

Approach to Setting Operating Expenditure for Price Reviews

January
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This document examines the RIC's approach to setting operating expenditure for the Trinidad & Tobago Electricity Commission for the second regulatory control period.

Consultative
Document

Table of Contents

1.0 BACKGROUND 2

 1.1 Purpose of the Document 2

 1.2 Structure of document 2

 1.3 Responding to this Document 3

2.0 INTRODUCTION..... 4

3.0 RIC’S APPROACH TO ASSESSING OPEX 5

 3.1 Baseline Opex 7

 3.2 Assessed Scope for Efficiencies 7

 3.3 Specification of Generalized Efficiency Factor 8

 3.4 Efficiency Carryover Mechanism 8

4.0 OPEX OUTTURN 11

**5.0 FACTORS TO CONSIDER ARISING FROM T&TEC’S PERFORMANCE IN THE
FIRST REGULATORY PERIOD AND RIC’S PROPOSALS..... 14**

 5.1. Role of Incentives in State-owned Utilities 15

 5.2 Design of Incentives 17

 5.3 Improving Regulatory Reporting and Compliance 18

 5.4 Treatment of Unforeseen Costs 19

6.0 CONCLUSION 19

Table of Figures

Figure 1: Building Block Approach to Revenue Requirement 5

Figure 2: RIC's Past Approach to Determining Efficient Opex..... 9

Figure 3: RIC’s Efficiency Challenge for Opex..... 13

1.0 BACKGROUND

The Regulated Industries Commission (RIC) is responsible for setting price limits for the electricity sector and does so within a regulatory framework that is governed by the RIC Act. As the economic regulator, the RIC's mandate is to ensure that quality services are provided to customers at the lowest reasonable overall cost. During the first regulatory control period the RIC adopted an incentive regulation or RPI-X framework for establishing price controls. This framework consisted of a number of elements, key among them being, the setting of challenging performance targets and incentives to outperform those targets.

Embedded in this RPI-X regulation framework was the building-block approach, which essentially involved the development of revenue forecasts for T&TEC, based on four major components: efficient levels of operating expenditure (Opex), capital expenditure (Capex) that an efficient utility could be expected to require, depreciation and return on the asset base. Final tariffs were then established that would achieve the established levels of forecast revenue.

Opex accounts for a very significant portion of a utility's total costs and such costs can have notable impact on the final bills paid by customers. Consequently, the appropriate level of Opex to be allowed into the revenue requirement is critical, and therefore requires close scrutiny of the utility's performance in this area.

1.1 Purpose of the Document

This paper examines the RIC's current approach to assessing operating expenditure, reviews T&TEC's actual Opex and compares this with the RIC's approved Opex for the first regulatory period. It then discusses the RIC's proposed approach/measures for the second regulatory control period for the electricity transmission and distribution sector.

1.2 Structure of document

The remainder of this document will be structured as follows:

-) **Section 2** – introduction of key concepts that form the basis of the “building blocks” approach and the need to examine Opex;
-) **Section 3** – outlines the RIC's approach to setting Opex, as used in the first control period;

-) **Section 4** – reviews RIC’s proposed Opex against T&TEC’s actual Opex, for the first control period;
-) **Section 5**– highlights challenges in assessing Opex and how they may be addressed going forward with respect to the rate review for T&TEC; and
-) **Section 6** – Conclusion.

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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Copies of this document are available from the RIC Information Centre or from our website at www.ric.org.tt. Comments close at 4.00 pm on February 2nd, 2018.

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.

2.0 INTRODUCTION

The Regulated Industries Commission (RIC) Act No. 26 of 1998 established the RIC as the economic regulator of the electricity transmission and distribution sector in Trinidad and Tobago.

The RIC, according to Section (6)(1)(c) of the Act, has a duty “*to ensure, as far as is reasonably practicable, 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 necessary investment*”. Additionally, Section (6)(3)(a) requires the RIC to consider, “*maximum efficiency in the use and allocation of resources to ensure as far as is reasonably practicable, that services are reliable and provided at the lowest possible cost*”. It must also have regard to:

-) *The ability of consumers to pay rates - Section (67)(3)(c); and,*
-) *The replacement capital cost expended, least-cost operating expenses which may be incurred, annual depreciation, return on the rate base; Section (67)(4)(a) – (d).*

The Act outlines the duration of the regulatory control period, as Section (48) mandates the RIC “*to review the principles for determining rates and charges for services every five years , or where the license issued to the service provider prescribes otherwise, at such shorter intervals as it may determine.*

Working within this legal framework for a price review, the RIC establishes tariffs that are expected to recover T&TEC’s efficient costs of providing service. This is done by considering components or “building blocks”, and is generally given by the following equation.

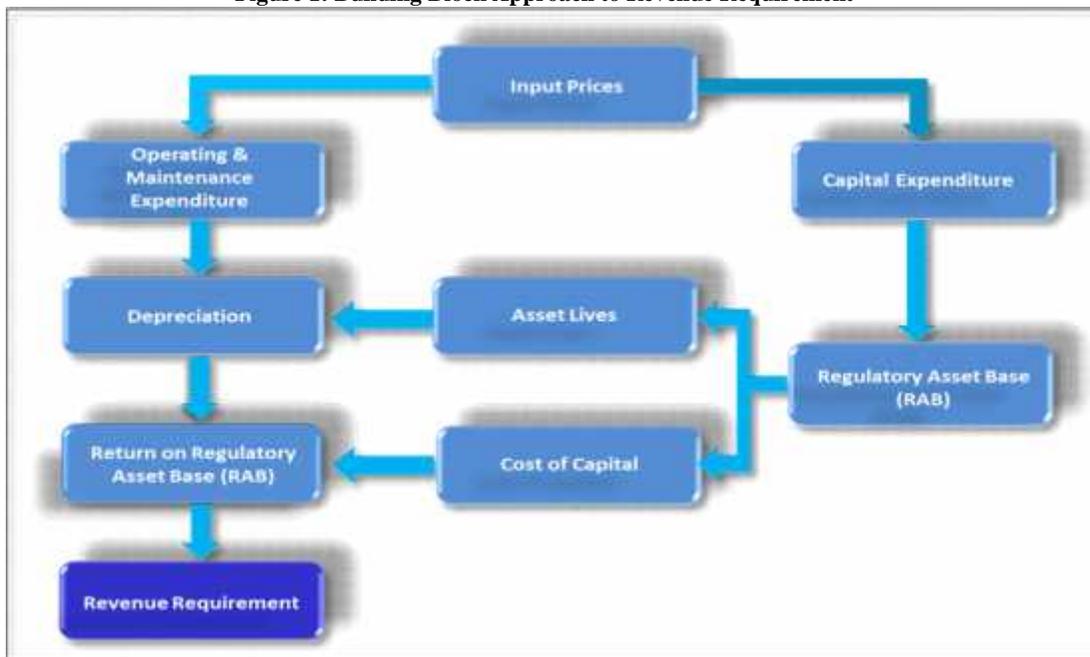
$$\text{Rev} = (\text{WACC} \times \text{RAB}) + \text{Dep} + \text{Efficient Opex}$$

Where:

-) *Rev is the allowed revenue requirement*
-) *Dep is regulatory depreciation*
-) *Opex is the expected efficient operating expenditure*
-) *RAB is the regulatory asset base*
-) *WACC is the weighted average cost of capital*
-) *WACC x RAB establishes the return on capital allowed over the same period.*

The general relationship between these components is summarized in Figure 1 below.

Figure 1: Building Block Approach to Revenue Requirement



The RIC has commenced a price review for the second regulatory control period for 2018-2023, and wishes to examine the effectiveness of its regulatory approach and the subsequent relevance and applicability of same, going forward. In its determination of the efficient level of Opex that T&TEC was allowed to recover through tariffs for the first regulatory control period, the RIC had to give careful consideration to the need and ability of T&TEC to fund its operational activities as well as the needs of customers in terms of required service levels, and their ability to pay for such services. In the process of establishing efficient Opex, the RIC made a number of assumptions and decisions regarding the associated expenditure items. In this regard the RIC must examine its approach to determine whether any changes are necessary.

3.0 RIC'S APPROACH TO ASSESSING OPEX

Operating expenses (Opex) are the day-to-day costs of running the utility and typically include cost for generation, fuel, repairs and maintenance, staffing, overhead costs, etc. These amount to about 90% of the overall revenue requirement. The overall objective of assessing the service provider's Opex is to determine whether the proposed Opex is efficient, necessary and to be funded within the price limits. There are a number of methods that can be used by regulators to determine an efficient level of Opex that will be charged to the revenue requirement of service providers.

In this process, regulators would separate “controllable” from “uncontrollable” costs. The former are those costs over which the utility has the ability to exercise some level of control i.e. can be controlled by management such as advertising, overtime, etc. On the other hand, there are costs that may be determined by mechanisms outside of the purview of the service provider, over which management has little or absolutely no control. These costs might include license fees, fuel costs or obligations/payments under Power Purchase Agreements (PPAs). Such costs are said to be “uncontrollable” and are usually passed directly to the overall efficient level of Opex determined.

The allowance for Opex is usually assessed by reference to a range of different sources of evidence including: historical performance of the service provider; the service provider’s own Opex projections; various types of benchmarking exercises (internal, process or international); and evidence as to what efficiencies have been achieved in other utilities. Additionally, the nature of incentive-based regulation, where the service provider is permitted to retain the benefits of out-performance (or suffer the consequence of under-performance) against the allowances, means that significant weight will usually be placed on the most recent actual performance of the service provider. Equally, as demand grows, the nature of the service provided may change and further (previously unconsidered) opportunities for efficiencies may arise. Therefore, new factors may influence the appropriate allowances for operating costs. It is important to note here that T&TEC is a State-owned utility. This can have important implications for the incentives that management faces and how it responds to incentive-based regulation.

The objective for the regulator is to understand what represents a reasonable allowance for operating costs, which is usually a level of costs that can realistically be expected to be incurred if the entity is run efficiently within the constraints it faces. Most regulators utilize a broadly similar approach to setting Opex, based on reviewing historical expenditure and considering whether future activities justify an increase in expenditure. The service provider is usually incentivised to reduce costs by being allowed to keep any underspend (or bearing the risk for any overspend) for a limited time period.

In assessing controllable Opex, the RIC utilized the following process/steps:

-) Determining the baseline operating costs;
-) Reducing baseline costs through efficiencies; and

- J) Specifying a generalized efficiency factor for the reduction of forecast (allowed) costs for future “unidentified” efficiencies.

The RIC also included an efficiency carryover mechanism for Opex to incentivise T&TEC to reduce its Opex costs over the price control period.

3.1 Baseline Opex

The assessment of Opex begins with an in-depth assessment of the service provider’s reported actual expenditure, as provided in its audited financial statements, in a base year (the base year for the price review, i.e. the starting point for setting forward allowances). The baseline should reflect the normal operating costs of the service provider, from which it is possible to assess the impact of future cost changes. Consequently, one-off costs and savings that are considered to be atypical of the service provider’s normal Opex are removed. In the case of T&TEC, the assessed baseline also excluded generation and fuel costs, as these are uncontrollable costs, based on contractual arrangements, and as such cannot be influenced by T&TEC. The assessment at this stage does not take into consideration future improvements in efficiency, as this is considered separately.

The RIC’s assessment of the normalized baseline costs focussed on the breakdown of Opex into categories (the “bottom-up” approach) and sought justification from the service provider, with a more probing review. This was undertaken by analyzing expenditure by function, i.e. the cost to provide a particular service, and by activity, i.e. the cost of each activity comprising a service. The costs for meeting new demand from customers and for the effects of annual inflation were also allowed. The RIC also identified particular significant cost items where it felt that a more detailed review would have been more instructive, and was guided by the outcomes thereof. The assessment process also considered to what extent the initial results should be adjusted to take account of any special factors that may have been relevant to T&TEC at that time.

3.2 Assessed Scope for Efficiencies

As a next step, the RIC also considered wider information and identified a few cost items where it felt that comparison with other utilities (the “top-down” approach) would have been useful. Therefore, T&TEC’s overtime expenditure, absenteeism rate, etc. were benchmarked against “best

practice” targets. Benchmarking¹ cannot be exact, and requires careful interpretation and accurate information. Accurate benchmarking requires comparisons to be like-for-like. The RIC recognized circumstances where it was appropriate to adjust results to account for local factors and to account for unavoidable statistical uncertainties in the comparisons. As indicated above, the RIC also distinguished costs that the utility’s management could influence or control, from those that are driven purely by external factors.

The RIC had also set prescriptive annual targets for cost reduction for a limited number of cost items (e.g. heat rate), given the limitations of benchmarking.

3.3 Specification of Generalized Efficiency Factor

The RIC also utilized a generalized efficiency factor of 2.8% per year to reflect the efficiencies T&TEC was expected to achieve in costs of service provision and hence in prices for services. The RIC utilized the “rate of change” as one of the techniques for arriving at an “efficient” level of Opex for the first regulatory control period. The rate of change is the year-to-year change in Opex for a number of factors such as, expected productivity improvements in labour and other costs. The rate was established by examining the productivity achieved by T&TEC in Opex for a number of past years and thereafter, calculating future cost reductions on the assumption that the same rate of change (i.e. productivity improvement) will continue in the future. Consequently, T&TEC’s Opex was further reduced by \$53.3 million over the first regulatory control period.

3.4 Efficiency Carryover Mechanism

A tenet of the incentive-based approach is to reward good performance. An efficiency carryover mechanism is the means by which the incentive for a service provider to make efficiency gains is

¹ Benchmarking for the purposes of regulation consists of two main elements:

-) The “measurement” side of benchmarking (performance benchmarking). This aspect concentrates on measurement and comparison within organizations and within industry by the use of techniques such as performance indicators, modelling and outcome measures; and
-) The “action” side of benchmarking (process benchmarking). It deals with understanding current processes, comparing to “best in class” and changing the way things are done.

Performance benchmarking is important for identifying whether a utility is efficient compared with others and is useful to compare the performance of the utility over time. Process benchmarking allows for comparison of policies, procedures and processes which allows for the identification of strategies for improving efficiency within a utility.

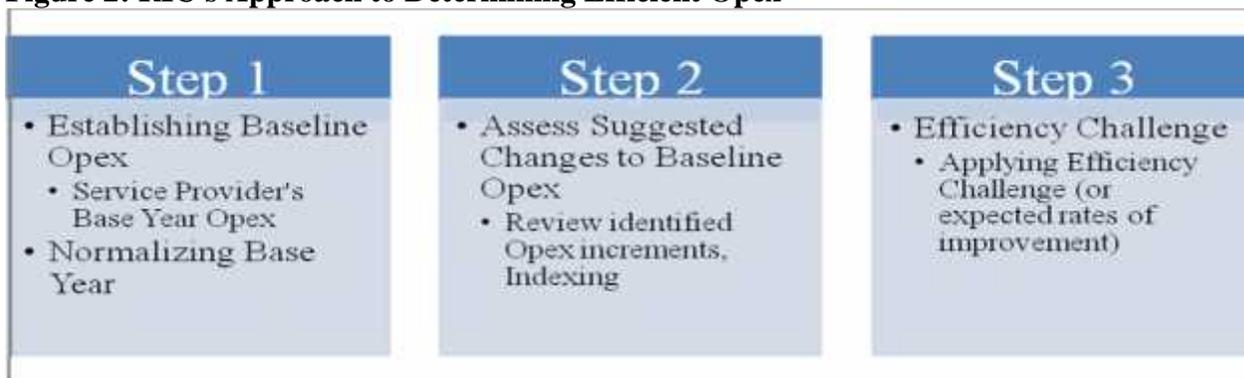
enhanced by permitting it to carry over gains from one regulatory period to the next. Customers benefit from lower prices when efficiency gains are passed to them at the end of the period. In this regard, the RIC had implemented a five-year rolling efficiency carryover mechanism for Opex, in order to further supplement incentives for achieving efficiencies within the regulatory control period.

In summary, the analysis to determine the level of efficient Opex that would be recovered by tariffs comprised:

-) Examining T&TEC’s historical Opex and Opex profile (1999 – 2004), identifying trends and removing any non-recurrent or one-off type costs in the process;
-) Comparing T&TEC’s forecast Opex against its historical Opex (1999 – 2004);
-) Collating and examining data for other electricity utilities in order to compare particular measures with T&TEC’s proposed Opex, in order to establish a reasonable profile;
-) Considering a number of scenarios that were relevant to determine and account for any level of future changes to be considered in establishing the efficient level of Opex;
-) Reviewing T&TEC’s potential to improve efficiency, thereby arriving at efficiency savings to be applied to the allowed Opex; and
-) Establishing the overall allowed efficient level of Opex based on all of the above considerations, and the inclusion of uncontrollable Opex, namely T&TEC’s generation (fuel and conversion) costs.

The steps to assessing Opex and establishing the allowed level of efficient Opex are summarized in Figure 2.

Figure 2: RIC's Approach to Determining Efficient Opex



Having followed the process and approach outlined, the RIC, in its determination of efficient Opex for the first regulatory period, reduced T&TEC's proposed Opex by \$905.74 million over the first control period and made a number of adjustments, some of which included the following:

- J **Employee Costs** – Given the review of data for the period, 1999 – 2004, and subsequent submissions for 2005, the RIC increased Employee costs by 10.6%² over 2004 costs, for the first year of the control period (2006), and thereafter applied even increases of 5% per annum to account for any new bargaining agreements, etc. Overall, the RIC reduced T&TEC's proposed Employee costs by \$124 million.

- J **Administration and General Expenses** – The RIC allowed 82.5% of proposed costs in this category. Overall, \$10.9 million was disallowed for promotions/promotional activity. The RIC also made provisions for Cess payments, provided \$200,000 per annum for payments towards breaches of the Guaranteed Electricity Standards, and removed one-off expenditure items from the base year Opex.

- J **Repairs and Maintenance** – These costs were adjusted to keep in line with internationally accepted best practice of a total that represents 1.5% of gross fixed Transmission assets and 2.5% of gross fixed Distribution assets.

- J **Conversion and Fuel Costs** – Given revised energy forecasts submitted by T&TEC, the RIC allowed over 96% of conversion costs, and in order to provide appropriate incentives to move towards combined cycle plants and save on fuel costs, over 85% of proposed fuel cost was allowed.

- J **Efficiency Savings** – Based on analysis of productivity changes in Opex for T&TEC over the period, 1999 – 2003, the RIC included a non-compounding efficiency factor of 2.8% per annum, thereby reducing Opex, and Transmission and Distribution Costs, in particular, by \$53.3 million overall.

² This was consistent with the compound annual growth rate (CAGR), calculated for data submitted by T&TEC for the period 1999 – 2005.

4.0 OPEX OUTTURN

As indicated above, at the June 2006 price review the RIC challenged T&TEC to provide value for money by requiring it to improve its operating efficiency and reduce its Opex by \$905.74 million less than it had proposed in its Business Plan (a reduction of 8.04%). This efficiency challenge would have reduced annual expenditure by about \$181.15 million by the end of the control period compared with the levels that would have prevailed had there been no regulatory efficiency challenge.

Unlike Capex, ex-post treatment of Opex is not a feature of most regulatory regimes. Where regulators use ex-post assessment of Opex, it is generally to inform the setting of Opex allowances for the next price control period rather than to claw back inefficient expenditure from the previous price review. However, a brief assessment of the first price control period is presented below.

A comparison of T&TEC's actual Opex to RIC's allowed, for the first regulatory control period, June 2006 – May 2011, is shown in table 1 and figure 3, below. T&TEC's operating expenditure was more than that allowed by the RIC, in all but the final year of the control period. Overall, T&TEC's outturn surpassed the RIC's allowed Opex by 5.6%, in nominal terms. Additionally, the RIC's allowed Opex profile provided for a gradual and cumulative increase in such expenditures to a maximum of 45.75% over that of 2006, by the end of the control period. However, in actuality, T&TEC's Opex peaked in the period June 2009 – May 2010, at a maximum of 51% above the allowed 2006 Opex, thereafter falling slightly in the final year.

Table 1 shows the analysis of Opex, for the period June 2006 – May 2011 according to the major line items: Conversion; Fuel; Labour; Transmission and Distribution (T&D) Repair, Maintenance and Other T&D Expenses; and Administration and General. According to this data, actual expenditure was \$601.67 million more than approved.

Table 1: Analysis of Actual Opex by Major Categories

Opex Item	June 2006 - May 2007 (TT\$ Mn)	June 2007 - May 2008 (TT\$ Mn)	June 2008 - May 2009 (TT\$ Mn)	June 2009 - May 2010 (TT\$ Mn)	June 2010 - May 2011 (TT\$ Mn)	Total (TT\$ Mn)	Difference Actual - Approved	Approved from Actual as a Percentage of Actual ³
Conversion:								
RIC Approved	792.66	844.08	1,050.27	1192.87	1391.51	5,271.39		
T&TEC Actual	807.85	932.06	942.38	943.05	878.69	4,504.03	-767.36	-17.04%
Fuel:								
RIC Approved	584.1	609.4	651	671.5	716	3,232.00		
T&TEC Actual	557.34	583.52	635.94	725.34	732.91	3,309.08	3.05	0.09%
Labour:								
RIC Approved	273.61	287.3	301.65	316.72	332.54	1511.82		
T&TEC Actual	337.44	355.4	363.65	494.62	528.36	2079.47	567.65	27.30%
T&D Repair, Maintenance and Other T&D Expenses:								
RIC Approved	233.83	245.49	257.53	270.43	280.97	1288.25		
T&TEC Actual	254.18	264.42	314.87	493.33	404.69	1731.49	443.24	25.60%
Administration & General:								
RIC Approved	134.35	137.91	140.71	144.24	147.38	704.59	--	--
T&TEC Actual	172.53	449.99	223.47	186.22	310.39	1,053.01	638.02	47.52%
Total Expenditure:								
RIC Approved	1,796.00	1,892.34	2,166.40	2,353.35	2,617.71	10,825.80	--	--
T&TEC Actual	1,963.27	2,175.82	2,191.06	2,711.94	2,385.38	11,427.47	601.67	5.27%

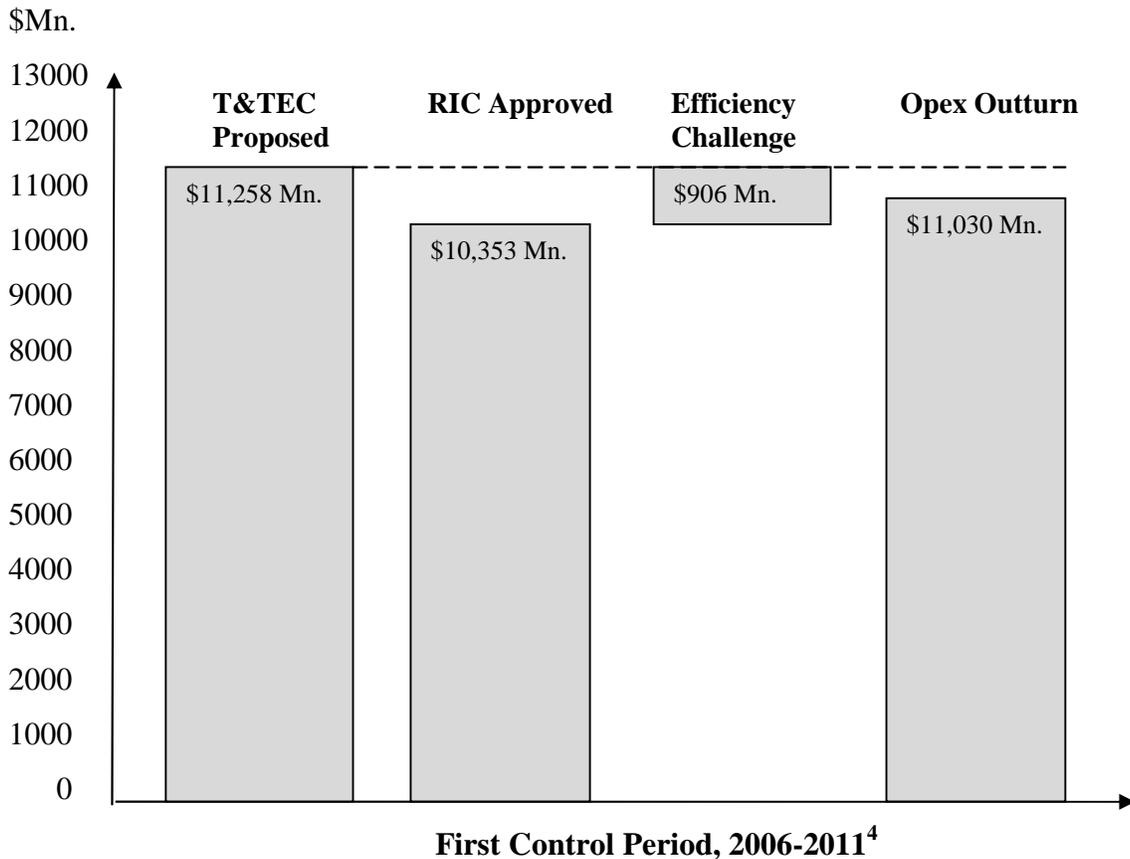
Notes to Table:

Expenditure associated with T&D Repair Maintenance and Other T&D Expenses as well as Administrative and General Expenses, includes Personnel Costs which have also been included in the Labour line item.

Total Expenditure includes other expenditure not shown, including depreciation.

³ These percentages measure the difference between what the RIC approved against T&TEC actual spend i.e. [(Actual Opex-RIC Approved) x 100] / Actual Opex.

Figure 3: RIC’s Efficiency Challenge for Opex



In the RIC’s assessment of T&TEC’s conversion and fuel costs, which were largely treated as uncontrollable, adjustments were made to first reflect cost “pass-throughs” of 98% and 90% respectively, and a small additional reduction was then applied. The realisation of significantly lower costs in terms of conversion, but slightly higher costs with respect to fuel may be attributed to uncontrollable factors.

Employee costs, which comprise wages, salaries and employee benefits, were \$567.65 million above forecast. More specifically, whilst T&TEC spent more in each year on labour than was approved, the increase over the approved amount doubled between the 2008/2009 and 2009/2010 period. The sharp increase is attributed to increased salaries for management as a result of job evaluation exercises and the payment of back-pay associated therewith in 2009. There were similar payments to employees following new collective bargaining agreements, signed in December

⁴ Figures do not include depreciation.

2008. This also accounted, in some measure, for the higher than approved Transmission and Distribution costs and Administration and General Expenses. In addition, the extension of the 1994 T&TEC-PowerGen Power Purchase Agreement, the new treatment of depreciation under IAS17⁵ and the repair of the damaged submarine cable between Trinidad and Tobago, would have also pushed T&D and Administration and General Expenses above RIC approved amounts.

The increased expenditure may also be explained, in part, by T&TEC's accounting treatment for its "Retirement Benefit Obligation". At the time of the review, T&TEC had not yet adopted the December 2004 amendment to IAS 19⁶, which provided for the option of recognising actuarial gains and losses in full, in the period in which they occur, outside profit or loss, in a statement of recognised income and expense. T&TEC in fact adopted this amended standard during the control period; therefore, such expenditures were not catered for in the original Opex projections submitted for the 2006 Price Determination. Additionally, T&TEC indicated that this figure is difficult to predict, and can either be an addition to expenditure or 'reduction', but is always recorded on the expenditure side of the Income Statement. For the years 2006 – 2008/09, this item was reported as \$289.6 million (expenditure), \$56.03 million (expenditure), and \$44.6 million (gain), respectively, giving a net addition to expenditure of \$301.03 million. No data were available for the period 2009/10. Apart from pensions, increases in this category, according to T&TEC, have also resulted from the need to undertake urgent and critical maintenance work or from price increases since the release of the Final Determination.

5.0 FACTORS TO CONSIDER ARISING FROM T&TEC'S PERFORMANCE IN THE FIRST REGULATORY PERIOD AND RIC'S PROPOSALS

The analysis of T&TEC's Opex performance for the first regulatory period clearly suggests that no concerted efforts were made by T&TEC to undertake efficiency improvements. However, there were also some occurrences during the control period that affected T&TEC's outturn as compared with allowed Opex levels, that were undoubtedly unforeseeable and therefore, outside of the control of the utility. Notwithstanding this, RIC was able to ensure, through its efforts that certain

⁵ International Accounting Standard 17 (IAS17) – Leases.

⁶ International Accounting Standard 19 (IAS19) – Employee Benefits

efficiencies were passed up-front to customers by disallowing certain expenditure into the revenue requirement.

The RIC intends to continue to utilize the combination of approaches and techniques identified in Section 3 for the second regulatory control period. These methods are well accepted for use in a regulatory environment and across major utility sectors. However, every regulator tailors specific analytical tools in response to the particular issues it faces and the RIC is mindful that there remains certain elements of regulatory judgement in the process. Further, the RIC is cognisant of the following:

-) Allowed revenue must offer a reasonable prospect for T&TEC to recover its efficient costs (including a reasonable rate of return). The risk of not doing so entails incentives for efficient expenditure and investment being undermined;
-) The high proportion of costs that are sunk or uncontrollable limits the scope for cost reduction. However, the RIC has an obligation to ensure that costs that are demonstrably inefficient or unnecessary are not allowed but, at the same time, to make an allowance for any additional costs arising out of new obligations.
-) Estimating efficient costs purely on the basis of benchmarking is not possible given the practical problems of finding good comparators, as electricity utilities differ in size, structure and may face a variety of external operating environment factors.

However, a number of issues need to be highlighted going forward and these are discussed in the following sub-sections.

5.1. Role of Incentives in State-owned Utilities

Regulators generally seek to create an environment that incentivises utilities and their owners. However, some of the more intractable problems as regards incentive regulation occur in sectors where state-ownership has been retained. It is generally argued that the regulatory instruments developed can easily become blunted under state-ownership. Consequently, management is less incentivised because the penalties for failure are minimal, managers are less frequently sacked, there is no real threat of bankruptcy as even a poor performing utility can expect to be “bailed out”

by the State, and the disciplines of the market for corporate control are also absent. On the other hand, the rewards for success for these managers are also smaller.

While recognizing that the incentives may not be as strong as in the case of private utilities, the RIC proposes to supplement incentive-based regulation with provisions that require the service provider/management to have in place specific additional incentives to align incentive-based regulation with management incentives. For State-owned entities, where the profit motive is absent, management is likely to be more focused on achieving outputs as this will have a direct impact on the reputation of the entity and its senior management. The RIC will therefore ensure that its concentration on the achievement of outputs/outcomes continues and that the management is subject to strong reputational incentives for good performance. In this regard, some of the measures will include:

-) **naming and shaming (e.g. poor performance to be reported prominently in the media);**
-) **more strict cost management through management of actual cost savings against target levels; and**
-) **regular and more frequent publication of regulatory accounts in accordance with the regulatory accounting guidelines established by the RIC.**

The RIC strongly advocates that Government give consideration to implementing Management Incentive Plans (MIP), e.g. bonuses for improved performance, performance related pay, etc., that set out the types of incentives that should apply to management to align their incentives with the regulatory regime established by the RIC. In fact, increasingly it is becoming either a statutory requirement or an element of the operating licences for State-owned entities to develop and maintain MIPs.

In addition to the incentives provided to management through MIPs, consideration needs to be given to the ownership structure of the entity as this can have a bearing on the extent to which managers are incentivised to achieve set targets. Strengthening the governance regimes to better align the incentives of the board and managers, with clear service quality and financial performance objectives, may be even more critical to the improvement of performance.

5.2 Design of Incentives

The importance of good quality information cannot be overemphasized in terms of improving the regulator's ability to conduct an effective review of the utility's forecasts. This is especially applicable to T&TEC's data submissions on historically-incurred costs, as well as forecast future costs and the business cases that underlie the forecasts. In this context, "good quality" may encompass providing accurate time-series data, sufficient detail (costs allocated to a number of individual projects or programs), maintaining consistency of definitions over time and where changes are made, clearly identifying same and the resultant impacts, and finally, ensure the provision of up-to-date audited financial data⁷. In this regard, the RIC will consider including an incentive mechanism geared towards high quality information⁸. The general concept is to encourage T&TEC to submit a business plan that reflects the best available information about future efficient expenditure requirements. In doing so the utility may or may not receive a financial reward or penalty depending on their forecast relative to the regulator's assessment of efficient expenditure. Better forecasts from the utility relative to the regulator's, results in a positive outlook for the efficiency challenge posed by the regulator.

In terms of designing incentives for the utility on a whole, the goal is to have incentives that can cause a serious enough impact if performance targets are not satisfactorily met. So far, the RIC has mainly applied financial incentives⁹ to change utility behaviour. In the future, the RIC may be guided according to the other types of incentives listed below:

-) **Reputational** (Naming and Shaming) – where T&TEC's reputation is enhanced or damaged depending on whether the established targets are achieved or not. In fact, the reputational aspect is important to maintain sound relationships with customers and to boost confidence in potential foreign investors with respect to the economy.
-) **Procedural** – where T&TEC is subjected to greater and more frequent information provision requirements, depending on the delivery of outcomes/targets established by the regulator. One option that has been recently implemented by Ofgem, is to fast-track the business plans of

⁷ In many jurisdictions (GB, New Zealand, Ontario, AER), the regulator collects historical data through a process which is separate from the price review process.

⁸ Ofgem in the UK has taken this approach in its most recent price control for electricity distribution. (https://www.ofgem.gov.uk/system/files/docs/2017/01/guide_to_riioed1.pdf)

⁹ Including but not limited to performance targets set in the T&TEC Quality of Service Standards.

certain utilities that have established a good compliance record, with a built in penalty mechanism for deficiencies in the business plans. While this initiative is still being evaluated, the philosophy here is to reward utilities for submitting very good quality information and applying appropriate penalties to those that do not place sufficient emphasis on the accuracy and comprehensiveness of their business plans.

5.3 Improving Regulatory Reporting and Compliance

The RIC views Performance Reporting on T&TEC's technical and operational performance as an important element of the regulatory framework. Not only does it enable stakeholders to assess compliance with regulatory decisions and compare performance from one period to the other but frequent performance reporting also enhances the operations of the utility by encouraging active and informed stakeholder participation in the regulatory processes. While many of the existing reporting arrangements will remain, the RIC has considered that certain changes will improve reporting compliance, and the reliability of the data supplied, including:

-) the utility must demonstrate that it has systems in place to provide on-time and materially unbiased data. T&TEC and the RIC have embarked on a collaborative data mapping exercise to increase the effectiveness of the regulatory data collection and reporting process;
-) the engagement of an independent "Reporter", at the utility's expense, to conduct regular and detailed audits, in cases where the utility is found to have misreported information, or has not improved reporting standards to acceptable levels;
-) greater self-certification will also be encouraged by requiring T&TEC's Management and/or Board to indicate in writing that Opex projections accurately reflect the underlying information. This would entail establishing a clearly documented internal procedure for accurate identification of Opex by activity;
-) annual reporting on the current year's allowed and actual Opex by activity, identifying reasons for differences between allowed and actual expenditures; and

) establishing an annual reporting framework whereby T&TEC submits to the RIC, a report that is suitable for public release.

5.4 Treatment of Unforeseen Costs

Most regulators use different mechanisms and tools to address unforeseen costs and to mitigate risks, as some uncertainty will inevitably remain when setting price limits. The mechanisms to address uncertainty include cost pass-through allowances for uncontrollable costs, reopeners (if revenue falls short by a specified minimum amount), logging up and down (inclusion of expenditure not previously allowed) and interim determinations. The RIC will continue to use these mechanisms when necessary and where appropriate.

6.0 CONCLUSION

The RIC is mandated by its guiding legislation to ensure that the service provider that operates under prudent and efficient management will earn sufficient revenue to finance necessary investment. As such, the RIC must endeavour to ensure that the approved operating expenditures are reflective of a utility operating in an efficient manner, maximising output and minimising costs, whilst at the same time not compromising service levels or service quality. In the second price review, the RIC will adopt a relatively intrusive ex-ante review of Opex to determine whether costs are necessary and efficient. It will use a combination of the bottom-up and top-down approaches, thereby examining cost activities/items individually, and in some instances, benchmarking certain costs. This approach allows the RIC to analyse data that can provide a number of useful insights into the detailed workings and practices of T&TEC, thus facilitating increased scope for identifying areas for operational and performance improvement.

The RIC invites comments and views on the proposals presented in this paper.