

South Africa Local Government Financial Reform Project

Final Report

10 September 2001

**Task 4: Evaluation of Alternative Arrangements of Powers and
Functions—User Charges for Trading Services**

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Task 4: Evaluation of Alternative Arrangements of Powers and Functions—User Charges for
Trading Services

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Prepared by Palmer Development Group



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1 INTRODUCTION: PURPOSE OF THIS DOCUMENT

Task 4 of the local government reform project deals with revenue assignment. As team members dealing with this task, Palmer Development Group (PDG) have undertaken a review of each municipal services sector and several cases studies focused on gaining an understanding of expenditure on municipal services and related income issues.

Task 4 overall needs to deal with revenue issues with the emphasis specifically on user charges. This is intended to be a combined Task 4 team effort with PDG providing inputs from the sector and case studies.

This report is intended to provide an overview of the key issues relating to user charges for municipal services. It draws substantially on the work done for the local government financial reform project but also uses more recent information available to PDG from ongoing work the firm is undertaking in the municipal services sector. In this regard it is notable that there have been major changes in approach to user charges over the 6 months which have passed since the case studies and sector reports were done. These changes have been brought about primarily through the newly introduced ‘free basic services’ policy of national government, a policy which has evidently been adopted by all local authorities. Further, newly demarcated local authorities are in the process of re-aligning what were previously a separate tariffs for each of the former local authorities making within their new boundaries.

2 CONTEXT: VARIETY OF LOCAL CIRCUMSTANCES

In the case study report undertaken for Task 4, local authorities were categorised into 5 groups:

3 WATER SUPPLY TARIFFS

3.1 Urban Context

Tariff structures – residential (on-site full pressure connections)

Since 1994 there has been a strong tendency for all former TLCs to move towards the implementation of a rising block tariff. (A recent – 2000 - survey of consumers in the Rand Water supply area indicates that 26 out of 32 respondents were applying a rising block tariff). This is largely in response to a national drive by DWAF to promote rising block tariffs as they are seen to be ‘pro-poor’ and also promote conservation.

In many cases municipalities are using a fixed monthly charge together with a rising block consumption charge. For example 13 of the 26 municipalities mentioned above. This removes the progressive advantages of the rising block tariff but makes income into the account more secure.

Those municipalities not using rising blocks use single consumption based charges, often with a fixed monthly charge and, in a few cases, declining block tariffs.

A high proportion of consumers with on-site supplies are metered (roughly 80% -own estimate). Those who are not are typically charged a flat rate per month.

Finally it needs to be noted that pre-payment metering is being applied to a limited extent. (South Africa is a world leader in developing electronic prepayment technology). The costs of the meters is a constraining factor at present.

Tariff structures – residential (other service levels)

Yard or roof tanks is a new service level concept which has been tested successfully in Durban. This is well suited to a fixed monthly charge as a fixed volume of water is delivered.

Public standpipes: The issues are similar to those discussed under ‘rural context’.

Tariff structures – non-residential

There are two primary approaches to setting charges for non-residential consumers:

- Rising block tariffs, often the same tariffs which are applied to residential consumers. Typically this is applied together with a fixed monthly charge.
- Single rate, consumption based tariffs, again typically with a fixed monthly charge.

In some cases special rates are applied to specific large industrial water consumers. There are problems with applying rising block tariffs equitably with non-residential consumers and this is not recommended (See PDG 2000). However, one way of achieving equity is to use the concept of residential unit equivalents (RUEs). This has been applied successfully in Hermanus.

A key issue municipalities face in setting tariffs for non-residential consumers is the extent to which they use industries to cross subsidise low income residential consumers. This is a local decision but national government (cabinet) has recently indicated that they favour reducing the input costs to industries.

Income from tariffs

With few exceptions local authorities budget to break even or generate a surplus on their water accounts. In most cases accrued income from user charges does equal or exceed actual expenditure. However, there are often relatively high levels of non-payment. It is difficult to track this as much depends on the way the treasury assigns debtors between accounts.

Durban is a useful case study as it has separate accounts and billing systems for water supply. Durban Water Services also applies a very strict credit control policy and proves that non-payment levels (bad debts) can be kept below 5%.

Impact of 'free basic water' policy

All municipalities are facing the need to introduce a free basic water policy. Some guidance is being provided to them by DWAF (see DWAF 2001a and 2001b). Three approaches are being considered or actually applied:

- A rising block tariff with a zero first block and no fixed monthly charge for those using water at the first block (basic needs) level.
- A credit applied to the accounts of the poor, sufficient to cover a basic amount of water. This is generally applied to the consolidated account.
- Service level targeting, with no charge for lower service levels (more applicable to rural areas).

Currently the indications are that the 'free water' message, which has been communicated strongly – but often inappropriately - by councillors at election time, is leading to increased levels of non-payment without a replacement source of income to municipal water accounts. However, this is not always the case.

Key issues

The majority of (urban) municipalities have well developed water supply tariff policies. The key issue is the implementation of a free basic water policy in such a way that the viability of the service is maintained. Much depends on the way in which the 'equitable share' is applied.

3.2 Rural context

Tariff structures

The majority of those in rural areas who have access to reticulated water use a public standpipe. There is a small proportion (perhaps 10 to 20%) who have connections to their yard or house with many having made these connections themselves, often illegally. Tariffs for public standpipes have typically been set as a flat rate per household which has access to the service. However, other methods have been tried but are not widespread:

- Kiosk and concession systems with payment made by volume to kiosk or concession operator.
- Supervised standpipes with people paying via coupons to the tap supervisor.
- Prepayment metering (electronic and mechanical) for 'retail' supply where payment is by volume.
- Bulk prepayment systems run with tokens where community collects money to buy tokens.
- Payment based in income with an assessment made by local water committees.

In summary tariff structures, where they exist are either single rate consumption based charges or flat rates.

Income from tariffs

In the majority of cases consumers do not pay. As the arrangements for subsidising operating costs are unstructured and inadequate there is typically little or no management of the system, particularly at the retail level. Therefore many systems are unsustainable.

The situation is changing as DWAF, local government and NGOs such as Mvula Trust have been promoting the establishment of new institutional structures, with the inclusion of community based organisations, and with an emphasis being placed on payment by the consumers for the services provided. There have been notable successes, with consumers paying sufficient amounts to allow local systems to be run properly.

Impact of a free basic water policy

As most people in rural areas are only getting a basic level of supply the ‘free basic water’ policy implies that most do not need to pay. This creates two sets of circumstances:

- Successful schemes, which are associated with consumers making payments, are at risk.
- Schemes where people have not been paying may remain unsustainable, with increasing numbers of illegal connections.

Key issues

To avoid the situations mentioned in the preceding paragraph in a ‘free basic water’ context it is essential that:

- Management arrangements are put in place to collect income from those who do not have a basic service.
- New subsidy arrangements need to be put in place with the emphasis on local rules which allow non-municipal services providers to access the subsidies to cover their costs.

Probably the most important issue facing the municipal service sector at present is the establishment of sound subsidy arrangements for water supply to rural areas. Although DWAF is currently applying substantial subsidies they recognise that this is an unstructured and poorly targeted subsidy. The Department recognises that innovation is needed in this area.

4 SANITATION TARIFFS

4.1 Urban Context

Tariff structures – residential waterborne sanitation

There are a wide variety of tariffs structures applied in South Africa’s towns and cities, including (roughly in order of popularity with municipalities):

- Fixed monthly charge at same level for all consumers.
- Fixed monthly charge varied by plot size.

- Fixed monthly charge varied by number of toilets.
- Flow based charge
- No separate charge: part of property rates.
- Fixed monthly charge varied by suburb.

There is a need for sanitation tariffs to be rationalised nationally. This has not received the same level of attention as water supply tariffs.

Tariff structures – residential –other service levels

Other service levels include:

- Intermediate waterborne systems which use low cost reticulation.
- On site ‘wet’ systems such as septic tanks.
- On site ‘dry’ systems such as ventilated improved pit latrines.

In the case of intermediate water borne options these are not widely applied but would have the same tariff structure options as for full waterborne.

In the case of ‘on site’ sanitation service levels there are two primary approaches to charging for the service to empty pits of tanks:

- Charge per emptying event.
- Monthly charge to cover emptying when require.

Most authorities use the former for septic tanks. Little attention has been given to pit emptying arrangements.

Tariff structures – commercial, institutional and ‘dry’ industrial

Tariffs vary widely, with the same range as for residential but with toilet based charges most popular. There is often a poor rationale for the tariffs. Surprisingly, given the direct relationship between ‘water in’ and ‘wastewater out’ for this group, there is little application of flow based tariffs.

Tariff structure – industrial effluent

Currently municipalities typically apply a flow based charge, often with an organic load component (based on chemical oxygen demand or some other measure). Although some municipalities include charges for other pollutants there has been little innovation in this regard. Little attention has been given to mass load based charges.

A research project on this topic is currently being completed (Kerdachi, 2001).

Income from tariffs

In the great majority of cases municipalities run their sanitation (sewerage) accounts with an accrued surplus. In some cases the surplus is relatively large (see Rand Water, 2001). However, there has historically been a common situation where the fixed monthly charge for poorer households is unaffordable to them and therefore payment defaulting has been high (see PDG, 1999). Once again it is difficult to relate levels of non-payment to the sanitation service as consolidated billing is the norm and much depends on council policy for allocation of debtors.

Impact of a free basic services policy

There has been little attention given to ‘free basic sanitation’ at a national level. However there are a number of tariff options which can be applied to promote affordable services to the poor:

- Rising block tariff with flow related to water consumption and first block set to zero.
- Setting sanitation tariff as a proportion of the water bill (thereby using the impact of the water supply rising blocks).
- Credits on the sanitation account, which work in the same way as for water supply.
- Incorporating sanitation with property rates (the poor would have low property values).
- Service level targeting, with VIP or equivalent provided free of charge (which implies a free pit emptying service).
- Using a charge based on plot size with a zero charge for very small plots (typically 250 sq m or less).

Key issues

The need for rationalisation of tariff structures nationally has been mentioned. There is often a poor motivation for the tariff structures being applied. Further the impact of tariffs on the poor has not been given proper attention and this is now a high priority issue in the light of the ‘free basic services’ policy of government. New approaches to tariffs, selected from the menu given in the last section, need to be considered urgently.

4.2 Rural context

Tariff structures

Very few rural households have access to sewerage sanitation systems. In fact the majority do not have an adequate sanitation service at all, relying as they do on unimproved pits or nothing at all. However, there is a national sanitation programme, managed by DWAF which has the aim of promoting the widespread use of ventilated improved pit (VIP) latrines.

The tariff structure issues with on site options such as VIPs, are simple and have been mentioned under ‘urban context’: monthly charge to cover pit emptying costs or charge based on an emptying event.

Income from tariffs

There are very few, if any, situations currently where income is being raised in rural areas for on-site sanitation services. At the same time it needs to be said that there are very few situations where an effective pit emptying service is being applied. This will become more important in the future as the pits built over the last 6 years fill.

Impact of a free basic services policy

Probably the policy is best interpreted as the provision of a free pit or emptying service. This would need to be funded from the equitable share or some other subsidy into the sanitation account.

Key issues

Rural sanitation tariff policy is not a key issue at the moment. However, attention needs to be given to ways of funding pit emptying if this is not to be from user charges.

5 ELECTRICITY TARIFFS

5.1 Urban context

Tariff structures – residential grid electricity

Eskom and municipal service providers apply a range of tariffs. However, two are typical:

- Monthly availability charge with consumption charge based on single rate per unit consumed.
- Consumption based charge with single rate per unit.

Eskom and some municipalities apply the latter charge to those receiving a lower service level as it is more progressive and allows small users to pay small amounts.

There appears to have been little use of rising block tariffs in the industry although these are getting greater attention now (see below).

With regard to tariff levels, some 2000 different tariffs prevailed (in 1997) and clearly cross-subsidisation of varying degrees existed between types of consumers. (Task 4 sector report). Finally, it needs to be noted that the majority of new connections which have been over the last decade have used prepayment meters. Many existing credit meter based systems are also being retro-fitted with prepayment meters.

Tariff structures – residential off grid

It is likely that those using off grid sources (typically solar panel based) would be charged at a flat rate for maintenance services but this has not been researched for this project.

Tariff structures – non-residential

Non-residential tariffs in the electricity are typically based on an availability charge (based on peak kVA requirements) and a consumption charge. The extent to which declining block tariffs are used has not been researched for this project. However, most big users of electricity negotiate a special tariff.

Time-of-use tariffs are applied in some cases to encourage consumers to use power at off peak times.

Income from tariffs

According to the National Electricity Regulator (NER) an average of 19% surplus over operating costs were being paid into the general fiscus of municipalities. This represents a total of R2.4bn being used to subsidise other municipal services.

The NER's tariff policy applied by the NER has been:

- To cap the surplus at a level of 15% and
- To limit or make transparent the cross-subsidies that existed between consumer types, essentially from the industrial and commercial sectors to domestic consumers.

However, it needs to be noted that surpluses are not generated in all circumstances. Many smaller municipalities has been running the service at a loss and this has, in part, been the motivation for the re-structuring of the electricity distribution industry. This restructuring in to regional electricity distributors (REDs) will have a major impact on tariff rationalisation as there will only be a few REDs in the country.

Impact of a free basic electricity policy

The Department of Minerals and Energy (DME) has a process underway to introduce a free basic electricity. The use of a rising block tariff with a zero first block is receiving attention as an option. However, there are considerable difficulties in doing this as the large number of prepayment meters which have been installed previously cannot deal with a rising block. This can be dealt with by issuing free units on a monthly basis but targeting in this case is difficult.

Key issues

The sector is faced with two major issues at the moment:

- The impact of restructuring of the electricity sector on municipal finances.
- The provision of 'free basic electricity'.

With regard to the first issue, current proposals on the table are (1) for municipalities to receive a levy from the REDs and (2) for the municipalities to be shareholders of the REDs, which will be set up as companies.

5.2 Rural context

Tariff structures

Electricity distribution at municipal level is provided from a single system and tariffs are applied uniformly to all consumers. In the case of Eskom, which supplies the majority of rural consumers, there is a common national tariff system with options based on service level which are applied uniformly across the country.

Income from tariffs

The cost per consumer in rural areas is substantially greater than for urban areas, both because of the relative remoteness of rural settlements and because of the small amounts of electricity consumed by the typically poorer consumers in rural areas.

Currently a substantial level of cross subsidy is taking place, to rural areas, at national level, within the Eskom account. With the establishment of REDs this single cross subsidy mechanism will fall away. However, proposals are being investigated to transfer funds from REDs with stronger consumer bases to those with weaker ones.

Impact of a free basic electricity policy

Issues with regard to grid electricity are similar to those for urban areas. With regard to off-grid sources the operating costs are low but maintenance is a key factor. Ways of funding this have not been researched for this project.

Key issues

The key issues in rural areas are similar to those for urban areas. However, the funding of capital costs for expanding service coverage in rural areas needs to be mentioned although this is not a user charge issue.

6 MUNICIPAL SOLID WASTE TARIFFS

6.1 Urban Context

Tariff structures - residential – kerb-side collection

Most residential consumers in urban areas are provided with a kerb-side collection service.

Currently tariff structures applied for this service include (roughly in order of popularity):

- Fixed monthly charges for all consumers.
- Fixed monthly charge varied by suburb.
- Fixed monthly charge varied by storage container provided.
- Charges based on number of bags collected.
- No separate charge: service covered by property rates.
- Fixed monthly charge based on plot size.

There has been little work done at a national level to guide municipalities on tariff options for municipal solid waste and tariff structures are often not well motivated.

Tariff structures - residential – other service levels

Other service level primarily comprise:

- Communal collection points (typically based on skips).
- Communal dumps.

In the first instance the tariff would typically be a fixed monthly charge. But this is rarely applied. In the second instance it could be argued that tariffs need to be charged to cover the cost of managing the landfill. However, management is often not provided and consumers are not charged.

Tariff structures – non- residential

These tariffs have not been covered by research for this project. However, it is evident that tariffs for non-residential consumers are typically based on the volume of waste removed as measured by container size. Special arrangements are made for hazardous waste which is generally removed by private companies.

Income from tariffs

The situation with income from solid waste is similar to that for sanitation: municipalities budget for an accrued surplus but non-payment rates are high as tariffs for poorer consumers do not take affordability into consideration.

Impact of a free basic services policy

Little appears to be happening at national level to guide local authorities with implementing a ‘free basic solid waste’ service.

The tariff options for doing this would be similar to that for sanitation except that the water related measures are excluded. Possibly the best arrangements would be:

- A credit on the account of poor consumers.
- Area (suburb) based tariffs with poor areas have free collection.
- Raising of income through property rates.

Key issues

Key issues are also similar to that for sanitation: need for national guidance on tariffs generally and tariffs for free basic services specifically.

One specific issue which is the inclusion of street cleaning with the solid waste service. This is recommended in which case the cost needs to be covered by the user charge.

6.2 Rural Context

General approach to tariffs

In rural areas there is seldom a ‘managed’ solid waste service. By far the greatest proportion of rural households dispose of their solid waste on their own properties by burying or burning, or use informal dumps. In this situation tariffs are not applied.

However, solid waste management in rural areas does require improvement and this implies that income needs to be raised in the future. User charges are not an obvious way to go.

7 CONCLUSIONS

The following are seen to be as key issues with regard to user charges:

- a. The implementation of a free basic service policy which implies a subsidy to poor consumers.
- b. This implies the need for a sound local subsidy framework at local level on the basis of which user charges can be set.
- c. Decisions as to whether subsidy should take place:
 - As a cross subsidy within trading services account.
 - Through the transfers into the account.
 - Through the use of a demand side subsidy on the consolidated municipal account, either through targeted credits or through voucher systems.
- d. Targeting of the equitable share, particularly in a rural context.
- e. The establishment of subsidy mechanisms which allow MSPs to access the subsidy. This is particularly important in rural areas and needs to provide for community-based services providers.
- f. The need for national guidance on the setting of sanitation and solid waste tariffs, particularly in a ‘free basic services’ context. In this regard the option of funding these services from property rates income needs particular attention.
- g. The impact of re-structuring of the electricity distribution industry on the income to municipalities.

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