

Embedding Financial Viability and Sustainability

September

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The purpose of this paper is to review the RIC's approach utilized for the first price control period to assessing financeability and to determine whether it remains valid and how the RIC will respond to potential financeability issues in the future.

**Consultative
Document**

1. BACKGROUND

One of the primary duties of the Regulated Industries Commission (RIC) is to ensure that the service providers under its purview are financially viable. One of the ways the RIC performs its duties is to review and set price limits every five years. In conducting the first price determination of the electricity transmission and distribution sector which covered the period 2006 to 2011, the RIC ensured that T&TEC was able to finance its functions by:

- enabling T&TEC to earn a return on the Regulatory Asset Base (RAB) at least equal to the cost of capital; and
- enabling T&TEC to raise finance for its capital expenditure on reasonable terms.

To cross check how its pricing decisions were likely to affect T&TEC's "financeability" over the regulatory period, the RIC applied a financeability test by computing five financial ratios for each year of the price control period and comparing the projected financial ratios against the "best practice" values for these ratios.

1.2 Purpose of the Document

The purpose of this paper is to review the RIC's approach utilized for the first price control period to assessing financeability and to determine whether it remains valid and how the RIC will respond to potential financeability issues in the future.

1.3 Responding to this Document

All persons wishing to comment on this document are invited to submit their comments.

Responses should be sent by post, fax or e-mail to:

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All responses will normally be published on the RIC's website unless there are good reasons why they must remain confidential. Any requests for confidentiality must be indicated. A copy of this document is available from the RIC's website at **www.ric.org.tt**.

2. RIC's LEGISLATIVE OBLIGATIONS

The RIC is required under its Act to set price controls every five years. The RIC Act also sets out the factors/objectives that must be taken into account in making its price determinations. The Act places obligation on the RIC to ensure that service providers are capable of financing their operations as specified by Section 6(1) of the Act, which states that:

“the service provided by a service provider operating under prudent and efficient management will be on terms that will allow the service provider to earn sufficient return to finance the necessary investment”.

The RIC Act also specifies a range of matters that the RIC is required to consider in making its pricing decisions, including:

- the maximum efficiency in the use and allocation of resources to ensure as far as reasonably practicable, that services are reliable and provided at the lowest possible cost;
- the replacement capital cost expended, least-cost operating expenses which may be incurred, annual depreciation, return on the rate base;
- the funding and ability of the service providers to perform its functions;
- the interest of shareholders of the service provider;

- the ability of consumers to pay rates; and
- the standards of service being offered by the service provider.

It is quite evident that the RIC is directly and, in some cases, indirectly obliged to consider whether its pricing decisions are likely to adversely affect the financeability of a prudent, efficient service provider. However, in considering the above matters, the RIC must balance the diverse needs and interests of different stakeholders.

Given the RIC's obligations under its Act, financeability refers to the duty placed on the RIC to ensure that a service provider under its purview is able to finance its functions. This duty has two components:

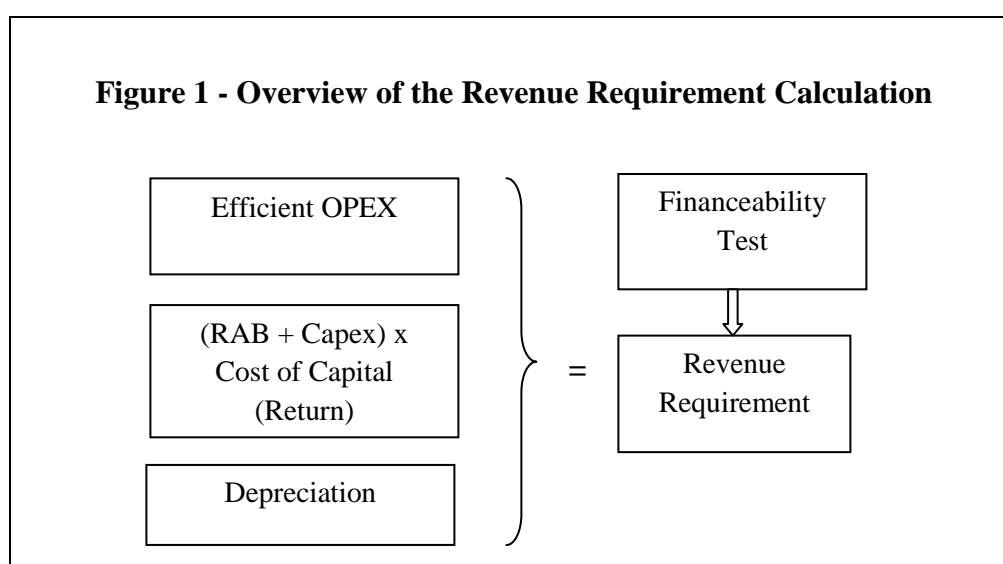
- enabling the service provider to earn a return on its regulatory asset base that is at least equal to its cost of capital; and
- enabling the service provider to raise finance on reasonable terms.

In fact, long-term consumer interests will not be advanced if investment in the continued provision of services is not commercially viable or if the service provider fails to raise finance on reasonable terms.

3. RIC's APPROACH TO ENSURING FINANCIAL VIABILITY

The RIC's approach to ensuring financial viability for the first regulatory control period was to estimate the revenue that will be required by T&TEC to meet the full and efficient costs over the regulatory control period. The RIC utilized the building-block method (**Figure 1**) to calculate these costs, which included all efficient operating and maintenance (Opex) costs, plus allowances for returns on and of T&TEC's regulatory asset base. In calculating the allowance for return on T&TEC's assets, the RIC determined the appropriate rate of return and the regulatory asset base (RAB). The RIC guaranteed a return to finance the functions at the cost of debt rather than at the weighted average cost of capital (WACC). The generation and fuel costs, which comprise almost 70% of total Opex, were treated as pass-through, with minor adjustments for heat rate.

In estimating the yearly revenue requirements, the RIC also allowed T&TEC to pass through its **actual** debt costs (embedded debt), as T&TEC carried high-cost embedded debt of 11.87%, compared with the allowed cost of capital of 8% for the first rate determination. Compensation for inflation was allowed through indexation of the RAB. These measures would have reduced the likelihood of mismatch between T&TEC's revenues and costs in the short to medium term, which can give rise to financeability issues. A key consideration is to ensure that the revenues, profits and cash flow are such that T&TEC can secure financing in a timely manner and at a reasonable cost.



Additionally, the RIC included as an additional step in the review an explicit assessment of the financeability of its proposed conclusion by computing five financial ratios based on notional gearing ratio. The ratios that were used to assess financeability were as follows:

- (Funds from Operations (FFO) + Net Interest) / Net Interest
- Net Debt / FFO
- FFO / Net Debt
- FFO – Dividends / Net Capex
- Net Debt / RAB

These cash-based financial ratios are central to the assessment of financeability test and are used for assessing the strength of cash flows by both regulators and rating agencies. These financial ratios for T&TEC were compared with “best practice” targets for privatized utilities whose shares are traded on the stock markets¹. The RIC stated that complying with all the ratios would not only be challenging (as T&TEC’s tariffs were last adjusted about 16 years ago) but may not be totally desirable for a State-owned entity which is funded by customer charges and debt. The RIC, therefore, indicated that the trend of such financial indicators, considered as a package, was more important than the absolute figures for any particular indicator in any particular year. Consequently, no allowances or upliftment in revenue was made to ensure that T&TEC’s financial ratios achieved “best practice” targets. In fact, the RIC did not make any explicit financeability adjustments to its building-block method for the first regulatory control period.

4. ISSUES AND ASSESSMENT

4.1 Building-block Approach and Financeability

The building-block approach utilized by the RIC allows the service provider to recover all its efficient costs over the life of its assets. As long as the cost of capital and other variables/factors are estimated correctly, the building-block method should ensure **long-term** financial viability of the service provider. In fact, some regulators maintain that a financeability problem should not arise under this method and, therefore, there is no need to even cross-check by the use of financial ratios. In purely economic terms, all that ought to matter is the net present value of future revenues less future costs. However, financeability issues can arise during the short to medium-term due mainly to:

- a mismatch between revenues and costs under the building-block approach; and
- poor financial management and/or excessive costs.

¹ One indicator that these utilities use is the credit rating that credit rating agencies such as Moody’s and Standard & Poor’s assign them. If their rating falls below investment grade, they may have difficulty raising finance at a cost they can afford, thereby threatening their financial viability.

A mismatch between costs and revenues may arise for a number of reasons even if the service provider is efficient. A mismatch can occur due to:

- **A mismatch between the asset lives and the term of financing.** The building-block method recovers the costs over the whole of the asset lives whereas the service provider may be only able to access ten to fifteen year financing or less. Therefore, financing costs may have to be paid over a much shorter period.
- **Benchmarking or comparative efficiency assessments.** The RIC makes use of benchmarking or comparative efficiency assessments of certain aspects of costs and getting these targets wrong can have adverse effects on service provider's ability to finance.
- **A mismatch between real price paths and nominal financing.** Through the building-block approach, regulators provide sufficient revenues for service providers to operate based on real terms, with a real cost of capital. However, the service provider operates via financing from banks at nominal terms. Therefore, at least in the early years, the actual cost of financing is going to be greater than the allowance under the building-block approach. In the first determination for T&TEC, the RIC provided financing in nominal terms to lessen the effect of this mismatch.
- **Compensation for Inflation.** The key issue here is the way in which regulators choose to inflate the RAB in line with the retail price index, so that compensation for the effects of inflation comes mainly² through depreciation of the RAB over time. The regulators spread compensation for inflation over successive control periods, as depreciation is generally profiled over periods of 30 years or more. In contrast, debt is structured so that the annual interest is set in nominal terms, compensating lenders for effects of inflation on an on-going annual basis and the service providers pay back the original (inflated) principal after a fixed period of time.
- **The lumpy nature and/or a significant new investment.** The above mismatches become more significant when there is a large amount of new investments to be undertaken. These mismatches would not be that important if there were a steady stream of capital expenditure and uniform age distribution of assets.

² Some compensation is also provided as the (real) cost of capital is earned on the index-linked RAB, but these amounts are small in years immediately after an investment is added to the RAB.

With respect to poor financial management or excessive costs, the RIC believes that the regulator should never seek to protect service providers from poor financial management. To do so would blunt the incentives for efficient improvements. For example, one of the major factors affecting the financial stability of T&TEC during the first control period was T&TEC's failure to implement the RIC's approved Capex. **Funds granted for these projects (through rates) were diverted to fund either ring-fenced projects (that is, those not approved by the RIC for varying reasons) or to fund operating costs which were deemed to be inefficient.** T&TEC undertook projects of this nature to the value of \$738.6 Mn. while only receiving from Government \$33.7 Mn. In addition, the funds that were to be used to service the **National Gas Company** (NGC) debt were re-directed to these projects. T&TEC's financeability **would be/was** affected in a number of ways, including:

- T&TEC's net cashflow was lower, as internally generated funds were utilized for ring-fenced projects.
- T&TEC would need to access external financing to meet not only day to day activities **but also its debt to NGC – an additional burden on the rate payer and tax payer.**
- T&TEC staff and associated costs (which were allowed in the determination) were used for ring-fenced projects. When actual allowed projects are completed, overtime was incurred that would not have been provided for in the determination.
- Due to T&TEC personnel being utilized to complete ring-fenced projects as a priority, normal maintenance works were delayed and thus reactive maintenance was done rather than preventative. **This creates** additional expenses.

Additionally, the monitoring of performance was also affected as ring-fenced projects were not separately costed and reported.

4.2 Notional or Actual Gearing Ratio

For the first regulatory period, the RIC used a notional gearing ratio of 70% in the building-block model. This implies that the efficient capital structure for T&TEC consisted of 70% debt and 30% equity. This gearing ratio feeds into the building-block model and the financeability

assessment, as the cost of capital used in calculating the allowances for a return on capital is based on a constant 70% gearing level and the annual interest payments within the building-block method are based on the 70% gearing level.

The research undertaken by the RIC suggests that some regulators used notional gearing while others use actual gearing ratio of the service provider. In fact, many regulators use notional gearing ratio in the building-block model and actual gearing ratio in the financial ratio analysis, as this may reflect commercial practice more closely. It is generally agreed that regulators can use at least three different types of gearing ratios; long-term notional gearing ratio; short-term notional gearing ratio or actual gearing ratio. There are both advantages and disadvantages of using a notional or the actual gearing level. In theory, it may be preferable to use a long-term notional gearing ratio, as this ensures internal consistency in the building-block model.

As indicated above, the RIC's obligation is to ensure that an **efficient service provider** is capable of financing its activities. In the assessment of financeability, the RIC assumed a notional capital structure for the first regulatory control period, as it believed that it was not the function of the RIC to specify the capital structure of the service provider. To the extent the actual differs from the notional, any costs should be borne by the shareholder and not the final customer.

The RIC invites comments on whether it should use:

- **the notional or actual gearing ratio within the building-block method.**
- **the notional or actual gearing ratio in assessing financeability.**

4.3 Cost of Debt and Capital

Like any other business T&TEC is expected to compete for capital to finance its capital projects (Capex). The amount of revenue to be collected by the service provider from its customers to cover this cost is set by applying a cost of capital to the service provider's RAB. This, in fact, is a critical and significant element of the revenue control. There is considerable academic discussion surrounding the most appropriate approach to setting the cost of capital.

In the first Determination, the RIC discussed the different approaches to calculating the cost of capital, including whether to use the true WACC (i.e. as a Government-owned entity) or to use a private sector surrogate. The standard practice amongst many regulators is to adopt benchmark assumptions about financing arrangements, rather than to use the entity's actual position. This allows regulated businesses to benefit from innovation and more efficient financing decisions, while protecting customers against any inefficient financing decisions. It also improves the comparability across the utilities/sectors. Similarly, the practice is to adopt a benchmark for the cost of debt rather than the entity's actual costs. The benchmark cost of debt, it is argued, should reflect the latest market evidence available on the borrowing costs of an efficiently financed business. However, this raises the question of embedded debt cost which may exceed prevailing market rates. Maintaining high cost debt that is actually higher than the prevailing market rates would result in customers paying prices over time that are inefficiently high. This would be inconsistent with the RIC Act which requires that prices reflect efficient costs. It may also reduce the incentives for an entity to efficiently manage its debt portfolio.

Since T&TEC is not required to earn a return to compensate the investor for undertaking risk by investing in the utility, the cost of capital was in effect limited to the cost of debt. This is the return that was allowed during the first review period and was based on a forward looking approach. As a result of not providing a return on equity, it could be assumed that 100% debt financing was in effect. If however, the RIC were to have utilized the WACC approach to find the cost of capital coupled with using the notional gearing structure of 70% debt and 30% equity (with a zero return for equity finance), the return on debt would be 11.44%.

The RIC considered that a combination of a forward-looking cost of capital, and an allowance for embedded fixed rate debt, provided a more reasonable approach than the traditional WACC approach. Therefore, in order to take account of the higher cost of embedded debt faced by T&TEC, the RIC had included an allowance to reflect T&TEC's embedded fixed rated debt for the first control period.

The RIC seeks the view of the public as to whether a forward looking approach be adopted to the cost of debt, whether embedded cost be considered and whether a standard gearing structure should be adopted.

4.4 Anticipatory Investment

The issue of anticipatory investment is of concern to the RIC in the context of a regulated asset base, as it can impact on T&TEC's financeability. The Government is planning to set targets for electricity generation from renewable energy sources. To meet these targets, a significant amount of investment in renewable generation will be required and much of this may occur at locations currently not equipped for the transmission of such energy. Consequently, investment in the transmission and distribution (T&D) networks will be required to facilitate achievement of renewable generation. Given the lead times involved and not to create any obstacle to generation investment, the funding arrangements for investment in T&D, in some instances, may have to precede the completion of renewable generation. Therefore, the key issue is how investments made on an anticipatory basis should be regulated, as there is clearly a risk that the anticipatory investment may not be fully utilized or may not be of the same specification had there been perfect knowledge at the time of investment.

Essentially, three sets of issues/concerns arise:

- Stranding of assets – that is, if the investment proves to have been of greater capacity than required, should the full cost of the investment be recovered and/or eligible to earn a return?

- Speed of recovery – that is, how quickly the cost of the investment should be recovered from consumers through charges vis-à-vis depreciation, as it is likely that transmission assets will have longer physical lives than renewable generation assets.
- Return on capital – that is, should the anticipatory investment earn the same return as other assets or should there be some recognition of the uncertainty of the investment and therefore a separate return be set for anticipatory investment?

The RIC invites comments on the stranding of assets, the speed of recovery and the return on capital for anticipatory investment.

4.5 Assessing Financeability

Broadly, the RIC assesses the financeability of a service provider by undertaking the following steps:

- forecasting service provider's cash flows over the determination period (based on forecast revenue using the building-block method);
- computing financial statements from the forecast cash flows; and
- computing a set of financial ratios from the financial statements.

Most regulators assess the financeability of a regulated entity by applying the above steps. However, many regulators, especially in the U.K. and Australia, also calculate a service provider's likely credit rating based on the financial ratios. Also, most regulators use largely similar financial ratios, as they focus on service provider's ability to pay interest and its level of gearing. As indicated, some regulators use the actual gearing ratio in the financial ratio analysis, while others use the notional gearing ratio. Based on the notional gearing ratio, the RIC calculated five financial ratios as part of the financeability test:

Ratio	Formula	Target
• Funds Flow Interest Cover (times)	$(\text{FFO} + \text{Net Interest}) / \text{Net Interest}$	Between 2 to 3
• Debt Payback Period (years)	$\text{Net Debt} / \text{FFO}$	Between 5 to 7
• Funds Flow/Net Debt (times)	$\text{FFO} / \text{Net Debt}$	Between 0.15 to 0.2
• Internal Financing Ratio (%)	$(\text{FFO} - \text{Dividends}) / \text{Net Capex}$	Minimum 40
• Debt as a proportion of the RAB (%)	$\text{Net Debt} / \text{RAB}$	Below 65

Some regulators use only a small number of financial ratios to assess the financeability concerns.

These are:

Ratio	Range
• FFO / Interest	Not less than 3 times
• FFO / RAB	About 9%
• Debt / RAB	Not higher than 65%

The RIC invites comments on the type and number of ratios to be used and/or any other additional factors that should be considered apart from financial ratios.

4.6 Restoring Financeability

For the first regulatory control period, the RIC did not make any explicit adjustments to its pricing models to ensure that T&TEC's financial ratios achieved best practice targets. In fact, the RIC indicated that the trend of financial ratios, considered as a package, were more important than the absolute figures for any particular ratio in any particular year. In general, the regulators have adopted two broad approaches whenever financeability tests indicated potential short to medium-term financial viability concerns. One approach taken by regulators is that it is better for the owners/shareholders of the asset to address and manage such potential concerns. This can be done, among other things, by:

- Not allowing for portions of the forecast Capex;

- Increasing shareholders' funding through larger equity injections (Ofgem in 2007 included an allowance for equity injection in its determination, as well as an explicit equity issuance cost);
- Refinancing and/or better managing debt;
- Making efficiency savings or productivity increases; and
- Reducing dividend payments, if applicable.

The second approach adopted is to explicitly adjust the building-block model inputs to improve/address the service provider's financeability concerns. Obviously, this will have impact on the proposed tariffs. In principle, the RIC believes that the responsibility for managing short to medium-term financeability issues should generally rest with the service provider/shareholder, who is best placed to manage the risk rather than customers. Additionally, the RIC does not believe that it should mandate specific funding strategies to the service provider to address short to medium term financeability issues.

As indicated above, there is precedent of regulatory intervention by adjusting building-block inputs (and thus tariffs) to address financeability concerns, especially in privatized utilities. As indicated above, the root cause of the financeability problems is the way in which lenders are compensated for the effects of inflation. Therefore, two main options for restoring financeability will be by using the nominal cost of capital when setting prices or by accelerating the payment of depreciation. However, a number of instruments have been used by regulators, including:

- **Accelerated depreciation** – This boosts service provider's cashflows in the short-term.
- **Using the Nominal Cost of Capital** – This will compensate service providers upfront for the effects of inflation in exactly the same way that lenders are compensated by service providers.
- **Upward Adjustment of the Cost of Capital** – Even a small increase in the allowed cost of capital/WACC can lead to a significant improvement in the financial viability of the service provider.

- **Dual/Split Cost of Capital** – That is, applying one cost of capital on existing assets and a different cost of capital for new assets. One option is to apply a higher cost of capital on new investment or applying the cost of capital/WACC to all new capital and applying the historical debt cost to historic debt.
- **Explicit Allowance/Upliftment of Revenue** – Here an explicit allowance is made to address financeability concerns.

Generally, two approaches are utilized if any adjustments have to be made to the building-block inputs; NPV-positive adjustments and NPV-neutral adjustment. Under the NPV-positive approach consumers pay more for the service than they would otherwise have done. The approach also raises intergenerational equity issues. An NPV-neutral adjustment is superior to an NPV-positive adjustment in terms of economic efficiency, but consumers pay more in the short-term but face lower prices in the future.

In general, the research shows that regulators are reluctant to make any adjustments to the building-block model due to their impacts on pricing efficiency and intergenerational equity, etc. Additionally, the regulators believe that the service provider is best placed to address any short to medium-term financeability concerns³.

The RIC invites comments on whether adjustments to the building-block model be made to address financeability concerns or whether the responsibility should rest with the service provider/shareholder.

³ Ofgem (2010) in its recent review of energy network regulation has stated that:

- as long as the allowed rate of return, depreciation profile and capitalization are set appropriately, the service providers should be financeable.
- Ofgem will continue to consider the financial ratios.
- Ofgem will not advance cash flow if there is apparent short-term deterioration in the financial ratios but expects service providers to resolve the situation.

5. SUMMARY CONCLUSIONS

In making its pricing decisions, the RIC must have regard to a number of factors including efficiency and economy, the financial viability of the service provider, the ability of consumers to pay rates and intergenerational equity. Therefore, the financeability issues cannot be considered in isolation of other requirements of the Act. At least, the RIC must identify the circumstances when financial viability concerns outweigh other requirements of the RIC Act. The building-block approach ensures financial viability of the service provider over the long-term and any financeability issues in the short to medium term must necessarily, in the first instance, be addressed by the service provider/shareholder. The RIC must focus on getting the overall regulatory framework right. Only in cases where the financeability concerns are serious and/or longer lasting that the RIC may consider adjustments to the building-block model as a last resort. The RIC still maintains that financeability checks have a role to play in ensuring that the overall return is set at an appropriate level and that the trend of financial ratios, considered as a package, is more important than the absolute figures for any particular indicator in any particular year.

The RIC invites comments on the issues discussed in this document.