Implementation and Delivery of Free Basic Electricity in the Face of the Restructuring of the Electricity Distribution Industry

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ENERGY RESEARCH CENTRE

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DECLARATION

I, Audrey H. Dobbins declare that this dissertation is my own original work. It is being submitted in partial fulfilment of the requirements for the degree of Master of Science in Engineering (Energy Studies) at the University of Cape Town. It has not been submitted before for any degree or examination at any other university. I know the meaning of plagiarism and declare that all the work in the document, save for that which is properly acknowledged, is my own.

Signed by candidate

AUDREY H. DOBBINS

Dated at 20th ~~02.2006~~ this day of February 2006

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ABSTRACT

The Free Basic Electricity (FBE) Policy was established, in part, to alleviate some of the worst effects of poverty experienced by the poorest of the poor in this country. Yet, of the 70% households electrified nationally as of 2003, only 38% of them are poor households, inherently excluding the other 62% of poor households from eligibility for the subsidy. There is much ground to be covered since the government has set a target for Universal Access to electricity by 2012. Improving access to electricity is one aspect, addressing the issues of affordability is another facet. This is where the FBE comes in as it is intended to supply each poor household with a free allocation of 50 kilowatt hours per month. Thus far, 19% of all households have experienced a drop in their energy costs due to the contributing FBE. Of these 19% households, 43% of them are poor. Here, too, is more ground to be covered yet if the intended poverty alleviating effects are to be harnessed by those for whom the policy was intended.

The targeting mechanisms used to administer the subsidy are one of the most difficult aspects of service delivery to get right. Recommendations of broad-based and self-targeted approaches allow local governments the sovereignty to implement the free allocations of electricity to the best of their financial and administrative capabilities. Both of these approaches have their advantages and disadvantages and either threatens the exclusion of those deserving of the subsidy or the inclusion of those who do not. Compared to the implementation of other subsidies and grants in South Africa, the administrative difficulties are not very different when it comes to targeting the recipients.

Municipalities have the right and the duty to electrify and provide those in their jurisdiction with basic services. Local government is in the position to generate most of its income from collecting taxes and surpluses from tariffs which they then in turn use to pay for other municipal services. The costs to supply free basic services are supplemented through national funding by means of an equitable share allocation from national government administered through provincial government. Since most of local government's income is generated from electricity sales, there was the fear that the restructuring of the electricity distribution industry into Regional Electricity Distributors (REDs) could render the municipalities bankrupt. Furthermore, would the delivery of electricity related services such as electrification and FBE continue and increase in effectiveness?

This paper investigates the intention of the Free Basic Electricity policy, the implementation of this policy, the policy beneficiaries, the funding of the policy, the role of the policy in poverty alleviation and the future of the policy in light of the Regional Electricity Distributors.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMNS AND ABBREVIATIONS

ANC	African National Congress
CCT	City of Cape Town
CO_2	Carbon Dioxide
COSATU	Congress of South African Trade Unions
DME	Department of Minerals and Energy
dplg	Department of Provincial and Local Government
DWAF	Department of Water Affairs and Forestry
EDI	Electricity Distribution Industry
EDRC	Energy and Development Research Centre (now ERC)
ERC	Energy Research Centre (merger of EDRC & ERI)
ERI	Energy Research Institute (now ERC)
ESI	Electricity Supply Industry
FBE	Free Basic Electricity
FBS	Free Basic Services
FBW	Free Basic Water
GEAR	Growth, Employment and Redistribution
GDP	Gross Domestic Product
IDP	Integrated Development Plan
kVA	Kilo Volt Ampere
kWh	Kilowatt-hour
LED	Local Economic Development
LPG	Liquefied Petroleum Gas
LPGSA	LPG South Africa
MJ	Mega Joule
NER	National Electricity Regulator/National Energy Regulator
NT	National Treasury

PASASA	Paraffin Safety Association of South Africa
PIR	Poverty and Inequality Report
RED	Regional Electricity Distributor
RDP	Reconstruction and Development Programme
SALGA	South African Local Government Association
SDA	Service Delivery Agreement

CHAPTER 1: INTRODUCTION, OBJECTIVES AND OUTLINE

1. Introduction

What is the need for an Electricity Basic Services Support Tariff (EBSST) in South Africa? Who should the targeted beneficiaries be and how will they be reached? How will this subsidy be funded? These are a few of the questions that have been explored in this work. My interest in this topic arose from a field visit during the course of my studies at University of Cape Town to Masiphumelele, near Noordhoek. Just as a picture speaks a thousand words, seeing the state of electricity and energy use in low-income urban households in Cape Town brought to life the realities faced by those living in poverty. My interest rose to find out how the Free Basic Electricity tariff, and indeed policy, has contributed to alleviating the burdens of these households. This visit showed me that, in fact, not all households were privy to the benefits of the tariff. Those that lived in the poorest areas of this informal settlement did not have electricity connections, much less the advantage of receiving a free allocation of electricity. How then, can the plight of poverty be alleviated in these households? How is the burden of paying for energy compensated? During this dissertation, it is my aim to explore the objectives, targets, delivery and funding of the Free Basic Electricity Policy in the face of a restructuring electricity distribution industry. Legislative decisions are taken on a national level but implemented on a local level, therefore when reading this dissertation it should be kept in mind that it is necessary to talk to a national level as well as to a local level. Where it is necessary to talk about the local level implementation, I have chosen to talk about the Cape Town metropolitan area in the Western Cape of South Africa for several reasons. One is that the example given above about Masiphumelele draws my attention closer to home. Another reason is that the Free Basic Electricity Policy was first implemented in Cape Town, just as Cape Town was the first area to have an established Regional Electricity Distributor, making Cape Town the ideal platform for discussion of these issues.

1.1 Objectives

The following sections outline some of the most important research questions that will be answered in this dissertation. Some of these questions developed only after reading a significant amount of literature, which shed light on previously overlooked information. Much information also had to be excluded as this research went on due to the pure fact that asking another question leads to a whole new universe of questions. Though many of these other questions are interesting and worthy of further exploration, the questions asked and answers sought were restricted to relevancy to the

analysis of the Free Basic Electricity Policy and the impacts of the restructuring of the Electricity Distribution Industry on the delivery and implementation of this policy.

1.1.1 Question 1: The Free Basic Electricity Policy (FBE)

The questions relating to the Free Basic Electricity Policy are as follows:

- Why was this subsidy created?
- What is the intention of the policy?
- What implementation and delivery methods were considered and how they were selected?
- How are other subsidies delivered in comparison?
- Who are the intended recipients of the subsidy?
- Who are the actual recipients of the subsidy?
- Who are the poorest of the poor?
- How is the subsidy financed?
- How does the funding funnel through national government to the recipient of the subsidy?
- What difference does the Free Basic Electricity subsidy make in addressing affordability of modern fuels in poor households?
- How will the targeting of FBE affect backyard dwellers and low-income non-electrified households?

1.1.2 Question 2: Regional Electricity Distributors (REDs) and FBE

The research questions related to the impact of the REDs on delivery of FBE are as follows:

- Why restructure the Electricity Distribution Industry in South Africa?
- What inefficiencies were found in the sector?
- How will the restructuring impact on the Municipality's ability to fulfil its legal obligations?
- How will the restructuring impact on the delivery of the Free Basic Electricity subsidy?
- How will the restructuring impact on the funding of the Free Basic Electricity subsidy?
- What will the tariff structure look like under the REDs?

1.2 Methodology

This dissertation was researched by reviewing government documents, such as relevant policies, acts, bills, budgets and the Constitution. This was supplemented by reviewing literature analysing various positions on the implementation of Free Basic Electricity, the restructuring of the

electricity industry, and the impacts of these on different sectors of government and people of this country. Where current literature was not available, the details were acquired through interviews with pertinent people working in this field. Applicable information was collected from a thorough internet search for documents pertaining to South African energy use patterns, demographics and energy history. This information was narrowed down to include a comprehensive profile of Cape Town, which served as the study site. Various stakeholders were consulted via email exchanges, telephonic and personal interviews to fill in gaps where no literature has yet been released.

1.3 Outline

The first chapter outlined the reason for this study, the objectives, research questions, and the methodology used to arrive at the answers.

The second chapter of this dissertation includes a description of energy use in South Africa, the state of energy use in households in Cape Town, and energy policy in South Africa. This will provide as a background to give context to the FBE. An exploration to understand poverty and energy poverty is undertaken with relevance to the establishment of a free basic electricity allocation.

The third chapter gives a brief history and background to the Free Basic Electricity policy and considers the funding possibilities examined. The fourth chapter briefly explores the implementation of various other subsidies and grants in South Africa and compares these mechanisms with those used for the FBE. To provide a deeper understanding of the implementation of the FBE, appropriate legislation and budgets will be reviewed in the fifth chapter, especially with regards to local government as the acting body of transferring the subsidy. The sixth chapter investigates the restructuring of the electricity industry giving special focus on the current restructuring of the electricity distribution industry into the Regional Electricity Distributors. The possible implications of the restructured industry on the funding and delivery of the Free Basic Electricity subsidy will be discussed. A summary of key issues in the seventh chapter will give rise to the conclusions detailing alternatives and solutions to the intricate problems of targeting, implementing and delivering the Free Basic Electricity Policy in the final and eighth chapter.

CHAPTER 2: SOUTH AFRICAN ENERGY POLICY, ELECTRIFICATION, AND ENERGY USE IN THE CAPE TOWN DOMESTIC SECTOR

2. Introduction

This section deals with the policies formulated in South Africa in the previous as well as the present government that determine the production, distribution and use of energy. An overview of energy use in South Africa will be given, with emphasis on the residential sector in Cape Town, the focus area of this research. The historical and current picture of energy use in South Africa will show how electricity use falls within the context of the development of a Free Basic Electricity Policy. Access and affordability of electricity use are important links in the success of the objectives of such a policy and thus are also addressed in this chapter. The current state of residential energy use will lead to a discussion about energy poverty and the need for policies to combat poverty.

2.1 Energy Policy

The Department of Minerals and Energy (DME) in South Africa developed the *White Paper on Energy Policy for the Republic of South Africa* to outline the new energy policies after the end of the Apartheid in 1994. In writing the policy, the authors took into consideration the importance of the policy being internationally relevant in terms of recognising trends without compromising regional and national objectives and priorities. The energy policy was aligned with the priorities of the government, namely advancing economic growth and creating jobs. The objectives of the energy sector policy as outlined in the 1998 DME *White Paper* are:

- Increasing access to affordable energy services;
- Improving energy governance;
- Stimulating economic growth;
- Managing energy-related environmental and health impacts; and
- Securing supply through diversity

Increasing access to affordable energy services is viewed in this document as core to the success of the government's Reconstruction and Development Programme (RDP) and to the socio-economic progress of the country (ANC, 1994). The RDP (ANC, 1994:32) discusses the necessity to develop policies which not only aim to improve overall economic growth, but also to address community services and the needs of the poor. In its quest to supply affordable energy services, which are also cleaner and safer to use, the government has explored options such as coal substitutes, for example

liquefied petroleum gas (LPG), promotion of safer paraffin stoves with monitored standards, raising awareness of the implementation of such tools and continuing the electrification of households (DME, 1998).

2.2 Electrification

A priority for the government is to increase access to affordable energy services while minimising the negative effects of energy use on personal health and the environment. This was emphasised in the RDP (ANC, 1994:33), where an accelerated electrification programme would bring the electrification of households from 36% to 70% by 2000, which has been achieved! The current President of South Africa, Thabo Mbeki, has also promised in his State of the Nation Address in 2005 that there would be electricity for all by 2012 (GoSA, 2005) in line with governments objectives outlined in the DME White Paper (1998) to achieve "Universal Access." Electrification is contended to be more difficult for the remaining 28%, as most of these households are either in rural areas far from the main grid, making it more expensive to deliver electricity, or urban households situated on land not zoned for municipal service delivery, such as private, encumbered, flood plains, wetlands, etc (McFarland, 2004). Informal settlements that are situated on encumbered land, private land, and wetlands (or other environmentally unsuitable land for living) will not be electrified (McFarland, 2004). Currently, the City of Cape Town does not have a policy to manage informal settlements, but Roger McFarland (2004) of the former City of Cape Town electricity department recommends that this happen in order for Universal Access targets, and indeed other developmental goals of the government, to be met. The issues which need to be addressed in order for these households to get access to electricity may involve the purchasing of such private land by government, or the relocation of households to more suitable land. However, this is also not an easy feat to be addressed and is outside the scope of this research, but is worthy of future investigation.

Electrification can be supplied via grid and off-grid connections (Solar Home Systems (SHS), generators, hybrid systems or battery supplies). Off-grid connections, such as the SHS, are subsidised and the connections are given as equal a financial priority as possible, since grid connections are more economically feasible. A huge electrification process began after the 1994 elections in order to balance discrepancies left over from Apartheid. Electrification is an attempt to address a multitude of issues that this country faces: economic growth, environmental sustainability, and social needs (DME, 1998).

2.2.1 Electrifying for Economic Growth

Economic growth is considered to be imperative (DME, 1998:6 and ANC, 1994:78) to the development of South Africa. Further, the RDP (ANC, 1994:16) states that meeting basic needs

boosts "production and household income through job creation, productivity and efficiency, improving conditions of employment, and creating opportunities for all to sustain themselves through productive activity." Developing electricity infrastructure would supply the means with which to build "productive economic capacity" (DME, 1998:7). Electricity is a versatile form of energy, easily applied to various activities and therefore provides the opportunity to be used in productive and income-generating activities. Electricity is the cheapest fuel to meet most cooking, lighting, media and ironing needs in terms of efficiency (Lloyd, 2004:10-16). However, many households still use other fuels, which compete with electricity use as the main source of energy, because for instance the initial capital investment in electrical appliances is generally higher (SEA, 2003:4-4). Borchers et al (2001:30) found that some small businesses benefited from being electrified in that they were able to use more electrical appliances, thereby enabling them to provide more sophisticated services to others. Yet the benefits of electrification catalysing more local income-generation activities had not been fully realised, as had been expected as an outcome of the electrification programme and the free allocation of electricity (Lloyd et al, 2004:17).

2.2.2 Electrifying for Environmental Sustainability

Lloyd et al (2004:9) report from their findings that indoor air pollution and the health risks associated with burning low-grade fuels and fuelwood in the household are greatly diminished by an increase in electricity use. The risk of fires is also drastically reduced as the use of paraffin decreases. Electrification thus engenders local environmental stability. However, the burning of coal to produce electricity at the power station produces carbon dioxide (CO_2) which is a major contributor to climate change (SEA, 2003:3-2). Therefore, production of electricity at a power station is still ideally done with a more environmentally sound fuel source or technology such as a renewable source (e.g. solar, wind or hydro).

2.2.3 Electrifying for Satisfying Social Needs

Electrification also has a social objective. The DME (1998:36) states that the continued reliance on multiple fuels hampers the human development potential. Lloyd et al (2004:16-17) found in their study to identify the sustainability (socially, economically, and environmentally) of electrification that there were definite impacts on reducing poverty. Their study found a marked improved quality of life and living conditions, in terms of "health, wellbeing and safety" when using electricity. Reduced dependence on dirtier fuels translates into reduced health costs associated with the use of low-grade fuels and lower risks of property destruction. However, some of these fuels are still being used in a number of households.

A stronger drive for electricity as the primary energy source for households arose in part from the recognition of the dangers of paraffin use. Indoor air pollution from paraffin smoke causes severe

to fatal health problems such as chronic coughing, asthma, headaches, dizziness, and pneumonia (PASASA, 2001) Also, paraffin is often sold in any available container provided by the customer, most often an old beverage bottle, wherefrom the contents are often inadvertently consumed by children, thereby poisoning them (SOE, 2003:4-8, UCT, 2002:72, PASASA, 2005). Furthermore, PASASA (2005) reports that 50,000 South African households are devastated by paraffin-related fires annually, with occasional resultant deaths (The figures for paraffin related burns, deaths, poisoning are not collected, and are in fact difficult to collect, but it is estimated that 4 000 deaths per year are due to burns, but it is not known if these are all paraffin related (PASASA, 2005).) Paraffin related fires are mostly caused "when sub-standard, unsafe paraffin stoves are knocked over or explode or when paraffin contaminated with other chemicals, including petrol, suddenly flares" (PASASA, 2005). These are some of the associated risks when using paraffin and are perhaps even keeping the poor in poverty because of the related costs to health and damaged property. But as will be discussed in the next section, preference is not always a factor when choosing which fuels to use in the household.

2.2.4 Funding Electrification

Electricity connections, as part of the electrification programme, will be funded "from a dedicated electrification levy, the level of which will be determined annually, as part of the budgetary process" (DME, 1998). Electricity distributors are expected to comply with annual electrification targets set by national government, and pay for the balance of the electrification programme, as part of their license conditions. A portion of the capital costs of these connections will be financed through the National Electrification Fund collected from the national revenue (DME, 1998:35-38).

2.3 Poverty and Energy Poverty

Measuring and defining "poverty" is a difficult feat, exacerbated by the circumstances in a country like South Africa where the average per capita value (a norm in measuring a country's poverty level) ranks South Africa as an "upper-middle-income economy" (May et al, 1998). In South Africa's case, it would be better to consider the rate of unemployment, the percentage of the population living under the poverty line, and the unequal distribution of wealth amongst its citizens, as these factors are more reflective of the state of poverty in this country. Poverty in South Africa has also been measured in terms of the Human Development Index (HDI) and the Gini coefficient, both of which set South Africa as a relatively poverty stricken and unequal society (May et al, 1998). The HDI measures the development of humans in a country using life expectancy, infant mortality, education levels and standard of living. South Africa, using the HDI, falls under "medium human development." This indicates that South Africa, as a whole, is not

living to its fullest development potential in terms of living "long, informed and comfortable lives" (May et al, 1998:3).

The Gini coefficient measures the inequality of a society or the inequality within different sectors of society. The HSRC (2004) describes the Gini coefficient as "a summary statistic of income inequality that varies from 0 (in the case of perfect equality where all households earn equal income) to 1 (in the case where one household earns all the income and other households earn nothing)". The overall Gini coefficient for South Africa in 2001 was 0.77 (HSRC, 2004), indicating a vastly unequal society. This figure has increased since 1999 from 0.69 suggesting that policies and measures put into place by the government have not been as successful in redistributing some of the wealth of income and assets as was possible (HSRC, 2004). Headway needs to be made when looking at the distribution of income across household quintiles in order to kerb the current trends and prevent them from worsening the situation for the poorest South Africans. Policy decisions, and their proper implementation, will impact on the alleviating the worst effects of poverty for the poorest of the poor.

The Poverty and Inequality Report (PIR), in 1998, used a method from the RDP to determine the poverty line for South Africa. This is: the first two income quintiles, i.e. 40% of all households, are categorised as poor and the first income quintile, i.e. the poorest 20% households, are categorised as ultra-poor. In financial terms this translates to households spending less than R352.53 per adult equivalent per month classified as poor, while those spending less than R193.77 per adult equivalent per month are considered to be ultra-poor. In numbers, this translates to classifying approximately 19 million people as poor and 10 million people as ultra-poor (May et al, 1998). Measuring poverty is not an easy feat, therefore it is vital to get an accurate picture by taking all of these factors and measurement tools into consideration.

The PIR (May et al, 1998) gives the following definitions:

- "Poverty can be defined as the inability to attain a minimal standard of living, measured in terms of basic consumption needs or the income required to satisfy them;
- Inequality can be defined in terms of being the opposite of 'equality', a state of social organisation that enables or gives equal access to resources and opportunities to all members."

Another term used in the PIR is that of *vulnerability*. Vulnerability is used to understand the movement into and out of poverty. Poverty is not a static condition, meaning that people can rise out of and fall into poverty due to many reasons, such as poor health leading to loss of income, drastic and sudden events such as flooding or fires, increase in family size putting a burden on the

budget, or indeed a positive turn of events like family members acquiring jobs, being promoted or a pay-rise.

It is not necessary to go into historical detail about the causes of the current situation, and the degree of poverty in this country as it is well-known that the previous Apartheid regime is to blame for blatantly putting people of darker colour at a disadvantage, by denying them the right to access basic needs, or providing substandard services in substandard conditions. The responsibility and burden to address, and better still to put into motion measures to rectify, these discrepancies is on the shoulders of the current government. Policy decisions should be taken to rectify the inequality of the previous government's wrongs and to reduce poverty. This includes sustaining economic growth while improving the quality of life in terms of the HDI by expanding individual and community access to physical and social assets and reducing inefficiencies of markets and infrastructure of service delivery (May et al, 1998).

The RDP (1995) gives the following as their mission statement to combat poverty: "It is not merely the lack of income which determines poverty. An enormous proportion of very basic needs are presently unmet. In attacking poverty and deprivation, the RDP aims to set South Africa firmly on the road to eliminating hunger, providing land and housing to all our people, providing access to safe water and sanitation for all, ensuring the availability of affordable and sustainable energy sources, eliminating illiteracy, raising the quality of education and training for children and adults, protecting the environment, and improving our health services and making them accessible to all."

As mentioned, poverty can also be caused by a lack of access to infrastructure, and resulting inability to meet basic human needs, such as the energy use. Access to and use of energy is vital to the improvement of welfare and quality of life, and to the achievement of the objectives set out in the RDP mission statement to combat poverty. Energy poverty is defined in the PIR (May et al, 1998) as "the condition of having less than a certain level of daily consumption necessary to maintain a minimum standard of living." This is essential in countering the "negative impacts on nutrition, hygiene, health, and comfort." The lack of energy also impacts on the ability of individuals or households to participate in economic activities which would lead to small- and micro-enterprises.

2.4 Energy and Electricity Use in Urban South African Households

South Africa derives 70% of its primary energy from coal, followed by 17% from crude oil, which are used to produce electricity and fuel the transport sector, respectively. These are the two sectors that consume the greatest amount of electricity. Coal is in vast supply and economically inexpensive, therefore it is used to its maximum for electricity production. Eskom, the state-owned

utility, owns and operates the national electricity grid and supplies 95% of South Africa's electricity (GoSA, 2005).

Since 1994, energy use in South Africa has undergone many changes. An electrification programme launched to undo the discrepancies in electricity services from the previous Apartheid government has seen three million households electrified. That brought the overall figure of electrified households from 36% to 70%. Many rural households are still not electrified, as the infrastructure for these households is more demanding and capital intensive. The national outstanding figure of non-electrified rural households is currently around 46% (NER, 2003). However, efforts are being made to supply electricity to rural households via Solar Home Systems (SHS). This is discussed in section 2.2 titled "Electrification".

Energy comes in the form of electricity (produced from other sources of fuel), coal, firewood, natural gas, LPG, paraffin, batteries, nuclear power and renewable sources such as biomass, solar and wind. There are many possible options for fuel use in the residential sector, but these are not always ideal or available. The acquisition of free energy sources, such as firewood or biomass, are not always possible in urban areas as wooded areas are limited, if not non-existent, in close proximity to homes (Lloyd et al, 2004:5, Gaunt, 2003: 147). This means that low-income houses, especially, are dependent on lower grade fuels that can be used in inexpensive appliances, such as paraffin in paraffin stoves (SEA, 2003:4-4; Lloyd et al, 2004:5). Electricity has historically been viewed as the end goal on the "energy ladder" model; anyone without access to electricity is viewed to be in some kind of energy poverty. The energy ladder corresponds to fuels ordered in a ladder type hierarchy dictating various factors: expenditure level i.e. the cost of fuels (and appliances); and level of air pollution released when burning that fuel. Traditional fuels, which may vary for different regions, such as biomass, coal and firewood are typically at the bottom of the ladder, while paraffin occupies the middle rung and the cleaner, more efficient, modern forms of energy (electricity and LPG) reside at the top (Reddy et al, 2002: 45).

There has been a political drive to electrify all households, however, simply having access to fuels or electricity does not address the issue of affordability. Many people may have access to electricity, though still be unable to afford to use it to satisfy all of their energy needs. People lacking access to *modern* energy fuels may not necessarily be in energy poverty since they are still using other fuels, such as paraffin, to meet their needs. However, these energy forms are usually more expensive when bought in smaller quantities (Clark, 2002:8), unlike electricity, which can be purchased in any amount at the same rate. Put into context, currently with most people (70% nationally, 79% national urban, 81% Cape Town area) (NER, 2003) electrified, many low-income households still cannot afford to use electricity as their exclusive source of energy for cooking, heating and lighting. A recent study done by Lloyd et al (2004) in an urban informal settlement in

Cape Town found indications that cooking with electricity was on the rise, and that about 65% of electrified households were indeed using electricity for cooking purposes.

2.5 Energy and Electricity Use in Households in Urban Cape Town

The City of Cape Town is a Metropolitan Category "A" Municipality located in the Western Cape which includes six administrative areas: Cape Town, Blaauwberg, Helderberg, Oostenberg, South Peninsula, and Tygerberg. Municipality demarcation is discussed in greater detail in section 5.1 "Municipality Demarcation". Figure 1 depicts the borders of the City of Cape Town.

Figure 1: Map of the City of Cape Town (Source: www.demarcation.org.za)

Cape Town is dependent on coal-generated power plants located predominantly in Mpumalanga for most of its electricity supply, which is purchased from Eskom via the national grid. Some electricity is produced in close proximity to Cape Town, including 171 MW from a gas turbine at Acacia (emergency supply), 1840 MW from Koeberg nuclear power station, and the Palmiet pumped storage scheme (400 MW). Cape Town demands 2000 MW at peak load, of which the majority could theoretically be supplied by Koeberg, but often only one unit is running (producing a maximum capacity of 920MW) (SEA, 2003:12-2).

Cape Town has an average electrification of 81% (SEA, 2003), which leaves 19% of households without electricity. These households have mainly still not been electrified, because they are either located on unsuitable land (which will never be electrified because they are on land not zoned for municipal services) or far from the grid (which make connections expensive), although the latter is less likely in urban Cape Town.

Household energy use in South Africa comprises 22% of the total consumption of energy (DME, 2005b). Cape Town households consume 38% of Cape Town's total electricity consumption, and Cape Town's total consumption comprises 6% of the national total (SEA, 2003:3-1, 12-2). Figure 2 represents the energy consumption profile for the household sector in Cape Town with electricity as the dominant fuel source followed by paraffin, fuelwood, LPG and coal in decreasing order of magnitude (SEA, 2003:3-1).

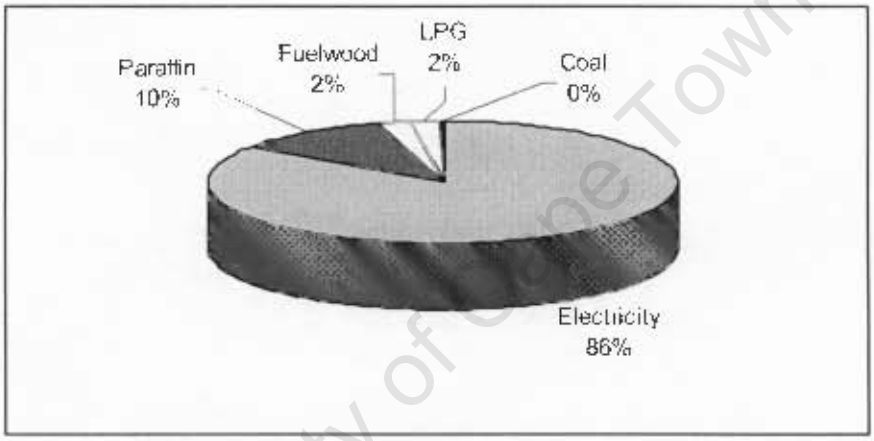

Figure 2: Domestic sector energy consumption profile for Cape Town

Households in Cape Town generally use a variety of fuels regardless of income, but multiple fuel use is typically linked to lower income households. It is therefore necessary to distinguish between income levels when discussing household fuel use, as consumption patterns vary. Table 1 shows the spread of households across each income level.

Table 1: Distribution of Household Income levels in Cape Town

Income	# Households	% of Total Households	# People	Quintile
No income	97,977	12.6%	391,908	1st
R1 - R400	22,021	2.8%	88,084	1st
R401 - R800	63,998	8.2%	255,992	1st – 2nd
R801 - R 1 600	108,309	13.9%	433,236	2nd
R1 601 - R 3 200	127,695	16.4%	510,780	2nd – 3rd
R3 201 - R 6 400	131,330	16.9%	525,320	3rd – 4th
R6 401 - R12 800	108,317	13.9%	433,268	4th – 5th
R12 801 - R25 600	66,787	8.6%	267,148	5th
R25 601 - R51 200	22,901	2.9%	91,604	5th
R51 201 - R102 400	5,322	0.7%	21,288	5th
R102 401 - R204 800	3,000	0.4%	12,000	5th
R204 801 or more	1,827	0.2%	7,308	5th
Collective living quarters	18,753	2.4%	75,012	Not classifiable
Total	**778,237**	**100%**	**3,112,948**	

Source: StatsSA Census 2001

Determining the wealth and income distribution of a household, as discussed in Chapter 2.3 "Poverty and Energy Poverty" is done in quintiles. The poorest households are the first two income quintiles (40%), defined as low-income households, and the richest households are in the fifth quintile (20%), defined as medium-high income households. The monthly household income distribution for Cape Town is shown in Figure 3.

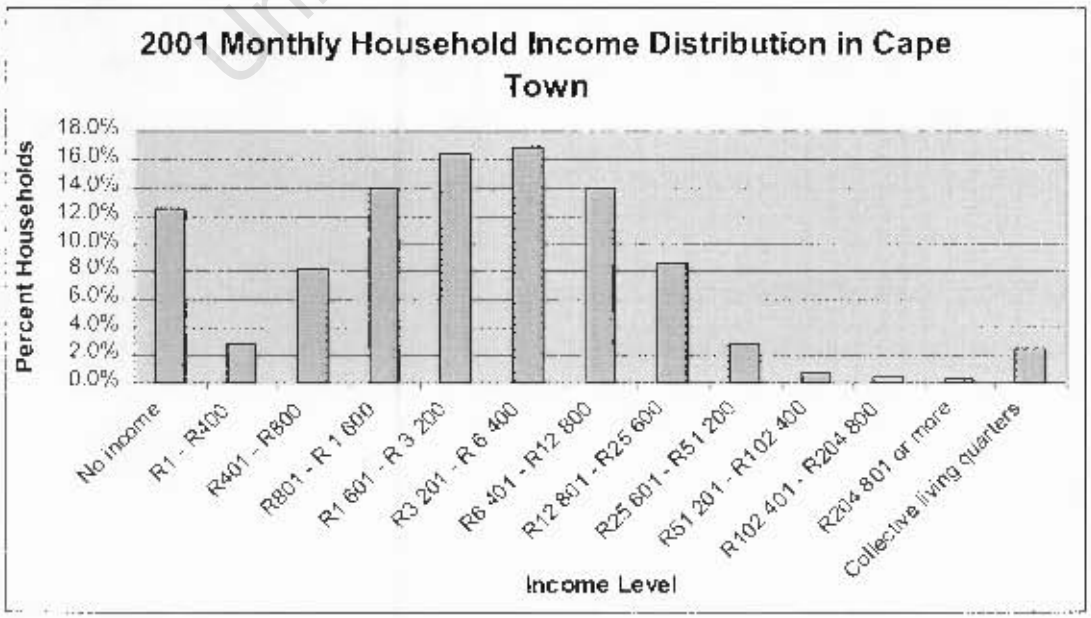

Figure 3: Monthly Household Income Distribution in Cape Town

Statistics South Africa (STATSSA, 2005) gives the midway population estimate of Cape Town at 4.5 million people, up by approximately 1.4 million from the 2001 Census survey. This indicates that increased population growth and migration contribute greatly to the stresses on the current infrastructures in Cape Town. Statistics provided by the Congress of South African Trade Unions (COSATU) (2004) show that households with higher income levels spend a smaller percentage of their income on energy costs.

Table 2: Household income level and percent expenditure on electricity

Household income	% of income spent on electricity
0-500	16%
501-1000	9%
1001-2500	6%
2501-4500	5%
4501-8000	3%
>8000	2%

Source: COSATU, 2004

Table 2 shows that as monthly household income levels increase, the percent of the income spent on paying for electricity decreases. The State of Energy Report for Cape Town (SEA, 2003) confirms this with their findings that "poor households spend between 10% and 25% of their incomes on energy while wealthier households spend between 3% and 5%. Cowan and Mohlakoana (2004) found that household expenditure on energy for low-income electrified households averaged out to the same as low-income non-electrified households. They note that this could possibly indicate one of two things: either the demand for electricity is not dependent on the amount of income earned, or poorer households buy energy at a higher price, therefore are actually consuming less energy than higher income households spending the same amount of money on energy in the same area. They point out that the electrified households also receive FBE, which means the households don't have to spend as much money as their non-electrified counterparts which are receiving electricity via an extension cord and do not have access to their own allocation of FBE.

COSATU (2004) tabulated national figures correlating the percent of households with access to electricity according to income levels given in Table 3:

Table 3: Household income levels and percent urban households electrified

Household Monthly Income levels	% of urban households getting electricity service
0-6,000	38%
6,100-12,000	49%
12,100-30,000	57%
30,001-54,000	71%
54,001-96,000	85%
96,001 +	90%

Source: COSATU, 2004

Table 3 shows that as household income levels increase, so do the percentage of households electrified. Electrified households with access to electricity have the possibility to have access to the Free Basic Electricity. Yet as Table 3 shows, only 38% of poor households have access to electricity meaning only 38% are eligible to receive the free allocation of electricity intended for them.

2.5.1 Residential Electricity Tariff Structure

The DME (2003b:18) provides the following options for setting residential tariffs in accordance with providing FBE:

- **Flat rate** of a fixed monthly charge for all customers excluding those targeted to receive FBE. This tariff creates subsidised use from low consumption to high consumption.[*]
- **Block tariffs** with an incline in tariff rate after a 'block' of electricity. This tariff cross-subsidises from high consumption customers to low consumption customers. It is suspected that this may have negative effects on medium usage customers. Generally not approved by the NER.
- **Single rate tariff** bears the same price for each unit of electricity regardless of the level of consumption. This tariff is administratively simple.

Another option for subsidising low-income households is to cross subsidise from non-residential customers. However, this could impact the local economic growth of commercial and industrial businesses, and this is not approved by the National Electricity Regulator (NER) (Ferrando, 2003). Currently, the NER, a regulatory body, is to approve and regulate tariffs for all consumers.

The City of Cape Town provides 84% of residential customers with electricity, while Eskom provides the remaining 16% (SEA, 2003). The tariffs for each electricity provider vary and are given in Table 4. The electricity tariff structures for residential customers to the City of Cape Town (CCT), as per July 1, 2005 are as follows (CCT, 2005):

[*] Note that the policy actually says that the low consumption customers subsidise high consumption customers.

Table 4: Domestic consumer electricity tariffs for City of Cape Town customers

Domestic Consumer Electricity Tariffs*	**2004/05**
Free basic electricity DOMESTIC 1	0 kWh
Free basic electricity DOMESTIC 2 (customers in this category receive a free basic supply of 50 kWh per month.)	50 kWh
Domestic 1 : High consumption (>500 kWh per month)	
Energy charge	29.19 c/kWh
Service charge	1.09 R/day
Domestic 2 : Low consumption (<500 kWh per month)	
Energy charge	38.79 c/kWh
Service charge	0.00 R/day

*All tariffs apply to both credit and prepaid meters.

Currently all CCT residential customers, irrespective of household income level, qualifying for the "Domestic 2" tariff receive Free Basic Electricity, an allocation of 50 free kilowatt hours (kWh). Eskom domestic tariffs are set differently, and are currently as described in Table 5 (Eskom, 2005):

Table 5: Eskom Domestic Tariff Structure

Tariff Category	**Service Charge (R/month)**	**Network charge (R/month per dwelling unit)**	**Energy charge (c/kWh)**	**Connections available**
Homepower* standard (medium high consumption)	R 35.40	Varies from R27.69 for 16 kVA connection to R235.78 for 100 kVA connection	25.42	16, 25, 50 or 100 kVA; 60A+
Homelight** 1	-	-	39.08 (2.5 & 20A) 43.96 (60A)	2.5, 20 or 60A
Homelight** 2	-	-	33.94 (20A), 38.82 (60A)	20 or 60A

* credit meter

** prepaid meter

Eskom customers of 2.5 and 20A are recipient to FBE.

2.6 Energy and Electricity Use in Urban Medium to High-income Households in Cape Town

The typical fuel profile of urban medium- to high-income households in Cape Town consists of electricity. Electricity is seen as the cleanest form of energy to use and the most convenient. Some

of these households supplement their energy needs with fuelwood and/or coal for heating in fireplaces and braaiing. A growing number of households in this income level use LPG for cooking (SEA, 2003). The prevalence of households that use either of these fuel sources has not been concretely quantified as yet, but there are estimates that 2% of residential households use LPG (LPGSA, 2005). Further energy sources used are those for transportation in the form of petrol or diesel for private cars. The burning of each of these forms of energy contributes to the 'carbon footprint' of the household, as they emit CO_2 which is a greenhouse gas causal to climate change. The typical electricity demand of medium- to high-income households demand, broken down by end use, is as shown in Figure 4:

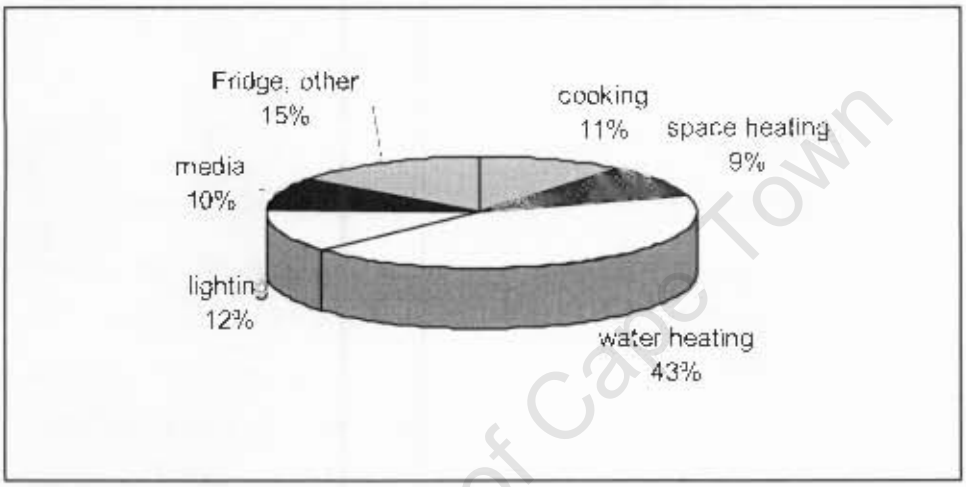

Figure 4: Typical electricity use profile for an urban medium- to high-income household

Water heating accounts for the greatest electricity consumption in medium- to high-income households, followed by refrigeration, lighting and cooking. These households almost exclusively use electricity to satisfy all of their household energy needs. The portion of their income spent on energy is between 3% and 5%.

2.7 Energy and Electricity Use in Urban Low-income Households in Cape Town

Most low-income households use more than one fuel to satisfy their energy needs. Lloyd et al (2004:10) found that the equivalent of 1 000 Mega Joules (MJ) of energy per month is generally sufficient in meeting the basic needs of a typical low-income household. This equates to about 150 kWh per month in the form of electricity. It is necessary to distinguish between electrified and non-electrified low-income households, because non-electrified households are not eligible to receive the Free Basic Electricity by virtue of the fact that they are not connected to the grid.

2.7.1 Low-income Electrified Households

A typical household fuel profile for an urban low-income electrified household might look like the one given in Figure 5 (SEA, 2003):

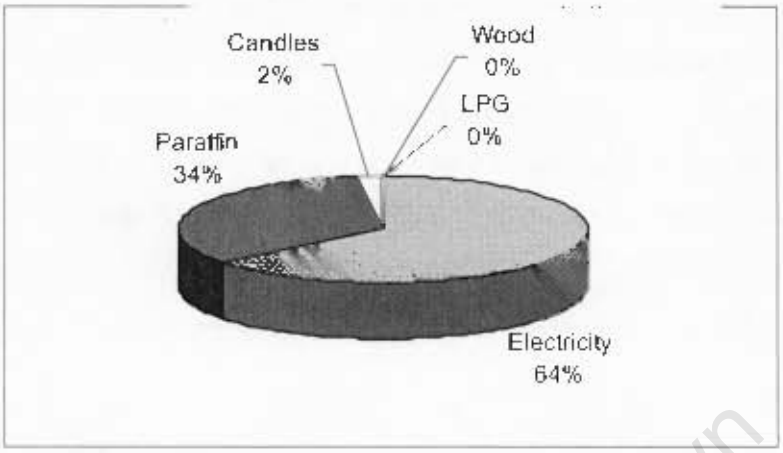

Figure 5: Typical fuel profile of an urban low-income electrified household

The figure above lists wood use and LPG as zero percent. These are in fact used more frequently but are not easily quantifiable. The government estimates that fuelwood comprises about 50% of household energy use, mainly in rural areas (GoSA, 2002). Many urban low-income electrified households use a mix of fuels to meet all of their needs, such as electricity, LPG, paraffin, fuelwood, and LPG. A recent study in Khayelitsha, Cape Town undertaken by Cowan and Mohlakoana (2004) shows that a typical low-income electrified household utilizes at least 3 fuels to meet all of their energy needs. This is invariably due to the fact that a household is not financially able to meet all of their energy needs with one fuel type, the goal being 100% electricity. Electricity is used for lighting, ironing, refrigeration, media/entertainment, and limited water heating and cooking needs, while paraffin will fulfil most cooking, water heating and space heating needs. Candles are still extensively used for lighting, even in electrified households (Annecke, 2004). It is interesting to note that these households are generally using more than 150 kilowatt-hours per month, while the typical household size is two to four people. This indicates a greater use of electricity. The allocation of free basic electricity contributes to households using more electricity (Lloyd et al, 2004: 17). Low-income households typically spend between 10% and 15% of their income on energy.

2.7.2 Low-income Non-electrified Households

Figure 6 represents a typical fuel profile for a low-income non-electrified household (SEA, 2003).

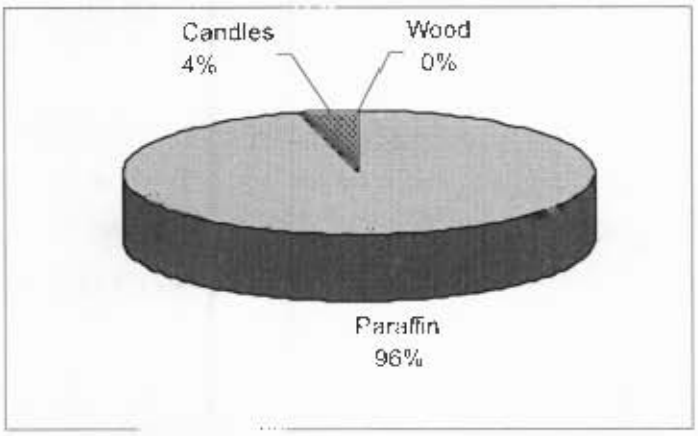

Figure 6: Typical fuel profile of an urban, low-income non-electrified household

Figure 6 lists wood as zero percent, but this is actually used extensively for cooking and space heating. The amount of wood used is not, however, easily quantifiable. Low-income non-electrified households predominantly use paraffin to meet their lighting, cooking, space heating and water heating needs. Candles are generally used for lighting. Although these low-income households are not connected to the electricity grid, about half of the households use electricity provided by neighbours through extension cords (Lloyd, 2005). Therefore, the typical fuel profile of an urban low-income non-electrified household may vary greatly from that given in Figure 6 in that electricity *would* comprise part of that fuel mix. Therefore, I would propose that Figure 6 represents perhaps 50% of these households and a more accurate representation of the remaining 50% low-income non-electrified household would be of the graph shown in Figure 7:

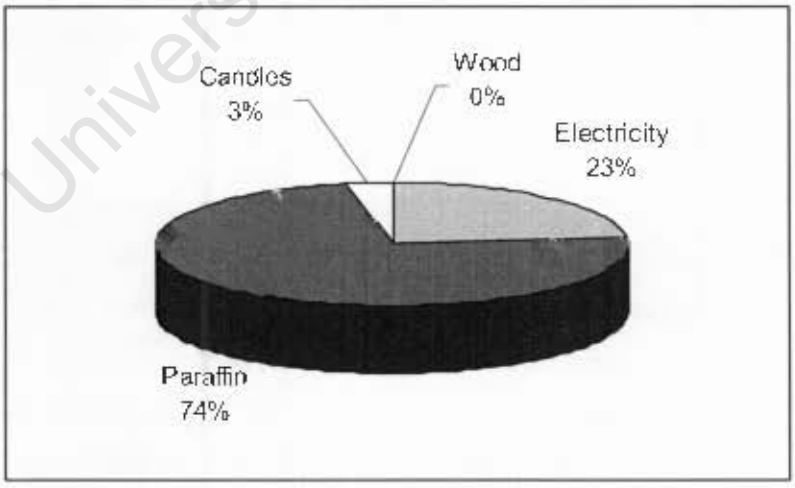

Figure 7: Proposed fuel profile for 50% of urban low-income non-electrified households

These numbers were generated using data collected by Cowan and Mohlakoana (2004) on fuel use patterns in non-electrified households. The wood depicted in the Figure 6 is listed as zero, but in

fact it does contribute to the household fuel profile. However, as stated before, this is not an easily quantifiable figure.

Irrespective of electricity use in these households, the predominant fuel used for cooking, water heating, space heating, and ironing is paraffin. Electricity would, however, be used for lighting and running any electric appliances the household may have, such as kettles, TVs, radios, and irons. Fuelwood is used for space heating and cooking. These households typically spend between 10% and 25% of their income on energy.

According to Cowan and Mohlakoana (2004), the problems faced by low-income households are greater than the supply of electricity. They maintain that housing shortages, land issues and continuing migration into informal settlement areas is the origin of the problem. As stated in their research,

> It is rooted in the housing shortage, land issues and continuing in-migration to areas like Khayelitsha. Perhaps their energy problems could be partly addressed by decoupling electricity provision from settlement legitimacy issues. On the other hand, this could compound the broader land-planning, housing and service-provision challenges faced by the municipality, and possibly impede a more sustainable, safe, long-term solution. However, the gravest energy concerns arise mainly in settlements which do not receive services (or only minimal communal services for water and sanitation) because they are situated in locations which have not been approved for housing by the municipality. Some households in these areas are making use of extension cords, with attendant reported problems of higher expense, less security, unreliable power, possible dangers, and usually an inability to benefit from the FBE allowance.

The low-income non-electrified households are disadvantaged twice: once for not being directly connected to the electricity mainframe, twice for not receiving free basic electricity.

2.8 Analysis and Summary

This section looked at poverty and energy poverty, and ways used to measure these in South Africa. The energy and electricity use profiles for urban households, broken down by income levels and access to electricity, were discussed. The South African government's energy policy and their drive to electrify households were reviewed. There are many arguments for electrification in South Africa, such as the encouragement of economic growth, reducing impact on the environment and supporting the social needs of people. Electrification allows the government to supply households with a cleaner form of energy at the point of use. It also allows for the energy form used to power infrastructure systems to be changed, without affecting the function, (e.g., electric trains, electrified households, etc) meaning that whichever fuel is being used to produce electricity, it won't affect the end-user as they will not have to alter their appliances to accommodate a particular fuel.

However, as was pointed out access to electricity is not always a straightforward issue to address. Some are living on land which is not zoned for electrification and will not see an official electricity connection, be it grid, or off-grid. For example, some of these settlements are located on wetlands below the flood plain, thereby making an electricity connection dangerous. Others again are located on private land, where the municipality cannot legally put in an electricity connection. Without the provision of suitable land, these households are at a continued disadvantage to receive any of the poverty alleviating benefits electricity may have to offer. For example, as Table 2 showed, with nationally only 38% of poor households connected to the grid in 2004 means only these poor households would have access to poverty alleviating efforts. Therefore, the questions arise: is it the right time to address affordability, or should the focus be on access? What about the households who do have access and cannot afford electricity? Should their needs be ignored while they wait for Universal Access?

Many households who have attained an electricity connection are also up against other barriers to electricity use: affordability of use, and affordability of relevant appliances. These issues of affordability of electricity use are addressed in the next chapter.

CHAPTER 3: THE FREE BASIC ELECTRICITY POLICY

3. Introduction

The following section gives an overview of the history of the development of the Free Basic Electricity (FBE) Policy, traces the research done into targeting and implementation methods, and investigates the funding mechanisms put in place to cover the costs incurred from the policy implementation to the electricity distributor. The Free Basic Electricity policy was developed by the government of South Africa as part of an action plan to alleviate poverty. As mentioned before, electrifying households was the first step in addressing some of the discrepancies of Apartheid by overcoming barriers of access to modern fuels for all people, but this did not address the issue of affordability. The Free Basic Electricity (FBE) Policy, or Electricity Basic Services Support (EBSST) Policy (as it was called up to 2004 when this policy was being developed), aims to focus on subsidising electricity use to fulfil basic energy needs, but mentions that other fuels have not been excluded. This section will investigate the difficulties of identifying and targeting the poor for subsidies and discuss the targeting methods explored and used in implementing the FBE. The intended targets to benefit from the FBE are the poorest households. Currently, however, there is leakage into higher income households due to the targeting methods chosen. It is the poorest

households who most need the benefit of some kind of subsidy to support their expenditure on energy, a basic human need and right. This chapter will explore the Free Basic Electricity Policy, its history, implementation, funding, successes and shortcomings.

3.1 History of the Free Basic Electricity Policy

The idea of a "poverty tariff" was initiated by the South African National Electricity Regulator (NER) in 1998. This poverty tariff would be eligible to [poor] households earning less than R800 per month (UCT, 2002). Although it was intended to be implemented by Eskom in 1999, it was not, as it was said that the timeline was unrealistic when considering the changes and preparations that would have to be made in order to accommodate efficient delivery of the tariff (UCT, 2002 and CCT, 2003b). Eskom therefore did not participate in the allocation of FBE to their customers.

In 2000, government introduced the Free Basic Electricity tariff, in conjunction with Free Basic Water (FBW), to help alleviate the financial burdens and improve the livelihoods of poorer households. They recognised energy as a basic need and therefore acknowledged the need to provide those unable to afford this basic right with a base amount (DME, 2005b). In 2001, the DME concluded that the free basic electricity policy would include 50 kWh for qualifying households connected to the grid, which would be administered by the Municipality or service providers, and would be funded through the Equitable Share. These conclusions would be developed into policy guidelines pending the results of the pilot studies done by the UCT (2002).

UCT (2002) was commissioned to conduct a research project to determine the appropriate number of units of electricity that would be sufficient to sustain a minimum standard of living. It was initially argued that if a typical medium-income household consumed 750 kWh per month, then a low-income household would find 350 kWh to be adequate. However, pilot studies indicated that most households barely consumed 100 kWh and in fact, most consumed 50 kWh or less. Therefore, Cabinet approved 50 kWh as the basic level of provision for a poor household. However, the pilot studies were restricted to rural areas and one peri-urban area only (UCT, 2002: 94); therefore the results may not transfer directly to urban energy use.

The DME (2005) defines free basic electricity as:

> ...the amount of electricity, which is deemed sufficient to provide basic electricity services to a poor household. This amount of energy will be sufficient to provide basic lighting, basic media access, basic water heating using a kettle and basic ironing in terms of grid electricity and basic lighting and basic media access for non-grid systems.

"Basic", in this case, could equate to fulfilling the following energy applications as shown in Table 6:

Table 6: Electricity consumption and possible duration for various applications

Activity	Hours used per day	Kilowatt hours per month
Basic Lighting (one 60 Watt light bulb)	5	9
Basic Media Access (one small colour TV)	4	8
Basic Water Heating (one kettle)	.5	30
Basic Ironing (one iron)	.5	6
TOTAL	10 hours/ day	53 kWh/ month

Generated from Cowan, 2003b

The findings from the UCT study translated into a policy document (DME, 2003) for local government to implement.

3.2 Implementation and Delivery of the FBE in Cape Town

DME (2003) circulated guidelines for local authorities on how to implementing Free Basic Electricity successfully. The basic steps included understanding consumers with key information on:

- Population and households (number of households, etc),
- Income distribution (income categories from census data based on housing subsidy categories),
- Consumer analysis (consumer categories, settlement types),
- Existing level of service,
- Consumption levels (category, tariffs),
- "Willingness to pay" and "Ability to pay"
- Monitoring and control (internal and external audits),
- Improving information (information system, poverty database)
- Monitoring arrangement (assessing effectiveness of FBE)
- Good management at Service Authority and Service Provider levels, and
- Communications strategy (customer information education).

These guidelines were intended to ease the procedures for local authorities to target, implement, manage and deliver the subsidy more efficiently and effectively. Furthermore, these guidelines state that local subsidy rules should be set in order for the local authority to uphold a transparent policy endorsing "access to electricity by the poor and efficiency on the part of the services provider" (DME, 2003b).

The City of Cape Town was the first electricity provider to implement the Free Basic Electricity tariff, which was done in 2001 before the national policy had been fully formulated and approved in 2003. The City of Cape Town implemented 20 kWh per month (reduced from the nationally recommended 50 kWh per month) free to *all* residential households (i.e. using the broad-based targeting approach) within the boundaries of the City of Cape Town commencing on 1 July, 2001. Customers serviced by Eskom were not given the FBE at this time, as Eskom was not legally required to provide this service at that point in time. The funding for the 20 free kilowatt hours was derived from a levy on all tariffs for electricity customers. The City of Cape Town found that although the distribution of the FBE would be to all customers regardless of income levels, it is an effort with the "sole purpose of partially alleviating the plight of the poor only" (CCT, 2001). They found this way of administering the tariff to be the most cost-effective, since it was established that it was administratively too complex to determine who the poorest of the poor are, and to administer the tariff only to them. It was also noted that the free basic electricity would not reach households that were not connected to the grid, but that electrification was continuing in order to rectify this deficiency in delivery (CCT, 2001).

The aim of implementing the tariff was defined by the City of Cape Town as enabling poorer households to reach a position from which the poor could begin a phase of 'self-development' (CCT, 2001). The rationale for the provision of a free basic electricity supply was outlined by the City of Cape Town in 2001, in the name of improved quality of life, and is as follows:

- To aid refrigeration and storing of food, and boiling water;
- To reduce the number of shack fires instigated from the use of other energy sources used for lighting;
- To encourage economic growth in the way of home businesses through the use of small electrical appliances;
- To encourage and promote education and communication through improved access to reliable and safe lighting and access to television, radios and computers; and
- To reduce pollution derived from dirty fuel sources.

The City of Cape Town Municipality embarked on this new policy with an initial 20 kWh as this would introduce the policy and allow the City to begin in an affordable manner while working out more sustainable, fair and reasonably priced means of funding this tariff (CCT, 2001). The outlined intentions were successful in that two out of the five points were met: namely the first and the fourth. Unfortunately, little evidence has been found to date to support the notion of "economic growth in the way of home businesses" and since many low-income households continue to use

more than one fuel to meet their energy needs, pollution is only somewhat reduced, as are the number of shack fires (Lloyd and Cowan, 2005).

Neil Ballantyne (2002), assistant City Electrical Engineer in customer services, presented a case study on the implementation of FBE in Cape Town, where he states that the Council of the City of Cape Town implemented FBE in early 2001 with the objective of alleviating the difficulties associated with poverty for the poorest of the poor by providing a monthly allocation of electricity. Herewith, the burdens of poverty would be eased and the quality of life improved. Initially only City of Cape Town electricity customers would receive the FBE because Eskom was testing the issue of FBE within their systems. A 'Funding Agreement' was signed in 2003 by the City of Cape Town and Eskom whereby Eskom would also provide FBE to its customers (CCT, 2003b). Most of the poorest residents of the City of Cape Town live in areas where electricity is serviced by Eskom, so it has been an imperative move for Eskom to also implement FBE. All domestic customers received FBE as soon as Eskom made the changeover in its systems, such as upgrading meters, changing the billing procedures and installing further pre-paid meters (CCT, 2003b). Without Eskom participating in providing FBE, the policy would have failed, since the provision is for the poorest of the poor. Eskom, however, was tentative about implementing the tariff as they stood to lose huge revenue due to changeovers and paying for the FBE itself. However, if Eskom is providing electricity on behalf of the municipality, then it is the responsibility of the municipality to fund the provision of Free Basic Electricity by covering Eskom's costs in implementing the policy (DME, 2003).

The implementation of FBE in Cape Town also acted as a kind of pilot study for the policy before the national roll-out. Initial weaknesses in the system were worked out, such as some people being issued several FBE allocations, but this was remedied the next month by claiming the money back (Ballantyne, 2002). The allocation of Free Basic Electricity has since been streamlined to the effect that each customer receives only one allotment of free electricity. Since Cape Town acted as a learning process for the policy document for the national roll out of FBE, the guidelines written by the DME (2003b:17) reflected some of these lessons. One such lesson was that the local authorities should allow for phasing in of the subsidy. The DME (2003b) recommend that local authorities respond to their transitory state, which makes security of funding vague, by providing the subsidy to the poorest households first, then the poor and progressing until all intended recipients have been targeted. Alternatively, households can be phased in using the self-targeting method explained above. This procedure would allow the local authorities to provide subsidies to the poor without going under financially.

But ultimately, the competence, capacity and skills of the municipalities should be under the microscope as implementation can only be as successful as the municipality is capable. In

recognition of some of the problems municipalities have with delivering subsidies, the Department of Provincial and Local Government (dplg) (dplg, 2005) initiated "Project Consolidate" to combat some of the challenges of service delivery due to lack of capacity within municipalities. Project Consolidate undertakes to:

- provide municipalities with support as they build their capacity and develop systems to enable them to discharge their constitutional mandate;
- focus on municipalities with the most difficulties in meeting delivery targets;
- identify and unblock bottlenecks inhibiting the acceleration of service delivery and institute sustainability; and
- engage and interact directly with municipalities and local communities in partnership with state owned enterprises, private sector organisation, and civil society.

3.3 Off-grid Free Basic Energy

Off-grid electrification is provided to households in rural areas too remote to connect to the national grid. This would be done mainly via Solar Home Systems. The capital costs are recovered by the supplier from the National Electrification Fund. The operational costs are in part covered through the Equitable Share as a subsidy to the value of R 48 per system per month (DME, 2003).

3.4 Free Basic Alternative Energy Policy

Noting that not all people who suffer from energy poverty receive Free Basic Electricity, the DME (2005b) made clear that their intention is to achieve "Universal Access to electricity" through the Integrated National Electrification Programme. In order to reduce the costs to residential consumers, paraffin is not subject to Value Added Tax (VAT). In some parts of KwaZulu-Natal, fuel gel is being distributed for free as part of a Free Basic Energy initiative. LPG, although not included as a residential fuel at that time the policy was written in 2003 since it is mainly used for commercial purposes, would be monitored further to ascertain whether some form of subsidy was needed to fulfil residential energy needs (DME, 2003:6). The State of Energy Report for Cape Town (2003) states that 2% of all residential customers in Cape Town use LPG to meet part of their energy needs. In addition to connecting households to electricity and removing VAT from paraffin, an LPG programme will be rolled out "in the coming months", effecting an alleviation of some of the lack of energy sources for poor households (LPGSA, 2005).

The Minister of Minerals and Energy announced the plans for the LPG low-income household programme. A memorandum of understanding between the DME and LPG suppliers would stipulate if a subsidy would be available, and in which amount, which LPG appliances and services

would be offered, the upper limits of the price of LPG and the monitoring process of this programme. Initially, 250,000 low-income households will be targeted in the pilot phase; thereafter the LPG programme will be rolled out to 3 million households (LPGSA, 2005).

The DME, in 2005, announced a draft Free Basic Alternative Energy (FBAE) Policy in line with their Low-income Households Energy Support Programme (DME, 2005d). The DME found that electricity consumption is low in poor households indicating that low-income households generally do not profit from the advantages of electrification; affordability being most likely the key issue. Another reason for introducing the FBAE is because 50 kWh is not deemed to be sufficient to meet all energy needs, especially thermal. Lloyd et al (2004:1) confirm this in their findings that households unable to afford more than the 50 kWh are driven to rely on other, sometimes more expensive, fuels. The FBAE is intended to address the thermal needs of poor households, concentrating mainly on non-electrified households. So while alternative energy sources are explored and implemented in different areas, there is currently no national policy regulating the use and distribution of these.

The FBAE will focus on using existing supply chains to deliver some form of alternative energy, possibly through Integrated Energy Centres (DME, 2005d). These centres would be the home to all types of energy services including prepaid electricity, off-grid SHSs, ethanol gel, charging batteries, LPG, paraffin, firewood, candles, etc. The centres would use existing fuel supply chains and expand on them should the demand increases. Since the "government supports the concept of 'energisation', i.e. the widening of access to a safe and effective energy package within grasp of low-income households and will promote it's implementation" (DME, 1998), this is something that should become a viable solution to supplementing poor household's energy needs.

3.5 Identifying the Targets of the Policy: The Poorest of the Poor

Identifying the recipients of the Free Basic Electricity tariff is not an easy feat (UCT, 2002:12). The correct targeting of a subsidy has been deemed an administratively heavy task (DME, 2003:12) and expensive (UCT, 2002:32). Some of the problems of identifying the targets of subsidies may be that potential beneficiaries are not registered, or cannot be registered as they are not living at a fixed residential address, or the security of the dwelling being in place for a length of time is under threat due to fires, relocation, etc. Moreover, targets cannot be identified by geographic location alone, as some poor live in richer areas and some richer live in poor areas (UCT, 2002:30). The Department of Provincial and Local Government (dplg) (2005) expressed the challenges of implementation as:

- Indigent policies and targeting of indigents;
- Lack of infrastructure;

- Lack of billing structure;
- Data management and monitoring;
- Equitable share not always adequate or appropriately used;
- Consumer awareness and consumer education;
- Implementation on privately owned land;
- Limited technical and institutional capacity within municipalities; and
- Municipal implementation plans and effective planning.

Eliminating the backlog of access to services is chiefly affected by the "lack of asset management (operations and maintenance in municipalities)". This has the impact that service delivery can not transpire at the expected rate since the technical capacity and project management and financial skills are lacking in municipalities (dplg, 2005).

3.5.1 Who are the Poorest of the Poor?

The poorest of the poor have been elected as the primary targets of subsidies because of their poverty status. As discussed in section 2.3 (Poverty and Energy Poverty), poverty is not static, meaning that people move into and out of poverty making it difficult to track the exact location and number of people living in poverty and needing subsidies to alleviate some of the burdens of life.

The Department of Provincial and Local Government (2005) identifies three points where the poorest of the poor are hardest hit, namely gaining access, maintaining access, and proper targeting of the poor. It is recognised that people living in municipalities without access to services are disadvantaged the most and are therefore in the greatest need of attention. However, municipalities cannot supply services to those living on unregistered land. Land cannot be provided if the municipality does not have access to affordable, suitable land for housing. Nor can access be supplied in the face of a lack of capacity within the municipality to manage the infrastructure were it provided. Access to services cannot be maintained by the indigent if the services supplied are not properly operated and maintained. The dplg uses the term "institutional poverty" in this case, because a lack of capacity in the municipality to manage financial and human resources appropriately will not lead to high-quality services to alleviate poverty, as the national Government intends for it to. Therefore, a properly targeted subsidy is crucial to gain, maintain and sustain access to services. If indigents have access to services it does not mean they are able to use them, which brings about the need for a subsidy. For that reason, the dplg argues that it is essential for only indigents to be recipient of a subsidy as the financial health of the municipality may otherwise be at stake if it were to provide free basic services to households or individuals who were not in dire need of one. They maintain that revenue should be raised from non-poor to subsidise the poor.

The proper administration of subsidies only benefiting indigents would mean that the indigent policy of that municipality is successful. However, the NER does not agree with cross-subsidisation from non-poor to poor, because they maintain that "an adverse impact on the economy" may be the result (Ferrando, 2003:87).

3.5.2 Considered Targeting Approaches and Accepted Methods

The UCT task team (UCT, 2002:176) researched various means of targeting the subsidy, narrowing their recommendations to a broad-based approach and a self-targeted approach. The broad-based approach is given to all customers with an electricity connection. The advantage of this is that every household would benefit from the FBE. The obvious disadvantage is that the leakage of this subsidy to non-poor households contradicts the purpose of the policy, which is to target poor households. The self-targeted approach would mean that households would apply for the FBE and in doing so accept a downgrade of the current load available to that household to 8A. The advantage of this is that the recipients of the subsidy would only be the poor. The disadvantage of this is that capital costs could run high in converting households to a lower current supply.

The DME (2003, 2003b) considered the above implementation options and added a self-targeting approach without current limiting, where only households consuming less than 150 kilowatt hours per month would receive the free allocation of electricity. The advantage of this tariff is that it would target primarily poor households and the electricity service providers would not have to alter the meters or current supply to the household. This would not affect the electrical load of the household if there are many members, or the electricity is being extended (via extension cord) to other households. The disadvantage of this method of implementation is that non-poor households using little electricity, in the case of smaller households, would also benefit from the subsidy. However, this approach would greatly limit the leakage to non-poor households without compromising the quality of service to poor households. The DME recommends the self-targeting approach, but leaves the choice of method used for the self-targeting up to the electricity service providers.

Where Eskom was the electricity distributor, they would have to enter into a service delivery agreement with the municipality to ensure that the intended recipients of FBE would also be the actual beneficiaries. Eskom, however, was not interested in entering into over 200 service delivery agreements with just as many municipalities. Eskom determined terms acceptable to them in a 'Funding Agreement' whereby they agreed to provide their customers with a free allocation of electricity in the amount of 50 kWh per month to qualifying households. The municipality would have to choose one of the two methods of targeting recipients outlined by Eskom as the 'Standard method' or the 'Municipal indigent policy method.' The 'Standard method' entails that Eskom is to

identify the targets, which will then be prepaid metered customers with a 20A or lower connection or credit meter customers whose average monthly consumption does not exceed 150 kWh per month. The other method would require that the municipality would have to identify the indigent customers from a list of all Eskom customers provided by Eskom, whereby all customers would still have to fulfil the requirements of a 20A or less connection and consuming 'less than 150 kWh per month' (Fowles, 2004: 27). Arranging targets of the subsidy and choosing the method of delivery is one aspect of implementation, the issue of funding the subsidy is another.

3.6 Funding FBE and Equitable Share

Various methods to fund the Free Basic Electricity have been analysed by UCT (2002), such as national funding and cross-subsidies. They found that a dedicated fund financed by an earmarked tax for the FBE could be a very suitable way to pay for the subsidy however, the case for funding via the national budget was stronger (UCT, 2002: 148). Initially, the FBE was funded by means of a cross-subsidy within the municipality. The National Electricity Regulator (NER) won't allow cross-subsidisation, because it is postulated that this may affect the economy resulting from a rise in power prices (Ferrando, 2003:87). Therefore it has been decided that funding should be channelled to the local authority for distribution to the intended recipients of FBE via funds from the nationally collected revenue. The advantages of funding the FBE via the national budget are stated by the UCT (2002:132) research team as:

- it facilitates the effective redistribution of resources from rich to poor;
- the programme has to compete with other programmes for funds each year, which promotes more effective prioritisation; and
- it facilitates oversight of the programme in that parliament, the provincial legislatures of the local councils have to appropriate funds for it each year, and therefore have an opportunity to review the performance and priority of the programme.

Using this method of allocating funding may also be a good way to track the progress of the delivery of FBE and the numbers of indigents in that area. Funding is, therefore, allocated to each municipality from nationally budgeted funds via "Equitable Share" to each province. "The equitable share is made available to municipalities from the fiscus to help them fund services to households and areas that, prior to South Africa attaining political freedom and the new local government dispensation, did not have access to basic services. The level of the grant to each municipality is determined by dplg based on their information on the number of indigent households in the municipal area" (Fowles, 2004:23). The South African Local Government Association (SALGA) held a conference in September 2004 where it was decided that all indigents, who are unable to afford to pay for municipal services in each municipality, would be

registered (SALGA, 2004). The municipalities would then receive a share of money, the equitable share, from the national government based on the number of indigents in that region.

The amount in this unconditional grant is based on a calculation made up of six components: education (number of school going children), health (number of people without medical aid), the "basic" component (the percentage of the country's population in that province), institutional (divided equally among provinces), poverty[α] (reinforces distribution), and economic (based on the distribution of total remuneration in the country) (NT, 2005: 148). The allocation of the equitable share is unconditional, however each provincial government can spend it at its own discretion (NT, 2004b:152). The provincial government distributes portion of this as an equitable share allocation to municipalities via their own calculations containing components for basic services (BS), development (D), institutional support (I), revenue raising capacity (R), and a correction and stabilisation factor (C). The formula is: $G = BS + D + I - R \pm C$ (NT, 2005: 260). It is interesting to note that the calculations also distinguish between the number of serviced and unserviced households in that region. It is typically assumed that one third of the households are unserviced and funds are duly allocated. A grant or R 130 is given per month per serviced household and a grant of R 45 is given per month per unserviced household.

Legally, however, municipalities have the jurisdiction to prioritise and decide what to spend their allocated equitable share funding on. Government accepts that municipalities are not constitutionally obliged to spend the intended equitable share to "provide subsidised services to low-income households" (NT, 2005). Therefore, "the focus will rather be to ensure that all municipalities report against their budget on spending programmes to support poor households and to put in place support systems to assist municipalities to better identify and target poor households, and to provide basic services to such households. Government will also consider issuing guidelines and norms and standards on how the equitable share should be utilised, to target poor households for the provision of basic services" (NT, 2005:239).

The dplg wanted to ensure that municipalities understood their right of allocating funding, and distribution of these funds, especially with regard to Free Basic Electricity, when in 2002 they told local authorities through a road show that (Fowles, 2004:27):

- each municipality could decide the level of allocation to provide up to 50 kWh per month, dependent on what was affordable;
- each municipality could decide who should receive the FBE allocation, but they should use national guidelines on identifying indigent households;

[α] The poor are defined as "people whose incomes fall in quintiles 1 and 2 based on the 2000 Income and Expenditure Survey" (NT, 2005).

- Where Eskom is the de facto electricity service provider for that municipal area or portion thereof, Eskom would be required to enter into a service delivery agreement with each municipality. The costs of providing FBE would be recovered by Eskom from the municipality.

However, municipalities are also constitutionally responsible for providing basic services to its residents, such as electricity and water. The Constitution of 1996 explicitly states in section 156 and subsequently Schedules 4 and 5 that municipalities have the executive authority and right to provide electricity (see appendix). The legislative side of municipal rights is discussed in greater detail in Chapter 5.

Wentzel and de Lange (2003) found that all the electricity suppliers they interviewed felt they would not be able to supply a free allocation of electricity without increasing the costs of their tariffs to other customers, because electricity sales serve as the largest income generation mechanism for most municipalities that distribute electricity. Yet, the National Energy Regulator (NER) does not agree with increasing tariffs to fund Free Basic Electricity.

Wentzel and de Lange (2003) argue that there are two potential negative impacts on electricity suppliers pending the implementation of Free Basic Electricity: less electricity consumption resulting in less income generation from electricity sales, and an initial increase in administrative costs to accommodate the new system. These fears were not to come to fruition when the DME (2003) advocated that the FBE be funded by the Equitable Share granted to the provincial governments. This funding should be sufficient to cover the costs of providing FBE and the capital costs involved in providing this service, such as administration costs, upgrading systems, and changing the current capacities of households (i.e. from 2.5A to 10A or from 60A or 20A to 10A) (DME, 2003). Therefore, the provision of an electricity supply and the free allocation of electricity should not impact on the budget of the local electricity distributor.

The DME (2003b) determines the amount of subsidy to be allocated per customer by either calculating it using a "service cost basis" or an "available fund basis". When using the "service cost basis", it is first determined how much the cost of providing the Free Basic Electricity supply of 50 kWh costs. This figure is multiplied by the number of subsidy targets. If the targets are not self-targeted, whereby they accept a reduction in current, then they should not be eligible to receive the subsidy and will not be counted when allocating funds. This is only done when the amount allocated to the local authority is not sufficient to supply a free allocation of electricity to the intended targets. The number of targets is then reduced by enforcing the current limiting self-targeting approach. The "available funds basis" calculates the amount of the subsidy by dividing the cost of providing 50 kWh into the total fund allocated. The electricity distributor then endeavours to fund as many people as possible from this amount.

3.7 Current Progress of the FBE

The Department of Provincial and Local Government (dplg, 2005), using official dplg and Eskom figures, estimates that Free Basic Electricity contributes to alleviating the energy burden of 19% of households nationally. Of the 19% households, it is estimated that 43% of them are poor.

3.8 Analysis and Summary

This chapter described the development of the Free Basic Electricity Policy from conception, targeting and funding to implementation and delivery. The research done for the policy also included the amount of the subsidy. Although it is not in the scope of this dissertation to undertake whether the amount is sufficient or not to meet basic needs, it is necessary to point out that there is a flaw in addressing needs. Although 50 kWh is sufficient to meet most energy needs, it is not adequate enough to meet the greatest source of energy needs, namely cooking. It is not the intention of this research, however, to assess the content of this policy as to if the amount provided is indeed enough to cover basic needs. However, as cooking is one of the greatest human needs to be met; the policy does not meet the means for its intention, even if "limited cooking" needs were to be met.

The FBE policy for the City of Cape Town did not include cooking as a reason for providing the subsidy. Yet it is understandable that the application of the subsidy quantity to an urban area would have limitations since the quantity is based on studies done in rural areas and energy use patterns may differ. The policy is not consistent in stating the intended purposes of the free units. The inherent problem with this is that unclear targets result in unclear outcomes. It makes measuring the success of the policy difficult in that there are no clear indicators to be used for monitoring. In analysing the intended applications for the free allocation of electricity, it showed that grid connected households would be able to use hot water; while non-grid connected households receiving the subsidy would not. This brings out the question of priorities in targeting. Are non-grid connected households of lesser priority or importance? Is their plight in poverty not equal to that of grid connected households? Should they not also be entitled to the same quantity to use for the same applications?

The distribution of funds from national government to provincial government to local government via equitable share calculations is a good way to allocate funding to help meet the basic needs of people. These formulae take into consideration factors such as the number of indigents in that area, the level of infrastructure needed and the wealth of that area. This is a useful method in redistributing the wealth across the country to areas which need it more. However, in distributing the necessary funds to alleviate poverty through infrastructure and affordability of use grants, it is interesting to note that a disparity in grant levels is given depending on the existing infrastructure.

Local governments get grants to support, maintain and provide infrastructure and services in the amounts of R 130 per serviced household per month and R 45 per unserviced household per month. This seems to be unfair in that an unserviced household would surely require the larger amount of funding in order to increase access to infrastructure and not to exclude them. An unserviced household does require less funding to maintain that present position, but if the intent is to alleviate poverty and increase access to services, this funding disparity is not going to achieve these goals.

The targeting methods evaluated by UCT and approved by Cabinet give each municipality an array of options to identify recipients and ensure their accessibility to the subsidy. Each method of targeting has its advantages and disadvantages. While a broad based targeting method would guarantee that poor households would be recipient to the subsidy, this also leaks the subsidy to non-poor households. This has the consequence that fewer resources are available for those that are really in need. Targeting is not an easy feat, but it can be refined to reduce the amount of leakage to unintended recipients.

CHAPTER 4: Other Social and Basic Needs Subsidies in South Africa

4. Introduction

The following chapter gives a brief overview of other social and basic needs subsidies in South Africa and compares their implementation methods against those of the Free Basic Electricity Policy. FBE is especially compared with Free Basic Water since this was done around the same time and goes hand in hand in the basic needs basket of goods. The aim of this chapter is to draw lessons on implementation from other nationally implemented subsidies.

4.1 Basic Needs Subsidies and Social Grants in South Africa

There are various subsidies and grants available to the people of South Africa. The grants available are old age, disability, care dependency, foster care, child support, parent allowance, child allowance, war veterans and grant in aid (DSD, 2005). The largest percentages of financial support go to child support and old age. Other basic needs subsidies available are for free basic services, notably water, sewerage and refuse.

4.2 Implementation and Delivery of other Basic Needs Subsidies

The government is to meet the basic needs of all its citizens and does so through the implementation of policies which allow the funding of subsidies. These subsidies, notably social grants and subsidies for basic services are then delivered to the people of South Africa via their local government. This is done via taxes, tariffs, rates, and as cash through collection by the successful applicant for a grant from a paypoint or post office. Households with property values of less than R 50,000 – R 100,000 (depending on the grant) will be beneficiaries of certain grants made, such as automatic deduction of arrears, or payment of a R 20 income supplement to help pay for rates and services (van Ryneveld, 2003). The inherent assumption here is that these households are registered and administratively available to receive grants. The Indigent Policy for the City of Cape Town (van Ryneveld, 2003) proposes linking the payment of other arrears to the pre-paid electricity meter. This ensures receiving payment for services, but it also decouples the consciousness of actual electricity consumption from perceived consumption, thus perpetuating the belief that electricity is expensive and the continual use of other fuels. These grants are dispensed automatically to households that have been registered, which differs from the broad based approach of the Free Basic Electricity targeting strategy.

4.3 Implementation and Delivery of the Free Basic Water Programme in South Africa

In 2001, the Department of Water Affairs and Forestry (DWAF) announced the intent to provide poor households with a basic 6000 litres of safe water per month (DWAF, 2001). Free Basic Water (FBW) is also seen as an important measure in line with government's intentions to alleviate poverty. DWAF (2001) decided to leave the definition of poor and the methods of delivery up to the local authorities. They maintain that local choice in implementing is imperative in the success of the subsidy. Some local authorities are better capable of assessing the degree of poverty within their jurisdiction, measured using their own indicators, and their financial situations to provide these services to some or all households. Statistics indicate that the FBW programme is a success. Since 1994, 15 million people now have access to a safe water supply. This translates to 92% of the population in 2005, up from 60% of the population in 1994 (dplg, 2005). DWAF (2005) estimates that an investment of R12.8 billion will eliminate the current backlogs to access of water, the bulk of which is in rural areas. Of the 92% of the population with access to water, 70% are recipients of Free Basic Water. Yet, with all of that said, DWAF estimates that another 3.7 million still have no access to infrastructure at all and 5.4 million have access to infrastructure that is substandard. The positive side is that of the 70% of the population receiving FBW, 82% of them are poor. However,

FBW is also leaked to non-poor households. According to the DWAF statistics, only 18% of these households are non-poor, but that still translates to 2.6 billion litres of water per month.[β]

Taking the City of Cape Town as a case study, the FBW was implemented in 2001 as 6000 litres to *all* domestic metered customers. The city defined basic water services, in line with national government, as "25 litres per person per day within 200 meters of the home" (CCT, 2001b: 2). The full cost of service delivery is recovered from consumers; that is through a cross-subsidy.

Comparing this with the Free Basic Electricity policy implementation, we see that a broad based approach was also taken, but that the funding comes solely from the customers themselves by means of a cross-subsidy. A cross-subsidy is done by means of charging some or all other customer categories a levy in order to recover the funds for providing a free service to others (UCT, 2002). Yet, the FBW appears to be reaching more poor people than the FBE. This could be due to definitions of access. Whereas electricity access is defined as a single point of supply in a household, a basic water supply is sufficient when defined as a communal tap. The communal tap allows for more people to have access, but does not require the same amount of infrastructure as the defined basic services of electricity; thereby the reported success rates for FBW would be higher.

4.4 International Experiences with Implementation and Delivery of Basic Services and Policies

South Africa is different from most developing countries in that it is a resource rich country. South Africa has very rich people and very poor people. In many ways, South Africa compares with many first world countries, yet in other ways, such as health care, unemployment and population living under the poverty line, it compares distinctly with other developing countries. It would have been useful to compare the implementation and delivery of a type of free basic electricity policy in another country such as this, but it was found that there are too many varying factors involved which would not allow for a direct comparison. These factors being government legislation and jurisdiction, social acceptance of such a policy, general demographics, applicability of such a policy due to percent electrified, etc. In fact, most other African countries are dealing with issues of access rather than subsidising the use of electricity. This is not to say that there are no other countries subsidising electricity, in fact there are a few: Argentina, Brazil, India, France, for example.

[β] Calculated as 92% of 15 million people (number of people with access to a safe water supply) = 13.8 million; 70% of 13.8 million (the number of people receiving FBW) = 9.66 million; 82% of 9.66 million people = 7.9 million (the number of poor people receiving FBE); Leaving 9.66-7.9 = 1.74 million (non-poor people receiving FBE); 1.74 million people/4 (average household size) x 6000 L water per month = 2.6 billion litres of water per month.

4.5 Analysis and Summary

This section reviewed other grants and subsidies in South Africa and compared their methods of targeting and implementation with those of the Free Basic Electricity. The reality is that targeting subsidies and grants is incredibly difficult. The way in which subsidies, such as social grants, refuse, rates, income, etc are delivered is through a registered administered system where the successful applicant can collect the sum at a paypoint or at the post office. Although these grants are most definitely not relayed to anyone not deserving of such a grant since these are administered through an application process, there is exclusion to those who are not registered, or those who cannot register (e.g. for lack of an ID book). In most cases, it is the poorest of the poor who are not benefiting from such poverty alleviating schemes. The Free Basic Water is applied in a broad based targeting method such as the Free Basic Electricity originally was in Cape Town. This broad based approach ensures that all who should be recipient to a poverty alleviating subsidy, yet it will include many who are not in need. The difference with the FBW is that they are able to cross-subsidise the free water and recover the costs in full, therefore making the delivery of such a subsidy realisable. However, access is defined differently for FBW than for FBE. Access to FBW also includes a communal tap dispensing 25 litres per day per person, yet, there is no regulation to ensure that this water is fairly distributed. As discussed, these communal taps may also be skewing the facts as to how many people are actually beneficiaries of Free Basic Water. However, the FBE implementation can learn from this that a broad based approach is good for inclusion of all poor connected to the grid, but not helpful to those without access. A more administratively refined approach of targeting may be too exclusive in that only households registered would benefit. The lesson to be learned is that a blend of these approaches may be the most beneficial to the recipient and the provider.

CHAPTER 5: MUNICIPAL LEGISLATION AND BUDGETS

5. Introduction

It is the responsibility of local authorities to provide those living within their jurisdiction with basic services. It is the responsibility of local governments to support local authorities to perform their duties. This chapter explores the creation of municipalities and the rights and duties allocated to them, particularly with regard to providing free basic services. Municipalities must achieve a political aim and follow through by managing financial arrangements. The budgets and provision of funds for making Free Basic Electricity available is examined accordingly. Again, Cape Town is taken as the case study since it has both the implementation of FBE and the establishment of the Regional Electricity Distributor in place. The purpose of this chapter is to examine how

municipalities the legal and budgetary infrastructure which enables the funding and implementation of FBE.

5.1 Municipality Demarcation

The Municipal Demarcation Board was instated in 1999 by the Municipal Structures Acts 27 and 117 of 1998 to establish new municipal boundaries in line with the Constitution's vision for municipalities to be able "to provide equitable and efficient services, build local democracy, promote social and economic development, collect revenue, ensure safety and healthy environments, and create a generally viable and sustainable system of local government" (MDB, 2005). The establishment of new municipality boundaries in 1999 was in order to balance some difficulties faced by some municipalities after the initial boundaries drawn in 1996. There was difficulty in understanding and responding to local needs as some district councils were too large and remote from local councils; there were metropolitan governments with split tax bases; there were municipalities that were not financially stable because there was no tax base was within their boundaries; there were many regions not served at all by an accountable local authority; some rural municipalities did not have the resources, capacity or power to "achieve meaningful service delivery"; there were still racial boundaries; and some metropolitan municipalities failed to meet the criteria for a metropolitan municipality of Category "C" as stated in the Municipal Structures Act (MDB, 2005). The demarcation of municipalities was done, in part, to affect efficient service delivery. Municipalities are divided into three categories. As given in the Constitution (1996:82):

- Category "A" is a municipality that has the exclusive municipal and legislative authority in its area;
- Category "B" is a municipality that shares municipal executive and legislative authority in its area with a category C municipality within whose area it falls; and
- Category "C" is a municipality that has municipal executive and legislative authority in an area that includes more than one municipality.

Cape Town is a category "A" municipality, because it distinctly fulfils criteria according to the Municipal Structures Act 117 (1998:8), namely an area of high population density, significant movement of people, goods and services, extensive development, and numerous business districts and industrial areas. The Municipal Structures Act defines, amongst other things, the central structures and the functions and powers of a municipality as dictated in the Constitution.

5.2 Municipal Legislation

The Constitution of the Republic of South Africa (1996) states the powers and functions of a municipality, as well as their duties and rights. These include the "executive authority to administer gas and electricity reticulation" as stated in Section 156 (1) a. In other words, it is the duty and right of a municipality to provide electricity to those living in its jurisdiction as dictated in the Municipal Demarcation Act. The Constitution in Section 152 and the Municipal Systems Act 32 of 2000 also direct municipalities to provide communities with sustainable services, of which electricity supply is one. Furthermore, both pieces of legislation listed above require that municipalities should, within their financial and administrative capacity, provide citizens with equitable access to these municipal services. In line with meeting the goals of this legislation, municipalities can adopt policy objectives such as the Free Basic Electricity. However, since the Free Basic Electricity is a national government proposal, local government can implement these objectives as they choose within their financial and administrative capacity. Yet, as a national government initiative, national and provincial government are required to assist local government in implementing policies (dplg, 2005).

The development of an Integrated Development Plan (IDP) is required in the Municipal Systems Act. The IDP lays out the objectives and methods for achieving these for the municipality, which is vital in developing the intentions of the municipality to provide basic services for their poor and how they will do so. The Municipal Finance Management Act 56 of 2003 provides municipalities with a framework which affects an efficient and transparent budgetary process for realising the objectives set out in the IDP.

5.3 Municipal Budgets

In order for municipalities to fulfil their legislative duties, a sustainable, reliable source of revenue must be in place to ensure the stable delivery of services. Municipalities receive money from the national government and the rest is self-generated. The nationally raised revenue is divided among the three tiers of government such that the largest portion remains in the national government, the second largest goes to provincial government and the smallest amount is transferred to local government (OSF, 2005). Different municipalities receive different amounts of this transfer, based on their own revenue raised and various other factors, which has already been discussed in greater detail in section 3.6 "Funding of the FBE and Equitable Share". Revenue for municipalities is generally raised through the surpluses on rates charged for property, electricity, sanitation, and refuse removal (OFS, 2005). The surpluses earned from electricity sales alone for the City of Cape Town has been 18.4% and national transfers consisted only of 3% of the total budget in 2000 (NT, 2005b: 30, 151). Municipalities deliver and fund other services from the surpluses earned as per

IDP themes. For the year 2005/06, the City of Cape Town (CCT, 2005) lists the funding available per IDP themes as:

1. creating integrated human settlements (R 2.4 billion);
2. economic growth and job creation (R 24.5 million);
3. building strong communities (R 20.2 million);
4. access and mobility (R 413.6 million);
5. equitable services (R 981.2 million);
6. enabling institutional framework (R 147.8 million); and
7. financial sustainability (R 106 million).

Equitable services, including themes such as water, waste and electricity services, sport and recreation, environment and safety, comprise about 23% of the total budget for the City of Cape Town. The provision, maintenance and accessibility of community facilities is budgeted at 2.7% of the total equitable services budget while 33.3% is earmarked for maintaining the quality of electricity supply in existing areas (CCT, 2005). The total national budget for fiscal year 2004/05 was R150, 291, 025, 000. The budget allocations relevant to this study for the fiscal year 2004/05 are given in Appendix 2 (NT, 2004) and highlight the priorities for spending, which are less for electricity than for other services. For example, the national budgeted total for increasing access to electricity services through the Integrated National Electrification Programme is R 247.6 million, while the total for increasing access to water is R 1.3 billion. The total budgeted spending for Free Basic Services and infrastructure (including electricity, water, sanitation, refuse, etc) through the Provincial and Local Government is R 29 million, while the additional total spending for subsidising water operating tariffs is R 858 million. This is a point worthy of further exploration, as it queries the priorities of funding. Also, it brings about the definition of access, since these are defined differently for water and for electricity (discussed in previous chapter). A further grant is given to support municipalities and ensure investment in extending infrastructure. This Municipal Infrastructure Grant (MIG) is meant to provide the capital expenditure needed to address infrastructure, backlogs and basic services for low-income households (NT, 2005: 157-158). The MIG contains an electrification component to fund electrification "backlog of permanently residential dwellings that are situated in historically under-supplied areas" (NT, 2005: 266) and is incorporated in the formula for the 2006/07 budget (NT, 2005: 268).

The Energy White Paper identifies that a major portion of income for local governments comes from operating and selling electricity. In terms of loss of revenue due to the establishments of the Regional Electricity Distributors (REDs), the Constitution has made allowances for local authorities to move away from an electricity-based income, which is deemed not to be transparent or regulated, to more transparent and regulated sources of revenue. There are several issues facing

municipal electricity distributors and the DME (2005) deems that the funding problems in municipalities are too great to allow municipalities to meet their electrification obligations as well as all their other service obligations. They argue that applying an overarching fund for all purposes will not permit municipalities to meet the objectives of fairness and equity, efficiency, transparency, and viability. Policies have been put in place to allow Municipalities a slow transition to reduced dependence on electricity taxation as a form of income. This will be done so as not to destabilize the financial position of local government (DME, 1998). The loss and recovery of municipal funding is discussed in greater detail in the next chapter.

5.4 Analysis and Summary

National transfers to local government are important, as they increase the ability of local government to meet their legislative objectives and obligations to provide infrastructure and services in an equitable and stable manner to all of its citizens. The process for administering the funds from national government to provincial government is done in an equitable manner and in turn, a portion of these funds are passed on to municipalities to assist them with their legal obligations to provide basic services. These funds are usually not sufficient, but local governments are expected to generate most of the income necessary to fund these services on their own since they have access to directly taxing property rates, electricity and water consumption, and other municipal services.

A possible point worthy of future examination would be to investigate the priorities of spending for various programmes. It is noted that the amount of capital made available for funding is not relative to the costs of providing infrastructure, especially since the definitions of providing that access differ so greatly between water and electricity. In other words, the definition of access to water is a communal tap within 200 metres of the home, while the definition of access to electricity is a pre-paid meter in the home. These would clearly require differing amounts of capital investment, but perhaps not in the way earmarked in the budget. However, with municipalities now also recipient to an extra grant made available for the sole purpose of extending infrastructure to poor households, it should become easier for municipalities to cope with the loss of revenue from electricity sales.

An interesting remark in the Budget Review (NT, 2005) which states that the MIG should fund permanent households "situated on historically under-supplied areas" is also worthy of further investigation as this leaves a lot of poor migrants out in the cold if they move to an area which is not "historically under-supplied". In fact, the intrinsic fact of that statement could potentially keep poor households in the same geographic area, not allowing them to move for loss of the right to an

electricity connection or possibly subsidies for these services. The question is: is the freedom of choice only available to those who can pay?

CHAPTER 6: ELECTRICITY INFRASTRUCTURE, ELECTRICITY REFORM, REGIONAL ELECTRICITY DISTRIBUTORS AND THE IMPACT ON THE DELIVERY OF FREE BASIC ELECTRICITY

6. Introduction

"There are a number of issues facing South Africa's electricity industry which limits its ability to achieve its primary objectives of meeting aggressive electrification targets, of ensuring world class supply quality, and of continuing to provide low cost and equitably priced electricity to all customers. The EDI [Electricity Distribution Industry] restructuring and the ESI [Electricity Supply Industry] restructuring is a way of meeting these objectives" (DME, 1998:30, 2005). Reforming the electricity distribution sector is seen as the most urgent change to be made to meet these policy views. The White Paper (DME, 1998:29) stresses the point that the electricity supply industry must be made to be "financially viable, technically healthy and well managed... [and] capable of being the engine for growth, development and prosperity for South Africa."

This chapter will discuss the reasons for restructuring the electricity sector, but focus mainly on the distribution industry aspects of restructuring as this is the area that would impact directly on the delivery of the Free Basic Electricity in the near future. A brief depiction of the electricity infrastructure in South Africa and Cape Town will be given, followed by the background and current view of the restructuring of the distribution industry. The focus area, again, will be Cape Town since the RED has already been established there. An analysis of the Service Delivery Agreement (SDA) between the City of Cape Town and RED1 will provide a better understanding of function of the RED in place of the municipal electricity distributor. A description of the proposed structure and formation of the Regional Electricity Distributors (REDs) will give way to an analysis of the impact this is having on the funding and delivery of Free Basic Electricity.

6.1 The Electricity Infrastructure in South Africa and Cape Town

This section will cover the electricity infrastructure in South Africa from generation to the point of use. Various stakeholders, their roles and involvement in the hierarchy of electricity industry will be discussed. Figure 8 illustrates the various points of departure for the distribution of electricity, which are generation, transmission, distribution and reticulation (SEA, 2003).

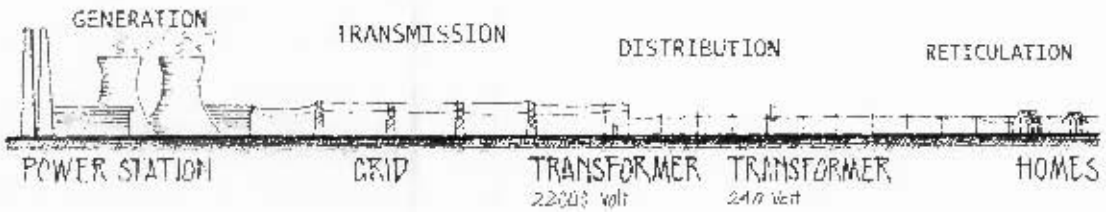

Figure 8: Electricity Infrastructure (SEA, 2003:12-1, Ward, 2002)

6.1.1 Electricity Generation and Transmission

Generation is defined as "the production of electricity by any means" (DME, 2005c:4). Eskom generates 95% of South Africa's electricity. Cape Town purchases 98.6% of its electricity from Eskom, of which almost all is produced at coal-fired power stations in Mpumalanga (SEA, 2003:12-3).

Transmission is defined as "the conveyance of electricity through a transmission power system operating above 132 kV" (DME, 2005c: 4-5). SEA (2003:12-3) quote transmission losses of more than 20% when sending electricity from Mpumalanga to Cape Town. Therefore, there is great incentive to encourage more local electricity generation.

6.1.2 Electricity Distribution

Distribution can be defined as "the conveyance of electricity through a distribution power system operating at or below 132 kV" (DME, 2005c:4). The DME (2005c:4) defines reticulation as "trading by a municipality and the distribution of electricity by a municipality to the community within its area of jurisdiction, and includes services associated therewith. Nationally, electricity distribution is carried out by Eskom and some 378 municipalities (DME, 2001). Customers within a local government jurisdiction are mostly supplied with electricity by the municipalities who purchase most of their electricity from Eskom, and Eskom serves the rest. Eskom supplies about 40 percent of all customers in number and 60% in total sales by volume (ERIC, 1996). As discussed in section 2.5.1 "Residential electricity tariffs", Eskom and the municipalities, in this case Cape Town, have differing tariffs for essentially the same service. The idea behind regulating the electricity distribution industry is to rationalise these tariffs, thereby providing a more efficient, stable and fair service amongst all licensed distributors.

6.2 Background to the Restructuring of the Electricity Industry in South Africa

The Government envisages a fully restructured electricity industry to address the myriad of problems the previous government left behind in the poor decisions that were made regarding

electricity policy (Eberhard, 2002). Changes will be made throughout the sector to optimise performance within the industry and expand the potential for economic growth. Although generation and transmission (the Electricity Supply Industry) will also be reformed, the main focus is on the Distribution sector, because the most urgent need for change to meet Government's goals to provide a productive, efficient, reliable, consistent and transparent distribution sector is in this sector.

6.2.1 Restructuring the Electricity Supply Industry

With the desire to become and remain globally competitive, Government wishes to keep abreast of global changes in the electricity industry as such a measure. Global trends are towards opening up markets to foreign investors to assist with the input of capital investment to develop the electricity sector. Government intends to follow these trends in the view of optimising the industry, while staying true to their obligations to meet social needs. Restructuring the supply industry include establishing a competitive market where customers have the ability and right to choose the electricity provider, and providing entrance to the grid from various electricity generators. The vision is for the electricity supply industry to be "financially viable, technically healthy and well managed" (DME, 1998).

6.2.2 Restructuring the Electricity Distribution Industry

The Electricity Distribution Industry (EDI) includes the parts of the electricity industry responsible for the reticulation, which is the delivery, of electricity. This is the part of the industry that takes electricity from the transmission lines and transfers it to all customers. This is done by Municipalities, Eskom, and other smaller electricity distributors. This is the portion of the electricity industry seen as requiring the most attention for restructuring and is therefore the first part of the reformation process that will be done.

6.2.3 Reasons for Restructuring the Electricity Distribution Industry

According to the White Paper (DME, 1998.30-31), there are several reasons for restructuring the distribution sector, namely the inefficiencies:

- The sector is highly fragmented with more than [280] municipalities having less than 1000 customers and more than 90 municipalities with a revenue of less that R1 million per annum;
- The financial health of municipal distributors varies greatly. Some municipalities earn money from electricity distribution, some do not distribute electricity, some earn a large surplus, others only a minimal amount;

- The differences in prices paid by various customers in different areas but in essentially the same category vary greatly which cannot be fully explained by the costs associated with serving these segments;
- Economies of scale, skill and specialisation are not being captured by many of the small distributors and average distribution costs range significantly;
- The need for new electricity connections varies regionally with poorer areas needing the most electrification. Some distributors may not be able to meet their electrification targets if funding gets stretched for various other, equally important, purposes. Cross-regional subsidisation is seen as an "equitable way to fund the regional programme" since electrification is a national objective; and
- "While there are many distributors that are not financially viable today, collectively the industry is able to fund both the supply of electricity and electrification over the long-term. However, if the industry is expected to both contribute to funding other municipal services (as it does currently) and to pay for the electrification programme over the long-term, the electricity distribution industry will experience financial bankruptcy without alternative funding and pricing mechanisms, a reduction in the generation and transmission prices (i.e. the wholesale price of electricity), or substantial increases in tariffs. Even if the price municipalities pay for energy is reduced to the price paid for energy by Eskom distribution, the collective position of the industry will not change. The current Eskom distribution surplus will just be transferred to municipalities without changing the overall cash flow problems for the industry as a whole."

The DME (1998) also cites an increasing number of municipalities unable to pay their bulk accounts to Eskom as grounds for restructuring the electricity distribution industry. The DME wants the distribution sector to be a productive, efficient, reliable, consistent and transparent. To do this, a type of "redistribution of wealth" of distributors will be engaged in to help the poorer areas meet the national goals of electrification as well as ensure a reliable supply of electricity at an acceptable cost. The objectives of restructuring the electricity distribution industry, as put out by the White Paper (DME, 1998) are to:

- Ensure agreed-to electrification targets are met;
- Provide low-cost electricity;
- Facilitate better price equality;
- Improve the financial health of the industry;
- Improve quality of service and supply;

- Foster proper co-ordination of operations and investment capital; and
- Attract and retain competent employees.

The DMEs next objective was to tackle *how* the electricity industry would be restructured. Since it was strongly believed that the distribution sector was in the greatest need of change, the focus of restructuring would be here, at least for the near future.

6.2.4 The Restructuring Process and Procedures

The Electricity Restructuring Inter-departmental Committee (ERIC) compiled a report in 1996 for the Government on recommendations for how to restructure the sector. Based on this report, Cabinet decided that the EDI should have the following (DME, 2005):

- Consolidation of the EDI into a maximum number of financially viable and independent Regional Electricity Distributors (REDs);
- The introduction of transparent, cost-reflective tariffs, an electrification fund and a capped tax for part funding of municipal services;
- Consultation by and with relevant and major stakeholders, such as the Ministers of Minerals and Energy, Finance, Public Enterprises, Labour, Trade and Industry, and of Provincial Affairs and the Constitutional Development; and
- A full-time team appointed to investigate detailed issues and involving major stakeholders in the planning process of transformation.

Using the above key points as guidelines, the restructuring process began first with a proposal phase, then a transformation phase and then the implementation phase of putting the REDs in place, the current phase. The ERIC (1996) made some key assumptions about the limitations to restructuring:

- The restructuring will not incur any forced retrenchments in the distribution industry;
- Eskom and municipalities will continue to maintain public ownership of the EDI for the short- to medium-term. Changes will take place within the framework of Government's policy on restructuring of state assets;
- The onus of setting policy and distributing electricity within their jurisdiction will still lie with the municipality, but distribution does not have to be undertaken by the municipality itself;
- The income generated from electricity sales will still be available to municipalities to fund other services, but this will be done in a more transparent way via different means;
- Government will only be able to provide "limited subsidies" and therefore the EDI should put self-funding mechanisms in place;

- National funding will be provided transparently and distributors will be expected to meet their agreed to electrification targets;
- The NER will continue to regulate and manage tariffs;
- Some issues will have to be addressed at national level, while others will have local level jurisdiction and should be handled as such irrespective of the infrastructure.

These assumptions acknowledge and address the challenges faced when restructuring. Acknowledging them in the fore, gives the relevant stakeholders the opportunity to concentrate on finding solutions to these expected obstacles. The ERIC considered various models for application to the restructured distribution industry and Cabinet approved the Regional Electricity Distributor (RED) model, in which distribution is separated from the generation and transmission entities of the electricity industry.

6.3 Regional Electricity Distributors

It was envisaged that the RED model would be most beneficial and appropriate to Government's intentions. The envisaged benefits of the RED model over others are that economies of skill and scale will be harnessed and there will be transparency between distributors, which enable a competitive environment for consumers. There are, however, some disadvantages to this model. The local communities stand to lose responsibility and accountability, customers could be in the position to lose power if there is only one distributor, initial costs to establish the new system will be incurred, and efficiency will only come with time (ERIC, 1996). The aim of the REDs taking over the distribution of electricity, according to the decision taken by Cabinet in 2001, is to reduce costs, improve efficiency and standardise tariffs.

Initially, it was deemed that six REDs would be capable of distributing electricity since each RED would be anchored by one of the six metropolitan municipalities. However, in December of 2005, a seventh RED was announced which would be a type of 'national RED' (Mabanga, 2005). The national RED would be a virtual RED which would support struggling smaller municipalities (Eberhard, 2006). Municipalities could then decide if they wanted to join the metro RED or join the national seventh RED (Mabanga, 2005). The REDs will be implemented in stages, beginning with RED1, of which the City of Cape Town falls into its boundaries, which was put in place on July 1, 2005. RED1 will act as a case study for this discussion since it has already been established. The picture below depicts the area covered by RED1. RED1 includes 39 Local Municipalities, 16 District Management Areas, and 1 Metro.

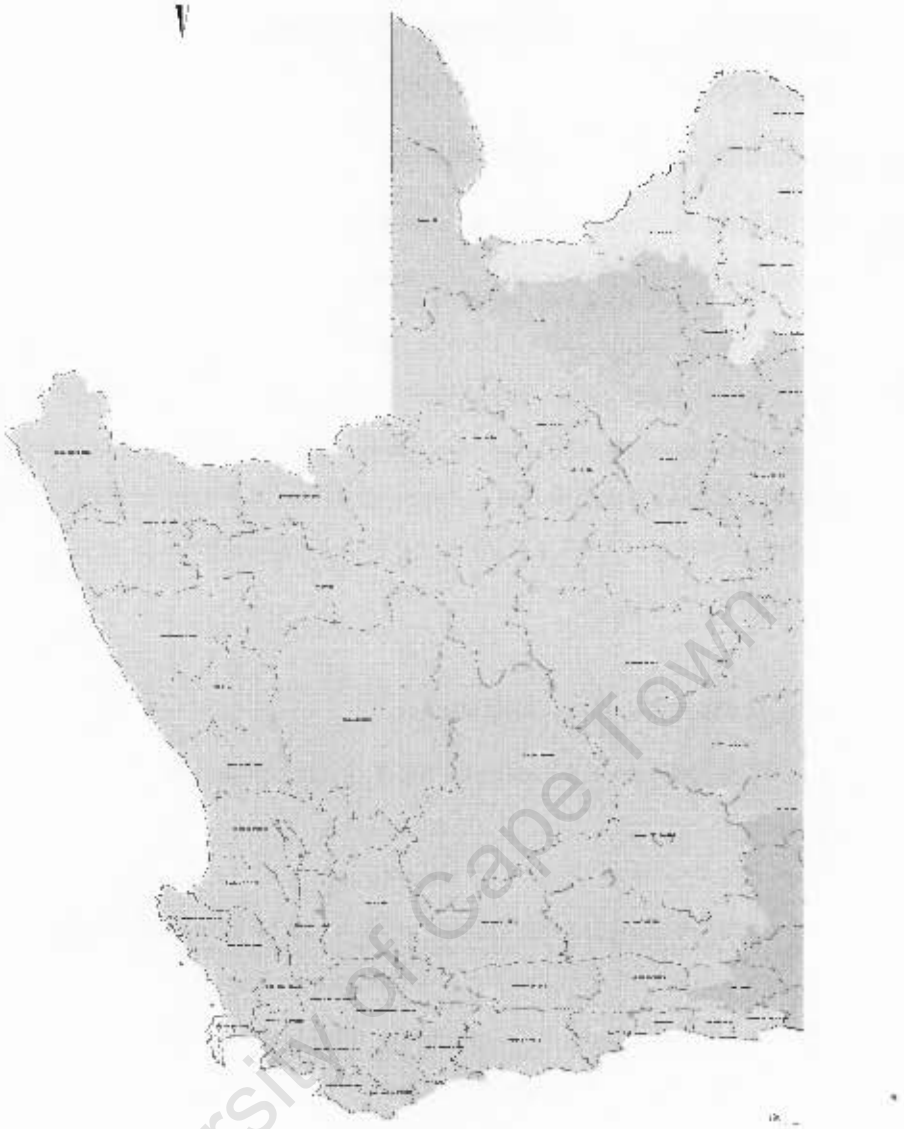

Figure 9: Map showing areas included in RED1 (EDI, 2005)

6.3.1 REDs Ownership and Authority

The REDs, envisioned as the sole distributors of electricity, will be Government owned and controlled by a Government appointed board. The EDI Blueprint Report (2001:25) states that the REDs "will be made up from assets and liabilities contributed by Eskom and a large number of municipalities." Large contributors will be compensated for with shares, while smaller contributors will be paid out. The shares will allow the contributors to have "voting rights within the governance arrangements for that RED", but national government will hold a "golden share" allowing it to rule over "certain limited decisions among RED shareholders" (DME, 2001:25-26). This golden share will be in place for the next five years, allowing for the most beneficial transition of the REDs. Furthermore, it is recommended that national government holds Eskom's shares, since Eskom is involved in the generation and transmission side of the electricity industry and would thus avoid conflicts of interest once retail competition begins (DME, 2001:27).

Municipalities would therefore still play a role in that they would part-own the sector distributing electricity. Officially, the RED would be a municipal entity, which is governed by the Municipal Systems Act and the Municipal Finance Management Act. An official relationship between the REDs and municipalities would be established through legislation, contractual agreements or other suitable procedures (DME, 1998:33).

6.3.2 REDs, Municipalities, Eskom and Service Delivery Agreements

"The future regulation of the EDI should be through a combination of local and national arrangements: the municipalities should exercise their constitutional role through a service delivery agreement (SDA) with the RED; the NER should exercise its role through the licences issued to the REDs based on applicable national legislation" (DME, 2001:38). Because the municipality is legally obligated to provide electricity services to those within its jurisdiction, the establishment of the RED makes this no longer possible. The constitutional obligations will be upheld in the RED through this legislative framework of the SDAs and the licence awarded by the NER, thus controlling and protecting the rights of electricity customers. The SDAs will include annual documentation from the RED for approval by the municipality. These documents will ensure that the RED is performing and will include (DME, 2001: 38-39):

- an electricity distribution development plan (including an operating and investment plan) whereby the integrated development plan (IDP) for that area is honoured;
- policies for that area for credit control, debt collection and customer management and must be in line with national standards and license conditions;
- tariff policies and electricity tariffs compiled in agreement with licence conditions, national policies and national legislation, as applicable. Local commitments will have to be respected and followed; and
- performance indicators and targets.

An analysis of the Service Delivery Agreement between the City of Cape Town and RED1 (EDI, 2005) shows that the above mentioned points are indeed included. The RED is required to "develop a multi year business plan and service delivery plan, including an electrification plan, having regarded the City of Cape Town's integrated development plan..." (EDI, 2005:16) and contained in this business plan will be the City of Cape Town's requirements regarding the implementation, targeting and delivery of FBE (Eberhard, 2006). Specifically stated in the SDA is the means of funding the FBE within the RED. The City of Cape Town is to transfer its share of equitable share allocated for FBE to the RED (EDI, 2005: 24). The SDA further states the key objectives to be (EDI, 2005: 41-42):

1. Customer satisfaction;
2. municipality sustainability and financial viability;
3. protection of the right of access to free basic electricity;
4. maintaining of governance integrity;
5. creation of an independently sustainable and viable entity;
6. municipal obligation to current staff members; and
7. accountability and transparency of reporting.

The second objective states in more detail that it should "ensure agreements are in place to continue the provision of free basic electricity services in accordance with national policy, to those customers who genuinely cannot afford the service, on an equitable and long-term basis, with ongoing improvements in standards of quality" (EDI, 2005: 41). Pending the performance of the RED against various indicators and objectives set out, the agreement can be amended or terminated, which allows the city some security. The performance of the RED will be based on the following indicators (EDI, 2005: 42):

- actual capital financial performance against monthly budget;
- actual operating financial performance against monthly budget;
- revenue collected against billing;
- progress made with rationalisation of tariffs;
- actual bulk purchases versus electricity sold;
- new installations/connections per month against electrification plan; and
- subsidised connections per month against electrification plan.

The SDA is important in that it will enable the municipality to release its legal obligation to reticulate electricity to the RED with peace of mind. Eberhard (2006) suggests that service delivery agreements are important, but even stronger when the relationships are as strong. The understanding and agreement of common goals will enable mutually beneficial outcomes.

The NER will further ensure compliance with national and local legislation by the RED with its own agreements issued through three licences: distribution, captive market retail licence and contestable market retail license. Currently, the retail competition aspects of the RED are not yet in place and will not begin in the near future except for large customers (DME, 2001:36), so the focus will be constrained to the distribution licence agreements. The key points of the distribution licence to regulate the tariffs and services of the REDs are as follows (DME, 2001:39-41):

- the REDs will have a universal service obligation, which is in line with national governments goal to provide universal access to electricity for all, and will include the provision of electricity to grid and off-grid customers;
- protection of low-income households through "specific provisions" and include the duty to implement poverty tariffs in line with government policy;
- total revenues will be controlled ensuring that REDs are not unduly collecting profits;
- the price structure will be regulated by NER's tariff methodology;
- distribution access and connection terms will maintain unbiased access to the distribution network to third parties through NER authorised agreements; and
- supply and service quality will be ensured through carrot and stick incentives.

Through proper regulation, the services delivered by the RED should provide a comparable service to the current electricity distributors. The SDA and the license agreements ensure mutual satisfaction.

6.3.3 Municipality budgets after the establishment of the REDs

Municipalities stand to lose a great source of revenue with the implementation of the REDs. Municipalities have profited from electricity sales and used this to fulfil their duties to the community from electricity undertakings. With the restructuring, municipalities will no longer be the middleman to electricity distribution and hence lose the profits. Mark Pickering of the Palmer Development Group envisages a significant loss of over R 306 million in revenue to the City of Cape Town municipality (NT, 2005:151). The DME (2005) suggested several transitory and permanent solutions to this loss of funding to ensure continued electrification, subsidisation of electricity use for poor households and the funding of all other municipal services through mechanisms such as:

- Ultimately seeking cost-reflective tariffs, phased in over time (i.e. an increase in cost of sales);
- REDs collecting an electricity levy on behalf of the municipality; and/or
- A supplementary transfer of funds to the municipalities based on the loss of revenue, as well as give authorisation for municipalities to generate revenue through the taxation of other services.

As decided in the EDI Blueprint (DME, 2001:15, 49), municipalities will continue to receive the levels of income related to electricity sales through the means of a levy and dividends. It is

envisaged that this levy will be reduced over time as local governments strengthen their capacity to generate their own income from other sources (DME, 2001: 50).

6.3.4 Financing the REDs

The financial situation of the REDs in its transitional stage will differ from that envisaged when they are in their final position. Apart from the assets accrued from the transfer, the REDs will initially generate income through the tariffs set, and maintain funds by paying out dividends only after the first four years (DME, 2001: 52-53). These are all still theoretical speculations at this point, however, since the first RED has only been established in July 2005 and has yet to be in a position of holding assets and conducting business. This is envisaged to begin on 1 July, 2006 (Eberhard, 2006).

6.3.5 Tariff structures in REDs

The tariffs for REDs should be cost-reflective, affordable and transparent, with cost-reflective tariffs being the most important factor in deciding the levels (DME, 2001:44-45). Although tariffs are structured differently for each customer category, the focus here will be on residential tariff structures as this is relevant to FBE.

Tariffs are based on recovering costs incurred for supplying electricity, and in the case of the RED, earning a return. The tariffs for the residential sector include the costs of generation and transmission of electricity to the RED. The RED will charge a tariff, approved by NER, which will allow it to "maintain its asset base, meet its operating costs and earn a reasonable rate of return on its assets" (DME, 2001:45). Since the residential tariff is currently not cost-reflective, and in fact falls 50% short of being cost-reflective, it is for financial security that the RED should increase this tariff to a more realistic one. Without raising the tariff by at least 40%, the RED will not have the independent financial status to fund its development initiatives, the quality of supply and customer service standards will drop, and the RED will not be financially attractive to investors. It is, however, envisaged that with the benefits of reforming the EDI, the residential tariff may not have to rise more than 22% over the next 10 years, because REDs will be given incentives "to achieve significant improvements in cost efficiency, loss reduction, improvements in revenue collection, and achieve growth in total load served in an efficient manner" (DME, 2001:46, 52).

The typical residential tariff (excluding poor households) will then include cost components for the RED to maintain, operate and earn a return, and a levy for local governments. The electricity sales levy is to guarantee revenue for local government to make up for the loss of finances from their previous electricity undertakings. It is viewed that this levy will be transitory as local government finds it's footing in generating income (DME, 2001:49-50).

The proposed residential tariffs given in the EDI Blueprint are a single rate tariff and a two-part tariff. A single rate tariff at a subsidised rate should be available for low-income households with a current at or below 40A, while all other residential customers with an installed capacity exceeding 40A will have the choice of a single rate or a two-part tariff. The single rate will be charged at the same rate as for the low-income customers, but designed that if consumption levels exceed a specified amount it would be cheaper to opt for the two-part tariff. Customers wanting to upgrade their current supply will be able to do so at full cost (DME, 2001:47-48).

6.3.6 REDs, the Poor and Free Basic Electricity

"Reform of the EDI must take place in a way which places the needs of poor consumers at its heart and supports rural development" (DME, 2001:47). A task team will be set up by the Holding Company to recommend to the DME how they can meet the electricity related basic needs of poor customers. Clark and Drimie (2002: 23) have noted that "the South African government has chosen, within the context of energy sector reforms, to continue to subsidise energy utilised by poor people. This is deemed by most energy sector players to be appropriate although it has been argued that a deeper understanding needs to be developed of what these subsidies amount to in currency terms, as well as how and by whom these fuels will be cross-subsidised." According to the EDI Blueprint Report (DME, 2001:47) financing the electricity consumption of the poor can occur in two ways:

- a cross-subsidy from "other electricity consumers" to poor customers with grid or off-grid connections; and
- through a direct payment to the RED from the equitable share transferred to the municipality.

The DME (2001:47-48) detail that the implementation of the subsidies (FBE and cross-subsidies) is intended for the purposes of low-income households and the RED should "as best as possible" ensure that the subsidy is not "readily available" to non-poor customers. Poor customer's right will be protected through service delivery agreements made between the REDs and the municipality within whose jurisdiction they fall. The performance of the RED will be reviewed and can be amended on an annual basis (EDI, 2005).

6.4 Analysis and Summary

The restructuring of the Electricity Distribution Industry into Regional Electricity Distributors is a process that has long been under debate, and it is still long till fruits are borne. The reduced inefficiencies and benefits envisaged have the apparent potential to address and correct the legacies of the Apartheid government. The REDs will be in the financial position to undertake the electricity services thereby allowing municipalities to concentrate more on other aspects of

development and providing other basic services to the poorer communities. However, the success of the RED is only as strong as the service delivery agreements and the relationships between those who make them.

Although these are points that are meant to be addressed in the future annual business plan of the RED, it is worrying that a SDA was signed by the City of Cape Town without knowing what that business plan entails. Further research is possible into the structuring of the actual business plan of the RED, because various issues need to be addressed to ensure the protection of the poor. How will the RED identify the recipients of the FBE? The fleshed out version of the objective regarding FBE stated that FBE would be provided "to those customers who genuinely cannot afford the service", which implies that the recipients will be refined to exclude those who do not need the subsidy and include those that do. However, the performance indicators listed does not monitor the success of the delivery of FBE to poor households. Therefore, it is still open to further research once the REDs have been fully established if the REDs will have an impact on the delivery of FBE to poor households.

CHAPTER 7: ANALYSIS AND DISCUSSION

7. Introduction

This chapter will summarise, analyse and discuss the key issues arising out of the previous chapters.

7.1 Electrification and Household Energy Use in South Africa

The provision of electricity in South Africa has social, environmental, economic and political grounds. An aim of the Energy Policy of 1998 is to address the discrepancies of services provided during the Apartheid government to rich, white households only. Not only does the promise to electrify all by 2012 have immense social and political objectives, but environmental and economic. Electricity use is more convenient, efficient, reliable, clean (at point of use) and economic than other fuels typically used by low-income households. Low-income households often lack the additional capital required to invest in the appliances which run off of electricity and therefore continue to use harmful and dangerous fuels such as paraffin. Local emissions and the danger of poisoning and fire outbreaks render paraffin to be environmentally, socially and economically destructive in comparison with electricity use. However, many low-income households do not have access to electricity, because they are located on land that is not suitable

for electrification or cannot be electrified (wetlands, private land, etc). But with the promise made that all households will be electrified means that provisions must be made to accommodate the needs of these people as well (although six years is still a long time to wait and the issues here do not simple involve a power supply, but possibly entire purchasing of land, or relocation of households). Although these issues are outside of the scope of this research, it should be mentioned that further research should be undertaken to investigate possible mitigation strategies for either improving rural conditions which provide those living there with the economic fulfilments sought out when moving to urban areas, or adaptation strategies such as accelerated, improved infrastructure are developed. Statistics have shown that very few poor households are actually even connected to electricity, leaving them at a disadvantage to receiving the benefits of poverty alleviating efforts, since they do not have the access to the infrastructure needed to qualify for the subsidies given. This is very important as these are the households that are disadvantaged twice: once for access, twice for affordability of use.

7.2 The Free Basic Electricity Policy

The Free Basic Electricity Policy was developed in part to address the issues of affordability of electricity use and with the intention of being part of a greater poverty alleviating initiative. The free allocation of electricity has been set nationally to the amount of 50 kWh per household per month, although the exact amount dispensed and recipients are left up to the municipality. The flaw in the amount of subsidy provided, although not specifically addressed in this research, is not sufficient to meet all basic energy needs for poor households. This requires further investigation as it is vital to the intention of the policy. For example, grid connected households were given electricity and subsidies for the use of hot water, while non-grid households were not given sufficient energy to meet their hot water needs. This gap in the policy intention needs to be addressed if equitable services are indeed objectives. Furthermore, monitoring the success of the policy is dependent on measurable indicators, which cannot be clearly defined if the intention of the policy is not unambiguous.

Funding for the implementation of the FBE is done via a formula based on the number of indigents which redistributes the wealth across provinces, local governments and, ultimately, households. This is a fair, transparent and equitable way to make funds available for the development of the low-income residential sector. A Municipal Infrastructure Grant is allocated to support municipalities with the capital expenditure needed to extend basic services infrastructure to low-income households. Together, these are part of the accelerated service delivery programme. However, a disparity was found in the allocation of funds in that serviced households received more money than an unserviced household. Further investigation is required to find the intention behind this distribution. If the intention is indeed poverty alleviation, then surely the unserviced

household would require more funds to lift them out of poverty? Surely denying them access to an equal amount of funding could be keeping them in their position? The future of the Free Basic Electricity is dependent on universal access to electricity by all. Only with access to electricity can eligibility to receive the subsidy be attained. Therefore, it is most important to address the needs of those without access as these are the most disadvantaged people. However, the Free Basic Electricity Policy is not without an end. At the development of the policy, there was no mention of an exit strategy giving the impression that it was not well thought out from the onset. This is yet another area requiring further attention to answer questions such as: when has the FBE achieved its goals? When will the FBE no longer be needed? Can the FBE be phased out? How can the FBE be phased out?

7.3 Subsidy Targeting

Targeting subsidies is an administratively difficult and expensive exercise, but it is in fact a very important task to undertake as the financial, social and environmental impacts of many are at stake. The targeting approaches discussed have been limited to a broad based approach and a self-targeted approach (with or without current limiting). Both have advantages and disadvantages to them. The broad based approach ensures that all households connected to electricity will be recipients of some kind of subsidy, but this limits the funds available and lessens the quality of the impact made by such an intervention when the subsidy is stretched over too many recipients. This also has the effect that richer households are included but don't need the subsidy, and poorer households are excluded (no access to electricity) but need the subsidy. The self-targeting approach has the advantage that there is less leakage to non-poor households, but does not address the issues of richer holiday homes using little electricity thereby qualifying and receiving the FBE. Also, some larger, poor households (or extended backyard dwellers) may not qualify for and not receive the subsidy although they are in need of it. A disadvantage to the self-targeting approach with current limiting is that it does not consider that many poor non-electrified households make use of electricity via extension cords from neighbours. This means that if the main household with the electricity connection now has limited current, the advantages of electricity use will not be realised as there may be current overloads which could damage appliances, and cut-off the non-electrified households from an electricity supply that they may never hope to get of their own.

7.4 Other Subsidies

When comparing targeting and implementation of other subsidies in South Africa, it was found that these are truly incredibly difficult feats to get right. The targeting method used to deliver social grants requires the recipient to pass an application process to qualify. This has its advantages in that non-poor individuals are totally excluded, but it can also exclude poor individuals who have

not yet qualified, or cannot qualify as they have no means of registering (e.g. no ID book, proof of residence). Again, it is the poorest of the poor, the actual intended recipients of such poverty alleviating mechanisms, who are the hardest hit.

Free Basic Water is implemented using a broad based approach. This is an obvious method as the administrative costs of supplying only a certain amount of water to a household is costly and difficult. Yet, this approach also has the disadvantage of including non-poor and excluding poor without access. Access, in the case of water, has been defined as a communal tap dispensing 25 litres of water per person per day within 200 metres of the home, whereas access to electricity is defined as a power supply within the home. These fundamental differences in definitions make the comparison of water and electricity problematic. For example, many more households would have access to water than households would have access to electricity since less infrastructure is required to meet the defined targets for water than for electricity. Within these definitions, Free Basic Water would be more 'successful' in reaching the objectives of access and free water for all. This is seen when comparing the success rates for FBW and FBE. This is yet another point that could be explored further. FBE can learn from this, however, that a mix of approaches may be more beneficial to beneficiary and benefactor.

7.5 Municipality duties and rights

Municipalities are legally obligated to provide basic services to the people living in its jurisdiction. Municipalities sometimes struggle to properly administrate and cover the operational and maintenance costs of providing electricity. Grants, such as the equitable share and the Municipal Infrastructure Grant, are financial means to assist municipalities in meeting these obligations. These transfers are often breaking point for municipalities to realise the provision of basic services and extension of infrastructure, however, local governments are meant to generate and fund themselves through the sales of such services and through the collection of rates and taxes. A point worthy of further investigation is the intent of the MIG, which is classified for the provision of infrastructure to permanent households located on historically under-supplied areas. This, however, has the potential of excluding poor living in other areas as well as keeping poor in the same geographic region as they would only thus be supplied. This is disturbing as the issue of freedom and choice should be available to all and not only those who can pay.

7.6 Restructuring of the REDs

Originating in the need to address the inefficiencies in service delivery and rationalise tariffs to provide fair, equitable and cost-reflective tariffs and services, the electricity distribution industry has been restructured into Regional Electricity Distributors. The functions and performance of the

REDs are stronger when supported by sound legislation and healthy relationships with the cities that appoint them. The service delivery agreements will contain the foundation, but the real substance to support the intentions and will of the city's IDP will lie in the business plan designed by the RED and reviewed by the city on an annual basis. It is within this business plan that the rights of poor customers will be protected and further ensures them of a reliable supply of electricity at the subsidised price that is the FBE. The development of the business plan will need to be monitored as the protection of poorer communities is not yet in writing, although it is conditionally agreed upon in the form of objectives to be achieved. Questions around the implementation of FBE still remain: how will the recipients be targeted? How will success be measured? How long will the FBE remain in place? These and other questions remain to be seen as the REDs are fully established and begin delivering FBE.

CHAPTER 8: RECOMMENDATIONS AND CONCLUSIONS

8. Introduction

This paper investigated the current energy use patterns in urban South African households and concluded the need and justification for a support mechanism to help with the operating costs of electricity for the poor. The questions were asked why this subsidy was created and what is the intention of the policy? The intention of the Free Basic Electricity policy was looked at in order to determine what key performance indicators could be drawn upon to measure success. If the intention of the policy is to alleviate poverty, then it has probably not achieved its goals. It addresses the symptoms of the problem and not the cause, but perhaps this is in fact the way that poverty is addressed in this day. Giving an electricity subsidy not only does not solve the problem, it has the potential to create another entirely. In terms of Sustainable Development creating an electricity dependent country/population is contradictory to its goal to achieve economic growth but not at the cost of the environment. It is important to clarify that giving *energy* is not the problem here, but rather what type of energy is being promoted. The policy goals can also be achieved while providing a range of fuels, such as LPG, fuel gels, and solar (SHS and solar water heaters) to meet the growing demand for energy. Numerous studies have shown the benefits of electrification to be better health from cleaner energy sources, more time for homework with lighting and more access to less expensive and efficient appliances are some of the benefits accrued, yet in the fast developing world, electricity is not the only energy source. This should not be fought against, but instead embraced because diversity is not inferior.

Targeting and implementing the policy also proved to be more difficult in that many households are excluded or included when they should not. It was asked what methods of implementation were considered and how were they selected, how are other subsidies delivered to the poor, how are the poor identified, who are the intended recipients of the subsidy and are they also the actual recipients? These are all very important questions when determining the success of the policy. However, there is still distinct leakage to non-poor households while many poor households go without the benefits.

Funding mechanisms were investigated to understand the question of financing of the policy. The funding is determined in a fair and equitable manner on a national level, but still excludes the poorest of the poor from attaining any of the benefits since access to electricity still needs to be achieved. This responds to the next question about the backyard dwellers and non-electrified households not harnessing the benefits of FBE.

The future of the policy in light of the Regional Electricity Distributors was closer examined in terms of understanding the impact this might have on the implementation, funding and delivery of FBE. Why was the Electricity Distribution Industry restructured in South Africa? Would restructuring address the inefficiencies found in the sector? It still remains to be seen how the restructuring of the EDI will impact on the ability of municipalities to fulfil its legal obligations to provide basic services to the poor. As arranged through service delivery agreements between the RED and the municipality, the REDs are meant to develop a business plan which should be in line with the municipalities IDP and therefore enshrine the rights and protection of poorer households in the community. This business plan will also address the questions around the delivery and funding of FBE, which remains to be seen, but if anchored with strong legislation should not be an issue. The tariffs under the REDs will be more fair, equitable and cost-reflective and support economic growth while giving domestic consumers a real idea of the cost of supplying electricity.

Though some questions remain unanswered but the prospective of further investigation gives hope that pitfalls can be avoided in future decisions around the FBE and the implementation and delivery through the REDs.

8.1 Recommendations

8.1.1 Free Basic Energy

Although the FBE addresses the issue of affordability, it is not the only solution to the problem of energy poverty, as it does not reach people who are living without the electricity infrastructure, nor can these people hope to be included in the infrastructure because they live on unsuitable land. These people are the poorest of the poor and are not being reached by any kind of energy infrastructure or subsidy. The government has recognised this fact and is working on the development of a Free Basic Alternative Energy Policy. This is a worthy step to make in terms of advancing access and promoting a more equitable share in energy services. Rolling out of other fuels, such as LPG, is also a progressive way in addressing urban as well as rural energy needs.

8.1.2 New Residential Tariff - Free Basic Electricity delivered without leakage

Targeting FBE properly, i.e. to intended recipients of the policy only, is of utmost importance. Once all households have been electrified in 2012 (the target date), there will be an additional 2.8 million household electricity connections and most likely all will qualify for FBE, adding an approximate additional cost of R 22.50 (for the 50 kWh at R 0.45 per kWh) per customer per month, R 63 million for all newly connected customers per month, R 756 million for all newly connected customers annually. If this subsidy is still being administered to unintended residential customers, then the subsidy will fail in its intention and fall under financial strain. Therefore, it is essential to administer and target the subsidy appropriately with explicit tariffs to avoid misappropriation of funding and freeing up funding for other priority areas.

Although the FBE is already administered in sorts as a step tariff, I would propose that to limit the amount of subsidies leaked to non-poor households, a three part step tariff is implemented. This tariff would be available to all people who used less than 150 kWh (as is intended with the self-targeting without current limiting approach). I disagree with limiting the current supply of poorer households, because this could restrict their ability to grow economically, for example with small businesses run from the home.

Table 7: Proposed domestic tariff scheme to reduce leakage of subsidy to non-poor households

Tariff Category	Consumption Levels	Tariff Rate		
		Energy Charge	Service Charge	Free Basic Electricity
Domestic 1 (low consumption)	Use < 150 kWh per month; receive FBE as 50 kWh free per month.	All units consumed above the 50 free kWh charged at going rate for low consumption as approved by NER;	Service Charge applies at going rate (for a cost-reflective tariff)	50 kWh provided at no charge
Domestic 2 (low – medium consumption)	Use > 150 kWh and < 500 kWh per month; do not receive FBE.	All units consumed charged at going rate for low consumption as approved by NER;	Service Charge applies at going rate (for a cost-reflective tariff)	No 50 kWh free; No contribution to cost of providing 50 kWh free to Domestic 1 customers
Domestic 3 (high consumption)	Use > 500 kWh per month; do not receive FBE.	All units consumed charged at going rate for high consumption as approved by NER;	Service Charge applies at going rate (for a cost-reflective tariff)	No free 50 kWh; Contribution to the provision of 50 kWh free to Domestic 1 customers.

It is not a complicated procedure for the City of Cape Town (or the RED using the CCT data) to track customer consumption annually and categorise them according to levels of consumption. By tracking consumption on an annual basis and placing customers into the respective categories, leakage of the subsidy to non-poor households would be reduced drastically.

Non-poor households or customers with a second electricity connection to supplement their use (same property with more than one house, or to run a water pump) should not receive the FBE with the above mentioned tariff structure. Leakage to non-poor households, in fact, would be drastically reduced. The only limitation to the above structure would be holiday homes and households using very little electricity. These would be fewer households than the current scheme, but should be

monitored and appropriate action taken if and when these type of connections rise. The customers in the high consumption "Domestic 3" category could cross-subsidise the electricity use for the low consumption "Domestic 1" category customers.

In addition to only poor households getting FBE (consuming less than 150 kWh per month), non-poor households, that is those in the "Domestic 3" tariff category, should be strongly encouraged to participate in energy efficiency within the household, which is a goal in the DME White Paper. This would reduce the peak load experienced at the power station and bring consciousness of conserving energy and natural resources to the more fortunate. They could also feel good about themselves as they are contributing to the declining poverty levels in their own country. This would be because less electricity used means less capacity must be built and the current capacity would last longer. This would ultimately reduce some of the strain on the electricity industry to increase their supply, thus enabling them to make more sustainable energy decisions for the longer term, rather than putting up any type of quick fix power solutions which may not be environmentally, financially or socially sustainable.

If we are indeed living in a country where it is desired by the government to instil a notion of unity amongst its citizens, then I believe a community effort should be played by all members of society. Everyone can contribute to eradicating poverty, even in the smallest ways. I believe that in order to balance out inequality, the rich must help the poor and the poor must help themselves. A reduction in electricity demand from the rich implies an increase of available resources (indeed wealth) to be redistributed. Some options in terms of reducing electricity are installing solar water heaters (addresses the renewable energy targets), installing compact fluorescent light bulbs (CFLs), or putting a timer on the household geyser. The advantage of these options is that people would be contributing to the government's commitment to balance inequality, which would instil a feeling of pride of their nation. Possibly these options may not be widely accepted, yet is it not better to act by choice rather than forced through legislation?

8.1.3 REDs and the poor: a strong legislation

The service delivery agreements set between the municipalities and the REDs should be the cornerstone to fair and equitable electricity services. The results emanating from the agreements made in this legislation are as a result of strong legislation. Eberhard (2006) suggests that strong legislation must go hand-in-hand with strong relationships. It is the fostering of these relationships which lead to understanding and mutually undertaking the achievement of common goals. The REDs as they are envisaged can be beneficial to all as long as the agreements made ensure the achievement of these shared goals.

The RED in itself, once it has been fully established, has the opportunity to provide even more to the accomplishment of environmental and social goals. It is recommended that the concept of Integrated Energy Centres be developed and rolled out. REDs are in the position to take over the role of overseeing this. If the REDs were to become the distributors of not only electricity, but energy as well, there could be financial, technical and social advantages to the distributor as well as the customer. The Regional *Energy* Distributor could help finance the setting up of Integrated Energy Centres as part of its capacity expansion. The RED would stand to gain financially since it would be able to access a larger portion of the market and also provide all energy needs, not just electricity. The higher costs of providing electricity in rural areas may go down as the RED wouldn't need to supply a grid connection directly. Those using a SHS could be supplemented with other energy sources, which could be supplied by the RED via an Integrated Energy Centre. Together with strong legislation to support this initiative, the RED could supply the nation's energy needs while complementing the economic growth and social objectives of the government. This is supportive and encouraging to the poorer households to interact in the growing economy, while giving them the means to do so.

8.2 Conclusions

South Africa is a unique developing country in that the previous political system resulted in the current policy for Universal Access to electricity, and causing electrification to happen at an accelerated rate. Of course there are obstacles to Universal Access, which must be addressed at national level but implemented at local level. With the restructured electricity distribution industry, the delivery of the free basic electricity to poor households was potentially under threat, the recommended blueprint is well thought out and minimises as many potential disasters as possible within their constraints. The Free Basic Electricity Policy has the chance to make a difference in the lives of more poor households, because legislation ensures that electrification (access) continues and operating costs (affordability) are reduced for poor households. There is always room for improvement and continued efforts should be made by all stakeholders and customers alike to reduce inefficiencies. With the promise that all households will be electrified by 2012, we have the hope that the needs of those living on unsuitable land will be also be addressed, as these are truly the poorest of the poor in our urban areas with no benefits of the electricity services which are deemed basic needs.

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APPENDIX 1: GLOSSARY OF TERMS

Basic needs – food, safe water, land, safe sanitation, energy, safe environment, access to health services, and education are termed as the basic human needs which must be met for a minimum living standard.

City of Cape Town – refers to the Metropolitan Municipality of Cape Town.

Distribution - The conveyance of electricity through a distribution power system operating at or below 132 kV.

Energy burden – The percent of household income spent on energy services in proportion to other expenditures.

Energy Poverty - The condition of having less than a certain level of daily consumption of energy necessary to maintain a minimum standard of living.

Generation - The production of electricity by any means.

Kilo Volt Ampere (kVA) – Unit of measure of power, usually depicting demand or load of electricity used; 1 kVA = 1 kW.

Kilo Watt hour (kWh) – Unit of measure of energy, usually electricity.

Mega Joule (MJ) –Unit of measure of energy. One kWh = 3.6 MJ.

Mega Watt (MW) – Unit of measure of power. One MW = 1000 kW.

Poor – financially identified as those in the first two income quintiles.

Poorest of the poor – financially identified as those in the first income quintile.

Poverty – the inability to attain a minimum standard of living, measured in terms of basic consumption needs or the income required to satisfy these.

Poverty line – The threshold of cost of living, below which a person or household is considered poor (expenditure of less than R 323.54 per household per month, or income of less than R1200 per household per month).

Transmission- The conveyance of electricity through a transmission power system operating above 132 kV.

APPENDIX 2: EXTRACTS FROM THE NATIONAL BUDGET 2004/05

The table below is an extract of the national budget for the fiscal year 2004/05 and shows the funding priorities for various areas relevant to this study.

Vote	Subsection	Schedule Area	Aim	Budget R('000)
5	-	Provincial and Local Government	To develop and promote a national system of integrated and cooperative governance, and to support provincial and local government	12 850 768
5	5	Free Basic Services and Infrastructure	To strengthen service delivery capacity for local government to enable municipalities to meet their constitutional mandate by increasing, in a sustainable manner, access to basic services to all communities	28 989
5	6	Provincial and Local Government Transfers	Provide for the conditional grants to the provincial and local spheres of government that are directly administered by the department	12 566 924
5	6	Local Government Equitable Share	-	7 677 546
5	6	Municipal System Implementation	-	182 243
5	6	Infrastructure	-	4 445 943
9	2	Public Enterprises: Restructuring State-Owned Enterprises	Develop, implement and manage the restructuring process to meet governments social and economic objectives	25 446
10	4	Public Service and Administration: Service Delivery Improvement	Engage in supportive intervention and partnerships, which enhance, in the public service, both the efficiency and effectiveness and innovation learning and knowledge-based models and practises of service delivery	27 519 of total Public Service budget of 126 626
19	7	Social Development: Poverty Alleviation	Develop, implement and monitor strategies for poverty alleviation, undertake community development programmes and support non-profit organisations	521 210 of total Social Development budget of 4 548 410
30		Land Affairs	To provide an equitable and sustainable land dispensation that promotes social and economic development	1 788 152
31		Minerals and Energy	To formulate and implement an overall minerals and energy policy in order to ensure the optimum utilisation of minerals and energy resources	1 934 494
31	5	Associated Service	Provide related services in support of the Department's mandate through the funding	1 509 013

			of statutory bodies and organisations	
31	5	Electricity Distribution Industry Holding Company		54 000
31	5	Eskom		819 829
31	5	Conditional Grant to local government – Integrated National Electrification Programme		247 577
34		Water Affairs and Forestry	To ensure the availability and supply of water at a national level to facilitate equitable and sustainable social and economic development; ensure the universal and efficient supply of water services at local level; and promote the sustainable management of forests	3 302 144
34	3	Water Services	Ensure that all people living in South Africa have access to adequate, safe, appropriate and affordable water and sanitation services, use water wisely and practise safe sanitation	1 333 772
34	3	Conditional Grant to local government – water services operating and transfers subsidy		858 334
34	3	Conditional Grant to local government – implementation of water services project		160 279

APPENDIX 3: RELEVANT ACTS, POLICIES AND LEGISLATION

This appendix contains direct extracts from relevant acts, bills, policies and legislation referred to in the main text of this dissertation.

Constitution Act 108 of 1996

The following extracted information from the Constitution is relevant to the establishment, powers, duties and executive legislative authority of municipalities.

Chapter 7: Local Government

151. Status of municipalities

1. The local sphere of government consists of municipalities, which must be established for the whole of the territory of the Republic.

2. The executive and legislative authority of a municipality is vested in its Municipal Council.

3. A municipality has the right to govern, on its own initiative, the local government affairs of its community, subject to national and provincial legislation, as provided for in the Constitution.

4. The national or a provincial government may not compromise or impede a municipality's ability or right to exercise its powers or perform its functions.

152. Objects of local government

1. The objects of local government are -

    a. to provide democratic and accountable government for local communities;

    b. to ensure the provision of services to communities in a sustainable manner;

    c. to promote social and economic development;

    d. to promote a safe and healthy environment; and

    e. to encourage the involvement of communities and community organisations in the matters of local government.

2. A municipality must strive, within its financial and administrative capacity, to achieve the objects set out in subsection (1).

153. Developmental duties of municipalities

A municipality must

a. structure and manage its administration, and budgeting and planning processes to give priority to the basic needs of the community, and to promote the social and economic development of the community; and

b. participate in national and provincial development programmes.

154. Municipalities in co-operative government

1. The national government and provincial governments, by legislative and other measures, must support and strengthen the capacity of municipalities to manage their own affairs, to exercise their powers and to perform their functions.

2. Draft national or provincial legislation that affects the status, institutions, powers or functions of local government must be published for public comment before it is introduced in Parliament or a provincial legislature, in a manner that allows organised local government, municipalities and other interested persons an opportunity to make representations with regard to the draft legislation.

155. Establishment of municipalities

1. There are the following categories of municipality:

    a. **Category A**: A municipality that has exclusive municipal executive and legislative authority in its area.

    b. **Category B**: A municipality that shares municipal executive and legislative authority in its area with a category C municipality within whose area it falls.

    c. **Category C**: A municipality that has municipal executive and legislative authority in an area that includes more than one municipality.

2. National legislation must define the different types of municipality that may be established within each category.

3. National legislation must

    a. establish the criteria for determining when an area should have a single category A municipality or when it should have municipalities of both category B and category C;

    b. establish criteria and procedures for the determination of municipal boundaries by an independent authority; and

    c. subject to section 229, make provision for an appropriate division of powers and functions between municipalities when an area has municipalities of both category B and category C. A division of powers and functions between a category B municipality and a category C municipality may differ from the division of powers and functions between another category B municipality and that category C municipality.

4. The legislation referred to in subsection (3) must take into account the need to provide municipal services in an equitable and sustainable manner.

5. Provincial legislation must determine the different types of municipality to be established in the province.

6. Each provincial government must establish municipalities in its province in a manner consistent with the legislation enacted in terms of subsections (2) and (3) and, by legislative or other measures, must

    a. provide for the monitoring and support of local government in the province; and

    b. promote the development of local government capacity to enable municipalities to perform their functions and manage their own affairs.

A. If the criteria envisaged in subsection (3) (b) cannot be fulfilled without a municipal boundary extending across a provincial boundary-

    a. that municipal boundary may be determined across the provincial boundary, but only-

        i. with the concurrence of the provinces concerned; and

        ii. after the respective provincial executives have been authorised by national legislation to establish a municipality within that municipal area; and

    b. national legislation may-

        i. subject to subsection (5), provide for the establishment in that municipal area of a municipality of a type agreed to between the provinces concerned;

        ii. provide a framework for the exercise of provincial executive authority in that municipal area and with regard to that municipality; and

iii. provide for the re-determination of municipal boundaries where one of the provinces concerned withdraws its support of a municipal boundary determined in terms of paragraph (a).

[Subs-s. (6A) inserted by s. 1 of Act No. 87 of 1998.]

7. The national government, subject to section 44, and the provincial governments have the legislative and executive authority to see to the effective performance by municipalities of their functions in respect of matters listed in Schedules 4 and 5, by regulating the exercise by municipalities of their executive authority referred to in section 156(1).

156. Powers and functions of municipalities

1. A municipality has executive authority in respect of, and has the right to administer

   a. the local government matters listed in Part B of Schedule 4 and Part B of Schedule 5; and

   b. any other matter assigned to it by national or provincial legislation.

2. A municipality may make and administer by-laws for the effective administration of the matters which it has the right to administer.

3. Subject to section 151(4), a by-law that conflicts with national or provincial legislation is invalid. If there is a conflict between a by-law and national or provincial legislation that is inoperative because of a conflict referred to in section 149, the by-law must be regarded as valid for as long as that legislation is inoperative.

4. The national government and provincial governments must assign to a municipality, by agreement and subject to any conditions, the administration of a matter listed in Part A of Schedule 4 or Part A of Schedule 5 which necessarily relates to local government, if

   a. that matter would most effectively be administered locally; and

   b. the municipality has the capacity to administer it.

5. A municipality has the right to exercise any power concerning a matter reasonably necessary for, or incidental to, the effective performance of its functions.

Part A of Schedule 4 (Functional areas of concurrent national and provincial legislative competence) refers to the following relevant matters:

Environment

Housing

Municipal public works only in respect of the needs of municipalities in the discharge of their responsibilities to administer functions specifically assigned to them under this Constitution or any other law

Part B of Schedule 4 refers to the following relevant matters:

Air pollution

Electricity and gas reticulation

Municipal planning

Municipal public works only in respect of the needs of municipalities in the discharge of their responsibilities to administer functions specifically assigned to them under this Constitution or any other law

214. Equitable shares and allocations of revenue

1. An Act of Parliament must provide for –

   a. the equitable division of revenue rased nationally among national, provincial and local spheres of government;

b. the determination of each provinces, ocal government or municipalities share of that revenue; and

c. any other allocations to provinces, local government or municipalities from national government's share of that revenue, and any conditions on which those allocations may be made.

2. The Act referred to in subsection 1 may be enacted only after the provincial governments, organized local government and the Financial and Fiscal Commission have been consulted, and any recommendations of the Commission have been considered, and must take into account –

a. the national interest;

b. any provision that must be made in respect of the national debt and other national obligations;

c. the needs and interests of the national government, determined by objective criteria;

d. the need to ensure that the provinces and municipalities are able to provide basic services and perform the functions allocated to them;

e. the fical capacity and efficiency of the provinces, local government and municipalities;

f. economic disparities within and among the provinces;

g. obligations of the provinces and municipalities in terms of national legislation;

h. the desirability of stable and predictable allocations of revenue shares; and

i. the need for flexibility in responding to emergencies or other temporary needs, and other factors based on similar objective criteria.

227. National sources of provincial and local government funding

1. Local government and each province –

a. is entitled to an equitable share of revenue raised nationally to enable it to provide basic services and perform the functions allocated to it; and

b. may receive other allocations from national government revenue, either conditionally or unconditionally.

2. Additional revenue raised by province or municipalities may not be deducted from their share of revenue raised nationally, or from other allocations made to them out of national government revenue. Equally, there is no obligation on the national government to compensate provinces or municipalities that do not raise revenue commensurate with their fiscal capacity and tax base.

3. A province's equitable share of revenue raised nationally must be transferred to the province promptly and without deduction, except when the transfer has been stopped in terms of section 216.

4. A province must provide for itself any resources that it requires, in terms of a provision of its provincial constitution, that are additional to its requirements envisaged in the Constitution.

Electricity Act 41 of 1987

To provide for the continued existence of the Electricity Control Regulator and for control of the generation and supply of electricity; and for matters connected therewith.

Electricity Amendment Act 58 of 1989

To amend the Electricity Act, 1987, so as to provide for a levy on electricity; to alter the circumstances in which a licence shall not be required for the generation of electricity; and to provide for the transfer of servitudes on the transfer of undertakings; and to provide for incidental matters.

Electricity Amendment Act 46 of 1994

To amend the Electricity Act, 1987, so as to delete or substitute certain definitions; to provide for the continued existence of the Electricity Control Board as the National Electricity Regulator; to apply certain provisions of the Act to other institutions and bodies; and to provide for matters connected therewith.

Electricity Amendment Act 60 of 1995

To amend the Electricity Act, 1987, so as to declare the National Electricity Regulator a juristic person; to make provision for the appointment, conditions of employment and functions of the chief executive officer and employees of the said National Electricity Regulator; and to make provision for the funding and accountability of and reporting by the said National Electricity Regulator; and to make provision for matters in connection therewith.

Electricity Distribution Industry Restructuring Bill

The purpose of the Electricity Distribution Industry Restructuring Bill is to establish a national framework for the restructuring of the distribution industry, to provide for the creation of regional electricity distributors into which the relevant officers, employees, assets, liabilities, rights and obligations may be transferred, to provide for certain structures and functions in the restructured electricity distribution industry, and to provide for matters connected therewith.

Electricity Regulation Bill

The purpose of the Electricity Regulation Bill is "to establish a national regulatory framework for the electricity supply industry; to make the National Energy Regulator the custodian and enforcer of the national electricity regulatory framework; to provide for licences and registration as the manner in which generation, transmission, distribution, trading and the import and export of electricity are regulated; to provide for the establishment of national norms and standards to regulate reticulation; and to provide for matters connected therewith."

Municipal Demarcation Act 27 of 1998

The purpose of the Municipal Demarcation Act 27 of 1998 is "to provide for criteria and procedures for the determination of municipal boundaries by an independent authority; and to provide for matters connected thereto."

Municipal Financial Management Act 56 of 2003

The purpose of the Municipal Finance Management Act 56 of 2003 is "to secure sound and sustainable management of the financial affairs of municipalities and other institutions in the local sphere of government; to establish treasury norms and standards for the local sphere of government; and to provide for matters connected therewith."

CHAPTER 4: MUNICIPAL BUDGETS

15. Appropriation of funds for expenditure

A municipality may, except where otherwise provided in this Act, incur expenditure only-

(a) in terms of an approved budget; and

(b) within the limits of the amounts appropriated for the different votes in an approved budget.

16. Annual budgets

(1) The council of a municipality must for each financial year approve an annual budget for the municipality before the start of that financial year.

(2) In order for a municipality to comply with subsection (1), the mayor of the municipality must table the annual budget at a council meeting at least 90 days before the start of the budget year.

(3) Subsection (1) does not preclude the appropriation of money for capital expenditure for a period not exceeding three financial years, provided a separate appropriation is made for each of those financial years.

18. Funding of expenditure

(1) An annual budget may only be funded from-

(a) realistically anticipated revenues to be collected;

(b) cash-backed accumulated funds from previous years' surpluses not committed for other purposes; and

(c) borrowed funds, but only for the capital budget referred to in section 17 (2).

(2) Revenue projections in the budget must be realistic, taking into account-

(a) projected revenue for the current year based on collection levels to date; and

(b) actual revenue collected in previous financial years.

CHAPTER 5: CO-OPERATIVE GOVERNMENT

36. National and provincial allocations to municipalities

(1) In order to provide predictability and certainty about the sources and levels of intergovernmental funding for municipalities, the accounting officer of a national or provincial department and the accounting authority of a national or provincial public entity responsible for the transfer of any proposed allocations to a municipality, must by no later than 20 January of each year notify the National Treasury or the relevant provincial treasury, as may be appropriate, of all proposed allocations, and the projected amounts of those allocations, to be transferred to each municipality during each of the next three financial years.

(2) The Minister or the MEC responsible for finance in a province must, to the extent possible, when tabling the national annual budget in the National Assembly or the provincial annual budget in the provincial legislature, make public particulars of any allocations due to each municipality in terms of that budget, including the amount to be transferred to the municipality during each of the next three financial years.

Municipal Structures Act 117

The purpose of the Municipal Structure Act 117 of 1998 is "to provide for the establishment of municipalities in accordance with the requirements relating to categories and types of municipality; to establish criteria for determining the category of municipality to be established in an area; to define the types of municipality that may be established within each category; to provide for an appropriate division of functions and powers between categories of municipality; to regulate the internal systems, structures and office-bearers of municipalities; to provide for appropriate electoral systems; and to provide for matters in connection therewith."

CHAPTER 1: CATEGORIES AND TYPES OF MUNICIPALITY

Part: Categories of municipality

2. Areas which must have category A municipalities

An area must have a single category A municipality if that area can reasonably be regarded as-

(a) a conurbation featuring-

(i) areas of high population density;

(ii) an intense movement of people, goods, and services;

(iii) extensive development; and

(iv) multiple business districts and industrial areas;

(b) a centre of economic activity with a complex and diverse economy;

(c) a single area for which integrated development planning is desirable; and

(d) having strong interdependent social and economic linkages between its constituent units.

8. Types of category A municipalities

There are the following types of category A municipalities:

(a) a municipality with a collective executive system;

(b) a municipality with a collective executive system combined with a subcouncil participatory system;

(c) a municipality with a collective executive system combined with a ward participatory system;

(d) a municipality with a collective executive system combined with both a subcouncil and a ward participatory system;

(e) a municipality with a mayoral executive system;

(f) a municipality with a mayoral executive system combined with a subcouncil participatory system;

(g) a municipality with a mayoral executive system combined with a ward participatory system; and

(h) a municipality with a mayoral executive system combined with both a subcouncil and a ward participatory system.

CHAPTER 5: FUNCTIONS AND POWERS OF MUNICIPALITIES

83. General

(1) A municipality has the functions and powers assigned to it in terms of sections 156 and 229 of the Constitution.

(2) The functions and powers referred to in subsection (1) must be divided in the case of a district municipality and the local municipalities within the area of the district municipality, as set out in this Chapter.

(3) A district municipality must seek to achieve the integrated, sustainable and equitable social and economic development of its area as a whole by-

(a) ensuring integrated development planning for the district as a whole;

(b) promoting bulk infrastructural development and services for the district as a whole;

(c) building the capacity of local municipalities in its area to perform their functions and exercise their powers where such capacity is lacking; and

(d) promoting the equitable distribution of resources between the local municipalities in its area to ensure appropriate levels of municipal services within the area.

84. Division of functions and powers between district and local municipalities

(1) A district municipality has the following functions and powers:

(a) Integrated development planning for the district municipality as a whole, including a framework for integrated development plans of all municipalities in the area of the district municipality.

(b) Potable water supply systems.

(c) Bulk supply of electricity, which includes for the purposes of such supply, the transmission, distribution and, where applicable, the generation of electricity.

(d) Domestic waste-water and sewage disposal systems.

(e) Solid waste disposal sites, in so far as it relates to-

(i) the determination of a waste disposal strategy;

(ii) the regulation of waste disposal;

(iii) the establishment, operation and control of waste disposal sites, bulk waste transfer facilities and waste disposal facilities for more than one local municipality in the district.

...

(n) Municipal public works relating to any of the above functions or any other functions assigned to the district municipality.

(o) The receipt, allocation and, if applicable, the distribution of grants made to the district municipality.

(p) The imposition and collection of taxes, levies and duties as related to the above functions or as may be assigned to the district municipality in terms of national legislation.

(2) A local municipality has the functions and powers referred to in section 83 (1), excluding those functions and powers vested in terms of subsection (1) of this section in the district municipality in whose area it falls.

(3) *(a)* The Minister may, by notice in the *Government Gazette*, and after consultation with the Cabinet member responsible for the functional area in question, and after consulting the MEC for local government in the province and, if applicable, subject to national legislation, authorise a local municipality to perform a function or exercise a power mentioned in subsection (1) *(b)*, *(c)*, *(d)* or *(i)* in its area or any aspect of such function or power.

...

(b) The Minister must in the notice referred to in paragraph *(a)* regulate the legal, practical and other consequences of the authorisation, which may include-

(i) the transfer of staff;

(ii) the transfer of assets, liabilities, rights and obligations, and administrative and other records; and

(iii) the continued application of any by-laws and resolutions in the area of the municipalities concerned and the extent of such application.

(c) The Minister may-

(i) amend a notice issued in terms of paragraph *(a)*; and

(ii) regulate the legal, practical and other consequences of such amendment; and

(d) Whenever the Minister revokes an authorisation envisaged by paragraph *(a)*, the Minister must in the notice revoking that authorisation regulate the legal, practical and other consequences of the revocation, which may include-

(i) the transfer of staff;

(ii) the transfer of assets, liabilities, rights, obligations and administrative and other records; and

(iii) the continued application of any by-laws and resolutions in the area of the municipalities in question and the extent of such application.

(e) The Minister must comply with the consultation requirements as set out in paragraph *(a)* when a power referred to in paragraph *(c)* or *(d)* is to be exercised.

Municipal Systems Act 32 of 2000

To provide for the core principles, mechanisms and processes that are necessary to enable municipalities to move progressively towards the social and economic upliftment of local communities, and ensure universal access to essential services that are affordable to all; to define the legal nature of a municipality as including the local community within the municipal area, working in partnership with the municipality's political and administrative structures; to provide for the manner in which municipal powers and functions are exercised and performed; to provide for community participation; to establish a simple and enabling framework for the core processes of planning, performance management, resource mobilisation and organisational change which underpin the notion of developmental local government; to provide a framework for local public administration and human resource development; to empower the poor and ensure that municipalities put in place service tariffs and credit control policies that take their needs into account by providing a framework for the provision of services, service delivery agreements and municipal service districts; to provide for credit control and debt collection; to establish a framework for support, monitoring and standard setting by other spheres of government in order to progressively build local government into an efficient, frontline development agency capable of integrating the activities of all spheres of government for the overall social and economic upliftment of communities in harmony with their local natural environment; to provide for legal matters pertaining to local government; and to provide for matters incidental thereto.

CHAPTER 2: LEGAL NATURE AND RIGHTS AND DUTIES OF MUNICIPALITIES

4. Rights and duties of municipal councils

(1) The council of a municipality has the right to-

(a) govern on its own initiative the local government affairs of the local community;

(b) exercise the municipality's executive and legislative authority, and to do so without improper interference; and

(c) finance the affairs of the municipality by-

(i) charging fees for services; and

(ii) imposing surcharges on fees, rates on property and, to the extent authorised by national legislation, other taxes, levies and duties.

(2) The council of a municipality, within the municipality's financial and administrative capacity and having regard to practical considerations, has the duty to-

(a) exercise the municipality's executive and legislative authority and use the resources of the municipality in the best interests of the local community;

(b) provide, without favour or prejudice, democratic and accountable government;

(c) encourage the involvement of the local community;

(d) strive to ensure that municipal services are provided to the local community in a financially and environmentally sustainable manner;

(e) consult the local community about-

(i) the level, quality, range and impact of municipal services provided by the municipality, either directly or through another service provider; and

(ii) the available options for service delivery;

(f) give members of the local community equitable access to the municipal services to which they are entitled;

(g) promote and undertake development in the municipality;

(h) promote gender equity in the exercise of the municipality's executive and legislative authority;

(i) promote a safe and healthy environment in the municipality; and

(j) contribute, together with other organs of state, to the progressive realisation of the fundamental rights contained in sections 24, 25, 26, 27 and 29 of the Constitution.

(3) A municipality must in the exercise of its executive and legislative authority respect the rights of citizens and those of other persons protected by the Bill of Rights.

CHAPTER 3: MUNICIPAL FUNCTIONS AND POWERS

8. General empowerment

(1) A municipality has all the functions and powers conferred by or assigned to it in terms of the Constitution, and must exercise them subject to Chapter 5 of the Municipal Structures Act.

(2) A municipality has the right to do anything reasonably necessary for, or incidental to, the effective performance of its functions and the exercise of its powers.

11. Executive and legislative authority

(1) The executive and legislative authority of a municipality is exercised by the council of the municipality, and the council takes all the decisions of the municipality subject to section 59.

(2) A municipality may exercise executive and legislative authority within its boundaries only, but may, by written agreement with another municipality and subject to Chapter 5 of the Municipal Structures Act and other applicable national legislation, exercise executive authority in the area of that other municipality.

(3) A municipality exercises its legislative or executive authority by-

(a) developing and adopting policies, plans, strategies and programmes, including setting targets for delivery;

(b) promoting and undertaking development;

(c) establishing and maintaining an administration;

(d) administering and regulating its internal affairs and the local government affairs of the local community;

(e) implementing applicable national and provincial legislation and its bylaws;

(f) providing municipal services to the local community, or appointing appropriate service providers in accordance with the criteria and process set out in section 78;

(g) monitoring and, where appropriate, regulating municipal services where those services are provided by service providers other than the municipality;

(h) preparing, approving and implementing its budgets;

(i) imposing and recovering rates, taxes, levies, duties, service fees and surcharges on fees, including setting and implementing tariff, rates and tax and debt collection policies;

(j) monitoring the impact and effectiveness of any services, policies, programmes or plans;

(k) establishing and implementing performance management systems;

(l) promoting a safe and healthy environment;

(m) passing by-laws and taking decisions on any of the above-mentioned matters; and

(n) doing anything else within its legislative and executive competence.

CHAPTER 5: INTEGRATED DEVELOPMENT PLANNING

Part 1: General

23. Municipal planning to be developmentally oriented

(1) A municipality must undertake developmentally-oriented planning so as to ensure that it-

(a) strives to achieve the objects of local government set out in section 152 of the Constitution;

(b) gives effect to its developmental duties as required by section 153 of the Constitution; and

(c) together with other organs of state contribute to the progressive realization of the fundamental rights contained in sections 24, 25, 26, 27 and 29 of the Constitution.

(2) Subsection (1) must be read with Chapter I of the Development Facilitation Act, 1995 (Act 67 of 1995).

24. Municipal planning in co-operative government

(1) The planning undertaken by a municipality must be aligned with, and complement, the development plans and strategies of other affected municipalities and other organs of state so as to give effect to the principles of co-operative government contained in section 41 of the Constitution.

(2) Municipalities must participate in national and provincial development programmes as required in section 153 *(b)* of the Constitution.

(3) If municipalities are required to comply with planning requirements in terms of national or provincial legislation, the responsible organs of state must-

(a) align the implementation of that legislation with the provisions of this Chapter; and

(b) in such implementation-

(i) consult with the affected municipality; and

(ii) take reasonable steps to assist the municipality to meet the time limit mentioned in section 25 and the other requirements of this Chapter applicable to its integrated development plan.

(4) An organ of state initiating national or provincial legislation requiring municipalities to comply with planning requirements, must consult with organised local government before the legislation is introduced in Parliament or a provincial legislature, or, in the case of subordinate legislation, before that legislation is enacted.

25. Adoption of integrated development plans

(1) Each municipal council must, within a prescribed period after the start of its elected term, adopt a single, inclusive and strategic plan for the development of the municipality which-

(a) links, integrates and co-ordinates plans and takes into account proposals for the development of the municipality;
(b) aligns the resources and capacity of the municipality with the implementation of the plan;
(c) forms the policy framework and general basis on which annual budgets must be based;
(d) complies with the provisions of this Chapter; and
(e) is compatible with national and provincial development plans and planning requirements binding on the municipality in terms of legislation.
(2) An integrated development plan adopted by a municipal council in terms of subsection (1) may be amended in terms of section 34 and remains in force until an integrated development plan is adopted by the next elected council.
(3) *(a)* A newly elected municipal council may, within the prescribed period referred to in subsection (1), adopt the integrated development plan of its predecessor, but before taking a decision it must comply with section 29 (1) *(b)* (i), *(c)* and *(d)*.
(b) A newly elected municipal council that adopts the integrated development plan of its predecessor with amendments, must effect the amendments in accordance with the process referred to in section 34 *(b)*.
(4) A municipality must, within 14 days of the adoption of its integrated development plan in terms of subsection (1) or (3)-
(a) give notice to the public-
(i) of the adoption of the plan; and
(ii) that copies of or extracts from the plan are available for public inspection at specified places; and
(b) publicise a summary of the plan.

Part 2: Contents of integrated development plans

26. Core components of integrated development plans

An integrated development plan must reflect-
(a) the municipal council's vision for the long term development of the municipality with special emphasis on the municipality's most critical development and internal transformation needs;
(b) an assessment of the existing level of development in the municipality, which must include an identification of communities which do not have access to basic municipal services;
(c) the council's development priorities and objectives for its elected term, including its local economic development aims and its internal transformation needs;
(d) the council's development strategies which must be aligned with any national or provincial sectoral plans and planning requirements binding on the municipality in terms of legislation;
(e) a spatial development framework which must include the provision of basic guidelines for a land use management system for the municipality;
(f) the council's operational strategies;
(g) applicable disaster management plans;
(h) a financial plan, which must include a budget projection for at least the next three years; and
(i) the key performance indicators and performance targets determined in terms of section 41.

34. Annual review and amendment of integrated development plan

A municipal council-
(a) must review its integrated development plan-
(i) annually in accordance with an assessment of its performance measurements in terms of section 41; and
(ii) to the extent that changing circumstances so demand; and
(b) may amend its integrated development plan in accordance with a prescribed process.

Part 4: Miscellaneous

35. Status of integrated development plan

(1) An integrated development plan adopted by the council of a municipality-
(a) is the principal strategic planning instrument which guides and informs all planning and development, and all decisions with regard to planning, management and development, in the municipality;
(b) binds the municipality in the exercise of its executive authority, except to the extent of any inconsistency between a municipality's integrated development plan and national or provincial legislation, in which case such legislation prevails; and
(c) binds all other persons to the extent that those parts of the integrated development plan that impose duties or affect the rights of those persons have been passed as a by-law.
(2) A spatial development framework contained in an integrated development plan prevails over a plan as defined in section 1 of the Physical Planning Act, 1991 (Act 125 of 1991).

36. Municipality to give effect to integrated development plan

A municipality must give effect to its integrated development plan and conduct its affairs in a manner which is consistent with its integrated development plan.

37. Regulations and guidelines

(1) The Minister may for the purposes of this Chapter make regulations or issue guidelines in terms of section 120 to provide for or to regulate the following matters:

(a) incentives to ensure that municipalities adopt their integrated development plans within the applicable prescribed period, and comply with the provisions of this Act concerning the planning, drafting, adoption and review of those plans;

(b) the detail of integrated development plans taking into account the requirements of other applicable national legislation;

(c) criteria municipalities must take into account when planning, drafting, adopting or reviewing their integrated development plans;

(d) the detail of the process for the planning, drafting, adoption and review of integrated development plans;

(e) a process for the amendment of integrated development plans;

(f) the manner in which an objection must be referred to an *ad hoc* committee envisaged in section 33;

(g) the manner in which written evidence or documents must be submitted to an *ad hoc* committee;

(h) the proceedings of an *ad hoc* committee; and

(i) any other matter that may facilitate-

(i) integrated development planning and the drafting of integrated development plans; or

(ii) the application of this Chapter.

(2) When making regulations or issuing guidelines in terms of section 120 to provide for or to regulate the matters mentioned in subsection (1) *(b)*, *(c)*, *(d)* and *(e)* of this section, the Minister must-

(a) take into account the capacity of municipalities to comply with those matters; and

(b) differentiate between different kinds of municipalities according to their respective capacities.

(3) The Minister, by notice in the *Gazette*, may phase in the application of the provisions of this Chapter which place a financial or administrative burden on municipalities.

(4) A notice in terms of subsection (3) may-

(a) determine different dates on which different provisions of this Chapter becomes applicable to municipalities;

(b) apply to all municipalities generally;

(c) differentiate between different kinds of municipalities which may, for the purpose of the phasing in of the relevant provisions, be defined in the notice in relation to categories or types of municipalities or in any other way; or

(d) apply to a specific kind of municipality only, as defined in the notice.

CHAPTER 6: PERFORMANCE MANAGEMENT

41: Core components

(1) A municipality must in terms of its performance management system and in accordance with any regulations and guidelines that may be prescribed-

(a) set appropriate key performance indicators as a yardstick for measuring performance, including outcomes and impact, with regard to the municipality's development priorities and objectives set out in its integrated development plan;

(b) set measurable performance targets with regard to each of those development priorities and objectives;

(c) with regard to each of those development priorities and objectives and against the key performance indicators and targets set in terms of paragraphs *(a)* and *(b)*-

(i) monitor performance; and

(ii) measure and review performance at least once per year;

(d) take steps to improve performance with regard to those development priorities and objectives where performance targets are not met; and

(e) establish a process of regular reporting to-

(i) the council, other political structures, political office bearers and staff of the municipality; and

(ii) the public and appropriate organs of state.

(2) The system applied by a municipality in compliance with subsection (1) *(c)* must be devised in such a way that it may serve as an early warning indicator of underperformance

CHAPTER 8: MUNICIPAL SERVICES

73. General duty

(1) A municipality must give effect to the provisions of the Constitution and-

(a) give priority to the basic needs of the local community

(b) promote the development of the local community; and
(c) ensure that all members of the local community have access to at least the minimum level of basic municipal services.

(2) Municipal services must-
(a) be equitable and accessible;
(b) be provided in a manner that is conducive to-
(i) the prudent, economic, efficient and effective use of available resources; and
(ii) the improvement of standards of quality over time;
(c) be financially sustainable;
(d) be environmentally sustainable; and
(e) be regularly reviewed with a view to upgrading, extension and improvement.

Part 1: Service tariffs

74. Tariff policy

(1) A municipal council must adopt and implement a tariff policy on the levying of fees for municipal services provided by the municipality itself or by way of service delivery agreements, and which complies with the provisions of this Act, the Municipal Finance Management Act and any other applicable legislation.

(2) A tariff policy must reflect at least the following principles, namely that-
(a) users of municipal services should be treated equitably in the application of tariffs
(b) the amount individual users pay for services should generally be in proportion to their use of that service;
(c) poor households must have access to at least basic services through-
(i) tariffs that cover only operating and maintenance costs,
(ii) special tariffs or life line tariffs for low levels of use or consumption of services or for basic levels of service; or
(iii) any other direct or indirect method of subsidisation of tariffs for poor households;
(d) tariffs must reflect the costs reasonably associated with rendering the service, including capital, operating, maintenance, administration and replacement costs, and interest charges;
(e) tariffs must be set at levels that facilitate the financial sustainability of the service, taking into account subsidisation from sources other than the service concerned;
(f) provision may be made in appropriate circumstances for a surcharge on the tariff for a service;
(g) provision may be made for the promotion of local economic development through special tariffs for categories of commercial and industrial users;
(h) the economical, efficient and effective use of resources, the recycling of waste, and other appropriate environmental objectives must be encouraged;
(i) the extent of subsidisation of tariffs for poor households and other categories of users should be fully disclosed.

(3) A tariff policy may differentiate between different categories of users, debtors, service providers, services, service standards, geographical areas and other matters as long as the differentiation does not amount to unfair discrimination.

75: By-laws to give effect to policy

(1) A municipal council must adopt by-laws to give effect to the implementation and enforcement of its tariff policy.

(2) By-laws in terms of subsection (1) may differentiate between different categories of users, debtors, service providers, services, service standards and geographical areas as long as such differentiation does not amount to unfair discrimination.

Part 2: Provision of services

76: Mechanisms for provision of services

A municipality may provide a municipal service in its area or a part of its area through-
(a) an internal mechanism, which may be-
(i) a department or other administrative unit within its administration;
(ii) any business unit devised by the municipality, provided it operates within the municipality's administration and under the control of the council in accordance with operational and performance criteria
determined by the council; or
(iii) any other component of its administration; or
(b) an external mechanism by entering into a service delivery agreement with-
(i) a municipal entity;
(ii) another municipality;

(iii) an organ of state, including

(aa) a water services committee established in terms of the Water

(bb) a licensed service provider registered or recognised in terms of national legislation; and

(cc) a traditional authority;

(iv) a community based organisation or other non-governmental organisation legally competent to enter into such an agreement, or

(v) any other institution, entity or person legally competent to operate a business activity.

77: Occasions when municipalities must review and decide on mechanisms to provide municipal services

A municipality must review and decide on the appropriate mechanism to provide a municipal service in the municipality or a part of the municipality-

(a) in the case of a municipal service provided through an internal mechanism contemplated in section 76, when-

(i) an existing municipal service is to be significantly upgraded, extended or improved;

(ii) a performance evaluation in terms of Chapter 6 requires a review of the mechanism; or

(iii) the municipality is restructured or re-organised in terms of the Municipal Structures Act;

(b) in the case of a municipal service provided through an external mechanism contemplated in section 76, when-

(i) a performance evaluation in terms of Chapter 6 requires a review of the service delivery agreement;

(ii) the service delivery agreement is anticipated to expire or be terminated within the next 12 months; or

(iii) an existing municipal service or part of that municipal service is to be significantly upgraded, extended or improved and such upgrade, extension or improvement is not addressed in the service delivery agreement;

(c) when a review is required by an intervention in terms of section 139 of the Constitution;

(d) when a new municipal service is to be provided;

(e) when requested by the local community through mechanisms, processes and procedures established in terms of Chapter 4; or

(f) when a review of its integrated development plan requires a review of the delivery mechanism.

78: Criteria and process for deciding on mechanisms to provide municipal services

(1) When a municipality has in terms of section 77 to decide on a mechanism to provide a municipal service in the municipality or a part of the municipality, or to review any existing mechanism

(a) it must first assess-

(i) the direct and indirect costs and benefits associated with the project if the service is provided by the municipality through an internal mechanism, including the expected effect on the environment and on human health, well-being and safety;

(ii) the municipality's capacity and potential future capacity to furnish the skills, expertise and resources necessary for the provision of the service through an internal mechanism mentioned in section 76 *(a)*;

(iii) the extent to which the re-organisation of its administration and the development of the human resource capacity within that administration, as provided for in sections 51 and 68, respectively, could be utilised to provide a service through an internal mechanism mentioned in section 76 *(a)*;

(iv) the likely impact on development, job creation and employment patterns in the municipality, and

(v) the views of organised labour; and

(b) it may take into account any developing trends in the sustainable provision of municipal services generally.

(2) After having applied subsection (1), a municipality may-

(a) decide on an appropriate internal mechanism to provide the service; or

(b) before it takes a decision on an appropriate mechanism, explore the possibility of providing the service through an external mechanism mentioned in section 76 *(b)*.

(3) If a municipality decides in terms of subsection (2) *(b)* to explore the possibility of providing the municipal service through an external mechanism it must-

(a) give notice to the local community of its intention to explore the provision of the municipal service through an external mechanism;

(b) assess the different service delivery options in terms of section 76 *(b)*, taking into account-

(i) the direct and indirect costs and benefits associated with the project, including the expected effect of any service delivery mechanism on the environment and on human health, well-being and safety;

(ii) the capacity and potential future capacity of prospective service providers to furnish the skills, expertise and resources necessary for the provision of the service;

(iii) the views of the local community;

(iv) the likely impact on development, job creation and employment patterns in the municipality; and

(v) the views of organised labour; and

(c) conduct or commission a feasibility study which must be taken into account and which must include-

(i) a clear identification of the municipal service for which the municipality intends to consider an external mechanism;

(ii) an indication of the number of years for which the provision of the municipal service through an external mechanism might be considered;

(iii) the projected outputs which the provision of the municipal service through an external mechanism might be expected to produce;

(iv) an assessment as to the extent to which the provision of the municipal service through an external mechanism will-

(aa) provide value for money;

(bb) address the needs of the poor;

(cc) be affordable for the municipality and residents; and

(dd) transfer appropriate technical, operational and financial risk;

(v) the projected impact on the municipality's staff, assets and liabilities;

(vi) the projected impact on the municipality's integrated development plan;

(vii) the projected impact on the municipality's budgets for the period for which an external mechanism might be used, including impacts on revenue, expenditure, borrowing, debt and tariffs; and

(viii) any other matter that may be prescribed.

(4) After having applied subsection (3), a municipality must decide on an appropriate internal or external mechanism, taking into account the requirements of section 73(2) in achieving the best outcome.

(5) When applying this section a municipality must comply with-

(a) any applicable legislation relating to the appointment of a service provider other than the municipality; and

(b) any additional requirements that may be prescribed by regulation.

(6) The national government or relevant provincial government may, in accordance with an agreement, assist municipalities in carrying out a feasibility study referred to in subsection (3) *(c)*, or in preparing service delivery agreements.

80: Provision of services through service delivery agreements with external mechanisms

(1) If a municipality decides to provide a municipal service through a service delivery agreement in terms of section 76 *(b)* with-

(a) a municipal entity or another municipality, it may, subject to subsection (3), negotiate and enter into such an agreement with the relevant municipal entity or municipality without applying Part 3 of this Chapter;

(aA) a national or provincial organ of state, it may enter into such an agreement with the relevant organ of state without applying Part 3 of this Chapter; or

(b) any institution or entity, or any person, juristic or natural, not mentioned in paragraph *(a)* or *(aA)*, it must apply Part 3 of this Chapter before entering into such an agreement with any such institution, entity or person.

(2) Before a municipality enters into a service delivery agreement with an external service provider it must establish a programme for community consultation and information dissemination regarding the appointment of the external service provider and the contents of the service delivery agreement. The

contents of a service delivery agreement must be communicated to the local community through the media.

(3) *(a)* Where a municipality decides to enter into a service delivery agreement with another municipality as contemplated by section 76 *(b)* (ii), that other municipality must conduct or commission a feasibility study, which it must take into account, before the service delivery agreement is entered into.

(b) The feasibility study referred to in paragraph *(a)*, must include-

(i) an assessment on the impact on the budget of that other municipality, and on its assets, liabilities and staff expenditure, for each of the financial years that it intends to serve as an external service provider;

(ii) an assessment on whether it will be necessary to increase the number of staff to enable that other municipality to be an external service provider, and whether it will be necessary to transfer or second any staff from the appointing municipality to that other municipality;

(iii) an assessment on the ability of that other municipality to absorb any commitments, liabilities or employees involved, if and when the appointment as external service provider ends; and

(iv) any other relevant information as may be prescribed.

81: Responsibilities of municipalities when providing services through service delivery agreements with external mechanisms

(1) If a municipal service is provided through a service delivery agreement in terms of section 76 *(b)*, the municipality remains responsible for ensuring that that service is provided to the local community in terms of the provisions of this Act, and accordingly must-

(a) regulate the provision of the service, in accordance with section 41;

(b) monitor and assess the implementation of the agreement, including the performance of the service provider in accordance with section 41;

(c) perform its functions and exercise its powers in terms of Chapters 5 and 6 if the municipal service in question falls within a development priority or objective in terms of the municipality's integrated development plan;

(d) within a tariff policy determined by the municipal council in terms of section 74, control the setting and adjustment of tariffs by the service provider for the municipal service in question; and

(e) generally exercise its service authority so as to ensure uninterrupted delivery of the service in the best interest of the local community.

(2) A municipality, through a service delivery agreement-

(a) may assign to a service provider responsibility for-

(i) developing and implementing detailed service delivery plans within the framework of the municipality's integrated development plan;

(ii) the operational planning, management and provision of the municipal service;

(iii) undertaking social and economic development that is directly related to the provision of the service;

(iv) customer management;

(v) managing its own accounting, financial management, budgeting, investment and borrowing activities within a framework of transparency, accountability, reporting and financial control determined by the municipality, subject to the Municipal Finance Management Act;

(vi) the collection of service fees for its own account from users of services in accordance with the municipal council's tariff policy in accordance with the credit control measures established in terms of Chapter 9;

(b) may pass on to the service provider, through a transparent system that must be subject to performance monitoring and audit, funds for the subsidisation of services to the poor;

*(b*A*)* must ensure that the agreement provides for a dispute-resolution mechanism to settle disputes between the municipality and the service provider;

(c) may in accordance with applicable labour legislation, transfer or second any of its staff members to the service provider, with the concurrence of the staff member concerned;

(d) must ensure continuity of the service if the service provider is placed under judicial management, becomes insolvent, is liquidated or is for any reason unable to continue performing its functions in terms of the service delivery agreement; and

(e) must, where applicable, take over the municipal service, including all assets, when the service delivery agreement expires or is terminated.

(3) The municipal council has the right to set, review or adjust the tariffs within its tariff policy. The service delivery agreement may provide for the adjustment of tariffs by the service provider within the limitations set by the municipal council.

(4) A service delivery agreement may be amended by agreement between the parties, except where an agreement has been concluded following a competitive bidding process, in which case an amendment can only be made after the local community has been given-

(a) reasonable notice of the intention to amend the agreement and the reasons for the proposed amendment; and

(b) sufficient opportunity to make representations to the municipality.

(5) No councillor or staff member of a municipality may share in any profits or improperly receive any benefits from a service provider providing a municipal service in terms of a service delivery agreement.

Part 4A: Regulations and guidelines regarding municipal services

86A: Regulations and guidelines regarding municipal services

(1) The Minister may for purposes of this Chapter make regulations or issue guidelines in accordance with section 120 to provide for or regulate the following matters:

(a) The preparation, adoption and implementation of a municipal tariff policy;

(b) the subsidisation of tariffs for poor households through-

(i) cross-subsidisation within and between services;

(ii) equitable share allocations to municipalities; and

(iii) national and provincial grants to municipalities;

(c) limits on tariff increases;

(d) criteria to be taken into account by municipalities when imposing surcharges on tariffs for services and determining the duration thereof;

(e) incentives and penalties to encourage-

(i) the economical, efficient and effective use of resources when providing services;

(ii) the recycling of waste; and

(iii) other environmental objectives;

(f) criteria to be taken into account by municipalities when assessing options for the provision of a municipal service;

(g) measures against malpractice in selecting and appointing service providers, including measures against the stripping of municipal assets;

(h) mechanisms and procedures for the co-ordination and integration of sectoral requirements in terms of legislation with this Chapter, and the manner in which municipalities must comply with these;

(i) standard draft service delivery agreements;

(j) the minimum content and management of service delivery agreements;

(k) additional matters that must be included in a feasibility study in terms of section 78 (3) *(c)*, which may include-

(i) the strategic and operational costs and benefits of an external mechanism in terms of the municipality's strategic objectives;

(ii) an assessment of the municipality's capacity to effectively monitor the provision of the municipal service through an external mechanism and to enforce the service delivery agreement;

(l) performance guarantees by service providers; and

(m) any other matter that would facilitate -

(i) the effective and efficient provision of municipal services; or

(ii) the application of this Chapter.

(2) The Minister may only make regulations and issue guidelines contemplated in subsection (1) *(a)* to *(e)* after consulting with the Minister of Finance and any other Cabinet member whose portfolio is affected by such regulations and guidelines.

(3) When making regulations or issuing guidelines in terms of section 120 to provide for or regulate the matters mentioned in subsection (1), the Minister must-

(a) take into account the capacity of municipalities to comply with such regulations and guidelines; and

(b) differentiate between different kinds of municipalities according to their respective capacities.

CHAPTER 8A: MUNICIPAL ENTITIES

Part 1: General provisions

86B: Kinds of municipal entities

(1) There are the following kinds of municipal entities:

(a) a private company-

(i) established by one or more municipalities in terms of Part 2; or

(ii) in which one or more municipalities have acquired or hold an interest in terms of Part 2;

(b) a service utility established by a municipality in terms of Part 3; and

(c) a multi-jurisdictional service utility established by two or more municipalities in terms of Part 4.

(2) No municipality may establish, or participate in the establishment of, or acquire or hold an interest in, a corporate body, including a trust, except where such corporate body is-

(a) a private company, service utility or multi-jurisdictional service utility referred to in subsection (1); or

(b) a fund for the benefit of its employees in terms of a law regulating pensions or medical aid schemes.

(3) Subsection (2) does not apply to the acquisition by a municipality for investment purposes of securities in a company listed on the Johannesburg Securities Exchange in accordance with the investment framework envisaged in section 13 of the Municipal Finance Management Act.

86D: Legal status of private companies established by municipalities or in which municipalities hold interests

(1) A private company referred to in section 86C (1)-

(a) is a municipal entity if a municipality, or two or more municipalities collectively, have effective control of the private company; or

(b) is a public entity to which the Public Finance Management Act, 1999 (Act 1 of 1999), applies if ownership control in the company, within the meaning of that Act, is held by a national or provincial organ of state.

(2) A private company which is a municipal entity-

(a) must restrict its activities to the purpose for which it is used by its parent municipality in terms of section 86E (1) *(a)*; and

(b) has no competence to perform any activity which falls outside the functions and powers of its parent municipality contemplated by section 8.

86E: Conditions precedent for establishing or acquiring interests in private companies

(1) A municipality may establish a private company or acquire an interest in such a company only-

(a) for the purpose of utilising the company as a mechanism to assist it in the performance of any of its functions or powers referred to in section 8;

(b) if the municipality can demonstrate that-

(i) there is a need to perform that function or power in accordance with business practices in order to achieve the strategic objectives of the municipality more effectively; and

(ii) the company would benefit the local community; and

(c) if any other conditions that may be prescribed have been complied with.

(2) If a municipality establishes a private company or acquires an interest in such a company for the purpose of using that company as a mechanism to provide a municipal service, Chapter 8 applies.

86F: Conditions precedent for co-owning of private companies

If two or more municipalities intend to establish a private company or to acquire interests in the same private company, each of those municipalities must-

(a) comply with section 86E;

(b) consider and reach agreement on proposals for shared control of the company; and

(c) consider cash flow projections of the company's proposed operations for at least three financial years.

86G: Disposal of companies and equity interests in companies

A municipality may transfer ownership or otherwise dispose of-

(a) a wholly owned private company, subject to the Municipal Finance Management Act; or

(b) an interest in a private company-

(i) subject to section 14 of the Municipal Finance Management Act; and

(ii) if that transfer or disposal would not result in an infringement of section 86C (2) by another municipality which holds an interest in the company.

Part 3: Service utilities

86H: Establishment

(1) A municipality may pass a by-law establishing a service utility.

(2) A by-law establishing a service utility must-

(a) state the purpose for which the service utility is established;

(b) confer the powers and impose the duties on the service utility which are necessary for the attainment of such purpose;

(c) provide for-

(i) a board of directors to manage the service utility;

(ii) the number of directors to be appointed;

(iii) the appointment of directors, the filling of vacancies and the replacement and recall of directors by the parent municipality;

(iv) the terms and conditions of appointment of directors;

(v) the appointment of a chairperson;

(vi) the operating procedures of the board of directors;

(vii) the delegation of powers and duties to the board of directors;

(viii) any other matter necessary for the proper functioning of the board of directors;

(ix) the acquisition of infrastructure, goods, services, supplies or equipment by the service utility, or the transfer of infrastructure, goods, services, supplies or equipment to the service utility;

(x) the appointment of staff by the service utility, or the transfer or secondment of staff to the service utility in accordance with applicable labour legislation;

(xi) the terms and conditions on which any acquisition, transfer, appointment or secondment is made;

(xii) the governance of the service utility; and

(xiii) any other matter necessary for the proper functioning of the service utility; and

(d) determine budgetary and funding arrangements for implementation of the by-law.

(4) No by-law may confer on a service utility any functions or powers falling outside the competence of the parent municipality contemplated by section 8.