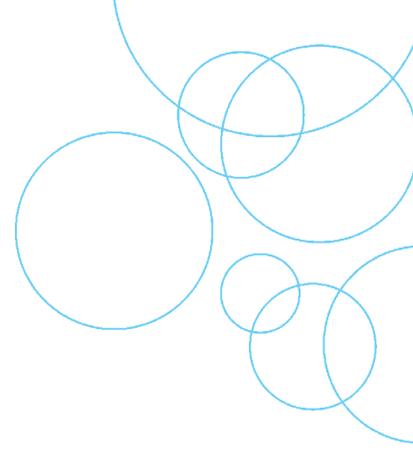




Water Utilities in Africa: Case Studies of Transformation and Market Access





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Inputs to the Regional Practitioners' Workshop
on "Market Finance for African Water Utilities" in
Pretoria, South Africa

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Introduction

It is widely acknowledged that achievement of the urban Water Supply and Sanitation (WSS) Millennium Development targets will require better access by utilities in Africa to finance, in particular from domestic financial markets. In many African countries, utility reform has focused on creating autonomous governance structures to improve service delivery to an expanding customer base. However, implementation of reforms has, to date, been uneven, constrained by the absence of appropriate incentives to reform, and hampered by limited access to capital investment funding. In some countries, for example, South Africa, Senegal, and Namibia, utilities have successfully sourced capital investment from domestic financial markets. Others, including utilities in Kenya, Uganda, and Tunisia, regularly access commercial finance for working capital or minor investments.

Data provided by utilities and financial providers suggests that one way forward might be to link utility reform with improved access to much-needed capital funds from domestic financial markets. Ideally, this strategy would create a virtuous cycle premised on sound service delivery performance, including operating and financial efficiency as well as transparency and accountability. Concurrently, expansion and reform of financial markets is under way in several African countries. While domestic finance has a key role to play in enhancing sustainable service delivery, investment in WSS can also help strengthen domestic financial markets, which suggests there is scope for mutually beneficial relationships.

During 2006, the WSP, with support from Public-Private Infrastructure Advisory Facility (PPIAF) and the African Development Bank (AfDB), sought to better understand how urban water service providers in Africa could mobilize market-based resources. To this end, a regional workshop was held in Pretoria, South Africa, in August 2006 to explore the feasibility of “Market Finance for Water Utilities in Africa.” The workshop focused on two financing challenges: to mobilize additional funding resources for development of the water sector; and to ensure that investment results in sustainable service delivery.

Case studies of six water utilities were presented at the workshop as well as a survey assessing the readiness of 14 utilities (including the six case study utilities) to tap into domestic financial markets. This report will set out a summary of the case studies, then go on to discuss the qualities and attributes that signal readiness to access commercial finance. The report is accompanied by a summary and an overview of the workshop summarizing all of the key outputs.

The case studies encompass a range of different business structures, countries, and regions in Sub-Saharan Africa: Burkina Faso’s Office National d’Eau et d’Assainissement (National Office of Water and Sanitation, Burkina Faso) (ONEA) and Sénégalaise des Eaux (Senegalese Water Company) (SDE) and Société Nationale des Eaux du Sénégal (Senegalese National Water Corporation) (SONES) in West Africa; Nairobi Water and Sewerage Company (NWSC)

of Kenya in East Africa; Société Nationale d'Exploitation et de Distribution des Eaux (National Cooperation for the Exploitation and Distribution of Water, Tunisia) (SONEDE) of Tunisia in North Africa; and Johannesburg Water and eThekweni (Durban) Water Department in South Africa. The utilities also reflect a variety of ownership and management models, from fully public service delivery to public/private partnership, as well as management contract (now terminated). Despite the lack of uniformity

across the six cases, similarities were apparent among highly performing utilities that already successfully access—or are close to accessing—commercial finance. These include: The transformative implementation of reforms, institutional structures and internal management processes to achieve performance improvements. Each case study includes an assessment of the local financial market environment and the attempts undertaken by the utility to access those markets.

Acronyms and Abbreviations

AFD	Agence Française de Développement (French Development Agency)	EM	eThekweni Municipality
AfDB	African Development Bank	EMUWA	Economic and Monetary Union of West Africa
AWF	African Water Facility	ES	Equitable Share
AWSB	Athi Water Services Board	EU	European Union
BCEAO	Banque Centrale des Etats de l'Afrique de l'Ouest (Central Bank of West African States)	FI	Financial Institution
BEE	Black Economic Empowerment Business	GASCs	General Assembly of State Corporations
BOAD	Banque Ouest Africaine de Développement	GDP	Gross Domestic Product
BOO	Build Own Operate	GIS	Geographic Information System
BOT	Build Operate Transfer	IDP	Integrated Development Plan
CBAO	Compagnie Bancaire d'Afrique Occidentale (Bank of West Africa)	INCA	Infrastructure Finance Corporation Limited
CJ	City of Johannesburg	JOWAM	Johannesburg Water Management Company
CMU	Contract Management Unit	JSE	Johannesburg Stock Exchange
CPI	Consumer Price Index	JW	Johannesburg Water
CSAs	Community Service Agents	KfW	Kreditanstalt für Wiederaufbau (Reconstruction Credit Institute)
DBSA	Development Bank of South Africa	KPIs	Key Performance Indicators
DPLG	Department of Provincial and Local Government	LTWP	Long Term Water Project
DWAF	Department of Water Affairs and Forestry, South Africa	MAHRH	Ministere de l'Agriculture, de l'Hydraulique et des Ressources Halieutiques (Ministry of Agriculture, Water Supply and Fishery Resources, Burkina Faso)
DWR	Directorate of Water Resources	MARH	Ministere de l'Agriculture et des Ressource Hydrauliques (Ministry of Agriculture and Water Resources, Tunisia)
ECOWAS	Economic Community of West African States		
EIB	European Investment Bank		

MDGs	Millennium Development Goals	SONEES	Société Nationale d'Exploitation des Eaux du Senegal (Senegalese National Corporation for Water Utilization)
MFMA	Municipal Finance Management Act		
MIG	Municipal Infrastructure Grant		
MIGA	Multilateral Investment Guarantee Agency	SONES	Société Nationale des Eaux du Sénégal (Senegalese National Water Corporation)
MIS	Management Information System		
MWRMD	Ministry of Water Resource Management and Development	SPA	Service Provider Agreement
NCC	Nairobi City Council	STEG	Société Tunisienne de l'Electricite et du Gaz (Electric and Gas Company of Tunisia)
NGO	Nongovernmental Organization		
NWSB	Nairobi Water Services Board	SWOT	Strengths, Weaknesses, Opportunities, and Threats
NWSC	Nairobi Water and Sewerage Company	SYNTEA	Syndicat National des Travailleurs de l'Eau et de l'Assainissement (National Union of Workers in the Water and Sanitation Sector, Burkina Faso)
ONAS	Office National de l'Assainissement du Sénégal (Senegalese National Sanitation Office)	UACs	Utilities, Agencies and Corporate Departments
ONE	Office National de l'Eau (National Office of Water, Burkina Faso)	UFW	Unaccounted-for Water
ONEA	Office National d'Eau et d'Assainissement (National Office of Water and Sanitation, Burkina Faso)	WB	World Bank
PPIAF	Public-Private Infrastructure Advisory Facility	WRMA	Water Resources Management Authority
SAUR	Société d'Aménagement Urbain et Rural (private French water company)	WSAs	Water Service Authorities
SDE	Sénégalaise des Eaux (Senegalese Water Company)	WSP	Water Sectoral Project
SONEDE	Société Nationale d'Exploitation et de Distribution des Eaux (National Cooperation for the Exploitation and Distribution of Water, Tunisia)	WSP-Af	Water and Sanitation Program, Africa
		WSPs	Water Services Providers
		WSRB	Water Services Regulatory Board
		WSS	Water Supply and Sanitation

1. Nairobi Water and Sewerage Company (NWSC), Kenya

Summary and Lessons Learnt

The rapid reforms undertaken by NWSC since 2004 offer an example of what can be achieved through implementation of greater management efficiency, when funding is available to mobilize reform. Kenya's Water Act of 2002 created a favorable framework for improved WSS services in Nairobi, and this was followed by a series of reforms that enhanced the company's viability. The key lessons from this case are:

- Although institutional reform is a gradual process, considerable change can be effected in a matter of months, contingent on the right mixture of leadership and commitment to a common goal. In 2003, the Water and Sewerage Department of the Nairobi City Council was characterized by inefficiency, corruption, and inability to provide consistently high quality water services. Yet, by 2005, the Kenya Association of Insurance Brokers ranked the NWSC second in a survey of public companies.
- External factors have clearly played a role in spurring a turnaround in the utility's performance. Although NWSC remains 100% publicly-owned, its mandate and focus have been set out more clearly than previously. The NWSC's long-term vision has been communicated throughout the company, and is reflected in its benchmarks for success and overall performance. With performance targets, clear delineations of responsibility and rules for accountability in place, NWSC's management can more effectively monitor, manage and budget the company's operations.
- The reform process has also spurred a shift in the utility's operating culture. The management and Board of Directors appear committed to improving the utility's performance. For management, the establishment of performance targets has provided further incentive for strong performance.
- The clear delineation of roles and responsibilities within the water sector's institutional and organizational framework has also helped transform the NWSC. However, communication channels among the various institutions of the water sector may require strengthening, particularly in instances in which one relies on another's decision-making. For instance, between NWSC and AWSB with regard to budgeting and investment decisions.
- NWSC has undertaken serious efforts to extend service coverage into informal settlements through partnerships with a wide range of stakeholders, including communities themselves. These initiatives can be expected to boost NWSC's longer-term viability and growth, and to improve its image in the eyes of the wider public.

Introduction

Kenya straddles the equator, and encompasses several different climates. A majority of the country's population (64%) lives in rural areas,¹

¹ Data as of 2003. <http://www.ruralpovertyportal.org/english/regions/africa/ken/statistics.htm>

and 75% of the workforce is engaged in agricultural activities. Fifty-six percent live below Kenya's poverty line.

In 2002, after free elections, a new government took office, led by Mwai Kibaki and the National Rainbow Coalition (NARC). Elected on a platform of reduced government corruption, the new administration was expected to usher in a new, more democratic era. In 2005, the government announced that it would mainstream the Millennium Development Goals (MDGs) into its national budgeting and planning.

As part of a broad reform, the new government passed the Water Act of 2002, which reorganized Kenya's water sector. This case will examine the Nairobi Water and Sewerage Corporation (NWSC) in the context of this reform, with particular reference to improvements in governance and management, and how the reform program has influenced the utility's prospects for mobilizing domestic financial resources.

Transformation Process

Prior to the most recent reform, Kenya's water and sanitation sector was financially unviable and debt-ridden. Poor management, inadequate maintenance of existing infrastructure, artificially low tariffs, and increasing debt loads all contributed to poor service delivery. In Nairobi, services provided by the Water and Sewerage Department of the Nairobi City Council (NCC) were characterized by low coverage and unreliable service, high levels of Unaccounted-for Water (UFW), considerable accounts receivable, tariffs set below cost recovery levels (and even for operations and maintenance costs), and weak and ineffective management. Consequently, households that could afford to do so, dug their own wells. While groundwater abstraction licenses were required by the Ministry of Water Resource Management and Development (MWRMD), the system was neither controlled nor coordinated.

Table 1.1: Overview of Water and Sanitation Services, NWSC

Area served	208 km ²
Size/population of service area	2.0 million
Volume of water produced (in m ³)	160 million
Water consumers served	1.6 million
Number of connections	220,000
Number of metered connections	211,765
Number of consumers provided with waterborne sewerage, pit latrines or septic tanks	1.2 million
Unaccounted-for Water ²	35%
Credit rating (for the municipality)	
- Short-term	
- Long-term	NA

Source: NWSC.

² UFW is based on water produced and water billed. Notably, 81% of bills are actually paid, yielding 48.4% of net revenue collected relative to water produced.

Table 1.2: Snapshot of Kenya³

	Kenya
Total population	33.5 million ⁴
GDP	US\$20.2 billion
GDP growth (average, 2002-2005)	3.76%
GDP/capita (p.a.)	US\$481
Prime rate	6.34 (REPO)
Inflation	14.6% ⁵
Unemployment rate	40%
Poverty rate	52%

Source: Human Development Report 2006, http://www.indexmundi.com/kenya/gdp_real_growth_rate.html; Central Bureau of Statistics, Kenya; Kenya Facts and Figures 2006 Edition, CIA World Factbook Web site, Central Bank of Kenya Web site.

In 2002, the water sector was a key target for reform by the newly elected government. The 2002 Water Act restructured the sector with four key policy objectives: water resources management, water and sewerage development, reforms to the institutional framework, and improving finance mechanisms for water sector investment.

In Nairobi, the reform process led to the creation of the Nairobi Water and Sewerage Company (NWSC), a corporatized, ring-fenced utility. In 2004, shortly after its creation, NWSC announced a goal to be a fully viable water company within five years. In 2005, an audit revealed the company was eight months ahead of schedule.

The Utility and its External Environment

Several external factors spurred the creation of NWSC. In 2003, to expedite implementation of the Water Act in urban areas, incentives were drawn up to encourage local councils to create water companies out of existing water and sewerage departments. In Nairobi, the NCC

created NWSC from the previous utility, which serviced the bulk of the city's formal areas. However, the NWSC's capacity to manage operations, improve service delivery, and service its inherited debt was virtually nil without external funding. With support from the World Bank, NWSC is currently in the midst of a five-year transition to commercial viability. The Kshs1.6 billion (approximately US\$21.5 million) project was funded jointly: The World Bank provided a Ksh1.2 billion grant, and the utility self-financed the remainder. The effects of this project, within the context of broader reform efforts, are examined below:

Overall Sector Strategy

Under the prereform institutional framework, the government performed the roles of water resources manager, regulator, and water services provider. This model was ineffective and resulted in weak service delivery and poor financial performance throughout the country. In response, the 2002 policy reduced the government's role in policy formulation, regulation and supervision, at the same time

³ Data as of 2004. http://hdr.undp.org/hdr2006/statistics/countries/data_sheets/cty_ds_KEN.html

⁴ Data as of 2005.

⁵ Data as of November 2006.

inviting stakeholders and target communities to participate in the implementation, financing, operations and maintenance of water resources and supply facilities.

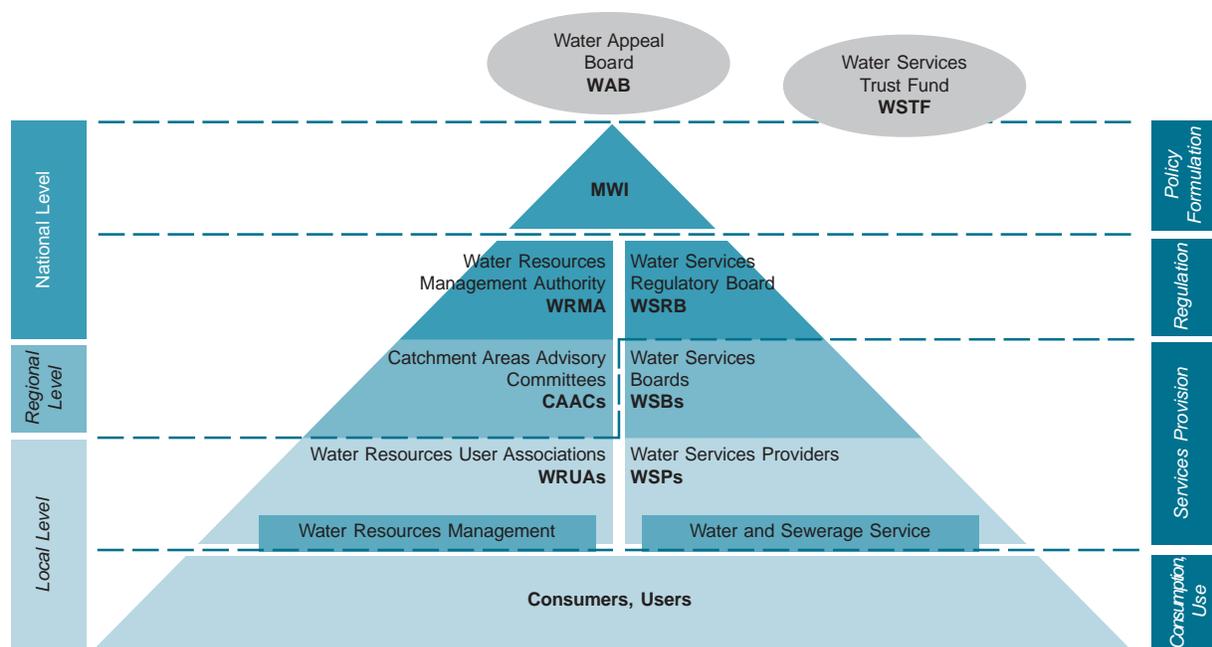
The Government of Kenya’s National Water Policy 1999 and a Government Action Plan for implementing the Poverty Reduction Strategy Paper set targets for universal access to water supply, with a coverage expansion of at minimum the MDG target of 70% coverage by 2015. For sanitation, the target is 93% coverage by 2015. To achieve these targets, the Government developed a Sector Wide Approach (SWAP), which was formally adopted in late October 2006. Launch of the SWAP was conditional on satisfying nine prerequisite conditions, which include: government leadership; involvement by the Ministry of Finance; formulation of an interim sector investment plan; annual sector reviews; the setting of prerequisite funding modalities; and training in anticorruption, enforcement, and accountability. The government has completed most of these, and has begun efforts to meet goals for anticorruption and staff transfers from the Ministry of Water and Irrigation.

Institutional Arrangements

The Water Act defines three main levels of water management, as outlined in *Figure 1.1*. At the national level, the Water Resources Management Authority (WRMA) provides licensing and regulation functions; Water Services Boards (WSBs), are responsible for investment in water resources; and the Water and Sanitation Trust Fund (WSTF) mobilizes financial resources for the sector. All of these organizations are state-owned corporations, and operate in both urban and rural areas.

At the regional level, there are seven water basins. Each basin has a Water Service Board and a resource management authority. The resource management authorities’ role is to ensure effective management and maintenance of catchment areas. Each catchment also has a Catchment Area Management Committee (CAMC) to ensure community involvement in water management. The CAMCs report directly to the WRMA. Water Service Boards have a mandate to provide water, and are authorized to provide licenses to service providers for service

Figure 1.1: Institutional Arrangements in Kenya’s Water Supply



provision. To provide a system of checks and balances, Kenyan legislation does not permit water Boards to be service providers; they must appoint agents to do that. For example, the Athi Water Services Board is the asset owner and is responsible for overall service provision in Nairobi as well as western Kenya, while NWSC is the actual service provider.

Relationship between NWSC and AWSB

NWSC was created to provide water and sewerage services in the greater Nairobi area. The relationship between NWSC, the WSRB, the AWSB, the Nairobi City Council, and customers is defined in a Tripartite Agreement that constitutes the overall framework for the water and sewerage services in the city. The legislation specifically sets out: transparency in roles and responsibilities; separation of asset ownership and control and operation; and autonomy of service delivery institutions. AWSB operates under a license issued by the WSRB, which enables it to facilitate the provision of WSS services to customers and institutions within its jurisdiction. The AWSB, in turn, signed a five-year service provision contract with

NWSC. This contract specifies terms and conditions defining NWSC's services, metering and billing functions, and bill collection.

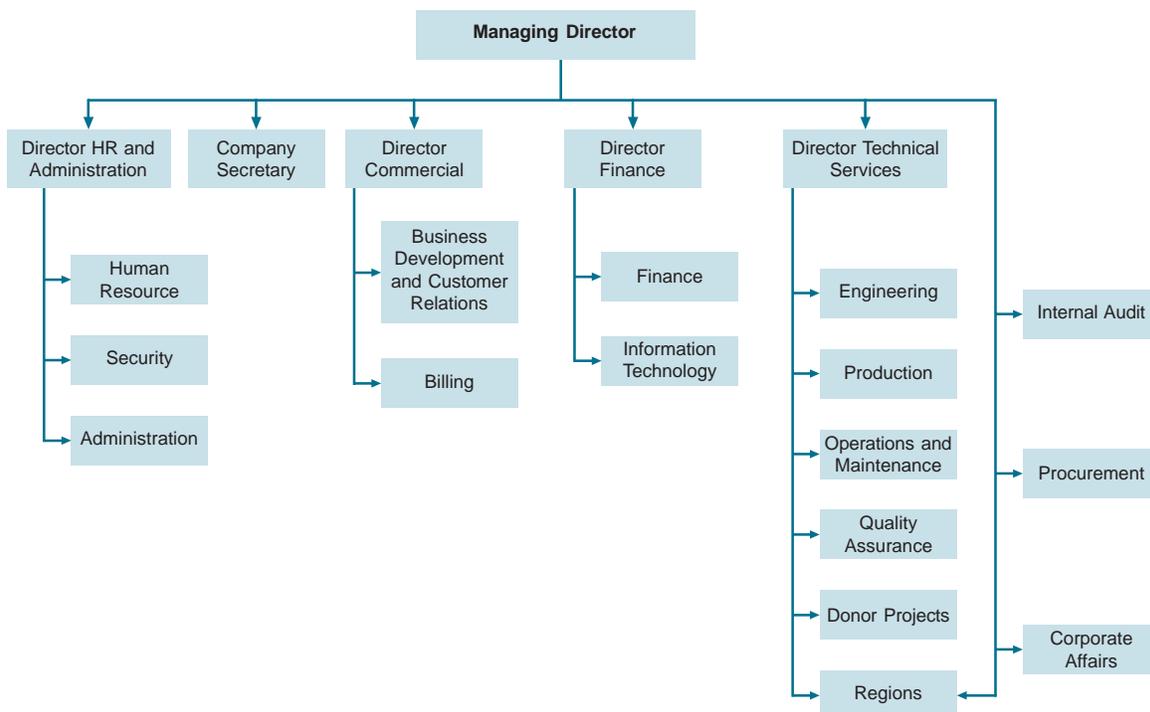
Company Structure

NWSC was incorporated in December 2003 under the Companies Act CAP 486 as a wholly-owned subsidiary of the Nairobi City Council (NCC), and became operational on May 17, 2004. Its headquarters are in Nairobi, with divisional centers in five city suburbs (Karen, Nairobi Dam, Eastleigh, Kariobangi and Gatundu).

The company's chief executive is the Managing Director, who is appointed by the Board and is responsible for the performance of the Management Team, which is organized as follows:

- Directorate of Technical Services
- Directorate of Commercial Services
- Directorate of Financial Services
- Directorate of Human Resources Management and Administrative Services

Figure 1.2: Organogram of Nairobi Water Company



Governance

The Boards of Directors for commercialized utilities are frequently drawn from the public sector, and often from the government agency previously responsible for service delivery. NWSC used a public-private partnership approach to staff its board, intending to tap the skills and experience of a range of Nairobi's leading private and public organizations. Over the course of 2003, discussions took place among NWSC, the Ministry of Finance, the Ministry of Water, and the Ministry of Local Government. Despite resistance to the idea of commercializing a water utility and ceding some control over management, a new board structure emerged that would feature six directors from the public sector and six from outside institutions. The latter six outside were selected from reputable institutions in Kenya to meet specific needs of the utility. For example, the board member representing the Institute of Certified Public Accountants offers financial and accounting expertise, while the African Medical Research Foundation (AMREF) board representative provides a voice for hygiene aspects of water and sewerage. All of the board's committees are chaired by relevant private and NGO organizations (for example, the Auditing Committee is chaired by the Institute of Certified Public Accountants).

Despite board diversity, the utility remains 100% owned by the NCC, and there is significant public sector representation: three elected civil servants

(the Mayor, Treasurer, and Clerk of Nairobi City) and two technocrats (representing NCC's Water Committee and Finance Committee). Despite having no shareholding, directors from external (private and NGO) agencies are expected to provide capacity building and expertise to strengthen NWSC's competence, and occupy the Chair and Vice Chair of the board. Chairs of different board committees are also occupied by external agency directors.

The board is responsible for formulating the company's strategic plan and guiding its implementation. This includes: approving performance targets for senior management; guiding budgets and expenditures; ensuring that financial statements comply with International Financial Reporting Standards; and identifying and mitigating risk. Further, the board oversees implementation of governance procedures aimed at promoting compliance with legislation, professional standards and the best corporate governance practices promulgated by relevant authorities.

The Utility and its Internal Environment

Since 2004, when NWSC assumed responsibility for operations, the company has implemented several changes, including an upgrade and modernization of its accounting and billing system, overhaul of customer service functions, and repair of the water distribution network. The utility has also made significant progress in establishing company-wide management

Table 1.3: NWSC's Board Structure

<i>Public Sector Representation</i>	<i>Private Sector Representation</i>
Mayor of Nairobi	NGO Council
Town Clerk	Kenya National Chamber of Commerce and Industry
City Treasurer	Institute of Certified Public Accountants
Chair, Water Committee, NCC	AMREF
Chair, Finance Committee, NCC	– Association of Hotelkeepers and Caterers – Plan International

systems and procedures, and also in orienting its staff, many of whom were previously employed by the NCC, to a new and more efficient management and operations paradigm.

Background

Although created in May 2004, NWSC did not become fully autonomous (legally and financially) until August 2004. Once the transition was complete, the utility radically changed its management structure through two stages of management reform. In the first, a new management team was recruited (for the posts of Managing Director, Commercial Director, Technical Director, Financial Director, Administrative Director, and Company Secretary). Positions were advertised internationally and regionally, and an external firm hired to ensure the recruitment process remained free of political interference. Subsequently, all administrative staff positions were also advertised, with the aim of creating a new operating culture.

In 2005, a second management reform, now aimed at mid-level managers, began. With new senior and junior management teams in place, the utility began to engage in far-reaching organization-wide reforms.

Strategic Planning and Budgeting

Reforms are being implemented according to a three-year planning cycle. The current (and first) three-year plan ended in June 2007, while a new one was expected to gain Board approval in early 2007. Strategic plans include commercial, operational and financial goals, and also set out targets and indicators for success. Budgets are set on an annual basis, within the framework of the three-year cycle. Although revised to reflect actual costs, budgets are aligned with the overall strategy. Budgets and strategies are sent to the AWSB for comment, but no approval is needed.

Human Resources

When NWSC was created, it was agreed that existing staff would not be downsized (except in cases of attrition, or dismissal due to corruption). However, the decision was taken to open senior and mid-level management positions for competitive hiring. NWSC has roughly 2,200 staff members, which it considers high for the utility's size and customer base at 10 staff per 1,000 connections. As the new management team assumed its responsibilities, it became apparent that a considerable proportion of staff were underqualified for their positions. To address this, the utility developed a tightly focused program with an emphasis on retraining workers, and adopted the mindset that extra staff constitutes an asset rather than a constraint. Some of the ways in which staff skills and time have been applied include extending metering, improving the collection rate, and raising confidence amongst NWSC's customers, who were initially skeptical that the utility would provide better service delivery than the NCC's Water Department.

Concurrently, an operations manual on human resources policies has been developed, as well as procedures and financial policy manuals. The company developed a transition business plan, which was approved by the Board of Directors, and also launched a stakeholder communications program to increase public awareness about the company and its services. These efforts have influenced human resources skills, according to a recent study.⁶ Also, according to a 2005 survey, 79.6% of customers have noticed positive changes in the management and delivery of water services since 2004.

Although the relationship between NWSC and unions was tenuous when the company was first created, improved working conditions and higher salaries at the utility have gone some way to improving this.

⁶ A study was conducted by the World Bank and the Government of Kenya with the African Center for Economic Growth, which audited NWSC in 2005 and found that HR skills were improved.

Operating Performance

The reform program has led to a rapid improved operating performance. NWSC initially focused on improving billing and collection, at the same time recognizing that billing improvements must be matched by improvements in service delivery. To address service delivery issues, overall water production was increased between June 2004 and July 2006 from 320,000 m³ to 400,000 m³, while Unaccounted-for Water declined in the same period, from 58% to 35%. These, and other improvements enhanced cost recovery from Ksh80 million per month in May 2003, to Ksh100 million just four months later, and Ksh220 million by August 2004. Similarly, the utility's overall financial performance has improved: in its first full financial report, NWSC reported a net profit of Ksh48 million (approximately US\$650,000), based on an externally audited assessment. This rapid increase allowed the utility to increase all staff salaries by 70% between August 2004 and December 2005.

Internally, management continues to strive to improve staff performance. Between 5 and 10% of management are on performance-based contracts and can be fired, while the rest of the staff are on lifelong contracts, a holdover from the precorporatization process. The current plan is to reduce staff numbers from roughly 2,700 to 1,750. To achieve this without violating employment law, the utility has worked with the unions to develop early retirement packages, and supports natural attrition. For example, 56 staff members retired in 2007.

NWSC has also sought to increase, where possible, private sector participation in small-scale projects. In late 2004, the utility floated a tender for installing billing, financial, and personnel systems. Due to political concerns, the tendering process took over nine months. The Kampala Water Corporation, the World Bank, and external consultants participated in the bidding process, auditing and receiving presentations and assessing the capacity of the bidders. Three companies were selected. NWSC

also tenders to the private sector for billing and other activities, including installation and meter-reading. There are also plans to hire a private firm to execute an infrastructure audit aimed at strengthening asset management.

Still, to achieve its goals, NWSC requires additional funding beyond what it can raise by itself, or through donor grants. As a result, the utility is keen to tap private capital to bridge its financing gaps.

Customer Base/Customer Service

Ninety percent of NWSC's customer base is residential, although it also services industrial and commercial users. The utility provides a range of services, including networked service to wealthier customers, and tanker services in lower income areas that lack the necessary physical infrastructure for piped service. A large proportion of Nairobi's population lives in informal areas, of which some 60% live below the poverty line. Due to the nature of informal areas and land tenure issues, informal settlements are not officially eligible to receive public services, although most residents receive water, whether directly or indirectly, from the utility's network. Widespread water vending and illegal connection account for much of the NWSC's high rate of UFW and poor revenue collection.

The NWSC is keen to extend its services into informal and poor areas, and is working—through partnerships with communities, communications campaigns, subsidized billing and health awareness outreach—to close the service gap, particularly for the poorest city residents. These outreach activities have financial objectives: to reduce UFW and develop more efficient billing practices so as to rationalize the utility's books and, over time, increase revenues. NWSC has the latitude to impose strict measures to meet its goals. For example, in late January 2007, it disconnected for two weeks thousands of customers—including government departments—to prompt them into paying their arrears, and to make some gains against Ksh1.2 billion (US\$17 million) in outstanding bills.

NWSC has also implemented several improvements in customer service, in parallel with its financial reforms, although the value of these to the poor is unknown. For example, the utility developed a comprehensive Web site that provides options for users to report corruption, water leaks, billing problems, and general customer complaints. Overall, the utility has focused on streamlining and improving the bill collection process, in part by allowing customers greater flexibility in making payments. Bills can be paid: at company headquarters; at any branch of the Coop Bank (a cooperative bank that operates throughout Kenya); at select branches of K-Rep Bank (a microfinance bank); at the post office, and some other government offices. As weak revenue management was identified as a major constraint to effective operation, the utility switched to a system of monthly billings based on meter readings, issues disconnection notices for nonpayment, and is committed to reconnecting service within 24 hours of payment.

Tariff Structure

Kenya's tariff structure for water and sanitation is broadly outlined in the Water Act. For NWSC, specific tariff arrangements were established in the Tripartite Arrangement. Generally, water providers set tariffs based on the services they provide and local costs, but these must be approved by the relevant Water Services Board. For example, if NWSC determines that a tariff review is necessary, it must submit a proposal to

the Athi Water Services Board (the asset holder), which, following review, may send it to the Water Regulatory Board to make a final decision. Because the water companies (including NWSC) are so new, the notion of tariff boards and adapting tariffs to meet local needs is a relatively new concept. In Nairobi, tariffs have remained unchanged since 1996, despite increasing inflation.

NWSC charges users based on consumption, and provides meters free of charge to users. Customers can estimate their water charges using NWSC's website, or by reading their meters. The tariff structure is based on a graduated tariff, summarized in *Table 1.4*.

Billing

Soon after it came into existence, NWSC began to focus on improving revenue management through bill collection, and understanding and settling old debts, whether through repayment plans or write-offs. The utility's billing is often incomprehensible and inaccurate, even as inadequate revenue collection is one of the biggest challenges faced by the utility. In 2005, NWSC conducted a far-reaching seven-week multimedia marketing and branding campaign to impress the utility's new corporate entity into consumers' minds, as well as resolve billing issues and increase collection efficiency. During the campaign, one day each week was devoted to a campaign called *Bill bila balaa* (Kiswahili for

Table 1.4: Water and Sewer Tariffs

<i>Consumption (liters)</i>	<i>Water per m³ (in Ksh)</i>	<i>Sewer per m³ (in Ksh)</i>
0-10,000	12.00	8.95
10-30,000	18.00	8.95
30-60,000	27.50	11.62
Over 60,000	34.50	14.20
Subsidized rate in informal areas	10.00	

Source: NWSC Website <http://www.nairobiwater.co.ke/content/?contentid=53>

“bill without problems”). The campaign focused on four areas: strategic issue advertising, community mobilization, special events, and media relations. NWSC staff went door-to-door, introducing the new company to customers, responding to questions and concerns, and tracking down customers with poor payment histories to settle their accounts. For NWSC, this campaign had the added benefit of generating current data on consumer addresses; for consumers, the outreach exercise put a “face” on the city’s new water service provider.

The campaign set targets of reaching 30,000 customers, and hiking revenue collection by 10%. In reality, the company exceeded this, increasing revenue collection to 54%. Further, NWSC resolved more than 90,000 outstanding billing problems and increased collection efficiency to 98%. Increased revenues have allowed NWSC to pay off half its inherited debt, or Kshs750 million as well as to reinvest in core business functions.

Financing Transactions and Environment

Under the current institutional arrangements, ownership and control of fixed assets used by NWSC are vested in the Athi Water Services Board. This means that all investment-related decisions rest with the AWSB, and not with NWSC’s Board of Directors. In practice, the relationship between NWSC as the service provider, and the AWSB as the asset holder, is set out in a Service Provision Agreement (SPA). The SPA explicitly states that while the utility may engage in operational investments, all development investments must be borne by the AWSB. Consequently, the NWSC can directly mobilize financial resources only for working capital and relatively small-scale investments. In these cases, the utility must notify the AWSB, which only has decision-making authority for the development of fixed assets. Where infrastructure investments are deemed

necessary, NWSC and AWSB cooperate through meetings of technical experts.

Due to the reform process implemented over the last few years, NWSC has gradually begun to seek increased levels of commercial finance. At the same time, Kenya’s financial sector is increasingly looking for domestic investment opportunities. In 2006, the utility sought and received approval from AWSB to borrow from a local bank to acquire a fleet of vehicles and other operating assets. The loan value was approximately US\$460,000 and it was secured by the purchased assets. Recently, the utility submitted an application for a commercial loan worth US\$2.8 million, for operational equipment. A response was expected early in 2007.

The AWSB has also developed a five-year plan for infrastructure investments worth Ksh3 billion. To finance this, the AWSB has arranged concessionary financing from the World Bank and the French Development Agency for the total amount (about US\$120 million). So that the AWSB assumes at least some of the risk on commercial terms, it will be exposed to a loan of Ksh1.3 billion (US\$40 million), at between 2-2.5% interest, over five years. For the balance of the debt (Ksh1.7 billion), the Kenyan government agreed to shield the AWSB from foreign exchange risk.

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People Met:

- Mr. F. K. Mugo, Managing Director, NWSC
- Mr. Patrick Omutia, Financial Director, NWSC
- Mr. J. P. Kimani, Technical Director, NWSC
- Mr. Joseph Ndegeya, Principal Engineer, NWSC
- Eng. Lawrence W. Mwangi, CEO Athi Water Services Board
- Ms. Elizabeth Mwangi, Manager, Corporate Planning

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2. Société Nationale d'Exploitation et de Distribution des Eaux (SONEDE), Tunisia

Summary

Some of the key points arising from this case were:

- A utility's strong commitment to quality and management is critical for accessing commercial finance. In the case of Société Nationale d'Exploitation et de Distribution des Eaux (SONEDE), the absence of a viable private sector to assume noncore business activities led to the utility focusing on core and noncore business, which has cost implications. Despite this, SONEDE's success is attributable in part to the utility's governance structure and management expertise.
- Water sector reform is an ongoing and gradual process. SONEDE has been operating in Tunisia for over 30 years, over which time it has striven to improve operations through short-, medium-, and long-term strategies, coupled with budgets that match planned programs. Overall, the utility has adopted a staged, conservative approach, with a long-term view that accommodates new ideas.
- Water sector reform, implemented in tandem with broader sector reforms, can create a chain reaction and spur synergies. For example, financial sector reform enhances scope for a water utility to access funding. One challenge is to ensure that legal and regulatory frameworks are conducive to evolving water sector and financial services sectors.

Introduction

Tunisia is located in a semiarid climatic zone characterized by irregular rainfall, and is not well endowed with renewable natural water resources; there is an estimated 450 m³ per person annually. In light of population growth and rising demand for water from agriculture and industry, sustainable supply and water service provision are key concerns. As a result, a platform of water sector reform combining structural and societal reforms has sought to address some of Tunisia's water challenges, and has achieved some successes: a rising standard of living, expansion of the middle-class, economic diversification, and a more flexible economy and society.

SONEDE is a state-owned commercial and industrial company that provides water to domestic, public and industrial users, as well as the growing service economy. Annual investment, estimated at 85 million Tunisian dinars (US\$70 million), is used for developing new water supply projects (70%) and for the upgrade and maintenance of existing systems (30%). The company raises money through user fees, which vary according to user type. From its revenues, the utility is able to cover operations and maintenance costs, as well as finance up to 40% of new projects. The balance is financed by third-party donors, including public and private sources, such as housing developers, as well as the tourism and industrial sectors. Long-term loans are provided by international agencies, including the World Bank, the African Development Bank, the European Investment

Bank, the French Development Agency, the Islamic Development Bank, and others. This case study examines SONEDÉ in the context of

growing water demand and a changing economy, and explains some of the internal and external factors that have contributed to its success.

Table 2.1: Overview of Water Services, SONEDÉ

Area served	160,000 km ²
Size/population of service area	8.17 million
Volume of water produced	420 million m ³ /year
Water consumers served	NA
Number of connections	1,920 million
Water coverage (% population with a connection or within 200 m of a standpipe or other source of water)	99% in urban areas 89% in rural areas
Number of metered connections	100%
Number of consumers provided with waterborne sewerage, pit latrines or septic tanks	NA
Unaccounted-for Water	20%
Credit rating (for the municipality)	
- Short-term	
- Long-term	NA

Source: SONEDÉ, 2005.

Table 2.2: Snapshot of Tunisia

	<i>Tunisia</i>
Population (2005)	10.1 million
GDP (Tunisian dinar: constant prices 1990)	21.4 billion
GDP growth (average five-year)	5%
GDP/capita (p.a.)	3,530 dinars ⁷
Prime overdraft rate	11%
Inflation	2.1% ⁸
Unemployment rate	14.2%

Source: I.N.S. (Institut National de la Statistique, Tunisie: www.ins.nat.tn).

⁷ Data for 2005. 1 Dinar = US\$0.70.

⁸ Data for 2005.

Transformation Process

SONEDE was created in 1968⁹ during a time of rapid demand growth for water in Tunisia, in response to the need for a national body to manage all areas related to the provision of safe drinking water throughout the country (i.e., production, transportation, and distribution). Institutionally, SONEDE sits under the Ministère de l'Agriculture et des Ressources Hydrauliques (Ministry of Agriculture and Water Resources, Tunisia) (MARH). By law, SONEDE is a public monopoly provider. The law does not permit private-sector participation in the form of leasing, BOT, or disposition of financial assets, although SONEDE has introduced elements of the private sector over time, and as necessary. The Tunisian government is responsible for mobilizing financial resources beyond what SONEDE can recover through its user fees. In urban areas, which represent 65% of the country's population, SONEDE provides water services to 99% of the population. In rural areas, access to water services is at 89%; half of this population is serviced by SONEDE and the rest by the Rural Engineering Department of the Ministry of Agriculture and Water Resources, which operates in dispersed rural settlements.

The Utility and its External Environment

As a public corporation, the government directly owns all of the utility's capital and financial assets, although SONEDE is responsible for management of financial assets, operations and maintenance, rehabilitation, renewal and installation of equipment. Thus, SONEDE keeps both accounting and financial records, which are audited and certified by an external company. These records appear annually on the balance sheet and in the Official Gazette of the Republic of Tunisia.

Governance

SONEDE is a publicly-owned and operated monopoly service provider. The state is

responsible for trusteeship through the line ministry responsible for SONEDE (MAHR), with a goal to maintain the management and functioning of its corporations, with respect to abiding by regulations, ensuring uniformity between management and the broader direction of the government, as well as guaranteeing good governance principles. Further, in the absence of an independent regulator, MAHR supervises SONEDE to ensure that operations and management adheres to legislation governing the relationship between the utility and the State.

SONEDE's Board of Directors has 12 members, chosen based on experience and profile. They are state agents or other government employees charged to protect the interests of various stakeholders to the drinking water sector, as well as representatives respectively of government, the private sector, and consumers. The Board of Directors meets at least once each quarter. See *Table 2.3* for an outline of SONEDE's Board of Directors.

The Board of Directors is responsible for reviewing and approving SONEDE's budget estimates and related documents. SONEDE must also submit its contract program, budget estimates, financial statements, reports on legal certification of accounts and management letters, minutes of board meetings, and annual activity reports to the line ministry, the Ministry of Finance and Development, and the Ministry of International Cooperation. The line ministry will then submit budgetary and related documents to Tunisia's parliament during annual deliberations over government budgets.

The Utility and its Internal Environment

A utility's internal functioning is of considerable interest to credit analysts, and strongly influences a financier's willingness to provide financing. SONEDE's internal environment appears stable, with strong management and systems for negotiating with staff on human resources issues,

⁹ Law No. 68-22 of July 2, 1968, JORT July 2, 1968, p.743.

Table 2.3: SONED Board of Directors

Role	Where From
Chairperson (1)	Managing Director, SONED
Members (11)	MARH (2) Ministry of Interior and Local Development (1) Ministry of Public Health (1) Ministry of Industry and Energy (1) Ministry of Tourism, Commerce and Craft (1) Ministry of Development and International Cooperation (1) National Board for Water Supply (ONAS*) (1) Federation of Employers and Consumers (1) Trade Union (1) State Controller: 1st Ministry (1)

*Office National de l'Assainissement du Sénégal.

and strong linkages between strategic planning and budgeting departments to fund policies and programs. However, the utility lacks a customer-oriented perspective, although this seems to be changing. Lately, SONED has focused on improving its billing systems. See below for a profile of the utility's internal environment.

Human Resources

SONED employs 7,000 staffers (8% senior staff, 22% first-line supervisors, and 70% executing staff). During the 10th Five Year Plan (2002-2006), the number of permanent staff at SONED rose from 5,825 at the end of 2001 to 6,017 in 2006, representing an annual average increase of 0.7%, compared to an increase in ratepayers of 4.1% per year. In other words, the staff ratio is 3 per 1,000 connections in 2006, compared with 3.4 per 1,000 connections in 2002.

As a SONED partner, the government and the National Trade Union participate in staff salary negotiations every three years. These negotiations focus on salary review and operations, taking into account economic conditions in Tunisia and the financial and social

state of the utility, as well as consumer interests. The average salary rises about 6% every three years.

In addition to the union, SONED employees are also represented by joint regional commissions, appointed by the Managing Director, and by a panel of the company's administrative representatives, who are appointed by staff members. These commissions aim to represent the professional and social interests of staff on one hand, and to participate in the company's management in such matters as recruitment, promotion, training, discipline, health and security in the workplace, the management of social projects of the company, and proposals on all areas aimed at increasing production and improvement of staff performance.

Donors and Technical Assistance

SONED has established partnerships with a range of donors that finance long-term investments for development and upgrade of existing assets, as well as the strengthening of management and technical capacity. For example, SONED has a long-standing relationship with the World Bank, which is

currently financing its ninth project. This project comprised three initial components:

- **Studies of water demand** to improve planning for better safe drinking water supply projects. In collaboration with the World Bank's Institute of Economic Development, SONEDE undertook a study on the development of the economic aspects of predicting demand for water on a theoretical basis, which includes a mathematical model for predicting demand.
- **A study of the cost of water** to strengthen SONEDE's capacity to develop better projects for supplying safe drinking water, and, more specifically, to determine the long-term marginal cost of water as well as to determine a feasible model for select rural areas.
- **Study of the development of pro-poor services in water supply**, aimed at developing partnerships between public and private sectors, with a view to reducing costs associated with water supply.

The World Bank has extended this project through 2011 to extend capacity-building activities, as well as ensure a supply of safe drinking water. The extension includes formulation of a corporate plan for the company and undertaking an organizational audit, establishing a commercial system and a Geographic Information System (GIS), drawing up a physical-financial model, and acquiring a software package for human resource management.

Strategic Planning and Budgeting

Tunisia's water policy is based on public control over water resources, with the goal of meeting future demand in a sustainable manner. The first strategic plan (1990-2011), which set out short- and long-term objectives, aims to establish and implement a strategy for water sector regulation and mobilization, whether through dams, catchment ponds, spreading of flood waters, treated wastewater, artificial refilling of layers, borehole drilling, surface wells, and desalting.

Through this plan, the rate of water resource mobilization increased to 88% in 2004, from 67% in 1996, and is expected to increase to 95% by 2011. A second strategic plan is currently in development, and will cover strategy and projections through 2030. The second plan will focus on nonconventional water resources, with the following features:

- Desalination and recycling treated wastewater.
- Protection of water resources against pollution.
- Avoiding overexploitation of water tables.
- Increasing water efficiency.
- Demand management of water resources.

Planning for the drinking water sector is integrated at the national level through Five Year Plans. These are developed by SONEDE, with approval from its board, the line ministry and the Ministry of Development and International Cooperation partners. Planning is followed by the creation of an annual budget for operations and development, which is coordinated with the plan's policies and programs. SONEDE has just completed its 10th plan (2002-2006), and embarked on its 11th (2007-2011).

Utilizing the Private Sector

Private sector participation is currently limited to subcontracting technical services for the extension of water networks and installment of connections, although there is capacity in Tunisia for a wide range of private sector involvement by both domestic and international companies. Examples of possible activity include: building treatment centers, desalination works, constructing water pumping stations, building storage tanks for safe drinking water, and laying pipes. Maintenance, discovering leakages and engineering studies are currently partly subcontracted.

In 1999, SONEDE conducted a study of the potential role of the private sector in supplying

safe drinking water. As part of the study, SONEDE was granted permission to develop a list of activities for which subcontracting could be possible, as well as analyze constraints to the development of contracts. One area identified was in desalination capacity. SONEDE recently completed a more detailed study for the construction of a desalination facility on the island of Jerba with a total capacity of 50,000 m³ per day, scheduled to begin in 2008. Investment for this facility is expected to take the form of a Build Own Transfer (BOT) or Build Own Operate (BOO).

Billing and Customer Service

In its first decade of operation, SONEDE focused on meeting increased domestic, industrial and tourist demand for water in large urban centers, particularly in Tunisia's coastal regions. In its second decade, SONEDE concentrated on meeting the need for safe drinking water in urban and rural areas. The third decade saw the establishment of water desalination facilities aimed at improving the chemical composition of water destined for large urban centers in the country's south. To date, SONEDE has achieved a commendable level of service; its connection rate in urban areas is nearly 100%, and in rural areas, 52%. Service levels tend to be consistent and without frequent systemic interruptions. Moreover, the network for distributing safe drinking water operates at 85% efficiency.

SONEDE's strong technical performance is not matched by its customer service. Each regional office has a counter receptionist who answers customers' complaints or refers them to the appropriate department. In terms of installing new connections, SONEDE sets a deadline of 15 days, although this deadline is rarely met.

Perhaps, most importantly, SONEDE is striving to improve its billing systems. Billing is done on a quarterly basis for 98% of customers, and this accounts for 70% of SONEDE's earnings. Most customers' bills are calculated on the basis of meter readings. The remaining 2% of billings, which account for 30% of revenues, are done

on a monthly basis. Billing is on a 90-day basis for the central government and public establishments. Customers can pay their bills in a number of ways: SONEDE's agencies (at a cashier's desk); at the post office; via bank payment; or via the Internet (using a bank card). SONEDE recently signed an agreement with Société Tunisienne de l'Electricite et du Gaz (Electric and Gas Company of Tunisia) (STEG) to allow customers of both companies to pay their water and electricity bills to either of the companies' cashiers.

Currently, the overall payment rate is about 95%. The average bill payment rate for private individuals does not exceed 40 days, and this is considered acceptable by the utility. On the other hand, State and local administrations have poor payment records, equivalent to one year's consumption for the state administration, and two years' consumption for local administrations. The state administration is in arrears because the annual water budget always falls short of actual expenditure. To address this, the government intervened in 2000 and 2005 to reconcile the administration's water bills and the redemption dates of outstanding loans (24.4 million and 14.4 million dinars, respectively—approximately US\$17.1 million and US\$10.1 million). To address the arrears of local administrations, the state implemented a debt rescheduling contract for a total of 10.9 million dinars over five years, beginning in 2006.

Over the last 10 years, SONEDE has installed an average of 70,000 new connections each year, at an average unit cost of 300 dinars. Through 1998, new customers were able to pay cash for new connections, or pay the cost of the connection on a quarterly basis over five years. Since 1998, new customers, who opted for a credit connection, receives a bill each quarter that includes the tariff for consumption during the previous quarter, and a loan repayment installment. The bill must be paid in full or the connection will be cut.

SONEDE is carrying out a study to measure customer satisfaction, with the aim of improving

customer service levels over time. The study includes qualitative data on customer expectations and needs, as well as quantitative information from questionnaires developed in the first stage.

Affordable Services and the Poor

Tunisia has several national social programs relating to water supply and sanitation for the poor, including Presidential Programs and a National Solidarity Fund (FSN), which aim, among other things, to increase public service delivery in underprivileged urban and rural areas. These programs are financed from the State budget, external loans, and through donations.

Tunisia's tariff policy also includes a subsidy for the poor, through a progressive tariff structure that varies according to use and water consumption. The first bracket is targeted exclusively toward low-income households whose quarterly water consumption does not exceed 20m³, or the equivalent of 40 liters per day per person. The social tariff results in a subsidy of over 30% of the cost to supply water, and 1% of the total expenses of low-income families. This tariff structure has resulted in improved coverage and connection rates in poor areas. SONEDE affords this by implementing cross-subsidies across different categories of user, as well as by offering flexible options for payment, especially for the poor. For example, water connection loans are offered directly by SONEDE and are repayable over a period of between five and eight years (at 11% interest), as a surcharge to the quarterly water bill.

Financing Transactions and Environment

Almost all infrastructure projects in Tunisia have been developed and financed by the public sector. In the case of SONEDE, surpluses from user fees enable the utility to cover all operation and maintenance costs, as well as contribute an average 40% of financing for new projects, with the rest coming from medium- and long-term

loans. As noted above, there are also national programs and funds to support pro-poor initiatives.

Between 1995 and 2005, SONEDE's annual investment program demonstrated increasing ambition, with a focus on new development. For example, its ratio of renewal investment to production growth was 10% in that time period, while the ratio of development investment to production growth was 90%. The focus on development resulted in an increased debt profile, with incremental increases nearly every year, yet the utility's debt service ratio is well above the minimum allowed, and the utility is still able to self-finance considerable portions of its debt (the minimum is set at 30%).

SONEDE borrows mostly on domestic markets, due to exchange rate risks, and because unlike the state, SONEDE does not need hard currency resources. Still, SONEDE's ability to borrow commercially hinges on tariff increases, which have not kept pace with inflation. While this seems not to have been a constraint in recent years, it does carry risk. See *Table 2.5* for a list of the sources of finance for SONEDE's annual financial investment plan and debt repayment program.

SONEDE seeks concessionary loans to finance larger infrastructure projects, and has obtained loans from numerous donors. For items financed partially by donors or third parties, the remainder of the financing is provided from the company's resources.

Overview of the Banking Sector in Tunisia

Over the last decade, a series of reforms were implemented in all sectors of the country's economy. These include: liberalization of investments, prices and foreign exchange; administrative reforms; modernization of the banking sector; and reform of the financial market and restructuring of public corporations. These initiatives have strengthened the country's market infrastructure, and facilitated entrepreneurship and the private sector, resulting

Performance Measures

Table 2.4: Key Performance Indicators for SONEDE

<i>Description</i>	<i>Unit</i>	<i>Indicators</i>
1 Operating Indicators		
1.1 Rate of coverage	%	96.0
1.2 Connection rate ¹⁰	%	80.6
1.3 Number of subscribers	Thousand	1918
1.4 Water production	l/c/d	140
1.5 Water consumption	l/c/d	110
1.6 Water consumption measured by meters	%	100
1.7 Continuity of service	h/j	24/24
1.8 Potable water tariffs (excluding fixed costs)	US\$ /m ³	
– Average		0.450
– Minimum		0.120
– Maximum		0.740
1.9 Network yield	%	84%
2 Financial Indicators		
2.1 Connection cost	US\$	260
2.2 Personnel cost per connection	%	20
2.3 Gross operating coefficient after depreciation = operating costs/operating products	Ratio	0.97
2.4 Collection/billing	Ratio	0.95
2.5 Solvency = total debts/total assets	%	34%
2.6 Operating result/operating costs	%	2.7%
2.7 Equipment/investment subsidy	%	15%
2.8 Maintenance/operating costs	%	3%
2.9 Salary costs/operating costs for water	%	47%
2.10 Debt service: Operating result + subscriber contribution/debt service	Ratio	2.34
2.11 Capital investment/EBIT	Ratio	2.2
2.12 Average income per connection/connection costs	Ratio	1.2
2.13 Average payment time for private clients Active debts/income x 365	Days	40

¹⁰ Per individual connection.

Table 2.5: Sources of Finance

<i>Uses</i>	<i>Resources</i>	<i>Average Investment (millions of dinar)</i>	<i>% of Financing</i>
Loan principal repayment	Own resources	15	100%
Renewal investment	Own resources	10	100%
Large projects	Donors	50	70-95%
Urban WSP program	Own resources	10	100%
Rural WSP program	State	15	100%
Network extension program	Third parties	15	90%
Total in millions of dinar	115		

in a more competitive economy and closer integration into the global economy. In March 2004, SIGMA Conseil conducted a market study on Tunisia's banking sector. As part of the study (see Figure 2.1), a Strengths/Weaknesses/Opportunities/Threats (SWOT) analysis was undertaken.

Standard Financial Information

See Table 2.6 for a breakdown of the balance sheets for fiscal 1995, 2000 and 2005. The Table suggests that SONEDE's assets are illiquid, given that they are comprised mostly of immobilizations. Still, the utility's rate of

Table 2.6: Comparative Balance Sheets 1995, 2000, 2005 (all figures are dinars)

	1995		2000		2005	
Net immobilizations	636.952	88%	767.782	88%	1,027.903	83%
Current assets	86.039	12%	103.497	12%	204.537	17%
<i>Total assets</i>	<i>722.991</i>	<i>100%</i>	<i>871.279</i>	<i>100%</i>	<i>1,232.44</i>	<i>100%</i>
Own capital	548.463	76%	653.265	75%	812.418	66%
Long-term debts	94.573	13%	112.101	13%	234.419	19%
Short-term debts	79.955	11%	105.913	12%	185.603	15%
<i>Total liabilities</i>	<i>722.991</i>	<i>100%</i>	<i>871.279</i>	<i>100%</i>	<i>1232.44</i>	<i>100%</i>
Control	0	0	0	0	0	
Liquidity ratio	1.08		0.98		1.10	
Debts/total assets	24%		25%		34%	
Financial leverage: Debts/own capital	32%		33%		52%	
Permanent capital/ immobilizations	1.01		1.00		1.02	

Figure 2.1: Results of the SWOT Analysis on Tunisia's Banking Sector**Strengths**

- A sound regulatory and legal structure
- The interest margin remains relatively high by international standards
- Good coverage of the country by the network of agencies
- Satisfactory knowledge of international operations

Weaknesses

- Weak financial structure
- Banks lack commercial sophistication
- Reduced interest margins
- Commissions are relatively low compared to interest margins

Opportunities

- Attention and support from the authorities for the banking sector
- Tunisia's increasing ties to the global economy
- The country's internal development policy
- Legislation has been improving continually, which encourages banks
- The rising living standards of the population and the increasing strength of the middle class
- Progress in telecommunications and informatics, which favors the development of distance services

Threats

- Opening of the banking market to Europe in 2006
- Consequences of September 11, 2001, and other related events
- The accounting practices and knowledge of many firms is inadequate, which makes it difficult to interpret accounting reporting made to banks during credit-risk estimates
- Weakness of enterprises' own funds, which increases the credit risk

indebtedness is relatively low compared with industry standards in Africa even though the utility's financial leveraging is increasing. It is important to note that although the company's debt ratio is increasing, it is not clear what an appropriate ratio should be.

Operating Costs

SONEDE's operating costs are mainly staff costs, energy and debt repayments. A breakdown is provided in *Table 2.7*.

Since its creation, the state has granted SONEDE certain incentives. These include:

- Corporate tax exemption for 20 years, covering the period from 1968-1988. Since 1989, SONEDE is liable for corporate tax at a rate of 35% of its pretax income (all net post-

tax profits are regularly deposited into the company's reserve account for reinvestment).

- From its inception in 1968 through 1990, SONEDE received an equipment subsidy for investments and loan reimbursements. Since 1991, the subsidy has been reserved exclusively for the financing of low-profit projects, such as rural water and sanitation programs and desalination projects.
- Since 2000, the state only finances food and potable water supply projects in rural areas of Tunisia.
- SONEDE has never received an operating subsidy, since it generates sufficient revenue to cover the totality of its operating expenditure, debt service, and the bulk of required capital expenditure. Any remaining capital expenditures are financed by the State.

Table 2.7: Operating Costs

	1995		2000		2005	
Consumables	14.1	13%	20.0	13%	21.9	11%
Staff costs	45.9	42%	67.6	45%	95.3	47%
Energy and fuel	9.6	9%	12.2	8%	18.7	9%
Chemical products	3.3	3%	3.1	2%	4.3	2%
Other costs	8.7	8%	12.9	9%	22.7	11%
Works done by the company for itself	-7.5	-7%	-8.1	-5%	-0.8	0%
EBIDAT	109.2	100%	149.1	100%	203.7	100%
Repayments and provisions	35.0	32%	41.3	28%	41.5	20%
EBIT	74.2	68%	107.7	72%	162.2	80%

Characteristics of SONEDE Loans

Given the utility's high repayment rates (95% of issued bills are paid), repayments on Year A are used to finance loans issued in Year A+1. Annually, about 10 million dinars is loaned to new customers to finance connections. From 1999 on, loan tenors have been extended from five years to between five and eight years to accommodate lower-income customers (interest is 11% per year). To facilitate offering this extension to customers, SONEDE secured a medium-term loan from the Banque du Sud, Tunisia, for 5 million dinars.

Between 1993 and 1996, SONEDE's borrowing included some medium-term loans from local banks to complete its financing for the renewal of its rolling stock, which was more than 12 years old, and for which maintenance costs were considered too high. The utility needed an envelope of 12 million dinars over a period of four years and, through a series of loans, was able to borrow the full amount.

According to the above, SONEDE was able to obtain medium-term loans from local banks with the following conditions:

- The maximum loan repayment period is seven years, including a one-year grace period.

- The loan amount may not exceed 5 million Tunisian dinars.
- A variable interest rate (TMM + 1.5).

This loan program provided a new source of financing for SONEDE, and, by using local financing, the utility was able to avoid exchange rate risks.

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Table 2.8: Outline of Loan Program

Local Bank	Amount in millions of dinars	Grace Period (years)	Repayment Years	TMM at Signature	Interest Rate	Period
Banque de l'Habitat 1 (Habitat Bank 1)	2.0	1	6	8.8125	Variable TMM + 1.5	1993-2000
Banque de l'Habitat 2 (Habitat Bank 2)	1.0	1	6	8.8125	Variable TMM + 1.5	1994-2000
Banque de l'Habitat 3 (Habitat Bank 3)	2.25	1	6	8.8125	Variable TMM + 1.5	1995-2001
BNA 1	2.25	1	6	8.8125	Variable TMM + 1.5	1995-2001
Banque de l'Habitat 4 (Habitat Bank 4)	1.5	1	6	8.8125	Variable TMM + 1.5	1996-2002
BNA 2	1.5	1	6	8.8125	Variable TMM + 1.5	1996-2002
UIB	1.5	1	6	8.8125	Variable TMM + 1.5	1996-2002
Total	12.0					

Note: TMM is *taux moyen mensuel du marché monétaire* or average monthly money market rate as posted by the Central Bank of Tunisia.

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3. eThekweni Municipality Water and Sanitation Unit, South Africa

Summary

The eThekweni Water Department in Durban, South Africa, is one of the strongest in Sub-Saharan Africa. Since 1992, the utility has undergone a broad transformation, including its management philosophy, customer base, and operational and financial performance. However, the utility's management performance owes much of its success to the considerable financial support of national programs (specifically, the Municipal Infrastructure Grant and Equitable Share), as well as strong financial support from the municipality. The key lessons learnt from the transformation of eThekweni Municipality Water and Sanitation Unit are:

- Throughout the transformation process, strong leadership is critical to keep the focus of the organization on service delivery, despite the tendency of the staff to focus on internal change processes. Likewise, leadership and political maturation by the local government is imperative in allowing the utility to function as a ring-fenced department within a municipal governance structure.
- Available and accurate data is critical in understanding the service area and customer needs, identifying and improving certain functions (e.g., capital budgets), building and maintaining strong customer relations (e.g., community outreach/education), and tracking progress over time.
- In a business-oriented organization, staff empowerment, creativity and innovation should be encouraged to foster change and

challenge a “business as usual” approach. The management, at all levels, should be encouraged to think about the big picture and propose new ideas.

- Community education and outreach should be considered a part of institutional capacity-building, and should be led by specialists who can apply appropriate approaches to addressing sanitation, water conservation, cost recovery, and other core concerns with consumers. As part of an integrated effort to strengthen the business, GIS and other technologies should be used to understand and address constraints.
- Partnerships and relationships with research institutes, universities, and the private sector offer a conduit to the development of new ideas and solutions to problems. For example, eThekweni Water provides R1 million to local universities to conduct applied research on a range of issues from water pricing to social issues, as well as technical and chemical research.

Introduction

The city of Durban, South Africa, is located on the country's east coast, and is part of eThekweni Municipality. The municipality covers 2,297 km², and has a population of 3.1 million, and an average annual population growth rate of 1.56%¹¹ (by 2010, the population is estimated to exceed four million). The city is one of South Africa's largest, and has a diverse economy, with strong industry and manufacturing, commerce, finance, and tourism, boosted by its international

¹¹ <http://www.sacities.net/cities/ethekweni.stm>

port, the country’s largest. All told, Durban contributes over 7% to South Africa’s GDP.

The eThekweni Municipality Water and Sanitation Unit is a ring-fenced municipal department with a mandate to provide water and sanitation services. It raises money from domestic financial

markets through the municipality, which borrows in bulk for all municipal functions. This case study examines the utility and municipality and the transformation to provide services to a growing and changing population base, along with some of the internal and external factors that have influenced its success.

Table 3.1: Overview of Water and Sanitation Services, eThekweni Water and Sanitation Unit

Area Served	2,297 km ²
Size/population of service area	3.1 million people
Volume of water produced	28,800,000,000 m ³ /year
Water consumers served	977,000
Number of connections	394,000
Water coverage (% population with a connection or within 200 m of a standpipe or other source of water)	50%
Number of metered connections	394,000
Number of consumers provided with waterborne sewerage, pit latrines or septic tanks	510,534
Credit rating (for the municipality)	
- Short-term	A1
- Long-term	AA

Source: eThekweni Water and Sanitation Unit.

Table 3.2: Snapshot of South Africa

	South Africa
Population	46.9 million
GDP (p.a.)	R1,350 billion
GDP growth (average five-year)	4.2%
GDP/Capita (p.a.)	R17,756
Prime overdraft rate	10.5% p.a.
Inflation	3.9%
Unemployment rate	26.7%

Source: <http://www.statssa.gov.za> for South Africa figures, and eThekweni Municipality credit rating brief, GCR, for data on Durban.

Transformation Process

In 1992, prior to South Africa's democratic transition, Durban Metro Water was a department of the Durban Metropolitan Area that provided piped water supplies and waterborne sewerage to Durban's population of about a million, comprised mostly of White, affluent citizens. While the utility was well-run and functional, the department's financial management and operations were uncoordinated, information management was poor, and there was little accountability. For the most part, finances were not a concern; most costs were recovered either from users, or via support from the Apartheid government. Thus, the utility was not in a position to raise money.

In the Black townships surrounding Durban, water services for the roughly two million people were provided by separate administrative boards. Service coverage and quality was extremely poor: dysfunctional piped water systems characterized by high leakage rates and ineffective cost recovery, while the other half had no piped water at all. Outlying rural areas largely depended on grants from the national government for services.

In 1992, a transformation process began as part of strategic planning and restructuring ahead of the 1994 elections. Through the demarcation process outlined in the Municipal Structures Act, Durban Metropolitan became the eThekweni Municipality with extended boundaries that included the administrative boards and, eventually, rural areas. New business units were created from the municipal departments to encourage a shift toward fiscal accountability and orientation toward customer service. Through this process, eventually 38 separate

entities were amalgamated into the eThekweni Municipality.

In the process, the new eThekweni Water and Sanitation Unit shifted its approach from that of an engineering unit working in a largely developed context to that of a utility working in a developing country context. Whereas Durban Metro Water previously serviced a majority commercial base (60%), it now serves mostly poor, residential customers (60%). The utility's core values are customer focus, cost consciousness, and attention to staff well-being and a target of universal coverage has been set for 2010. According to its most recent business plan, the utility's key priorities are to¹²:

- Eliminate the backlog of water and sanitation services; the water backlog is now 15% of what it was in 1996, the sewerage backlog remains at 50% of what it was in 1996.
- Reduce Unaccounted-for Water from 30% to 25% by 2010.
- Improve asset management systems.
- Provide training to address skills gap in engineering and other professional posts.
- Improve performance management systems.
- Improve customer services and services payment levels (currently just over 90%).

To achieve these targets, a Basic Water and Sanitation Program (BWSP) was developed to create a single platform for rural and periurban areas.

The Water and Sanitation Unit's transformation largely hinged on how the utility adapted to changing conditions, both at the national level and internally. This section examines some of the

¹² eThekweni Municipality business plan. Internet: http://www.durban.gov.za/eThekweni/Services/water_and_sanitation/policies_and_guidelines/business_plan/executive_summary

key factors that have led to the utility's performance and its maintenance of bankability over time.

The Utility and its External Environment

Policy formation and implementation within the eThekweni municipality is influenced by policies at the national level and the regional Integrated Development Plan (IDP), which projects the municipality's vision for 2020. Governance for the water sector is determined by a few pieces of legislation, including:

- The *Water Services Act (1997)* and the *Water Services Amendment Act (2004)*, which set forth a vision for local governments to assume responsibility for water services, and distinguished between Water Service Authorities (WSAs)—local government—and Water Services Providers (WSPs). The Act requires all WSAs to prepare a Water Services Development Plan as part of the municipality's overall Integrated Development Plan (IDP).
- The *Municipal Services Act (2000)* which designated three spheres of governance: federal, provincial, and local. Under the Act, municipalities are designated as Water Services Providers (WSPs) with the responsibility for water and sanitation services provision. The municipality has the choice to either provide such services itself, or to contract out service provision functions.
- Further, South Africa's *Strategic Framework for Water Services* sets national coverage targets for water and sanitation, including universal provision of access to a functioning basic water supply facility by 2008 and universal access to a functioning, basic sanitation facility by 2010.

Governance

In Durban, the implementation of the Municipal Services Act led to the amalgamation of water and sewerage functions into one department

under the auspices of the local government. The utility's Board of Directors is in effect Durban's City Council, which has over 200 members, and fixes annual budgets and sets the municipality's policy. The utility's Managing Director reports to the City Manager, who is in effect its CEO. The City Manager reports to the city council, which reviews the utility's performance quarterly, through a Performance Monitoring Unit, which is based in the City Manager's office. Despite this governance structure, the utility has a high degree of autonomy to operate as a business. *Figure 3.1* shows the structure of the council. The water unit is a component of the procurement and infrastructure cluster.

As a ring-fenced unit, the utility pays property taxes and is expected to operate as a business. However, the unit operates as a cash business, which limits its ability to develop and implement a realistic capital budget. Under this arrangement, capital expenditure investments are booked upfront rather than amortized, and the utility functions by working on an overdraft with the municipal treasury.

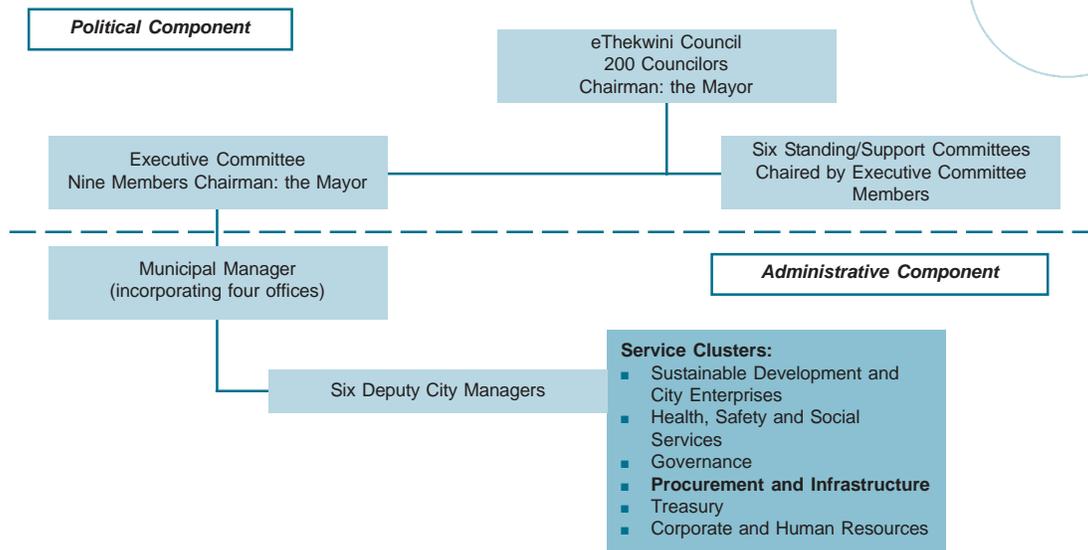
Drivers of Change

Durban's transformation has largely been driven by economic and political factors related to the switch to democracy in the early 1990s. Recognizing that business as usual would not be financially viable given the stark socioeconomic disparities in its new customer base, the city council shifted its practices such that the utility and all municipal departments would have to operate as businesses, with strict treasury controls. Aggregation of different administrative units allowed for harmonization of costs and tariffs, which helped focus the new utility on providing services to customers, not just citizens.

Tariffs, Regulation, and Credit Control

Because the utility remains a municipal department, the city council has authority to set tariffs. Still, the utility sets an internal rate for water supply using the principles of full cost

Figure 3.1: eThekwini Municipality Structure



recovery, meaning operations and maintenance as well as all capital works, including for new development,¹³ and submits this to the council for consideration, as well as the treasury. The treasury assesses the proposed tariffs adjustments based on broader affordability concerns and advises the council, which ultimately sets the tariff. Consequently, although full cost-recovery rates determined by the utility are often not actualized, they are used for budgetary purposes.¹⁴ At the end of each year, the municipality balances its books, acknowledging the difference between revenues collected at the given tariff rate and the full cost recovery tariff, and essentially writes off the debt.

In the absence of an independent regulator, public debate over tariffs often follows election cycles, and the utility’s planning and budgeting

processes are never entirely free of political considerations. That said, the city council has demonstrated considerable political maturity throughout the initial transition and into the present, and largely avoids interference in the utility’s internal affairs. For example, the municipality recently adopted a credit control and debt collection policy, in accordance with the Municipal Systems Act of 2000. Specifically, the water utility’s bills are sent to consumers as part of a broader municipal bill that includes electricity, solid waste, and other charges. If payments received amount to less than what is billed, the water department receives its share first.¹⁵ Highlights from the credit control policy are illustrated in *Table 3.3*.

Despite these credit controls, the utility experiences a high percentage (30%) of

¹³ In many new cities, a developer pays for water mains, which often results in underinvestment. In Durban, the utility pays for the water mains as a means to promote development as well as to encourage development that includes access to services.

¹⁴ Durban’s residential water tariffs were increased by 7.5% in July 2006, which the council believes will provide sufficient income to the utility to cover the cost of service provision. The high percentage of Unaccounted-for Water (30%, against a target of 2%) due to illegal connections and aging infrastructure, is of particular concern to the municipality, against rising debts and rising unemployment, although it is noted that the tariff increases are in line with inflation. Source: http://www.iol.co.za/index.php?set_id=1&click_id=13&art_id=vn20060324092606802C605221

¹⁵ eThekwini Municipality Credit Control & Debt Collection Policy, 2006.

Table 3.3: Debt Collection Policy

	Commercial Users	Domestic Users
Core policies for nonpayment	<ul style="list-style-type: none"> Users subject to disconnection if arrears surpass a set amount (deemed by the CFO) 	<ul style="list-style-type: none"> First notice: a warning on the monthly bill Second notice: a letter noting the risk of disconnection If no response, restriction of water supply, allowing for a daily consumption of 500 liters per six-hour period, but at an extremely low flow rate. Charges continue to accrue
Options	<ul style="list-style-type: none"> Pay outstanding arrears Conclude a credit agreement (on approval by management) and pay relevant charges over time 	<ul style="list-style-type: none"> Pay outstanding arrears (plus the cost of a new connection, if disconnection has occurred) Apply for a flow limiter and sign an acknowledgment of debt
If not heeded?	<ul style="list-style-type: none"> Total disconnection, user charged for disconnection cost. Service reinstated on payment of the entire debt plus the cost of a new connection, and a revised deposit 	<ul style="list-style-type: none"> If tampering with the flow restrictor occurs on more than three occasions, the customer may lose the entire connection

Unaccounted-for Water (UFW) mainly due the leaks attributable to aging infrastructure. As the utility purchases its water in bulk,¹⁶ the UFW rate adversely impacts its budget. Given the municipality’s emphasis on the need for transparent, equitable, and sensitive approaches to recovering costs for basic services, a number of arrangements have been devised to balance service levels with affordable tariffs in an attempt to reduce illegal connections. For example, the utility championed the free basic water policy, which is a national policy, and provides the first 200 liters of water per day to customers free of charge. eThekwini Water and Sanitation Unit

offers three service levels to domestic users¹⁷:

- A ground tank service that provides a maximum of 200 liters of water per day for free.
- A semipressure service which offers a reduced consumption tariff between 200 liters and 1,000 liters a day, with no fixed charges regardless of consumption.
- Full pressure service, for customers who reside in residential properties with a specified rateable value, presently R40,000 or less; no fixed fees are charged.

¹⁶ eThekwini’s Water And Sanitation Unit purchases the bulk of its water from Umgeni water. Bulk water tariffs were increased by 4.9% in 2006.

¹⁷ eThekwini Municipality Credit Control & Debt Collection Policy, 2006, page 17-19.

Subsidies for CAPEX and OPEX

The national free basic water policy states that all South Africans are entitled to free basic water and sanitation, provided by local authorities. Two key programs were created to implement this policy:

- The *Municipal Infrastructure Grant*, operated by the Department of Provincial and Local Government (DPLG), consolidated funds to support capital expenditures for basic infrastructure services. The MIG's approach simplifies transfers to municipalities by supporting municipal capital budgets, promoting integrated development planning, and allowing flexibility in budget programming—meaning that the municipalities can determine how they will spend the funds, provided they are used in accordance with the MIG's principles.
- *Equitable Share*, as set out in South Africa's constitution, reflects the desire of the relatively young democracy to allocate national tax revenues equitably among national, provincial, and local spheres of government. In eThekweni, funds received through the Equitable Share program are used to subsidize operating costs for basic services.

Currently, MIG grants are used to fund household latrines¹⁸ and basic water supply connections. Equitable share funds are used as operating subsidies. In 2005, MIG grants totaled R106 million, compared with R279 million spent in 2004-2005. In 2005, equitable share funds totaled R90.6 million; these were increased to R120 million in 2006. However, given the rise in total expenditures, the percentage of equitable share relative to expenditures declined by 4%.

The predictability of these government transfers is high, although they are not always equal to demand, largely because the MIG and Equitable

Share are highly linked in practice, though not in planning. For example, MIG funds are used in poor areas to provide free basic services, where the ability to recover even operations and maintenance (O&M) costs has proven limited. However, while the utility applies annually for MIG grants based on its projections of providing capital works for basic infrastructure in poor areas, Equitable Share subsidies rely on data from the national census, which is conducted every 10 years, and do not vary much from year to year. Therefore, the more MIG money is spent rolling out service provision, the greater the need for operating subsidies for O&M, or new programs to promote a payment culture, in order for the utility to maintain its strong financial position.

Management Structure

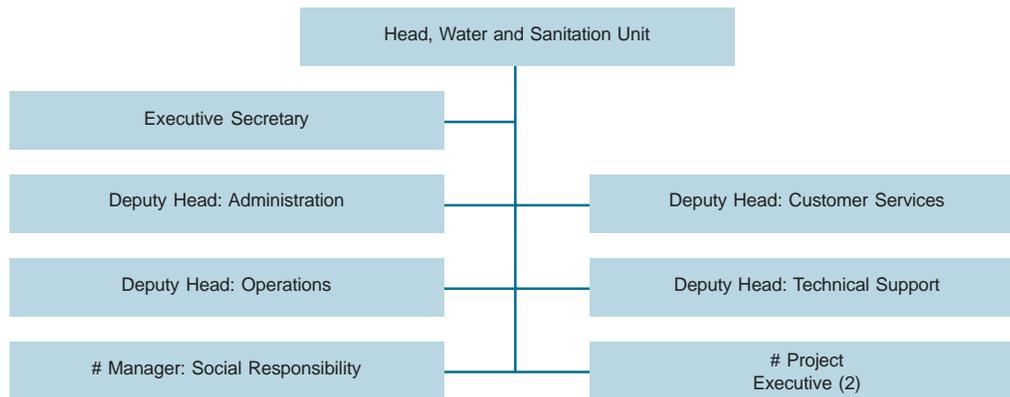
The Water and Sanitation Unit's management structure is relatively flat, and, due to close relations with the City Manager, senior management has relative autonomy. The utility does not have a Board of Directors; its Chief Executive is the City Manager. The municipality annually audits its books via an external agency, while staff salaries are set by the council. An organizational chart of the Water and Sanitation Unit is provided in *Figure 3.2*.

The Utility and its Internal Environment

A utility's internal functioning is an important indicator for credit analysts and strongly affects a financier's decision to provide financing. In the case of Durban, the municipality conducts all of the market borrowing for the water utility, but recognizes that all of its units must operate like businesses, with an emphasis on customer service. Consequently, early in the reform process, the council sought to put in place a management team with the requisite utility management skills, but also business training. The consequences of this shift in thinking about the internal environment on bankability are outlined below.

¹⁸ Composting, urine diversion toilets are provided in rural areas.

Figure 3.2: Organizational Chart of eThekweni Water and Sanitation Unit



Management Quality

The eThekweni Water and Sanitation Unit retained most of its management team throughout the transformation process; the team has demonstrated its strength and resilience over time. The utility’s vision and goals are clearly understood by all staff, and are articulated in the long-term strategy, in accordance with the municipality’s Integrated Development Plan (IDP). The utility has implemented a regular planning cycle that includes a multiyear (three-year) budget, which is aligned with the municipality’s policy goals and long-term vision.¹⁹

At the start of the transformation process, management conducted a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis, a standard management tool used in the private sector. Senior management operates on five-year performance contracts according to Key Performance Indicators (KPIs), which are set by the council and audited by an independent office within the municipality. KPI reports are measured monthly by the utility’s Managing Director. All junior and administrative staff members are provided with clear job targets and goals.

Human Resources (HR) and Staff Composition

As part of the transformation process, management was flattened from 28 levels to 6, in an effort to encourage innovation and creativity, as well as improve efficiency. Although the utility is ring-fenced, the utility’s HR staff report to a core HR unit within the municipality, rather than to the utility’s management. While this allows the municipality to have standard HR policies and practices throughout the different business units, it limits the utility’s autonomy and ability to directly execute personnel decisions.

As of June 2006, the Water and Sanitation Unit had 2,765 staff, comprising 1,621 full-time staff, 80 temporary council staff (from the municipality), and 1,304 temporary staff contracted from outside agencies. The high levels of temporary staff are a consequence of the transformation process. From 1995 to 1997, the municipality required all head counts to be agreed in the official organizational chart before hiring could occur. With the rapid change experienced as 38 administrative structures aggregated to seven, and then seven into one municipality, positions needed to be filled quickly. The process for hiring

¹⁹ The budget is linked to the IDP via an eight-point plan that includes “sustaining the natural and built environment; economic development and job creation; quality living environment; safe, healthy and secure environment; empowering our citizens; embracing our cultural diversity; good governance; and financial viability and sustainability.”

Table 3.4: Key Performance Indicators (KPIs) for Management in Terms of Staffing

<i>KPI</i>	<i>Unit Measure</i>	<i>Monthly Results</i>
Average time taken to appoint staff from date of request to date post filled	Days	216 (April 2006)
Total number of days sick leave taken	Days	—
Total number of days staff AWOL	Days	—
Total number of days leave taken in all categories	Days	—
Total number of disciplinary cases initiated	Quantity/number	5 (April 2006)
Total number of grievances lodged	Quantity/number	4 (April 2006)
Percentage of appointments that comply with Employment Equity targets	Percentage (%)	63

temporary staff was less onerous, and was therefore widely used. A breakdown by position and race is provided in *Table 3.5*.

The utility's staffing targets are set to reflect the economically active population for the province. For the utility as a whole, the racial targets have

Table 3.5: Staff Composition—Municipal Employees Only

<i>Tier</i>	<i>Description</i>	<i># Staff</i>	<i>% Whites</i>	<i>% Indians</i>	<i>% Coloreds</i>	<i>% Africans</i>
1	Top management	3	67	33	0	0
2	Senior management	5	100	0	0	0
3	Professionally qualified and experienced specialists and middle management	41	63	29	0	7
4	Skilled technical and academically qualified workers, junior management, supervisors, foremen and superintendents	335	25	31	5	38
5	General skilled and discretionary decision-making	572	6	33	2	59
6	Basic skilled and defined decision-making	665	0	14	0	85
Total permanent staff		1,621	10	25	2	64
Temporary staff		80	4	14	4	79
Total		1,701	9	24	2	64
Target			10	18	3	69

Source: Adapted from *Employment Equity Report as at end of June 2006, eThekweni Water and Sanitation Unit*.

been relatively well met (see *Table 3.5*); however, the proportion of Coloreds and Africans in top management is negligible. Further, the utility has a target of 47% female and 53% male staff. Water service provision is historically a male-dominated field, which is reflected in the current staffing pattern: 8% of permanent staff, and 28% of temporary staff (or a total of 9% total municipal staff in the water unit) are female.

Some core staffing challenges are:

- *A Shortage of skilled technical and professional staff.* There are currently 46 vacant posts for engineers and 77 vacant posts for technicians. In fact, there is a severe shortage of trained professionals, and especially for engineers in South Africa as a whole. Within the middle management tier of the utility, emigration and competition from the private sector have resulted in a high level of attrition.²⁰
- *Retirement.* In the next five years, 65% of staff will be within retirement age. Among senior management, 75% will be within retirement age in the next five years. Much of the current management team has been in place since the start of the transformation a decade ago, and represent decades more of institutional memory.
- *Friction amongst staff about professional grades and pay scales.* While the amalgamation process for both water and sanitation was completed in principle in 2000, harmonization of human resource functions is incomplete, and this has affected staff morale and created friction amongst staff, as pay scales vary widely both within and across different tiers.

To address these issues, eThekweni has developed several training programs. For example, the municipality pays for six students

per year to study engineering or technical fields, in return for a commitment to work at the utility for three years upon graduation. The utility also offers bridging courses for promising candidates who lack the appropriate science and math skills, along with apprenticeships and trainings in collaboration with national schools and universities.²¹ Another approach is to convert some of the currently temporary positions into full-time ones, to encourage staff retention.

Customer Service

At the Water and Sanitation Unit, the emphasis on customer focus has led to numerous initiatives to promote service and outreach. All water customers receive their water bills on a combined monthly statement from the municipality, which also includes charges for electricity, housing, solid waste, and other services. To handle customer complaints as well as general enquires and service requests, the utility created a customer call center that receives text messages, e-mails, and phone calls. The center is open 24 hours a day, 365 days a year. Customer service is also provided on a walk-in basis, at headquarters and four regional offices throughout the municipality. Some highlights of this initiative include:

- A targeted 80% of calls are answered in 20 seconds or less, by a 'live' person.
- All correspondence is logged into a database program that generates a work ticket, which is routed to the appropriate department. For example, on a maintenance call, all information about the caller and the request are logged, and then a service request is routed electronically to a work team.
- In urban areas, the utility's target response time for service calls is 80% in 24 hours for all service requests, and 100% in 48 hours.

²⁰ Amongst the administrative/nonprofessional staffing, attrition rates are also high, and often related to HIV/AIDS factors.

²¹ Notably, eThekweni has been identified as a training center for local government in the areas of sustainable urbanization and environment, information-sharing, and human, social and economic development by the United Nations Institute for Training and Research (UNITAR).

Connections are targeted to be installed within 14 days of an initial request.

The development of user-friendly software for customer service agents, linked with technology that allows transmission of real time updates to maintenance and other teams, has had a considerable impact on the utility's ability to manage the call center without highly skilled workers.

Another element of customer service is outreach. In urban areas, payment and cost recovery for water services is minimal, particularly amongst the poor, which represent a large—and growing—constituency of the customer base. To address high debt levels and nonpayment, in 2004, the utility's Community Education Department trained Community Service Agents (CSAs), and assigned them to communities where nonpayment levels were high. Communities were identified through the utility's GIS system. The CSAs made household visits to discuss water conservation, identify water leaks, read meters, and discuss debt repayment options. By providing a "human" face to the utility, customers signed acknowledgments of debt, kick-starting repayment. For customers with very high debt loads and low or nonexistent property values, the utility offered a restructuring of household debt. If a household consistently paid for current water use over a five-year period, its "old" debt was written off.

Of the 20,000 households targeted, CSAs have currently approached between 7,000 and 8,000, of which roughly 2,500 now make monthly payments. Where defaults continue, the CSAs undertake additional visits and outreach activities. The CSA approach generated about R7 million in revenues over 18 months since its inception, against a total cost of R900,000 to train and pay the CSAs.

Utilizing the Private Sector

Although the Water and Sanitation Unit is publicly-owned and operated, it turns to the

private sector where a business case exists. For example, since 2000, the utility has worked to develop and contract local, Black-owned business for a variety of functions, including making connections and disconnections, laying mains, building toilets (e.g., the urine diversion toilets used in rural areas), unblocking sewers, reading meters, and other functions. This expansion in the use of contractors was a consequence of the expanded service area and inability to meet demand for services, given the utility's staffing. Cost was also a significant factor in that contractors are considerably less expensive than full-time staff. Also, contracts with local private firms could include financial incentives to improve service delivery. For example, prior to outsourcing, the utility read about 70% of its meters on a quarterly basis. Now, because of outsourcing, 99% of meters are read on a monthly basis.

In addition to the use of private contractors, the utility has a concession with Durban Water Recycling (Pty) Limited, a consortium led by Vivendi Water System, which was agreed in 2001. The concession came about as a result of a planning process to increase the capacity of a marine outflow pipeline to meet projected wastewater supply, which posed high costs implications for consumers. An alternative to recycling the bulk of marine discharge for tertiary use by industry was presented and selected. Given the high technical complexity and associated costs, the utility decided to design a public-private partnership for a 20-year concession contract between eThekweni Water Services and Durban Water Recycling. The concession has benefited both parties: the utility was able to delay capital investment in new bulk water supply infrastructure while "gaining" sufficient water to supply up to 220,000 households, and did not have to undertake any new capital investment for the construction associated with the project. For the private companies, the cost of water was reduced considerably: the current clean water tariff is R5.2 per m³, Durban Water Recycling pays R2 cents per m³.

Table 3.6: Key Performance Indicators, Customer Service

<i>Key Performance Indicator</i>	<i>Unit Measure</i>	<i>Monthly Results</i>
<i>Customer Relations</i>		
Revenue improvement per customer service agent	Currency	13,000 (May 2006)
Number of schools visited	Quantity/number	36 (May 2006)
Number of street theater events held	Quantity/number	103 (May 2006)
<i>Call Centre</i>		
% calls dropped (does not include calls dropped within 5 seconds)	Percentage (%)	3.5 (May 2006)
% calls answered within 20 seconds	Percentage (%)	69 (May 2006)
% calls answered within 30 seconds	Percentage (%)	21 (May 2006)
Total calls answered	Quantity/number	56,427 (May 2006)
<i>Urban Customer Services</i>		
% meters read in a month	Percentage (%)	99 (April 2006)
% meters billed on actual readings in a month	Percentage (%)	99 (April 2006)
% connections made in less than 14 days	Percentage (%)	77 (April 2006)
# connections with no advance on the meter for 90 days	Quantity/number	4,215 (May 2006)
# flow limiter connections with consumption > 200 liters per day	Quantity/number	3,722 (April 2006)
# meters that have not been read for more than 90 days	Quantity/number	1,703 (May 2006)

Operations and Quality of Service

The quality of service and operations has an important impact on a financier's perspective of creditworthiness and also complements management quality and financial performance. In Durban, although piped water supply is continuous, factors such as UFW have increased rather than decreased in recent years. With each budget, the utility sets aside provisions for bad debt, to cover its losses for nonpayment and leakages that result in UFW. In 2005-2006, the provision was R296 million.

Factors that affect Unaccounted-for Water are poor management, theft, and administrative

causes (nonfunctioning meters, meters not being read, etc.). Currently, Durban bills 99% of its customers based on an actual meter reading, which helps to address potential administrative causes. Through the education department, the utility has started a pilot project based on a "caretaker" approach, according to which community members are hired to watch over a set number of households, to check connections and leaks in high-water loss areas. The CSAs, discussed above, are also a core component of the drive to reduce bad debts and UFW. A GIS database provides a wide range of data for the utility to understand the causes behind UFW, and target areas for improvement.

In rural areas, a cholera outbreak in 2000 helped shift the municipality's thinking on free basic water and sanitation. The utility developed a program to provide clean water and urine diversion (composting) toilets to poor areas, along with training for households and communities on how to use them. In partnership with other relevant municipal units, the utility follows up with the households to ensure their proper use. More recently, the utility made a

decision to pay for connection costs for the poor, as well as for developers, in order to encourage development that includes access to water and sanitation.

Performance Improvements

A summary of relevant performance improvements over the last 10 years is provided in *Table 3.7*.

Table 3.7: Performance Improvements

	<i>Prereform</i>	<i>Postreform</i>	<i>Impact on bankability?</i>
Business culture	Public sector department	Business systems with a customer orientation are now in place	Yes
Operations culture	Water department comprising engineers without regard to cost	Water department is run as a business with financing intrinsic to work plans	Yes
Operating areas	1 million people, largely homogenous service delivery	3+ million comprising urban and rural, along with many varied demographic and socioeconomic groups	Yes
Autonomy/independence	Water department a function of the municipal governance structure	Water department a function of the municipal governance structure	No
Financial planning	Financial planning not linked to utility operations	Financial planning strongly linked with operations as well as decisions for business planning	Yes
Readiness for transformation	Planning started two years before democracy; Durban was about two years behind Johannesburg and Cape Town in terms of transition, which allowed the city to learn from other experiences	Management team remained the same, for the most part	Yes
Access to capital markets	Municipality relied on capital markets to fund resource gaps	Municipality relied on capital markets to fund resource gaps	Yes

Table 3.7: Performance Improvements (Contd...)

	<i>Prereform</i>	<i>Postreform</i>	<i>Impact on bankability?</i>
Management capacity	Management capacity based on engineering skills	Focus on business management skills for senior management	Yes
Utilization of the private sector	Minimal	Increased use of the private sector for services, building capacity of local enterprise to support the local economy and reduce total costs for the utility; a concession with the private sector also strengthened relations with the industrial base through lower and more stable tariffs.	Yes
Unaccounted-for Water	Originally, with a client base of 1 million, UFW was 14%	Now, UFW is at 30%, although this is down from 45%. UFW is difficult to reduce given outdated infrastructure in the annexed areas, plus illegal connections	Yes

Financing Transactions and Environment

eThekweni municipality takes a holistic approach to budgeting and finance, considering the broader needs of its citizens as identified in the IDP. Cost recovery is a core principle, along with expenditure management, particularly when costs cannot be recovered. Importantly, the municipality receives budgets from all its departments and accesses finance for them. The departments then repay their debts to the municipal treasury, using the same interest rate applied in the original loan.

Characteristics of the Domestic Financial Market

South Africa's experience with municipal finance should be considered in the context of

national trends and policies. For example, per the constitution, national government guarantees of local government debt are illegal. The Municipal Finance Management Act (MFMA) No. 56 of 2003 aims to modernize budgeting, accounting and financial management practices, along with building municipal capacity, transparency and accountability to be able to deliver services to communities. The MFMA obliges all three spheres of government—from the national to local—to be transparent about their financial affairs.²²

South Africa has a very sophisticated financial market for debt products. The local bond market is 10 times the size of the Johannesburg Stock Exchange (JSE). Hedging products have been developed in recent years allowing for greater liquidity in the market, and a secondary market for bonds has developed. Overall, investors are supportive of long-term investing, which, in turn,

²² Source: <http://www.treasury.gov.za/mfma/default.htm>

benefits municipal investing (a small percentage of the overall market). In Durban, the high quality of infrastructure and the city's financial strength created an environment in which grace periods are seldom if ever required. The municipality is content with borrowing from lenders, who provide highly favorable rates, rather than launch bonds. In addition to commercial borrowing, South African companies, such as INCA (Infrastructure Finance Corporation Limited), launch bonds on the market, and then onlend to municipalities. Municipalities also privately place debt with banks and investors.

Drivers of Municipal Finance

Municipal finance reflects a small portion of total market activity in South Africa, while for the private banks and financiers, government business is considerable. Thus, the forces driving municipal finance are important to understand and consider. Prior to democracy, White-controlled authorities, such as Durban Metro, were able to access market finance because of an implied guarantee by government. With the government guarantee, Contractual Savings Associations (CSAs), which formerly had limited ability to assess risk, brokered deals between municipalities and the market.

With the advent of democracy, the new constitution noted that sovereign guarantees to local authorities were illegal—if the private sector wanted to lend to a local authority, it had to assume the risk. In this environment, the CSAs left the market, as they were unprepared and unable to execute the task adequately. Due to tax loopholes, private banks continued to provide long-term, fixed finance to municipalities until these were also closed, leaving a market gap. Into this vacuum stepped the Development Bank of South Africa and the Infrastructure Finance Corporation Limited (INCA), both of which were able to enter the market for long-term finance. Private banks continued to provide working capital and asset finance, but not at long-term, fixed rates. This trend continued until the financial charter was introduced.

The financial charter was designed to restructure the economy to reflect the new South Africa. Private banks, investors, and CSAs are given points for investing in Black-owned business, management control, and other factors, including the quality and intensity of training programs; procurement from Black-owned firms, and investing in infrastructure for the previously disadvantaged. Each institution must achieve a specified amount of investment, otherwise, they risk losing all government business.

The impact of the financial charter cannot be underestimated, as the banks have responded by reducing interest rates on municipal lending. For example, eThekweni Municipality currently borrows at a heavy discount from the private banking sector, and will continue to borrow at a discount until the banks meet their charter points. As a consequence of the risk of losing government business, the risk: reward analysis by banks favors municipal infrastructure in order to meet the charter conditions. Further, because of exchange controls put in place by the South African government, banks are forced to invest domestically, which benefits municipalities' access to the market.

In addition to the private sector's approach to the market, the DBSA also continues to pursue municipal finance, although it has found the market highly competitive following establishment of the financial charter. As a result, DBSA also provides highly discounted rates for municipal borrowing.

Financing Water and Sanitation at eThekweni Municipality

When it comes to municipal finance, the municipality's Treasury Department manages a portfolio of investments and arranges for long-term borrowing from the market. All of the municipal departments are ring-fenced in order to ensure transparency and to promote realistic budgets, in line with the MNMA. In many respects, the municipality acts like a central banker to the different departments, promoting

stability and conservatism at a central level, and then letting the different departments operate on a surplus or deficit at the end of the year. Departments operating on a surplus gain interest, while those operating on a deficit (through an overdraft to the treasury) are charged interest (currently 11.7%). The municipality can borrow at fixed or floating rates, depending on which is lower, but it provides finance to the departments at a fixed rate. To determine the amount of market-based borrowing needed, the treasury starts with its overall budget, and then subtracts grant-based and internally generated funds, as illustrated in *Table 3.8*.

For the Water and Sanitation Unit, all projected capital expenditures are proposed to the city council and, if approved, are put into the capital budget, and work can proceed. To fund the project, the utility provides bridge financing from its own account, which, for larger capital works, results in an overdraft situation in the short term, until loan funds can be raised by the municipality. Further, the topography of the rural areas where the utility provides basic services is often more rugged than anticipated, resulting in a mismatch between MIG budgets (set annually) and actual costs. In this case too, the utility uses its overdraft to make up the difference, and then reflects that difference to the MIG in the next annual cycle.

Because the Water and Sanitation Unit relies on its overdraft for working capital, this financing structure means that while it is independent in terms of its budgets, because tariffs are not approved at full cost recovery rates, it is strongly dependent on the city in the long term. In practice, the difference between the actual cost of providing service and what can be charged to consumers gets charged back to the council at the end of the year.

There are several factors that contribute to eThekweni Municipality’s ability to attract domestic market finance to meet its resource gaps, including:

- Durban’s historic financial strength prior to the advent of democracy, and the ability of South Africa’s new political system to maintain financial sustainability within the country as a whole. Early on, Durban’s municipal and utility leaders recognized that a business-as-usual approach would not work with the newly amalgamated municipal structure. Recognizing the need to provide basic services as well as foster civic-mindedness, there was a shift toward treating people as citizen-customers, which transformed the focus of municipal agendas.
- One of the most impressive results of this approach was the municipality’s development

Table 3.8: Utility Finance Worksheet

Steps	Figures
1. Overall budget for the year (2006-2007)	R2.8 billion
2. Amount derived from grant funding (international plus MIG and equitable share)	R1.3 billion
3. Amount requiring financing	R2.8 billion—R1.3 billion = R1.5 billion
4. Amount to be generated internally (e.g., taxes, cost recovery)	R500 million
5. Determine the average % of funds departments spent in a year	90%
6. Market-based finance required	= R1.5 billion—R500 million X 90% = R900 million

of a GIS-linked database with information on the municipality's physical infrastructure, housing patterns, demographics, customer database, payment history, and other factors that provide the municipality and water unit with a vast array of information that facilitates better management. In addition to data, the GIS system uses aerial photographs to provide context to the data, for example, to track settlement patterns in informal areas and shack farms, as well as topographical landscapes in rural areas. This use of technology allows management to recognize and target hot spots for capital expenditure or other programs, including outreach and education, which leads to more cost-effective programs and approaches.

- South Africa's legislation enshrines the right to water for all citizens, but leaves responsibility for service delivery to local authorities. From a financial perspective, the central government does not guarantee municipal finance, which means that municipalities must be sufficiently financially rigorous to meet their resource needs.
- The existence of such national programs as the Municipal Infrastructure Grant (MIG) and Equitable Share (ES), which are intended to increase infrastructure services to the poor. While local government is responsible for water services, a strong national regulator, the Department of Water Affairs and Forestry (DWAf), South Africa, has supported water services over the last decade to ensure stability in service provision and so that weaker municipalities could adjust to their new role.
- Finally, and perhaps most importantly, national legislation to reform the financial services sector has helped municipalities that are financially responsible to attract significant levels of finance at preferable rates.

Still, the transformation process is ongoing. eThekweni faces numerous challenges, from a changing and growing customer base that is mostly poor, to the adequacy of government subsidies, as well as staffing and human

resources constraints in the near future. New risks and challenges continue to emerge and the utility's ability to anticipate and address these risks before they affect financial and operating performance largely relies on strong management, good governance, and a stable external environment.

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4. Steve Pietersen, GIS Team, eThekweni Water Department
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4. Johannesburg Water, South Africa

Summary

Ongoing transformation within Johannesburg Water and the City of Johannesburg have resulted in a financial and operational turnaround, implementation of more sustainable business practices as well as the mobilization and extension of service delivery. Following expiry of a five-year management contract with a private operator, control of the utility reverted to public sector control in July 2006. The following factors contributed to success of both the City of Johannesburg and its water utility:

- The vision and strong leadership to successfully complete corporatization of public entities.
- A multistage approach that began with a strategic plan to dismantle the existing city structure and the use of private sector capacity for skills transfer.
- A proven capacity to spend monies to assuage investor fears coupled with a commitment to transparency. The City of Johannesburg had utilized over 90% of its budgeted expenditure in the past, and this has increased to over 95% in the last two years. Although the city does not have unqualified financial statements due to its complex problems,²³ lenders, nevertheless, price the risk accordingly. With improved information and transparency, the city has boosted market confidence, thereby reducing its cost of borrowing.

Introduction

The City of Johannesburg began to transform itself in the late 1990s with a broad platform of reforms that paralleled the country's shift to democratic rule. In Johannesburg, a strategy named *iGoli 2002* was developed to tackle the city's core challenges: financial stability, service delivery, accountability, administrative efficiency, and political leadership. Prior to the implementation of *iGoli 2002*, 15% of the population lacked waterborne sewerage, while 13% were without access to safe drinking water.

This case study profiles the transformation of the City of Johannesburg as a municipal entity, with a specific focus on Johannesburg Water, and some of the internal and external factors that have led to its success.

Transformation Process: The City of Johannesburg

In the late 1990s, the City of Johannesburg was headed toward bankruptcy. As part of a turnaround strategy and eventual transformation, the city consolidated its 11 administrations into five local councils ahead of the 2000 elections. The *iGoli 2002* plan was adopted, which sought to overhaul and reform the city's approach to providing public services. A Contract Management Unit (CMU) was created to restructure service delivery throughout the city and act as a regulator. The approach to reform

²³ This includes the completeness of its asset register. The City has sought qualified financial statements for five years, but the problems are deemed too complex, particularly with the rise in informal service areas, historically weak revenue management (this has changed with the management contract), and other factors.

Table 4.1: Overview of Water and Sanitation Services, Johannesburg Water Pty (Limited)

Area served	1,626 km ²
Size/population of service area	3.2 million people
Volume of water produced	473,000,000 m ³ /year
Water consumers served	10,670,000
Number of connections	529,854
Water coverage (% population with a connection or within 200 m of a standpipe or other source of water)	Over 75%
Number of metered connections	303,374
Number of consumers provided with waterborne sewerage, pit latrines or septic tanks	520,669
Unaccounted-for Water	32% ²⁴
Credit rating (for the municipality)	
- Short-term	zaA+
- Long-term	zaA1

Source: Johannesburg Water.

Table 4.2: Snapshot of South Africa

	South Africa
Population	46.9 million
GDP	R1,350 billion
GDP growth (average five-year)	4.2%
GDP/capita (p.a.)	R17,756
Prime rate	10.5% p.a.
Inflation	3.9%
Unemployment rate	25.5%

Source: <http://www.statssa.gov.za>

was predicated on the idea that political interference in public service delivery should be minimized, and that, where possible, there could be greater accountability if government was a majority or sole shareholder in public companies that provided public services. As a result, the city corporatized its key departments.

Creation of UACs

As part of the transformation, the city divided those public services that could function according to business principles into three categories: Utilities, Agencies and Corporate Departments (UACs). All are 100% owned by the

²⁴ Data for 2006.

City of Johannesburg, but are also set up as independent companies, and are accountable to the city council through agreed service delivery targets.

Utilities provide billable services directly to households and businesses, such as electricity, water and sanitation, and solid waste removal; utilities also operate without subsidies. Johannesburg has three utilities, each with its brand: City Power (electricity); Johannesburg Water (water and sanitation); and Pikitup (garbage collection, street cleaning, and waste management). Johannesburg Water accounts for 23% of the city's operating revenue, and is one of its largest sources of revenue (electricity accounts for 29%; property rates account for 23%).

Agencies perform other public functions (roads, parks, and economic development), and are structured as companies, but rely on the city for funding.

Corporatized departments (which include the zoo, civil theater, bus service, and the fresh produce market) all operate on concession contracts with declining subsidies over time.

As the City's regulatory body, the CMU monitors and evaluates UACs against service delivery agreements, and develops performance benchmarks, providing data and analysis to support policy and strategy development and inform decision-making. UACs report annually to the CMU. A separate Shareholder Unit (SHU) negotiates and ensures compliance with shareholder agreements, and reports to the city on shareholder issues and the UAC's financial performance.

During this period of organizational upheaval, a new corporate culture was required even as the staff was largely retained (the city deliberately sought to avoid layoffs). To increase capacity, efficiency, and staff morale, as well as shape public perception, special attention was devoted to branding the UACs with unique identities and internal cultures. Considerable effort was made

to change public perception of what had been an inefficient public sector.

Transformation Process: Johannesburg Water

Background/Rationale

Water and wastewater service delivery were key components of the change process, and between 1998 and 2000, the city prepared to amalgamate its seven utilities into one autonomous company, Johannesburg Water. To solidify the transformation into a unified professional company, the city decided to initiate a five-year management contract (2001-2006) through an international bidding process, with the objective of raising internal capacity and increasing operational and financial performance. In 2000, agreements were signed between the City of Johannesburg and Johannesburg Water (a public company), which transferred the city's water infrastructure assets to Johannesburg Water. Another agreement established service targets. These steps set the stage for the management contract, which was won by Johannesburg Water Management Company (JOWAM), a consortium led by the Suez Group. One of the core features of the successful offer was a proposed emphasis on increasing internal capacity, while gradually reducing expatriate staff over the five-year period. At the start of the contract, JOWAM opened 27% of its shares to local Black Economic Empowerment Business (BEE) companies including: MWAM, Tsholo, and Letlapa.

Legal and Regulatory Framework

Policy formation and implementation within Johannesburg is influenced by policies at the national level as well as by the regional Integrated Development Plan (IDP), which projects the municipality's vision for 2020. The city's planning process, which looks out over a 15-year time frame, is complemented by the budgeting and planning processes of each of the UACs. Within this framework, Johannesburg

Water develops and submits three-year budgets to the council for approval. These budgets include capital expenditures, intended targets of funding allocation, salaries,²⁵ and new posts.

Water sector governance is informed by the following legislation:

- The *Water Services Act (1997)* and the *Water Services Amendment Act (2004)*, which set forth a vision for local governments to assume responsibility for water services, and distinguished between Water Service Authorities (WSAs)—local government—and Water Services Providers (WSPs). The Act requires all WSAs to prepare a Water Services Development Plan as part of the municipality's overall Integrated Development Plan (IDP).
- The *Municipal Services Act (2000)* which designated three spheres of governance: federal, provincial, and local. Under the Act, municipalities are designated as Water Services Providers (WSPs) with the responsibility for water and sanitation services provision. The municipality has the choice to either provide such services itself, or to contract out service provision functions.

Further, South Africa's *Strategic Framework for Water Services* sets national coverage targets for water and sanitation, including universal provision of access to a functioning basic water supply facility by 2008, and universal access to a functioning, basic sanitation facility by 2010.

Although Johannesburg Water is an independent and autonomous company, policy decisions relating to water supply and sewerage/sanitation services are determined by the city government. In many areas, this has an impact on the company's operations, for example, the Free Basic Water Policy.²⁶

Subsidies for CAPEX and OPEX

As previously mentioned, South Africa's national water policy states that all South Africans are entitled to free basic water and sanitation provided by local authorities. To implement this policy, there are two national programs:

- The *Municipal Infrastructure Grant*, operated by the Department of Provincial and Local Government (DPLG), is a consolidated fund that provides capital expenditures for basic infrastructure services. The MIG's approach simplifies transfers to municipalities by supporting municipal capital budgets, promoting integrated development planning, and allowing flexibility in budget programming—meaning that municipalities can determine how they will spend the funds, provided they are used in accordance with MIG principles.
- *Equitable Share*, as explained in South Africa's constitution, reflects the Government's commitment to allocate national tax revenues equitably between the national, provincial, and local spheres of government. Johannesburg Water does not receive funding through the Equitable Share program; the City of Johannesburg absorbs it instead.

To receive MIG grants, Johannesburg Water makes proposals directly to the fund, according to initiatives in the City of Johannesburg's IDP. MIG grants are allocated to the utility both directly and indirectly via the city. While the MIG is insufficient to meet demand, it does make a difference: in 2005, MIG allocations totaled nearly R60 million, part of which was used to provide education and outreach activities to schools. By contrast, Johannesburg Water's investment in poor areas was R727 million for 2007.

²⁵ Under the Municipal Finance Management Act, the utility has the right to set salaries, although a salary cap for different positions is established by the City Council.

²⁶ South Africa's Free Basic Water Policy stipulates that each person shall receive 6 kiloliters of water per month for free.

Profile of the Management Contract

Johannesburg Water is a 100% publicly-owned, corporatized water and sewerage company serving the greater Johannesburg area. Between 2001 and 2006, the company's organizational structure was heavily influenced by JOWAM. JOWAM was launched with 13 executives and experts to facilitate a rapid skills transfer and change. Over the course of the contract, the executives and experts were gradually reduced and replaced by Johannesburg Water staff. Per the contract, JOWAM had four executives in the third year of the contract, and two for the last two years.

Despite the JOWAM management contract, the city retained control over some services, including billing, metering, and credit control. By late 2004, the utility was responsible for about 40,000 customers, or about 40% of the city's revenues for water and sewerage. These customers received separate, itemized water and sewerage bills from the utility, while the rest received a consolidated statement of municipal charges (e.g., electricity, roads, etc.) from the city. While this was done as a stopgap measure for the duration of reform, it also undermined the utility's autonomy.

The new management team also faced a number of administrative and financial challenges after it assumed control of the utility. For example, at the time of tendering, the city reported a collection rate of 81% although the actual collection rate was closer to 69%. Further, the city's accountants did not factor depreciation costs into their financial model and budgets. As a result, in 2003, the utility's budget showed considerable change due to accounting measures, including an additional R230 million in bad debt, and over R150 million in depreciation costs.

To mitigate a financial crisis, the utility developed a finance strategy over 2003-2004, with a goal to break even by 2006-2007. To achieve this, it was agreed that: the core task of meter-reading would be transferred from the city to the utility; 170,000 accounts (an additional 30% of the revenue

base) would also be transferred to the utility; and tariffs would be increased by 3% above inflation per year over a three-year period. The city also agreed to provide a subsidy of R240 million per year through 2007. The financial strategy was linked to plans to increase operational efficiencies, specifically through the *G'cin Amanzi* project in Soweto.

Ultimately only 30,000 accounts, rather than 170,000, were transferred, because the city was in the process of implementing a new revenue management system across all of its departments and utilities, and thus sought to retain control. However, the utility's focus on meter reading and billing in middle and high income areas resulted in a 46% increase in turnover over a four-year period.

Outcomes of the Management Contract

Over the life of the management contract, Johannesburg Water managed to turn around its financial and operating position, while transferring skills to employees. Some of the successes of the operational transformation are:

- *Improved operating performance*, including creation of a customer call center that answers 90% of all calls within 30 seconds. Over 80% of network repairs are completed within 48 hours of notice, and over 80% of sewers are unblocked within 24 hours. Whereas, prior to the management contract, water quality could not be assured due to an absence of quality monitoring/testing, now over 500 samples a month are tested, with over 99% bacteriological compliance. Further, tanker water supplied to informal settlements is treated, which was not previously possible.

As a result of the management contract, which has progressively transferred responsibility for meter-reading to the utility, the percentage of meters read monthly increased to 94% from 50%, while revenue collection on the utility's customers increased from 56% to over 105%, as a consequence of collection of outstanding and current debt.

- *Improved environmental performance*, including an increase in wastewater treatment capacity from 940 million to 1.01 billion liters per day; increased compliance with effluent standards, from 82% to 98% between 1999 and 2005, and an increase in sludge disposal compliance up from 50% to 100% between 2000 and 2005. Complementing this environmental performance was the cost effectiveness of different interventions: power consumption and ferric chloride consumption were sharply reduced between 2000 and 2005. Likewise, the number of overflows at wastewater treatment plants declined from 646 spills per year in 2001 to 138 spills in 2005.
- *Increased cost effectiveness through management improvements*, in addition to the examples of cost-effectiveness gains mentioned above, levels of UFW water were reduced, thereby also reducing the cost of bulk water, which the utility purchases from Rand Water.²⁷ At the start of the contract, UFW was estimated at 42%, but had fallen to 35% by 2006. Over the life of the contract, power and chemical savings amounted to R25 million. Due to increased efficiencies within the management structure, staff overtime was also reduced, from nearly 481,000 hours per year to almost 393,000. Unauthorized absences by staff were also reduced from 2,217 days in 2003 to 197 days in 2005. Further, the utility procures over 60% of its purchases from Black Economic Empowerment Business (BEE) enterprises.
- *Improved asset management*. Johannesburg Water, with JOWAM support, sought to improve the quality of its water infrastructure assets, first by understanding the extent of the network. To do this, the utility developed an asset register, and implemented a preventative maintenance plan. The plan, along with increased staff training to implement planned maintenance, has brought about more accurate annual capital

investment programs, resulting in sufficient infrastructure investment to meet the city's expansion. Likewise, annual investment programs have been fully implemented: between 97% and 98% of the capital expenditure budgets were spent, increasing investor confidence in the utility's financial and operational capacity.

These operational improvements helped to improve the public's perception of the utility, which has, in turn, enhanced public perception of the City of Johannesburg and its ability to mobilize domestic finance for public sector investment.

Risks and the Turnaround Strategy

Johannesburg is a rapidly growing city, with growing challenges. Some of the risks faced by Johannesburg Water include:

- ***A backlog for basic water and sanitation services to achieve development targets.*** The backlog is twofold, and related to increased population growth in informal settlements, and differing definitions of coverage. First, approximately 70% of the utility's base is residential, a figure that has continued to rise in tandem with population growth in the city of 5%. New access backlogs typically occur in low-income areas, due to increased migration and sharp growth of informal settlements. The city's planning process does not support infrastructure investments in informal areas. Further, as the utility uses GIS to track its customer base in metered areas, information about residents and consumption patterns in informal areas remains limited. The second challenge pertains to coverage definitions. The city's IDP does stipulate for formalization of several areas. When this occurs, the utility provides tanker water as a stopgap measure before infrastructure investments are made. Although the utility considers tanker water a

²⁷ The utility estimates that the bulk of its UFW losses are a result of commercial, rather than physical losses.

basic service level, the national government does not; hence, despite increased levels of access to tanker water in informal areas, national statistics on access to basic water services remain unchanged. This has created a tension between city planners, the utility, and the national government, which is concerned about meeting its development targets in anticipation for the World Cup in 2010.

- ***Need for a shift from “firefighting” to routine and planned maintenance on water infrastructure.*** Although there is a planned maintenance program, which is supported by the asset register, it is not well-funded, and may be insufficient to meet the utility’s needs: just 2% of the value of infrastructure invested each year is spent on planned maintenance.
- ***The growing need for qualified employees to maintain and extend service quality and efficiency in operations.*** Although the utility has improved substantially under the management contract and turned around its financial and operational position, there is a growing need for the skills needed to increase spending capacity and effectiveness, particularly in the areas of logistics, project management, engineering, and accounting. At the same time, competition for skilled workers is extremely high in South Africa on the whole, and in Johannesburg in particular. Given the salary differential between the public and private sectors, even for recent graduates, there is a concern that the pool of potential trained employees will be insufficient to achieve the utility’s goals.

To address some of these challenges, the utility has embarked on a three-pronged “turnaround” strategy to convert its current risks into profitable business activities through innovative strategies and approaches. The strategy has a clear focus

on achieving targets over the next five years, and seeks to build on the momentum created by JOWAM.

The turnaround strategy includes:

- ***Addressing substantial underbilling for water services.*** Part of the reason the utility’s costs exceed revenues is that the water tariff is not predicated on cost recovery. To mitigate this, the utility is in the process of shifting from the traditional flat tariffs levied for standpipes (see the bullet on UFW below), to a consumption-based approach, while working with the city to impose a benchmarked tariff that would be consistently 3% higher than the Consumer Price Index (CPI).
- ***Increasing accounts receivable.*** Currently, the city manages billings for about 40% of Johannesburg Water’s customers. In the contract’s first year, a certain percentage of customers were migrated from the city to the utility’s remit, which increased the utility’s billing rate. The utility then took over other functions, including metering, Management Information Systems, and water quality checks. Importantly, the utility ring-fenced its service area to ensure appropriate boundaries between the city and the utility. However, the city continues to manage credit control for the majority of customers, meaning it is responsible for collections once the bill is sent out. Consequently, the utility does not have full control of its accounts receivable, which limits its financial autonomy, and sometimes increases confusion over roles and responsibilities regarding bill payments. The utility is working with the city to resolve this matter, to help rationalize its balance sheet and resolve outstanding billing issues.²⁸
- ***Addressing the high levels of UFW.*** A review by the utility found that in metered areas,

²⁸ Due to the high levels of accounts receivable (estimated at over R2 billion), the city has adopted several measures to improve the situation, including an 18% interest rate on outstanding charges, and disconnection after several months of nonpayment. If services are cut off, both the outstanding charges and a reconnection fee are required, although the City’s Credit Control Department does provide various options for repayment depending on the situation. Reconnection fees range from R272 for reconnecting a water main at the meter to R1,237 to reconnect after a disconnection at the water mains supply.

UFW stood at reasonable levels, but in areas where consumers are charged a flat rate regardless of consumption, losses were significant. In Soweto, where losses are particularly high, the flat rate is in place for historic and political reasons; however, the system has created substantial waste, partly due to aging and inadequate infrastructure, and partly due to retrofits to water connections. In response, the utility, through the *Gcin'Amanzi*, or Soweto Water Project, introduced a program to repair all water pipes up to the property line, and then retrofit all toilets, cisterns, taps or other water infrastructure in all of the houses. Households could choose either a prepayment meter or a yard tap. The objective is to retrofit designated houses so that there are no leakages, and then “start afresh” with metered service provision.²⁹ The project, which began in mid-2003, aims to recover its costs over four years; the project will be completed by December 2008, and will cost R650 million. The initiative has a complementary education component that includes door-to-door consultations on all aspects of the program, including hygiene education. One of the expected outcomes of this project is a 10% reduction in UFW.

Financing was identified as a core requirement of the turnaround strategy's success. To obtain financing, Johannesburg discussed its program, and specifically the *Gcin'Amanzi* with a range of international banks. This tactic differed somewhat from the usual process by which the city arranges loans for the utility. The European Investment Bank (EIB) and AFD expressed interest and arranged EUR80 million in loans to the city for the sole purpose of supporting Johannesburg Water. The utility is fully responsible for the debt, and pays interest on the loans. Bulk water purchases have been reduced by approximately 70% per household as a result of the project; the savings resulting from the reduced outlay for bulk water will pay for the

costs of program implementation over roughly five years. More than 95% of properties that benefit from the program have opted for the prepayment meter over the yard tap. Further, the utility writes off the cost of the meters to consumers after three years, provided that the meter has not been tampered with in that time frame.

Accessing Domestic Finance Using Bonds

Background

In recent years, the City of Johannesburg has received considerable attention for its participation in the municipal bond market. The city aims to raise R6 billion in debt from the domestic capital markets between 2005 and 2010, a strategy that is backed by investor confidence. Since its first experiences, which required guarantees from international financial institutions, the city now issues bonds without guarantees, and intends to issue longer-term bonds of up to 30 years, in order to match the asset life of infrastructure investments.

The City of Johannesburg turned to the bond market as an alternative to commercial lending. In the early 2000s, the City was financially overextended, carrying a series of bad debts as well as a growing capital expenditure backlog. It had relations with seven banks, but given its credit needs, was close to exceeding its credit capacity. Four credit lines with the Development Bank of South Africa (DBSA) had been exhausted. Bond issuances offered the potential to diversify funding sources, reduce the cost of borrowing, and also extend the maturity profile of debt. By pursuing municipal bonds, the city also saw an opportunity to open up a new market for South Africa's municipalities.

South Africa already possessed a sophisticated financial market for debt products. The local bond market is 10 times the size of the Johannesburg

²⁹ Households are offered an option to either use a prepayment meter for a household connection or receive a yard tap. As of May 2006, the project was extended to 37,000 properties in Soweto, out of a planned 170,000 properties.

Stock Exchange (JSE). Hedging products have been developed in recent years to allow for greater market liquidity, and a secondary market for bonds has developed in recent years. Overall, investors are supportive of long-term investing, which, in turn, benefits municipal investing.

Transformation Process

With the turnaround in city management and operations leading into and after the 2000 elections, the city's economic development strategy and budgets indicated capital expenditure backlogs exceeding R10 billion, while actual expenditures stood at just over R1 billion. To prepare for a bond launch, the city needed to secure an investment grade rating and establish internal capacity to manage the issue. Extensive research, presented in nonfinancial language, was required, including an evaluation of the city's debt portfolio to identify inefficiencies and then sell the idea to management and the politicians. A council resolution was needed to proceed, and this would include a procurement process for appointing advisors and lead managers. Then, to gain support from investors, the city needed to establish a track record, with published annual financial statements that were audited, coupled with an action plan to address auditor's concerns.

The city's efforts bore fruit: its credit rating improved from a BBB+ to an A,³⁰ while financial and administrative management within the city improved considerably. In 2003, the city submitted signed financial statements to the Auditor-General on time. Interest rates were falling and the rand was strong, which created the possibility for lower borrowing costs. Through the Municipal Finance Management Act (MFMA), the national government allowed municipalities to borrow through domestic financial markets. In 2003, the city signed an agreement with its bond advisor, a consortium comprising Barclays Bank,

African Harvest Capital and Ernst & Young Corporate Finance, with the intention to issue municipal bonds. The bond advisors analyzed the City's credit profile to determine the bond structure, size, and timing of a launch. With all the necessary elements in place, and after a period of nearly two years, the City pitched its prospectus to investors through roadshows in Johannesburg and Cape Town.

In 2004, the city launched bonds worth R2 billion to refinance debt and recapitalize its aging infrastructure. The first, COJ01, was for R1 billion, and was 50% oversubscribed. COJ01 was neither guaranteed by the government nor secured by government assets. A second bond—COJ02—raised an additional R1 billion, and was partially guaranteed, which allowed for a longer tenure (12 years). Funds raised through the bond issue were allocated for the water sector as well as for roads, transport, and electricity, and for inner-city renewal; the refinancing of old debts through the bond will save the city about R20 million annually between 2004 and 2010.

Seven banks continue to work with the city as bond advisors and underwriters. The banks—Standard Bank, ABSA, Barclays, Deutsche Bank, RMB, Investec Bank and Citibank—were selected to set up and issue the bonds on behalf of the city, for a projected R6 billion through 2010. This longer-term arrangement will obviate the need to appoint a new transaction team for each issue. The bonds are listed on the Bond Exchange of South Africa.

Municipal finance is working in Johannesburg as a cost-effective means to raise finance for capital investments, as well as increase transparency within the city, one of *iGoli* 2002's core goals. Since CoJ02, several bonds have been issued, each with a lower interest rate and a tighter spread, reflecting investors' increasing confidence in the market.

³⁰ Johannesburg sought ratings from two companies: Fitch and CA Ratings. The former is an international rating agency; the latter is locally based.

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4. Manu Padiaychee, Executive Director & CFO, Johannesburg Water
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5. Office National d'Eau et d'Assainissement (ONEA), Burkina Faso

Summary

In Burkina Faso, the public utility ONEA has improved service delivery through strong operating and financial performance, at the same time achieving the main goals of its contract with the government. ONEA's dependence on operating grants, at 1.88% of all operating costs, is low but capital grants make up between 10% and 20% of the total investment costs. The company has at its disposal shareholders equity and substantial cash flow. The key findings from this case study are:

- Despite high levels of political commitment, the government has begun to shift away from direct investment in the water sector, which could impact ONEA's financial position if alternative forms of finance, including domestic market finance, do not materialize. ONEA does not currently access local markets to finance capital infrastructure, although, the results of an assessment of performance standards and internal standards indicate the company may have the ability to do so.
- Due to ONEA's strong performance, it is currently building relationships with banks and has begun borrowing for working capital purposes or for investments maturing within five to seven years. ONEA is also currently accessing opportunities of using commercial financing for medium-term investments.
- While ONEA's financial position is strong, its ability to access market finance is not certain. Considerations, such as regulations on public sector borrowing, balance sheet structure,

and overall profitability also have an impact. A persistent challenge is the need to maintain those areas that are strong while improving and reforming those areas that need attention in the face of limited resources.

- Although ONEA is legally autonomous, it struggles to collect payment from public sector customers. The company's credit control policy appears to be ineffective from the perspective of financial viability, and results in unnecessary borrowing to cover costs.
- The transition from a privately-run utility model between the 1940s to the 1970s, characterized by frequent change to a stable, publicly-managed utility (from the late 1970s to the present), has been achieved by complementary long-term and short-term strategic planning as well as financial planning. Increasingly, the need for stronger financial and investment planning has become clearer, particularly with regard to harmonizing financing decisions with the policies and activities outlined in the company's strategic plan.

Overall, ONEA is a well-managed company that has made significant progress in terms of its management and operations, in part due to a management contract. ONEA has sound administrative and financial management, financial autonomy and independence, good relationships with customers and banks, short- and long-term strategic planning, a commitment to professionalism, a history of cooperation with the private sector on certain aspects of its business, and a relatively sound institutional

environment (although some improvement is needed). The reform program has enabled the company to:

- Enjoy autonomy in managing water and sanitation utilities, although certain aspects relating to governance need improvement.
- Implement a tariff structure conducive to cost recovery, with special considerations for the poor.
- Improve its financial and economic efficiency in order to generate cash flow.
- Enjoy greatly improved technical performance.
- Put in place quality human resources with experience and practical knowledge.

Sovereign guarantees may be one way to stimulate market-based finance, but this may constitute nothing more than reassurance for prospective lenders. In order to tap the domestic financial market, certain improvements in ONEA's external environment may be required, such as: increased autonomy in borrowing and governance; establishment of disciplinary mechanisms with regard to the implementation of the plan contract; and increasing tax benefits on loans taken by the company. Finally, the utility's Management Information System should be improved.

Introduction

Burkina Faso is located in West Africa, and borders Mali, Niger, Ivory Coast, Togo, Ghana and Benin. Its climate is characterized by two seasons: a rainy season, between June and September, and a dry season between October and May. As a landlocked country with a Sahelian-Sudano tropical climate, water issues are a core concern. The country's economy is largely agrarian; cotton, a key crop, is highly dependent on water. With a population growth of 3%, the country is expected to have 18 million inhabitants by 2015, up from 13.1 million in 2005. In recent years, there has been a noticeable increase in the use of water for economic and

social purposes; the water sector has risen as a priority area for government in poverty reduction.

The drinking water, sewerage disposal and excreta sector is subdivided into three parts. In urban centers with a population of over 10,000 people, ONEA is a corporatized state corporation that provides water to domestic, public and private (industrial and service economy) users. Following decentralization, local communities and municipalities in semiurban and rural areas are increasingly responsible for water management, although a range of service providers is possible, including government, NGOs, the private sector, and user associations.

This case examines ONEA's transformation over the last several years into a more viable company with the potential to access market-based finance. For example, through increased efficiencies, the company extended service coverage from 36 urban centers to 43 urban centers in 2005.

Transformation Process

In Burkina Faso, a series of reforms have been implemented over time to address poor management and weak water service delivery. Political will and donors support were key drivers of the changes effected by ONEA to reorient management toward commercial principles, and strengthen financial and accounting operations under a contract between ONEA and the government. This contract led to increased efficiencies and, concurrent with some changes in the financial services sector, has increased the potential for increased market-based borrowing.

ONEA's transformation is ongoing, and dates as far back as the 1940s. AOF Power Company in 1954 began efforts to ensure a safe drinking water supply in Bobo-Dioulasso and Ouagadougou. In 1960, SAFELEC succeeded AOF Power Company and, in 1968, VOLTELEC, Burkina Faso's (the country was then called Upper Volta) national electricity company, was created to manage the electricity and water supply. This obtained until 1970, when electricity

Table 5.1: Overview of Water and Sanitation Services in 2005, ONEA

Area served	NA
Estimated size/population of service area	2.8 million
Volume of water produced	41,384,486 m ³
Water consumers served (2005)	2.3 million
Number of connections	86,785
Water coverage (% population with a connection or within 200 m of a standpipe or other source of water)	84%
Number of metered connections	84,907
Number of consumers provided with waterborne sewerage, pit latrines or septic tanks	524,167 m ³ ³¹
Unaccounted-for Water	18.5%
Credit rating	
- Short-term	
- Long-term	NA

Source: ONEA.

Table 5.2: Snapshot of Burkina Faso

	Burkina Faso
Population	13.1 million
GDP (millions FCFA)	3,005,001 ³²
GDP growth (average five-year)	5%
GDP/capita (p.a.)	US\$439 ³³
Maximum lending rate	14.75%
Inflation	3.2% ³⁴
Unemployment rate	NA
Poverty rate	45% ³⁵

Source: Ministry of Economy and Development, MEDEV.

³¹ Amount of treated sewerage in 2005, for a population of 669,150.

³² Data for 2005.

³³ Data for 2005.

³⁴ Compared to an average of 7.1% for EMUWA.

³⁵ Data for 2003.

was decoupled from water supply. The National Water Company (SNE) was created and charged with overseeing the generation and supply of safe drinking water in urban and semiurban centers throughout the country. In 1976, the first water policy was enacted, which transferred management of water to the public domain.

The second period, from 1977-1994, saw nationalization of the management of public facilities, and the creation of ONEA. ONEA's (then called Office National de l'Eau [National Office of Water, Burkina Faso] [ONE]) master plan was developed in 1978; in 1984, the Ministry of Water Resources was reorganized, and ONEA's responsibilities were expanded to include sanitation, which led to the creation of ONEA³⁶ in 1985. ONEA became a state corporation³⁷ in 1994 with legal autonomy, one year after signing its first contract plan with the government. Most recently, ONEA underwent a series of reforms and signed in 2001 a five-year contract with an international water service operator and consultant to reorient management toward commercial principles, as well as to strengthen financial and accounting operations. This contract led to increased efficiencies and, concurrent with developments in the financial services sector, has increased the potential for increased market-based borrowing.

ONEA is a legally and financially autonomous public company that has the government of Burkina Faso as its sole shareholder. In its management and operations, ONEA is subject to government authority, through decisions taken during Council of Ministers meetings. ONEA is also subject to restrictions concerning indebtedness, as provided for in the indebtedness regulations, which govern state corporations for all debts exceeding CFA 1 billion, and whose term of payment is greater than one year. Although the government determines policy and sets tariffs, as well as

ensures service quality via the Ministry of Health, ONEA has the power to study tariff changes and propose appropriate tariffs, in line with achieving targets set in its contract. Lack of autonomy with respect to indebtedness may be a hindrance in terms of recourse to domestic financial markets.

The Utility and its External Environment

In recent years, supported by above-average GDP growth, Burkina Faso's external environment has created greater choice for water sector actors, whether as a result of decentralization, which creates options and ownership at a local level, or due to increased financial liquidity, which creates opportunities for new types of investment. This section examines some of the key external forces influencing ONEA.

Overall Sector Strategy

Burkina Faso's water strategy, articulated through a water policy paper and a 1998 water strategy document, is aligned with the Millennium Development Goals (MDGs). Specifically, the water strategy aims to ensure access by the poor to safe drinking water and sanitation, to expand the service area through the construction of 3,000 modern water points, including 1,000 new boreholes each year, to rehabilitate 500 boreholes, and to equip secondary urban centers with a network of simplified systems for safe drinking water supply. Achievement of the strategy's aims is in line with sustainable service provision and increased public finance.

At the core of the country's water strategy is increased participation by local communities in the planning and decision-making process for water management. The Government, in collaboration with development partners, has developed a "road map" to achieve the MDGs, with an objective to have a "program budget" by 2007.

³⁶ Decree n° 85/387/CNR/PRE/EAU of July 22, 1985. November 2, 1994.

³⁷ The company was transformed into a state corporation by decree N° 94-391/PRES/PM/MCIM/EAU (this decree was eventually modified by decree N°96-161/PRES/PM/MEE/MCIM of May 17, 1996, which was, in turn, modified by decree N° 2001-095/PRE/PM/MEF/MEE/MCPEA concerning the ONEA by-laws. Source: Legal service unit of ONEA.

Notably, the country's sanitation coverage lags in comparison with water supply, and, since 1994, the country has sought to fill the gap through the development of Sanitation Strategic Plans (SSPs), coupled with a national strategy for the subsector, which was adopted in 1996. SSPs have been implemented in the major towns, Ouagadougou and Bobo-Dioulasso, and are currently being implemented in four secondary centers. Further study to determine effectiveness and sustainability of these SSPs is planned, before scaling up the approach at a national level.

Institutional Arrangements

Burkina Faso's urban and rural water sector institutional framework is organized around three institutions: government agencies,³⁸ territorial communities, and ONEA. There are a total of 49 urban municipalities and 302 rural municipalities in the country, to which the government will gradually transfer 11 areas of jurisdiction, including drinking water supply and sanitation, as part of a broad decentralization strategy.

This institutional framework is complemented by legal and regulatory frameworks, as well as a contractual framework that governs ONEA's operations in urban areas. ONEA operates on the basis of triennial contracts, which stipulate the commitments of both parties (ONEA and the government) relating to water sector management. ONEA also works on a contractual basis with municipalities. For example, in 2004, ONEA signed a lease contract for the management of safe drinking water supply in six towns. ONEA has also signed conventions of partnership with some municipalities that do not have safe drinking water systems. These conventions provide a contractual framework whereby ONEA offers advisory support and technical expertise for the development and implementation of municipal development plans

for supplying drinking water, health, and sanitation. Notably, the conventions do not mention remuneration to ONEA for these services, and it is unclear how payment will be structured, if at all.

Company Structure

ONEA's chief executive is its Managing Director, who is appointed by the Board of Directors and serves as Chairperson of the board. The Managing Director is responsible for the company's daily operations, and has extensive power in the management and representation of the company. The Managing Director is evaluated annually by the board; he or she may be fired on the recommendation of the minister, or by the board. The Managing Director is assisted by a Secretary General and an official responsible for quality. The Secretary General controls the management departments, the legal and litigation department, and communications and public relations, including documentation service. ONEA comprises nine functional departments³⁹ (see *Figure 5.1*).

ONEA's operations are highly decentralized. ONEA consists of three operational departments (Ouagadougou, Bobo-Dioulasso, and auxiliary centers) as well as 43 centers throughout the country. ONEA owns and runs six laboratories for water quality assurance. The ONEA Center for Water Treatment and Sanitation evaluates training needs and ensures implementation of the company's training program for internal and external staff.

Governance

ONEA falls within the stewardship of the Ministère de l'Agriculture, de l'Hydraulique et des Ressources Halieutiques (Ministry of Agriculture Water Supply and Fishery Resources, Burkina

³⁸ This includes the Ministry of Agriculture, Water and Fishery Resources in charge of Water and Sanitation; The Ministry of Economics and Development; The Ministry of Local Administration and Decentralization; The Ministry of Finance and Budgetary Affairs; the Ministry of Health; and the Ministry of Commerce.

³⁹ A new organization adopted by the Board of Directors on 23/12/2005 was established on March 7, 2006, and added four new departments, including a Planning and Investment Department (PID), and a Computer Department (CD).

Figure 5.1: ONEA Organizational Structure



Faso) (MAHRH), whose trusteeship technical committee is the Directorate of Water Resources (DWR).⁴⁰ The company is governed by a Board of Directors (the board), which meets regularly per its constitution.⁴¹ The board wields extensive managerial powers and must be informed of all important issues relevant to the company's general operations (e.g., formulation of objectives and guidelines, purchase and sale of capital assets, borrowing, control over the Directorate, as well as the balancing of accounts). The board submits a general annual report on ONEA's economic and financial situation to the General Assembly of State Corporations (GASCs), per the law governing publicly-held stock companies. The GASC is chaired by the country's Prime Minister and approves ONEA's accounts and makes recommendations as well as guidelines to the Chairperson of the Board of Directors and the Managing Director.

ONEA works on the basis of triennial plan contracts signed with the government, which

clearly establish performance targets and indicators (there were 34 indicators in 2001 and 28 in 2004 (see Annex 1). The contracts also govern relationships between ONEA and public institutions, and includes regulations relating to public sanitation service, which govern the relationships between customers and ONEA. Since 1993, four contracts have been signed. ONEA's compliance with the agreed indicators, which is validated by an international technical auditor, was 83% in 2003, and 65% in 2005. This decline is due to a disagreement between ONEA and the auditor with respect to some of the assumptions used. The latest plan contract, signed in 2004, terminated in 2006. This contract is expected to be renewed and effective in 2007 and will include specifications for the production and distribution of safe drinking water, raw water, and sanitation in urban and semiurban areas throughout the country.

Plan contracts map out the roles and responsibilities for ONEA as well as the government, although there does not appear to be

⁴⁰ By-law N° 2006-18/MAHRH/SG/DWR in application of decree N° 2006-242/PRES/PM/MAHRH of 02/06/06.

⁴¹ Decree N° 2001-095/PRES/PM/MEF/MEE/MCPEA.

any accountability mechanism for government action (or inaction). The government's role largely concerns minimizing or eliminating risk relating to government interference. For ONEA, this results in a number of benefits, such as exemption from taxes and customs duties, and enhanced credibility with the private sector and financiers.

The latest contract between ONEA and the government outlines commitments and determines technical, financial, and commercial objectives. These are evaluated based on success in meeting 28 indicators, which focus on the topics outlined in *Table 5.3*.

The implementation of these commitments is managed by a Monitoring Committee, which includes representatives of both government and ONEA, one representative for employees, and another for customers. The Monitoring Committee meets twice a year to make an appraisal report on the status of implementation. The report is

submitted to the Board of Directors, and verified by an international auditing firm. The report is not made public, which raises some concerns about transparency. ONEA's new total quality control systems allow for some positive and negative reinforcements throughout the life of the contract, which is viewed as a positive step.

The Utility and its Internal Environment

ONEA's internal environment has improved considerably in recent years due to effective reform programs coupled with the aforementioned management contract in effect from 2001-2006. This section outlines some of the key areas of internal performance that relate to a utility's capacity to borrow.

Customer Base

ONEA provides metered networked services and manages standpipes⁴² to private households,

Table 5.3: Categories of Indicators in the ONEA/Government Contract

<i>ONEA Commitments</i>	<i>Government Commitments</i>
■ Water resource development	■ Water resource development
■ Utilization of safe drinking water supply facilities	■ Taxation
■ Provision of water service	■ The development policy for safe drinking water and sanitation sector
■ Quality of water supply	■ The ONEA recovery policy of consumption bills for the government and public institutions and offsetting irrecoverable debt obligations
■ Sanitation	■ Government debt obligations
■ Investments	■ Personnel management
■ Finances	■ Water resources
■ Customer care management	■ Evaluation
■ Human resources management	
■ Internal management and information management system	
■ Dissemination of indicators	

⁴² ONEA manages 1,878 standpipes.

government branches, and municipalities in urban and semiurban areas. Its total potential customer base is estimated at 2.8 million, of which 84%, or 2.3 million, currently receive water. In Ouagadougou, service coverage is 92%, while in Bobo-Dioulasso, Burkina Faso's economic capital, coverage is 86%. In the country's 43 secondary centers, ONEA has a coverage rate of 62%, although it aimed to increase this to 82% by 2005.

Human Resources

As a corporatized utility, ONEA has extensive managerial authority to achieve the objectives set out in its contract. The contract determines required managerial skills, as well as sets standards of accountability for ONEA.⁴³ Overall, ONEA has a reasonably stable human resource environment. As of December 2005, the company had 650 permanent staff, the overwhelming majority of which were male (88.46%), and relatively young: 46% of permanent staff is under the age of 40, while only 14% are over 50 years old. The rate of attrition is low, 1.4% per year. The management to staff ratio is 1:3, while the staff to subscriber ratio in 2005 was 7 per 1,000 connections, an improvement over 2001 levels, when the figure was 8.4 per 1,000 connections. To fill the relatively few staff positions open at any given time, the company conducts recruitment by candidate application, and operates a competitive internship program to train and develop potential future employees.

ONEA's evaluation and promotion mechanisms for staff are based on merit rather than seniority, and are grounded in the principles of benchmarking against discussed and accepted targets and objectives between staff and management. However, it is unclear whether the criteria for staff evaluations are realistic or

objective, or what types of follow-up mechanisms to track performance have been implemented.

Overall, relations between management and staff are cordial, although there was some tension following implementation of a salary increment scheme that was unilaterally selected by the government in 2004.⁴⁴ A disciplinary committee settles disputes between employees and management, and is empowered to take disciplinary action, including dismissal in case of a serious offense. The company maintains regular dialog with the unions (National Union of Workers in Water and Sanitation Sector, SYNTEA). The union is involved in ONEA's management through its representative on the Board of Directors.

In recent years, ONEA has focused considerable energy on developing a more coherent corporate culture and a common vision for staff. To achieve this, the Total Quality Control Unit has implemented intensive sensitization, which aims to obtain ISO⁴⁵ certification for the company. Activities include a mobile quality control team that visits various ONEA sites. These efforts have improved staff morale and the company image in the eyes of customers. Further, a new organizational structure is being developed to create new, horizontal units (e.g., computer, logistics, provisions units, etc.). In the near future, the company intends to develop a computerized master plan that includes an intranet for internal communication, and company-wide access to the Internet. To complement these efforts, the company allocates 2% of its budget to training internal and external staff.

Strategic Planning and Budgeting

ONEA has two core development plans: a development plan which focuses on the long

⁴³ Article 5 of the specifications book, Articles 22,24, 25 28 and 29 of the ONEA by-laws and Articles 9 and 10 of the plan contract.

⁴⁴ In this instance, ONEA management took the position that, as an autonomous company, they were not bound to the government's decision, which impacted civil servants. After about a year of discussions, ONEA and the government negotiated a mutually agreeable approach.

⁴⁵ ISO—the International Organization for Standardization. See www.iso.org

term (2004-2015), and a Strategic Plan, which covers a four-year cycle (the current one is for 2004-2008). These plans articulate the company's long-term vision, and take into account the entire company, from the Board of Directors, which receives guidelines from the GASC⁴⁶ through to staff. Likewise, the company ensures planning and investments according to an investment plan, based on estimations for 10 years, and updated annually. ONEA must also develop a financial policy geared toward limiting future government support in terms of financing its activities. At least every five years, ONEA has to propose an acceptable billing to the authorities.

The 2004-2008 Strategic Plan sets out changes intended to facilitate adaptation to ongoing external changes, such as policy and legal reform (e.g., the Integrated Water Resource Management Policy), decentralization, and ongoing government disengagement from service provision. ONEA's current objectives are:

- Maintain financial equilibrium and improve profitability.
- Improve ONEA's image in the eyes of customers and increase customer satisfaction.
- Improve the satisfaction and commitment level of the ONEA staff through regular and systematic evaluation.
- Improve sewerage disposal and excreta facilities through strategic planning, and achieve a service area coverage rate of 40% in the two main cities of the country (within the context for the supply of safe drinking water).

Social measures are also taken to help increase access to drinking water by the poor. For example, ONEA is currently implementing a program to

extend 50,000 connections to the poor, at a cost of CFA 50,000 (approximately US\$100) per connection.⁴⁷ This builds on previous efforts, such as a program in 2004 to add 7,000 connections (at a cost of CFA 100,000).

ONEA's Development Plan (2004-2015) was formulated in 2004 and focuses on meeting the MDGs. The plan contains the following elements:

- Demographic summary.
- Determination of the coverage rate, as well as present and expected specific consumptions, and how they relate to the targeted values of the MDGs.
- A balance sheet mapping water resources and needs.
- A sector investment plan for 2004-2008, totaling CFA 83.4 billion, which includes CFA 19.6 billion already received (CFA 13.2 billion from donors and CFA 6.4 billion from ONEA cash flow).

ONEA's Development Plan constitutes a major step toward institutionalizing the MDG targets; however, more work is needed to update the data used, and integrate planning with the company's financial model. This is necessary to estimate the impact of the investment plan and the financing methods used (e.g., grants, loans) on ONEA's medium- and long-term financial equilibrium.

Operating Performance

Between 2001 and 2005, when the management contract and reform program were in effect, ONEA's operations and quality of service improved considerably. Overall, since 2001, the company has improved the regularity of water supply, so that in two-thirds of its service area water is available 24 hours a day; however there is rationing in the remaining one-third. Water

⁴⁶ General Assembly of State Corporation is Body that acts as Shareholders General Assembly. It meets annually and is chaired by the Prime Minister.

⁴⁷ The cost of a new connection is CFA 80,000 in which user contribute for 20,000 to be connected. In addition, the user has to pay in advance CFA 30,000. The 50,000 comprises 20,000 for connection and 30,000 as advance payment.

supply coverage in 2005 was 84%, bettering a target of 82%. The water quality rate is 98% (as measured by the Ministry of Health), and the number of complaints in 2005 came in below the target of 1%. At the same time, however, the number of unused boreholes increased to 12% in 2005, compared with an average of 7% between 2001 and 2004. In response to this increase, ONEA has developed preventative maintenance measures and set a target of 2-3% for unused boreholes in the future. Water losses are in the range of 18%, compared to a target of 16%, although no data are available for illegal or unbilled consumption. The number of unpaid bills, in terms of percentages, is in the range of 17%, against a target of 8%.⁴⁸

While operating performance in the water sector has improved, sanitation targets for 2005 were not met despite considerable investment, suggesting that the impact of recent investments to sanitation has not been felt. Coverage in Ouagadougou and Bobo-Dioulasso was 40% and 20%, respectively, against targets of 45% and 25%. Still, the level of sewerage treatment is considered 100% satisfactory in those areas.

Customer Service

ONEA's Customer Service Unit manages customer relations. The Unit frequently carries out studies on customer satisfaction, and has found the results to be largely positive, with a complaints rate at 0.6% of the total customer base. Complaints are addressed quickly and monitored regularly, although complaints are not yet integrated into the Management Information System. Major customers are given preferential treatment and their concerns are addressed by a correspondence unit.

Tariff Structure

While ONEA lacks the financial autonomy to set tariffs, it can—and does—propose tariff structures to its board, based on its financial

model. Following board approval, the proposal is forwarded to the Council of Ministers for consideration and final approval. Tariffs are constructed such that larger consumers subsidize access for small consumers, while larger centers in the service area support small centers that are in deficit. In its monthly bills, ONEA recently announced a need for demand management, accompanied by a tariff grid that provides examples of water bills. For example, the cost for a subscriber, with a minimum guaranteed inter-occupational wage of CFA 28,811, consuming 6 m³/month, amounts to CFA 2,456, including tax and connection fees, consumption of 30 m³ costs CFA 12,483, and 60 m³ costs CFA 46,298. Compared to the country's GDP, this monthly bill represents 1.07-20.20% of the GDP per capita (see Annex 2). For the poor, (those who consume a maximum of 6 m³/month) this is considered affordable. See *Table 5.4* for a breakdown of the tariff structure.

Continual reassessment of tariffs facilitates making adjustments as needed. A new tariff policy is expected to be analyzed at the end of 2006, within the context of pursuing a tariff policy based on marginal costs, and reduction of business losses.

Billing

All of ONEA's nearly 85,000 customers are metered, and billing is conducted monthly. On an average, ONEA's networks billed about 33.7 million m³ of safe drinking water in 2005, amounting to about CFA 14.06 billion, against total sales of roughly CFA 14.4 billion. While overall, ONEA's customers pay their bills, and rates are considered affordable, the average recovery rate is significantly below (policy versus actual) the target of 90% (69% for 2001-2003) and 92% (77% for 2004-2005). The main reason for the poor recovery rates is a failure by public sector customers—public institutions, municipalities, and local communities—to pay

⁴⁸ According to calculations by the technical auditor; ONEA claims that the percentage is closer to 9%, suggesting a difference in calculation method.

Table 5.4: Tariff Structure at ONEA, Effective 2002-2005 (tax excluded)

	2002	2003	2004	2005
Standpipes	186	188	188	188
Autonomous water station	93	95	95	95
Households				
- 0-6 m ³ /month	180	188	188	188
- 7-30 m ³ /month	377	393	393	393
- Over 30 m ³ /month	998	1,040	1,040	1,040
Raw water	426	439	439	439
Company tariff structure	993	998	1,040	1,040
Monthly charge per connection	1,000	1,000	1,000	1,000

Source: ONEA Annual Report, 2005.

their bills on time. Ultimately, ONEA's lenient credit control policy toward the public sector offers little incentive for timely and accurate payment, which negatively impacts the company's cash flow. Table 5.5 highlights the variance between the actual recovery rate amongst different types of customer, and the associated target.

ONEA's Unaccounted-for Water has risen from an estimated 5.6 m³/day per km of network in 2004, to 6.1 m³/day per km of network in 2005. Data on the percentage of illegal connections, age of network, and leakage were unavailable, although overall UFW is 18% of water produced. But ONEA's development plan is expected to rehabilitate the network and reduce these issues.

Despite the low recovery rate, ONEA's turnover improved significantly between 2001-2005, from CFA 13.4 billion to CFA 17.2 billion in 2005, mainly due to the progressive implementation of the ZIGA project for supplying water to Ouagadougou and the town of Ziniaré. The revenue increase is due to an increase in water supplied, along with an increase in the number of private subscribers, from 62,274 in 2001 to 84,907 in 2005.

Utilizing the Private Sector

According to the Drinking Water and Sanitation Private Sector Support Component (DWSPSSC),⁴⁹ in 2004, there were 76 civil engineering firms involved in public works and

Table 5.5: Recovery Rates (accounts receivable measured in number of day) Against Targets for Private and Public Customers

Customer-type	2005 Actual	2005 Target
Days outstanding, private customers	94	95
Days outstanding, public institutions	224	190
Days outstanding, municipalities and local communities	1,211	120

Source: Report of internal and technical auditors, June 2006.

⁴⁹ DWSPSSC is part of PADSEA II, a national reform program that provides support for a national private sector development strategy, with an emphasis on: (i) support for the creation of an environment which is conducive to the development of the private sector, in order to improve the process of acquisition of good and services; and (ii) support for the promotion of good management by private operators.

provision of equipment and material, 49 engineering and design firms, and 567 artisans involved in the repair of working handpumps. These companies cooperate with ONEA in drilling, work provision and fixing of handpumps, superstructure architectural design as well as the establishment of small networks. These services are particularly utilized in the ZIGA project.

Since 2001, ONEA has been collaborating with Veolia water and Mazars (a consultancy) in accordance with a five-year service contract to manage and reinforce financial and accounting operations. In addition to the contract, ONEA has turned over management of the standpipes,⁵⁰ network extension works, supervision, and cleaning of factories as well as repair and maintenance of equipment to the private sector.

Overview of ONEA Finance

Traditionally, the water sector has depended on a range of funding sources to finance activities, including government, local communities, bilateral and multilateral partners, as well as international NGOs. While available data are unreliable, a study of changes in public expenditure in the subsector suggests that, since 1993, the government spent an average of 9% of its resources on the water sector. Of this, 84% originated from donors.⁵¹ Over the last 10 years, ONEA spent, according to estimates, an average of US\$30 million per year on the Water and Sanitation Sector, and an average of US\$12 million on sanitation. ONEA relies on its own resources, along with government and donor finance. Local bank finance tends to be used on a short-term basis, in the form of advances for working capital (in part to bridge the cash flow gap caused by late payments by government agencies).

ONEA's Strategic Plan stipulates that the company must establish financial equilibrium by

2006. In all, ONEA's financial statements suggest that the company is performing well, and is financially stable. For example, the target level of indebtedness is 58%, whereas the actual level of indebtedness is only 51%, suggesting considerable room for assuming more debt. Turnover increased from CFA 12,354 million to CFA 17,152 in 2005, largely as a result of new connections to private subscribers; however, cash flow declined from CFA 4,460 million in 2004 to CFA 3,802 million in 2005. This is largely due to the considerable increase in days outstanding for all customers, at 130 days, up from 94 days in 2004. As noted elsewhere in this report, the recovery period from private customers has improved, while recovery from public institutions, local communities, and municipalities has actually worsened over the last few years.

Between 2002 and 2005, ONEA's net capital assets grew from CFA 92.5 billion to CFA 153.9 billion, mainly as a result of the new equipment associated with the ZIGA project. In 2006, investments were estimated at CFA 36.22 billion, financed from shareholder equity. Projected investments for the period 2007-2015 are estimated at over CFA 78 billion for those ONEA centers under lease contract, and new centers yet to be established.

ONEA's dependency on operating grants is low, at 1.88% of all operating costs. However, the company is highly dependent on grants for capital investment (between 10 to 20% of the total investment costs). The company has, at its disposal, shareholder equity and substantial cash flow. Shareholder equity rose from CFA 62.4 billion in 2002 to CFA 83.5 billion in 2005. This was possible due to ONEA's conservative financial management, a policy of saving, disbursement of grants by donors, and an increase in the provision of investment through the company's contract with government.

⁵⁰ Private management of the standpipes is almost as old as the standpipes themselves.

⁵¹ Major donors to the water sector include the French Agency for Development, Germany, Denmark, OPEC, Japan, the Kuwait Fund, and the African Development Bank.

Despite a high level of political commitment, the government is moving away from direct investment in the water sector, which could impact ONEA's financial position if alternative forms of finance, including domestic market finance, do not materialize. ONEA does not currently access local markets to finance capital infrastructure, although based on an assessment of performance standards and internal standards, the company may be able to do so. Overall, the company has sound administrative and financial management, financial autonomy and independence, good relationships with customers, short- and long-term strategic planning, a commitment to professionalism, a history of working with the private sector for certain aspects of its business, and a relatively sound institutional environment (although some improvement is needed). To support more market-based finance, sovereign guarantees may be a way to stimulate more market-based finance, but this may be limited to a simple comfort level to prospective lenders.

Financing Transactions and Environment

At the end of 2005, there were nine banks operating in Burkina Faso, and another two in a start-up phase, and five financial institutions. The country has a strong decentralized financial system, national funds for financing, specialized financial institutions, insurance companies, representatives of regional financial organizations, and companies catering to pensioners. Important reform programs have been carried out by the Central Bank of West African States within the general context of strengthening the region's financial system, improving monetary policy and accelerating regional economic integration. According to statistical data provided by the Bank Commission, Burkina Faso's banking sector achieves satisfactory performance compared with other West African countries.

Burkina Faso's financial system is characterized by excess liquidity, which has typically been used as a deposit in the form of a contribution to other financial institutions of the Economic and Monetary Union of West Africa (EMUWA) or the government. The reason for this has largely been a lack of financing opportunities in the economy due to market insecurity. By April 2006, however, the ratio of resource employment rose to 90%, from 75% in 2004, suggesting greater flexibility and opportunities for investors.

Within the context of developing its 2004-2008 strategic plan, ONEA held a meeting with some banks, to determine their interest in financing water sector infrastructure. The banks showed some interest in deepening their relationship with the company, and noted that one starting point could be project-based funding. Local funding could be considered for those projects whose maturity and investment returns do not exceed 10 years, and where a grace period could be less than two years. Issues such as interest rates, and acceptable returns, have not yet been negotiated.

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4. Ousmane SEDOGO, Financial Analyst, Operating Directorate, ONEA
5. Cyrille SOMDA, Senior Officer, Internal Audit, ONEA
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7. Lydie Laure SOME, Senior Officer, Legal Department, ONEA
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Annex 1: Performance Indicators in the Plan Contract ONEA/GoBF

N°	Indicators	2001	2002	2003	2003 Objective	2004	2005	2005 Objective
A4	Water resources development							
1	Level of protection of the water resources	95%	75%	75%	96%	73%	72%	96%
A5	Use of facilities for the provision of safe drinking water							
2	Total output of the facilities	81%	83%	82%	80%	83%	80%	80%
3	Amount of water supply	84%	86%	85%	84%	83%	82%	84%
EX 4	Production of safe drinking water	96%	97%	97	96%		Not available	
A6	Population served							
EX 5	Number of new connections	5,352	5,719	5,323	4,000		Not available	
EX 6	Number of new standpipes	8	24	24	50		Not available	
4	Inactive connections in terms of %					15%	15%	7%
5	Water coverage rate	Not determined in the plan contract				82%	84%	82%
A7	Water quality							
6	Level of water quality	99%	99%	98%	98%	98%	98%	98%
7	Level of carrying out tests	96%	96%	96%	93/94/95	98%	95%	96%
8	Level of biological quality	99%	99%	99%	99%	99%	99%	99%
A8	Sanitation							
EX 11	Number of sanitation plants established	6,961	6,824	10,213	8,000		Not available	

Annex 1: Performance Indicators in the Plan Contract ONEA/GoBF (Contd...)

N°	Indicators	2001	2002	2003	2003 Objective	2004	2005	2005 Objective
EX 12	Number of schools with sanitation facilities	12	0	14	35	Not available		
EX 13	Towns with sanitation	2	2	2	5	Not available		
9	Sanitation coverage rate in Ouagadougou	40%				39%	40%	45%
9	Sanitation coverage rate in Bobo-Dioulasso	Not determined in the plan contract				12%	20%	25%
EX 15	Security level of the wells	Not determined in the plan contract				Not available		
EX 16	Expenditure rate in sanitation	82%	65%	52%	50%	Not available		
EX 17	Investment rate in sanitation	15.7%	5.31%	1.72%	25%	Not available		
10	Sanitation subsidy rate	Unplanned for				41%	85%	70%
11	Sanitation expenditure rate	Unplanned for				130%	106%	100%
12	Quality of sewerage treatment	Unplanned for				NC	100%	90%
A9/10	Investments and finance							Sanitation
13	Productivity level of capital assets (EBE/net average capital assets) with or (without ZIGA project)	-1.6%/*(0.55%)	-1.90%	-2.07%	2.4%	5%	4%	4%

Annex 1: Performance Indicators in the Plan Contract ONEA/GoBF (Contd...)

N°	Indicators	2001	2002	2003	2003 Objective	2004	2005	2005 Objective
14	Production expenditure rate	66%	67%	78%	65%	75%	76%	67%
15	Indebtedness ratio	8.7%	17.5%	26.5%	20%	29%	35%	58%
EX 21	Investments returns with or (without Ziga project)	-0.8% (0.3%)	-1.13%	-1.06	0.3%			Not available
A11	Customer care							
16	Recovery of arrears from private customers (in days)	161	218	169	160/140/120	82	94	95
17	Recovery of arrears from public institutions (in days)	205	411	237	120	137	224	190
18	Recovery of arrears from municipalities and local communities (in days)	514	813	997	120	1,158	1,211	120
19	Recovery of arrears from specific customers (in days)				Unplanned for	1,504	1,283	120
20	Level of complaints	0.8%	0.63%	0.63%	1%	0.68%	0.64%	1%
EX 26	Average period of intervention/ hrs	NA	72	47	48			Not available
21	Total recovery rate	69%	67%	72%	90%	71%	83%	92%

Annex 1: Performance Indicators in the Plan Contract ONEA/GoBF (Contd...)

<i>N°</i>	<i>Indicators</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2003 Objective</i>	<i>2004</i>	<i>2005</i>	<i>2005 Objective</i>
22	Recovery rate from private customers	86%	86%	78%	92%	88%	90%	95%
A121	Human resources management							
23	Personnel ratio = number of water service employees/ 1,000 connections	9.03/ 8.9	9.03/ 8.7	8.17	8.1	8.40	7.27	6.5
24	Personnel expenses DWS/ operational expenses					26%	30%	28%
EX 30	DWS personnel ratio	0.3	0.3	0.23	0.20			
25	Personnel sanitation expenses/ sanitation operational expenses					20%	13%	30%
EX 31	Personnel expenses/ operational expenses	28%	28%	26%	25%			
26	Personnel expenses rate/turnover	18%	18%	21%	20%	24%	24%	16%
27	Training ratio	53%	47.5%	49%	55%	50	39	55
28	Training expenses rate		1.31%	1.5%	1.75%	2%	2%	2% 2%

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Annex 2: Billing and GDP per Head

	<i>Water</i>			<i>Sanit- ation</i>	<i>RED</i>	<i>VAT</i>	<i>Bill (ATI)</i>	<i>Accumulated Growth</i>	<i>% GDP/ Head</i>
	<i>Monthly consumption per m³</i>								
	188	393	1040	21	1000	202			
6	1 128			126	1000	293	2 456		1.07%
30	1 128	9 432		630	1000	1 840	12 483	408.27%	5.45%
40	1 128	9 432	10 400	840	1000	2 050	23 131	841.82%	10.09%
50	1 128	9 432	20 800	1 050	1000	3 111	33 779	1275.37%	14.74%
51	1 128	9 432	21 840	1 071	1000	12 660	35 030	1326.30%	15.29%
60	1 128	9 432	31 200	1 260	1000		46 298	1785.10%	20.20%

6. Société Nationale des Eaux du Sénégal (SONES) and Sénégalaise des Eaux (SDE), Senegal

Summary

Senegal's experience of reform and involvement of the private sector in improved water supply services has been a considerable success, when considered against established performance targets. Likewise, the development of a comprehensive financial model, using historical data and updating them annually, has allowed the utilities Société Nationale des Eaux du Sénégal (SONES) and Sénégalaise des Eaux (SDE) to access both domestic and subregional finance on commercial terms. Some of the key lessons of Senegal's experience are:

- Private sector participation, through a leasing (*affermage*) contract, can be a viable option for effective service delivery. In Senegal's case, the successful elements of the contracting have been accomplished through strong political commitment at the very highest levels of government, transparency in contracting, participation by all sector stakeholders in evaluating performance, and clear performance targets for all parties (in Senegal's case, SONES, SDE, and the government).
- The decision to introduce a private sector partner is a political rather than an economic one. It requires willingness on the part of all shareholders, and the nature of private sector participation should be determined after an objective and detailed diagnosis of the sector. In Senegal's case, detailed study of experiences in other countries, complemented by a lengthy process of discussion and brainstorming, resulted in a feasible model that has yielded considerable benefits.
- Senegal's unique regulatory structure, that is, a series of contracts that check and balance the power and responsibility among the core water sector actors, is successful in part due to transparency, including open competition, widespread dissemination of information and opportunities and tendering procedures. Further, as the contracts require long-term partnership, issues such as mutual confidence among partners, common understanding of the contract, honoring commitments, the absence of misinformation, developing common environmental, economic and social management systems, and developing a mechanism for negotiations should be addressed as early in the process as possible.
- Public support must be developed through a sensitization and information campaign targeted to the public, and delivered by public representatives (locally-elected representatives, civil society, etc.). Further, as private sector participation is relatively unfamiliar to the domestic private sector, a transparent tendering process and minimum qualifications for acceptance are important. Finally, the transition period should be as short as possible, to avoid the degradation of service quality, which could erode public support for the reform process.
- Senegal's strong sector performance in recent years has also been accompanied by clearly stated objectives and targets, driven by government. Further, the government's policy of targeted subsidies for connection as well as basic services can have a strong impact on access to the poor and consumer perceptions about private sector participation. Social connections can be financed

through a mix of government support and cross-subsidies (in Senegal's case, the cross-subsidies have been between larger and smaller users of water services).

Introduction

Senegal is situated at the extreme west of the African continent, and shares a common border with Mauritania, Mali, Guinea, Guinea Bissau and Gambia. Senegal is a democratic republic with a popularly elected president. It is a member of the Economic and Monetary Union of West Africa (EMUWA), the Economic Community of West African States (ECOWAS), the African Union and the Franc Area. Senegal has a dry tropical climate, and sources its water through surface and groundwater. Over the last several years, water demand has increased largely due to economic and social growth. According to experts, Senegal has sufficient water resources to meet the needs of its population: only 3% of

surface water and about 30% of groundwater is used per year for all rural and urban needs. However, Senegal's water resources are poorly distributed relative to demand, which, coupled with inefficiencies in service delivery, has created gaps in service coverage.

In 1995, Société Nationale d'Exploitation des Eaux du Senegal (Senegalese National Corporation for Water Utilization) (SONEES) faced bankruptcy due to weak tariffs and insufficient recovery rates. As a result, the government embarked on broad sector reform with the adoption of a law (n° 95-10, April 7, 1995) that replaced SONEES with three entities: SONES, SDE, and Office National de l'Assainissement du Sénégal (Senegalese National Sanitation Office) (ONAS).⁵² SDE was selected following a call by the Senegalese government for international tenders to manage water supply services in Senegal's 56 urban centers using the public distribution systems.

Table 6.1: Overview of Water and Sanitation Services, SONES and SDE

	SDE/SONES
Area served	2.7 million m ³
Size/population of service area	5.2 million people
Volume of water produced	124.7 million m ³ ⁵³
Water consumers served	4.002 million
Number of connections	410,000 ⁵⁴
Water coverage (% population with a connection or within 200 m of a standpipe or other source of water)	89.9%
Number of metered connections	NA
Number of consumers provided with waterborne sewerage, pit latrines or septic tanks	NA
Unaccounted-for Water	NA
Credit rating (for the municipality)	
- Short-term	
- Long-term	NA

Source: SDE/SONES, 2005.

⁵² ONAS was created to manage the sanitation subsector, but is not addressed in detail in this study.

⁵³ Data for 2005.

⁵⁴ Of which 392,000 are local connections. Seventy-one percent of SDE's customers are serviced by network connection; 18% are served by standpipe.

Table 6.2: Snapshot of Senegal

	Senegal
Population	11 million ⁵⁵
GDP	US\$7.9 billion
GDP growth (average five-year)	4.7% ⁵⁶
GDP/capita (p.a.)	US\$655
Prime lending rate	12-13%
Inflation	1.7%
Unemployment rate ⁵⁷	NA
Poverty rate	NA

Source: Ministry of Finance.

This case study examines Senegal's water supply sector, beginning with the creation of SONES and SDE.

Transformation Process

The transformation of Senegal's water sector began in 1994 with the introduction of a year-long process to improve urban water management and water service delivery. The process resulted in the introduction of new institutional and regulatory frameworks based on contracts governing the sector and the dissolution of the national water utility provider. The changes were driven by continued poor performance, and increasing financial debt, coupled with reduced ability to recover costs. Under the new arrangement, asset management, service delivery, and policy functions are separated, while two new entities—a public asset holding company, and a service delivery company—were created using private sector participation. Regulation is conducted on the basis of four contracts that bind each of the new

entities and government to check and balance one another's performance.

The Utility and its External Environment

Overall Sector Strategy

Due to increased demand for water urbanization, coupled with the growth in secondary towns, Senegal faces considerable water constraints, particularly with respect to improved service delivery of drinking water. There is growing demand for water by industry and domestic users, greater demand for water quality, and rising unemployment and incidence of poverty. Understanding this situation, the government of Senegal initiated an institutional reform program in 1995-1996, coupled with an investment program of US\$450 million through the Water Sectoral Project (WSP) and the Long Term Water Project (LTWP). The country's overall strategy is to guarantee access to water and sanitation services for all, while assuring the sector's financial viability.

⁵⁵ Data for 2005. Population growth rate is 2.4%.

⁵⁶ For the period 2000-2005. The rate is estimated at 6.1% for 2005.

⁵⁷ Specific data on unemployment was unavailable, but it is on the rise.

The 1995 sector reform program hinged on three strategic objectives: (i) to create a technically and financially sustainable state asset holding company; (ii) to implement an ambitious investment program to reduce the water supply shortage and facilitate access to water and sanitation for the poor; and (iii) to maintain water charges at socially acceptable levels. Coupled with these objectives was a goal to restore financial viability through improved management, billing, and cost recovery, while reducing government subsidies for all types of water users. To achieve this goal, support from the private sector was deemed necessary.

In 2005, the government launched the Millennium Water and Sanitation Plan (PEPAM), a sector-wide plan to achieve universal coverage for water and sanitation. PEPAM was developed using a participatory approach that included all stakeholders, including the private sector, and presents a clear road map for government action, and achievement of the MDGs.

Institutional Arrangements

The reform process in 1994-1996 overhauled the sector and created new institutional arrangements for improved service delivery. With support from the World Bank, a planning process began, resulting⁵⁸ in a unique institutional arrangement bound by contracts to balance powers amongst different stakeholders, most notably, the Ministry of Water, SONES and SDE. SONES is a public asset holding company, responsible for owning and maintaining infrastructure, funding capital investments, and regulating SDE. SDE is majority owned by an international company, Société d'Aménagement Urbain et Rural (private French water company) (SAUR), and is responsible for service delivery. Four major contracts bind SONES, SDE, and the Ministry. Two contracts are in effect between

SONES and the Ministry: the first is a 30-year concession contract authorizing SONES to manage the sector, while the second outlines SONES' investment obligations. A third, signed by all three actors, is a 10-year leasing contract that governs water systems operations. The fourth is another 10-year contract between SONES and SDE, outlining specific responsibilities and performance targets for operations and service delivery.

The leasing contract, effective April 23, 1996, notes that SDE must pay dues to SONES in respect of production, network output and recovery rate, along with royalties⁵⁹ and other fees. SDE must also comply with the law on environmental management, and water quality standards. In addition, SDE must contribute to the renewal of facilities and work for the expansion of the sector. It is also responsible for the management of products and facilities, renovation of the water production equipment, meters, connections, part of the distribution network as well as business management.

As the asset holder, SONES evaluates the tariff structure and proposes revisions to government, in accordance with its 30-year concession contract. As part of the WSP and the LTWP, SONES monitors water consumption and on-time payment by public institutions, and works to reduce water usage by farmers. As an autonomous entity, it is allowed to obtain commercial loans from the domestic and regional financial markets, upon board approval, and after consideration by the Ministry of Finance.

The government, which owns shares in both SONES and SDE, has delegated authority over water and sanitation utilities. It assumes ultimate responsibility for the management, maintenance and development of water and sanitation facilities. It is also responsible for the

⁵⁸ Law n° 95-10 of April 7, 1995.

⁵⁹ Royalties paid in 2005 are estimated at CFA 14.6 billion.

coordination of all activities necessary for proper development of the sector and for formulating sector policy, developing the legislative and regulatory framework, and setting tariffs. Senegal's water sector is currently organized around four government institutions:

- The *Ministry of Prevention, Public Health, Sanitation and Urban Water Services* and the *Ministry of Agriculture, Rural Water Services and Food Security* implement policy and projects as well as water and sanitation programs.
- The *Ministry of Economics and Finance* ensures financial control over the work program, including water and sanitation projects financed by the government.
- The *Supreme Water Board* gives general guidelines in addition to regulating the sector;⁶⁰
- The *Water Technical Committee* provides support to the Supreme Water Board in all matters related to water resources management.

Other institutions either directly or indirectly hold stakes in the sector. These are the Ministry of Environmental Protection and Natural Resources, the Ministry of Internal Affairs, and the Ministry of Local Administration and Decentralization.

In addition to these actors, the NGO sector contributes to financing access to water and sanitation services in Senegal, and also contributed heavily to the creation of SONES. It is estimated that roughly 10-15% of Senegal's active water networks have been funded by NGOs.

Company Structure—SONES

SONES is a publicly-held, autonomous company (99.6% of the company's shares are held by the government and 0.4% of the shares are held by municipalities). As previously mentioned, SONES is responsible for managing water infrastructure assets, formulating an urban water master plan, investment planning, fundraising, and overseeing work undertaken by contractors (whether for rehabilitation or new extensions). SONES is also responsible for public education about water and sanitation issues.

SONES reports to the Ministry of Prevention, Public Health, Sanitation and the Urban Water Sector. The company is managed by a Board of Directors, consisting of 12 members, chaired by an individual selected by the government.⁶¹ The board submits an annual report on the economic and financial health of the company to the general assembly. A directorate committee, consisting of the board Chair, representative of responsible ministries, the Managing Director of SONES, as well as a financial auditor and at least two public officials, ensures permanent supervision of SONES management, and meets at least three times a year. SONES is audited internally and by external firms, under government supervision.

SONES is headed by a Managing Director appointed for three-year terms (renewable) on the proposition of the board and subject to ministerial review and approval. The Managing Director has extensive powers in the management and representation of the company and is obligated to seek board approval for all borrowings whose accumulated amount during a year exceeds CFA 1 billion, and for approval of

⁶⁰ A Supreme Water Board (CSE) was also established in 1998. The Board, whose Chairperson is the Prime Minister, is responsible for making major decisions concerning organization and management of water resources, solving eventual conflicts related to water utilization, ensuring respect for the laws governing the management of international waters and to decide on all other issues related to the management and control of the use of such resources. The Board is assisted in its task by a Water Technical Committee (WTC), established by order of the Minister in charge of the water resources.

⁶¹ There are 12 Directors, composed of seven representatives from relevant Ministries, one representative of public body shareholders, and one representative from the General Assembly, all of which are appointed by their respective authorities. The remaining three members consist of the Managing Director, a staff representative appointed by the workers, and a representative of Water and Sanitation Services users appointed by the Minister of Commerce upon a proposition by consumer associations.

contracts greater than CFA 500 million. The Managing Director is assisted by a Technical Advisor, a Communications Advisor, and an Internal Auditor.

The company comprises seven functional Directorates:

- Directorate of Works (DW).
- Directorate of Strategy and Planning (DSP).
- Directorate of Finance (DF).
- Directorate of Human Resources (DHR).
- Directorate of Provisions and Logistics and General Services (DPLGS).
- Directorate of Heritage and Supervision of Operations (DHSO).
- Directorate of Supervisory Management (DSM).

Company Structure—SDE

SDE is a privately-owned company (62.8% of the company’s shares are held by SAUR, 32.2% are held by private Senegalese companies, and 5% of the shares are held by the government), which has managed Senegal’s water supply in urban and semiurban areas since 1996. SDE is known internationally as one of the best African utilities for drinking water supply, and it is the first water supplier in Africa to be certified as ISO 9001 (in 2000). In April 2006, its lease contract with SONES was extended for another five years.

SDE has a number of objectives outlined in its lease contract, including operations and

maintenance of water services facilities and resources; to renew operating equipment, and justify the case to renew and expand infrastructure to SONES; to manage billing and fee collection for water services provision; maintain customer relationships; and extend network connections, as funded by SONES. SDE provides a range of service levels, including household connections and standpipes.

SDE is governed by a 12-member Board of Directors. The board has one government representative and four representatives of private shareholders, with the majority of positions held by SAUR. The board Chair is a representative of the Senegalese private sector, who formerly was a director at SONEES, the former water service provider. Board members are appointed by shareholders. The Board meets at least twice a year to balance accounts and review SDE’s triennial plan, as well as the company’s activities. It submits an annual report on the company’s economic and financial position to the General Assembly, which approves the company’s accounts and provides guidelines to the Chairperson of the board and the Managing Director. The company is audited annually by an external firm.

SDE is headed by a Managing Director appointed by the board, and who may be fired by the board. The Managing Director has extensive authority to manage and represent the company, and is assisted by a Deputy Managing Director and a legal advisor that also advises on insurance matters. The company comprises 11 functional Directorates and 12 regional Directorates.

Figure 6.1: SONES Organizational Structure

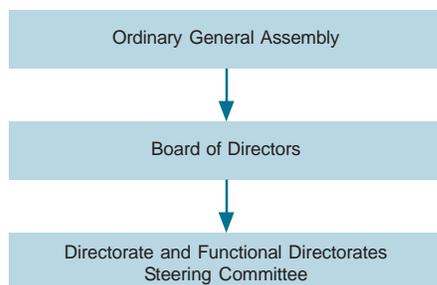
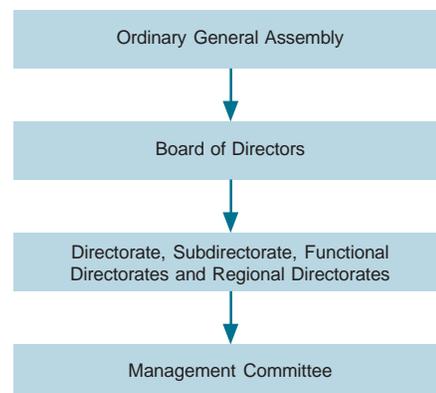


Figure 6.2: SDE Organizational Structure



The Utility and its Internal Environment

Strategic Planning and Budgeting

Over the last 10 years, SONES and SDE have implemented both the Long Term Water Project (LTWP), estimated at CFA 85 billion, and a project for 11 regional towns, at an estimated cost of CFA 605 billion. Coupled with the reform package, these efforts have resulted in access coverage in urban centers of 88% in 2005, against a target of 85%.⁶² A core factor contributing to this success was the policy of social connections, which resulted in 100,000 additional connections reaching an estimated 1 million people.

SONES' current development plan extends from 2006-2011, and includes provisions for the extended lease contract with SDE. The plan focuses on consolidating the sector's performance, and includes several new commitments and increased standards for SONES, such as an increase in social connections to 15,000 annually, from 2006 forward (between 1996-2005, the rate was 6,000 per year); an increase in pipelines to 43 km/year from 2006 forward (up from 23 km/year); and increased investment of CFA 68 billion over the five years, with a significant share derived from shareholders' equity. The development plan also sets out SONES' provisional financial situation,

taking into account major developments such as increased energy costs, the start of reimbursement from the WSP and the LTWP, implementation of new investments through PEPAM, estimated at roughly CFA 32 billion; and reinforcing SONES' obligations regarding renovation work for connections, and government willingness to pursue the tariff freeze begun in 2003.

In complement to SONES' strategic planning, SDE submits annual financial reports and has developed a working paper called "Letter of Strategic Guidelines" which is updated annually, and outlines the major strategic areas and objectives for the company. The letter is distributed throughout the company at all levels, and is incorporated into department and staff objectives and performance benchmarks. The company also operates on a triennial management plan to enable transparency in management activities.

As part of the contract extension between SONES and SDE, both parties agreed to specific obligations for the development and management of Senegal's urban water supply. Specifically, these obligations are categorized into technical, financial, and commercial objectives. There are 21 indicators (see *Table 6.3*).

Table 6.3: Categories of Indicators in the ONEA/Government Contract

Technical aspects	Performance of water treatment plant: VS/VA, number of observations, loss of water/network performance, number of leakages
Water quality	Bacteriologic quality: samples conform, number of samples examined; physical-chemical quality: samples conform, number of samples examined
Service quality	Interventions, reactivation into service, unaccounted-for bills, complaints, reduction in the number of complaints
Network renewal	Km equivalent to diameter of accumulated distribution, number of accumulated connections, number of accumulated meters
Financial aspects	Monthly transfer of fee to SONES, bill recovery, all customers included

⁶² In 1995, 54% of Senegal's urban population had access to safe water.

Within the framework of the PEPAM program, SONES intends to carry out several investments through 2015, and expects to borrow from the domestic markets to finance capital expenditures.

Human Resources

SONES reported 82 full-time staff in 2005, down from 86 in 2004. Of these, 35 are senior staff, 41 are in technical operations, and six are administrative employees. The majority (70.7%) of staff members are male, and relatively mature (all employees are over 30 years old, while 75% of staff are between the ages of 30 and 50, and 25% are over 50 and will approach retirement age within the next 10 years). SONES is a relatively stable company, from the perspective of turnover, although its aging workforce does pose some concerns for the future.

SONES has a policy to motivate staff, and has created a company culture that encourages employees to share in its vision, along with a strong system for internal communication. Management is conducted via evaluation and promotion, which is based on merit, according to previously discussed and accepted objectives; raises and promotions are discretionary. SONES allocates about 0.1% of its budget for training. This low figure reflects the age profile and experience of the workforce.

Overall, SONES' vision as a company is clearly stated and understood by employees, who generally identify with the company's culture. Relationships with labor unions are normal, and without major conflict, while relations between management and staff are strong. The government is active in evaluating SONES' performance contract with SDE, through its board representation.

SDE's staff totaled 1,145 in 2005, consisting of senior managers, supervisors, specialist engineers, technicians, and manual workers. SDE also makes regular use of private

contractors for a range of technical services, such as repairs and construction. The management-to-staff ratio is about 8.7%, and staff is relatively stable. SDE's stated vision is "to satisfy customers and become an international reference point through its practices in water supply services." SDE's vision is clearly defined and articulated annually through the Letter for Strategic Guidelines. All employees are aware of their job descriptions, requirements for compliance, and are evaluated annually against targets and benchmarks.⁶³ All assessment criteria are weighted in agreement with the workers' union. During evaluation, the total number of points allocated to an employee is measured against the average score given by the evaluator; employees are also compared with their peers. Reference to the average score serves to eliminate differences in evaluation style, and minimizes subjectivity. The gap between the group's score and that of any individual employee is the core determinant of the employee's salary increase. Notably, an independent committee determines staff salaries as an additional measure of fairness. Salaries are considered competitive with other sectors, and SDE is considered a good place to work.

SDE's organizational structure is premised on delegation of responsibility, to encourage employee accountability and facilitate quick decision-making, and has enabled staff to become involved in company affairs. This culture is seen to be responsible for the dearth of ethics violations since inception, as well as SDE management's excellent relationship with the workers' union.⁶⁴ As motivation, the company offers awards, medals, work certificates, credit savings funds, and established complementary retirement insurance effective January 1, 2006. The company also puts strong emphasis on capacity-building, and offers several training programs throughout the year. This annual training program, which amounted to 57,076 hours of staff training in 2005, is developed taking into account employee needs as identified

⁶³ Evaluations are conducted by superiors.

⁶⁴ In the last 10 years, there was just one day of strike.

during the annual evaluation process, and corresponding to the company's objectives in its strategic plan. Training activities are submitted to SONES, and are discussed with workers' unions.

Operating Performance

Overall, the service provision arrangement between SONES and SDE resulted in several significant performance improvements in all areas. For example, the performance contract between SONES and the government clearly delineates the obligations of both parties, and a committee was created to monitor implementation, thereby reducing institutional confusion over roles and responsibilities. With the creation of SONES, a five-year investment plan worth CFA 59 billion was approved and implemented, resulting in the expansion of social connections. This resulted in 100,000 new connections over 10 years, and 1 million new customers. The social connection rate increased by 52% between 2004 and 2005, and the number of paying customers increased to more than 19,000 units between 2004 and 2005. Reflecting the increase in social connections was the reduction in service provision by standpipes. In all, there was an absolute increase of 1.8% in overall volume of water supplied, corresponding to a performance rate of 99.52% against the set targets.

The overall productive capacity of the service area increased by 19.6% during 2005, largely due to the implementation of renovation works and the maintenance of boreholes in Dakar; utilization of the drinking water treatment plant and Keur Momar Sarr pumping system, and making use of new boreholes in line with the project for water provision in 11 regional towns. At the same time, the system continues to have unacceptable leakages and pipe bursts with 6,820 per year.

From a technical perspective, the reforms increased clarity and strategic planning in the sector, resulting in beneficial policies including preferential treatment to using surface water, and increased measures to protect groundwater resources.

Financially, the reforms brought about financial equilibrium⁶⁵ for both SONES and SDE, and improvements in cost recovery. The strong financial position of the sector has enabled favorable funding from both international donors and domestic financial markets. The reforms resulted in a clarification of the fiscal environment, kick-starting a process by which government regulates its water consumption and pays its bills on time. As part of the new lease contract, a new financial model was developed that incorporates SDE and SONES' historical operating data. The model includes a revised owner's remuneration calculation method and annual indexing of this price, as well as a price trend grid mapping the fees paid to SONES. For SONES, financial equilibrium has been fixed at a level that enables the company to finance its investments and cater to its operational requirements.

Customer Service

Customers receive their water services through SDE, which has a customer service center to address customer concerns. The center is responsible for handling complaints which are received either by a dedicated call center, or from suggestion and complaint forms available in the payment office.⁶⁶ SDE also holds meetings with agitated customers, institutional customers and consumer associations. Suggestions are taken into consideration in the planning process to improve services. The customer service center also collects and disseminates information about customers, and monitors the quality of water

⁶⁵ Financial equilibrium was defined as part of the sector's reform as "the point at which the accumulated cash deficit was reduced to zero and a sustained accumulated cash surplus was generated." The financial model developed allows for annual adjustments to achieve financial equilibrium, which included the annual tariff increase required. Source: http://www.worldbank.org/html/tpd/water/pdf/WSS_Senegal.pdf

⁶⁶ SDE does not have an Internet site for customers.

supply services for management. The government and SONES are responsible for supporting customers with respect to connections, and SDE supports both to identify target areas and ensuring speedy completion of work.

In 2005, largely due to the increase in (social) network connections, SDE's customer base rose to 412,000, up from 383,000 in 2004. Other factors included a policy of submeters, and a boom in real estate. Social connections, a cornerstone of government policy in the water sector, increased by over 14,000 in 2004, and nearly 22,000 in 2005, a considerable increase over the 120,000 social connections implemented in the first 10 years of the contract. Customers have recourse through their representative on SONES' Board to evaluate the performance contract, which has led to some of the changes in SDE's approach to customer service, particularly with regards to social connections.

Other SDE measures to improve customer service include upgrading its offices to facilitate interaction between customers and collaborators with SDE; use of new software (SAPHIR) to keep track of customer complaints and suggestions, as well as monitor response time to complaints, and a customer charter that details the rights and obligations of the customer.

Tariff and Billing Structure

Water charges are determined by the government, taking into account several factors such as different users (farmers vs. domestic users), and also the socioeconomic status of different ratepayers. Senegal's water tariffs are the highest in West Africa, largely because water resources are located at a distance from water consumption centers, especially Dakar. The tariff also includes a cross-subsidy for poor consumers in 2003. The tariff structure covers three categories of local subscribers based on

consumption (0-20 m³, 20-40 m³, and over 100 m³ per two-month period), and favor conservation: a 'social rate applies to the lowest level of consumption, whereas between 20-100 m³ results in a full rate, and a "dissuasive" rate applies to consumption greater than 100 m³.

SDE's customer base is composed of 52% local subscribers, 43% nonlocal subscribers, 3% served through standpipes, and 2% farmers. Bills are sent every two months, based on meter readings. As part of its contract, SDE has the power to cut off water supply for nonpayment, and the company has a very high billing recovery rate. In 2005, SDE reported a billing recovery rate of 98.2%, and has had a recovery rate higher than 97% since 2001. Of a total of 99.9 million m³ billed in 2005 through meter readings, nearly half was for individual household consumption.

As can be seen in *Table 6.4*, the social tariff is generous, amounting to 60% of the average water charge. In addition to the lower rate, the Ministry of Finance also implemented a program to exempt low-consumption users (from 0-40 m³ per two-month period) from the Value Added Tax (VAT), which is 18%. These subsidies amount to billions of CFA per year, and cover roughly 40% of poor local subscribers. SDE's revenue model accounts for revenue losses from social consumers through the tariff system for larger industry and institutions that pay water bills in a single block equivalent to the "dissuasive" tariff. Between 2001 and 2005, the average tariff increased from 456.1 (in 2001) to 483.04 in 2005.

Senegal's system also subsidizes connections for the poor. Local subscribers have a choice of different connections: (i) an "ordinary" connection, which costs CFA 100,000 for the first five meters, and an additional CFA 1,250 per meter for connections requiring between 5-20 meters of pipe. Beyond 20 meters, the user must pay the actual cost, although SONES provides

Table 6.4: Tariff Structure in Senegal

	<i>Level of Consumption</i>	<i>Water Supply Basic Rate/m³ (CFA)</i>	<i>Sanitation (CFA)⁶⁷</i>	<i>VAT (18%)</i>	<i>Municipal Surtax (CFA)/m³⁶⁸</i>	<i>Surtax on Water (CFA)</i>	<i>Rates/m³</i>
Local customers	0-20 m ³ per two-month period	179.31	10.00	0.00	0.00	1.95	CFA 191.26/m ³
	21-40 m ³ per two-month period	578.84	45.63	0.00	3.25	1.95	CFA 483.56/m ³ ⁶⁹
	Over 40 m ³ per two-month period	601.32	62.43	119.48	3.25	1.95	CFA 788
Institutions, industry and universities	> 15 mm (pipe diameter)	601.32	62.43	119.48	3.25	1.95	788.42
Standpipes	Flat rate	219.24	49.41	48.36	3.25	1.95	322.21

support through different financing plans; and (ii) a “social” connection, whereby up to 5 m are provided free of charge. The social connection requires an advance payment of CFA 13,556, as well as a credit guarantee for future consumption. About 80% of the water connections provided between 1996 and 2003 were social connections, financed by the subsidy mechanism; it is anticipated that this strategy will continue in future years toward achievement of the PEPAM targets.

Utilizing the Private Sector

In addition to SDE’s role as a private company operating in service provision, a number of formal and informal private sector enterprises are active in Senegal’s urban water services sector. SONES offers tenders for implementing different

projects that are outside the scope of activities defined as work for SDE, and outside the remit of SONES’ capacity, including civil engineering, construction and implementation of projects, and industrial productions (e.g., for material used to supply network connections). In Senegal, private sector capacity, in particular small and medium-scale enterprises, is affected by financial constraints, specifically obtaining bank guarantees and technical constraints.

Overview of SONES/SDE Finance

The SONES/SDE financial status is premised on the principles of financial equilibrium, i.e., that costs are recovered through operating income. As part of the reform process, a financial model was developed that incorporates data for both SONES and SDE, allowing for annual

⁶⁷ Sanitation rates are a flat rate based on water consumed for waterborne sewerage.

⁶⁸ This surtax is charged by municipalities to help cover their water and sanitation costs.

⁶⁹ Average charge, 2005.

adjustments to tariffs and guide planning, to achieve or maintain equilibrium. The utility's equilibrium is affected by water tariffs, the efficiency of water distribution, and investments.⁷⁰

Between 2001 and 2005, SONES' financial performance was stable, seeing low profits and high expenditures, but maintaining a positive cash flow (which has increased by 20% since 2003), sustaining a satisfactory debt profile, and growing capital assets, from CFA 164.8 billion to CFA 211.7⁷¹ billion (largely as a result of the WSP and LTWP programs). SONES' cash flow in 2005 increased 10% from 2004, to CFA 6.8 billion, while excess cash flow for operations declined due to outstanding debt obligations: SDE has CFA 7.77 billion outstanding in royalties to SONES, while SONES has outstanding debt of CFA 2.68 billion. SDE's outstanding royalties grew by 15% in 2005,⁷² while government debt increased by 23%. Despite these limitations, SONES' balanced profit was CFA 843 billion in 2005, up from CFA 564 billion in 2004 and up 49% from 2003.

SONES' positive growth rate in 2005 was a combination of an increase in turnover (9%) coupled with a decrease—by 23%—in the company's outsourcing costs, indicating good management of its direct costs. The debt burden—representing 31% of its turnover in 2005, however, suggests that better measures for recovering costs will be required for SONES to maintain a financial equilibrium. Importantly, SONES' cash flow capacity suggests that the company may be able to repay its debts in 10 years, which is satisfactory by donor standards.

Further, SONES' financial base is strong, with invested capital (shareholder equity plus long-term debt) representing 98% of the total liabilities, although the ratio of shareholder equity

to loans is about 128% over the last three years. In 2006, SONES decided to carry out an additional CFA 68 billion in investments over the next five years, and will draw on shareholders equity for financing. These investments will be to increase the number of social connections and pipelines.

SONES relies on concessionary finance from donor agencies, supplemented by loans from the domestic and subregional markets, for 95% of its water infrastructure investments. SONES has several financial partners to diversify its dependence on any one source. It relies on local banks to leverage funding from international donors. The company's only income is via SDE, its sole client, via royalties and other fees, as agreed in the contract.

Due to the contractual relationship between SONES and SDE, there is a very strong communication between the two institutions to facilitate execution of common projects, as well as improve the management and maintenance of the country's water facilities. In line with its lease contract, SDE does not depend financially on either the government or SONES.

SDE's financial balance is positive and its position strong. In the first few years of the contract, the company carried out several investments, which resulted in a weak short-term financial position. Now, the company's income exceeds expenditures; in 2005, income was CFA 30.2 million while expenditures totaled CFA 29 million. Its internal rate of return is 20%, while the debt-to-equity ratio has averaged 50% over the last three years. Over the last three years, net cash flow has increased from CFA 2.1 billion (in 2003) to CFA 3 billion in 2005, enabling the company to repay its debts. Still, the company's cash position in 2004 was

⁷⁰ http://www.worldbank.org/html/fpd/water/pdf/WSS_Senegal.pdf, page 22.

⁷¹ Net of depreciation.

⁷² SONES' royalties are based on the volume of water produced. With increased capital assets, so increase royalty payments. However, the government's continued subsidization of farmers has adversely affected SONES' royalties in recent years; this is particularly the case with the freeze in tariff increases, effective through 2008.

CFA 296 million, down from CFA 662 million in 2003, largely as a result of outstanding accounts receivable (largely from public sector institutions), and increased investments.

SONES and SDE have relied on private finance throughout the reform process. As part of the financial modeling process, a shortfall of US\$21 million was projected for 1998. To meet this gap, several approaches were adopted: SDE obtained a commercial bank loan; some donor funding (from the World Bank and KfW) was structured as equity rather than debt;⁷³ and SONES sold some of its equipment to SDE. At the time, the idea of commercial lending to a water utility in Sub-Saharan Africa was novel, but, in 1996, SONES approached Citibank for a line of credit. The company offered a number of reasons to the bank, including the credibility of reforms and the commitment of international donors to support the Senegalese government;⁷⁴ pro forma financial statements illustrating the utility's projected financial viability over the life of the contracts; and a comfort level from SAUR, SDE's majority shareholder.

Citibank arranged a syndicated line of credit that SONES could draw on with a maximum amount of US\$24.1 million over six years, at 6% interest, on the condition that SONES create an escrow account for its remittances, from which debt services would be made. This line of credit became effective once the World Bank loan for the WSP was effective. Other loans from local banks required commitments to meet set financial ratios, for example, shareholders' equity: long-term liabilities, or shareholders' equity to balance sheet total. Over time, as SDE's and SONES' positions improved, interest rates have fallen, while loan tenures have

expanded, given the shift in the utility's risk profile. Further, given their performance in the market, the comfort letters, required at first, are no longer required.

The confidence of the local banking sector resulting in a second commercial line of credit was in 2000, when the Compagnie Bancaire d'Afrique Occidentale (Bank of West Africa) (CBAO), funded the construction of a new drinking water treatment facility through a direct loan of US\$7 million to SONES as part of a Design Build Finance contract that was developed in conjunction with a CDE, Senegalese firm and Degrémont, a French firm. In addition to CBAO, additional funding was obtained from Banque Ouest Africaine de Développement (BOAD), totaling US\$16 million. The loans were provided on commercial terms, with interest rates between 8% and 9.5%, and with a tenure of between five and seven years following a grace period of three years. To support these transactions, the government provided a guarantee, transfer of loans, and a comfort letter to cover political risk. This transaction was successful, and served to assure the domestic banks of the water sector's credibility, which helped to procure additional commercial finance for the LTWP.

The government does not provide direct subsidies or transfers to SDE for capital expenditures or operations. It does act as an intermediary between donor agencies and SONES, and offers some commercial lenders with a letter of comfort to cover political risk. Government decisions, however, have had a considerable impact on the sector's finances. In 2003, the Government decided to freeze water tariffs for private clients through 2007, and then

⁷³ This process in itself is worth greater analysis, and can be found in http://www.worldbank.org/html/fpd/water/pdf/WSS_Senegal.pdf

⁷⁴ At the time, Senegal's economy could be characterized by slow growth and structural adjustment, with strong involvement by a range of international donors.

raise them by 4% in 2008. For SDE's public clients, tariffs increased by 31% in July 2006, and will increase an additional 10% in 2008, and 8% more in 2011. These tariff decisions were made as a result of the 2007 elections, and the government's desire to avoid tariff increases for private customers. Unfortunately, this has increased SONES' risk, and increased its cost of capital in borrowing both from domestic and regional borrowers.

Financing Transactions and Environment

As of December 2005, Senegal's banking system had 12 banks, another three in the start-up phase of operations, two financial institutions, a strong, decentralized financial system, national funds for financing development, dedicated financial institutions, insurance companies, pension companies, and agencies representing regional financial organizations. Due to a strong central bank, commercial banks and other financial institutions operate in a fairly stable regulatory environment.

Overall, the financial sector is characterized by excess liquidity; until recently, banks have used their liquidity as a deposit to other financial institutions (national or regional), due to overall market insecurity in the economy. Customer deposits account for 80% of the banking sector's balance sheet. With Senegal's recent economic growth spurt, financial institutions are looking to invest their money in the economy. Loans to customers are on the rise, along with an increase in medium-term credit, which exceeded CFA 262 billion in 2003 and CFA 308 billion in 2004. Short-term credit also increased between 2003 and 2005, by 8.5%.

Risk Factors

Both donor agencies and financial institutions consider SONES a worthwhile risk given its

financial position; however, despite the high levels of government commitment to support water sector reform, the political risk surrounding the needed annual tariff adjustments is still too high for SONES to borrow on the market without a guarantee. As a result, SONES receives letters of comfort for donors and financial institutions as needed, to mitigate those risks. Senegal's government also provides guarantees for financial transactions through its concession contract with SONES. SDE is likewise considered a viable risk.

In addition to political risk, the lease contract between SONES and SDE poses some risks to all parties, including the relationship between the amount of water produced (SONES' responsibility) and the amount of water supplied to customers; and the risk of mobilizing enough resources to finance water infrastructure facilities and ensure financial equilibrium. Further, SDE faces the risk of its contract not being renewed, or being fined penalties for noncompliance with the performance contract, and the risk of insolvency, given its lack of control over tariffs.

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To help the poor gain sustained access to water and sanitation services.

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