

Annual Price Adjustments – Are they a necessary feature of Incentive Regulation

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2021

Some concerns have been raised with respect to the need for annual adjustments under incentive regulation and a preference has been expressed for adjustments to take place every other year. The RIC will examine this issue in this paper.

Consultative
Document

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1.0 Introduction

As part of its second price control review for the electricity distribution and transmission sector, the Regulated Industries Commission (RIC) plans to examine key aspects of the current regulatory framework. One of these aspects is whether or not there should be annual price adjustments as part of the overall price formula.

Sections 6 and 67 as well as Part V of the RIC Act, Chapter 54:73, provide that the type of regulation utilized by the RIC be some form of incentive regulation. Specifically, the Act mandates the RIC:

- to establish the principles and methodologies for determining rates;
- to carry out periodic reviews of the rating regimes; and
- to determine the rates and charges for services every five years.

While there is a range of possible approaches to incentive regulation, perhaps the two most common forms are price caps and revenue caps¹.

In its simplest form, a price cap allows the service provider to increase its rates annually by an amount equal to an inflation measure, less an amount equal to an annual rate of productivity. This basic formula can also be applied in the case of a revenue cap, where the service provider will be able to adjust its starting or base revenue by an amount equal to an inflation measure less an assumed rate of productivity.

In its Final Determination for 2006-2011, the RIC capped T&TEC's revenue such that revenue could not be increased by more than 7.4% in any year of the regulatory control period. The specific method that was utilized is shown below:

¹ A third category known as hybrid forms of controls can be included, which as the name suggests incorporates features of both price and revenue caps. These are discussed in the RIC's document titled "Framework and Approach for the Price Review for the Electricity Transmission & Distribution Sector (T&TEC) 2021-2026 Regulatory Control Period". This document is accessible on RIC's website.

Method for Establishing Annual Revenue

$$ARR_t \leq (1 + RPI) (1 - X_t) \times ARR_{t-1} + U$$

Where:

| Year t | X_t |
|----------|-------|
| 2007 | 4.4 |
| 2008 | 4.4 |
| 2009 | 4.4 |
| 2010 | 4.4 |

ARR = Annual Revenue Received from Services.

ARR₂₀₀₆ = \$1,901.03 million.

RPI means the Retail Price Index as determined by the CSO.

U = Unused charge. T&TEC will be permitted to carry over any unused change in charges from one year to the following years.

The RPI will be calculated using the following formula:

$$\frac{RPI \text{ June}_{t-1} + RPI \text{ Sept}_{t-1} + RPI \text{ Dec}_{t-1} + RPI \text{ Mar}_{t-1}}{RPI \text{ June}_{t-2} + RPI \text{ Sept}_{t-2} + RPI \text{ Dec}_{t-2} + RPI \text{ Mar}_{t-2}}$$

Where:

- Year t is the year for which tariffs are being set
- Year $t-1$ is the previous year
- Year $t-2$ is two years previous.

The overall side constraint is set at $(RPI + X) = 7.4\%$.

1.1 Purpose of Document

This paper examines the need for annual price adjustments as part of the overall price formula, under the incentive regulation approach utilized by the RIC.

1.2 Responding to this Document

In keeping with the RIC's obligation to consult, stakeholders are invited to comment on this document. All persons wishing to comment are invited to submit their comments. Responses should be sent by post, fax or e-mail to:

Executive Director
Regulated Industries Commission
#37 Wrightson Road
Port-of-Spain, Trinidad

Postal Address: P.O. Box 1001, Port-of-Spain, Trinidad

Tel. : 1(868) 625-5384; 627-7820; 627-0821; 627-0503
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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.

Deadline for submission of comments is February 8, 2021.

2.0 Should Annual Price Adjustments be Abolished?

It is generally accepted that incentive regulation seeks to mimic the discipline that can be derived from a competitive market. In a competitive market the presence of competitors leads firms to seek efficiency gains, which are passed to customers in the form of lower prices in an effort to increase their market share. Prices are therefore flexible and can change frequently. Hence, theoretically, if the regulated sector were achieving the same productivity gains as other competitive sectors in the economy (as well as the same level of input price inflation) the discipline of competitive forces could be replicated by limiting the growth rate of regulated prices to the economy-wide rate of inflation. These assumptions of course only hold in very few instances and regulators utilizing incentive frameworks have had to incorporate X-factors within the pricing formulas².

Concomitantly an important feature of incentive regulation is that once the pricing principle/formula is established, the regulator does not adjust the pricing principle/formula within the regulatory control period, to reflect any changes between the actual and forecast revenue requirements. Service providers have to manage any differences between forecast costs, as determined by the regulator, and actual costs incurred during the regulatory control period. To the extent that costs differ, the service provider retains the benefits or bears the loss. This is one of the central tenets of incentive-based regulation and it provides service providers with an incentive to efficiently control their costs. Hence, firms operating under incentive regulation cannot simply pass every change in their input prices immediately to customers. In seeking to replicate a competitive market, the methodology favours more frequent rather than less frequent price movements. At the same time too frequent price movements (more than once a year) can undermine the service provider's incentive to reduce cost.

² The X-factor or productivity adjustment, as it is sometimes known in price cap plans, is a theoretical concept. It is designed to allow the regulated firms to confront a competitive-like price constraint by incorporating objective, industry-wide, productivity improvements into a regulatory price formula. There are two common approaches used by regulators for determining the value of the X-factor. The first approach relies heavily on total factor productivity analysis and is sometimes referred to as the historical productivity method or approach (or alternatively as the index-based method). It is primarily used in the United States (US) and is discussed extensively in the academic literature. The second major approach, which is common in the United Kingdom (UK) and Australia, is the building blocks approach. The regulators in these jurisdictions factor the scope for cost reductions into the proposed expenditure of the utility, and the X-factor is used to "smooth" the price path during the regulatory period. As assumptions about cost reduction and demand growth are already taken into account, the X-factor does not bear any relationship to expected future productivity growth.

The RIC is of the view that annual price adjustments hold two important advantages. The first is that in instances where upward price adjustments are needed, these can be phased in gradually, thereby allowing customers to make small incremental adjustments to their budgets rather than having to cope with larger, though less frequent, adjustments. Indeed, the aim to achieve full cost reflectivity with a one-off increase can lead to price shocks for customers, which places an undue burden on customers. This is why some customers may prefer a 5% increase each year rather than a 30% increase every five years. Similarly, for some, a 5% increase each year may be much more desirable than a 10% every other year. Rate increases are not popular. However, most rate payers understand and accept small increases much better than large increases, even though the small increases may occur more frequently. The second advantage benefits the service provider. Annual adjustments can stabilize a service provider's financial position by allowing it to better cope with increases in input prices. It improves cash flows and the service provider is less likely to face financial hardship as a result.

On the other hand, service providers may argue that biennial price increases make it easier to align price adjustments to quality of service improvements, which may take a longer time to achieve. However, under incentive regulation, quality of service improvements and the time-frame for implementing same are taken into account during the price review, when price controls are being set. Differences in out-turn *vis a vis* forecasts can easily be dealt with annually.

The RIC notes that while regulators in other jurisdictions have made adjustments to the length of the regulatory period, to date, none have deviated from annual price adjustments. Indeed, annual price adjustments are the norm for both water and electricity regulators in the United Kingdom and Australia. It is also the preferred approach for regulatory bodies in the Caribbean such as the Office of Utility Regulation in Jamaica. The RIC also understands that since there has been only one price review utilizing incentive regulation, the overall methodology, inclusive of annual price adjustments, is still new. Moreover, in a sector in which a general price review had been long outstanding prior to the RIC's review for the 2006-2011 price control period, the idea of annual price adjustments is still novel.

The RIC would also like to highlight that during the 2006 -2011 price control period, the Trinidad and Tobago Electricity Commission (T&TEC) did not implement annual adjustments for all classes when they were due. In some cases, this led to two adjustments being implemented simultaneously. Domestic Customers, in fact, did not face their first price adjustment until May 1, 2008 when the adjustment for both 2006-2007 and 2007-2008 were effected³. Moreover, the first increase also coincided with T&TEC's change out to new meters, which while enhancing the accuracy of meter readings, led some customers to believe that that they were being subjected to a large one-off increase. This impacted negatively on certain customer classes. The RIC understands that the service provider may have had good intentions for delaying some of these adjustments but is of the view that customers would have coped much better with smaller annual adjustments.

The RIC therefore welcomes views on the need for annual price adjustments.

³ Rates for 2008-2009, came into effect on August 1, 2008.