

PRIVATISATION IN THE ELECTRICITY INDUSTRY IN TRINIDAD: ALICE THROUGH THE LOOKING GLASS

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ABSTRACT

The Government of Trinidad and Tobago, when faced with the request to guarantee a loan for the Trinidad and Tobago Electricity Commission, T&TEC (a wholly Government-owned public utility), to purchase new generation, was not in a position to do so. This was because of the magnitude of its foreign debt at the time and the advice of the World Bank/IMF in concert with the multi-lateral organisations' support for liberalisation and privatisation of utilities in the developing world. Hence, the Government decided to approach the foreign private sector with the hope of attracting the capital to enhance the generation and to partially divest the assets of T&TEC. This brought into being an intriguing interplay of politics, economics, corporate finance and the regulation of an engineering-based industry which is discussed in the following paper.

INTRODUCTION

The seminal theme paper by Sharma and Kochhar [1] captures one view of the partial divestment of the facilities of the Trinidad and Tobago Electricity Commission, T&TEC. However, the events that led up to the formation of the private company, Powergen, define a complex and dynamic environment in which there is the need to integrate the dimensions of politics, economics, corporate finance and planning technology of the electric supply industry. This discussion, based on a paper by the authors [2], primarily addresses the effect of these on the present outcome, i.e., an electric supply industry that now has to concern itself with policy and structural matters as a foundation for the privatisation and divestment process.

PROBLEM DEFINITION

T&TEC decided as a result of its 1990-91 generation planning exercise [3] that it required to install 150-200MW of combined cycle plant and refurbish the existing machines at an estimated cost of some TT\$1Billion. This decision was based on a projected annual peak growth rate of 2.5% and 3.4% to the year 2000. This study did not include the large point projects of the energy sector (NUCOR Iron Carbide Inc, LNG, Caribbean Ispat Ltd. expansion and the other Petrochemical plants). The study allowed for a reserve generating capacity of 90% which even T&TEC recognised as being high compared to other utilities, but in their view "some peculiarities of the T&TEC system (undefined) contribute to this high reserve margin". These peculiarities possibly refer to the extremely low availability of T&TEC's plant; a decline from 64.3% in 1986 to 52.8% in 1989. In 1994, it was nearer the 1986 figure.

In the T&TEC's study, it was recognised that certain methods could reduce the demand for a new plant. These were reduction in reliability figures, demand management, interconnection with Venezuela and improving the availability of the existing plant. Besides the last of these, T&TEC's decision to build a new plant ignored all the other options.

THE VALIDITY OF THE MODEL

The first organisation to suggest that T&TEC did not require any new plant was the Oilfield Workers Trade Union, OWTU [4]. In basing their position on the Ernst and Young Report,⁵ the Union stated that the T&TEC's generation expansion can be deferred by improving and refurbishing the availability of the existing plant,

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reducing the specifications on the generation reliability slightly, utilising demand management and improving the funding ability by using aggressive revenue collection techniques.

The request for proposals from T&TEC included, on the IFC's (International Finance Corporation) recommendation, a request to the prospective bidders to indicate whether they thought that new generation was necessary. The IFC subsequently reported that none of the bidding firms included new capacity in their bids, and concludes that judging from the forecast, demand over the next few years could be met by rehabilitating the existing generation units. In particular, the successful bidder won the bid with the condition that no new generation would be required to supply the specified growth up to 1998! Further, an independent consultant from New Foundland Power and Light on an evaluation of the T&TEC's planning document and the Ernst and Young report confirmed that T&TEC required no new plant given its forecasted load and its present capacity. In fact, reserve generation operated by T&TEC was indeed higher than that which his company utilised in a more demanding climate than Trinidad and Tobago (T&T).

Sharma and Kochhar refer to this divergence in views in generation planning in the following:

"Powergen claims that it can supply the required growth... from within the existing 1178MW installed in Trinidad. This they claim they can do through a mixture of refurbishment and repairs to the existing installed plant."

It is clear that T&TEC's generation planning had gone amiss. T&TEC had failed in optimising the use of capital; failed in planning capital allocation.

THE GOVERNMENT'S SOLUTION

T&TEC as usual went out to its suppliers and without a Government guarantee could not obtain the necessary loans i.e., the cost of capital used by T&TEC in its generation planning studies, 11.5%, was far from what the international lenders thought the project was worth. In accordance with the World Bank/IMF approaches towards privatisation and with their encouragement of developing countries to create opportunities for North

American capital, the Government of T&T was advised not to guarantee loans for the state enterprises but to invite the help of the foreign investor. These views are supported by the now familiar trade and financial liberalisation in this country. Further, a local group that was initially debarred from placing a bid, on protest, obtained special permission from the Cabinet to participate.

The Government's public interpretation of the problem was simply how to provide the additional generation requested by T&TEC without putting out capital or incurring further foreign debt. In the prevailing economic environment, this view was justifiable. However, the inclusion in the RFP of the IFC's recommendation as to whether additional generation was required demonstrated that the Government was still unsure of the main reason it gave publicly for its intention to divest part of T&TEC. It appears in retrospect that the Government intended to divest the generation whether T&TEC required new generation or not. The need for generation and the associated loan was a *non sequitur* in the impending divestment.

THE STATE OF THE ELECTRICITY SUPPLY INDUSTRY

The partial sale of T&TEC demanded some changes to the legislation that governed the power supply industry (the T&TEC Act). Hence, the Government went to the Parliament with a Bill that included privatisation of the industry:

"T&TEC may with the approval of the Minister, by order declare a body corporate or firm to be an approved generator of electricity... the right of an approved generator of electricity is subject to such terms and conditions as the Minister may determine".

Though the changes in the Act in no way intended to create fair competition, it is inconceivable that T&TEC as a major shareholder in the generation company Powergen, should also be the regulator that approves additional companies that will in effect be its competitors. If the Government foresaw competition developing among the generators (as the Bill suggests),

then this was an opportunity to develop a policy for the industry and create a regulatory environment that was transparent and ensure a 'level playing field' for all players and that the consumers were afforded protection. Instead the Government has all but disbanded the PUC (most of its operational staff had been retrenched).

The Bill went on to say:

"T&TEC may, with the approval of the Minister by order, transfer or vest in the approved generator (in which it has shareholding) any of its property, assets, rights. Where the Commission vests the right to supply energy in any part of T&T to the public.... the period during which the right may be exercised.. shall be subject to such terms and conditions in the order".

This was another distinct departure of the Government from its previous public position that Powergen will simply be a supplier of bulk power to T&TEC. With the large customers' demand in the energy sector by the new LNG and ammonia plants, Powergen was now well placed to become a generator, with its own transmission facilities and financial arrangements, able to supply directly these industries. There is nothing inherently wrong with this model or any other for that matter. But the Government, unlike the Jamaican or its UK counterparts in the provisioning for the Telecommunications sectors, did not publish a green paper for public comment on the proposed policy for the industry, nor did it develop a proper regulatory regime, nor did it really debate the matter properly in Parliament (the Government refused to release the details of the agreement with the successful bidder in Parliament claiming that it was secret negotiations between two companies). Instead it slipped in modifications to the Act which, with the agreements made with the new company, have reshaped the industry with implications still to surface. It is worth noting that the independent Senators in the Upper House were vehemently opposed to the Government's methodology used in the divestment of T&TEC.

RISK ALLEVIATION

All foreign investors in a developing country are concerned about risk to their investment. The foreign

shareholders of Powergen are no different. The risk alleviation on return on investment (ROI) was done in two ways. Contrary to Sharma and Kochhar, the view of the authors is that the reason for the supply of natural gas as a pass through was not to prevent any of the existing producers of natural gas in T&T having unfair advantage to their pricing structure if they were to tender for the generator assets, but was a risk alleviation strategy. The NGC's (National Gas Company) monopsony is that it is the only body that can sell gas to users in this country and as such is a buffer that can prevent transfer pricing between producer and user. The gas pass through effectively isolated Powergen from the vagaries of the local high risk economy. It was not to be affected by the eventual price of the product of the industry nor its local inputs. Generation is very capital intensive. Further, the price it obtained for its services to T&TEC is escalated according to the retail index in the USA (without a performance incentive X factor typical of the price cap regulation now in vogue). The other risk alleviation factor was that the Government agreed to guarantee all debts that T&TEC may owe to Powergen. It is difficult to understand why the Government was loathe to guarantee loans to T&TEC but does in effect the same thing by guaranteeing the revenue stream of Powergen. It is worth noting that the Government in its RFP (Requests for Proposal) for a management contract for the operation of WASA indicated that any funding necessary must be non recourse (to the Government) only to turn around and guarantee the funds by a neat use of government bonds as a sinking-fund for the repayment of the capital and a guarantee on the payment of the interest by WASA.

DE-INTEGRATION

An argument generally put forward for the separation of the transmission and distribution facilities from the generation was that the networks are natural monopolies while the generation is not. The theory that supports the latter depends on the criterion that once a system develops to a point that incremental sources of generation are small, relative to the total generation on the system, a competitive market based on competition can be created if there is non-discriminatory access to the transmission networks by all. T&T is clearly not at this stage. Further, the joint

venture, Powergen does not pretend to provide a de-integrated services in an environment of competition. In fact, two separate monopolies exist; one in transmission and distribution - T&TEC, and one in generation - Powergen. Thus de-integration as a lower cost solution 'per se' to provide competition based pricing of electricity in T&T is not a property of the Government's solution, though its public position was that it would provide lower prices. T&TEC continues to lose money and is approaching what is left of the Public Utilities Commission (PUC) for increased tariffs. Powergen, on the other hand, has realised its planned profits for 1995 given the alleviation of business risks.

SECURITY OF THE INDUSTRY

The security of the electricity industry is the single most important quality of the system. It depends on:

"proper control of the electric system to ensure that energy can be delivered where it is utilised, sufficient generation to meet demand now and in the future, protection against interruptions in fuel supply". [6]

This demands a set of statutory and contractual obligations on delivery of present and future demands, on equipment in the event of a disruption and fuel security. The Act and the contractual agreement between T&TEC and Powergen ensure that Powergen is paid (take or pay etc [1]) but nothing is said about its responsibility to the security of the industry. The present power contract between the two companies is up to a maximum of 819MW in 1998 and stays fixed thereafter [1]. Then, whose responsibility is it for the generation planning given the T&TEC/Powergen conflict in approaches to date? Even if this responsibility stays with T&TEC since it has the customers, it would have been given to the less equipped to deliver since it has no generation.

COST OF CAPITAL

The electricity supply industry in a country is usually the most capital-intensive sector of the economy. Further, the economic cost of electricity is determined substantially by the cost of capital i.e., the cost of debt and/or equity. T&T as a developing country with a

stuttering economy is considered a high risk client for capital. The capital that is attracted to the country (to earn its income in T&T) will expect high interests or ROR. This will also be accompanied by the requirement for government guarantees, today in some very innovative forms. T&T's electricity industry serves two main customer types, export-oriented, energy-based companies and the rest. The earnings of the export oriented-based companies will be subjected to the discipline of the world markets and they earn foreign exchange (hard currency). These companies operate under lower risk (from the international financier's viewpoint) than the rest of the T&T economy and can benefit from lower cost of capital. Financial liberalisation also helps ensure the decoupling of the two parts of the economy. Hence, were these companies to provide their own generating plants, they can benefit from lower costs of capital and as a result lower real electricity costs. One method then of isolating the demand of these lower risk producers from the general economy is to allow IPPS (Independent Private Power Suppliers) to supply these companies directly i.e., de-integration to IPPS can isolate investment costs of these export oriented generation projects. Further, T&TEC will not have to find high cost capital or government guarantees and is shielded from foreign exchange risks that are correctly the responsibility of the exporting plants. However, T&TEC will benefit by being physically connected to these sources of generation; reduced demand for reserve plant and being able to purchase lower cost excess energy.

Thus, the authors agree with Sharma and Kochhar on the need for IPPS, though our reasons and resulting model are more precise than their broad spectrum view that:

"Additional plants would be added in a competitive manner making way for the establishment of IPPS. Any new IPPS added will have to sell all its energy to T&TEC".

However, this view is at variance with the Act which states that T&TEC can vest its right to sell power to the public in any part of the country to an approved IPPS in which it has shareholding. The important idea is to isolate the risk to specific IPPS so reducing the

cost and risk of capital to T&TEC. To restrict the industry to the Commission's monopoly in purchasing electricity from all IPPS will prevent the isolation of capital costs.

THE LOCAL MARKET

T&TEC, as utilities the world over, was politically controlled. This allowed the engineers to concentrate on technological excellence i.e., they built plants, and the governments to subsidise prices to the consumer to maintain political influence. With cheap natural gas, the Government of T&T also invited foreign investment to exploit both the subsidised electricity and gas. The collapse of the oil boom brought to a halt the subsidy to T&TEC and without adequate price and asset productivity increases, T&TEC failed to ensure financial efficiency and to commercialise the organisation. It was effectively insolvent.

T&T is still inviting foreign investment to exploit its cheap natural gas. However, as already discussed, the supply of electricity to these plants can be financially isolated from the local sector. In this sector, the first task is to get the price of electricity right, to cut all subsidies, to engender a cultural change in its customers towards conservation and towards a balanced use of energy alternatives. In T&T today, this suggests a substantial increase in, and the restructuring of, tariffs. Marketing or price strategies must not encourage consumers to use more and more. Electricity is not that type of good or service. Instead, given the availability of alternatives the policy should be to optimally balance the use of electricity with other sources, restrict waste, thus limiting the use of high cost capital. The price of electricity has to be set such that it reflects the cost of production and in particular the cost of capital. However, the pricing in the local market will have to reflect a tariff structure that takes into account the idea of public service obligations (as in the Telecommunications industry).

This approach is not new and forms the basis of the well known 'Least Cost Utility Planning' in which the planning methodology integrates both the supply and demand aspects of the problem.

CONCLUSION

The real problem that faced the Government of T&T and hence the people of the country in the re-

configuring of the electricity industry is multi-dimensional and includes:

- New generation and the continued security of the system
- Link with Venezuela
- Reduction in reliability
- Cost of capital
- Increased capacity availability
- Conservation
- Demand control
- Tariff structures and regulation of the whole industry
- Gas pricing policy (still secret at the moment)
- Environmental factors
- Capital cost separation (local and export-oriented) and the establishment of IPPS
- Commercialisation of T&TEC, its present state of effective insolvency and the lack of faith of the public that it can solve its problems.

Many of these are yet to be addressed, in particular the last. In fact, what is still required is a clear policy framework for the development of the industry. The problem then was not simply the inability of the Government to guarantee a loan that was not really required. The resulting modifications of the T&TEC Act bear little relation to the requirements of the industry. It is as though the industry was being viewed through a looking glass. They have set the stage for an industry whose structure is clouded in the mists of time and subject to contentious interpretations as the industry expands. This itself is a constraint on economic development.

This paper sought to use this opportunity to enhance the initial published documentation of the divestment¹. It analysed an important occurrence in the region, the privatisation and regulation of an industry characterised by an intriguing mix of unbundling natural monopolies and the use of competition in this unique environment of export-oriented plants to allocate capital to lower risk islands of industries in an otherwise high risk environment.

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