oil from Venezuela; ii) hiring the import of electric energy from Brazil of up to 500 kW; both measures in order to have supply from April 04 until October 04. This fuel-oil operation was financed with contributions coming from the National State and was recovered by Generators with their sales to the MEM, while the import of electric energy was recovered by sales made to those who demanded it. (4)
- The situation described, both the provision of fuels as well as the enforcement of seasonal prices not adjusted to reality, generated the need to fund the MEM, a need which as of November 2004 reached 2.113 MS of which 56% were loans from the National State, 35% corresponding to outstanding debt from agents with an expiration date to be defined, and the rest were loans of other funds of the MEM. These loans are supposed to be recovered with the re-adaptation of the market. (4)
- On the other hand, authorities from this industry with the support of the National Executive Power presented, in March of 2004, an Energy Plan for the 2004-2008 period with an estimated total investment of over 10.700 MS (some 3560 Mu$Ss) where, insofar as this electric industry is concerned, we can highlight: a) an increase in the operating level of Yaciretá Hydro-electrical Central Station which will make it possible to add 1400 MW (1640MS$); b) completion of Atucha II Nuclear Central Station to incorporate 700 MW (1400 MS); c) enlargement of gas pipelines (5400 MS); d) transmission works to enlarge networks in 500 KV and 132 KV.(the rest). (6)
- It also included a program for the rational use of energy, with the objective of making consumption rational, both for gas and for electric energy. Insofar as electric energy is concerned, reductions in consumption receive a discount and excesses are penalized. Deductions shall be paid by commercial and industrial users.
This whole enormous regulatory effort which, in addition, produced the stripping of funds from the MEM, even though it has temporarily overcome the risk of having no supply in the winter of the year 2004, has, nevertheless, disarticulated the model and created great concerns among investors due to the lack of juridical security and respect for Contracts. This is the reason why there were no new investments such as those needed by the electric industry to sustain the growth that the recovery of the economy is having, something which has been happening since the middle of 2003. The industry needs to increase its offer in at least 1200 MW over the next two years, since the works forecast in the Energy Plan would only be ready by 2008/2009.
Faced with this situation the government has invited creditors of the MEM to contribute their outstanding debt in order to finance the construction of a central station of approximately 800 to 1600 MW, maximum, and to ensure a steady supply of gas for its functioning which would occur in 2007. In December of 2004 they closed an agreement to this end with 23 creditor generators that would be contributing their outstanding debt of about 930MS and financing to complete the rest.

ADEERA’s Position and Proposals
ADEERA’s position for the recomposition of the industry did not consider such a long and delayed transition period, neither one with so many regulatory changes which have weakened a model which had proved to be successful, but as some of the authors had already pointed out in a paper presented by ADEERA at CIRED Barcelona 2003, it came down to (1):

- Putting back in place, as fast as possible, the principles of Law number 24065 for the Regulatory Framework.
- Recomposing the earnings of the industry over real costs of companies in order to ensure the operation and maintenance of the service as well as profitability.
- Establishing temporal mechanisms, like a social tariff, which will buffer the social impact of going back to real, fair and reasonable tariffs, which should be based upon shared efforts. The State by reducing tax burden; beneficiaries/users by contributing with the possible cost based on their real economic resources; the remaining users by subsidizing the difference and companies by contributing with operative and financial resources to develop and sustain their application.
Based on this position, and given the fact that on many occasions both from media or else from political authorities it has been expressed that tariffs could not be adjusted because consumers of lower income would not be able to afford to pay them, ADEERA, has worked out a proposal for the implementation of a social tariff.

Following are the arguments which justify the proposal made by ADEERA, as well as the basic principles that sustain it and the major criteria to consider for its application.

**Social Tariff Introduction**

The regulatory framework which rules electric utilities in Argentina, and in general in developing countries, has not anticipated that a part of the population cannot respond to the mechanisms of the market since they do not have the payment capacity needed for an essential service, as is the case of electricity. We should point out that the World Bank has admitted that the transformations faced by some countries – even when they are successful and state-of-the-art – have omitted to include this aspect in their regulatory standards.

Currently, the right to electricity is taken for granted, just like it happens with water, health, education, etc. When looking for alternatives that will allow people to access electricity, a vision of the whole picture should be kept in mind regarding the problem of poverty, understanding that its access and the possibility for its use only stand as a partial contribution but in no way can they solve the conditions of social exclusion generated by poverty.

In the definition of the attributes of the Social Tariff Regime, we should bear in mind the accomplishment of objectives such as equanimity among users and the efficient use of energy resources, always within the framework imposed by financing restrictions.

Due to what has been said, tariff revisions – an essential and key procedure for the recovery of the functioning of the market and to ensure sustainability in supply, should include a special chapter about the social tariff.

**Basic Principles**

Following is a list of the basic principles sustained by the companies which are members of ADEERA:

1.-Implementation of a system that will benefit, with a discount, those residential users who, due to their socioeconomic situation, cannot afford to take charge of the total payment of costs for the rendering of electric utilities services.

In May of 2002, the urban population in Argentina showed 53% below poverty line. And, in turn, electric utilities in the surrounding urban area of Buenos Aires covers 99 % of the population. This allows us to appreciate the size of the problem.

2.- A reduction in tax burden, rates and contributions is also an adequate mechanism to reduce final costs in the rendering of the service to the homes benefited by the system, without altering the economic equation of distribution companies, and with the purpose of ensuring sustainability.

The State has this tool available in order to attenuate outlays of the neediest families. The average tax burden today is around 134 %.

3.- The deduction for these residential users will have to be compensated by an explicit subsidy, clearly identifiable in the invoice and should be neutral in the economy of companies rendering the service.

All of this in connection with the fact that the state should be in charge of ensuring the satisfaction of the basic needs of the population, among which we find electrical utilities, and in those cases in which it does this through concessions to the private sector, it should contribute with explicit subsidies within the framework of a global social policy.

4.- The definition of the universe that should receive the benefit must be made by competent authorities in each jurisdiction.

Argentina is a federal country in which each province has its own original powers. Each municipality, assisted by the areas of social action should keep an inventory of beneficiaries and follow up on their situation.

5.-The criteria to follow in order to define beneficiaries must bear in mind the situation of economic vulnerability (unemployment, lack of capacity for reconverting) and not their energy consumption.

Besides, it is essential for the benefit to have a temporal nature, connected with the conditions which originated it.

6.- Users of this regime will have the same rights and obligations established in the corresponding supply or service regulations and concession/license Agreements, for which reason non compliance with it will be enough reason to be excluded from the benefit.

This will contribute to bring about the educational process which is so necessary to take care of services and of the environment.

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