



Republic of Uganda
Ministry of Water and Environment
Directorate of Water Development
Water Authorities Division

TARIFF SETTING GUIDELINES

**For Use in Determining Tariffs for Water Supply Services in
Small Towns in Uganda**

Draft Version

August 2008



Ministry of Water and Environment
Directorate of Water Development

DRAFT

Preamble

Economic regulation is dynamic and forms of regulation change from time to time depending on the structure of the industry, size of the firms and overall policy objectives. This guideline provides the process and methodology of tariff setting in the context of the urban water sub-sector, specifically for small towns in Uganda that are gazetted as Water Authorities and where these Authorities have delegated the task of managing the water supply services to a local Private Water Operator.



Table of Contents

1.	Introduction	1
2.	Objectives of Tariff Setting.....	1
3.	Tariff Setting	1
3.1.	Considerations in Determining the Tariff	2
3.2.	Tariff Calculations.....	2
3.3.	Maximum Tariff.....	4
3.4.	Tariff Indexation	4
3.5.	Revenue Sharing Principal	4
4.	Roles and Responsibilities in Tariff Setting.....	6
4.1.	The POs	6
4.2.	The WBs.....	6
4.3.	The DWD	6

Abbreviations & Acronyms

APWO	Association of Private Water Operators
BPT	Business Planning Tool
DWD	Directorate of Water Development
MC	Management Contract
MoWE	Ministry of Water and Environment
PC	Performance Contract
WA	Water Authority
WB	Water Board



1. Introduction

This guideline outlines the tariff setting principals to determine tariffs in the Ugandan small towns applying the Tariff Policy. The Tariff Policy was developed by the Ministry of Water and Environment (MoWE) through the Directorate of Water Development (DWD). This policy was approved by Cabinet in May 2008.

This guideline concentrates on determining the tariff in small towns in Uganda that are:

- ✓ Gazetted as Water Authorities (WA),
- ✓ That have an operational Water Board (WB)
- ✓ Water Boards that have delegated the operations of the water supply system to a local Private Water Operator (PO) under a management contract.

2. Objectives of Tariff Setting

Tariff setting is guided by the following objectives:

- ✓ To provide consumers with a fair and affordable price structure consistent with maintenance of a financially and operationally secure water supply system;
- ✓ Encourage consumers to make efficient use of water;
- ✓ Encourage operators to make efficient use of plant (assets) and operational efficiency based on targets set;
- ✓ Provide Operating Companies reasonable return/profit to give confidence to current investors and attract new investors;
- ✓ Provide a tariff structure for an operational cost recovery tariff; and
- ✓ Provide for future progress towards a commercially competitive system.

3. Tariff Setting

This guideline has been developed specifically to assist the Operator and the Water Board in determining the necessary / appropriate tariff in the respective towns in accordance with the Tariff Policy (see Annex I for the Tariff Policy):

- ✓ Tariffs shall be formulated in accordance with the Water Act Cap. 152; Section 94
- ✓ Each service area should have its own tariff based on the uniqueness of the water infrastructure and hence the attendant O&M costs
- ✓ Enhance efficiency, effectiveness, viability and hence sustainability of the systems
- ✓ The tariff shall be uniform in each of the service areas
- ✓ Any service fee should be eliminated or kept to a bare minimum
- ✓ Tariffs will only be subsidized under very exceptional circumstances
- ✓ Efforts shall be made towards the establishment of a sanitation levy in large towns
Service for the poor will therefore be critically addressed by keeping tariffs to the lowest possible levels



To make this process easier and more transparent for all parties concerned, the Business Planning Tool (BPT) was developed. This tool allows for the computation of the tariff in each town by the respective WA in conjunction with the PO to determine the necessary / appropriate tariff, which will enable the PO to operate the system such that all operational costs can be met.

It is believed that with the aid of the BPT this can be done in a very structured manner that should be easily followed by all parties concerned. The BPT calculation results will therefore form the basis for tariff negotiations between the WB and the PO together with the necessary tariff approval by the MOWE.

Upon successful negotiations the agreed tariff will finally be submitted to the Ministry for approval by the Minister before they can be adopted in the respective town.

3.1. Considerations in Determining the Tariff

In the Tariff Policy it is clearly stated that tariffs will only be subsidized under very exceptional circumstances. This implies that the tariff should at least cover all operational and system maintenance costs. In addition the Policy also states that the tariff shall enhance efficiency, effectiveness, viability and hence sustainability of the systems. This implies that services need to be further improved through capital investments and operational costs have to be kept to a bare minimum.

This is also reflected in the Performance Contracts of the Water Boards, which clearly state under clause 12.4 that Business Plans shall be prepared that

- ✓ Set financial targets that maintain the Authority's financial viability
- ✓ Maintaining a reasonable level of reserves, so as to make provisions for
 - Estimated future demand for the services of the Authority
 - Capital contributions which the Authority is obliged to make under clause 14 (meet financial obligation)
 - Improve the accessibility of and performance standards for the services provided by the Authority

Thus again this refers to covering of operational costs as well as building some reserves for future capital investments that will be needed to improve services in the respective service area.

3.2. Tariff Calculations

Based on the previous section it is clear that in determining the tariff in any given town the tariff shall meet the all operation and maintenance costs as required by the PO, pay the Water Board Allowance as well as generate some funds for basic capital investments. The tariff shall therefore include the following:



Tariff =	$PO_{OPEX} + FEE_{WB} + CAPEX_{Buffer}$		
Where			
PO_{OPEX} =	All PO operational costs (including PO CAPEX and PO contingencies)		
FEE_{WB} =	5% Water Board Allowance		
$CAPEX_{Buffer}$ =	X%	Capital Investment	Buffer
	(to be kept on ESCROW Account)		

To determine a tariff that can cover all operational costs and can set aside a contribution to future capital investments, the PO on behalf of the WA is required to fill in the following four (4) sheets of the BPT:

- ✓ **“Context”** – this includes all the relevant baseline data for the respective town; i.e. past performance from the previous financial year (this should be taken from the annual report) as well as system specific details like length of network, population in the service area, number of connections and financial details.

Note: By varying the CAPEX Buffer input value (normal range between 10% – 25%) in the “Context” sheet, the percentage of revenue collected that is due to the PO, will also change accordingly. A 10% CAPEX Buffer will mean 85% of collected revenue paid to the PO a 25% CAPEX Buffer means 70% of collected revenue is paid to the PO. In all cases it is important to note that the payment to the PO in all cases is based on meeting the full operational expenditure of the PO as provided for in the BPT!

“Targets” – this includes the annual targets that the PO is proposing to achieve over the period of 3 years. Please refer to the “Business Planning Guideline” on how the Business Plans shall be structured and on how targets are set.

- ✓ **“OPEX-IN”** – this includes all the operational costs that the PO is expecting to incur in operating the water supply system for the 3 year period, broken down into costs for each individual year.
- ✓ **“CAPEX-IN”** – this includes all the capital investment needs that the WA will require in order to meet the strategies laid out in the Business Plan.

This includes necessary short-term investments done by the PO for items for the operational staff such as computers, motorcycles / bicycles that will be written off based on the depreciation periods as stated in the BPT. As such these investments by the PO are tariff relevant and are expected to be recouped by the operator over the implementation period of the contract.

Long-term investments in network expansions and / or connection intensifications as well as other investments (e.g. additional storage volume, additional pumping capacity, etc.) are proposed by the PO to the WA. Note that these investments are not factored into the determination of the tariff, since the tariff is set to provide



operational cost recovery but not full cost recovery. However, it is essential that these are captured in the BPT to see how these investments can be funded. This would either be from Conditional Grants or internally generated revenue accrued through the CAPEX Buffer.

3.3. Maximum Tariff

It is acknowledged that there are some towns that will not be able to charge the operational cost covering tariff that has been determined using the BPT as it would simply not be socially acceptable. This could have various reasons such as:

- ✓ Over design of the system with high operating costs compared to the number of connections generating revenue
- ✓ Sole reliance on generator power with high fuel costs
- ✓ Poor state of repair of the system with very high operational losses (power and water)
- ✓ High water treatment costs due to poor source quality

It is for this reason that a operating subsidy may be allowed in extreme cases.

NOTE: In case the calculated tariff is excessive, set the CAPEX Buffer to 0%. This will mean that no revenue will be retained for capital investments, but it might be possible to determine a viable tariff through which at least the operational costs can be fully covered.

If even this fails to determine a viable tariff, and the WA feels that no further reductions in operational costs are possible, an operational subsidy may need to be negotiated with the WB and the Ministry through the Conditional Grant but this will require full justification and demonstration of the need.

3.4. Tariff Review

In line with the Tariff Policy the BPT introduces an opportunity for review of the operating environment annually as part of the budgeting cycle, and if necessary cause an adjustment of the tariff to overcome tariff erosion due to inflation and other factors

3.5. Revenue Sharing Principle

Based on how the tariff is determined, i.e. which percentage was selected for the CAPEX Buffer, the collected revenue is also in the same manner.

$$\text{Total Collected Revenue (R}_T\text{)} = \text{A} + \text{B} + \text{C}$$

Where

A =	$Y\% * R_T$	PO's OPEX and short term CAPEX (incl. a mark-up / contingencies)
B =	$5\% * R_T$	Water Authority / Board Fee
C =	$X\% * R_T$	Capital Investment Buffer

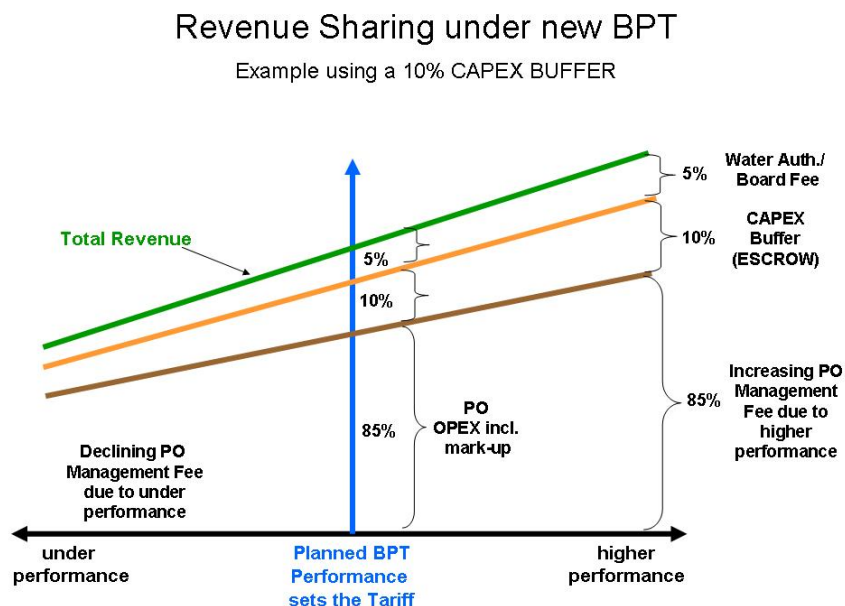


Looking at an example of 10% CAPEX Buffer, the collected revenue from the services provided by a PO in any given town is split as follows:

- ✓ 85% of revenue collected is received by the PO
- ✓ 10% of revenue collected are for future investments and are kept on the ESCROW Account
- ✓ 5% of revenue collected is paid out to the Water Board

It should be noted that the percentages that have been used in the tariff calculations for PO and CAPEX Buffer are the same percentages used to determine the sharing of the collected revenue. If another percentage is used for the CAPEX Buffer the percentages will change accordingly.

The way that this works is depicted in the following graph:



Based on the revenue sharing mechanism it is important to note three relevant scenarios which are likely to happen when the actual performance is compared to the planned performance as envisaged in the business plan and as calculated using the BPT

- ✓ Performance as planned
- ✓ Performance better than planned
- ✓ Performance less than planned

Implication of performance as planned in BPT

- ✓ The PO will have all operational expenses covered as planned in the Business Plan and determined using the BPT.

Implication of performance better than planned in BPT

- ✓ The PO will receive a higher Management Fee payments than the one calculated in the BPT



- ✓ Higher management fee for better performance will also lead to a higher Water Board Fee and also additional retained earnings in the ESCROW account for future investments.

Implication of performance less than planned in BPT

- ✓ The PO will receive a lower Management Fee payments than the one calculated in the BPT.
- ✓ Lower management fee for poorer performance than envisaged in the Business Plan will also lead to a lower Water Board Fee and also lower retained earnings in the ESCROW account for future investments.

4. Roles and Responsibilities in Tariff Setting

This section briefly outlines the roles and responsibilities of the different stakeholders in determining and finally setting the tariff for each town.

4.1. The POs

- ✓ Determines all relevant input figures for the BPT from past reports and knowledge of the supply area
 - Past performance data
 - System information
 - System context information
- ✓ Fills in the “Context” sheet in the BPT with the relevant data
- ✓ Determines annual targets
- ✓ Calculates the necessary inputs in

4.2. The WBs

- ✓ Checks the data in the “Context” sheet against available data from reports submitted by the PO in the past
- ✓ Verifies systems and context information
- ✓ Agrees on targets together with PO
- ✓ Is responsible for setting a tariff that doesn't exploit customers in the respective town, i.e. realistic targets are paramount
- ✓ Monitors the progress of the PO in attaining the planned activities as laid out in the Business Plan

4.3. The DWD/MWE

- ✓ Analyses the BP from each town and checks the baseline and context data in the BPT to the information kept in the DWD database for accuracy / correctness
- ✓ Assess if variables and indicators are reasonable and compare performance to future monthly reports (SIGMA)
- ✓ Analysis performance of towns through comparison of performance indicators (benchmarking)
- ✓ Analyses if inputs / investments are realistic
- ✓ Is responsible for setting a tariff cap