



Social Policy and Strategy for Water Regulation

February 2005

Public Utilities Regulatory Commission

Mission Statement

PURC is committed to the development and delivery of the highest quality of utility services to all consumers and potential customers, while building a credible regulatory regime that will respond adequately to stakeholders' concerns and also ensure fairness, transparency, reliability and equity in the provision of utility services in the country.

Vision

To become a model institution which ensures the delivery of the highest quality services to all consumers at fair prices.

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CHAIRMAN'S MESSAGE



This policy document sets out the objectives of the Public Utilities Regulatory Commission (PURC) in fulfilling its duty to protect water consumers, which includes both the served and unserved. It is informed by the current state of the sector, the Government of Ghana's (GoG) broad social policies as articulated in the Ghana Poverty Reduction Strategy (GPRS) document, and the findings of a socio-economic survey on accessibility to water supply undertaken by the PURC in 2002. The release of the document is in fulfilment of PURC's commitment to address social fairness, in view of market imperfections, and to ensure that the poor and vulnerable are protected by adequate mechanisms that provide them with their basic needs for water.

*Since its establishment in 1997, PURC has released a number of publications to demonstrate its commitment to transparency in dealing with all stakeholders. In addition to this **Social Policy and Strategy** document, PURC is simultaneously issuing its **Tariff Policy** document to explain the Commission's position with regard to the setting of water tariffs. The documents come at a time when GoG is undertaking considerable investment in the sector and the Ghana Water Company Ltd. (GWCL) is close to introducing the private sector into the management of its operations. PURC has followed the restructuring process with keen interest and hopes that actions taken by GoG will lead to greater efficiency in service provision.*

The 5-Year Review of the performance of GWCL (1999-2003) recently published by PURC provides useful insights into the operations of the company and the areas in which considerable improvement is required. However it is not expected that these improvements will impact heavily on those who are currently deprived of direct access to service. The need to recognise this in PURC's regulatory decisions in the short to medium term underpins most of the policy statements in this document.

A handwritten signature in black ink, appearing to read 'Kwame Pianim'. The signature is fluid and cursive, written over a light background.

Kwame Pianim
CHAIRMAN

Public Utilities Regulatory Commission
February 2005

EXECUTIVE SUMMARY

In furtherance of its duty to protect the consumer interest, PURC commissioned research work in 2001-02 to improve its understanding of the issues which are important to consumers in respect of water supply service. The PURC research took the form of a *'Use and Satisfaction'* survey in urban areas of Ghana. The results of this survey provided reliable data to enable the PURC to understand the current level of service performance and the priorities for water supply improvement as perceived by the consumers (both GWCL customers and potential customers).

Across the whole of the 3,000 sample, the first priorities were **Accessibility** (including reliability for piped customers), **Affordability** and **Quality**. The other two issues identified during the qualitative stage are **Community Involvement** to promote sustainability and **Duty of Care** by Institutions in respect of consumers as individuals and as members of their local communities. It is the findings from this survey that largely inform PURC's social policy initiatives.

PURC has a primary concern to address the interests of the poor. The poor (defined by Living Standards Measurement criteria) make up 47% of the total population in urban piped system areas. PURC's research study found that within urban piped system areas only 15% of the poor have access to piped water either directly or via yard taps. This has led to the adoption by PURC of a working definition of the urban poor as those (i) without direct access to regulated piped supplies, (ii) who depend on secondary and tertiary suppliers and (iii) who buy by the bucket.

In its policy statements, PURC demonstrates its commitment to ensuring service to the urban poor by assuming a leadership role among the institutions with a remit to tackle pro-poor issues.

In view of the demonstrably high rates paid for water purchased from suppliers other than the utility, the social policy lays emphasis on improving access, targeting water supply investments to the requirements of the poor and ensuring affordability. This is further supported by the evidence that whilst the amount spent by the urban poor appears similar for both the un-served and those served by the utility, the former obtain only a quarter of the volume of water used by their counterparts.

The role played by secondary suppliers in the water supply chain is important in view of the significant gap between supply and demand, the poor's preferred service and payment options, and the high cost of

connecting to the utility's mains. The policy recognises that any regulation of this segment of the sector should concentrate on safeguarding the health and safety of consumers rather than the price at which their services are delivered. It is hoped that the recognition of their role, and the regulation of the tariff at which bulk water is sold, will encourage secondary suppliers to offer better prices and service to their customers.

Non-governmental organisations (NGO) and Community-based organisations (CBO) have a role to play in determining the level of service that an area is willing to pay for. They have a vital role to play in ensuring that the interests of the poor (those not connected) and the under-served are safeguarded and that their voices are heard in public and private sector debates. PURC is seeking the formation of effective Consumer Associations (as a means of getting consumer feedback) and these will play an important part in improving PURC's understanding of issues important to the consumer (Consumer policy statements to be issued by PURC will cover this policy objective).

Operators must have a social dimension and involve their customers. Customer service orientation – a marketing approach – puts the customer first. It is PURC's view that this should be the case even under the present constraints under which the public utility operates.

PURC is conscious of the importance of communication and Public Awareness in support of its functions.

1. INTRODUCTION

1.1 State of urban water supply

There are two distinct management arrangements for the provision of water in Ghana, with a separation into urban and rural/small town water supply. The Ghana Water Company Ltd. (GWCL) is responsible for urban water supply and at the moment has about 80 systems serving a total population of some six million. As of 2004, urban water coverage is estimated at 59% and is expected to reach 85% by 2015 in line with the Millennium Development Goals (Ref. GPRS, PMU). Under the sector's investment programme a total investment of US\$891 million will be required to meet this target (Ref. PMU).

Many urban communities face shortfalls in water supply. The situation is even more critical in the major cities, where the urban poor have to pay more than ten times the tariff for water (as approved by the PURC) through secondary and tertiary providers. Several factors have been responsible for this state of affairs some of which include:

- i) previously low tariffs which affected GWCL's ability to renew its facilities and carry out expansions in water supply;
- ii) increased urbanisation which is putting tremendous pressure on utilities;
- iii) management challenges; and
- iv) ineffective mechanisms to ensure accessibility to potable water supply to low-income and peri-urban consumers.

GoG is bringing in the private sector in the hope that there will be greater efficiency and much needed investments can be marshalled. The introduction of the private sector imposes on PURC the challenge of ensuring that the needs of the urban poor and vulnerable are adequately catered for, at the same time recognising the interests of the provider to make adequate return to ensure sustainable services.

Rural and small towns water supply, on the other hand, is the responsibility of District Assemblies (DAs) who are custodians of the systems that are required to be community-managed. The Community Water and Sanitation Agency (CWSA) provides facilitation and advisory support to DAs and communities in the

planning, implementation, operation and maintenance of their water supply systems. This sub-sector is not covered under PURC's regulatory purview.

It is worth noting that community managed systems fix their own tariffs, subject to approval by their respective District Assemblies. These tariffs range between ¢50 – 200 per bucket, with an average tariff of around ¢100. This compares with a lifeline (social) tariff of ¢80 per bucket approved for urban consumers (2004). This evidence and others will inform PURC in addressing the tariff, water supply and service options for low income urban communities, whose circumstances of life may be similar in many respects to those who live in rural and small town communities.

1.2 Social policy in Ghana water sector

The Government of Ghana (GoG) considers the provision of potable water as a critical element in its policy for the sustainable economic development of the country. This has been clearly stated in its policy statements and the Ghana Poverty Reduction Strategy document. In line with its commitment to ensure the provision of potable water, the Ministry of Works and Housing (MoWH) initiated various reforms in the water sector in the 1990s to improve the efficiency of water supply. These reforms created an institutional structure to separate and clarify the various institutional roles within the water sector, and have followed a process to introduce the private sector into urban water delivery. GoG further established the PURC by Act 538 to regulate and oversee the provision of water and electricity supply 'to consumers'.

Among some of its key objectives in ensuring the provision of potable water supplies and in line with the GPRS, GoG is focusing on improving access to water in rural, peri-urban and unreached poor urban areas (Ref. GPRS 2003-2005). The basic issues to be addressed, with impact on access to water supply, particularly to low-income consumers, include:

- mobilising of financial resources for investment in refurbishment and extension of coverage of urban water systems;
- strengthening the Ghana Water Company Ltd. (GWCL) to effectively manage service contracts and extensions;

- establishing a Unit within the MoWH to monitor provision of water to the poor;
- bringing tariffs to cost recovery levels to make the operations of urban water systems sustainable;
- providing direct state interventions in areas where there is a marked gap in service delivery;
- creating partnership programmes with NGOs which have a comparative advantage in responding effectively to the needs of the vulnerable and excluded.

These broad GoG objectives and policies provide a reference point for PURC's own initiatives as outlined in this document.

1.3 Consumer's perceptions

In furtherance of its duty to protect the customer interest, in 2001-02 PURC commissioned research work to improve its understanding of the issues which are important to consumers in respect of water supply service. The PURC research took the form of a *'Use and Satisfaction'* survey in urban areas of Ghana which will remain in the management of the Ghana Water Company Limited (following transfer of several smaller piped systems to community management). The process commenced with an initial qualitative stage to identify issues, followed by a detailed quantitative stage in which 3,000 households throughout Ghana were interviewed about each of the issues.

The results of this survey provided reliable data to enable the PURC to understand the current level of service performance and the priorities for water supply improvement as perceived by the consumers (both GWCL customers and potential customers). The survey also provided useful information on the cost of water and the quantity which consumers were able to obtain through the different access routes.

The survey asked consumers to prioritise the issues which they saw as most important to their water supply. Across the whole of the 3,000 sample, the first priorities were **Accessibility** (including reliability for piped customers), **Affordability** and **Quality**. The other two issues identified during the qualitative stage are **Community Involvement** to promote sustainability and **Duty of Care** by Institutions in respect of consumers as individuals and as members of their local communities. The

findings of the socio-economic study largely inform this policy document.

1.4 Key issues

PURC has a primary concern to address the interests of the poor. The poor (defined by Living Standards Measurement criteria) make up 47% of the total population in urban piped system areas. PURC's research study found that within urban piped system areas only **15% of the poor have access to piped water either directly or via yard taps**. This has led to the adoption by PURC of a working definition of the urban poor as those (i) without direct access to regulated piped supplies, (ii) who depend on secondary and tertiary suppliers and (iii) who buy by the bucket.

The PURC research asked consumers for their **preferred method of water supply and the response was almost universally for a direct connection** to piped supply. The ultimate goal of water sector development is to provide direct connections for as many consumers as possible, but this is a very expensive strategy. There are **huge investment requirements** in development of water resources and treatment to serve the much higher water use by consumers with piped connections.

There are very **high leakages** in some areas, and it is believed that many illegal connections have been made to the GWCL pipe network. There is a significant shortfall in revenues for water supplied because of poor billing and collection performance. It is also thought that there is abuse of flat rate charge assessments where meters are not working.

Neither the physical nor the financial losses can be made good immediately, though GWCL has shown good progress in some areas. New direct connections cannot be served unless there is already a reliable water supply and spare resource and treatment capacity to meet the additional demand. Alternatively, new standpipe connections make available only the existing quantity of water container users currently obtain from GWCL pipes via secondary suppliers. They do, however, simplify collection (nearer to home) and stabilise price (community or GWCL management).

Systems with intermittent supply may be improved simply by attention to leakage and **removal of illegal connections**,

without requiring major investment in additional resources and treatment, and there may be some scope for additional connections if sufficient losses can be recovered. Improvements of this nature are relatively cheap and assist all consumers but are not targeted specifically at the poor.

The first year investment programme (FYIP) of the Urban Water Project (UWP) being undertaken by the GWCL is aimed at the rapid restoration of supplies in areas of this nature. The UWP contains a target to provide not less than an additional **50,000 connections** (either directly or as standpipes). At best this number of connections will not reach all of the unconnected population unless at least 15,000 connections are installed as standpipes each serving 200 population (i.e. more than 90% of the unconnected population will remain on container supply, probably without access to the lifeline tariff).

Consequently it must be recognised that system improvements for all consumers will not be obtained through the period of the UWP without significant additional investment, only part of which can come from improved billing and collection arrangements. International experience has shown that communities themselves working with the other water sector stakeholders can assist by determining the means of supply improvements they can afford and adopt community management of the billing and collection arrangements.

Non-governmental organisations (NGO) and Community-based organisations (CBO) have a role to play in determining the level of service that an area is willing to pay for. They have a vital role to play in ensuring that the interests of the poor (those not connected) and the ill-served are safeguarded and that their voices are heard in public and private sector debates.

PURC is seeking the formation of effective **Consumer Associations** (as a means of getting consumer feedback) and these will play an important part in PURC's improving understanding of issues important to the consumer (Consumer policy statements to be issued by PURC will cover this policy objective).

Operators must have a social dimension and involve their customers. Customer service orientation – **a marketing approach** – puts the customer first.

PURC is conscious of the importance of **communication and Public Awareness** in support of its functions. (Consumer policy statements will cover this policy objective as well).

As part of its desire to build knowledge that will inform its regulatory decisions and future policy and bring benefits to the urban poor, PURC has resolved to test interventions in delivering water to low-income communities through the **promotion of pilot projects**.

2. PURC SOCIAL POLICY ROLE

2.1 Functions of PURC

This policy issued by the Public Utilities Regulatory Commission sets out the objectives of PURC in fulfilling its duty to protect consumers. The clauses of the 1997 PURC Act which support the framework for a meaningful role for PURC in regulatory social policy are (selectively) extracted as follows:

The functions of the Commission include the following:

3(c) to protect the interest of consumers and providers of utility services

3(d) to monitor standards of performance for provision of services

3(e) to initiate and conduct investigations into standards of quality of service given to consumers

A public utility licensed or authorised under law to provide utility services shall:

11(b) make such reasonable effort as may be necessary to provide to the public service that is safe, adequate, efficient, reasonable and non-discriminatory

In preparing the guidelines [for any rate to be charged for any service] the Commission shall take into account

16(a) consumer interest.

Section 3 (c) 'to protect the interest of consumers' is a primary function of the Commission, repeated in respect of rate setting in Section 16 (a). PURC's powers to obtain information and take regulatory action in support of the consumer interest are an amalgam of the utility's duty 'to provide to the public service that is safe, adequate, efficient reasonable and non-discriminatory' and PURC's functions 'to monitor standards of performance for

provision of services' and 'to initiate and conduct investigations into standards of quality of service given to consumers'.

2.2 PURC to take the lead role in pro-poor issues

Policy Statement 1: Leadership

PURC will take a lead role in the resolution of pro-poor issues in the urban water sector in line with its regulatory mandate to protect the interest of consumers, as well as Government poverty reduction objectives.

PURC has a key role in promoting agreement between stakeholders on the most appropriate form that pro-poor activity should take and to ensure that the contractual frameworks established in the sector support progressive improvement of service performance. The Commission has decided that pro-poor issues are important and it is fully committed to dealing with them. In line with this the Commission will require the utility to include pro-poor criteria in undertaking investments in water supply projects.

PURC will lead the formation of a working group of stakeholders to address provision of service to the urban poor. The group's tasks will include the targeting of any social funding or other relief schemes for the poor. PURC will undertake pilot studies to test interventions in delivering water to low-income communities to provide lessons that will inform its regulatory policies, the supply and payment options available to the utility and the criteria for determining investments targeted to the urban poor.

There have been several recent initiatives aimed at obtaining stakeholder involvement in developing arrangements to provide water supply service, notably through the establishment of an Urban Low Income Working Unit (ULIGWU) and a Unit to monitor the provision of service to the urban poor. PURC proposes to take the lead in water sector stakeholder involvement in improving services for the urban poor.

In furtherance of its duty to protect the consumer interest, in 2001-02 PURC commissioned research work to improve its understanding of the issues which are important to consumers in respect of water supply service.

2.3 PURC's working definition of urban poor

Policy Statement 2: Definition of urban poor

PURC will pursue a policy of reducing the burden of those who face the greatest deprivation. In line with this policy PURC's working definition of the 'urban poor' refers to those

(i) without direct access to the utility's supplies,

(ii) who depend on secondary suppliers and

(iii) who buy by the bucket or container.

PURC has a primary concern to address the interests of the poor. The poor (defined by Living Standards Measurement criteria) make up 47% of the total population in urban piped system areas. PURC's research study found that within urban piped system areas only 15% of the poor have access to piped water either directly or via yard taps. This has led to the adoption by PURC of a working definition of the urban poor as those (i) without direct access to regulated piped supplies, (ii) who depend on secondary and tertiary suppliers and (iii) who buy by the bucket.

3. REGULATORY SOCIAL POLICY OBJECTIVES

The following sections of this document set out PURC policy objectives to protect consumers in each of the five key areas:

- Accessibility
- Affordability
- Quality
- Community Involvement
- Duty of Care

3.1 Accessibility

3.1.1 *The current position*

The research results have confirmed the classification of access routes to water supply which have been used in earlier research papers (e.g. London Economics *Affordability and Willingness to Pay*, 1998). The PURC 2001-02 research demonstrated that

there is a basic requirement for a volume of water per person which is satisfied by consumers who collect water by container irrespective of price.

Those with a direct piped supply use more water (up to four times more per person than those collecting by bucket), but pay approximately the same monthly amount for this much larger volume.

Larger households (whether directly piped or collecting water by bucket) use less water per head than smaller households, and there is a robust relationship between per-capita consumption and numbers of persons per household. Average household size found from the survey across Ghana is approximately 4.8, but there are large regional variations.

The volume used per household is only loosely related to household income, with only the highest income groups on piped supply (and those taking bulk deliveries from tankers) using more than the volume expected based on household size. Hence the most significant determinant of consumer use and unit cost of water is whether the consumer has to collect and pay for water by the container. This has led PURC to its working definition for the urban poor.

In some areas customers have no choice as to the sources of water available to them and sellers can exploit this situation. Tankered water in particular is very expensive because of the unavoidable costs of transport (the survey data found it nine times more expensive than piped supply), but may be the only access route available for the poor, with 4.6% obtaining water by this route. The most frequently used access routes for consumers in urban areas are from neighbours and secondary suppliers (35% of the poor, at prices three to four times more expensive than piped supply) and from communal sources and standpipes (32% of the poor, around double the price of piped supply).

3.1.2 Improving access to water

Policy Statement 3: Improving access to water

PURC will support any interventions which result in improved and more reliable access to water, with the ultimate goal of direct connections.

In the light of the above findings, PURC will support any interventions which will result in improved access for consumers, improved continuity and reliability of supply. This will include support where appropriate for secondary suppliers.

Improvement in supplies will necessarily be incremental in order to reach the greatest number of low income consumers, and PURC will support interventions which move consumers to lower priced access routes. In the short to medium term many consumers will have to accept improved access to container supply routes whilst engineering and management improvements seek to increase the water and funding available for improved service, with the ultimate goal of direct connections when systems have been restored and then extended.

The PURC-led pilot interventions will provide useful lessons in this regard.

3.1.3 Targeting investment for low income consumers

Policy Statement 4: Targeting investment for low income groups

PURC will instruct urban water utilities to include pro-poor criteria when undertaking investments in water supply projects.

Low income groups bear a disproportionate burden arising from the current state of urban water supply. The working definition of the poor includes 32% of poor consumers receiving water from 'managed' supplies such as standpipes and community pumps where they must collect water using buckets (containers). A further 49% of the poor take water from surface sources or secondary providers. A small proportion of consumers (4%) have access to private sources at home.

Investments in water supply projects will not benefit the poor unless such investments specifically target them. PURC will insist that the public utility includes pro-poor criteria when undertaking water supply projects.

3.2 Affordability

3.2.1 PURC research results

The research found no simple external measure (e.g. housing type) able to identify 'the poor'.¹ 'The poor' were defined in the research work as the two lowest LSM groups, comprising 47% of the households in the survey. This is a similar proportion to non-piped consumers (51.1% excluding free supply routes) and tends to support PURC's definition of the urban poor as those without access to direct supply.

The group of consumers who collect water by bucket/container can be subdivided into classes based on the secondary supplier route through which they obtain water. All these classes have the same average consumption per capita, but pay different prices dependent on the access route as indicated above in Section 3.1.1. PURC's survey data showed that the subsistence quantity of water collected by bucket or other container is the same irrespective of price. Hence for container users, affordability of direct piped supply is not an issue, since many already spend as much as piped customers do each month, but obtain only one quarter of the volume of water used by piped customers.

3.2.2 Ensuring the poor enjoy the lowest possible price

Policy Statement 5: Affordability

PURC will support any interventions which will increase the number of the urban poor who benefit from the lowest possible water price.

The evidence in section 3.2 highlights the fact that the poor who obtain water by the bucket could use three times more water that they are currently using and spend the same amount of money. In the light of this PURC will support any interventions that will increase the number of urban poor who benefit from direct connection and can therefore enjoy the lowest possible water price.

¹ Defining the poor based upon their own statement of incomes or expenditures is known to be unreliable (because of variability of income as well as non-disclosure). The PURC research work adopted the living standards measurement (LSM) method used in market research, based upon ownership of material goods etc which has been found to be more representative of disposable incomes.

3.2.3 Recognition of role of secondary suppliers

Policy Statement 6: Recognition of role of secondary suppliers

PURC recognises the role and importance of secondary suppliers in the water distribution chain, particularly in reaching the urban poor. It will therefore support initiatives that enhance their capacity to deliver acceptable service at an affordable price.

Secondary and tertiary suppliers – tankers, cart operators and domestic vendors – form an important aspect of the water distribution chain. PURC acknowledges that the best approach to water delivery is to provide direct supply through the utility's mains. However the Commission recognizes that this will be hard to achieve in the short to medium term, and secondary providers will continue to play a role in the supply chain. PURC has therefore resolved to adopt innovative approaches to reaching the urban poor in the short term through some of the following interventions to enhance the capacity of secondary suppliers to deliver acceptable service at an affordable price:

- bring tanker filling points closer to areas of need (recognising technical limitations) through collaboration with Ghana Water Company Limited;
- require GWCL to allocate a percentage (say 10%) of their production to secondary providers;
- promote co-operation between the utility and secondary providers in safeguarding the quality of service given to consumers

3.2.4 Regulation of activities of secondary suppliers

Policy Statement 7: Regulation of secondary suppliers

For the near future, PURC will not regulate the prices charged by secondary suppliers. PURC will institute appropriate mechanisms to regulate the quality of water supplied by these suppliers in order to safeguard the health and safety of consumers.

Secondary suppliers are in business because there is a big gap between supply and demand, and GWCL's distribution network

does not cover all communities. Even where there is reticulation a number of factors, including the high cost of connecting to the utility's mains and preferred payment options, have contributed to the proliferation of the secondary water business. A substantial portion (up to 85%) of the cost of tankered water is made up of transportation, over which the PURC has no regulatory control. The PURC believes that the rates charged for the provision of water supply services in secondary markets, e.g. vendors and tanker services, are subject to free market forces and do not warrant regulatory intervention. Currently the prices charged by GWCL to the providers of secondary market services are subject to PURC price regulation. Where there are market distortions, and exploitation of the poor, PURC will support interventions which move consumers to progressively cheaper access routes, and/or support lower prices from secondary suppliers by reducing their costs.

PURC however deems it important that the quality of water supplied to consumers by secondary suppliers is wholesome and consistent with standards defined by the Ghana Standards Board. It will therefore ensure that the services they provide are consistent with the promotion of good health. Appropriate guidelines for ensuring good quality water have been defined for the secondary market.

3.2.5 Regulation of tariffs to secondary suppliers

Policy Statement 8: Regulation of tariffs to secondary suppliers

PURC will regulate the tariff charged to recognised secondary suppliers by utilities and will encourage such secondary suppliers to pass on to consumers any benefits they derive from such regulation.

PURC recognises that those who depend on secondary suppliers pay substantially more for their water needs than those who are connected to the distribution mains. It is therefore the Commission's desire to reduce the burden on these consumers. The tariff paid by secondary suppliers for bulk water purchased from the utility will therefore be approved by the Commission.

3.2.6 ***Involving water sector stakeholders in serving the poor***

Policy Statement 9: Involving water sector stakeholders in serving the poor

PURC will collaborate with the relevant agencies, NGOs, Community-based organizations and research institutions to:

a) address the provision of service to the 'urban poor' and low-income households;

b) promote the involvement of local communities in decisions concerning water supply and service improvements, and

c) build and share knowledge on service to the poor.

There have been several recent initiatives aimed at obtaining stakeholder involvement in developing arrangements to provide water supply service, notably through the establishment of an Urban Low Income Working Unit (ULIGWU) and a Unit to monitor the provision of service to the urban poor. PURC proposes to take the lead in water sector stakeholder involvement in improving services for the urban poor.

PURC will undertake pilot studies to test interventions in delivering water to low-income communities to provide lessons that will inform its regulatory policies, the supply and payment options available to the utility and the criteria for determining investments targeted to the urban poor. Initially PURC activity will concentrate on the selection and promotion of pilot studies in conjunction with other stakeholders to inform the Commission and to demonstrate the advantages of joint working of stakeholders in support of pro-poor interventions. These pilot studies will investigate options such as provision of additional storage for individual customers or to support bulk supplies, pay-as-you-go systems for paying for water and options for community management of distribution systems.

3.2.7 Lifeline tariff

Policy Statement 10: Lifeline tariff

When the rising block tariff is applied for domestic customers, the lowest band, defined as the lifeline tariff, shall be set at levels to reflect affordability but not less than basic operational unit costs excluding depreciation and return on capital. The monthly allowance for water subject to the lifeline tariff shall reflect basic needs to ensure an acceptable quality of life with respect to hygiene and basic household needs.

It is recognised that lifeline tariffs only have limited benefit to the poor, defined by PURC as those without a direct supply from the GWCL, who rely on secondary suppliers and who collect water by buckets or other containers. A more appropriate pro-poor approach is to expand the service to those who currently do not enjoy the benefits of a GWCL service. Consequently PURC shall reserve the right to replace the lifeline tariff with a more appropriate pro-poor tariff arrangement at some time in the future.

3.3 Water quality

3.3.1 Issues in water quality management

Policy Statement 11: Water quality

PURC will promote best practice in achieving for end consumers water quality which is safe for drinking.

PURC has established a Water Quality Inspectorate, headed by a Director, to oversee the enforcement of the Commission's policies and regulations. The Commission is committed to ensuring that the water that is delivered is safe and will not cause any danger to public health. It is particularly keen to ensure that the utility takes all measures that will prevent any disasters and requires that emergency relief plans are defined to cope with any eventuality.

Water quality may be viewed from the perspective of the following:

- quality of raw water at the intake, which is a function of the way and manner in which the resource is managed;

- quality of water after treatment, which is a function of the technical processes that are followed by the utility;
- quality of water fed into the distribution lines and what happens to it before it is delivered to the consumer;
- quality of water within the consumer's premises, which is a function of the state of the service lines and cleanliness of household storage facilities.

It is on the basis of the above that PURC policies and strategies in ensuring the supply of good quality drinking water are founded.

3.3.2 *Water quality management*

End-product testing as a means of monitoring water quality is not seen as the best means of safeguarding the interests of the consumer, as it provides little protection when there is a serious crisis. PURC has therefore considered it appropriate to adopt a more pro-active approach that is premised on integrated water quality management.

Recent initiatives taken by the International Water Association (IWA) include promotion of integrated Water Management Plans (WMP) as the primary tool for management of water quality. WMP includes appraisal and monitoring of all risks to water supplied from the public system but also tankers and other secondary access routes for container users up to the point of use.

It is the Commission's view that whilst the quality of raw water impacts strongly on the utility's cost of treatment as well as its availability all year round, it does not have much control over the management of the resource. Other agencies are responsible for ensuring this. This therefore requires the involvement of the Water Resource Commission, District Assemblies and various other stakeholders to ensure adequate protection of the resource.

The Commission is promoting the concept of Water Quality Management Plans, which involves a number of stakeholders playing their roles effectively in the water supply and distribution chain. As part of its strategies in this direction the PURC is leading a Working Group of key stakeholders – including the Water Resources Commission (WRC), the Environmental Protection Agency (EPA), the Ghana Water Company Limited -

to take forward the development of a Water Management Plan for the Weija supply system.

3.3.3 *Water quality monitoring*

PURC will continue to use the audit approach in its monitoring of water quality, noting that the ultimate responsibility for ensuring the supply of good quality water and reporting to PURC rests with the utility. Under this arrangement the utility is expected to submit regular reports on water quality in respect of its operations. The Commission will carry out its own audits to determine the level of compliance. It will also follow up on customer complaints and will require that the utility takes immediate steps to remedy confirmed cases of default.

In carrying out its mandate in respect of water quality PURC will collaborate with the utility and the Ghana Standards Board to ensure that standards are in line with international best practice.

The Commission is aware that the current rationing arrangement, under which the utility's distribution system is subjected to frequent interruptions as a result of rationing, tends to compromise some aspects of water quality and increases the cost of operation. Nevertheless such rationing will continue into the immediate future and it is therefore required of the utility to take all reasonable measures to ensure that the quality of water to the final consumer is not compromised by the current state of supply.

3.3.4 *Secondary suppliers – water quality*

Causal evidence suggests that water quality can be severely compromised by the way water is handled and stored by secondary and other tertiary providers – tankers and domestic vendors. Contamination can take place during discharge of water when hoses are not properly handled, when tanks are not regularly cleaned (and in some cases when they are used to fetch raw water), and in the homes of consumers from unclean storage tanks and containers.

PURC has developed guidelines (*Ref. Water Tanker Service Guidelines*) and will monitor their application to safeguard the quality of drinking water supplied by tanker and other secondary and tertiary suppliers.

As part of the strategies to support secondary suppliers to deliver good quality water, GWCL has agreed to disinfect the tanks belonging to Tanker Associations that purchase water

from the utility. PURC shall insist that regular disinfection is carried out before any tanker operator can stay in business.

3.3.5 Consumer awareness - water quality and hygiene

Policy Statement 12: Enhancing consumer awareness of water quality and hygiene issues

PURC will promote consumer awareness of water quality and hygiene issues in urban and peri-urban communities in collaboration with the utilities and relevant government institutions.

Studies have shown that water contamination occurs more at consumer premises as a result of poor storage. At the moment no agency seems to have taken the responsibility to create awareness for water quality and for hygiene education that could complement the services in the urban and peri-urban communities. This is contrast to what is taking place in the community water supply sub-sector.

The application of the guidelines will complement consumer awareness programmes to be handled individually, and collectively, by the utility, PURC's Consumer Affairs Bureau and the Consumer Associations.

3.3.6 Other water quality initiatives

PURC will support other water quality and health education initiatives and will monitor their application in pilot studies.

3.4 Duty of care

3.4.1 Customer concerns

Policy Statement 13: Duty of care

PURC will ensure that the utilities (and their operators) have in place systems and procedures to provide appropriate and timely response to customers' concerns.

3.4.2 Involvement of civil society

In the course of the qualitative stage of PURC research it became clear that many communities felt that they were not being taken seriously by public utilities when they voiced their complaints. Often they had little recourse to obtain a hearing –

either community or political representation was weak and they felt that there was no way they could be heard.

Individuals with common problems wish to be heard and at least be given an explanation for why circumstances can't be changed. There is a role for NGOs in championing the poor and helping them to form consumer societies, but civil society should also interact with the regulator. The media can be a powerful ally, but it must be well informed. Public awareness and transparency are generally regarded as the keys to civil society involvement.

3.5 Community involvement

3.5.1 *International and Ghanaian context*

Recent international studies and experience from Ghana's own CWSA have shown that community involvement leads to sustainable access to water. In some cases consumers have been prepared to pay higher prices than for secondary supplies to gain the advantage of reliable community managed systems. At the qualitative stage of PURC's own research strong support was expressed for community participation in decisions about improving water supply. PURC will actively promote the concept of community participation, especially with regard to the provision of water to poor and peri-urban communities.

As part of its desire to build knowledge that will inform its regulatory decisions and future policy and bring benefits to the urban poor, PURC has resolved to test interventions in delivering water to low-income communities through the promotion of pilot projects. PURC is already undertaking pilot arrangements that involve community management of 'bulk water supply' to generate lessons that will guide replication in other urban communities.

It is intended that these pilot studies will provide lessons in increasing accessibility, shortening the supply chain and achieving sustainability through innovative supply and community management arrangements. The initial expectation is that the projects should be completed within two years, though monitoring for lessons learned with a view to engineering better informed and targeted social policy interventions may take longer

3.5.2 *Good governance*

Good governance is transparent policies, regulatory bodies and the involvement of civil society. This does not have to be a legislative construct. PURC policy statements can provide this lead and PURC acts on behalf of civil society.

3.5.3 *Duty of care in the water sector*

PURC stands in the place of civil society and can obtain and publish information and promote activity in the regulated business to ensure that the requirements of civil society are better observed in utility companies' operations.

This general policy will be supported by specific requirements for the monitoring of complaints handling (both by GWCL and PURC) and other customer response measures as required by PURC for its annual and periodic monitoring of the company's performance. (Consumer policy statements will cover these policy objectives).

ACRONYMS

CBO	Community Based Organisations
CWSA	Community Water & Sanitation Agency
DA	District Assemblies
EPA	Environmental Protection Agency
FYIP	The First Year Investment Programme of the World Bank Urban Water Project
GoG	Government of Ghana
GPRS	(GoG) Ghana Poverty Reduction Strategy
GSB	Ghana Standards Board
GWCL	Ghana Water Company Limited
IWA	International Water Association
LSM	Living Standards Measurement – a market research social and income classification system based upon ownership of household goods and other items
MoWH	Ministry of Works and Housing
NGO	Non-governmental organisations
PURC	Public Utilities Regulatory Commission
PMU	Project Management Unit – The World Bank Urban Water Project
SIPS	The Subsequent Investment Projects included in the UWP after the first year.
ULIGWU	proposed Urban Low Income Working Group
UWP	The World Bank Urban Water Project
WB	World Bank
WMP	Water Management Plans
WRC	Water Resources Commission

DEFINITIONS

Access route	The means by which consumers obtain water
Billing	For the water supplier this is the process of preparing and sending out demands for payment for water used.
Bulk supplies	Large quantities of water supplied from a single point
Collection	For the water supplier this is the process of gathering payment for water supplied. For the consumer it is the process of obtaining water by bucket or container
Communication pipe	The part of the service pipe which runs from the supplier's main to the point where the supplier's responsibility ends (usually the property boundary).
Compound house	A dwelling place containing more than one household
Connection	The means of providing water to customers from water mains. Term is also often used to describe the pipework which links water mains with households (see also water main, service and supply pipe)
Consumers	All users of water whether or not they are customers of GWCL
Container	The customer's means of collecting water from a tap or other supply point which includes buckets, bowls, calabash, <i>grawa</i> , jerry cans, drums and barrels.
Customers	The household, head of household or institution registered by GWCL for billing purposes.
Demand	A term used to mean the volume of water consumers take from a supply system, but it is also sometimes incorrectly used to describe the amount of water put into supply (which includes leakage)
Direct connection	The term is used to describe pipework leading into a customer's premises where it is connected to storage tanks and/or water using fittings (e.g. sinks, baths, water closets). (See Yard Tap).
Disinfection	The process of ensuring that water or what it is carried in is biologically safe (free from bacteria) using biological poisons such as Chlorine compounds
Distribution	Delivery of water. For the operator the distribution system is the network of pipes from which connections are made to customers
Duty of care	Where consumers have no choice but to obtain service from a single monopoly supplier then that supplier has to comply with its statutory role in a manner which is reasonable, socially acceptable and meets the normal

	behaviour which would be exhibited by a supplier in a competitive situation (see Regulation).
Financial losses	The value of water which is actually used by consumers but for which payment is not collected
Flat rate	An assessed charge for water – a single periodic payment.
Intake	The point at which water is drawn from resources for treatment
Intermittent supply	Where water is only available part of the time
Leakage	Loss of water through holes in pipework and other equipment used to supply water to consumers. A large proportion of this is on pipework and from fittings owned by customers (e.g. from dripping taps). (see Physical losses)
Level of service	A measure of the performance of water supply delivery of specified outputs (e.g. quantity, pressure)
Lifeline tariff	A special tariff rate for a quantity of water (or other commodity) designed to make basic needs
Lines	Distribution/service lines – an alternative term for pipelines
Main	See water main
Market failure	A situation where customers are deprived of the choice of services which would exist in a competitive market. One aspect of this is failure to exhibit duty of care.
Meter	Mechanical device used to record the volume of water which passes to the customer from the supplier's communication pipe.
Operator	Any provider of service in an industry using assets or equipment which it may not own
Peri-urban areas	Areas on the fringe of urban systems, usually without mains water supply
Physical losses	Leakage – water actually lost from mains, pipes and fittings.
Pilot project	A test of new processes or equipment on real systems to assess their usefulness before any wider scale application
Poor	Defined by PURC as those without a direct connection who depend on secondary suppliers and collect and pay for water by the container
Price	The amount paid by consumers for a volume of water e.g. the cost of one bucket.
Public Awareness	The process of getting messages across to the public

Rates	Rates of charge – see tariffs
Regulation	Regulation is the imposition of a framework of policies and guidance (with legislative support where appropriate) intended to ensure that commercial entities do not exploit monopoly positions. Regulation stands in place of competition where there is market failure.
Reticulation	Term used to describe interconnected networks of pipes
Secondary suppliers	Suppliers of water who obtain their water from the utility's system
Service (pipe)	A pipe which carries water from a water main to a customer's premises. The term includes the supplier's communication pipe and the customer's supply pipe.
Social Policy	Statements of goals or intentions on matters which affect civil society
Social Survey	Research work carried out by PURC in 2001-02 to obtain the views of consumers on water supply services
Stakeholders	All those institutions and groups with a legitimate interest in any matters which affect them or their duties
Standpipe	A section of rising pipework on which a tap is fixed. In respect of access routes for supply, the term is used to describe managed water points (public or otherwise) at which consumers collect and pay for water by the bucket (or other container).
Supply pipe	The customer's part of a service (pipe). The pipework which carries water into a customer's premises from the point at which the supplier's responsibility ends – usually the meter or external stop-tap.
Tariff	Price per unit volume of water set by the regulator PURC and charged by the supplier
Tertiary suppliers	Suppliers of water who are supplied by secondary suppliers
Utility supplier	The supplier of services to the public.
Water main	A pipe owned and operated by the water supply utility
Water resources	Water taken from natural sources such as streams which is treated for public supply
Water Sector	All commercial and public activity associated with the supply and use of water
Weija	The location of supply of water for western Accra – also the name of the distribution system served by the Weija Treatment Works

Wholesome	A description of water quality interpreted as meeting all standards and other customer requirements such as taste and appearance.
Yard Tap	The description of a piped supply to a customer's premises which ends at a tap outlet. This may be sited on an external or internal wall, or as a standpipe within the owner's control such as in the yard of a compound house. It is not connected to storage or water using fittings but is counted as a piped connection.

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