instituto acende Brasil

O OBSERVATÓRIO
DO SETOR ELÉTRICO BRASILEIRO

Instituto Acende Brasil’s comments on

Vale Columbia Center on Sustainable International Investment’s

draft report entitled

‘Leveraging Paraguay’s Hydropower for Sustainable Economic Development’

08/JUL/2013

Introduction

Instituto Acende Brasil is a think-tank devoted to the analysis and promotion of good public policy in the Brazilian electric sector. *Instituto Acende Brasil* has followed discussions on Itaipu for a number of years and has conducted an in-depth analysis of a number of issues addressed in the draft report entitled 'Leveraging Paraguay's Hydropower for Sustainable Economic Development', (hereforth referred to as 'Paraguay Report') produced by the *Vale Columbia Center on Sustainable International Investment*.

The *Vale Columbia Center on Sustainable International Investment* has requested comments on its draft report. One of the prime objectives of the Paraguay Report is to "develop a high-level strategic plan to use Paraguay's vast hydropower resource for sustainable economic development and the diversification of its economy." In our view the report's conclusions are misguided because they are based on flawed assumptions, which render the ensuing recommendations inappropriate.

Considering that the mission of the *Vale Columbia Center* is "to develop and disseminate practical approaches and solutions to maximize the impact of international investment for sustainable development" one would expect that its research team would hold dearly the importance of respecting property rights, binding contractual agreements and institutional arrangements. These are essential factors for fostering credibility for investment.

Breach of contract

The Paraguay Report, however, shows no regard to the Itaipu Treaty Agreement, calling for major changes in the agreed terms and conditions. It gratuitously sets the stage for a major international dispute, putting into question a Treaty that has been in place for 40 years.

It is bewildering that one of the main recommendations of the *Vale Columbia Center* research team is breach of contract.

In the entire analysis the Paraguay Report pays no regard to the binding agreement of the Itaipu Treaty calling for cancellation of Paraguay's portion of the remaining debt and immediate change in the Treaty's agreed pricing mechanism:

> "We have looked at the repayments made to date and have reason to believe that Paraguay has essentially repaid its debts if we use what we consider to be reasonable assumptions.
>
> *[…]*

> Market prices of other new generation should serve the Government as a guideline for post-Itaipu debt tariff negotiation. And note, we believe that such negotiation should not wait till 2023. A realistic price is needed now.
>
> Paraguay should also insist on autonomy over its share of electricity to ensure it can sell to third parties if Brazil is not prepared to pay the market price. " (p. 9-10)

Even if one were to consider the Itaipu Treaty Agreement unreasonable from today's perspective – which we believe not to be the case –, one should honor the established contractual commitments.

Irreversible investments such as those required to build the Itaipu dam, require long-term commitments.

If long-term contracts were to be breached every time one of the parties found it momentarily inconvenient, no investment would be made. This is a key foundation for promoting sustainable development, which must not be taken lightly.

Judgments based on 'rough estimates' and 'reasonable' assumptions

It is very disturbing that such disruptive recommendations are based on such a superficial analysis of the situation.

The report's reckless remarks, judgments and recommendations regarding Itaipu's debt accounting and pricing policies are made without ever examining Itaipu's annual financial statements:

> "*[…]*we were not privy to the detailed data to make a full assessment of IB's debt profile nor Paraguay's historical receipts and debt servicing" (p. 79).

Nevertheless, the *Vale Columbia Center* research team has no qualms on making inferences that the Treaty Agreement is unfair based on its 'fairly rough estimates' (p. 79) and some calculations based on what the research team believes to be 'reasonable assumptions'.

Flawed assumptions

In the third chapter of the report, the recommendation is more explicit: the *Vale Columbia Center* research team calls for recalculation of the debt and immediate change in the energy pricing policy, not only for future energy sales but also for past sales:

> "*[…]* it does seem to us that Paraguay should be relieved of any further debt burden after 2013.
>
> *[…]*
>
> We therefore recommend that Brazil and Paraguay transparently explore these arguments, and re-calculate the implied debt on a fair basis, with reasonable prices for Paraguay's past exports and reasonable assumptions on interest rates." (p. 79)

Most concerning, however, is the fact that the report's judgments and recommendations regarding Itaipu's debt accounting are made without examining Itaipu's payment and revenue flows.

All of *Vale Columbia Center* research team's recommendations regarding Itaipu debt and energy pricing are based on the following three erroneous assumptions:

> "*[…]* we believe the following:
>
> (1) interest rates charged have been too high during some of the years, especially in the 1980s, thereby pushing the debt above reasonable levels;
>
> (2) capital costs have been levied far above 'direct investments' for reasons that are not transparent. According to the official data, the capital costs of the project are far above the direct investment costs, roughly US$17.5 billion in '*imobilizado acumulado*' compared with US$12.4 billion in '*investimentos directos acumulado*'; and
>
> (3) the price for electricity that Paraguay received on its exports to Brazil were below even the modest level of US$52.7/MWh." (p. 9).

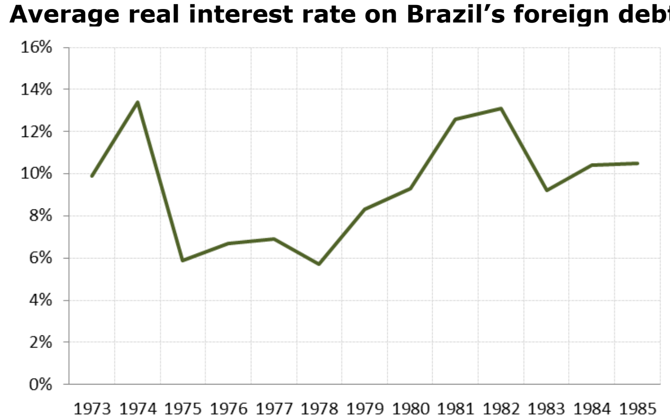
All three assumptions are flawed, as we demonstrate in the following three sections.

(1) 'Reasonable' interest rates

Regarding the first assumption, the *Vale Columbia Center's* research team presents what it considers a reasonable interest rate in chapter 3 of the report: 5% above inflation (p. 76). The assumption shows how alienated the research team is from the financial market reality faced by Latin American countries in the period.

Itaipu's debt conditions were not arbitrarily determined; they were dictated by the financial conditions available at that time. Moreover, the Latin American debt crisis not only led to higher interest rates, it led to a major withdrawal of capital from the region. Even at high interest rates, obtaining international credit during this period became very difficult.

Interest rates on loans made available to Latin American countries were much higher than the team's assumed 'reasonable' 5% rate. Professor Werner Baer, for example, computes that the average real interest rate of Brazil's foreign debt between 1973 and 1985 was 9.4%.



Source: Baer (1995) *The Brazilian Economy – Growth and Development* (4th Edition). New York: Praeger Publishers.

(2) Admit only direct investments as capital expenditures

Regarding the second assumption, the 'unexplained' difference between the '*imobilizado acumulado*' and '*investimentos diretos acumulados*' is not a mystery as insinuated in the Paraguay Report: it is due to interest incurred during construction. The fact that *Vale Columbia Center's* research team is puzzled by the difference in the two accounts demonstrates their unfamiliarity with standard accounting practices.

It is not reasonable to simply assume away these capital costs, as suggested in the Paraguay Report. Considering the project's magnitude – the world's largest hydroelectric power plant –, the cost of capital faced by Latin American countries at the time, and the long construction period, it is not surprising that interest incurred during construction added to large sum.

(3) Pricing premises of the Itaipu Treaty Agreement

Regarding the third assumption, the *Vale Columbia Center's* research team seems to be unaware of the Itaipu Treaty Agreement pricing mechanism. The Treaty Agreement determines that all energy produced by Itaipu be set on a cost basis – not market prices, not opportunity costs. Furthermore, the Treaty determines that the energy not consumed by one country must first be offered to the other country at cost.

The Treaty Agreement stipulates that each country pays for all the capital costs associated to its respective contracted capacity. In 2012 Brazil contracted 93% of Itaipu's capacity and was responsible for 93% of Itaipu's capital costs, while Paraguay paid for mere 7% of the Itaipu's capital costs, and in the past Paraguay paid even a smaller portion of the capital costs. This is an important point, because it means that the brunt of Itaipu's debt – approximately 96% – has been paid by Brazil, in spite of the fact that Paraguay owns 50% of the hydroelectric plant.

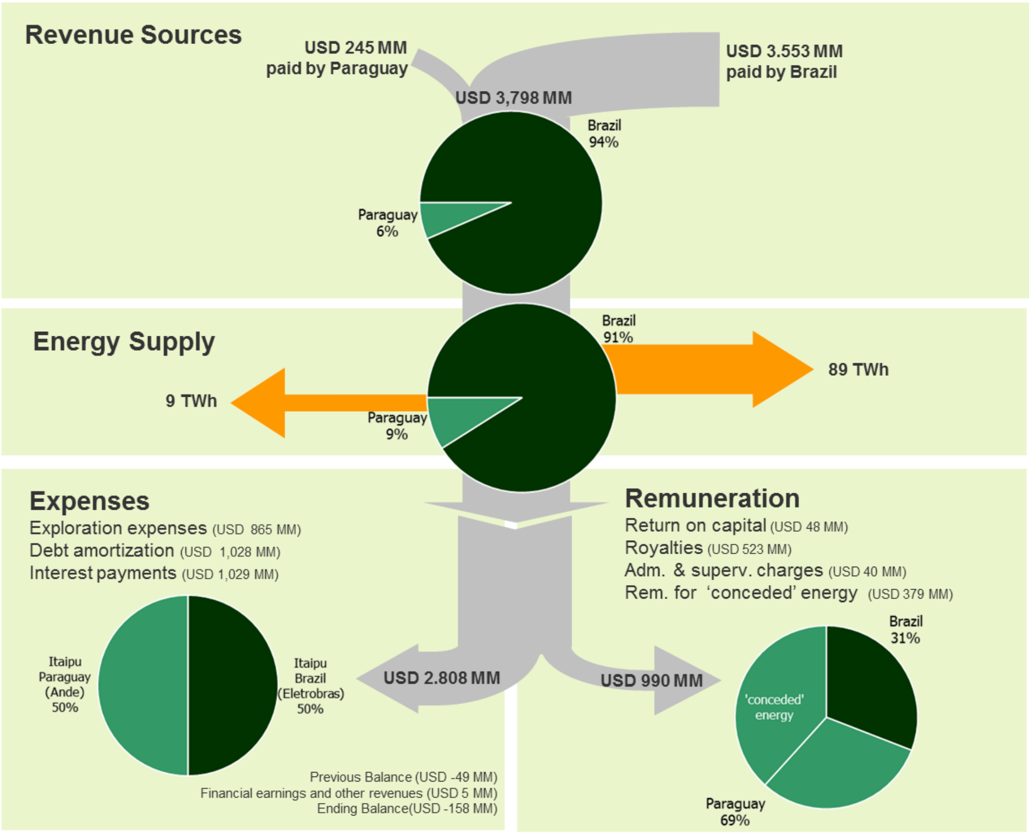
The contracted capacity entitles the country to consume the 'guaranteed energy' produced by that capacity. Most of the time, however, Itaipu produces more energy than the nominal 'guaranteed energy' attributed to the plant. This 'additional energy' (also named 'non-linked energy' or '*energia não vinculada'* in Portuguese) is sold at operational cost. Paraguay has been granted first priority in the consumption of 'additional energy'. In 2012, Paraguay consumed 17% of this cheap 'additional energy', while Brazil consumed 83%. This explains why Paraguay consumed 9% of the energy produced by Itaipu while only contracting 7% of its capacity (as can be seen in the figure below).

Beyond paying less for its share of the capital costs associated to the capacity, Paraguay receives an additional remuneration for the energy 'conceded' to Brazil, which in 2012 added-up to USD 379 million.

These factors explain why Paraguay benefits from the consumption of 9% of Itaipu's energy while shouldering only 6% of Itaipu's total costs in 2012.

The figure below demonstrates Itaipu's revenue sources, destination of its energy production, and distribution of costs and remuneration.

Itaipu's financial and energy flowchart



Source: Itaipu Financial Statements 2012. Analysis and elaboration : Instituto Acende Brasil

For further reading

Instituto Acende Brasil (2010). *Energia e Geopolítica: Compromisso versus Oportunismo*. White Paper 1, 32p. (section 4). (Available at: http://www.acendebrasil.com.br/archives/files/2010_WhitePaper_01_AcendeBrasil_Rev2.pdf)

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