

# METHODOLOGY TO IMPLEMENT COST REFLECTIVE TARIFFS

Presentation to the Rate Payers of  
Msunduzi LM

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**national treasury**

Department:  
National Treasury  
REPUBLIC OF SOUTH AFRICA



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# PRESENTATION OUTLINE

- Introduction
- Legislative Framework
- Information requirements
- Strategic decisions and transparency
- The proposed approach to cost reflective tariffs
- Tariffs - affordability
- Example: revenue required – *National Treasury tariff tool vs. municipality budget*

# INTRODUCTION

- **Cost reflective tariffs** means other revenue (i.e. equitable share and property rates) can be used to finance roads, subsidising of indigents and general services.
- A municipality will struggle to fund the budget if the tariffs of the **four main trading services** do not recover the cost of the services:
  - Electricity;
  - Water;
  - Wastewater; and
  - refuse removal

**Principle** - *A consumer must pay the cost of the metered services provided to that consumer.*

# Legislative Framework

The municipal council must annually adopt + implement a tariff policy for the services the municipality provides (Municipal Systems Act s.74)

The tariff policy must facilitate that:

- Users of municipal services are treated equitably
- Users pay in proportion to their use of the service
- Poor households have access to basic services
- Tariffs reflect the cost to provide the service
- Tariff levels facilitate sustainability
- Local economic development

## Cost Reflective Tariffs – information requirements

**To determine cost reflective tariffs information is important, for example:**

- The accuracy of data - to provide the service efficiently and effectively
- The number of consumers for all four trading services
- The annual volume sold to each category of consumer
- The distribution of the volume of respectively water and electricity sold between tariff bands
- The peak electricity demand for each consumer category
- The value of external grants and subsidies
- The value of other revenue

# Strategic Decisions and Transparency

## Cost reflective tariffs are underpinned by strategic decisions:

- How will subsidies be allocated between services and consumer categories.
- How will other revenue be allocated.
- Should any service be rendered at a deficit (loss) and to what extent.
- Should a service be rendered at a surplus and to what extent.

## Improvement of transparency:

- To what extent will external operating grants be used to subsidise consumer groups.
- To what extent is the surplus of one service cross subsidising any another service(s).

**Principle** - *Cost reflective tariffs should be transparent on the application of subsidies*

## The Approach to Cost Reflective Tariffs

1. The starting point is a **credible** budget
2. The objective is a fully **funded budget**
3. The **tariffs** (supplemented by operating grants + subsidies) must fully **recover the cost** of the four trading services
4. Other services (i.e. roads) should ideally be funded from property rates and other general revenue resources
5. **Governance and Administration services** are not directly provided to consumers – this must be funded from tariffs and rates. *There is no separate funding source(s) for this.*

The budget is fully funded budget when the *property rates, tariffs, operating grants and subsidies, and non-tariff revenue resources* **that can be collected** cover the operating expenditure to provide the services.

# Setting Cost Reflective Tariffs

Align the votes for trading services and determine the cost to provide the service. Allocate direct + indirect costs:

## **DIRECT COSTS:**

- Allocate the direct costs to provide each service to that service - like borrowing finance costs to fund capital expenditure
- Allocate impairment by using the payment rate for each service to calculate debt impairment

## **INDIRECT COSTS:**

- Activity based costing can be used to allocate governance and administration costs

## **CALCULATE THE COST OF EACH SERVICE:**

- The total cost of a service = the sum of direct cost to provide the service plus the share of indirect costs allocated to that service



## Determine – the revenue required per service

- **Determine the total cost** – this will inform the revenue required to operate the service (**and fund the budget**)
- **Determine non-tariff revenue** - operating grants, property rates, other income and tariff charges (i.e. connecting fees allocated to services)
- **Determine external grants and transfers** (i.e. equitable share to subsidise certain services)
- **Determine property rates** – fund services that are publicly accessed
- **Other income** should be allocated to trading services similar to the allocation of “Governance and Administration”
- **Non-tariff service charges** (i.e. connection fees) - allocate to the specific service
- **Deficits** may be approved if necessary to ensure that tariffs are affordable

*The revenue required from a tariff is the cost of supplying the service less any deficit allowed, **plus** any surplus generated + the non-tariff revenue allocated to the service.*

# The Consumer Mix & Growth

- **Customer categories** – the guidelines recommend three customer categories: Domestic, Commercial and Industrial
- Tariffs are levied on **volumes of services sold**
- **Water and electricity** – information on volumes sold
- **Sanitation**- volume of wastewater returned by individual consumers to sewerage purification works - average 70 per cent
- **Solid Waste** - municipalities do not have technology to measure mass and cannot levy consumption-based tariffs
- Municipal **infrastructure** need to meet the **peak demand of services**
- **Number of consumers** - needed to levy fixed charges based on the number of consumers
- Access to **historic trends** in sales volumes, consumers numbers and demand to determine future growth

# The Average Unit Cost per Consumer Category

- **Variable costs** increase when sales volumes increase + decrease when sales volume go down
- Variable cost is allocated based on volume of services sold to different category of consumers
- **Fixed cost** should be allocated based on volume sold as peak demand is related to volume sold
- **Unit cost** is used to provide the basis for comparing tariff to cost reflective tariffs
- If the service generates a surplus - the unit cost will be lower compared to the cost reflective tariff
- If the service is operated at a deficit - the unit cost will be higher compared to the cost reflective tariffs
- **Average fixed cost is calculated by** dividing the total fixed cost per consumer category by the number of consumers in each category

## The Revenue required per Consumer Category

- **Non-tariff revenue resources** are allocated between consumer categories for that service
- **Operating grants (i.e. equitable share)** should be allocated to the applicable consumer category
- **Other non-tariff revenue** are allocated between consumer categories in proportion to the cost allocate to each category

### *The municipality must decide:*

- Which consumers will benefit from a deficit, versus
- Which consumers will generate a surplus

**The revenue required for a service per consumer category is the cost supplying the service, less tariff revenue allocated, less deficit allowed for the consumer category plus any surplus per consumer category**

# Tariff Structure: Selection & Tariff Calculation (per consumer group)

- **The level of the tariff** must be set to generate the revenue required
- **Fixed charges** should cover 100 per cent of the fixed costs
- **Fixed levy charges** can be levied in blocks with the tariffs charged differing per blocks and blocks defined based on property rate or property value
- **Consumption based tariffs** are levied per unit consumed – applies where the consumption can be measured (i.e. electricity and water)
- **Wastewater consumption charges** should be levied on the volume of water sold with a return flow applied
- **Solid waste removal charges** should be based on the mass or volume waste removed from each consumer but cannot be applied due to the current lack of technology

# Tariff Structure: Selection & Tariff Calculation (per consumer group) (2)

- **A uniform rate tariff** - consumers are charged the same price per cost regardless of the volume consumed
- **Inclining tariff structure** - tariffs are set in blocks. The price per unit rise in each block aligned to the increase in consumption.
- *Inclining block tariffs discourage* wasteful consumption - the domestic consumer pay more (per unit) for high volumes of water, electricity and sanitation vs. the consumer who uses a small volume
- **A two-part tariff** combines fixed charge plus consumption-based tariff – applies to water, sanitation and electricity
- **A three-part tariff** applies to electricity - a fixed charge per consumer per month that *recovers the fixed costs* based on number of consumers, plus a fixed charge per KVA (that recovers cost related to peak demand), plus a consumption- based charge per kWh sold

# Tariff Structure: Selection & Tariff Calculation (per consumer group) (3)

- **Seasonal tariffs:** Different tariffs charged between winter and summer - should align with the seasonal tariffs charged by Eskom
- **Drought or scarcity tariffs:** this may be introduced to discourage wasteful usage of water consumption during draughts
- **Small scale embedded generation (SSEG) tariffs:** applies when power generating facilities have been installed at residential, commercial and industrial sites
- The municipality can charge the SSEG a fixed charge and import and export charges:
  - The import charge is the tariff that the consume pays for electricity drawn from the grid; and
  - The export tariff is the tariff that the municipality pay the consumer for the electricity the consumer feeds back into the grid

# Tariffs - Calculation

- *Calculations must ensure that the final tariffs generate the revenue required to fund the budget*
- **A simple fixed tariff charge per consumer per month** is when the revenue required from the customer category is divided by the number of consumers in that category
- If **consumption-based charges** are applied the volume of services should be known. If Inclining Block Tariffs are applied, then the volume of service that will be sold to the customer category in each block of the tariff should be known



# Tariffs - Affordability

- Tariffs must be set at an affordable level. If tariffs are not affordable consumers will not pay and cash collection levels will decline
- Accurate assessments of affordability can be determined through willing to pay surveys
- It is important to test affordability on a full municipal bill and not on one service in isolation

REVENUE REQUIRED TARIFF TOOL -XYZ Municipality 2022/23							
Detail of Expenditure	Total	Water	Waste W	Electricity	Refuse	Other services	Governance & Adm
<b>Expenditure budget 2021/22</b>							
<b>Detail of Expenditure</b>							
Employee related costs	88389977	997267	3606683	5822480	2133468	50325616	25504463
Remuneration of councillors	5866956	0	0	0	0	0	5866956
Debt impairment	14214354	2450060	6412759	2768907	0	0	2582628
Depreciation assets & impairment	20140104	0	0	0	0	0	20140104
Finance Charges	5000000	0	0	0	0	0	5000000
Bulk purchases	40980000	0	0	40980000	0	0	
		2028760					
Inventory consumed	23742623	2	210248	1016565	0	131915	2096293
Contracted Services	28343305	2172844	926237	6941405	0	3018319	15284500
Other Expenditure	20980298	3572361	251958	1504503	17703	912018	14721755
		2948013					
Total direct costs per service	247657617	4	11407885	59033860	2151171	54387868	91196699
		1718145					
Indirect Costs		8	6648239	34417634	1249394	31699974	-91196699
Surplus	587792	4199543	1083367	12148694		-16843813	
		5086113					
Total direct and indirect costs	248245409	5	19139491	105600188	3400565	69244029	0
		1077559					
Less:Grant Received	65093850	7	3937373	28708600	739945	20932335	
Property Rates	39694213					39694213	
: Other revenue	21767234	3797384	1469370	7606862	276137	8617480	
		1457298					
Total Revenue	126555297	1	5406743	36315462	1016082	69244028	
		3628815					
Revenue required tariffs tool	121690112	4	13732749	69284726	2384483		
Budget for 2021/22							
		2297164					
Revenue budgeted LGData base	131057172	3	30524752	62119936	15440841		
		-					
Surplus or Shortfall	9367060	1331651	16792003	-7164790	13056358		

**EXAMPLE  
REVENUE  
REQUIRED  
TARIFF TOOL  
VERSUS  
BUDGET.**

# THANK YOU



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