

THE CHALLENGES OF WATER SECTOR REGULATION IN THE TWENTY-FIRST CENTURY FROM THE PERSPECTIVE OF THE WATER AND SEWERAGE AUTHORITY OF TRINIDAD AND TOBAGO

The paper will explore and evaluate the impact of regulation by an independent regulatory commission (IRC) on the water services provider in Trinidad and Tobago as represented by the Water and Sewerage Authority (The WASA or The Authority).

This regulatory impact assessment will be undertaken with due regard to how the design of independent regulatory commissions (IRCs) impinge on the performance of water utility service providers.

Regulation can be defined as any government measure or intervention that seeks to change the behavior of individuals or groups. The emphasis of the paper will be on the extent to which the regulatory body – The Regulated Industries Commission or RIC has modified the management and operations of the WASA.

Nine functions or best practices have been identified that have implications for the central objectives of effective regulations of Water Supply and Sanitation (Berg, Holt, 2001).

These have been identified as:-

- i) Licensing, to specify operating and quality standards that have impacts on cost and tariff.
- ii) Prescription of standards for a utility investment and performance.
- iii) Collection of data on a utilities cost, revenues and performance, for use in tariff determinations and monitoring sector outcomes.
- iv) Approval of utility tariffs, to determine revenue sufficiency for operating and capital costs such as returns, asset values, deferred loans etc.)
- v) Adoption of uniform systems of accounting to provide comparable cost data (production, distribution, treatment) for tariffs.
- vi) Adoption of procedures to resolve disputes between utilities and consumers.
- vii) Use of management audits to provide cost-effective utility performance.
- viii) Development of human resource policies and procedures.
- ix) Submittal of reports on utility costs and tariffs, to emphasize current and future performance and efficiency, both for individual companies and for the water sector as a whole.

Each of these will be reviewed in order to:

- a) Determine the extent to which they apply to utility regulation in Trinidad and Tobago; and
- b) Assess their impact on the operations of the Authority.

1. **LICENSING TO SPECIFY OPERATING AND QUALITY STANDARDS THAT HAVE IMPACTS ON COSTS AND TARIFFS**

Modern utility regulation provides for the issuance of licenses or ‘certificates of use’ which stipulate operating and quality standards for new capital investment. Neither the PUC nor the RIC Act which superseded it makes direct use of licensing as a tool available to the IRC.

The RIC Act provides for the Minister to grant operating licenses to service providers, albeit on the advice of the RIC. In fact the Act provides that the Minister shall not grant a license to a service provider “unless he receives the advice of the commission and is satisfied that it would be in the public interest so to grant”

However the RIC in Section 6(1) (e), (f), and (g) of the RIC Act makes provision for prescribing service standards, monitoring such standards and imposing sanctions for non-compliance and any conditions attaching to a license granted.

The Water and Sewerage Authority (“The Authority”) is in the process of modifying its systems and operating and capital budgets to comply with these standards, some of which (Guaranteed Standards) carry penalties for breach.

2. **PRESCRIPTION OF STANDARDS FOR A UTILITY INVESTMENT AND PERFORMANCE**

In order ensure that investments are made to ensure least cost provision of utility services to its customers the IRC needs prescribe procedures and standards for service providers investment programs. This may extend to detailed criteria for least-cost-expansion and competitive bidding.

The PUC Act did not expressly provide for the regulator to exercise any oversight over investment decisions. Instead is merely provided for the PUC to make regulations (with the approval of the Minister) for “setting out the principles on which rates chargeable by public utilities should be based”.

The RIC on the other hand is empowered by its enabling legislation (Sec 6(1) (h) to establish the principles and methodologies by which service providers determine rates for services. Using this power it has requested that the Water and Sewerage Authority provide information on its investment plans in the framework of an overall business plan covering a five-year period. This will form the basis for the award of tariffs based on price limits and other associated decisions.

3. **COLLECTION OF DATA ON A UTILITY'S COSTS, REVENUES AND PERFORMANCE, FOR USE IN TARIFF DETERMINATIONS AND MONITORING SECTOR OUTCOMES**

The PUC Act gave the PUC the power to inspect the books and accounts of public utilities as well as require it to provide information and answer questions.

The RIC is similarly empowered by Section 5 of the RIC Act to furnish the RIC with any information requested by the RIC.

Both the PUC and RIC have exercised this power and the Authority has recently established a Department which inter alia is responsible for responding to such requests. The Authority has also modified its information and accounting systems to facilitate compliance with the data requirements of the RIC. This includes the development of a financial model and associated data gathering and analysis systems.

4. **APPROVAL OF UTILITY TARIFFS, TO DETERMINE REVENUE EFFICIENCY AND CAPITAL COSTS SUCH AS RETURNS, ASSET VALUES, DEFERRED ETC.**

Both the PUC and RIC Acts designated the PUC and the RIC as the quasi-autonomous bodies responsible for determination of the rate level and rate structure for consumers of Water and Sewerage services in Trinidad and Tobago.

The PUC issued orders for the Water and Sewerage services as set out in the table below.

Table 1

Water and Sewerage Rate Orders issued by The Public Utilities Commission of Trinidad and Tobago

Order #	Date	Effective Date	Comments
54	15 April 1986	1 January 1987	Granted first increase since formation of Authority in 1965 to all categories of water and sewerage customers.
66	05 October 1990	1 January 1990	(i) Required submission of a competitive wastewater tariff related to operating cost of the system. (ii) Provided a rate for industrial effluent of a specific customer.
77	28 May 1992	1 June 1991 1 January 1992	Awarded increase in rates for raw water abstraction. Introduced monthly billings for certain classes. Awarded increased rates for metered water consumption.
78	13 August 1992	13 August 1992	Made orders re: unserved commercial properties, dual use premises and rebates for customers who suffer loss of supply.
79	13 August 1992	13 August 1992	Granted increase for metered customers and unmetered non-domestic customers.
82	7 December 1993	13 August 1992	Granted rate for meter installations to non-domestic customers.
83	15 December 1993	10 October 1993	Miscellaneous increases to certain categories of customers

The RIC Act unlike the PUC Act allows for incentive based regulation as well as the more traditional rate of return method. It also allows for the more effective consideration of justifiable future cost increases in the price control framework available to it, as compared to the PUC.

It is therefore anticipated that future awards will not result in the regulatory lag which have characterized the existing awards.

5. **ADOPTION OF UNIFORM SYSTEMS OF ACCOUNTING TO PROVIDE COMPARABLE COST DATA (PRODUCTION, DISTRIBUTION, TREATMENT) FOR TARIFFS**

The Authority's list of accounts has been determined independently of the IRC, which does not under the legislation have the power to mandate a uniform system of accounts.

It has however attempted to model its coding system and chart of accounts on 'best practice' for water utilities. This includes the identification of the following categories: production, transmission, distribution, collection and disposal.

Under this heading it is also desirable for regulators to prescribe performance indicators for use in benchmarking. The Authority has adopted performance indicators on its own volition. However, the RIC has also suggested certain performance indicators for the Authority's use.

6. **ADOPTION OF PROCEDURES TO RESOLVE DISPUTES BETWEEN UTILITIES AND CONSUMERS**

This practice is recognised in both the PUC and RIC Acts. Both provide for the handling of complaints and lay down procedures for their handling.

The Authority has been and continues to improve its complaint handling capacity and performance which is handled by dedicated staff.

In recognition of the guaranteed and overall standards implemented by the RIC the complaint handling staff will be increased and investment in appropriate information systems technology.

7. **USE OF MANAGEMENT AUDITS TO PROMOTE COST-EFFECTIVE UTILITY PERFORMANCE**

Both the PUC and RIC Acts provide for the use of this regulatory tool.

It was used by the PUC in preparation for the tariff review which resulted in Order #54. This resulted in the identification of inefficiencies in the following areas:-

- i) Management of its customer base – e.g. failure to promptly update customer base with new service connections.
- ii) Time taken to make service connections – in excess of the three (3) weeks.
- iii) Excessive overtime
- iv) Excessive unaccounted for water (UFW)
- v) Lack of a proper Maintenance Management System

The Authority was urged to address these inefficiencies in PUC Order #54 via recommendations, notably:

- Renewed efforts are required to recover monies due to the Authority from its own staff, from ratepayers, beneficiaries of WASA-financed sewer installations repairs, and from firms to which bulk sales of water or effluent have been made.
- WASA's actual billing count for 1984 is a gross under count of the number of actual consuming units served by the Authority. A major effort is therefore required to rationalize and update WASA's customer records.
- Arrangements should be made as soon as possible for the frequency of billing customers to be increased from the current annual formula to a quarterly one.

The Authority has responded to these recommendations which by improving its billing and collection systems. These efforts have resulted in improved collection performance as evidenced by a collection ratio of almost 1:1.

8. **DEVELOPMENT OF HUMAN RESOURCE POLICIES AND PROCEDURES**

Berg and Holt argued that:

“The provision of water and sanitation services requires a continuation of information systems, engineering capabilities, financial analyses, managerial skills, and motivated labour”.

Utilities therefore need to focus on the objectives in their strategic and business planning.

In order to avoid the phenomenon of “regulator/capture” Berg and Holt went on to add that “*IRCs need to offer continuing education programs to ensure that professionals have the skills required for successful performance of the nine functions identified.*”

The cost of engaging and developing regulatory staff with the requisite skills and competencies is reflected on the regulator’s recurrent budget and fee structure to be borne in certain instances by the service providers. This will of necessity impact on the Authority, which pays a cess to contribute towards the operating budget of the RIC.

9. **SUBMITTAL OF REPORTS ON UTILITY COSTS AND TARIFFS TO EMPHASIS OVERRUNS AND FUTURE PERFORMANCE AND EFFICIENCY, BOTH FOR INDIVIDUAL COMPANIES AND THE WATER SECTOR AS A WHOLE**

The publication of reports by the Regulator on regulated service providers was identified by Berg and Holt as answering the following questions asked by stakeholders.

- 1) Are goals being met?
- 2) What issues need to be addressed by policy makers?
- 3) How does current performance compare with that of comparable nations?

The PUC published a statistical Digest of data on utility performance and the RIC has continued this practice.

Mindful of the need to supply reliable time and consistent data to the RIC the Authority is currently engaged in an upgrade of its information systems. As referred to earlier it has also created a Department whose sole function is to address regulatory issues and information flow.

10. **SUMMARY**

In conclusion, the nine functions reviewed above from the viewpoint of the Water and Sewerage Authority, are recognized as operating guidelines for the management of the Utilities interaction with the RIC and ultimately to provide a superior level of customer service.

They also assist in clarifying the respective roles of the regulator and WASA as the service provider.

References:

Berg, Sanford (2001): Investments Delayed, Service Denied: Regulatory Functions and Sector Performance,” *University of Florida*

Prepared by: **Wilbert Harris**
Head, Internal Audit
Water and Sewerage Authority
Republic of Trinidad & Tobago

Date: **November 3, 2004**