



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

PRICING STRATEGY FOR RAW WATER USE CHARGES

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- Principles for water pricing
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BACKGROUND (1/2)

- Pricing Strategy provides the pricing framework for the use of raw (untreated) water from the water resource and from government waterworks and the discharge of water into a water resource or onto land
- NWA makes provision for the review of the strategy from time to time
 - Current version was published in March 2007
 - There have been significant developments and a number of challenges in the sector since then, warranting a review of the strategy
- Challenges that this pricing strategy seeks to address are the following –
 - Recovery of costs for water resource management and sustainable infrastructure asset management
 - Protection of poor against unaffordable tariffs as a result of infrastructure development
 - Funding of catalytic water infrastructure to support social or economic development

BACKGROUND (2/2)

- Strategy seeks to facilitate reform as well to provide transparency and predictability on how water will be priced
 - It is intended to support the goal that water is efficiently and effectively managed for equitable and sustainable growth and development
- Issues that will be investigated further and/or requiring policy changes include –
 - Revision of price capping to the agricultural sector
 - Water for fracking, acid mine drainage and bio fuels
 - If any, these will be incorporated into subsequent revisions of the pricing strategy

OBJECTIVES OF THE PRICING STRATEGY

- Ensure that costs of achieving and maintaining RQOs are sufficiently recovered through water use charges
- Ensure that there is adequate funding for the effective operation, maintenance and development of waterworks
- Provide an enabling framework for the provision of financial assistance and the use of water pricing to support the –
 - Redress of racial and gender imbalances in access to water
 - Redistribution of water for transformation and equity purposes
- Facilitate financial sustainability of water management institutions
- Promote / facilitate water use efficiency
- Establish a platform for an independent regulator for improved economic regulation across the entire water value chain

PRINCIPLES OF WATER PRICING (1/3)

Pricing Strategy aims to provide a greater degree of transparency on how raw water is priced in the country and the following principles apply –

- ***Hybrid tariff approach*** – Provides for a combination of nationally and water management specific charges to facilitate development of affordable tariffs to all users. Elements of water charge will be –
 - Levied on basis of a national charge for a particular sector(s)
 - Based on Scheme or catchment level charge
- ***User pays and recovery of costs*** – Provide for full recovery of costs associated with management, use, conservation and development of water resources and associated administrative and institutional costs
 - Users must pay for costs of water use given the need for targeted subsidies where users are not able to afford costs resulting from full application of these principles

PRINCIPLES OF WATER PRICING (2/3)

- ***Polluter pays*** – Polluters must pay for costs of their water discharge or pollution
- ***Differential charges and capping of water use charges*** – Allows for differential charges and capping of water use charges to designated water use sectors to support the achievement of key national objectives
 - Food security
 - Racial and gender equity
 - Job creation
 - Economic development
- ***Fiscal support*** – DWS will provide fiscal support for core national and public interest functions which cannot be recovered fully through water use charges
- ***Ecological sustainability*** – Facilitate funding to ensure provision of water for ecological reserve and sector's contribution to maintaining ecosystems

PRINCIPLES OF WATER PRICING (3/3)

- **Accountability** – Funding will be allocated to specific water management institutions
 - Transparency and accountability for funds that are generated from raw water sales
- **Efficiency** – Provides for an economic regulator to ensure that water management charges are maintained at affordable levels
- **Multi-year tariffs** – Provides for multi-year tariff determination to facilitate longer term planning and greater levels of certainty for water institutions and users.

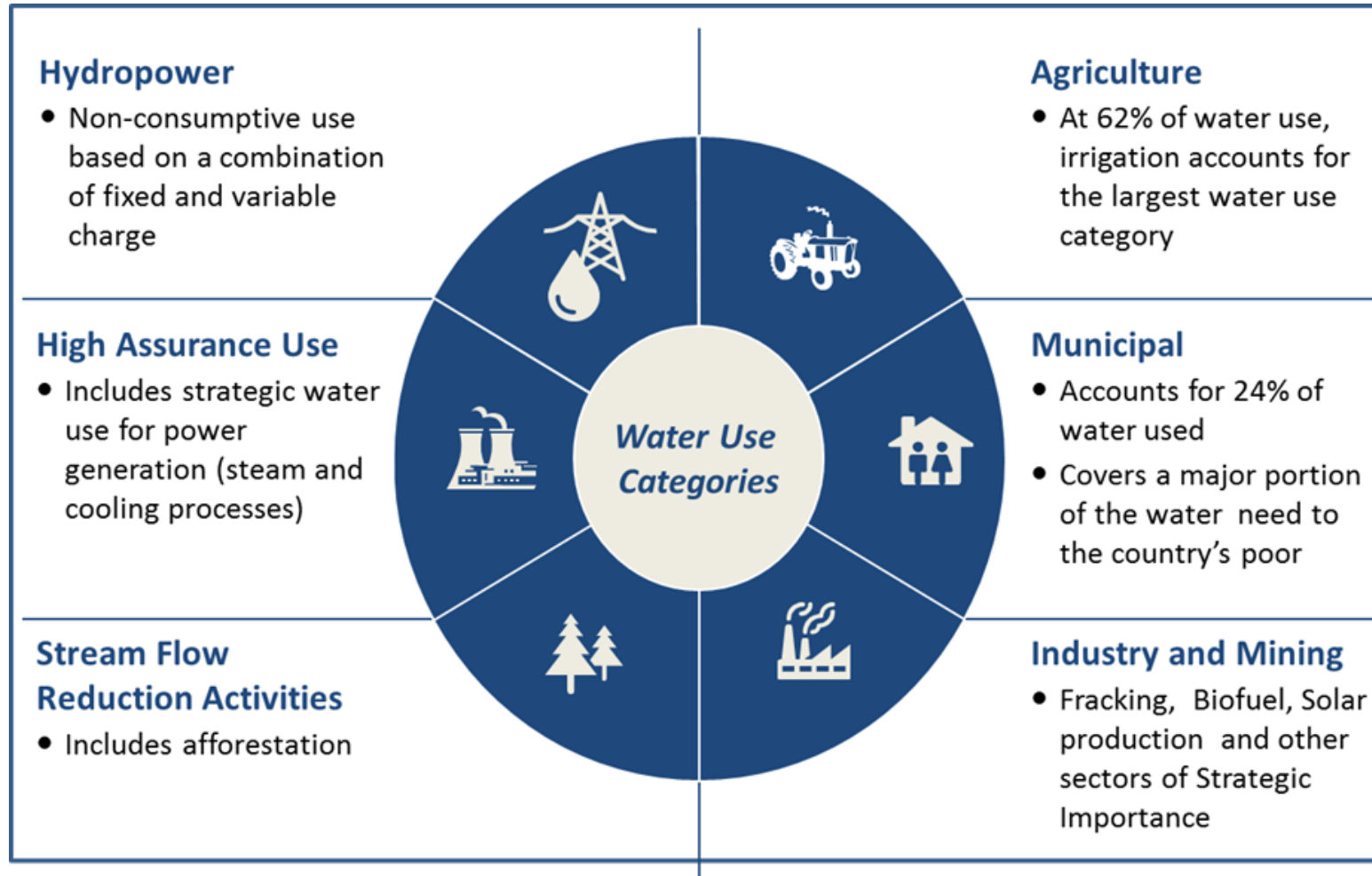
CHANGES FROM PREVIOUS VERSION OF PRICING STRATEGY (1/5)

Changes to the Water Use Categories (1/2)

- Provides for six water use categories from the previous four
 - Better representing water user groups
 - Allow for more clearly targeted charges
- Main changes in these categories are –
 - Split of formerly Domestic and Industrial category into two separate groups, Municipal and Industrial / Mining
 - Addition of High Assurance Use, representing users with an assurance of supply of 99.5%
 - Introduction of a category for hydropower to be able to charge for water use by small scale hydropower plants

CHANGES FROM PREVIOUS VERSION OF PRICING STRATEGY (2/5)

Changes to the Water Use Categories (2/2)



CHANGES FROM PREVIOUS VERSION OF PRICING STRATEGY (3/5)

Changes to the Water Use Charges (1/2)

- ***Future Infrastructure Build Charge (FIBC):*** Replaces Return on Assets (ROA) charge
 - Intended to fund activities listed under s56(2)(b)(i, ii and iii) of NWA
 - Costs of investigation, planning, design, construction and pre-financing of new infrastructure
 - Costs of betterment of already existing infrastructure
 - Only intended to finance activities for social and economic development stimulus infrastructure
 - Section 56(2) (b) (v) of NWA makes provision for a RoA charge “for funding water resources development”; however, ROA’s private sector connotation tended to obfuscate its purpose
 - Introduces a higher degree of transparency in calculation of FIBC

CHANGES FROM PREVIOUS VERSION OF PRICING STRATEGY (4/5)

Changes to the Water Use Charges (2/2)

- ***Economic Regulator Charge:*** Introduces an Economic Regulator Charge that is intended to fund the activities of the Economic Regulator
 - Institutional arrangements for Economic Regulator are still to be finalized
 - NDP and NWRS2 intimate a transition to an independent regulator
 - Best practice warrants independent funding for regulator
- ***Hydro Power Charge:*** Will be levied on all existing and new hydropower plants
 - Hydropower is a critical component of power generation mix but has a significant impact on water resources
 - Proposed charges for hydropower generation will be based on
 - c/kWh of energy generated, and
 - Fixed charge based on kW installed

CHANGES FROM PREVIOUS VERSION OF PRICING STRATEGY (5/5)

Changes to calculation of depreciation charges

- Depreciable portion (%) and Estimated Total Useful Life (years) were previously prescribed
 - Depreciable portion was based on a set of (unqualified) assumptions
 - Overly complicated process and could lead to misunderstandings given (unqualified+-) context behind parameters
 - Not aligned with standard industry depreciation practices used by water boards and related entities
 - Potential problem with depreciating only a portion of an asset is that loans can never be paid back without showing a profit
- Proposes that full component is depreciated over a certain period, and not only a portion
- Estimated Total Useful Life (years) of asset components are aligned with standard industry depreciation practices used by water boards

AMENDMENTS TO PRICING STRATEGY

S56 of NWA state that the pricing strategy may contain a strategy for setting water use charges to include funding for –

- Water resource management
 - Includes costs related to gathering information; monitoring, controlling, conserving and protecting water resources and their use
 - Includes discharge of waste and protection of the Reserve
- Water resource development and use of waterworks
 - Includes costs of investigation and planning; design, pre-financing and construction
- Operation and maintenance of waterworks
- A return on assets
- Costs of water distribution
- Achieving the equitable and efficient allocation of water

AMENDMENTS TO PRICING STRATEGY

Provides for water resources management costs within 5 categories of charges:



Water Resources Management Charges

Cover the charges required to manage water resources within the nine water management areas determined in the NWRS-2

Water Resources Infrastructure Charges

Charges relating to the development and use of waterworks, covering charges related to planning, capital costs, operation and maintenance, depreciation, and future infrastructure build on government water schemes.

Waste Discharge Mitigation

Charges which cover the charging for discharge of water containing waste into a water resource or onto land

Water Research Commission Charges

Paid into a national Water Research Fund and used by the WRC to fund water-centred Research and Development for South Africa.

Economic Regulation Charges

Charges intended to fund the activities of the Economic Regulator

AMENDMENTS TO PRICING STRATEGY – WATER RESOURCE MANAGEMENT CHARGE

- WRMC will fund water resources management activities in WMAs
 - Activities relate to protection, allocation, conservation, management and control of nation's water resources
- Two components to WRMC:-
 - Abstraction water use charge
 - Waste discharge related water use charge
- There are no changes in the composition and application of this charge from the current pricing strategy
- Activities will be progressively undertaken by CMAs when they are established and capacitated
- WRMCs will be levied to municipal, industrial, agricultural, SFRA and high assurance users
 - Hydropower users will not be liable for this charge

AMENDMENTS TO PRICING STRATEGY – WATER RESOURCE INFRASTRUCTURE CHARGE (1/7)

- Provides for development and use of Government waterworks and may include capital cost of projects
- Provides for four components to this charge;
 - Operations and Maintenance (O&M)
 - Depreciation / Refurbishment
 - Future Infrastructure Build Charge (FIBC)
 - Capital Unit Charge (CUC)
- Charges will be a differentiated tariff for water use categories
- Charges will be scheme specific with the exception of the FIBC (determined on a national basis)
- Applying the four infrastructure charges will vary depending on the funding arrangements of schemes
 - Infrastructure charges apply on new and existing government schemes

AMENDMENTS TO PRICING STRATEGY – WATER RESOURCE INFRASTRUCTURE CHARGE (2/7)

	Existing Schemes			New Schemes	
Charge to be Levied	Commercial portion of schemes funded by the Minister	Social portion of schemes funded by the Minister	Funded off-budget and debt has been repaid	Fully or partially funded by the Minister (social)	Off-budget funded portion of scheme
Operation and Maintenance	Yes	Yes	Yes	Yes	Yes
Depreciation / Refurbishment	Yes	Yes	Yes	Yes	Yes
Future Infrastructure Build Charge	Yes	X	Yes	X	X
Capital Unit Charge	X	X	X	X	Yes

AMENDMENTS TO PRICING STRATEGY – WATER RESOURCE INFRASTRUCTURE CHARGE (3/7)

Operations and Maintenance Charge

- Facilitate recovery of direct and indirect O&M costs on government water schemes to ensure that infrastructure is maintained
 - Charge will be recovered on a scheme or system basis
 - Charge applicable to all sectors, but capped for irrigation
- Direct O&M charge includes fixed and variable costs, attributed directly to –
 - Administering, operating and maintaining schemes, distribution costs
- Direct O&M costs will be allocated directly to sectors where this is possible; cost of joint works and operations will be shared on a volumetric basis
- Indirect O&M costs cannot be directly attributed to a specific scheme; contribute towards sustainable management of water schemes
 - Costs will be allocated to different sectors in an equitable manner

AMENDMENTS TO PRICING STRATEGY – WATER RESOURCE INFRASTRUCTURE CHARGE (4/7)

Depreciation Charge

- Provides for loss in functional performance and real term value of existing water resource infrastructure
 - Occurs due to wear and tear, decay, inadequacy and obsolescence
 - Value not restored by regular maintenance
- Charges will be –
 - Used to refurbish existing assets on a prioritised basis
 - Applicable to all sectors supplied from Government waterworks
 - Capped for irrigation sector
 - Scheme or system specific
- Depreciation commences when asset is available for its intended use
 - Land, artwork and assets under construction are not depreciated
 - All other property, plant and equipment are depreciate

AMENDMENTS TO PRICING STRATEGY – WATER RESOURCE INFRASTRUCTURE CHARGE (5/7)

Future Infrastructure Build Charge (FBIC)

- Support development of social and economic development stimulus infrastructure
 - Social infrastructure: Supplying basic water requirements of municipal water users in rural areas
 - Economic stimulus infrastructure: Provide for future economic water use where water supply is necessary for future economic development
- Charges will be paid by municipal, industrial / mining, high assurance use
 - Capping of infrastructure charges for irrigation is retained; these may be uncapped in future
- FBIC will be calculated at a national level, such that all users liable for FIBC
 - Based on annual costs for infrastructure, applied to water use volumes of all included user categories

AMENDMENTS TO PRICING STRATEGY – WATER RESOURCE INFRASTRUCTURE CHARGE (6/7)

Capital Use Charge (CUC)

- Institutional framework provides for funding government water schemes off-budget (debt financed), where such infrastructure is commercially viable
- CUC will be determined for each scheme and provide for debt service requirements on these commercially viable projects. CUC will be –
 - Taking cognizance of affordability, economic life and timing of potential future augmentation of infrastructure
 - Based on financial models for the project and on water used from scheme (and not necessarily on water provided into scheme)
- All water users supplied from scheme will be liable for CUC, except the social component
 - Users of social component of scheme will be subject to tariffs applicable to state funded schemes

AMENDMENTS TO PRICING STRATEGY – WATER RESOURCE INFRASTRUCTURE CHARGE (7/7)

Assurance of Supply

- Strategic water users have a high assurance of water supply – 99.5%
 - They should, on average, get their full supply of water for all but one year out of two hundred
- Assurance of supply for other sectors is as follows:
 - Municipal and Industrial / Mining users – 97%
 - Agricultural users – 70%
- Differences are reflected in charges that different sectors pay since assurance of supply is built into calculation of infrastructure charges
- Applies to Future Infrastructure Build Charge (FIBC) and Capital Unit Charge (CUC) infrastructure related charges

AMENDMENTS TO PRICING STRATEGY – WASTE DISCHARGE CHARGE (1/2)

- Waste Discharge Charge System (WDCS) based on polluter pays principle
 - Provides an economic instrument to assist in maintaining the Resource Water Quality Objective (RWQOs), which is the desired state of surface water resources
- Pricing Strategy may provide for a differential rate for waste discharges, taking into account –
 - Characteristics of waste discharged
 - Amount and quality of waste discharged
 - Nature and extent of impact on a water resource caused by the waste discharged
 - Extent of permitted deviation from prescribed waste standards or management practices
 - Required extent and nature of monitoring the water use

AMENDMENTS TO PRICING STRATEGY – WASTE DISCHARGE CHARGE (2/2)

- WDCS will be implemented at a catchment or sub-catchment level
- WDCS will be levied on water quality variables that critically impact RQOs
- RQO will be selected with due consideration to the following:
 - Type of waste discharge sources
 - Nature of waste typically discharged
 - Cost-effectiveness of monitoring different variables
- WDCS will comprise of two distinct water use charges:
 - **Waste Mitigation Charge (WMC)** - Cover quantifiable costs of mitigating waste discharge related impacts
 - **Waste Discharge Levy (WDL)** - Provide a disincentive for use of the resource as a means of disposing waste
- Pricing Strategy only provides for WMC, as the levying of the WDL will require the promulgation of a Parliamentary Money Bill







AMENDMENTS TO PRICING STRATEGY – WATER RESEARCH COMMISSION CHARGE

- Charge used for promoting water research and development
- Minister is empowered to set tariffs in respect of water research charges levied on quantities of water supplied, or made available for use, for
 - Agricultural purposes
 - Urban purposes
 - Industrial purposes
 - Any other purposes
- Department will collect charges on behalf of WRC
- Charges remain independent of changes in water use charges
- Water research charge is payable by the municipal, industrial & mining, agriculture and high assurance water use sectors
 - Resource poor farmers will be exempt from paying the levy

AMENDMENTS TO PRICING STRATEGY – ECONOMIC REGULATION CHARGE

- Charge is proposed as a separate category
 - Intended to fund activities of the Economic Regulator
 - Activities of the Economic Regulator are not part of the costs to produce water
 - However, the Economic Regulator has a critical role to play in all aspects of the water value chain
 - NWA does not currently provide for levying a charge for these activities
- Charge will only be implemented once necessary legislation provides for such charges
- Charge will be –
 - Based on annual budget of the Economic Regulator
 - Recovered on total register volume of users liable for charge
 - Payable by all sectors

AMENDMENTS TO PRICING STRATEGY – SUMMARY OF CHARGES

Sectors		Water Resources Management Charge	Water Resources Infrastructure Charge	Waste Discharge Mitigation Charge	WRC Charge	Economic Regulation Charge (Future)
	Municipal	YES	YES	YES	YES	YES
	Industry and Mining	YES	YES	YES	YES	YES
	High Assurance Use	YES	YES	YES	YES	YES
	Agriculture	YES	YES (Capped)	YES	YES	YES
	Stream Flow Reduction Activities	YES	×	×	×	YES
	Hydropower	×	YES	×	×	YES

IMPLEMENTATION OF PRICING STRATEGY (1/5)

Measurement of Water Use

- Water charges currently based on registered water use
 - Water use is not measured or metered
- Water for productive use is abstracted at different assurances
 - Must be reflected in payment for water resource management services
 - Is taken into account in registered volumes
- Compulsory measurement of water abstraction to be phased-in so that water use can be charged against actual abstraction
- Water resources management charges will continue to be charged against registered use for stability of revenue and administrative ease

IMPLEMENTATION OF PRICING STRATEGY (2/5)

Indexation of Charges

- Must use index that is linked the closest to costs being inflated or compared
- CPI (Consumer Price Index) is a benchmark for how consumers perceive tariff increases relative to a basket of other goods consumed
 - CPI is a good overall test; however, this index should be limited to O&M components when calculating raw water use charges (except for energy)
 - An 'energy index' based on the average price of electricity as calculated from Eskom's Annual Report should be used as it best reflects energy cost
- PPI (Production Price Index) reflects the cost of manufacturing goods and is the closest reflection of the cost of construction
 - PPI should be applied when calculating infrastructure related charges

IMPLEMENTATION OF PRICING STRATEGY (3/5)

Treatment of Reserve Funds for Depreciation and FIBC

- DWS to manage funds associated with depreciation and FIBC within a dedicated reserve fund
- The above structures will enable the following:
 - Depreciation charge revenue may serve as a stabilization reserve for refurbishment
 - FIBC income may serve as a provisioning reserve for betterment and development of social and economic stimulus development projects
- Use of depreciation funds will be prioritised in accordance with DWS integrated water resource risk management systems
- DWS will continue to fund these projects until such time that the reserve fund has been built up

IMPLEMENTATION OF PRICING STRATEGY (4/5)

Multi-Year Charges

- DWS (and CMAs) will introduce a system of multi-year charges
 - Sectoral charges will be developed during the budgetary process for each water management area
 - Charges will be set for a period of three years
- Water use charges must be approved by the economic regulator
 - Charges to be approved before 15th September of every appropriate year
 - Charges must be provided to WSPs and bulk WSPs to enable them to calculate bulk water tariffs before 30th September
- Minister must approve the charges until the economic regulator is established

IMPLEMENTATION OF PRICING STRATEGY (5/5)

Approval of Water Use Charges

- Minister approves water use charges for government waterworks and for water resource management
- Economic Regulator reviews and advises Minister on aspects such
 - Revenue
 - Cost and tariff trends
 - Substantive parameters
 - Impact of an adjustment of tariffs on sectors,
 - Revenue and sustainability of the WTE
 - Compliance with pricing strategy
 - Other regulatory guidelines and requirements
- Minister presents charges to Portfolio Committee to get their input, but remains ultimately responsible to approve the water use charges

Can the public have access to these documents??

www.gpw.gov.za/

- Revision of the pricing strategy for water use charges – Gazette Notice number **1154 of 2015**
- Revision of the norms and standards for setting water services tariff - Gazette number **1153 of 2015**

OR

- http://www.gov.za/sites/www.gov.za/files/39411_gen1154.pdf
- http://www.gov.za/sites/www.gov.za/files/39411_gen1153.pdf

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THANK YOU