



**REGULATED INDUSTRIES COMMISSION**

**RIC's PROPOSALS FOR ENSURING AFFORDABILITY  
AND PRO POOR SUPPORT MEASURES**

**Information Paper**

**April 2014**

## Contents

<b>1.0</b>	<b>CONTEXT</b> .....	<b>1</b>
1.1	Purpose and Structure of Document .....	3
<b>2.0</b>	<b>AFFORDABILITY</b> .....	<b>5</b>
2.1	Defining Utility Service Affordability .....	5
2.2	Classification of Affordability Instruments.....	7
<b>3.0</b>	<b>WATER AND ELECTRICITY EFFICIENCY AND PRO-POOR SUPPORT</b> .....	<b>10</b>
3.1	Water Conservation and Efficiency Measures .....	10
3.2	Energy Efficiency Programmes Benefitting Poor .....	12
<b>4.0</b>	<b>REGULATION AND AFFORDABILITY/PRO POOR PROVISIONS</b> .....	<b>15</b>
4.1	International Practice of Affordability Provisions .....	15
4.2	Local Situation .....	16
<b>5.0</b>	<b>RIC'S PROPOSED AFFORDABILITY/PRO-POOR MEASURES FOR THE WATER AND ELECTRICITY SECTORS</b> .....	<b>19</b>
5.1	Affordability Indicator .....	19
5.2	Price/Revenue Cap Regulation.....	19
5.3	Tariff Rebalancing and Side Constraint .....	20
5.4	Codes of Practice.....	20
5.5	Water Sector Specific Measures .....	21
	5.5.1 <i>Glide Path Approach to Revenue Determination</i> .....	21
	5.5.2 <i>Billing Period</i> .....	22
	5.5.3 <i>Tariffs and Other Financial Proposals</i> .....	22
	5.5.4 <i>Other Measures</i> .....	23
5.6	Electricity Sector Specific Measures.....	24
	5.6.1 <i>Consumer Compensation Scheme (Guaranteed Standards Scheme)</i> .....	24
	5.6.2 <i>Capital Contribution and Cost-Sharing for Electricity</i> .....	24
	5.6.3 <i>Tariffs and Other Measures</i> .....	25
<b>6.0</b>	<b>CONSUMER ADVISORY REPRESENTATIVE COMMITTEE</b> .....	<b>26</b>
<b>7.0</b>	<b>CONCLUSION</b> .....	<b>27</b>

## 1.0 CONTEXT

The affordability of utility services has been a key issue in the debate on utility tariff reform among stakeholders in most jurisdictions. Because some infrastructure services are considered essential, a minimum level of the service must be made affordable to households, to accommodate basic needs. Recent statistics show, that for most households worldwide, a safe and affordable supply of utility services has been achieved<sup>1</sup>. There is evidence, however, that for a significant minority of households in many countries, their ability to pay for even the essential service level fails to match the cost to provide it<sup>2</sup>. Since there are huge differences between countries regarding the level of poverty that exists, it is difficult to draw a general picture of utility affordability. It is, however, widely accepted, that basic utility service should be affordable, and provisions for affordability must specifically address the unique circumstances of vulnerable customers.

In Trinidad and Tobago, the Regulated Industries Commission (RIC) has commenced price review exercises for the water and electricity sectors. The RIC views utility service affordability as imperative. The RIC's commitment to affordability is derived from Section 67 3(c), of the RIC Act that mandates that the Commission shall have regard to the ability of consumers to pay rates. Further, recent estimates show that between 17 to 20 percent of the population live below the poverty line, that is, about 50 to 60 thousand households<sup>3</sup>.

The RIC considers the price review exercise to be a key aspect of its mandate to regulate the water and electricity sectors and has adopted improved pricing principles and policies. In carrying out its functions, the RIC's overall objective is to ensure that the utilities effectively provide the highest quality of services at affordable rates and at the same time it must seek to ensure the utility's viability and sustainability.

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<sup>1</sup>UNICEF, WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, Progress on Sanitation and Drinking-water, 2010 Update: In 2010 about 85% of the global population (6.74 billion people) had access to piped water supply through house connections or to an improved water source, however, about 14% (884 million people) did not have access to an improved water source and had to use unprotected wells or springs, canals, lakes or rivers for their water needs.

<sup>2</sup>Organization for Economic Co-operation and Development (OECD), Social Issues in the Provision and Pricing of Water Services, 2002

<sup>3</sup>Information provided by the Ministry of the People and Social Development, 2014

In Trinidad and Tobago, there have been no consistent tariff review exercises for the water and electricity sectors for some time. Price review exercises for water and electricity services were last completed in 1993 and 2006 respectively. Prior to the electricity rate increases applied in June 2006, domestic customers had not experienced an increase since 1992. Since tariffs have historically remained low (especially in the water sector), the impending price review exercises have generated concern about utility service affordability.

To guide its policy decisions to ensure affordability for the poor and most vulnerable, the RIC has considered the affordability provisions of other jurisdictions. For the price review exercise, the RIC will seek the simultaneous accomplishment of economic, environmental and social objectives. For the water and electricity sectors in Trinidad and Tobago near universal access has been achieved at 96%<sup>4</sup> and 99%<sup>5</sup> coverage respectively. For this reason, this paper addresses affordability of consumption, which is a more pertinent issue in Trinidad and Tobago. Measures utilized in other jurisdictions and RIC's proposed measures for affordability are the focus of this paper.

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<sup>4</sup> Water and Sewerage Authority, Business Plan, 2007-2011

<sup>5</sup> International Energy Agency, World Energy Outlook, 2011

## 1.1 Purpose and Structure of Document

This paper outlines the RIC's proposals to ensure that the services it regulates are affordable to the citizens of Trinidad and Tobago, and highlights specific pro-poor measures that the RIC has proposed for the electricity and water sectors. It also presents the approaches taken by other jurisdictions on the issue of social policy measures that specifically address utility service affordability and the circumstances of the less fortunate.

The rest of the paper is structured as follows:

**Section 2:** defines utility affordability and discusses the general classification of affordability provisions.

**Section 3:** discusses the application of water and electricity efficiency programmes to improve affordability of the poor and most vulnerable.

**Section 4:** summarizes the practices of several jurisdictions in assigning responsibility for the provision of affordability instruments and outlines the responsibilities of the RIC with respect to protecting customer's interest.

**Section 5:** highlights the RIC's proposed measures for addressing affordability in the water and electricity sectors.

**Section 6:** presents RIC's proposal for a Consumer Advisory /Representative Committee.

**Section 7:** presents conclusions.

### **Responding to this Document**

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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](http://www.ric.org.tt)**.

## 2.0 AFFORDABILITY

### 2.1 Defining Utility Service Affordability

Affordability of a utility service can be broadly defined as the ability to pay for a subsistence level of the service within normal spending patterns<sup>6</sup>. It is the social aspect of utility services provision that is most clearly and closely linked to pricing policies and because of this affordability analysis is an integral part of any price review exercise. Affordability of a utility service is not determined solely by the level of the tariff. Other factors may influence affordability. These include:

- **Deposit Requirements** – The poor may have difficulty meeting the cost of upfront prepayments for service. Hence, pro-poor measures can help cover the deposit requirements for the poor.
- **Disconnection and Reconnection Policies** – The requirement of proper notice prior to disconnection for non-payment is a procedural safeguard which can assist poor customers. A “field service charge” is sometimes applied, if the customer pays the outstanding bill to utility service personnel when the service is about to be physically disconnected. The customer thus avoids disconnection and reconnection fees. In addition, an appropriate disconnection policy generally prohibits disconnections at night or on the weekend and this provides a safety net for the very poor. Establishing a proper reconnection policy is another device which can provide a safety net for the poor.
- **Line Extension Tariff** – A policy outlining the terms under which the utility extends service to new consumers and new communities (at subsidized rates) is another measure which can assist the poor.
- **Availability of rebates/concessions** – The provision of tariff rebates and utility service vouchers to poor households.

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<sup>6</sup> Florence School of Regulation , Affordability of Basic Public Utilities: Regulation and Poverty Policies, 2008

- **Availability of payment options** - The provision of adequate services centers in proximity to poor communities.
- **Assistance offered in the event of payment difficulties** –The provision of easier payment plans and arrears forgiveness.

In essence, any measure that affects a customer’s ability to pay for a necessary minimum service level under the terms and conditions set by the utility is considered to be a factor influencing affordability.

Several indicators have been used to evaluate the affordability of utility service charges. In 2002 the World Bank developed Macro and Micro (utility service) affordability indicators<sup>7</sup>. Macro-affordability indicators were developed by relating national average household utility charges to either average household income or average household aggregate expenditure. Micro-affordability indicators disaggregate the former by income groups, family types or regions. These indicators guide policy the maker’s decisions about measures to address consumers’ unique affordability circumstances.

There are two popular methods of measuring electricity/water affordability. The first methods looks at the percentage of income spent on electricity/water. In this regard, the popular norm is that if a household spends more than 10% of its income on electricity, or 5 % on water, the service is not considered to be affordable. In the case of electricity, this is only a rule of thumb and it changes depending on whether the country concerned is a tropical country or if the country is one where electricity is also required for heating.

The second method looks at the affordability of basic need electricity/water. Again, the percentage of income required to attain basic need volume of electricity/water is generally considered in the analysis. In order to assess electricity and water poverty and affordability, the subsistence electricity and water needs of a typical household in the country is estimated. Identification of such basic need would facilitate the regulator in

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<sup>7</sup> World Bank , Poverty Measurement and Analysis, 2002

determining the lifeline (subsidized) block of electricity/water tariffs. For example, with regard to basic need electricity, two approaches are generally used; a top-down approach and a bottom-up approach. The top-down approach suggests that the “most essential electrical appliances” be identified in order to estimate the average consumption of electricity for those appliances over a period of time. In the context of bottom-up, the definition of basic need electricity is the volume of electricity consumed by the households on the poverty threshold. The poverty threshold is generally defined in terms of the national official poverty line.

## **2.2 Classification of Affordability Instruments**

Affordability provisions are generally classified into two main groups, income support provisions and tariff support provisions<sup>8</sup>. Income support measures address the individual customer’s ability to pay out of their disposable income. These measures usually take the form of direct income assistance or utility service vouchers, mostly provided to a target group of customers by the Government. Other income support measures include; payment assistance in the form of easier payment plans, special loan facilities, arrears forgiveness and additional hardship initiatives that provide assistance directly to households. In fact, targeted interventions, measures and approaches are often needed to ensure that the poor benefit from these efforts.

Tariff-related measures on the other hand keep the size of bills low and can take the form of tariff caps, increasing block tariffs, tariffs rebates and discounts. The tariff related measures are usually financed through some form of cross-subsidization or increasing-block tariff<sup>9</sup>. The affordability of electricity/water usage by poor households can be promoted in various ways by adjusting (lowering) the tariff levels through: providing a subsidy for the connection fee; reducing or eliminating the fixed charge component of the tariff; eliminating or reducing the energy charge for a defined maximum consumption; and reducing the energy charge with no defined maximum.

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<sup>8</sup> The classification is based on the paper “Social Issues in the Provision and Pricing of Water Services”, Organization for Economic Co-operation and Development (OECD), 2003

<sup>9</sup> Increasing/ Inclining block tariff: Volumetric charges that divide the tariff price into several steps or blocks. The first block of consumption is at the lowest price. As the customer uses more during the month, the consumption will eventually fall into block two at a more expensive price.

There are also many non-pricing elements that bear on the affordability of services to the poor, including deposit requirements, disconnection and reconnection policy, universal access to service and the use of load limiters to control a household's usage. Income support measures are favored by regulators because, in focusing on income rather than price, the economic and environmental signals sent by tariffs are not affected.<sup>10</sup> In fact, tariff systems should be designed to reflect the full costs of the service, while discount and subsidy systems should be designed to directly target the poor's needs. An approach that combines tariffs, discounts and subsidies should consider the basis and continuing validity of the tariff design, the financing sources of the utility and how to distribute the discount or subsidy so as to accomplish its specific purpose. Ideally, stakeholders should be involved at all stages.

An affordability instrument can also be classified as a general or specific measure, depending on its focus. General or untargeted instruments reduce prices to all or most customers, while specific or targeted instruments reduce prices for particular customers. To cater to the needs of the most vulnerable the instruments must be targeted. Since water and electricity bills are often a function of price and quantity, in principle, an inclining block tariff is an example of a targeted measure that can be structured to provide the lowest rates for subsistence levels of consumption. On the other hand, a Government subsidy to a utility is an affordability measure that is considered to be untargeted as it also delivers benefits to non-deserving customers by reducing the service provider's cost and lowering the tariffs to all customers. This can lead to reduced incentives to pursue efficiency improvements on the part of the service provider and to over consumption on the part of the customers.

Whether water and electricity subsidies are a cost-effective way to reduce the cost of service for the poor (and thus raise their disposable incomes) depends on the degree and manner in which they are targeted. The better targeted the subsidy, the lower the subsidy

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<sup>10</sup> OECD, *Social Issues in the Provision and Pricing of Water Services*, 2002

budget needed to provide a given discount to the poor, or alternatively the greater the benefit to the poor for a given subsidy budget. Pro-poor utility services provision generally has the following primary objectives:

- **Price** – that is, to ensure the poor have access to services at an affordable price;
- **Access** – that is, to ensure universal access to the service;
- **Quality** – that is, to ensure access of an acceptable quality;
- **Efficiency** – that is, to ensure productive, allocative and dynamic efficiency in the provision of a service; and
- **Sustainability** – that is, the provision of service must be financially, socially and environmentally self-sustaining.<sup>11</sup>

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<sup>11</sup> RIC, Social Policy and Strategy for Water Sector Regulation, 2007

### **3.0 WATER AND ELECTRICITY EFFICIENCY AND PRO-POOR SUPPORT**

Increasing the efficiency of supply and consumption of water and electricity can have a direct impact on the poor. Increased efficiency in the use and the consequent fall in the demand for utility services means that the poor pay less because they use less. There is an indirect impact on the poor because increased cost efficiency in the way water is supplied can lead, in turn, to lower prices for all consumers, making services more affordable. Furthermore, electricity and water utilities are very large users of water and electricity themselves. Therefore, energy and water efficiency measures can reduce costs for both water and energy utilities and thereby increase the available revenues for expanding access or service levels.

#### **3.1 Water Conservation and Efficiency Measures**

Water conservation and efficiency involve managing both consumer demand and supply to reduce the amount of water used for a given water service. On one hand, making water supply systems more efficient can help control costs, improve service delivery, and expand access without incurring prohibitive costs and/or tariffs. On the other hand, demand-side measures facilitate customer choice and can be price-based (e.g. variable tariff structures, targeted price concessions), or non-price based, such as information services on water use efficiency and, the use of efficient plumbing fixtures which can reduce water usage.

**3.1.1 Demand-Side Measures** – demand-side water efficiency measures include:

- **Household demand-side management** – such as low-flush toilets, low-flow shower heads, etc.
- **Water conservation technologies** – such as low-pressure pipes, sprinkler systems, drip systems for irrigation, different types of water recycling, improved water canal lining materials to reduce seepage, automatic water flow restrictors, etc.

- **Tariff designs/seasonal variation in the water tariff**- a dry season premium could reflect the fact that, because water is scarce, water use by one reduces the amount available to another.

### **3.1.2 Supply-Side Measures**

Supply-side water management seeks to limit and reduce the amount of water lost in the supply of water and to reduce the service providers cost, thereby reducing the tariffs to customers. There are a number of supply-side interventions and they include:

- **Efficient Pumping** – This involves optimization of the energy used by the water pumping system. Pumping improvements range from motors with low startup electricity requirements (‘soft starters’), small size pump rotors (‘trimming impellers’), repairing motors to their original efficiency (‘rewinding motors’), and installing pump flow controls (‘variable-speed drivers’). Pump system optimization is estimated to result in energy savings upward of 20%.
- **Leak Management** – Effective management of leaks can save enormous quantities of water and energy. Leak management generally covers two basic activities: detecting and repairing leaks and pressure management.
- **Water System Automation** – This involves automation of water supply system to handle operations in response to changed situations and to promote efficiency. The devices include: automatic alarms to reflect leaks and breakages; automatic shutdown of water pumps; and equipment to optimize water pressure in the supply network.
- **Metering and Regular Monitoring** – Metering and monitoring will provide information about how much water is put into the system. These help in leak detection and allow the management of water supply system against benchmarks and targets.

## 3.2 Energy Efficiency Programmes Benefitting Poor

Energy efficiency involves all changes leading to lower energy use for a given energy service or for a given level of activity. Promoting energy efficiency can help reduce energy bills by lowering demand for electricity or energy services. By transferring efficiency gains to consumers, electricity services will become more affordable. Many countries have adopted energy efficiency standards that require the achievement of specified energy saving targets by implementing energy efficiency programmes. In the UK, for example, energy efficiency standards require electricity retailers to rebate residential consumers for achieving energy savings targets. In Australia, a national Green start initiative seeks to improve the energy and water efficiency of low-income and disadvantaged households. Eligible households receive free home energy and water assessments; free supply and installation of energy and water efficiency products such as pipe insulation, efficient light bulbs, low-flow shower heads, draft-proofing, and seals for refrigerators, doors, and windows; and personalized help to access rebates and programmes.

### 3.2.1 Demand-Side Measures

There are a number of specific demand-side energy efficiency measures which can be beneficial to low-income consumers as they can result in reduced kilo watt hours consumed and consequently lower electricity bills:

- **More efficient lighting** – Lighting is one of the largest electricity uses for low-income households, hence the deployment of new clean lighting technologies can help realize energy savings. Two types of programmes have had particular success in some countries including Cuba and South Africa<sup>12</sup>:
  - Compact fluorescent lamps (CFL) – the collection of incandescent light bulbs and their replacement with CFLs for little or no charge to the consumers; and

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<sup>12</sup> The World Bank, Large-Scale Residential Energy Efficiency Programs Based on Compact Fluorescent Lamps (CFLs), 2009

- Street lighting utilizing renewable energy sources
- **Efficient Appliances** – Establishing energy efficiency standards for appliances can be among the most cost-effective options for controlling demand and thereby reducing a utility’s need to invest in additional capacity, as inefficient appliances require additional amounts of energy that ultimately require utilities to invest more in production, transmission and distribution to satisfy a given level of demand. Whether or not the poor directly use such equipment, they are indirectly affected with higher costs.
- **Automating the Delivery of Electricity** – Smart grids hold the potential for presenting a very effective way of efficiently delivering electricity to the consumer. They can improve energy efficiency and lower greenhouse gas emissions by managing loads, reducing system loss and allowing interaction between the utility and consumers.

### **3.2.2 Supply-Side Measures**

Supply-side management seeks to limit and reduce energy loss in the process of producing electricity and therefore makes more electricity available at the same cost. More efficient systems translate to reduced generation power costs, improved voltage levels and potentially reduced investment in system improvements. The poor obtain indirect benefits, including improved system reliability and lower retail prices. Supply-side measures include:

- **Enhancing Generation and Energy Conversion** – this involves improving/upgrading electricity generation units through the installation of equipment enhancements and co-generation, that is, generating heat and electricity from a single source.

*\*N.B this is utilized in jurisdictions with temperate climate, where heating required during some seasons.*

- **Making Transmission and Distribution more Efficient** – this can be done by:
  - (i) reducing technical losses through increasing transmission voltage, installing higher efficiency transformers at substations and replacing overloaded lines with larger-sized conductors;
  - (ii) reducing non-technical losses with innovative metering and load-monitoring schemes;
  - (iii) instituting penalties for electricity theft;
  - (iv) instituting a cap on the amount of system losses to be charged and passed through to consumers and requiring the amount to be further reduced overtime;
  - (v) giving incentives or imposing penalties to improve system power factor; and
  - (vi) shifting load patterns through demand-side management and demand-pricing schemes to avoid excessively high peaking periods.

Energy efficiency programmes can result in lower customer demand and consequently lower service costs. Some measures employed are technical, such as, load limiters, which restrict the level of current a consumer receives from an electric utility power line to a set value, or non-technical for example, inverted block rates and time of use or seasonal tariffs, which provide an incentive for customers to modify their appliance usage and conserve energy. In some cases the regulator may apply revenue-cap pricing that decouples the link between sales and revenue to ensure that the quality of service is maintained in the event of lower sales due to a successful energy efficiency programme.

## **4.0 REGULATION AND AFFORDABILITY/PRO POOR PROVISIONS**

### **4.1 International Practice of Affordability Provisions**

In light of the discussion in **Section 2.0** above, infrastructure service affordability issues can be tackled by a number of initiatives led by various agencies, whether it is the Government, the utility or the regulator. In jurisdictions worldwide there have been differing views (and practices) regarding which entity should have the social obligation towards vulnerable customers or rather if measures for addressing affordability and other social issues should be left to voluntary actions.

In jurisdictions such as Latin America and the United Kingdom early reform initiatives neglected to include social responsibility on the part of the regulator, since regulation was then, principally intended to protect private investors from the risk of administrative expropriation from Government and to signal commitment to reforms. In these regions the policy interventions aimed to increase access to services. However, the problems on the demand side, (such as those preventing users from connecting to services, that is, affordability) were not addressed. In fact, for years after early reform initiatives, ensuring affordability by low-income groups remained one of the most challenging, albeit important tasks on the agenda of public utility reform. Taking the regulator out of the equation, the social obligation fell solely with the Government and was left as a voluntary exploit of the utility companies since utilities were also not considered as having a social obligation towards vulnerable customers.<sup>13</sup>

More recent utility reform initiatives have included affordability analysis as an integral part of the reform programme. In many countries the regulator's governing legislation also spells out its responsibility to ensure affordability. Where the regulator directs affordability policy implementation, the possible actions are limited by the duties and objectives as set in its governing legislation. Underlying this framework is the view that the social dimensions of utility services need to be taken fully into account when key policy decisions are being made, especially those being made in the regulator's undertakings with regard to its price setting function.

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<sup>13</sup> World Institute for Development Economics, Consumer Participation and Pro-Poor Regulation, 2002

Currently, in several jurisdictions, the issues regarding utility affordability are addressed by a mix of initiatives of the Government (which has the primary obligation) and the utility (usually on the advice and supervision of the regulator). In the United Kingdom for instance, utility affordability policies for the water and electricity sectors are implemented under the supervision of the regulator. The energy regulator, Ofgem has an important secondary duty of protection of vulnerable customers, that is, consumers who are disabled or chronically sick, of pensionable age, with low incomes or living in rural areas, and have implemented a number of policies to address their unique affordability issues. Ofgem also has the responsibility to contribute to Government's strategy of eradicating fuel poverty<sup>14</sup>. In a small number of regions measures for addressing affordability and other social issues have not been addressed by the regulator and have been left to voluntary actions of utility service providers and or the government.<sup>15</sup>

## 4.2 Local Situation

The enactment of RIC Act No. 26 of 1998 enabled the RIC to commence economic and technical regulation of the water and electricity sectors. The functions of the RIC include:

- Regulating tariffs and charges in order to ensure that the most economical and efficient service possible is provided to consumers.

Specifically, the RIC Act (Section 6) states that in the performance of its functions, the Commission shall have regard to among other things the public interest and to 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. In Section 67, the Act states that where the Commission makes regulations it shall have regard to the ability of consumers to pay rates, thereby further imposing an affordability obligation on the RIC. The RIC views its affordability obligation as imperative, as it believes that there is a definite role for the Commission in addressing the social impacts of its pricing

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<sup>14</sup>A fuel poor household is one which cannot afford to keep adequately warm at reasonable cost. The term is mainly used in the UK, Ireland.

<sup>15</sup> Florence School of Regulation , Affordability of Basic Public Utilities: Regulation and Poverty Policies, 2008

decisions and ensuring affordable services. However, the RIC will seek to balance the interests of service provider (a reasonable return on investment), consumers (adequate and affordable service), and the public (expanding access for the poor, avoiding damage to the environment). The RIC also sees the Government as having the primary social obligation to protect the poor and other disadvantaged groups and it believes that Government policies such as rebates or direct financial assistance continue to be the best way to address issues related to customers' ability to pay.

Because affordability interventions are deemed as necessary to fulfilling its objectives, the RIC has proposed pro poor/affordability measures for both the Water and Sewerage Authority (WASA) and the Trinidad and Tobago Electricity Commission(T&TEC) to deliver affordable services to all classes of customers with special measures to protect those most vulnerable. As discussed above, tariffs, discounts and subsidies can be used to ensure affordability. Pro-poor pricing mechanisms can include inverted block rates; "lifeline" rates for qualifying low-income consumers; and a flat percentage of income charge. The non-pricing elements of utility charges that bear on the affordability of services to the poor include deposit requirements; disconnection and reconnection policies; the use of universal service; and the use of load limiters to control usage. Additionally, a regulator can approve a line extension tariff and/or the policy and terms under which the service provider will extend service to new customers/communities. The regulator can also establish internal institutional structures to respond to the poor, such as a consumer service committee, and an external stakeholder panel.

With respect to the affordability instruments for WASA and T&TEC, the RIC's position is that they should:

- target poorer consumers in a transparent manner, rather than through across the board subsidies;
- be established at a minimum level and must not support excessive consumption;
- not distort incentives; and
- be pre-determined, and the source of the subsidy should be disclosed and be paid to the service provider preferably out of general tax revenues.

The RIC will also continue to support and contribute to Governments policies that are targeted at improving affordability of the poor and disadvantaged.

## **5.0 RIC'S PROPOSED AFFORDABILITY/PRO-POOR MEASURES FOR THE WATER AND ELECTRICITY SECTORS**

Embarking on the price review exercise for WASA and T&TEC, especially after several years of stagnant prices can certainly generate concern about large price spikes and raise questions about affordability. On the other hand, establishing pricing regimes to get the utilities to a point where they will be able to recover their costs is certainly a challenge for the RIC. This section discusses the different ways for ensuring that water and electricity services are affordable for the poor and vulnerable customers.

### **5.1 Affordability Indicator**

To protect vulnerable customers the RIC takes into consideration the circumstances of the less fortunate in the country when setting tariffs. Therefore, for customers reliant on government pensions, or falling into similar low-income groups, whose monthly income is about \$3,000.00, their total monthly expenditure on water should be below the internationally accepted target of about 5%. Similarly, the RIC has proposed that electricity customers reliant on government pensions or falling into similar low-income groups, whose monthly income is about \$3,000.00 and whose consumption is about 200 kWh per month, their total monthly expenditure on electricity bills should be below the internationally accepted ceiling of about 10%.

### **5.2 Price/Revenue Cap Regulation**

The RIC believes that the implementation of the RPI-X<sup>16</sup> mechanism (more specifically Revenue Cap) for the price review for WASA and T&TEC is a clear demonstration of its efforts to protect consumers and provide for affordability. The RPI-X form of regulation provides strong incentives to minimize costs and allows the attainment of dynamic efficiency. There are in fact many characteristics of the RPI-X form of regulation that are instrumental in achieving affordability. One characteristic of the RPI-X form of

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<sup>16</sup>RPI is the Retail Price Index and X is the general efficiency improvement assumption.

regulation is the limit on the average price (or permitted revenue) of the service provider. It also produces financial stability and viability by introducing rating flexibility and it reduces the tendency to over invest in fixed assets. In effect, incentive regulation allows service providers to concentrate on minimizing costs which result in savings that are eventually passed on to the customers. In fact, there is significant scope for a determined management to out-perform the targets that have been proposed by the RIC. Such out-performance would also benefit customers in future regulatory control periods. The RIC's prudent approach to the financing means that both current and future generations of customers will pay a fair and affordable price for the level of service they receive.

### **5.3 Tariff Rebalancing and Side Constraint**

The RIC proposes to include a “rebalancing control” or “side constraint”, that is, setting limits to the extent of annual price increases to customers. In the absence of side constraints, individual customers could face significant price movements from year to year. Specifically, the RIC proposes to include a price constraint on the first block of consumption to limit the price increase to the lower income consumers to an affordable level for electricity customers. The RIC proposes a similar price constraint for domestic customers of the water utility.

### **5.4 Codes of Practice**

Within the first control period the RIC completed Codes of Practice for the Trinidad and Tobago Electricity Commission which speaks to a range of policies and provisions to improve affordability and therefore the ability of the poor and disadvantaged to use the service. The Codes are essentially a set of customer-related standards, policies, procedures and practices that the utility should consistently apply in dealing with specific customer and service issues.

The policies and procedures in the Codes of Practice detail the utility's function in:

- Providing Priority Services for The Elderly, Disabled and Chronically Ill;
- Dealing with Customers in Default;
- Disconnecting Customers;

- Providing a Range of Accessible of Payment Methods;
- Addressing Billing Queries; and
- Handling Complaints.

Many of the measures in the Codes of Practice deal specifically with protecting the interests of vulnerable customers by providing them with avenues of redress for poor service or for meeting special needs.

For WASA, similar Codes of Practice that will specifically improve the affordability for vulnerable customers have been proposed. The Codes also place the responsibility on WASA & T&TEC to make customers aware, and provide clarity and understanding about the arrangements that can benefit these customers. The measures in the Codes, encourage the service provider to minimize inconvenience to disadvantaged customers, it also provides a framework for dealing sensitively with the poor and most vulnerable. The policies, however, are not intended to promote or facilitate customers simply avoiding payment as they also place responsibility on customers to contact the utility if experiencing significant financial hardship. Under the Codes of Practice customers can gain access to alternative payment arrangements and will be able to negotiate reasonable payment plans. Limitations for disconnection, the timeframe for reconnection and WASA's/T&TEC's responsibility in indentifying and contacting customers in default are also outlined.

## **5.5 Water Sector Specific Measures**

### ***5.5.1 Glide Path Approach to Revenue Determination***

The current water tariffs are significantly below cost-recovery, as they were last adjusted about 20 years ago. In order to achieve full cost-recovery, large increases in tariffs would be required. The RIC proposes to utilize a glide path approach to determining the level of “revenue” to be recovered each year of the control period. The glide path approach works by increasing revenue gradually (and hence tariffs) over the regulatory control period so that in the final year of the control period the tariff revenue is equal to the RIC's full cost

allowed revenue requirement. The gradual increase in tariffs will make it easier for customers to manage their bills rather than large one-off increases that may make bill payments difficult. Additionally the gradual increase in tariffs will be linked to visible improvements in the quality of service received by customers, so that the service provider cannot improve earnings at the expense of reliability and service quality.

### ***5.5.2 Billing Period***

Another proposal by the RIC is that WASA should bill all customers at least every two months instead of quarterly as is currently the practice. Where customers are being billed monthly, this should continue. The advantages of billing bi-monthly are many. It will help improve WASA's cash flow and potentially reduce the cost of debt. Metered customers would receive more frequent and timely information on their consumption, thereby helping to send the right signals to customers. The total amount of the bill would be lower and, therefore, easier for poor households to manage their budget and make payments on a bi-monthly basis rather than be burdened with a larger quarterly bill.

### ***5.5.3 Tariffs and Other Financial Proposals***

#### ***Tariffs***

In determining the tariffs, the RIC will consider a number of factors, including the requirements of the RIC Act, efficiency and social/equity considerations. **First**, the RIC proposes the use of “postage stamp” pricing, under which all areas in Trinidad and Tobago have the same tariffs. This results in reduced tariffs to consumers in low-density areas, supported by customers in more heavily populated areas. This is a form of cross-subsidy where some customers pay a small premium so that all can enjoy a single “postage stamp” rate. **Second**, in the case of unmetered customers, the proposed increase in tariffs for the category of customers falling under the first band of ARV/ATV<sup>17</sup> properties (where most of the low income households would fall) will be much smaller than the two other bands. **Third**, in the case of metered customers, the RIC proposes to set a two-part tariff (that is, a fixed charge and a variable/volumetric charge), where the

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<sup>17</sup> ARV/ATV, Annual Ratable Value/Annual Taxable Value

low income households are charged a concessionary fixed charge. In the case of a volumetric charge, to meet customers' basic needs, the RIC will assume that all households must be able to afford to purchase at least 8m<sup>3</sup> of water ("basic-needs") per household per month (i.e. assuming 4 persons per household). On a volumetric basis, the maximum socially acceptable bill would be calculated. The RIC's suggests that the water tariff be designed to ensure that no household will have to spend more than 3% of their total household income on water. This indicator is less than the 5% internationally accepted ceiling for affordability of water and sanitation services.

#### ***5.5.4 Other Measures***

***The RIC has also proposed a number of other mechanisms, including:***

- (i) putting water at the centre of poverty-reduction strategies with predictable funding. The RIC will include water supply projects for the worst served areas in establishing the revenue requirement for the service provider, thereby making funds available for undertaking these projects. The RIC will monitor the implementation of these projects on a continuous basis;
- (ii) setting clear goals and holding the service provider accountable. The RIC has set a goal of 4 days per week for water supply to everyone in the country, with superior performance being encouraged through a mechanism that uses rewards and penalties to induce the service provider to achieve desired goals;
- (iii) establishing a rebate on the bills for areas receiving 4 days or less per week water supply (i.e. lower tariffs for intermittent service);
- (iv) establishing an effective safety net for poor households served by standpipes. The RIC proposes the elimination of a standpipe charge and recommends that local authorities be responsible for paying for standpipe supply until these customers are connected to WASA's network;
- (v) providing adequate funding for water trucking to bring immediate relief to those areas outside of WASA's network; and
- (vi) ensuring that after the initial increase, the tariffs during the regulatory control period would remain broadly stable in real terms.

## **5.6 Electricity Sector Specific Measures**

### ***5.6.1 Consumer Compensation Scheme (Guaranteed Standards Scheme)***

The RIC has established a consumer compensation scheme (Guaranteed Standards Scheme) wherein non-compliance of minimum standards for service quality will entail penalties for the service provider payable to the customer. The RIC has set a minimum standard for service quality in eight areas. These standards include restoration of service after interruption, keeping appointments, providing connections to supply, issue of first billing statement and response to complaints, among others. Non-compliance requires the service provider to compensate affected consumers by crediting the amount directly to the consumer's account.

### ***5.6.2 Capital Contribution and Cost-Sharing for Electricity***

A Capital Contribution (CC) is a network cost which is an advance lump sum payment to facilitate infrastructure works for an electricity supply. It is the customer's contribution to the capital cost of new network development. Currently, once the residential customer is within 60 feet of T&TEC's existing network, there is no charge to connect the customer. However, where a customer's property is not located close to the existing network, a customer is required to pay all or part of the capital contribution, which may act as a significant barrier to obtaining a connection. The RIC has approved a new policy and guidelines. One of the significant features of this policy is to protect the service provider from making an uneconomic investment while allowing the first customer who makes the initial investment for capital contribution the ability to cost-share with later connecting customer. The RIC has limited the period over which reimbursement may be offered to the original customer to 6 years. The RIC has also approved the accounting policies for collecting latecomer fees.

With regard to the water sector a similar mechanism for capital contribution and cost sharing will be proposed for implementation.

### ***5.6.3 Tariffs and Other Measures***

As in the case of the water sector, the RIC has used “postage stamp” pricing, whereby all customers in the country have the same tariff. The RIC has implemented an increasing/inclining block tariff, where the first block of consumption is at the lowest price ensuring that no household spends more than 2% of its monthly income. The RIC has proposed a number of other measures, including:

- waiver of interest payments on outstanding accounts;
- protection from service termination (some forms of non-payment are not to be tolerated i.e. illegal tampering of meters);
- extended payment arrangements i.e. the option of arranging alternative payment schedules and paying bills in smaller installments (this is to be agreed between the customer and service provider); and
- flexi pay card – a card enabling customers to make small, ongoing payments at banks and customer service centers, as agreed between the customer and service provider.

## **6.0 CONSUMER ADVISORY REPRESENTATIVE COMMITTEE**

The RIC is also planning to establish an external low-income **advisory body/consumer representative committee** to represent and advocate for the interest of the poor in specific pro-poor projects, policies or regulatory initiatives. This body/committee would focus on assessing, advancing and advising on pro poor needs in terms of affordability, access and quality. It would consist of all relevant stakeholders including advocates for the poor and citizen, Government and NGO representatives. The RIC will meet with this body/committee periodically to review proposed policy changes and rate design options and consult with it to develop new initiatives/ programmes.

## 7.0 CONCLUSION

Prices are an effective and efficient method of regulating demand. However, trying to achieve the competing goals of equity and efficiency with a single instrument is likely to be ineffective as one goal is likely to compromise the other. Better outcomes are likely to be achieved if separate instruments are used, and so pricing can be used to encourage efficient use of water and electricity, and subsidies can be set independently of consumption to achieve equitable access.

Since the RIC sees the Government as having the primary social obligation to protect the poor and to achieve affordability in the access and use of water and electricity, the RIC endorses the Government's affordability efforts that are targeted directly at the poor and most vulnerable. In fact, the RIC supports the Utilities Assistance Programme (UAP) which is a social intervention strategy, introduced by the Government. The UAP provides financial assistance to eligible citizens to ensure their continued access to basic utilities such as water and electricity.

While the Government's main focus is affordability, the RIC's goals are twofold and the RIC has proposed a number of measures to help achieve both goals of efficiency and equity. In addition to implementing affordability provisions to achieve these goals effective monitoring and reporting are also essential in enabling the RIC to track progress on social issues and identify possible additional areas for future action. The RIC will continue to monitor and report on the performance of WASA and T&TEC and utilize indicators relating to debt, disconnection, energy efficiency and feedback from vulnerable customers to measure the effectiveness of implemented affordability provisions. With RIC's affordability provisions operating alongside the Government's targeted policies, such as the UAP, the RIC is confident that social protection of the poor and vulnerable will be achieved by these mechanisms that provide them with their basic needs for water and electricity.