Rate Stabilization Trust Fund for Panamanian LDCs

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1. Problem definition

1.1. Symptoms of the problem

In May 2003, Mireya Moscoso, President of Panama, was under great pressure because of the imminent rises in the rates of electricity. "*To raise the electricity rates to a person earning $200 a month is a crime"*, the President said in an interview in May 9, 2003*: "We should study how this can be compensated*". The problem was compounded by the delay of a long-awaited raise in the minimum wage, scheduled for August 2002, which was yet to be approved by the President. Less than one year away from the next presidential elections, the Moscoso Administration was looking desperately for a mechanism to stop the imminent electricity rate raise scheduled for July 1st, 2003. Although the privatization of the electrical utility was done under the Administration of Ernesto Perez Balladares, whose term finished in August 1999, it was Moscoso who suffered the backfire of rate raises sprung from the privatization process. As early as November 1999, Moscoso opposed the rate raise scheduled for January 1st, 2000, declaring that: "*It is a huge irresponsibility from the ERSP to say they will raise the electricity rates.*" The ERSP is the public utility regulatory institution in Panama.

Constant popular protests against the rate raises marked the next four years. In 2000, students and workers associations marched in protest. In 2001, a protest of low-wage workers had to be dispersed with tear gas; the Commerce and Industry Chamber of Chiriquí heavily criticized the raises; and large supermarket chains protested against the ERSP. In 2003, private lawyers demanded the ERSP for allegedly "*violating the human rights of ratepayers*"; and the Panamanian Chamber of Commerce, Industry and Agriculture warned that the rate increases would be an obstacle for the economic growth of the country.

After being publicly defied by Moscoso in 2002 to find a way to stop rate increases, and having recognized in February 2003 that they had made several mistakes in the past, the ERSP announced in May 2003 that they were analyzing alternatives to prevent future rate raises, starting with a temporary solution to freeze the rate increase scheduled for July 1st, 2003.

1.2. Origin of the problem

We claim that the ERSP created this problem in 1998 when they defined the Electrical Utility Rate Regime, completely ignoring the need[1] to avoid frequent variations in rates.

Law No 6, the corner stone of the Panamanian privatization process, establishes that the ERSP will periodically define the general formulas that will be used to calculate the rates that LDCs charge regulated customers (Article 98), that these general formulas will be valid for four years (Article 100), and that during this period the LDCs can update the rates using the adjustment formulas established by the ERSP (Article 100). The ERSP established these general formulas in a document called Electrical Utility Rate Regime, published by the government in April 15, 1998, which is valid for 4 years, from July 1st, 1998 to June 30, 2002.

The Regime established that the LDCs will pass directly to the customers the costs of generation and transmission losses. By far, the main drivers behind the rate adjustments are the changes in oil prices. We claim this problem was caused by the Regime's failing to avoid frequent rate changes; we support this claim with the following facts. 1) The document states that LDCs will adjust their rates every six months. According to utility rates principles, this is too short a period. 2) The document allows the LDCs to use, even within the period between adjustments, different rates to compensate for seasonality and daily variations, allegedly in order to "*safeguard cash flow and send the correct signals to the final customer.*" 3) Surprisingly, the

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[1] In their book Principles of Public Utility Rates (2nd Edition, Chapter 10, Page 206), Bonbright, Danielsen and Kamerschen say: "*If public utilities were required to raise and lower their rates year by year, with the object of maintaining a fixed annual rate of return, the resulting necessary changes in rate schedules would prove inconvenient alike to the ratepayers and to the corporate managers.*" In Panama, from 1999 to 2003, rates were adjusted every six months, and published every January 1st and July 1st. These frequent changes, coupled with the awareness of ratepayers that many adjustments were to increase the rates, proved very inconvenient to ratepayers.

document even states that, if the generation prices change significantly, the affected LDCs can ask the ERSP for a rate adjustment in a period shorter than six months.

Neither a cross-subsidy that benefited small residential customers nor the new Electrical Utility Rate Regime for 2002-2006 soothed the harsh criticism and protests from ratepayers.

1.3. Problem statement

The problem can be defined as follows: within the frame of Law No 6, identify and implement a modification to the current state of things to prevent frequent rate adjustments, while protecting the interests of the members of the system, including LDCs and customers.

2. Description of the implemented solution

Before we describe the solution that was finally implemented, let us mention a couple of opportunities the ERSP had long time ago, but failed to seize, to solve this situation.

2.1. Missed opportunities

In our opinion, the ERSP could have solved this situation four years ago. Article 100 of Law No 6 explicitly states that the ERSP can modify the rate regime before its end date if it is evident that the interests of customers are being unfairly harmed. A modified rate regime could have been introduced as soon as 2000, extending the rate adjustment period from six months to a longer period, possibly two years. The ERSP not only decided not to execute this option, but also failed to seize the opportunity of extending the rate adjustment period when they prepared the new Electrical Utility Rate Regime for 2002-2006. Surprisingly, this new Rate Regime still defines the adjustment period as six months, thus perpetuating the issue.

2.2. Temporary solution

Trying to buy time to find a more permanent solution, in May 2003 the Government decided to freeze those rates that had increases scheduled for July 2003. We will not discuss the intricacies of this temporary solution here. However, it is important for our analysis to know that the rates of the second half of 2003 were not the result of the regular rate adjustments.

2.3. Rate Stabilization Trust Fund

In February 2004 the Panamanian government, through ERSP, ETESA (the Transco) and the Ministry of Economics and Finance (MEF), established a Rate Stabilization Trust Fund, to keep the rate of January 1st, 2003 (the "Base Rate") during the following four years.

ETESA approved this Trust Fund in a Board Meeting in December 22, 2003. ERSP accepted it through Resolutions JD-4472, JD-4473, and JD-4475, all published in December 30, 2003. The Trusteeship Contract formalizing the Trust Fund was signed by the MEF, ETESA and the Office of the Comptroller General of the Republic of Panama in February 6, 2004. It became official when published in the Official Gazette No 24,988, in February 12, 2004 (pages 9-20).

The Trust Fund has a nominal duration of four years, which amounts to eight periods of six months each. For each one of these six-month periods, the ERSP will calculate a rate, as mandated by (and based on the formulas of) the Rate Regime currently in force. At the same time, during the whole four years, the ratepayers will be charged exactly the Base Rate, instead of the rate calculated by the ERSP for the current period. For the ratepayers, only the Base Rate is visible: they will see no rate variations in four years. This effectively solves, at least temporarily, the problem of rates variability that we discussed previously. For the LDCs, this means they will receive from the ratepayers revenues based on the stable Rate Base that will not change in four years, and at the same time they will pay to the Gencos the generation costs based on the current fuel prices, which might or might not correspond with the generation expenses allowed by the stable Base Rate. Obviously, there will be differences between revenues and expenses of the LDCs related to the generation costs. The function of the Trust Fund is precisely to compensate these differences. It works as follows: In those periods where the rates calculated by the ERSP turn out to be superior to the Base Rate, the Trust Fund will be used to compensate the LDCs for the revenues they will not receive from the customers in terms of generation costs. On the other hand, in those periods where the rates calculated by the

ERSP turn out to be inferior to the Base Rate, the LDCs will redirect towards the Fund the extra revenues they perceive from the customers in terms of generation costs, in order to replenish it.

Although approved in February 2004, the Trust Fund is retroactive to January 2004. For the period January-June 2004, the rates calculated by the ERSP are higher than the Base Rate. The Government, through MEF, provided the $19.8M needed for this period's compensation: $9.0M for EDEMET, $6.2M for Elektra NE, $4.2M for EDECHI, $0.4M for other expenses.

The Trusteeship Contract contains many details about the workings of the Trust Fund, such as the following: 1) Money transfers between ETESA and the LDCs can be done either in the form of a single half-yearly payment or six equal monthly payments. 2) The money of the Trust Fund is separate from the assets of ETESA. 3) The Trust Fund will cover the compensations of the LDCs up to the amount that the Trust Fund can cover. In case the Trust Fund is insufficient to cover a period's compensation, ETESA is not obliged to cover the remaining compensation with its own assets. 4) Once a year, the operation of the Trust Fund will be audited by an independent auditing firm, and reported to both MEF and the Comptroller General's Office. 5) The Trust Fund can be revoked before its original end date, at the sole discretion of MEF. 6) The Trust Fund can be extended beyond its original end date, at the sole discretion of MEF.

3. Stakeholders

In this section, we identify the stakeholders in the implemented solution. Next to the name of each stakeholder, we mention what role, if any, it plays in the Trusteeship Contract that created the Rate Stabilization Trust Fund, and analyze how it is affected by the solution.

1) The ratepayers, although not directly involved in the Trusteeship Contract, are the reason why the Rate Stabilization Trust Fund was implemented in the first place. Residential ratepayers will benefit, including those with higher consumption (the low consumption ratepayers were also benefited more than a year ago by a cross-subsidy). Industrial ratepayers will also benefit by the predictability of the rates in the years to come. For industries, predictability is important, especially in the volatile economic environment of Panama.

2) The Local Distribution Companies, e.g. EDEMET, Elektra NE, and EDECHI, are the beneficiaries of the Trusteeship Contract. The Trust Fund's compensation mechanism makes the whole operation totally transparent to the LDCs, as long as the Fund has money. What happens if the Fund runs out of money is not discussed in the Trusteeship Contract and might be a source of problems in the future. The LDCs benefit from the stable rates, because much of the anger that the ratepayers manifested in their protests was aimed at the LDCs. This situation strained the relationship between ratepayers and LDCs. Many ratepayers protested based on the wrong presumption that the LDCs were arbitrarily raising the rates. Flat rates should ease this tension significantly, much to the relief of the LDCs.

3) ETESA is the Trustee of the Trusteeship Contract. As Panama's only transmission company, ETESA was chosen to be the Trustee of the Fund for the same reason that led to its designation as parent company for the System Operator and the Market Operator: it is fully owned by the Government and is the closest there is in the Panamanian market to a "neutral player". Since the Government is providing the money for the Trust Fund, the money has to be in hands of a neutral player, with no interest in distribution or generation. Let us mention that, when the market was first created right after the Privatization, ETESA was endowed with the responsibility of serving as wholesale buyer of the energy and power required by all the LDCs in the system. In other words, holding money of other companies is not a new thing for ETESA. Aside from being Trustee of the Fund, ETESA is neither benefited nor affected by it.

4) The Panamanian Government plays two roles in the Trusteeship Contract. The first role is through the Ministry of Economics and Finance, which is the Trustor (e.g. the provider of the initial funds) of the Trusteeship Contract. The second is through the Comptroller General's Office, which undersigned the Trusteeship Contract as supervisor. The Government benefits from the solution, because it eliminates the frequent rate variations, which irritated the ratepayers and moved them to protest against the Government in the streets. Also, the perception that this Administration "*solved the rate problems*" that resulted from the previous Administration's privatization of the electrical utility could prove useful in pleasing the

constituency, which is especially appreciated considering the general elections are in May 2004. Remember the Government had to outlay almost $20M for the first period of the Fund.

5) The ERSP, although not directly involved in the Trusteeship Contract, also benefits from the solution, because the elimination of the frequent rate adjustments could calm down the protests of ratepayers against, among others, the ERSP as Regulatory Institution.

4. Analysis of the solution

In this section we will analyze the solution that was implemented, in three different time scopes: 1) the short term, defined as the period from January 1st, 2004 to June 30, 2004; 2) the mid term, defined as the period from July 1st, 2004 to December 31st, 2008, when the original duration of the Contract expires; and 3) the long term, defined as the period starting January 1st, 2008. For each one of these analyses, we will assess the possibilities of success of this solution, identify any barriers to its implementation or continued operation, regarding the stakeholders and financial issues, and discuss any unforeseen consequences that might arise. We will consider the solution successful if it effectively solves the problem we defined before in 1.3.

4.1. Short term analysis

It is our opinion that, for the period from January to June 2004, this solution can be considered successful, because it effectively prevented the rate adjustment that was scheduled for January 1st, 2004, without affecting the revenues of the LDCs. Ratepayers saw no rate variation. Therefore, it seems reasonable to expect that during this period they will not protest against the Government, the ERSP and the LDCs because of the electricity rates, which is good news for all these stakeholders, especially for the Administration of President Moscoso, whose party will face presidential elections in less than two months from today.

The Government volunteered the $19.8M required for the operation of the Fund in the first period, and worked with the stakeholders to define the mechanics of the Trust Fund and sign the Trusteeship Contract. The implementation of the solution, for this period, was completed satisfactorily. We anticipate no negative consequences of the solution in the short term.

4.2. Mid term analysis

4.2.1 Political issues

We think that, in the mid term, some political issues can jeopardize the solution. Depending on the results of the presidential election in May 2004, the scenario in September 2004 could be very different from today. The candidate of the Arnulfista party (the party of President Moscoso) is currently ranking third in the polls, far behind the two leading candidates, who are members of other parties. Panamanian history teaches that sometimes a new President decides to modify a decision made by the previous President. It remains to be seen if the President that will be elected in May 2004, who will take Office in September 1st, 2004, will support the Rate Stabilization Trust Fund created by the current Administration.

The support of the Government is necessary for the correct operation of the Trust Fund, for two reasons. The first is that the Trust Fund will exist only for as long as the Government wants it to exist. The Government, through the MEF, can decide at any time to revoke the Trust Fund, even before its original end date, with the sole obligation of a previous notice a couple of months ahead. The Panamanian President has direct control over the MEF. This means that a new President that is decidedly against this Trust Fund has the power to revoke it at will.

The second reason the Trust Fund needs the support of the Government is that the Trust Fund currently has no money to compensate the LDCs in the second half of 2004 if the rates calculated by the ERSP for that period turn out to be higher than the Base Rate. The Trusteeship Contract allows the Government to provide more funds if they are deemed necessary, but does not make it mandatory for the Government to be the source of future funds. This means that, if the President decides so, the Government will not provide money for the future operation of the Fund. The Fund's compensation mechanism makes the whole operation totally transparent to the LDCs as long as the Fund has money. The Trusteeship Contract does not discuss what happens if the Fund runs out of money: this legal void can be a source of problems, because the LDCs will likely only accept to charge the ratepayers the Base Rate if they have assurance from the Government that they will be compensated for the difference through the Trust Fund. Without this assurance, the Trust Fund solution collapses.

In other words, it is in the hands of the new President to decide if the Rate Stabilization Trust Fund continues to exist after September 2004.

4.2.2 Technical issues

There is a technical issue concerning the way the Base Rate was determined that might jeopardize the performance of the solution in the mid term.

The rate used as the Base Rate is, as we said before, the one calculated by the ERSP for the period that goes from January 1st, 2003 to June 30, 2003. This rate was calculated in late 2002, based on the forecasts available at that time, with the sole purpose of providing the LDCs with rates that would help them recover their expected expenses and ensure their allowed profit, from January to June 2003, while adjusting any previous unbalance. It was never intended to last more than six months, much less to be used unchanged for sixty months in a row.

The reason the rates of the first half of 2003 are being used as the Rate Base of the Stabilization Trust Fund for 2004-2007 is not a technical one, but a political one. In May 2003, the Administration of President Moscoso realized that the electricity rates were again scheduled to increase significantly in July 1st, 2003, despite the recent inauguration of two large, vastly advertised hydroelectric projects, one of which had been planned for decades. The Government has been claiming for several years that the solution to the rate problem is to have more hydroelectric projects. At this point, the Government decided to prevent new protests of ratepayers by freezing the rates of the first half of 2003 for the second half of 2003, and started to work in a solution, which resulted in the Rate Stabilization Trust Fund published in February 2004. To avoid opening up a political *can of worms*, the Government decided to use the rate of the first half of 2003 as Base Rate, so that ratepayers would notice no change in their rates.

Despite its obvious political advantages, this procedure is not technically sound. Consider, for example, Equation 1. For the Trust Fund to operate as a stabilizing compensation mechanism instead of a governmental subsidy, the Base Rate (R^{BR}) for *n* periods should be carefully selected, so that, based on the consumption of each period (C_i), the total revenues received by using it are as close as possible to the total revenues that would be received by using in each period *i* the rates calculated by the ERSP for that period (R_i^{ERSP}). Here is the equation describing this:

$$R^{BR} \cdot \sum_{i=1}^{n} C_i \approx \sum_{i=1}^{n} (R_i^{ERSP} \cdot C_i)$$

Equation 1.

Unless the Base Rate is not calculated in this way, chances are that the inflows and outflows of the Trust Fund will not average zero at the end of the *n* periods, and one of two possibilities will occur: 1) the ratepayers paid more than they should, or 2) the Government subsidized the ratepayers. None of these scenarios is desirable. Since the Base Rate specified in the Trusteeship Contract was not calculated considering this principle, it is possible that after several periods the Trust Fund's cash flow will be unbalanced, jeopardizing its sustainability.

4.3. Long term analysis

Both the political and technical issues that we identified in the mid term analysis also apply to the long term. Here we only discuss the additional issues related only to the long term.

In the long run, the variations in composition and structure of the contracts between the LDCs and the Gencos should be considered. Old contracts are expiring in 2003 and 2004, and new contracts start. Compared to old contracts, new contracts use different indexing references, are more competitive and even pay some of the energy at spot prices in hours when the indexed prices are more expensive than the spot prices. Long term trends of fuel prices should also be considered. Four years seems like a long period for a unique Base Rate because of the changes in contracts and the unpredictability of fuel prices. A new Base Rate every two years seems like a compromise between the stability of the rates and the sustainability of the Trust Fund.

Besides the legal void that we identified in 4.2.1, there is another legal void that could cause troubles. The Contract states that when the Trusteeship expires, the Trustee will return the "Trustee Patrimony" to the Government. However, the term "Trustee Patrimony" is not defined in the Contract, and it is not clear whether it is equal to the sum of the contributions of the Government to the Trust Fund. We anticipate this issue can be problematic if at the end of Trusteeship the "Patrimony" is more than the sum of the contributions of the Government.