



Abt Associates Inc.

55 Wheeler Street
Cambridge, Massachusetts
02138-1168

617 492-7100 *telephone*
617 492-5219 *facsimile*

Hampden Square, Suite 500
4800 Montgomery Lane
Bethesda, Maryland
20814-5341

301 913-0500 *telephone*
301 652-3618 *facsimile*

101 North Wacker Drive
Suite 400
Chicago, Illinois
60606-7301

312 332-3300 *telephone*
312 621-3840 *facsimile*

98709
South Africa

Municipal Environmental Development

Studies and Analyses

February 1996

Prepared for

U.S. Agency for International
Development
Mission to South Africa
Delivery Order No. 14
IQC PCE-1008-I-OO-2064-00

Prepared by

John Miller
Richard Tomlinson
Trevor Grant
Sarah Keener
Xolela Mangcu

SOUTH AFRICA
STUDIES AND ANALYSES

prepared in support of the development of the
**MUNICIPAL ENVIRONMENTAL DEVELOPMENT
HOUSING GUARANTY PROJECT**
(Project No. 674-HG-003)

Annex D: Environmental Analysis
Annex H: Technical/Institutional Analysis
Annex K: Municipal Infrastructure Finance Analysis
Annex L: Technical Assistance and Training

Appendix 1: Persons Interviewed
Appendix 2: Selected References

U.S. Agency for International Development
Mission to South Africa

prepared by
Abt Associates Inc.
IQC PCE-1008-I-00-2064-00
Delivery Order No. 14

John Miller
Richard Tomlinson
Trevor Gaunt
Sarah Keener
Xolela Mangcu

PREFACE

This assessment was undertaken from November 1995 to February 1996. The material has been prepared as Annexes, in order to assist the U. S. Agency for International Development (USAID) develop a municipal environmental project that supports the efforts of the Government of South Africa to improve the functioning of local government and the consequent delivery of urban services.

The assessment team was comprised of John Miller, urban development specialist who led the team; Richard Tomlinson, South African urban development expert; Trevor Gaunt, South African infrastructure specialist; Sarah Keener, infrastructure and finance specialist, and Xolela Mangcu, South African local government expert. The South African team members contributed well beyond their professional expertise: they were invaluable interpreters of the realities of the country.

Ms. Carleene Dei, USAID Housing and Urban Development Officer, provided overall guidance and direction to the team's work, as well as information, sources, and insights into the issues. Ms. Dei and Mr. Jeremy Hagger, who directs USAID's Housing and Urban Development Division in South Africa, provided a vision of the assessment's utility and value in public policy formulation.

Grateful acknowledgement is also made to those South Africans from the public and private sectors, and from local, provincial, and national institutions who shared information and ideas in Johannesburg, Pretoria, Cape Town, Port Elizabeth, East London, Bisho, King William's Town, Empangeni, and Richards Bay. They are identified in Appendix 1.

The assessment, of course, reflects the authors' views and interpretations, which we trust will contribute to project development and implementation, and ultimately to improvements in local government management that will result in the delivery of urban services to all South Africans.

John Miller
Senior Associate
Abt Associates Inc.

February 1996

ACRONYMS

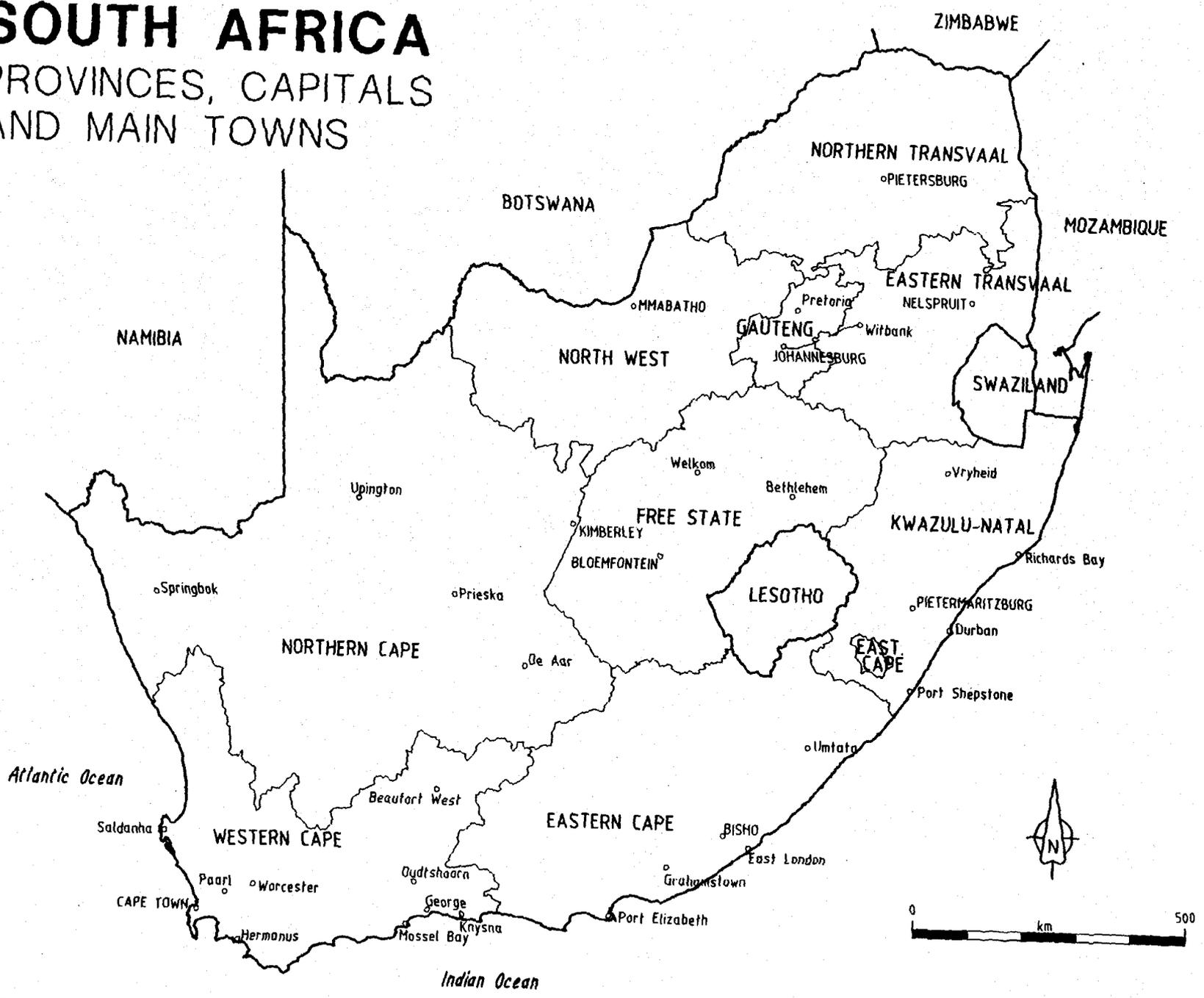
ABSA	Amalgamated Banks of South Africa
BLA	Black Local Authority
CEP	Capacity Enhancement Program
DBSA	Development Bank of Southern Africa
DC	District Council
EIA	Environmental Impact Assessment
EWG	Electricity Working Group
GDP	Gross Domestic Product
GIS	Geographic Information System
GNU	Government of National Unity
IEM	Integrated Environmental Management
IMTA	Institute of Municipal Treasurers and Accountants
JSB	Joint Service Board
MEDP	Municipal Environmental Development Project
MIIF	Municipal Infrastructure Investment Framework
NELF	National Electrification Forum
NER	National Electricity Regulator
NGO	Non Government Organization
RDP	Reconstruction and Development Programme
RSC	Regional Service Council
SALDRU	South African Labor and Development Research Unit

SCMB	Standard Chartered Merchant Bank
TCTA	Trans Caledon Transfer Authority
TLC	Transitional Local Council
TMC	Transitional Metropolitan Council
UIIPT	Urban Infrastructure Investment Program Team
WLA	White Local Authority

R3.65 (South African Rand) equals US\$1.00 (December 1995)

SOUTH AFRICA

PROVINCES, CAPITALS AND MAIN TOWNS



**ANNEX D: ENVIRONMENTAL ANALYSIS
TABLE OF CONTENTS**

1.	INTRODUCTION	1
2.	NEEDS ASSESSMENT	2
2.1	Focus of the Assessment	2
2.2	Classification of Service	2
2.3	Levels of Service	3
2.4	Extent of Provision and Demand	4
2.4.1	Size of Urban Sector	5
2.4.2	Electricity	6
2.4.3	Water Provision	7
2.4.4	Sewerage	8
2.5	Constraints to Full Distribution	10
2.6	Development Cost	11
3.	AFFORDABILITY	13
3.1	Affordability at Different Levels	13
3.2	Affordability of the Capital Expenditure	13
3.3	Sustainability	14
3.4	Household Expenditure	15
3.5	Gender Considerations	16
3.6	Community Participation	17
4.	ESTABLISHING THE PRIORITY OF NEEDS	18
4.1	Constraints and Choice	18
4.2	National Policy	19
4.3	Community and Client Participation	20
5.	DISASTER MITIGATION AND ENVIRONMENTAL IMPACT	21
5.1	Disaster Mitigation	21
5.2	Environmental Controls	21

LIST OF TABLES

Table D.1	Bulk, Link and Internal Services	3
Table D.2	Levels of Service Matrix (Red Book)	4
Table D.3	Alternative Levels of Service Matrix	4
Table D.4	Urban and Metropolitan Households, by Province and Race	5
Table D.5	Electrification by Province (December 1994)	6
Table D.6	Percentage Availability of Electricity by Race and Location	7
Table D.7	Availability of Piped Water in Urban and Metropolitan Areas (percent of sector)	8
Table D.8	Percentage Availability of Sewerage in Urban and Metropolitan Areas	9
Table D.9	Percentage of Population Without Adequate Sanitation, by Province	10
Table D.10	Cost of Bulk, Connector and Internal Services for Secondary Cities and Towns	12
Table D.11	Average Monthly Household Expenditure on Water and Energy, by Race and Location (in Rand)	15
Table D.12	Average African Monthly Income	16

ANNEX D: ENVIRONMENTAL ANALYSIS

1. INTRODUCTION

Two thirds of South Africa's population is functionally urbanized, being clustered in and around the formally demarcated urban areas and dependent on them for income. Urban growth is stimulated by perceptions among the rural poor of a better quality of life in urban areas, drought forcing people to move out of rural areas, and natural growth of population.

There is a significant backlog in the provision of urban services including water, sewerage, waste removal and electricity. The extent of the backlog depends on the level of services which it is intended should be provided.

The development of urban infrastructure affects the physical environment (increase in stormwater run-off and risk of flooding, development in flood plains, visual amenity, increased access to water and energy), and the social environment (urbanization, increased population concentration, community facilities, viability of economic activities, positive and negative impacts on community and individual health). The physical and social environments are related: for example fuelwood is usually collected by women, often requiring groups to make long journeys on foot; where fuelwood is gathered, not purchased, conversion to electricity removes the possibility for social interaction and changes responsibility for energy supply from the gatherers to participants in the cash economy, thus changing social roles in the family.

The effects of inadequate services include overcrowding, sickness, social stress and violence, air and water pollution, and the loss of productive agricultural land or natural habitat. Inadequate services also reduce the ability of a community to develop and sustain economic activity.

Positive impacts of development include improved health through easy access to clean water, reduction of exposure to faecal infection cycle, reduction in the household environment of combustion fuels which by giving off water vapor and particulates increase the incidence of TB, and increased safety compared with the use of combustible fuels. Negative impacts include the disposal requirements for waterborne sewage, and the impact of new services delivery on existing business patterns.

A lack of adequate services particularly affects the poor. Delivery and upgrading of services will have the greatest impact on the low income sector of the population. At the same time, it is important that service delivery be affordable and sustainable.

The following analysis examines the nature and extent of the demand for services provision and upgrading, and the process of establishing priorities.

2. NEEDS ASSESSMENT

2.1 Focus of the Assessment

The kinds of urban services that often are provided to residences by public authorities, private regulated utility companies, or other private companies, include water distribution, water-borne sewerage systems or pit latrines, electricity, solid waste disposal, storm drainage, roads, sidewalks, and natural gas. This assessment is focusing on those services of most critical need to many households in urbanized parts of South Africa.

Potable Water: For the most part, this means the distribution of treated water to a tap inside the residence or within the private yard, although in some cases it may involve only a standpipe that is shared by two or more families. A local authority or a regulated company (for example, a mining company or a private company as agent to a public authority) purchases water on a bulk basis and distributes it to areas of sufficient density to justify the capital expense. In many parts of the country the supply of bulk water is a significant constraint to increased distribution.

Sewerage: The provision of a high-standard, water-borne sewerage system prevalent in traditionally white, urbanized areas is not the ultimate objective of the government.¹ Instead, the immediate priority is to provide sanitation services to all which meet basic health and functional requirements including the protection of the quality of both surface and underground water. Higher levels of service can be achieved as incomes rise. Even the provision of a pit latrine represents a major improvement to systems currently used by some of the population.

Electricity: The distribution of electricity to each home that is not now served is a major objective of the government. 70 percent of homes are planned to have a reliable supply of adequate electricity by the end of the decade.

2.2 Classification of Service

Urban infrastructure services in South Africa have been classified into three levels, associated with responsibility for provision and funding.

Bulk services are provided generally by national, provincial or, occasionally, local government departments or by statutory organizations such as Eskom or Water Boards.

Link services are usually provided by a regional or local authority to connect a bulk service to the reticulated service in the township. Link services are funded by the providing

¹According to the November 1994 White Paper on water supply and sanitation policy, "conventional waterborne sanitation is in most cases not a realistic, viable and achievable minimum service standard in the short term due to its cost."

6

authority, although the source of funds may be the township developer or a government fund, e.g., National Housing Commission.

Internal services are the reticulation or distribution within the township, connecting each service point/consumer.

The scope of electricity, water and sewerage service at each of the levels of bulk, link and internal is indicated in Table 1.

Table D.1 Bulk, Link and Internal Services

	Electricity	Water	Sewerage
Bulk	Transmission lines and input substation.	Dams, bulk pipelines, water treatment works.	Treatment works and outfalls.
Link	Medium voltage (11 or 22 kV) feeder to boundary or into main distribution nodes.	Reservoirs, piping into the reticulation system.	Pumping stations and rising mains. Major outfall gravity sewers.
Internal	Medium and low (400/230 V) voltage distribution to the consumer's boundary or meter. May include street lighting.	The reticulation system, including standpipes in public domain, and connections to consumers, including water meter.	Waterborne sewerage: connection sewers and collectors. On site sanitation: latrines and forms of digesters.

The responsibility for any service is not consistent. For example, some local authorities distribute electricity, but in others Eskom has the distribution rights. Most dams belong to the Department of Water Affairs, but some local authorities have their own dams. In some areas, water and sewerage are administered mostly at provincial instead of local authority level.

2.3 Levels of Service

The "Guidelines for the Provision of Engineering Services and Amenities in Township Development" (widely known as the Red Book) and revised in May 1995 include a matrix of Levels of Service and an indication of the approximate costs associated with each level. The levels of service for water, sewerage and electricity are summarized in Table 2.

Table D.2 Levels of Service Matrix (Red Book)

Service	1	2	3	4	5
Water	Standpipe within 250m	1 standpipe per 20 sites, within 150m	Metered standpipe per site	Metered in-house supply	Not applicable
Sewerage	VIP latrine (Ventilated improved pit)	Anaerobic digester	Septic tank and soakaway	Waterborne sewerage. 750 l/day	Waterborne sewerage. 1000 l/day
Electricity	Highmast lighting only	Overhead MV and LV, pole mounted transformers		Underground MV and LV, ground mounted transformers	

There are alternatives to the levels of service detailed in the Red Book matrix. For example, the Water and Sanitation 2000 report identified the links between the water and sanitation systems, and the National Electrification Forum (NELF) identified the possibility of adopting three levels of electrification service -- minimal, restricted and unrestricted. Based on these proposals the following Levels of Service have been adopted in the MIIF.

Table D.3 Alternative Levels of Service Matrix

	Basic	Intermediate	Full
Water and Sewerage	VIP latrine and communal standpipe	Yard tap and Aqua Privy or similar	House connection and waterborne sewerage
Electricity	Supply restricted to 5 A (or 2.5 A)	Metered supply, restricted to 15-30 A	Metered supply, 60 A capacity

Consideration also must be given to the possibility of alternative services, particularly in the case of electricity. Electricity can be used for lighting, heating, mechanical work and electronic applications (especially entertainment). Alternative forms of energy, including fuelwood, coal, photovoltaics and diesel engines are widely used instead of network (grid) electricity. There are few, if any, alternatives to water and sewerage as functional services.

2.4 Extent of Provision and Demand

The extent of the need for urban infrastructure increases with urbanization and population growth. The backlog of unserved units decreases as the needs are met by development of new services. The demand for new services at any time consists of the current backlog plus households which will form in the future.

The data on urban infrastructure is uncertain. It is confused by the variety of authorities for which it is prepared, the definition of urban (including metropolitan) and non-urban (peri-urban and rural) settlements, preparation of data in different years, and the difficulty of counting squatter settlements.

The re-drawing of TLC boundaries will be a new source of confusion with new data collated from old sources. The question of how to define a secondary city or town has not been entirely resolved.

Where available, data is presented also for rural infrastructure, to allow comparison with undifferentiated data.

2.4.1 Size of Urban Sector

An important aspect of the distribution of services in urban areas is the racial bias arising from previous policies. As a basis for comparisons, the distribution of households by province and race, as derived from the SALDRU survey, is presented in Table 4.

Table D.4 Urban and Metropolitan Households, by Province and Race

		African	Colored	Asian	White	Total
Eastern Cape	Urban	119,500	14,700		72,000	206,200
	Metro	98,500	36,300		13,800	147,500
Mpumalanga	Urban	137,700	800	1,900	58,200	196,600
Orange Free State	Urban	310,800	16,900		77,400	405,200
Gauteng	Urban	201,700	0	0	0	200,700
	Metro	854,000	49,200	34,600	682,000	1,618,900
KwaZulu/Natal	Urban	164,500	23,100	129,500	49,000	363,400
	Metro	95,300	18,100	58,600	52,600	224,700
North West	Urban	54,300			32,700	86,900
Northern Cape	Urban	24,600	87,300			111,900
Northern Transvaal	Urban	54,300			57,200	111,500
Western Cape	Urban	11,800	119,700		84,300	215,700
	Metro	127,400	249,200	1,800	243,600	620,900
TOTAL	Urban	1,079,200	262,600	131,400	430,800	1,904,000
	Metro	1,175,300	352,800	95,000	992,000	2,615,100

Source: SALDRU

2.4.2 Electricity

The availability of electricity in urban areas in South Africa is indicated in Table 5. Rural availability of electricity is also indicated for comparison, and illustrates the much lower levels of service provision in the rural areas.

Table D.5 Electrification by Province (December 1994)

Region	Urban			Rural		
	Population (000)	Households (000)	Percent Electrified	Population (000)	Households (000)	Percent Electrified
Eastern Cape	2,143	489	60.8	4,478	885	2.4
Mpumalanga	868	192	57.4	2,049	386	26.0
Gauteng	6,664	1,651	75.3	308	67	55.5
KwaZulu/Natal	3,293	791	75.2	5,188	973	9.8
North West	1,069	226	67.5	2,394	471	12.0
Northern Cape	543	118	71.9	258	63	36.8
Northern Transvaal	470	116	71.4	4,657	925	16.1
Orange Free State	1,485	352	65.6	1,268	236	26.2
Western Cape	3,179	781	85.9	558	133	48.0
TOTAL	19,714	4,716	-	21,158	4,139	-

Source: Eskom, Electricity Distribution in South Africa

It is evident from this table that the percentage levels of urban electrification are lowest in the Eastern Transvaal and Eastern Cape.

According to the SALDRU survey, as shown on Table 6 below, the percentage availability of grid electricity in urban and metropolitan areas is high for whites and Asians and, to a lesser extent, coloreds. Availability for Africans is substantially lower.

Table D.6 Percentage Availability of Electricity
by Race and Location

	Metropolitan	Urban	Rural
African	66.7	42.3	25.6
Colored	95.7	75.9	71.4
Asian	100	100	100
White	100	99.6	98.5

In the early 1990s, the electricity distribution industry established a target of connecting 500,000 new consumers per year. Of this total, Eskom has responsibility for 300,000 and local authorities have responsibility for 200,000. In 1993, significant progress was made in increasing the activity levels towards reaching the target and in 1994 it was substantially achieved. Now, however, Eskom is becoming concerned that maintenance of the program at this level may be hampered by a lack of progress in new housing development and the high costs of connecting consumers using inappropriate technology. Continued development at the same pace, now incorporated into the RDP objectives, will force Eskom into unprofitable activity, incurring high costs in connecting consumers who, in the long run, simply cannot afford to pay for the electricity service. At the same time, many significant local authority projects are being delayed by uncertainty regarding the electricity supply industry structure and the approval of project funds.

2.4.3 Water Provision

Most water supplies in South Africa are from surface water systems. Most groundwater utilization is in small scale schemes in rural areas and in small towns in drier parts of the country.

Water provision in urban areas is predominantly piped water, the most significant categories being:

- internal or within the yard (private); and
- public standpipe, either free or paying (public).

The availability of water in these categories, by race, province and location is illustrated in Table 7, as derived from the SALDRU survey.

**Table D.7 Availability of Piped Water in
Urban and Metropolitan Areas (percent of sector)**

Province	Location	African		Colored		White	
		Private	Public	Private	Public	Private	Public
Eastern Cape	Urban	92.7	-	100	-	100	-
	Metropolitan	75.0	25.0	97.3	-	100	-
Mpumalanga	Urban	54.7	44.5	100	-	100	-
Orange Free State	Urban	47.4	52.6	100	-	100	-
Gauteng	Urban	66.0	33.0	-	-	-	-
	Metropolitan	96.3	3.3	100	-	99.9	-
KwaZulu/ Natal	Urban	96.2	3.8	100	-	100	-
	Metropolitan	67.4	32.6	100	-	100	-
North West	Urban	90.6	-	-	-	93.9	-
Northern Cape	Urban	100.0	-	91.0	9.0	-	-
Northern Transvaal	Urban	96.8	1.6	-	-	100	-
Western Cape	Urban	63.7	18.2	94.3	5.7	100	-
	Metropolitan	66.4	33.6	99.2	0.8	100	-

2.4.4 Sewerage

In urban areas, the density of settlement usually results in the adoption of flush or bucket systems of sewage disposal. Flush systems include waterborne sewerage as well as septic tanks. Most bucket systems were installed as interim measures during periods of rapid growth, intended to be replaced when funds were provided for waterborne sewerage. In practice, they continue to be used for long periods, in spite of high operating costs and social disadvantages, because of the high capital cost of replacement or upgrading.

The availability of sewerage services in urban and metropolitan areas, derived from the SALDRU survey, is indicated in Table 8. There are clearly discrepancies between the data from the SALDRU survey and Palmer, as evidenced particularly by the figures for the Northern Cape and Northern Transvaal.

Table D.8 Percentage Availability of Sewerage in Urban and Metropolitan Areas

Province	Location	African		Colored		White	
		Flush	Bucket	Flush	Bucket	Flush	Bucket
Eastern Cape	Urban	57.1	34.3	20.0	80.0	97.9	2.1
	Metropolitan	76.1	23.9	97.3	1.2	100	
Mpumalanga	Urban	36.0	50.4	100	-	100	-
Orange Free State	Urban	40.3	31.9	100	-	100	-
Gauteng	Urban	51.8	16.8	-	-	-	-
	Metropolitan	88.0	2.2	96.6	1.7	100	-
KwaZulu/Natal	Urban	90.8	-	100	-	100	-
	Metropolitan	69.2	-	100	-	100	-
North West	Urban	43.4	37.7	-	-	100	-
Northern Cape	Urban	100	-	88.5	13.5	-	-
Northern Transvaal	Urban	93.5	-	-	-	100	-
Western Cape	Urban	63.6	9.1	74.6	21.3	100	-
	Metropolitan	64.7	30.3	98.4	1.2	100	-

According to Palmer, 21 percent of people living in urban areas use pit latrines, of which very few are of the VIP type; eight percent use bucket systems and 68 percent waterborne (including septic tank).

Palmer defines adequate sanitation to include waterborne, septic tank, VIP latrines and intermediate systems. The percentage of the population without adequate sanitation is indicated on Table 9. Note that a region is defined in terms of Development Regions; this is similar but not identical to Provinces.

12

Table D.9 Percentage of Population Without Adequate Sanitation, by Province

Development Region	Percent Urban Population Without Adequate Sanitation
Western Cape	13
Northern Cape	63
Orange Free State	42
Eastern Cape	27
KwaZulu/Natal	36
Mpumalanga	40
Northern Transvaal	73
Gauteng	23
North West	49
TOTAL	31

Source: Palmer

2.5 Constraints to Full Distribution

One of the major constraints to more complete distribution of utilities to the former black townships and rural areas is the daunting cost of construction -- with estimates as high as R37 billion -- compressed into the seven year goal of the RDP. Some officials feel that the timetable agreed to is overly ambitious, and that ten or more years is a realistic schedule for providing water, waterborne sewerage, and electricity to those areas which have been systematically excluded from service provision or have for other reasons been outside serviced jurisdictions.

Another constraint on the development of services is the non-viable economics of providing a high-cost service to those unable or unwilling to pay for it. The investor facing a low likelihood of recovering costs must make difficult policy choices about pursuing uneconomic activities.

Competition for public funds is at a high level. Public demands for better schools, job training programs, health services, and social services of many kinds increase the pressure on

13

all levels of government to increase spending for immediate gains and improvements to the standard of living.

2.6 Development Cost

One way to approach costs of infrastructure extensions to the former black townships and rural unserved areas is to consider the cost per household for hookups of water, waterborne sewerage, and electricity. One city where this analysis has taken place is Port Elizabeth. That city has begun an infrastructure extension program which will provide basic water, wastewater, electricity, paved roads, and for 4,000 housing units. Total funding for the two programs is R72 million, including both local efforts and the centrally-funded Special Presidential Program.

The total infrastructure improvement per household is R17,500, of which R9,500 is for sewer and water, R2,500 is for roads and other improvements, and R5,500 is put up by the electric utility for service. This R12,000 cost for sewerage and water, if considered for new housing, represents a very large share of the total cost (R35,000) of providing a standard unit. That is, the R12,000 represents 34 percent of the cost of that unit.

Applying that figure to the upgrading of substandard housing, it is readily apparent that the cost of the utilities is in excess of the value of the dwelling by huge multiples. This strongly implies that the municipality is investing in the long-term use of the improved services, and has an incentive to see that the present substandard housing units are replaced by substantial structures capable of yielding significant property tax and fee income in the years ahead.

Another way of looking at the overall cost of infrastructure extension and upgrading is to consider the aggregate increase in all fees and taxes. It is estimated that the full cost of upgrading and building the utility systems nationwide over five years would entail a three percent per year increase in all local taxes and fees.

The electricity fee constitutes 40 percent of local collections, and if present attempts to take electricity revenue out of the local control by creating a separate national electricity authority are successful, the increase then becomes five percent. Coupled with other critical social and educational needs of the population, this increase will be politically difficult or impossible to accomplish.

The RDP's Municipal Infrastructure Investment Framework (MIIF) estimates the cost for infrastructure service upgrading in only four metropolitan areas and 20 secondary towns, taking into account the varying levels of service that could be provided.

Extrapolation of the study of selected towns projects the costs shown in Table 10 for providing municipal services (water, sewerage and electricity) to the urban areas (excluding metropolitan areas).

**Table D.10 Cost of Bulk, Connector and Internal
Services for Secondary Cities and Towns
(including asset replacement of rehabilitation)**

Service	Level of Service		
	Basic	Intermediate	Full
	R million at 1995 prices		
Water	2,716	3,787	4,856
Sanitation	3,837	5,395	7,867
Electricity	3,849	5,384	5,200
Total	10,402	14,566	17,923

Notes:

1. Electricity excludes bulk and connector.
2. Lower cost for full electricity services, compared with intermediate level illustrates some discrepancies in cost estimations.
3. Population served by envisaged services is 10.6 million.

The cost of providing the services will be between R10.4 billion (for basic level of service) and R17.9 billion (for full service) in 1995 prices. A projected ten percent inflation rate for labor and materials adds dramatically to the cost estimate.

The analysis of needs alone does not give a correct representation of the magnitude of the challenge. The affordability of the investment must be considered.

12

3. AFFORDABILITY

3.1 Affordability at Different Levels

The proposed infrastructure development needs to be affordable to the potential beneficiary, to the supplying organization and to the country as a whole.

At national level it is agreed that an infrastructure investment program is an important component of the growth strategy, while also alleviating poverty. It is generally accepted that the standards to be adopted in the investment program will have to be appropriate to the needs and affordability of the communities. The MIIF asserts that the funding of a capital investment program over ten years would be feasible, based on average economic growth performance and success in redirecting government expenditure. However, this finding should be cautiously interpreted since the Financial and Fiscal Commission has not yet concluded its investigations into the structures and level of taxation.

The affordability of infrastructure investment at the level of local government will be significantly affected by the decisions regarding electricity revenues. The continuing debate about electricity supply industry structure renders it difficult for local authorities to raise the capital for development if their future revenue streams are uncertain. Local government requires clear and consistent policies from central government about funding and the planning of investment programs and to be responsive to economic conditions. In addition to capital investments, the local authorities need to meet the operating and maintenance costs of their developments, which would normally be funded from user fees. Uncertainty about payment of tariffs by customers is also inhibiting development in some towns.

The affordability by households has been the subject of studies by the World Bank and the South African Labor and Development Research Unit (SALDRU). There are marked differences in the affordability of average service charges in different areas and for different racial groups. In many urban areas (excluding the metropolises) the proportion of households unlikely to be able to afford even the service charges for a basic level of services is high (15 percent) and the potential for subsidies from high income households is low.

3.2 Affordability of the Capital Expenditure

The total cost for water, sanitation, and electricity for the full service option in secondary cities and towns is estimated at just under R18 billion.

The major constraints to a more complete distribution of utilities to the former black townships and rural areas are:

- the daunting cost of construction -- estimated as high as R30 billion for full services, including roads in secondary towns, plus a further R40 billion for metropolitan areas -- compressed into the five year goal of the RDP.

- the enormous cost to local ratepayers/residents of the expenditure expected to be made by local government utilities.
- major institutional problems confronting service providers.
- underfunding of bulk utilities.
- the non-viable economics of providing a service to those unable or unwilling to pay for it.

3.3 Sustainability

The capital and operating costs are both related to the quality and quantity of service provided. These costs are usually reflected in the tariffs and, therefore in the cost to the household of the service. The technical standards adopted by the service supplier, including the chosen level of service, affect the service suppliers' costs and, accordingly, household expenditure on electricity and water. Thus, the standards adopted will affect the sustainability of the development.

It is generally the government's intention that the beneficiaries of services should pay for the use. A tariff policy would make provision for lifeline tariffs for the very poor, subsidized by the higher income customers. In all cases the operating costs of a service should be covered by the revenue, even if the capital expenditure has to be serviced and recovered out of grant financing.

The financial sustainability of the trading services is relatively simple to analyze. At this stage, though, the application of tariffs for sanitation (sewerage and treatment) and waste disposal are not widely nor uniformly applied. Some authorities recover the cost of sanitation through water consumption tariffs. Waste removal costs may be partially recovered through the sale of refuse bags. However, in many cases the operating and maintenance costs of these other services are met from the revenues on electricity.

The financial aspect is confounded by strong political and social aspects. Even where a service may be financially affordable, the possibility exists that payment will be withheld as an expression of dissatisfaction, with the quality of service or even for a perceived inadequacy of consultation with the community. In some instances, communities perceive that they can pressurize the authorities into improving the level and quality of the services by boycotting payment on the basis that the standard does not justify the charges levied. (There is, of course, no guarantee that payments will be resumed when the standards are improved, since other perceived grievances will probably remain.)

The scope of the service provider to respond to non-payment is limited. The health regulations do not permit cutting off of water supplies. Some authorities reduce the supply to a trickle, but in some cases it appears that the community is prepared to tolerate a trickle

supply if the water is free. Electricity suppliers do cut off supplies, but there have been problems with the intimidation of officials. In many cases the disconnected customers resort to stealing the electricity, by bypassing the meter or disconnection switch, or making an illegal connection.

3.4 Household Expenditure

The SALDRU survey investigated the income and expenditure characteristics of households. The data in Table 11 indicates the expenditure on electricity and other energy, and on water, where this is sold and not included in rates. The expenditure on water and energy as related to total household expenditure is also indicated.

Table D.11 Average Monthly Household Expenditure on Water and Energy, by Race and Location (in Rand)

	Location	Electricity	Other Energy	All Energy	Water	Total Household Expenditure	Energy and Water: Percent of Total
African	Rural	6.20	58.70	64.90	2.00	955	7.0
	Urban	12.70	40.10	52.80	2.20	1,205	4.6
	Metropolitan	19.20	28.20	47.40	0.60	1,533	3.1
Colored	Rural	20.70	20.10	40.80	0	1,561	2.6
	Urban	18.30	29.40	47.70	9.80	1,332	4.3
	Metropolitan	72.00	9.40	81.40	19.30	2,280	4.4
White	Rural	227.90	20.10	248.00	3.90	4,682	5.4
	Urban	53.80	8.30	62.10	14.80	4,189	1.8
	Metropolitan	46.20	3.90	50.10	13.20	4,986	1.3

Source: SALDRU, pages 94 and 320.

Colored and African consumers in urban and metropolitan areas spend proportionately more of their total household expenditure on energy and water than do white consumers. African urban consumers spend proportionately less than whites on electricity, but this reflects the lower availability of electricity and the higher expenditure (absolute and proportional) on other energy.

18

3.5 Gender Considerations

There is an unequal impact on the delivery of services, and on the consequences of non-delivery, on women.

Gender is an important issue due to the large number of African households headed by women and related differences in household expenditure, as shown in Table 12 below.²

Table D.12 Average African Monthly Income

Location	All African Households	Female-Headed African Households
Per household		
Rural	R955	R814
Urban	R1,205	R997
Metropolitan	R1,522	R1,277
National	R1,111	R954
Household per capita		
Rural	R270	R202
Urban	R412	R283
Metropolitan	R514	R384
National	R342	R259

Source: SALDRU, 1994.

The gender inequalities arise from:

- the concentration of the female labor force in low-paid sectors of the economy;³
- the continued impact of the migrant labor system on rural households and the phenomenon of migrants often sustaining two households, one urban and one rural; and
- the breakdown of the family system among many African households, especially having an effect in the metropolitan areas.

²USAID has recently commissioned a study of the implications of gender on the delivery of services in South Africa.

³For example, they are excluded from the relatively well-paid mining sector and concentrated in the poorly-paid service sector, especially domestic services.

19

3.6 Community Participation

Implementation of infrastructure projects must take into account the community, with its institutional structures, skills, and economic activity, as well as the engineering and project finance. Community empowerment takes place through skills transfer, organizational development, and economic growth.

Because the RDP depends on democracy and social stability in local communities, the management of institutional change and the delivery of municipal services must occur simultaneously. Local government is the key institution in the delivery of basic services, extending local control, managing local economic development and redistributing public resources.

The RDP funds make provision for broad based community information and capacity building as part of the development programs. The institutional aspects are discussed in Annex H.

Community participation in the identification of priorities and preferences for development is likely to increase the acceptability of the standard of the services provided and the understanding of the need, and hopefully a willingness, to pay for the services.

4. ESTABLISHING THE PRIORITY OF NEEDS

Community participation contributes significantly to determining the preferences and priorities within a community. At higher levels, such as provincial and central government, decisions need to be taken regarding the priorities of development and the allocation of resources.

4.1 Constraints and Choice

The available resources place a limit on the speed and scale of services provision. The limits include finances, trained personnel and institutional infrastructure.

The priority of the needs for urban infrastructure should be determined according to the economic and social benefit which will be derived from the development. The benefits include poverty alleviation, improved health, reduced environmental degradation, and stimulation of educational and economic activity. However, this benefit based approach to setting priorities is complicated by the following factors:

- The link between infrastructure development and economic benefit is not easily evaluated.
- Social benefits of infrastructure development are not easily quantified for comparison between communities.
- The benefits of development will depend on the other aspects such as the institutional infrastructure to operate and maintain the systems and the other economic and social activity in the community.
- The willingness (or ability) of the community to pay for the improved services will determine the long term viability, but this factor is not easily determined before the development.

There have been many studies on the positive impacts of improved water quality and sanitation, and the supply of electricity. One, for example, suggests a savings of R800 million within the health sector, associated with the accelerated national electrification program (mainly related to reductions in respiratory disease, burns, and paraffin poisoning).⁴ Few studies are as rigorous in the evaluation of control groups and the calculation of economic benefits. The problems arise from the multiple co-factors and the complexity of "improved quality of life", encompassing health, safety, employment, personal development and other non-financial factors. The quantification of positive impacts also depends on the existing environment of a specific community.

⁴Electrification and Health: A South African Perspective. Medical Research Council, Community Health Research Group. Cape Town, 1995.

21

Generally though, it appears that not enough is known about how to select towns for development investment. Therefore the likely alternative is that the towns will be selected on a political basis, or the towns will have to select themselves by a process of continued participation in a program devised to maintain a commitment to development.

For example, the Department of Public Works in the Eastern Cape is considering a Capacity Enhancement Program (CEP) based on the following:

- Towns must apply to participate - the program will not be forced on any town or community.
- Services will be provided through contracts.
- There will be a good financial control mechanism.
- The community will be involved.

The CEP is similar in many respects to the old Urban Management Program operated by the Ciskei Administration, but with important improvements such as the elective participation and community involvement.

Serious doubt arises regarding the viability of services provision in secondary towns where the communities are less able than in metropolises to afford the services, and subsidies from commercial and industrial customers cannot meet the needs. There appears to be little quantifiable material to assess the priorities objectively.

4.2 National Policy

Ultimately, government policy will determine how the priorities for infrastructure investment will be established. The policy will be communicated in the following ways:

- The establishment of national norms and guidelines, in particular on the levels of service to be provided and the related charges (tariffs) to the customers.
- By providing consistent and easy to use criteria for the application and granting of national and provincial funds for infrastructure investment.
- By adopting sectoral policies (water, electricity) which encourage the efficient use of resources and provision of infrastructure services.
- The provision of technical assistance to local authorities for the planning, implementation and operation of the services, and assisting in improving their capacity to carry out these activities.

4.3 Community and Client Participation

Elements within a community may have conflicting interests which affect the assignment of priorities. Particular attention needs to be given to implementing an institutional framework or process which will retain the community's commitment for most of the time. In addition, it is necessary to involve the community only to the extent that its decisions can have an effect on the investment process, so that the consultation process will be perceived as having positive outcomes.

A particular feature of community participation is that the opinions of the users of the service be solicited. The cultural processes within many communities place emphasis on the community leaders, mostly men, instead of on the users, many of whom are women. It appears that alternative approaches (compared with those normally used in South Africa) may have to be introduced.

23

5. DISASTER MITIGATION AND ENVIRONMENTAL IMPACT

5.1 Disaster Mitigation

Disaster mitigation has already been analyzed in the Basic Shelter and Environment Housing Guaranty Program 674-HG-002. The analysis asserts that the main threats from natural hazards such as hydrometeorological events (storms and floods) and geophysical (earthquake and landslide) causes are comparatively low. Low income communities are vulnerable to natural disasters because of high urban densities, the use of inflammable building materials, inadequate services, improper site selection, poor planning and uncontrolled development. Disaster management strategies include pre-disaster prevention, mitigation and preparedness and post-disaster relief, rehabilitation and recovery.

USAID's Basic Shelter and Environment program analysis makes no mention of drought as being a natural disaster. The threat of drought is significant in most parts of South Africa. Infrastructure is vulnerable to drought in respect of water supply and waterborne sewerage. Drought affects both surface and groundwater supply systems. Prevention, mitigation and preparedness is achieved through the adoption of appropriate design standards and effective operation and maintenance to reduce waste. The response to drought is through rationing, water transfer and water transport. The capacity for and performance of disaster mitigation strategies is influenced by institutional and financial constraints.

Although not arising from natural causes, fire and disease are significant disasters in low-income informal communities. At present there are few formal disaster management strategies or post disaster relief programs.

5.2 Environmental Controls

The Department of Environmental Affairs and Tourism has been responsible for drafting the Integrated Environmental Management (IEM) procedures and proposed regulations, but is mostly involved in preparing policy. Much of the implementation of an environmental policy is the responsibility of other central government departments, such as Water Affairs and Forestry, or of local authorities in the provision of services to residents.

Draft regulations published in March 1994⁵ identified any infrastructure project with a development capital in excess of R10 million as requiring environmental assessment. The White Paper on Water Supply and Sanitation Policy (November 1994) proposes guidelines which will require the application of EIA procedures for all developments, irrespective of size. None of the proposed policies have the force of regulations.

The capacity and experience of local authorities to interpret and enforce the processes of IEM are severely limited by the lack of regulations and a shortage of experienced personnel.

⁵Government Gazette, 4 March 1994, Notice 172 of 1994.

At this stage, environmental input in project development in South Africa generally ends after the environmental impact assessment or similar study has been completed, and the project is approved for implementation. The measures recommended in the EIA simply may not be incorporated in the project design and construction.

In general, both disaster mitigation and environmental controls compete with the general alleviation of poverty for scarce investment resources. They are given relatively low priority in urban infrastructure development.

25

ANNEX H: TECHNICAL/INSTITUTIONAL ANALYSIS TABLE OF CONTENTS

1.	INTRODUCTION	1
2.	SUMMARY OF THE MUNICIPAL INFRASTRUCTURE INVESTMENT FRAMEWORK	2
3.	PRELIMINARY OVERVIEW OF RESPONSIBILITY IN RESPECT OF THE FIVE SERVICES	3
	3.1 Water	3
	3.2 Sewerage	4
	3.3 Electricity	4
	3.4 Roads and Stormwater Drainage	4
4.	INSTITUTIONAL ROLES	5
	4.1 Local Authority	5
	4.2 Parastatal	9
	4.3 Provincial Government	10
	4.4 Central Government	11
	4.4.1 Water and sanitation	11
	4.4.2 Electricity	12
	4.5 Private Sector	14
	4.6 Community	15
	4.7 Non Government Organization	16
5.	ISSUES	17
	5.1 Capacity Constraints	17
	5.1.1 From Integration to Public-Private Partnership	17
	5.1.2 Ongoing Constraints	18
	5.1.3 Training for Institutional Capacity	18
	5.2 Extending the Role of the Private Sector	18
	5.3 Participation/Client Orientation	20
	5.4 Coordination of Service Delivery	21
6.	CONCLUSION	23

ANNEX H: TECHNICAL/INSTITUTIONAL ANALYSIS

1. INTRODUCTION

The objectives of this section are to:

- describe current and anticipated changes in the roles of institutions involved in service delivery;
- identify capacity constraints to service delivery;
- explore the role of the private sector in enhancing service delivery; and
- examine how community participation might be more effectively structured in order to provide sustainable urban services.

One should note that there is uncertainty regarding the future role of institutions in service delivery. While the Municipal Infrastructure Investment Framework (MIIF) describes government's intentions for service delivery, there are parallel inquiries into the restructuring of the electricity supply industry and into the involvement of the private sector in the reticulation of water. In addition, the Local Government Transition Act is being revised and will attempt a closer definition of the responsibilities of different types of local government for service delivery.

This description of institutional responsibility has therefore to proceed in stages. First, we need to understand the MIIF, for discussion surrounding municipal services is now generally cast in terms of the MIIF. Second, we need to describe how services are presently delivered. Thereafter we consider the responsibilities of particular institutions and also the changes that are imminent. The latter is speculative and must remain so until new legislation is in place. Finally, we debate critical issues before government.

2. SUMMARY OF THE MUNICIPAL INFRASTRUCTURE INVESTMENT FRAMEWORK

The MIIF deals with five services -- water, sanitation, roads and stormwater, and electricity - and proposes a ten year, R60-70 billion infrastructure investment program. Phase 1 of the MIIF is complete; phase 2, presently underway, involves the preparation of an implementation program as well as an implementation manual that provides "hands-on" guidance to local authorities. Phase 1 contains:

- the estimated service backlogs in South Africa's urban areas;
- the calculated cost of remedying those backlogs;
- recommendations regarding the financial mechanisms through which infrastructure can be financed; and
- suggestions for the institutional arrangements and processes that should govern service delivery.

It is in the last respect that the MIIF provides guidance to this annex of the Municipal Environmental Development (MED) Project. Of particular significance is that it is argued in the MIIF that the foremost constraint to the program is not its cost, but the capacity to implement the program. Since traditionally, in terms of provincial ordinances, and now also in terms of Schedule 2 of the Interim Constitution, the delivery of municipal bulk, connector and internal services is the responsibility of local authorities, the focus is on the capacity of local authorities to undertake infrastructure planning, arrange finance for infrastructure projects, implement such projects, manage service delivery, and maintain the services.

In the light of anticipated capacity constraints, the Government of National Unity (GNU) emphasizes that while it is the responsibility of local authorities to ensure that services are delivered, local authorities need not themselves deliver the services. Instead there are a wide range of options for organizing service delivery, ranging from public delivery, some form of public-private partnership, to private investment in and control of delivery. Central to the MIIF, therefore, is an exploration of these alternatives.

An additional aspect of phase 1 of the MIIF is that it calls for community participation in the selection and implementation of projects, but tends to bland statements which encourage such participation without going into detail regarding the nature of the participation. The character of community participation is being explored in phase 2.

3. PRELIMINARY OVERVIEW OF RESPONSIBILITY IN RESPECT OF THE FIVE SERVICES¹

Local governments are responsible for providing their residents with services on a sustainable basis. The services include water supply, sewerage purification, electricity, refuse removal, roads and stormwater drainage, and certain social services.

The general approach to infrastructure delivery is that internal services in green-field sites should be provided by developers, and then taken over and maintained by the local government. Local authorities are responsible for the provision of bulk services within their area of jurisdiction. External bulk services (those services supplying a region or a number of towns such as major sewerage outfalls, arterial roads and electricity substations) are normally provided by parastatals such as Eskom and the Water Boards and by provincial and central government departments.

The organization of service delivery is typically based on service departments arranged on hierarchical, departmental lines. Generally, individual infrastructure services have not been separated out into autonomous units, with clear business objectives, or the financial autonomy to pursue those objectives. (There are exceptions: in Durban, for example, electricity, and water and waste, have been established as separate business units.) There is little transparency in how local authorities use their resources, and clear, comprehensible financial information has usually not been available to customers or ratepayers. In addition, there is no real competitive pressure on service provision, and consumers dissatisfied with the level or quality of service have had to rely primarily on the political process as a means of resolving these concerns.

In the case of specific services:

3.1 Water

While some local authorities provide their own bulk treated water, most purchase bulk treated water from Water Boards. The local authorities then provide storage dams, reservoirs and reticulation within their areas of jurisdiction. Local authorities typically take responsibility for reticulation up to the property boundary where house connections are installed. Some Water Boards supply to individual consumers within a local authority area, with local government consent. Some larger municipalities retail bulk water to other neighboring authorities. In some instances the former Regional Services Councils have supplied water to local authorities.

¹Section 3 has largely been borrowed from the MIIF.

3.2 Sewerage

Where water-borne sewerage exists, local authorities are responsible for sewerage collection. Most former white local authorities also operate treatment facilities. In other cases, sewerage treatment has been the responsibility of the former RSCs or Water Boards.

3.3 Electricity

Eskom, a parastatal organization, is the largest supplier of electricity in South Africa, though it supplies only two-thirds of residential (domestic) customers. Eskom's primary function is to supply bulk electricity to local authorities, but it also operates as an electricity retailer in most rural areas and in many former black local authority areas. In fact, since 1993 it has become the largest distributor of electricity because of its electrification program and the take-over of services to the former black local authorities. Local authorities supply secondary reticulation and retail electricity to their residents. Some local authorities generate electricity. Public lighting, whether in the form of high-mast poles or street-lighting on standard poles, is generally supplied with low-voltage electricity off the reticulation systems provided for domestic customers, and is the responsibility of local authorities.

3.4 Roads and Stormwater Drainage

Local roads are the responsibility of the local authority, with provinces and the national government taking responsibility for more major roads. In practice, there has been only minimal investment in new roads in recent years, with funds for roads and transport being used primarily for the subsidization of urban transport.

However, roads and stormwater are not part of this project and they will not be mentioned again.

4. INSTITUTIONAL ROLES

Each institution will be assessed in terms of four issues:

- current constitutional and legislative responsibilities (applicable to government and parastatals);
- actual role in service delivery;
- constraints; and
- alternatives, especially insofar as the private sector and communities are concerned.

4.1 Local Authority

The responsibilities of local authorities were reviewed above and are reported in greater detail here. They are taken from Chapter 10 of the Interim Constitution and parts iv. and v. and Schedule 2 of the Local Government Transition Act. The Local Government Transition Act is being revised and the revised draft is due in February 1996.

The electricity functions assigned to TMCs, District Councils and TLCs (see below) are in the context of the Local Government Transition Act. The recommendations of the Electricity Working Group (EWG) are contrary to these elements presently in the constitution.

It appears likely that the changes proposed by the EWG will be implemented; the National Electricity Regulator issued temporary licenses to all distributors, valid only to May 1996. The changes for local authorities may be quite severe, both financially and administratively.

In practice, the earlier general review gives way to considerable complexity and uncertainty. The division of responsibility differs between cities and provinces, and in some cities and provinces is still undecided. A first example of this uncertainty is that a principle underlying the Local Government Transition Act is that former white and black parts of town will be physically and fiscally integrated, and that the new local authority boundaries will include shack settlements whose population are functionally urbanized (they work, shop and seek social services in the local authority). The boundaries of most local authorities reflect this principle. However, in KwaZulu/Natal, functionally urban areas that fall outside a local authority and within King Goodwill Zwelithini's Ingonyama Trust area have been excluded from the local authority with which they are functionally a part, even in major centers such as Durban. This has created uncertainty about who is responsible, for example, for paying rates -- the king, chief or residents.

A second example centers on the division of responsibilities between transitional metropolitan councils (TMCs) and metropolitan sub-structures (MSSs). Each province is divided into metropolitan (where applicable) and non-metropolitan areas. In metropolitan areas, TMCs

have been established to replace structures in these areas. MSSs have been created below TMCs, which comprise amalgamations of former white and black local authorities. In non-metropolitan areas, district or services councils (DCs) are being established. These will have representation from transitional local councils (which range from small to large local authorities), rural local councils, local area committees and transitional representative councils, depending on the size and nature of the area to be represented.² In terms of these new local government arrangements, the former regional services councils or joint services boards will be replaced by DCs.

However, in the case of Johannesburg, the country's largest metropolitan area, the TMC is drafting proposals regarding its functions and those of the MSSs while, reportedly, the Gauteng government is preparing a provincial ordinance that would override the proposals of the Johannesburg TMC. In the same vein, whereas Johannesburg has adopted a 'hard top' approach to metropolitan government, the other metropolitan areas are inclined to a 'soft top' approach.³

In other words, the final division of responsibilities between TMCs and MSSs, and DCs and TLCs, is undecided and will differ among these institutions. The revised Local Government Transition Act will define local government roles and responsibilities more precisely, but it is open to objection from the provincial governments who may view this as their prerogative. In the meantime, the following illustrative example for a TMC/MSS is taken from

²Definitions of these areas are not forthcoming in the Local Government Transition Act No. 209 of 1993, but are promised in next year's revised Act.

³These approaches describe the relationship and division of power between a TMC and its MSSs.

- A. **Hard top.** In this case the power remains to a large extent with the central TMC with the MSSs delegated the more mundane duties and powers. The Greater Johannesburg TMC has adopted such an approach during the pre-interim phase, thus important and essentially political decisions will be made at the central point and the MSSs will in turn be responsible for the more administrative issues and also fulfill an advisory role. In the case of the Greater Johannesburg TMC, the hard top option has occurred in conjunction with the redefining of former local authority boundaries. This is not a prerequisite, however; in the case of the Cape Town TMC, boundaries have also been redefined but here a soft top approach has been adopted.
- B. **Soft top.** In this case the power is not predominantly centrally based with the TMC. Instead, the MSSs to a large extent retain their powers and operate almost independently within the broader TMC structure. The Greater Pretoria TMC has adopted this approach with its three MSSs (Northern Pretoria, Central Pretoria, and Southern Pretoria) retaining a significant degree of their former powers and duties.

The soft top approach is by far the favored option with five of the six metropolitan councils opting for this route, the exception being the Greater Johannesburg TMC. It remains to be seen, however, whether the situation in Greater Johannesburg will change and whether significant powers will be delegated to the MSSs.

preliminary suggestions for the Johannesburg TMC.⁴ The example for a DC/TLC is for the East Rand.⁵

The following description of the functions of TMCs, sub-structures, DCs and local governments are therefore to be understood as only a general depiction of service responsibilities.

a) Transitional Metropolitan Councils

- bulk water supply up to local supply points (unless this is done by a Water Board);
- setting bulk water tariffs;
- bulk sewerage purification, main sewerage pipelines, outfall sewers, waste water conveyance to treatment works, treatment of waste water, repairs and maintenance;
- setting bulk sewerage tariffs;
- control of refuse sites and maintenance of landfills; setting refuse disposal tariffs;
- metropolitan electricity supply authority with district service units; and
- determining minimum level of service delivery.

b) Metropolitan Sub-Structure

- local supply of water, local distribution network, treatment of stored water, setting of water tariffs;
- local sewerage including local outfall sewers, collector sewers, local sewerage network, repairs and maintenance;
- maintenance of non-water-borne sanitation systems;
- setting sewerage tariffs; and

⁴Preliminary information, Ian Symon, Executive Director: Strategic Development, of the Johannesburg Transitional Metropolitan Council.

⁵Information in respect of the East Rand was provided by the Eastern Gauteng Services Council. It has distinguished between regional functions, to be performed by the Services Council, and local authority type functions, to be performed by TLCs, the local area committee and transitional representative committees.

- management of refuse collection, street cleaning and setting the collection tariff; and ensuring maximum participation at grassroots delivery.

c) District Council ("regional functions")

District Councils have two main types of institutional responsibilities. Those relating to regional roles apply across all institutions under them. Those relating to local authority roles function on behalf of the smaller institutions under them.

- planning, financing and coordination of regional bulk water supply and distribution infrastructure;
- coordination of the provision of bulk electricity supply and distribution infrastructure;
- provision and management of bulk waste water treatment and conveyance systems; and
- "local authority type functions" such as the rendering of civil engineering services, electrical services, and sanitation in the case of smaller local authorities.

d) Transitional Local Council ("local authority type functions")

These are amalgamations of former black and white local authorities, e.g., Benoni, Bolsburg, and Springs in the Eastern Gauteng Services Council. These TLCs perform all the functions that the previous white local authorities engaged in and have much the same responsibilities as the MSSs.

- rendering of civil engineering services;
- rendering of electrical services; and
- rendering of sanitation.

As already noted, the major constraint to many local authorities fulfilling these roles relates to their ability to:⁶

- engage in strategic planning;
- formulate infrastructure programs;
- design and implement infrastructure projects;

⁶Andrew Boraine, Deputy-Director General, Department of Local Government.

34

- assemble financial packages for projects which include loans from the private sector;
- calculate appropriate tariffs; and
- administer municipal services, including promoting payments for services.

Government is actively exploring means of addressing these constraints. They generally focus on the use of grant and DBSA funding to leverage private sector capital; and partnerships with the private sector to design and implement infrastructure projects, manage service delivery, and invest in, own and manage service utilities. Associated with both these options is the restructuring of service delivery institutions.

4.2 Parastatal

Section 4.2 describes the existing roles of the main infrastructure parastatals, Eskom and the Water Boards. Central government's inquiries into the restructuring of both sectors is described in section 4.4.

In the case of electricity, 96 percent of the electricity used in South Africa is generated by Eskom. The remaining four percent is generated by eight local authorities for their own use. The electricity generated by Eskom is transmitted by Eskom by way of its main transmission system (the national grid) to all areas of the country for distribution to consumers. Electricity generated by local authorities does not enter the grid as they distribute it locally to consumers. The distribution of electricity is undertaken by more than 350 local government bodies (who serve approximately 60 percent of electricity consumers or 40 percent by sales volume). With the exception of minor distribution undertaken by a number of services councils and some provincial governments, Eskom is in large part responsible for distributing the balance of electricity. In other words, aside from generating the country's electricity, Eskom distributes more than 50 percent by sales volume.⁷

In the case of water, the Water Boards were established in terms of the Water Act No. 54 of 1956.⁸ The directors of the Water Boards are appointed by the Minister of Water Affairs and Forestry. All Water Boards report to the Minister and their contact with government is defined by the Water Act. (Note that this relationship is with central government; Schedule 6 of the Interim Constitution does not grant provinces any authority over Water Boards.) All Water Boards are non-profit and non-tax paying, and they receive no money from

⁷It should be noted that Eskom's distribution of electricity includes major clients such as Alusaf (a platinum smelter) that consumes as much electricity as Johannesburg, and also the railways. Eskom's distribution of electricity to households is far less.

⁸The Rand Water Board was the first Water Board established in the country, first in terms of a proclamation of 1903 and then in terms of the Rand Water Boards Statute (Private Act 1950, Act No. 17 of 1950).

5

government. Curiously, the Water Act does not regulate matters such as water quality, instead it is understood that the Water Boards will follow the guidelines of the World Health Organization.

The Water Boards supply bulk water through the management of dams and/or the purchase of water, the treatment of water, and the transportation of water to local authorities. The tariffs charged are those approved by the Department of Water Affairs. In term of the Water Act, water is only reticulated in urban areas if approved by the authority.

Finally, note that in terms of organizational structure and incentives, the parastatals have some advantages vis a vis local authorities, in that they are more clearly focused on the financially sustainable delivery of defined infrastructure services and are somewhat less susceptible to direct political pressures. They are also in a position to raise bulk finance at lower rates than some local governments. However, as with local authorities, there has been relatively little transparency in the way in which the parastatals use their resources. The overall regulatory arrangements for both water and electricity are currently under review.

4.3 Provincial Government

The role of local government in delivering municipal services is shaped in part by policies adopted at the provincial level. Some uncertainty remains as to the functions that provinces will have, and the precise nature of the powers associated with those functions. Schedule 6 of the Interim Constitution sets out an initial definition of provincial powers. Some redefinition of provincial and hence local functions is possible when the Constitution is revised and finalized.

The nature and organization of provincial functions related to municipal infrastructure varies across the nine provinces. However, most provinces have Ministries of Local Government, Housing, Planning and Environment.

Local government ministries are intended to promote local government administration and institutional development. The functions of their MECs include:

- regulating local government legislation and land transactions;
- administering statutory functions of local government bodies;
- monitoring local government elections; and
- promoting research and development of local government bodies within the context of capacity building.

The Planning Ministries generally see their function as coordinating land use, environmental and infrastructure planning. To this end planning MECs focus on:

- planning services, including all work pertaining to township establishment; land release, restitution and land development programs;
- transport planning;
- planning support at regional level to the various line departments; and
- general environmental issues.

The Housing Ministries, in concert with Provincial Housing Boards, set housing policy, which shapes the nature and flow of subsidies for housing. Since fifty to sixty percent of the housing subsidy is commonly used for internal services, this subsidy has a major bearing on any local authority's infrastructure program. (This subsidy is expected to pay for about a third of the infrastructure program described in the MIIF.)

Most provinces have an RDP Commissioner or Coordinator who works through an inter-departmental committee. The role of the RDP office is generally to coordinate the implementation of the RDP at provincial level, including provincial applications for RDP funds, and to assist communities and local governments in the preparation of business plans, when applying for RDP funding.

Based on site visits, it appears that local authorities view provinces as playing an extremely minor role in service delivery and also that provinces do not have the capacity to play a more significant role. To some degree, the minor role of provinces is to be expected given that the Water Boards report to the central government Department of Water Affairs and that Eskom, the supplier of bulk electricity, is a national agency.

The future powers and functions of provinces should not be taken for granted as government appears committed to enhancing the responsibility of local authorities for infrastructure investment. What this means for the above powers of provinces will only become clear in the next six months or so.

4.4 Central Government

4.4.1 Water and sanitation⁹

The Department of Water Affairs' White Paper titled "Community Water Supply and Sanitation" sets out clear policy proposals for the residential component of the water and sanitation sector. Primary responsibility for the provision of water and sanitation services rests with local government, with bulk water (and possibly sanitation) services provided by Water Boards and provincial government agencies where appropriate, and the Department

⁹This section is based on the "Report on Principles and Guidelines for the Engagement of the Private Sector in the Provision of Water and Sanitation", Draft, December 1995.

primarily responsible for overall water resource management (with limited involvement in bulk raw water scheme development). The policy framework allows considerable flexibility for the most appropriate service delivery arrangements to evolve at the local level in accordance with local circumstances, with the Department fulfilling an institutional support and capacity building function where necessary.

Urban water and sanitation services are to be self-financing (both capital and operating and maintenance) at the local level as far as is possible, with local authorities raising loan finance on the basis of future income streams, and covering the full operation and maintenance costs (including interest and redemption payments) through tariffs and service charges. The responsibility of the Department of Water Affairs, in terms of financing, is limited to helping ensure that all residents have access to a basic minimum level of water supply and sanitation service, defined as 25 liters per capita per day within 200 meters, and an adequate sanitation system (for example, a VIP latrine). Where local authorities can show that they cannot provide this without outside assistance, the Department will provide grant finance for capital development (but not for operating and maintenance costs) to assist local authorities.

However, it should be noted that a steering committee is presently in the process of drawing up a report which looks into the restructuring of water affairs. The final report will probably only be available by the end of December 1995. On the basis of reviewing a draft/working copy of the report, it is apparent that it both supports the MIIF and is more detailed in the water sector. Thus while the fact that a restructuring is being contemplated, it does not lead to much uncertainty. This issue will be further explored in section 5.

4.4.2 Electricity¹⁰

As with water and sanitation, there is an inquiry into the electricity supply industry. However, unlike the inquiry into the water sector, the recommendations by the Electricity Working Group appear to be headed in a radically different direction; they minimize the role of both local government and the private sector. The EWG was created by the National Electricity Regulator (NER), which itself needs to be explained. The NER was created in 1994 in order to ensure the rationalization of the electricity supply industry. It required all generators, transmitters and distributors of electricity to apply for licenses, and the applicants were evaluated on the basis of their competency to supply industry. The NER issued permanent licenses to generators of electricity, but only temporary licenses to electricity distributors. The EWG was then established to investigate the rationalization of the distribution industry and its recommendations are due in January 1996.

¹⁰This section is based on "Recommendations by the Electricity Working Group on the Electricity Supply Industry", initial report for discussion purposes only, 24 November 1995.

38

Problems that the EWG has identified in the electricity supply industry include:

- many electricity distributors are not financially sound because they are supplying economically non-viable areas;
- the electricity distribution is highly fragmented and does not optimize economies of scale, achieve coordination of operations, facilitate system expansion planning, and enable investment to take place at least cost;
- sales to consumers essentially take place through two retailers in series, the Eskom distributor and the local authority distributor;
- the electrification program will remain non-viable for at least the next ten years due to the high capital cost of the program, ongoing operating losses, non-payment problems;
- average electricity prices should remain low as they represent one of South Africa's few comparative advantages;
- managerial and technical resources are constrained;
- due to the multiplicity of distributors there are 'thousands' of different electricity tariffs; and
- electricity charges do not reflect consumption; there is cross-subsidy from non-domestic to domestic consumers.

The overall thrust of these "problems" is a tendency to argue for the centralization of the electricity industry, which at this stage is the only alternative presented for discussion. This direction is further evidenced in key assumptions underlying the EWG's proposed alternatives:

- the electricity supply will remain under public ownership and privatization is not an option for the foreseeable future;
- the electricity supply industry will remain under public control for the foreseeable future;
- local government bodies will continue to play an important role in setting policy for the supply of electricity in their areas but this does not mean that they will have to undertake the distribution of electricity directly;

- regardless of whatever structure is put in place, national tariff systems and national service and technical standards will apply which will be enforced by the National Electricity Regulator;
- regardless of whatever structure is implemented, there are certain issues which have to be addressed at a national level (e.g., funding, planning, standards) and other issues which are better addressed at a local level (e.g. local planning, customer service).

Five alternatives are being considered:

- a single, vertically integrated generation, transmission and distribution utility;
- Eskom retaining the generation and transmission sectors and the creation of a single distributor, presently referred to as EDCOR, which would be decentralized into autonomous (operating as separate business units) regional distributors;
- Eskom retaining the generation and transmission sectors and the creation of a number of independent regional electricity distributors;
- Eskom taking over the entire 'wires business' (production, transmission and distribution), while local authorities that can, take over the retail sale (pricing, metering and billing); and
- Eskom taking over the electricity supply industry except in the case of those local authorities who are currently successfully distributing electricity and are financially viable.

It is reported that the second option is finding favor in workshops throughout the country and an Electricity Regulatory Act is due in 1996. Since many local authorities earn a surplus (presently totaling R1.7 billion) on their electricity accounts and use it to subsidize other services, water in particular, the EWG allows that if local authorities lose responsibility for supplying electricity and consequently lose the surplus, they should still receive a 'franchise fee' instead.

4.5 Private Sector

As a result of the capacity constraints faced by local authorities, government has come to accept that the private sector should substantially expand its role in the delivery of services.¹¹ To date, the private sector has primarily been involved in consulting services,

¹¹The potential for private sector involvement in service delivery is explored in chapter 3 of the MIIF. It is increasingly evident that local authorities will explore many options other than public-private partnerships. Agency agreements, for example, with parastatals and section 21 (non-profit) companies are being established.

contracts for specific construction activities, and the development of residential areas, and to a lesser degree in the management of service delivery where local authorities face difficulties. Private involvement is often viewed more as a response to these difficulties than something which is intrinsically desirable.

Private incentives for efficient performance have been driven by such factors as the extent of competition in local authority tendering processes, the quality of the contracts negotiated, and the incentives implicit in the various subsidy schemes for the servicing of stands and the provision of housing.

In the past, during the era of prescribed assets, banks financed infrastructure investment. In recent years there has been a reluctance to continue doing so due to services boycotts, uncertainty regarding the financial implications of consolidated local authorities assuming the debt of former black local authorities, and the lack of transparency in municipal accounting.

From government's point of view, it now actively supports:

- private capital being made available for infrastructure (discussed further in Annex K);
- private design and implementation of infrastructure projects;
- private investment in, ownership and management of service utilities;
- the access of small contractors to infrastructure investment projects; and
- assisting with the management of the local authority -- building institutional capacity -
- where such capacity is lacking.¹²

4.6 Community

Local authorities have formal responsibility for service delivery and they are not obliged to consult communities when investing in infrastructure projects. A hypothesis that emerged from the site visits was that a local authority's willingness to engage with communities is directly proportional to how well organized the community is and the degree to which the local authority confronts financial difficulties.

It is nonetheless expected of local authorities that they engage community organizations in the prioritization of infrastructure investments (in the light of resource constraints) and in the design of infrastructure programs. This is certainly something which has been heavily emphasized by central government and the RDP Ministry in particular. However, central

Phase 2 of the MIIF will spread the options more widely than the hitherto singular focus on the private sector.

¹²These items appear contradictory in the light of the EWG's assumptions and alternatives.

government never prescribed how this engagement should occur; this seems as much due to local complexities as an inability to agree at a central level on the character of that participation. At one time government proposed institutionalizing local development fora as a means of obtaining community involvement in the RDP and in local planning. Such fora have in fact been encouraged in some provinces, but it is not clear in most provinces what their role will be after local elections, nor whether they should continue and, if so, in what form. It is clear, though, that community organizations will not be accorded veto rights; that government's view is that in the past community participation (equated with working with community organizations) was taken too far and nowadays the issue is more one of consultation. The formal responsibility of local authorities is not to be diminished.

One might conclude that there is increasing uncertainty about the role community organizations should play in development. While there remains the belief 'in principle' that community organizations should be a central actor, there is the realization that 'in practice' many community organizations are self-appointed, lack legitimacy and have served as gate-keepers. In the case of housing, for example, it is widely held that such organizations have slowed the delivery of housing due to requirements that they participate in 'social compacts'.¹³ This belief has to be set against the fact that the GNU is being judged in terms of its record of delivery.

4.7 Non Government Organization

South Africa has a well-developed Non Government Organization (NGO) network that supports disadvantaged communities with research into development options, capacity building, negotiations with the authorities, and the ongoing support of development programs. They constitute an important resource for enhancing the quality of community participation in infrastructure programs.

¹³It has proven especially difficult for developers to determine whether community organizations are indeed representative; this problem is self-evident in the case of green-field development where there is no pre-existing community.

42

5. ISSUES

5.1 Capacity Constraints

5.1.1 From Integration to Public-Private Partnership

The integration of local authorities has combined authorities with very different service levels, capacities and data bases. It appears that often the first task of the newly integrated local authority is to take stock of the engineering services actually available throughout the authority, their state of repair, the number and skills of local authority staff, and state of municipal accounts. This information may well be difficult to come by and it may be years before a comprehensive data base, integrated management systems for service delivery and accounting system are widely in place. The same appears true of the municipal employees, whose grading and skills may appear fairly random. The latter issue is fraught with difficulties as a number of local authorities were over-staffed and the combination of authorities will create a need for rationalization.

A further difficulty with the combination of local authorities is that non-payment of services in formerly black local authorities is the creation a backlash in formerly white local authorities. This is an issue which has been little explored, but receives repeated, if muted, reports as one travels between local authorities. This may become an increasingly significant issue over time, especially in the case of water where there are severe restrictions on a local authority's ability to turn off the supply of water.

It is in the light of such difficulties that an increasingly popular vision among local authorities is that the local authority should start managing service delivery, with the private sector actually supplying, metering and billing for the service. The local authority should operate as a business and contract out service delivery. Although this involves reducing the labor force, more through attrition than firing, it is felt the labor force should anyway be streamlined. Municipal jobs not replaced will be rationalized through skills upgrading and the creation of supervisory positions. The labor to be supervised would be hired as and when needed on a contract basis, and not gain access to all the benefits of full-time municipal employment.

The role of the private sector in abetting this vision and providing capacity should also be noted. For example, in Queenstown Lyonnaise Francais made a deal with the South Africa Municipal Workers Union that was based on this vision. The private sector is also employed in a more ad hoc fashion. For example, the Richards Bay local authority has appointed Coopers and Lybrand to clear up the accounts of Nseleni, eSikhaweni and Vulindlela which were incorporated into a combined local authority. And in Johannesburg consultants were employed to review the TMC's tendering procedures in order to make them more accessible to small contractors.

Finally, if the revised Local Government Transition Act places greater responsibility for planning and delivering services on the shoulders of local authorities, then capacity problems achieve still greater prominence.

5.1.2 Ongoing Constraints

The ability of local authorities to actually deliver services is highly differentiated and it would be unwise to generalize about them -- far better to recognize that there are classes of local authorities. Perhaps the best way to conceptualize this issue is along two axes, one describing technical capacity (essentially represented by the former white local authority)¹⁴ and the other financial capacity. City size and capacity are often wrongfully equated -- metropolitan areas, secondary cities, large and small towns. East London, for example, reportedly has 35,000 rate payers, but in 1991 had a population of 623,000 persons. Most are located in Mdantsane and have very low incomes.

While there are reasonable measures of a city's or town's location along both axes, the lack of data in South Africa prohibits actually constructing the graph. One is left with the knowledge, already widely recognized, that the majority of local authorities will face ongoing institutional and technical constraints to service delivery.

The distinction between institutional and technical is of some importance. Technical constraints, for example, those which involve designing and implementing a project or making sense of the accounts of a former black local authority, can be overcome through consulting services from the private sector. Institutional constraints are more profound. They refer to the skills of the local authority staff and effective systems of governance. It should be noted that these constraints include councilors who are new to the job and may understand little about what local authorities can and should do, the officials themselves, and community education.

5.1.3 Training for Institutional Capacity

Government is aware of these training needs and is responding through the Local Government Training Board, a statutory body, that has fifteen centers around the country. These centers are tasked with managing a training program. Ninety percent of the training is contracted to universities, private firms, retired municipal officials. However, the methodology and course content is currently under review. The training used to target local government officials, but will now extend to councilors as well.

5.2 Extending the Role of the Private Sector

The vision that underlies much of the MIIF and which can be read from presentations made by the RDP Ministry is that local authorities should explore the desirability of increasing the

¹⁴Towns in the former homelands are an exception to this rule and they frequently are worst off.

role of the private sector in service delivery. This can take the form of financing capital projects, helping to manage local authorities and/or to build local authority capacity, and to actually deliver services.

In respect of financing capital projects, principles underlying the financing of capital projects include:¹⁵

- Capital expenditure should be financed by borrowing; current expenditure should be financed by current income.
- Capital finance should be accessed by integration into the mainstream private financial system, rather than through special public sector lending institutions; where public sector lending institutions do exist, they should support this process.
- An ongoing process of institutional development of service providers (including municipalities) is required, aimed at enhancing efficiency and facilitating borrowing for investment in infrastructure.
- An efficient system based on uniform standards for gathering and processing relevant financial and other information of all local authorities and other bodies involved or potentially involved in delivering the program must be created.

It is apparent that lending institutions are interested in entering this market at scale.¹⁶ The question centers on the extent to which they will serve poorer local authorities. One reason that government is advocating the development of public-private partnerships is that commercially viable utilities with identifiable income streams are more likely to attract loans than local authorities with uncertain financial prospects. Another area of government intervention is the use of grants to leverage loans, coupled with soft loans from the DBSA to further enhance local authority access to private capital.

As regards the management of local authorities, this seems especially common in former homeland local authorities where a town clerk and city engineer, for example, may be lacking. This phenomenon is not ideal and is a reflection on the weakness of the local authority rather than a policy objective.

In the case of the water and sanitation and the electricity sectors, it is apparent that the inquiries into the restructuring of the two sectors are headed in different directions. The assumptions underlying the EWG's work exclude the private sector. It remains to be seen whether government will accept them.

¹⁵The principles are found in the MIIF, chapter 4.

¹⁶ Conversations with Marlene Hesketh at Rand Merchant Bank, Colin Coleman at Standard Corporate and Merchant Bank, and other bankers reveal considerable interest in this topic.

Finally, in the case of water and sanitation, the steering committee that is looking into the restructuring of water affairs bases the need to engage the private sector on the potential improvement in management capacity, access to capital markets, and greater efficiency and effectiveness in the delivery of water. The alternatives being considered are ring fencing (which does involve the private sector), corporatization, and the involvement of parastatals (essentially Water Boards) or private companies through service contracts, management contracts, renting of assets, investment linked contracts, or privatization.¹⁷ The thrust of the draft is far more in line with the government's policy of enhancing the role of the private sector.

5.3 Participation/Client Orientation

An observation regarding the character of community participation is that it is always thought of as occurring with groups. For example, the housing social compact has been negotiated with groups. This preconception politicizes community participation as community "leaders" struggle to monopolize the development process, to act as gatekeepers and to be seen to be responsible for delivery. Of course, the same desire to be viewed as responsible for delivery will be true for local authorities, traditional leaders and other claimants to leadership status. It is no surprise, therefore, that community organizations have been found to contest legitimacy and "turf", community leaders dispute decisions with councilors, and that negotiated agreements fall apart as a result of changes in community leadership arising from local power struggles.

At the same time, particular groups can be excluded. This may be true of church organizations which may, in fact, legitimately claim to represent a broad cross-section of the community and be in a position to facilitate negotiations from a relatively neutral vantage

¹⁷Ring-fencing is an approach that may be used for any tradable service, and implemented at relatively low cost regardless of the size of the local authority. At the simplest level, ring-fencing requires the identification and isolation of the revenues and expenses, assets and liabilities of each service. The local authority must then pass an ordinance establishing governance issues relating to the business unit, and clarifying that its financial flows will not be co-mingled with the authority's other financial flows. The advantage of ring-fencing is that it clarifies the financial flows, and financial position, of each category of infrastructure provision, and provides improved information with which to monitor the performance and viability of service provision. For these reasons it enhances the mobilization of external finance.

Corporatization of infrastructure services is more complicated than ring-fencing in that it involves the establishment of formal companies for service provision, under the companies legislation. (This requires, for example, an asset valuation, and the establishment of a financially viable starting balance sheet.) Corporatized service providers operate at arm's-length from the local authority (which retains ownership), with clear commercial objectives, and clear mechanisms through which managers will be held accountable for performance in accordance with these objectives. They are also more directly subject to competitive pressures than are ring-fenced business units. For example, corporatized entities are generally responsible for raising their own debt (subjecting them directly to capital market pressures), and corporatization is ideally accompanied by the removal of any statutory right to act as a monopoly service supplier, opening the way for competitive entry by alternative suppliers.

point. Most likely to be excluded are women, especially in areas where access to land is governed by custom. Since women are responsible for collecting firewood and water and, more than most, stand to benefit from services, they should be the first group to be consulted.

The issue, essentially, becomes one of how to reach the actual users of a service and to seek their opinion regarding service priorities, project priorities and affordability. This is not to deny the need to consult community organizations and traditional leaders (if any are present), but it is to urge that non-threatening vehicles for consulting the actual clients of services need to be explored.

5.4 Coordination of Service Delivery

The location of investment in services should be guided by a local authority's structure plan.¹⁸ In the future, such structure plans will be guided by the Development Facilitation Act. The Act asserts principles regarding physically integrating the previously divided cities and towns as well as 'densifying' them in order to render them less inefficient and less inequitable. Each town will have to give effect to these principles through its Land Development Objectives (which strangely need not be mapped) and the service levels it adopts. Phase 2 of the MIIF shares the underlying principles of this legislation and is being linked to this legislation. Do local authorities in fact have the power to give effect to the Act and to the MIIF?

The first major constraint concerns the Provincial Housing Boards for they have approved project based subsidies on greenfield sites (by far the predominant form of subsidy) in inefficient locations distant from centers of employment. These projects often also require extending bulk services rather than utilizing existing capacity. Linked to the actions of these Boards is the Bulk and Connector Infrastructure Grant which is specifically designed to enhance housing delivery through subsidizing the construction of such infrastructure in areas where its absence is slowing housing delivery. The criteria governing the allocation of the grant emphasize creating compact cities and towns, but then so too do those governing access to the housing subsidy.

The second major constraint arises from the fact that the institutions providing bulk electricity and water are parastatals that presently are subject to neither local nor provincial control, and which do not themselves coordinate the location and timing of their investments.¹⁹ However, in cases where there might be a duplication of facilities, TMCs or

¹⁸ In the case of the EGSC, aside from regional, bulk infrastructure, town planning is viewed as a local function. In the case of Johannesburg, planning appears likely to be undertaken by the TMC.

¹⁹ There have been complaints that in aggressively pursuing its electrification drive, Eskom has supplied electricity to communities where the delivery of other services will be most expensive and which are extremely inefficiently located.

DCs are responsible for coordinating investment. On these grounds, theoretically, adjacent local authorities should not invest in two sewerage plants if there are economies of scale in investing in one larger plant.

Another possible constraint may arise from the recommendations of the EWG. The MIIF is premised on the view that local authorities should decide on service priorities and levels in the light of their financial situation and the affordability to their residents. The EWG proposals appear to reduce the ability of local authorities to determine their investment priorities and to allocate resources accordingly.

Finally, housing and infrastructure developments need to be coordinated with investments in educational, health, recreational and other facilities. Here one is attempting to coordinate PHB-linked investments, often also urban renewal grant finance, parastatals, and provincial and national line departments. The case of Cato Manor is illustrative. It is destined to settle about 200,000 people. Present budgetary constraints allow for the construction of one school.

6. CONCLUSION

Institutional roles and responsibilities for the delivery of services are subject to change in the near future, as are the financial arrangements for capital investment in such services. Revisions to the Local Government Transition Act, the restructuring of the electricity and water industries, new electricity legislation, the implementation of the Development Facilitation Act and other reported changes require that the subject be revisited periodically.

ANNEX K: MUNICIPAL INFRASTRUCTURE FINANCE ANALYSIS TABLE OF CONTENTS

1.	INTRODUCTION	1
2.	DESCRIPTION	2
2.1	Background of Municipal Finance in South Africa	2
3.	THE FUTURE FINANCING CHALLENGE	4
4.	CURRENT AND FUTURE SOURCES OF MUNICIPAL INFRASTRUCTURE FINANCE	6
4.1	Overview	6
4.2	National Transfers	7
4.3	Grant Allocation	9
4.4	Internal Sources of Financing	11
4.4.1	Tariffs	11
4.4.3	Improved Efficiency	15
4.5	Loan Financing	15
4.5.1	Development Bank of South Africa	15
4.5.2	Private Sector Financial Institutions	15
4.5.3	Private Sector Companies	18

LIST OF TABLES

Table K.2	Cost of Eliminating Service Backlogs and Serving New Population Over 10 Year Period (millions of Rand)	4
Table K.3	Potential Sources of Finance for the UIIPT (1995 prices)	7
Table K.4	Bridging Finance and Intergovernmental Grants Paid to BLAs Since 1987	8
Table K.5	Tariffs and Income Levels	14

ANNEX K: MUNICIPAL INFRASTRUCTURE FINANCE ANALYSIS

1. INTRODUCTION

The nature of municipal infrastructure finance in South Africa remains in a period of rapid change. Redrawn municipal boundaries, new local government bodies and an evolving constitution all contribute to a climate of continuing uncertainty. Although certain trends are clear -- the movement away from *ad hoc* central grants and the future necessity of borrowing as a supplement to the traditional source of finance from capital development funds -- a sense of uncertainty nonetheless continues to characterize the sector in terms of future regulation, magnitude of intergovernmental transfers/grants, and future revenue streams and sources. The magnitude of financial need and interest of private sector financiers and service providers can only be assessed through analysis of each municipality; for many cities, this analysis has not yet been completed, or in some cases even begun. Moreover, in some tribal areas of KwaZulu/Natal and in Cape Town the municipal boundaries are still under review. It is, however, likely that smaller secondary towns are more likely to face larger financial and administrative challenges in providing services for all.

2. DESCRIPTION

2.1 Background of Municipal Finance in South Africa

Municipal finance in white South Africa has enjoyed a solid record, with almost no history of default or severe municipal financial strain. Until 1988 White Local Authorities (WLAs) of larger cities had a well developed financial market and relied on municipal bonds. After 1988 these municipalities were able to accumulate large capital development funds which were attractive given high interest rates. From 1980-1986 local governments borrowed R5,110 million or 54.5 percent of their total investment needs. This then dropped to R3,340 million between 1987-1992 or 18.4 percent of all financing.¹

Local authorities were able to reduce reliance on private sector financing largely because of high income levels from "trading" services of water and electricity tariffs; these services generated 55 percent of WLAs' turnover with three-quarters of this revenue from electricity alone.² Most often tariffs were based on flat fees which were higher for commercial and industrial users (electricity costs ranking among the lowest in the world allowing for this) in order to allow lower prices to domestic customers. For example, in 1989/90 in the city of Johannesburg the operating cost for water provision was R1.20/kl, and the assigned tariff for domestic users was R1.00/kl. The commercial/industrial rate base made this up at R1.695/kl, or nearly 70 percent higher than for domestic users of water. These trading services surpluses were often transferred to support other activities which otherwise would be supported by the property tax. Property taxes thus remained relatively low.

Table K.1 WLAs Budgeted Operating Income
1993/94 (all provinces)

Source	Percent of Total Operating Income
Property Rates	20%
Electricity	47%
Water	11%
Sewerage	5%
Refuse	3%
Subsidy	2%
Other	13%
Total	20,370 million R
Surplus (Deficit)	(191.5 million R)

Source: P. van Ryneveld

¹Dr. Danie Cronje, ABSA Bank, "The Role of the Banking Sector in the Financing of Local Government," presented at the IMTA, October 1995 Alberton Conference.

²P.V. Ryneveld.

The fiscal situation in black areas was completely different. Blacks in urban areas were not allowed to own property so property taxes provided no income. Low levels of services and investment (spending in WLA areas was 25 times the level of spending in Black Local Authority areas) produced low income from trading services in these areas. In the 1970s sales from liquor or beer halls provided one of the more significant sources of income for Black Local Authority (BLA) areas. Privatization of beer halls and a subsequent increase in utility tariffs contributed to the politically motivated boycotts on service payments in townships.

Where black local authorities or municipalities fell short, an *ad hoc* system of central government transfers stepped in and accounted for approximately 80 percent of revenue. It is, however, important to note that a small number of townships accounted for a large proportion of the total funds channeled from the national through the provincial level government to the BLAs as grants. These include: Ikapa, Cape Town, Ibhayi, Port Elizabeth, Ningizimu, Durban, Thabong, Welkom, Kgotsong, Bothaville, Soweto, Johannesburg, Diepmeadow, Johannesburg Lekoa, and Vanderbjilpark.³

Regional service councils (RSCs) and joint services boards (JSBs) were set up from 1987 onwards to finance infrastructure in areas of greatest need. Both BLAs and WLAs had representation on the Boards depending on the percentage of services they used. All RSCs and JSBs raise revenue from the regional services levy (a percentage of the wage bill) and the regional establishment levy (percentage of turnover). The RSCs focused primarily on bulk infrastructure and took over responsibility for providing local services in small towns and rural areas. However, their projects tended to be underfunded. From 1993/1994 they have also received one cent per liter of fuel and diesel sold in their areas. In many areas RSC income has been used increasingly to supplement current account deficits of BLAs.⁴

Information on total income and expenditures and their sources is not available on a consistent basis for former BLAs. This points to some of the challenges currently facing municipalities in trying to reconcile different and often non-transparent accounts.

Accumulated arrears represents one of the vestiges of the unsustainable approach taken towards municipal finance in BLAs. According to the January 20, 1994 Agreement on Finance, Service, and Service Rendering, transitional councils shall not inherit debts and liabilities accumulated by the BLAs unless the assets purchased with this debt generate revenues. Accordingly R220.77 million was written off with the majority of arrears owed by BLAs to WLAs (R190.67 million). As of August 1994, only R55 million had been paid out largely due to administrative delays.⁵

³P.V. Ryneveld.

⁴P.V. Ryneveld.

⁵P.V. Ryneveld.

3. THE FUTURE FINANCING CHALLENGE

According to the Urban Infrastructure Investment Planning team (UIIPT) which is preparing the Urban Infrastructure Investment Programme, the cost of addressing a backlog of infrastructure investment (excluding national bulk infrastructure such as dams or electricity plants and recurrent costs) over a ten year period ranges between R45 billion and R85 billion depending on the target level of services (basic to full). The UIIPT believes that a ten year time frame is more realistic than the seven years initially envisioned. The level of aggregate investment which would be consistent with household income levels and ability to pay for the services installed, would equal R60-70 billion with distribution of 55:25:20 among full, intermediate and basic service levels as defined in Annex D (Environmental Analysis).⁶ This cost is based on per capita average cost for services, and does not take into account the specific circumstances and service level demands of different towns. Some towns have not begun to assess the real cost of investment and upgrading required.

Table K.2 Cost of Eliminating Service Backlogs and Serving New Population Over 10 Year Period (millions of Rand)

	Basic	Intermediate	Full
A. Metropolitan Areas			
Internal Services	R10 855	R19 033	R30 546
Bulk and Connector Services	R2 871	R5 189	R10 080
Asset Replacement and Rehabilitation	R7 165	R7 803	R8 803
Land (for new developments)	R5 477	R5 477	R5 477
<i>Subtotal A</i>	<i>R26 368</i>	<i>R37 502</i>	<i>R54 906</i>
B. Secondary Cities and Towns			
Internal Services	R8 902	R14 221	R19 674
Bulk and Connector Services	R2 279	R3 548	R6 615
Asset Replacement and Rehabilitation	R3 573	R3 883	R4 2656
Land (for new developments)	R3 547	R3 547	R3 547
<i>Subtotal B</i>	<i>R18 301</i>	<i>R25 199</i>	<i>R34 101</i>
Total Capital Investment (A + B)	R44 669	R62 701	R89 007

Source: UIIPT

Notes: (1) All amounts exclude VAT. (2) The national amounts have been derived from detailed studies and calculations undertaken by the Development Bank and the World Bank.

⁶According to the Urban Infrastructure Investment Planning Team.

54

Capital expenditures of all former WLAs was R6,532.7 million in 1994/5 of which R445.4 million was from national grants. In addition, a total of R1,800.6 million was collected in RSC/JSB levies (R885.3 million of which was transferred to former WLAs). Thus, approximately R7 billion was locally generated for capital expenditure. According to the UIIPT, experience in areas where TLCs have already been set up indicates that it is possible to redirect as much as half of this investment into poor areas. However, much of this would be in the larger metropolitan areas.

4. CURRENT AND FUTURE SOURCES OF MUNICIPAL INFRASTRUCTURE FINANCE

4.1 Overview

Through work of the UIIPT, an effort has been made to develop a national policy framework on municipal infrastructure finance. This constitutes part of an effort at the national government level to rationalize and create more transparent mechanisms for the allocation of various grants, while developing a strategy to deal with the massive infrastructure backlog over the next ten years. Some of the areas of their policy recommendations include:

- Reduction in the *ad hoc* nature of intergovernmental grants and transfers in favor of more efficient targeting and more transparent mechanisms for allocating public funds.
- Increased role for provincial authorities in ensuring equitable distribution within provinces.
- Movement away from the distortionary effects of both subsidized interest rates and from central government guarantees for private sector financing.

According to the UIIPT, a significant source of capital finance will need to come from the private capital market. Other sources of finance will include:

- Sources outside of local government:
primarily continuation of current recurrent grants from national government
possibly provincial taxation
- Increased revenue collection:
from formerly black areas which were previously boycotting service payments
small increases in local taxes and charges from well serviced areas
- Finance from the integration of white and black areas:
transfer of capital budgets from former white local authority areas (primarily capital investment funds which have accumulated)
the use of former Regional Service Council (RSC) and Joint Service Board (JSB) levies for a pool of local revenues

The UIIPT estimates that half of the required capital expenditure should be met by local government resources, primarily in the metropolitan areas. One tenth of the total capital could be met by private households through mortgage bonds for those areas which comprise high income customers. The remainder would need to come from grants from central government, primarily to non-metropolitan areas.

Table K.3 Potential Sources of Finance for the UIPT (1995 prices)

Range of Costs	Capital Investment	R60-70 billion
	Land costs	Approximately R9 billion
Potential sources of finance	Local government borrowing and internal sources including: a. redirection of resources from former white areas b. increased revenue collection from former black areas c. RSC and JSB levies d. small annual real increases in local taxes and changes in well serviced areas e. the sale of assets	R35-40 billion
	National government grants through the housing subsidy	approximately R20 billion
	Infrastructure grant from national government	R10-12 billion
	Self-financing of internal services by high-income households	R6-9 billion

4.2 National Transfers

It is clear that the central government will need to continue to provide substantial resources to local and provincial governments given its importance in generating revenues in the past.⁷ The financing plan outlined above rests on the assumption that central government grants for infrastructure continue (R30-35 billion rand at 1995 prices over a 10 year period) as well as inter-governmental grants to poorer local authorities continue at their current level of approximately one billion rand per year. The amount of the proposed grants is roughly equal to the amount currently budgeted by central government for grants and infrastructure funds.

⁷In fiscal year 1992, for example, 82.7 percent of all government revenues were raised by the central government. Provincial governments raised 9.4 percent, and local government 7.9 percent of all revenues. "Intergovernmental Grants in the Context of Local Government," John B. Cribfield, Barents Group, KPMG Peat Marwick, Working Paper, Institute for Local Governance and Development, November 1995.

57

The national housing subsidy, if continued, could potentially furnish two-thirds of this R30-35 billion. The housing subsidy is a once-off capital grant made available to individuals to purchase the housing package of their choice. The subsidy also applies to "internal" services; however, the higher the level of internal services (water, sanitation), the more expensive the land, and the less of the subsidy is available for the top-structure. This assumes that 50-60 percent of the housing subsidy is directed towards internal services. Developers, in compacts with communities, are responsible for constructing new housing and use the housing subsidy among several sources of finance.

The one billion rand of intergovernmental grants to poorer local authorities may be affected by decisions of the national government's Financial and Fiscal Commission which is currently focusing on providing parliament with recommendations on how to distribute national monies among national and provincial governments. The commission will provide similar recommendations for local government allocations, but has not yet looked into this area.

Table K.4 Bridging Finance and Intergovernmental Grants Paid to BLAs Since 1987

Year	Millions of Rand
1987/88	373.8
1988/89	460.3
1989/90	518.8
1990/91	644.0
1991/92	903.7
1992/93	791.8
1993/94	1,115.8
1994/95	709.9

Source: P. van Ryneveld

Note: The 1993/94 figure includes a R160 million set-aside to write off the bad debts of the BLAs.

It is not clear to what degree, or over what time frame these central government grants will continue. The trend, however, has been towards stable or decreasing levels of grants, with the allocation for 95/96 projected to remain constant or decline in real terms. According to the International Municipal Treasurers Association (IMTA), the transfer of BLA liabilities together with cost recovery rates which may not have changed, and lower real central government transfers will translate into deficits requiring emergency subsidies. There is, however, in numerous towns, a potential financial crisis; in the region of KwaZulu/Natal for example, the budget for towns administered by the province was reduced by 20 percent from 94/95 to 95/96 resulting in a R195 million shortfall. As a result, many TLCs had deficits which would not allow them to continue to provide necessary or in some cases essential services such as maintenance. The provincial government has thus requested that central

58

government transfers continue for five years at current levels, and then be phased out over another five years.⁸ According to Development Bank of Southern Africa (DBSA) analysis, without substantial reliance on grant resources, small and medium towns would see considerable increases in tariffs over 20 years even with modest service levels. By the end of the fiscal year (end-March) the net impact of account consolidation on local government finance should be clearer.

Responsibility for provision of water and sanitation rests with local government, with bulk water responsibility at the provincial level and the Department of Water Affairs with overall water resource management (i.e., involvement in a limited number of bulk raw water schemes). According to the UIIPT, the Department of Water Affairs responsibility for water and sanitation finance is limited to helping to ensure that all residents have access to a basic minimum level of water supply and sanitation services (25 litres per capita per day within 200 meters and at least a VIP latrine). In cases where local authorities demonstrate that they cannot provide this without outside assistance, the Department will provide grant finance for capital, but not recurrent, expenditures. However, this practice is currently suspended, pending a review and realignment towards supporting only the provision of bulk infrastructure sufficient to meet the basic needs of low income households.⁹ In addition there are a number of RDP special rural and urban water and sanitation projects (R390 million mostly with water boards), a program for upgrading and extending municipal services (R830 million via Constitutional Development), the Urban Infrastructure Program of the Department of Housing (R700 million) and at least seven urban renewal projects (e.g., Katoris, Cato Manor, etc.) totaling R1.6 billion over five years all of which have water and sanitation components.

A great deal of variation exists even among secondary towns in terms of the level of sophistication and of contingency planning in response to the uncertain future of national level grants. Some cities (Empangeni, Richards Bay) are looking ahead to the time when these grants are no longer available; others (King William's Town) are so far from reconciling accounts and multiple administrative structures that financial crisis looms if grants are cut off.

4.3 Grant Allocation

National to Provincial: The process for allocating intergovernmental grants to the nine new provinces for the fiscal year 1995/1996 was completed on the basis of a temporary formula based on the number of individuals in urban areas earning less than R5,000 per year. However, the data on the income characteristics of different urban areas under the new municipal boundaries are extremely weak. Previous censuses failed to adequately cover

⁸Peter Miller, Minister of Local Government and Housing, Memorandum to the Cabinet, "Financial Support to Transitional Councils."

⁹Barry Jackson, DBSA.

59

black areas, leading to educated guesses regarding income levels. Improving these baseline statistics, particularly when they are the basis for resource allocation, represents one of many challenges that lie ahead. A more permanent set of transparent guidelines for how central government grants are allocated among provinces was proposed to Parliament in September 1995 by the Finance and Fiscal Commission.¹⁰ It is calculated according to three criteria, only two of which are currently factored in; first, each province will receive the same grant per pupil in the province, according to education standards set by national advisory bodies; second, grants will vary depending on the level of infrastructure services in the province.¹¹

Provincial to Local: Until 1991 the four old provinces enjoyed fairly broad discretion regarding the allocation of resources among the various black local authorities. In 1991 the Department of Finance devised a formula for allocation by the provinces to the local authorities. A fixed amount of R50,000 was to be paid to each authority, and the rest was to be allocated on the basis of population and per capita income. In the Transvaal 60 percent of the total grant for black local authorities was divided on the basis of the above formula. The remaining 40 percent was allocated on an *ad hoc* basis to address special needs and crisis. In the other three old provinces 70 percent was allocated on a formula basis and the remaining 30 percent on an *ad hoc* basis.¹²

Provincial governments have no taxation powers at present, although a Provincial Borrowing Powers Bill is currently under discussion by the Joint Standing Committee on Finance and will go to the assembly during the next session. The bill proposes several measures to strengthen provincial governments by allowing them to:

- claim a share of national revenues;
- raise their own revenues through taxes or surcharges; and
- borrow capital.

The drawbacks to significantly increasing borrowing capacity at the provincial level relate to the lower level of accountability associated with distancing the borrower from the actual works being financed at the municipal level. This issue is yet unresolved.

¹⁰John B. Crihfield, Barents Group, KPMG Peat Marwick, Working Paper, Institute for Local Governance and Development, November 1995.

¹¹The third criteria not currently in place, involves an equalization among provinces based on a per capita grant equal to the national average per capita tax base minus the provincial per capita tax base multiplied by the provincial tax rate (i.e., the income tax rate). Poor provinces could increase their tax base by imposing a provincial surcharge on national personal income tax. The central government would likely offer this incentive with a cut in the national income tax rate by an average of two percentage points.

¹²P. V. Ryneveld.

The method for distributing funds raised at the provincial level is undefined and it is not clear whether each province would develop its own criteria or if the Financial and Fiscal Commission would agree on a formula with all of the provinces. A full 80 percent of GDP is generated by metropolitan areas, pointing strongly to the tax raising abilities of the more populous provinces. However, smaller cities which do not have a strong tax and/or commercial base will likely face substantial shortfalls in revenues.

4.4 Internal Sources of Financing

4.4.1 Tariffs

It is expected that one of the primary sources for finance for operations, maintenance, and in some cases capital, will come from cost recovery for infrastructure services, primarily electricity and water. Tariff levels are thus being re-examined in light of their ability to recover costs, to provide correct signals on the value of resources such as water, and to provide equitable access for the poorest consumers.

Electricity tariffs represent one of the most promising sources of finance given the surpluses they have historically generated -- roughly R2 billion per annum nationally -- and the fact that new investments in bulk supply are not needed. Financial modeling has demonstrated that the provision of electricity to all urban households is financially viable through mobilizing resources within the sector (tariffs and borrowing against future revenue streams). The National Electrification Forum (NELF) has recommended this approach. For example, if the sector adopted uniform tariffs, by raising levels to high income consumers by an average of 30 percent, to those who have benefited in the past from cross-subsidization from industrial/commercial users, then additional revenue of close to R1 billion would be generated per annum.¹³ However, electricity surpluses have historically been used as a backbone of municipal finance, covering deficits and funding other non-electricity expenditures. The net impact of shifting these resources remains to be seen.

Moreover, there has been recent discussion of removing control over electricity surpluses to give to a regional or national authority in order to achieve economies of scale.¹⁴ Removing control of these surpluses would have a substantial negative impact on local finances; removing this source of funds in Port Elizabeth, for example, could cause a 30 percent increase in the real estate tax.¹⁵ The board of directors of Eskom which produces 98 percent of electric power in South Africa, is appointed by the Ministry of Minerals and

¹³The NELF has established a National Electricity Regulator to issue licenses to electricity distributors and to require these distributors to submit plans for rationalizing the electricity tariff structures.

¹⁴UIIPT.

¹⁵P. Wilson, Port Elizabeth, from Abt Associates Inc., "South Africa: An Assessment of Municipal Environmental Services and Infrastructure", April 1995.

Energy Affairs rather than elected. It is far removed from public accountability and can take on some of the characteristics of a monopoly. The government has been prudent in entrusting the National Electric Control Board with franchising powers based upon a set of objective criteria.¹⁶ The degree to which urban consumers should cross-subsidize rural consumers is also under debate.

How tariffs are set varies. For some water boards, such as Umgeni, bulk water tariffs are approved at the *national* level by the Ministry of Water and Forestry. Retail tariffs structures are often approved by the town council. However, the Fiscal and Finance Commission maintains that provinces have some jurisdiction in approval of tariff structures as well. Some local governments, such as Cape Town, are also considering designating one tier of local government responsible for rate setting, project planning and collection of tariffs while another lower tier is charged with service delivery for reticulation, operations and maintenance.

Equity: One concern of raising tariff levels is that poorer consumers not bear an excessive burden. The white paper on Water and Sanitation thus recommends adoption of a lifeline tariff. With this tariff, the unit cost for the first unit of consumption up to a level of basic need (defined here as 5,000 liters per month) is less expensive than subsequent units and would not include the cost of capital; the largest consumers thus pay the highest unit costs, which effectively cross-subsidizes the capital costs of those that consume a minimal quantity. This is not only equitable, but it also discourages wasting of scarce resources. In white areas levels of water consumption are roughly triple that of former black townships and this policy would thus benefit poorer township areas.

The movement away from flat fixed tariffs will also improve the equity and efficiency of the tariff structure as flat rates tend to punish lower-income consumers. Staff of two municipalities (Empangeni, Richards Bay) both voiced agreement with a new principle of tailored payments and appeared to be making plans to integrate these mechanisms and abolish less efficient "flat" rates which had been used previously. This even extended to refuse collection in Empangeni, where the city is starting to sell bags for collection so that those who produce more refuse pay higher prices.

Improvements in Tariff Collection: It is clear that many of the assumptions regarding the ability of tariffs to generate revenues, and regarding the long-term sustainability of new infrastructure investments hinge on improvements in payment levels of former black townships. In South Africa political and social issues combined with poverty to create a culture of non-payment of utility bills. The scale of non-payment is more of a problem in the larger urban centers, where service levels tend to be higher and to cost more. The first major boycott occurred in Soweto in 1986. Since then payments have rarely been above 30 percent. The roots for non-payment were in part political, in part economic due to people's

¹⁶F. van der Velde, Cape Town, from Abt Associates Inc., "South Africa: An Assessment of Municipal Environmental Services and Infrastructure", April 1995.

limited ability to pay in face of the sudden increase, and in part due to low levels of service, poor payment services (few meters, inaccurate and unfriendly billing systems) and distrust of BLAs. The prerequisites for improved cost recovery in the future include:

- political will;
- adequate income levels;
- presence of accurate meters with people in place to read them;
- effective and consumer-friendly billing procedures, particularly for townships where people may not all have established addresses; and
- satisfaction with service levels and service quality.

In order to reverse past political support for payment boycotts, the Departments of Constitutional Development and Provincial Affairs are sponsoring the Masakhane Campaign in conjunction with the Department of Housing and the RDP Ministry. The campaign is meant to encourage residents to start paying for services, and improve service delivery, but also includes capacity building in local government for accounts payable procedures and tariff collection.

Comprehensive data is not yet available on the impact that this campaign has had on cost recovery levels. However, initial returns from IMTA's nationwide survey of local government to review a host of financial issues have not revealed any improvement in tariff payment levels. By the end of February 1996 a memorandum will be sent to the Cabinet with recommendations on how to improve this situation. Initial surveys have not revealed an improvement in repayment levels. In part, this may be attributed to the lag time which will be required to install meters, improve billing systems, and improve service levels. For example, in two municipalities with a fairly high level of capacity, Empangeni and Richards Bay, meters were still in the process of being installed in December 1995. However, it is also possible that political support is not always consistent or unanimous and that the belief that basic goods such as water should be free is difficult to reverse. The latter is particularly true where water cannot legally be disconnected, and where legislation does not exist with regard to the enforcement of tariffs.

A second factor which will be important if tariffs are to be increased, revolves around the capacity of the population to bear higher tariff costs. The UIIPT has estimated average service charges (water and sanitation excluding waterborne sewerage) incorporating cross-subsidization and excluding interest and redemption costs of capital, as follows:

Table K.5 Tariffs and Income Levels

Service Level	Rands per Month	Approximate Percent of Population for which service costs would exceed 10 percent of monthly income		
		Metropolitan	Non-metro urban	Rural
Basic	35 - 50	5.16%	14.83%	29.22%
Intermediate	100 - 130	26.83%	48.57%	76.48%
Full (low consumption)	180 - 220	49.22%	71.44%	91.52%
Full (high consumption)	270 - 350	70.89%	87.4%	97.15%

Only 16.7 percent of the population of non metropolitan urban areas earns more than 3,000 rand per month, compared to 34 percent in metropolitan areas. While some secondary cities (such as Empangeni) have a relatively small service backlog or a larger number of high-end consumers, many will be limited in their ability to cross-subsidize lower-income consumers.

Another important factor in improving repayment levels lies in the capacity of service providers who have traditionally been catering to a white population with a high level of service, to adapt and effectively communicate to different types of clients who may have lower service levels, lack adequate postage services, and speak diverse languages. For example, in one township outside of Richards Bay, women residents reported that water had been cut off for weeks at a time without explanation or warning. This poor service offers little incentive to pay, particularly when tariffs are charged on a flat basis and do not vary with levels of consumption. Effective communications strategies are thus going to play an important role in improving relations between service providers in former townships and clients. The ability of service providers to become more client-oriented represents one of several factors influencing cost recovery rates. While substantial discussion has centered around consultation with local representatives over service provision, service agencies must actually respond to the needs and demands and initiate dialogue with the end-customer.

Technological mechanisms also hold potential for increasing revenue streams. One of these, the use of energy dispensers, is most promising. Under this arrangement, a device is placed in the household which controls the amount of electricity that will be dispensed over a given period. The customer pays in advance for a certain amount of electricity via the purchase of tokens or entering code numbers into the dispenser. In this way the consumer chooses the level of service he wants for a given time period and pays for it in advance. Recent technological advances have reduced the ease of tampering with these devices.

4.4.2 Taxes and Rates

According to the UIIPT, the greatest potential for increasing local authority taxes lies in increasing the fuel levy already payable to local government, and/or increasing other

69

motoring taxes. The property tax could be further exploited although large increases would likely be politically unacceptable. However, low rates of assessment suggest that increased revenues could be generated just by increased coverage; in the town of Kimberley, for example, only half of the city's 60,000 housing units have been assessed. If trading services such as electricity are ring-fenced or have their surpluses controlled at the provincial or national level, local authorities could still collect an excise tax on the sale of these services to replace the surpluses currently earned.

4.4.3 Improved Efficiency

It is likely that over the short-term local government efficiency will decline as administrative structures are merged. Moreover, the Interim Local Government Act forbids firing or laying off personnel during this transitional phase and thus administrative costs will probably stay the same or increase.

4.5 Loan Financing

4.5.1 Development Bank of South Africa

The DBSA traditionally provided subsidized loans to homeland governments and BLAs. Its current portfolio includes an estimated R800 million to R1 billion in infrastructure loans. The Bank is in the process of changing its strategy to phase out subsidized interest rates; instead it is moving towards intervening only in cases of market failures or where its involvement could leverage additional private sector financing by providing technical assistance on financial management and partial financing to local authorities. In two recent projects in which the DBSA was involved, the private sector was willing to provide full financing.

4.5.2 Private Sector Financial Institutions

In the past, private sector finance has been primarily limited to a small number of large metropolitan cities and water Boards. As of February 1994, 12 water boards had long term debts totaling R2.1 billion with the TCTA (Trans Caledon Transfer Authority, the South African end of the Lesotho Highlands scheme) borrowing an additional R2.4 billion.

Several merchant banks have, however, shown an interest in lending not only for bulk supply but also for schemes which involve reticulation. Boland Merchant Bank is interested in grouping loans to several smaller municipalities in order to pool risk. Standard Chartered Merchant Bank (SCMB) has established a public finance division which has 800 million rand in municipal infrastructure loans. Other banks and institutions, as in Pietersburg, have been interested in acquiring equity and some of the underlying assets for water or electricity supply for tax deduction purposes.

The private financial sector will not be interested in all municipalities, particularly now that central government guarantees are no longer being offered. Banks tend to be interested in the larger municipalities with larger, high profile projects.¹⁷ They would also lend to smaller municipalities if they demonstrate an ability to repay loans either through government guarantees, track record of repayment, sound balance sheets, and through demonstrated management capacity. SCMB does not assess projects under 10 million rand. This limits the private financial sector's involvement to municipalities with a solid track record for tariffs, and large customer or commercial bases. However, in one case, a merchant bank lent to a small municipality with the understanding that the central government would support the municipality in case of financial distress (although this was not an official guarantee). The sustainability of this type of informal guarantee is limited. It is also likely that the smaller municipalities which have less management capacity, will also be those without the proper accounts for banks to assess credit risk.

The IMTA is supporting the development of a stronger credit rating capacity within the country in the hopes of facilitating private sector involvement. Goldman Sachs recently rated South Africa at barely investment grade. Ratings of water boards such as Umgeni by local rating agencies have varied so substantially as to lack credibility.

One of the reasons it is difficult to rate these municipalities is that these ratings cannot be done until effective underlying accounts are in place. The criteria which a private sector lender would need to easily assess include:¹⁸

a) Project viability

- The acquisition and financing of infrastructure projects should be subjected to a proper viability study. Only commercially viable projects can be considered.
- Ringfenced projects should generate a sufficient cash flow to service the loan obligations, especially at fluctuating interest rates.
- The extent of equity in a project, whether such equity is contributed by central government, provincial government, local government, or an RDP grant, can in fact enhance the viability of such projects.

b) Issues contributing to an acceptable credit assessment of local government

- Areas or local government bodies incorporated into the particular local government and the track record of these areas or local governments.

¹⁷Colin Coleman, SCMB.

¹⁸Dr. Danie Cronje, ABSA.

- Growth potential (proven growth record, availability and implementation of strategic or RDP programs should be considered).
- Composition and legitimacy of the council.
- Management expertise.
- Violence/crime.
- Unemployment and the extent of job creation.
- Home ownership.
- Tariff structures.
- Interest payments and loan redemptions as a percentage of operating expenditure.
- Salaries as a percentage of total expenditure.
- Outstanding debtors.
- Existing borrowings.
- Projected cash flows.

Thus the private sector can finance capital costs (not recurrent) and would be more likely to finance schemes which are ringfenced and therefore can demonstrate a sustainable cash flow. Many long-term lenders are therefore hesitant to invest in long-term stock and bonds for local governments; they are only likely to change once a track record has been established by the new local government; or if some form of guarantee was extended; and a credible rating system has been established or financial reports are in such a state as to demonstrate the likely rating.

Unfortunately, it is likely that many of the smaller municipalities which may have an acute need for external financing, are also often especially poor in administrative and managerial capacity.

In order to avoid the expectation that central government will rescue every municipality which nears default, clear financial regulation is needed to define the consequences and censure for default. For example, municipalities in financial default be taken over by a financial board, which would be charged with ensuring continued delivery of basic services, negotiating the degree to which debtors are paid, the level of future taxes and the extent to which municipality assets could be sold. Transparent and binding legislation on how the cost of bankruptcy is to be shared is especially necessary to ensure that capital markets are able to

167

play their disciplinary role and that central government does not ultimately inherit the debts of municipalities and service providers.¹⁹

The IMTA is also developing financial guidelines to be used as an input in the new local government act. This would include guidelines on default, conditions of borrowing, long-term operating and capital budgets, and recommendations on legislation for tariff enforcement. This may also include recommendations on how to deal with persistently low repayment rates; one idea under consideration is to recommend universal application of a lifeline tariff where the basic consumption level is set at a very low rate (below operations and maintenance costs) in order to improve payment levels to be subsidized by national government.

Role of guarantees: According to the criteria for loans set out above, it is unlikely that secondary towns without a strong rate or tariff record would qualify for private sector loans without external guarantees. However, national policy is clearly moving away from the provision of guarantees at the national level as these favor undertaking projects which may not be economically or financially sustainable. The only type of guarantees which would be appropriate would be if a financier needed to assess a given level of annual transfer from central government; in this case the guarantee could be given only if the agreed national transfer would need to go through the Fiscal and Financial Commission.

In some cases, however, private sector financiers expect that central government will by default bail out municipalities facing financial difficulties and have received informal signals to this effect. This sort of informal guarantee of central government support is not sustainable on a wide basis and highlights the need for specific legislation on default.

4.5.3 Private Sector Companies

Private sector companies which may want to provide services and contribute towards equity are another source of potential financing for local governments. A common approach is to have semi-independent water boards own and manage bulk water supplies. A 25 year concession for the provision of water is already in place in Queenstown. The concessionaire will provide water and sanitation services to the new TLC area. The concession has reportedly produced improvements in service quality and a decrease in costs of around 20 percent.²⁰ In Pietersburg a private sector company purchased water supply assets for tax purposes.

The primary focus of the main infrastructure parastatals (Eskom and Water Boards) has been on bulk water supply. However, both Eskom and the water boards have at times become involved in distribution directly to consumers, and the technical capacity exists for them to

¹⁹UIIPT.

²⁰UIIPT.

play a wider role in distribution. A water board active in KwaZulu/Natal, Umgeni Water, for example, is considering entering into a partnership with a private company where Umgeni would take over bulk water provision, and subcontract with the company to provide reticulation.

**ANNEX L: TECHNICAL ASSISTANCE AND TRAINING
TABLE OF CONTENTS**

1.	INTRODUCTION	1
2.	IN SUPPORT OF THE MUNICIPAL INFRASTRUCTURE INVESTMENT FRAMEWORK	3
2.1	Background	3
2.2	Responsibilities of a Local Authority	3
3.	OTHER TECHNICAL ASSISTANCE AND TRAINING PROPOSALS	6
3.1	Service Delivery	6
3.2	Legislation and Regulations	6
3.3	Local Government Training	6
3.4	Community Participation	7
3.5	Tariff Collections	7
3.6	Infrastructure Finance	8
3.7	Data Needs	9
3.8	Sanitation	10
3.9	Contracting Service Provision	10
3.10	Electricity Responsibility	10
3.11	Environment Management and Disaster Mitigation	11

ANNEX L: TECHNICAL ASSISTANCE AND TRAINING

1. INTRODUCTION

Technical assistance and training is best focused on improving means by which local authorities are able to undertake their responsibilities -- generating revenues, planning and programming expenditures, and implementing programs. Training can range from hands-on accounting for city treasurers to traditional town planning for local authorities, from community participation approaches to capital investment planning.

USAID should combine a focus on certain urban centers¹ and types of assistance. In determining needs and the most appropriate institutional arrangements, USAID must continue to engage national, provincial, and local institutions in discussions.² Attention must also be paid to the providers of assistance -- the mix of expatriate experts with South African consulting firms, universities, and professional associations.³

USAID may focus on relatively advanced urban centers in order to maximize the impact of assistance; or it may focus on, say, helping local authorities to compile a data base or to acquire the skills necessary for assessing institutional capacity.

The mode of assistance must be addressed as well. In many towns, financial deficits are reaching crisis levels and there is a need for short-term support. This suggests that technical assistance "on demand" is important. Such assistance could be in the form of financial managers and planners located at the provincial level, who could be seconded to different towns.

Some local governments would benefit from assistance in financial planning, forecasting and accounting. Others need assistance to transform service provision to be more consumer oriented through improved communications strategies. The need for such assistance varies substantially from town to town and from region to region. According to the Director

¹Besides attention to the areas around Cape Town, Pietersburg, Nelspruit, Port Elizabeth, and East London, USAID should consider the Richards Bay-Empangeni area and the Bisho-King William's Town area.

²Issues to be discussed include, of course, the target institutions --- should assistance be provided directly to individual local governments, to all or only specific provinces, and/or to national agencies such as the Department of Constitutional Development? Central government line departments that are particularly relevant to municipal services are the Departments of Housing, Water Affairs, Transport, Energy, Constitutional Development, Finance and the RDP Ministry. From the point of view of technical assistance and training, Constitutional Development is very important. The departments that the government designates as responsible for steering the infrastructure program are also significant.

³For a discussion of relevant training programs, see "Local Government Training in South Africa," March-May 1993, Baba Mabuya and Chris Thornhill.

General of KwaZulu/Natal, local governments may need some assistance, but sufficient technical expertise exists within the province which can be drawn upon. In Empangeni, for example, the town government is already discussing strategies for diversifying income sources, hopes to improve communications to its new clients, and has established a newsletter towards that end. In fact, on average, financial management capacity within KwaZulu/Natal is probably more developed than in some other regions. In contrast, in the Eastern Cape administrative capacity may be weaker.

A strategic decision must be made regarding whether assistance should be provided to those towns with the worst deficits and/or financial and managerial weaknesses, or whether assistance is best provided to those towns which might be able to attract private sector capital if they could improve their accounts and financial management somewhat. If the criteria for assistance is to leverage private sector funding, then assistance would be most effective for those towns which could, with a small amount of assistance, attract the private sector financiers.

Develop a number of case studies of particular local authorities, help them to formulate and implement an infrastructure program, and feed the lessons back into the design of central government technical assistance programs.

Section 2 below suggests an overall assistance program that supports the intentions of the Government's Municipal Infrastructure Investment Framework. Section 3 presents the needs and possibilities for USAID assistance in more discrete units.

2. IN SUPPORT OF THE MUNICIPAL INFRASTRUCTURE INVESTMENT FRAMEWORK

2.1 Background

Central government has embarked on an extensive program of capital investment in municipal services in order to overcome services backlogs and promote economic development. This program is taking the form of the Municipal Infrastructure Investment Framework (MIIF), which in phase 2 focuses on the implementation of the infrastructure program. Without necessarily linking USAID technical assistance and training directly to the MIIF -- as phase 2 has still to be accepted by government -- it would be appropriate to utilize technical assistance to support the delivery of infrastructure services in the manner envisaged in the MIIF.

Phase 2 envisages that local authorities will proceed through six steps (see below). USAID's potential contribution is to enable local authorities to proceed through the steps. This assistance can be provided either directly to local authorities which are central to service delivery, to provinces in order to build their capacity (albeit their role is still undefined), to parastatals, and to national government line departments which are investing in services and which provide assistance with capacity building.

2.2 Responsibilities of a Local Authority

Responsibility for preparing an infrastructure program and for coordinating the investments of central government line departments and the parastatals lies with local authorities. With a view to preparing an infrastructure program, a local authority has to:

- ascertain what services are presently available;
- determine where services backlogs exist in terms of levels and standards;
- learn which services backlogs are prioritized by residents;
- assess whether it has the capacity -- financial and institutional -- to undertake an infrastructure investment program that will remedy the backlogs;
- explore alternative sources of finance;
- evaluate alternative forms of service delivery;
- establish the institutional forms and systems and ensure staff capacity necessary to deliver services;
- negotiate access to finance;

- prepare a five-year infrastructure investment program; and
- design, seek funding for, and implement priority projects.

In order to fulfill its responsibilities, a local authority must undertake a number of steps. The presentation of steps 1 to 6 below does not imply an orderly progression from 1 to 6. For example, a local authority may have the ability to design and fund an infrastructure project, but still lack basic data as described in step 1.

Step 1. Data base. A local authority should obtain data pertaining to:

- demography (e.g., number of households, population growth, where growth is located);
- available services (e.g., bulk capacities, intended standards, actual levels of service delivery);
- planning (e.g., local authority boundaries, area densities, distances to employment centers, land uses);
- local authority financial capacity (e.g., rates income, service charges, record of cost recovery);
- local authority budget information (e.g., breakdown of current expenditures, capital expenditure program);
- local authority institutional capacity (e.g., staffing, skills);
- other social facilities that require services (e.g., education, health, recreational facilities); and
- an economic profile (e.g., industrial, business and commercial activities and the associated demand for services).

Step 2. Preliminary determination of infrastructure program priorities. The local authorities should ascertain community priorities for services and review existing strategic frameworks, forward plans, and especially Land Development Objectives prepared in response to the Development Facilitation Act, and then reach agreement in overview of a desired infrastructure program.

Step 3. Capacity constraints. The local authority should then assess its ability to:

- prepare an infrastructure program, design and implement projects, and maintain services;

- manage service delivery, provide meter services, manage billings and collections, calculate appropriate tariffs, etc.;
- understand government and the program priorities and expenditures of line departments;
- understand the financial system and how one obtains grant finance and private loans;
- access finance and comply with the conditions under which funds are likely to be available.

Step 4. Evaluate ability to overcome constraints. Constraints might be addressed by altering the form in which services are delivered and leveraging private finance with DBSA and grant funding.

Step 5. Finalize infrastructure program. This involves preparing a five year infrastructure program with projects sequenced over time, calculating the associated budget and settling on appropriate funding arrangements, ensuring institutional capacity and, where appropriate, adopting a new structure for service delivery. Local authorities that have a good credit rating may be able to obtain program funding from the private sector.

Step 6. Local authorities and service providers design, fund and implement projects. While the availability of an infrastructure program provides immediate guidance to local authorities regarding project priorities and denotes a degree of community acceptance, the actual design of projects supplying services to households should be based on further consultation with the recipients of the services.

Local authorities or service providers that are unable to obtain program funding will be forced to seek project funding. Local authorities that qualify for grant funding can then apply for such funding to the relevant provincial department, or if appropriate to the provincial representative of a national department.

10

3. OTHER TECHNICAL ASSISTANCE AND TRAINING PROPOSALS

3.1 Service Delivery

Problem to be Addressed: The collapse of service delivery in many smaller towns is reaching emergency proportions. At Butterworth, for example, the water supply is running out, largely through inadequate management of the system.

Recipient Institution or Target Group: A study of several towns would quickly indicate the scope and severity of service delivery problems. Provincial authorities would be able to determine priorities.

Nature of the Assistance or Training: Identification and quantification of parameters to evaluate the capacity of towns to meet customers' present needs and future growth. For example, determining the present per capita use of water and electricity and the proportion of excess capacity in the systems related to growth rates. Analytical studies to assist towns in planning the extension and reinforcement of their systems. Enhancing institutional ability to establish funding criteria, evaluate project proposals, select contractors -- in other words, establishing planning and development procedures.

3.2 Legislation and Regulations

Problem to be Addressed: Some laws, regulations, and financial procedures are preventing administration rationalization. The TLCs cannot function as units because the legal and financial environment is inconsistent. The regulations in each province are different.

Recipient Institution or Target Group: Provinces.

Nature of the Assistance or Training: Legal and financial experts would review the present regulations and financial procedures and formulate a coherent system for application in at least one province, but preferably applicable to all.

3.3 Local Government Training

Problem to be Addressed: Many political representatives have little technical (financial, administrative or engineering) knowledge of urban services provision. There is uncertainty about alternative forms of service delivery; indeed there appears to be resistance to the topic -- "now that we have gained control of government, you want to privatize service delivery?" Likewise, local government officials often appear to assume that infrastructure projects will be funded with grants -- "what is leveraging and anyway how does one go about doing it?" Municipalities face a complex and evolving landscape when it comes to financing service backlogs. Many municipalities are preoccupied with merging different administrations with different regulations and modes of functioning. In the town of Bisho, for example, different sections of the Transitional Local Councils continue to function as separate entities as the

procedures from the former administrative departments remain inconsistent.

Recipient Institution or Target Group: Local government officials, councillors, and provincial officials.

Nature of the Assistance or Training: Local government training courses. Subjects should include services provision, economics, finance, administration, role of community. Possibly visits to local authorities in other countries to see how they deal with similar matters. Providing information through newsletters regarding current changes in public policy thinking.

3.4 Community Participation

Problem to be Addressed: The role of community participation is unclear. Consultation during planning causes delays. Involvement in actual service delivery is not widely recognized. The respective roles of the TLC and community are unclear, especially since the local government elections.

Recipient Institution or Target Group: Local governments and community groups.

Nature of the Assistance or Training: A study of the relationship between the representative councils and the communities. The benefit should be a better understanding of the importance of, and methodologies for, community consultation in urban development projects. The introduction of community participation processes which reach the users of the services, particularly women who may not be represented in traditional community forums, is important.

3.5 Tariff Collections

Problem to be Addressed: Non-payment of fees and charges has enormous implications for the viability of service provision. It is not clear whether improved services will improve the payment situation -- in some cases non-payment is perceived to be the way to force improvements, without an obligation to pay. Communication strategies need to address both community involvement and commitment to pay.

Recipient Institution or Target Group: Local authorities.

Nature of the Assistance or Training: Assistance in improving the conditions which contribute to non-payment, such as failure to issue bills or record the payments, errors in billing, shortage of payment facilities, etc. The preparation of general communication strategies for local authorities. Training of communication staff to work in the local authorities. Administrative support and training would be needed in dealing with new groups of clientele and in improving repayment rates. This assistance and training would focus on improving the communications capability of the new authorities and on improving their

ability to assess and respond to client demands, conduct customer surveys, and adapt billing procedures.

3.6 Infrastructure Finance

Problem to be Addressed: Financing is mostly perceived as grants from the national to local government. A mixed finance package is generally not contemplated; it is not clear how it could work. Tariffs need to be modified, with a move away from flat rates possibly toward provisions for lifeline rates. In many towns the level of financial sophistication is still relatively low, as evidenced by the fact that many towns have had trouble properly filling in the questionnaire sent out on financial status by the IMTA.⁴ Technical assistance in the actual application and interpretation of such a model is likely needed. If provinces come to administer grant funding,⁵ then they need to enhance their capacity to fulfill this function. Clarity regarding the role of the provinces requires finalization and acceptance of phase 2 of the MIIF, the revised Local Government Transition Act and the revised Constitution. Due to this uncertainty the potential for focused USAID assistance to provinces appears a long way off.⁶

Recipient Institution or Target Group: Local governments.

Nature of the Assistance or Training: Formulation of typical finance packages, indicating the application and conditions. Training courses for town treasurers and provincial accountants. Compiling an infrastructure program to design, fund and implement infrastructure projects.

Technical assistance could include the formulation of new tariff rates and the processes of moving to those tariffs without provoking further boycotts. The bulk of training has been directed to town councilors. Several initiatives have sought to provide local governments with tools to assist them with planning and managing their new financial situations. These include a tariff/investment model⁷ that computes the cost of upgrading water and sanitation services for a given municipality. The model allows one to experiment with the impact of

⁴The analysis noted that former white towns in or near densely populated homelands faced the largest service deficits (East London, Botshabelo, Ladybrand, Giyani, Phalaborwa).

⁵This trend seems likely as they already play a coordinating role in the administration of, for example, the Rehabilitation and Extension of Municipal Services Fund. However, it should be kept in mind that grant funding represents a small proportion of total capital investments in infrastructure which, to a much greater degree, are funded by own sources, (increasingly by) borrowing, and the expenditure of central government line departments.

⁶While the same uncertainty of course also pertains to local authorities, the understanding that they are responsible for ensuring service delivery is unquestioned.

⁷Developed by Palmer Development Group, DBSA and Durban Water and Waste.

178

adjusting assumptions on levels of service for new consumers, upgrading to higher levels of service over time, length of program to eliminate backlogs, tariff structure, and increase in tariffs to repay loans.

The IMTA currently sponsors an initiative to establish a professional and coherent rating system which is in line with international standards, to develop consistent guidelines for provincial ordinances on finance (i.e., the types of borrowing allowed by local government), and to provide training through workshops to provincial administrations and new local governments on financial management issues (i.e., standardization of financial accounts). IMTA could also become involved in city councilors training.

Another initiative to be considered is a financial model which has been developed by the DBSA and applied to twenty towns to show what happens when a stable, medium sized town becomes a Transitional Local Council and inherits a large, underserved residential area. The model allows cities to assess the affordability of different levels of capital expenditures on long-term operating budgets.

3.7 Data Needs

Problem to be Addressed: Urban development plans, where they exist in any form, are mostly physical and have little or no relation to needs assessments nor do they have an economic or financial dimension. Benefits-based strategies may need to be considered. Urban consolidation studies as in Nelspruit may have limited value. Local governments are unclear about what development is needed. Local authorities often lack the wherewithal to assess what effective delivery of services entails and what the specific local authority is capable of. This is true of both institutional and financial capacity.

Recipient Institution or Target Group: Local authorities.

Nature of the Assistance or Training: Preparation of a standard process for collecting and evaluating data, and utilizing it to develop and present alternative strategies. The system could include structured worksheets, checklists and guidance on appropriate values in planning. Application of the process in some towns to demonstrate its validity. Due to the poor quality of socio-economic data, assistance could be provided in enabling local authorities to obtain, store, and use data, especially when this is on a geographic information system (GIS) system.⁸ The Department of Constitutional Development is, in fact, developing a register of all available data on municipal areas, but this is unlikely to be coherent and user-friendly. It is essentially this service, enabling weaker local authorities to develop and utilize (especially via GIS systems) user-friendly data bases that should be emphasized.

⁸GIS is fairly common in South Africa, but not among smaller and poorer local authorities.

79

3.8 Sanitation

Problem to be Addressed: The implications of sanitation methods are not well understood - environmental impact, cost, acceptance by the beneficiaries.

Recipient Institution or Target Group: Local authorities.

Nature of the Assistance or Training: A study of sanitation that should identify the limits of application of different technologies in such a way that the funding authorities can be informed when a more expensive technology is justified by applicants for funds.

3.9 Contracting Service Provision

Problem to be Addressed: The role of Transitional Local Councils in service provision is often constrained to past practices. The opportunities for contracting out, as well as the need for good project and operations management, are not widely perceived.

Recipient Institution or Target Group: Local authorities.

Nature of the Assistance or Training: Workshops for councillors and officials to review the role of contracting in services provision. Training courses on project management for the operation and maintenance of public urban services through contractors, under the administration of the local authority.

3.10 Electricity Responsibility

Problem to be Addressed: The MIIF identifies roles for different levels of government. Local government is responsible for the delivery of services in urban areas. Central government is responsible for the criteria for allocating public funds. The role of the parastatals, such as Eskom, is not defined. The proposed takeover of all electricity supply by Eskom or a similar national distribution authority would be in contradiction of the principles outlined in the MIIF. Responsibilities for making decisions on the electricity supply industry structure and the contest between Eskom and the local government utilities must be clarified.

Recipient Institution or Target Group: National government, Eskom, local authorities.

Nature of the Assistance or Training: The appropriate assistance on this issue may be difficult to identify, as the situation may move quickly and result in structures of very different characteristics. If the structure is changed to remove electricity responsibility from local authorities, there will be a need for replanning the financial affairs of the local

authorities.⁹ If Eskom does not assume responsibility over the electricity supply in local authority areas, a study of rationalization of financial, administrative and technical processes of electricity supply could be of significant use to the local authorities.

3.11 Environment Management and Disaster Mitigation

Problem to be Addressed: Although the RDP White Paper included the creation of sustainable and environmentally friendly development as part of the nation's goals, there is inadequate institutional capacity and understanding of the processes of integrated environmental management and disaster mitigation for these aspects to be included effectively in development planning.

Recipient Institution or Target Group: Provincial and local officials.

Nature of the Assistance or Training: Assistance with drafting regulations and specific guidelines and procedures for the incorporation of environmental control and disaster mitigation in development planning and implementation. Training of officials at central and provincial government in the techniques of integrated environmental management and disaster mitigation. Analysis of the economic contribution of environmental management and disaster mitigation to urban development.

⁹MIF documents state that the options for financing local authorities, if not from electricity revenues, "must be evaluated in the context of wider fiscal and taxation policy".

Appendix 1: PERSONS INTERVIEWED

Gemey Abrahams	Consultant, RDP Urban Infrastructure Investment Planning Team
Japie Bosch	National Secretary, Institute of Municipal Treasurers and Accountants (IMTA)
Andrew Boraine	Deputy-Director General, Department of Local Government
F. Bosman	Town Engineer, Richards Bay
Colin Coleman	Standard Chartered Merchant Bank
Felix Fongoqa	FST Consulting Engineers and Project Managers, East London
Chris Heymans	Manager, Policy Coordination, Development Bank of Southern Africa
Barry M. Jackson	Senior Policy Analyst, Development Bank of Southern Africa
C. J. Kapp	City Treasurer, Port Elizabeth; President, IMTA
M. Lundstrom	Deputy Director Department of Public Works, East Cape Provincial Administration
Mateza	City Treasurer, King William's Town
Antony Melck	Deputy Chairperson, Financial and Fiscal Commission
T. Mhlahla	MEC Public Works, Eastern Cape Provincial Administration
Neil Muller	Town and Regional Planner, Empangeni
P.E. Odendaal	Town Clerk, Empangeni
Henk Rossouw	Boland Financial Services
Nelly Sauti	Town Secretary, Bisho
Brian Schaller	Town Engineer, Bisho
A. J. Van der Walt	Town Treasurer, Richards Bay
Philip van Ryneveld	Consultant

82

Martiens Victor

Borough Engineer, King William's Town

Brian Walford

Chief Executive, Umgeni Water Board

183

Appendix 2: SELECTED REFERENCES

Abt Associates Inc. South Africa: An Assessment of Municipal Environmental Services and Infrastructure. April 1995

Crihfield, John B., Barents Group, KPMG Peat Marwick. Working Paper, Institute for Local Governance and Development. November 1995.

Cronje, Dr. Danie, ABSA Bank. The Role of the Banking Sector in the Financing of Local Government. October 1995.

Electricity Working Group. Electricity Supply Industry.

Government Gazette, 4 March 1994, Notice 172 of 1994.

Institute of Municipal Treasurers and Accountants. The Effect of Amalgamation on Local Government Finances. October 1995.

____. The Effect of the Non-Payment of Local Government Tariffs. October 1995.

____. Example of the Published Annual Financial Statements of a Grade 4 Local Authority. 1994.

____. The Implementation of Uniform and Affordable Local Government Tariffs. October 1995.

____. Implementing the RDP at the Local Level: A Strategy. October 1995.

____. Guidelines Regarding Standardised Financial Regulations for Local Authorities. February-March 1987.

____. Report on Standardisation of Financial Statements of Local Authorities in South Africa. 5th Edition, June 1994.

____. The Role of Central Government in Local Government Finance. October 1995.

____. The Role of Development Finance in the Provision of Municipal Infrastructure. October 1995.

International Co-Operation, Occasional Papers. Local Government in SA: Realities and Issues From the Past and for the Future. October 1993.

Jackson, Barry. Financing Water and Sanitation Services: The South African Scene. June 1995.
Mabuya, Baba and Thornhill, Chris. Local Government Training in South Africa. March-May 1993.

Medical Research Council, Community Health Research Group. Electrification and Health: A South African Perspective. Cape Town, 1995.

Miller, Peter, Minister of Local Government and Housing, KwaZulu/Natal Province. Memorandum to the Cabinet, Financial Support to Transitional Councils.

Ministry in the Office of the President. The Rural Development Strategy of the Government of National Unity. October 1995.

_____. The Urban Development Strategy of the Government of National Unity. October 1995.

Ministry in the Office of the President and the Department of National Housing. Municipal Infrastructure Investment Framework. October 1995.

Report on Principles and Guidelines for the Engagement of the Private Sector in the Provision of Water and Sanitation. Draft, December 1995.

RSA Government. Municipal Infrastructure Investment Framework. October 1995.

_____. White Paper on Housing. 1994

The South African Treasurer. September 1995, October 1995.

The State of Local Government Finance, Version 3. October 1994.