

# **An assessment of the challenges faced by King Sabata Dalindyebo Local Municipality in respect of the provision of electricity services**

by  
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## **Declaration**

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.

## **Dedication**

This study is dedicated to my husband, Siyabulela Gqwede, I am honestly humbled by your love, support and encouragement, and the sacrifices you have made to see this study to successful completion. The sleepless nights, the expert insight shared and the journey we have travelled have seen to the completion of this thesis. Thank you Nobhula wam!

## Abstract

The correlation between electricity and economic growth is evident, as is electricity's importance in the development process. Its capacity to improve people's lives cannot be denied. This study assesses the provision of electricity in the King Sabata Dalindyebo Local Municipality (KSDLM). The KSDLM comprises two towns, Mthatha and Mqanduli, and a case study research method was used for the purpose of this research with Mthatha as the focus area within the KSDLM.

Quantitative and qualitative data collection techniques were employed. A thorough literature review was conducted to establish a theoretical foundation for the study. Secondary data were obtained from publicly available sources. Old and frail infrastructure is one of the factors hindering quality service delivery, therefore asset management has been noted as the key approach to get the best out of available assets for the benefit of the organisation and/or its stakeholders and this concerns understanding and managing the risk that is associated with owning an asset. Municipalities are not without challenges, however an assessment by the Department of Cooperative Government and Traditional Affairs (COGTA) identified various challenges faced by municipalities, from political and administrative tensions to lack of funding from local revenue, while the White Paper on local government states that one of the problems is the inability to rebuild relations between municipalities and the local communities that they serve (RSA, 1998).

Primary data were gathered by means of face-to-face structured interviews and questionnaires. An official and two councillors of the KSDLM were interviewed, as well as three business representatives. The KSDLM councillors and the official unanimously stated that they are aware of the challenges faced by the KSDLM with regard to the provision of electricity; however, the organisation is striving to do better. Questionnaires were distributed in the community in the KSDLM. Responses revealed that the overall feeling was that the community is not satisfied with the provision of electricity by the KSDLM.

The KSDLM Masterplan identified a number of initiatives to be undertaken to improve the quality of the electricity supply and the service provided to the communities of the KSDLM. Repairs, maintenance and refurbishment of the primary KSDLM electricity network including critical network components which have become old and obsolete will improve the quality of the electricity supply. A number of factors were identified as contributing to the poor provision of electricity in Mthatha and how it has an impact on development and economic growth has become clear. This has led to a greater number of unsatisfied customers in the Mthatha area. This study recommends solutions for overcoming the challenges.

## Opsomming

Die verband tussen elektrisiteit en ekonomiese groei is net so duidelik soos die verband tussen elektrisiteit en algemene gemeenskapsontwikkelings. Hierdie studie evalueer die verskaffing van elektrisiteit deur die King Sabata Dalindyebo Plaaslike Munisipaliteit (KSDPM). Die KSDPM betrek twee dorpe, naamlik Mthatha en Mqanduli en Mthatha het vir die doeleindes van hierdie navorsing as die studiegebied gedien.

Beide kwantitatiewe en kwalitatiewe datainsamelingtegnieke is gebruik. 'n Volledige literatuurstudie is uitgevoer en 'n teoretiese grondslag vir die studie is aan die hand daarvan geskep. Sekondêre data afkomstig vanaf openbare bronne is ook benut. Ou en vervalde infrastruktuur is een van die hooforsake van swak dienslewering. Doeltreffende batebestuur is dus een van die primêre fokusareas vir munisipaliteite en hulle aandeelhouers, hoewel nie sonder besonderse uitdagings nie. 'n Oorsig deur COGTA het aangetoon dat munisipaliteite verskeie uitdagings in die gesig staar, waaronder politieke en administratiewe spanning en 'n tekort aan plaaslike inkomste. Die Witskrif oor plaaslike owerhede dui aan dat gebrekkige verhoudinge tussen munisipaliteite en die gemeenskappe wat hulle dien een van die probleme is.

Primêre data is via persoonlike onderhoude met 'n plaaslike amptenaar, twee raadslede van die KSDPM, as ook drie plaaslike besigheidsvertegenwoordigers ingesamel. Die raadslede en plaaslike amptenaar het in geen onduidelike terme toegegee dat hulle bewus is van die elektrisiteitsvoorsieningsprobleme, maar dat die KSDPM probeer om 'n beter diens te lewer. Inligting wat deur die vraelyste ingesamel is, toon egter dat die gemeenskap nie met die verskaffing van elektrisiteit tevrede is nie.

Die meesterplan van die KSDPM het 'n aantal inisiatiewe geïdentifiseer ten einde die gehalte van elektrisiteitsverskaffing en verwante dienste aan die KSDPM te verbeter. Herstelwerk, instandhouding en opknapping van die primêre KSDLM-elektrisiteitsnetwerk, insluitend kritiese netwerkkomponente wat oud en verouderd geword het, sal die gehalte van die elektrisiteitsvoorsiening verbeter. 'n Aantal faktore wat tot die swak voorsiening van elektrisiteit in Mthatha bydra is geïdentifiseer en hoe dit 'n impak op ontwikkeling en ekonomiese groei uitoefen, het duidelik geword. Dit het gelei tot 'n groter aantal ontevrede kliënte in die Mthatha area. Hierdie studie beveel oplossings aan om die uitdagings te oorkom.

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## List of acronyms and abbreviations

BNG	Breaking New Ground
CBO	Community Based Organisations
COGTA	Department of Cooperative Governance and Traditional Affairs
DPME	Department Planning, Monitoring and Evaluation
DoE	Department of Energy
ESLC	Electricity Suppliers Liaison Committee
HV	High Voltage
IDP	Integrated Development Plan
INEP	Integrated National Electrification Plan
IUDF	Integrated Urban Development Framework
IMC	Inter-Ministerial Committee
KSDLM	King Sabata Dalindyebo Local Municipality
KV	Kilovolt
LG MTSF	Local Government Medium Term Strategic Framework
LV	Low Voltage
LGBER	Local Government Budgets and Expenditure Review
MV	Medium Voltage
MFMA	Municipal Finance Management Act
NRS	National Rationalised Specifications
NDP	National Development Plan
NGO	Non-Governmental Organisations
PI	Presidential Intervention

PMU	Project Management Unit
PWG	Provincial Working Group
SALGA	South African Local Government Association
SANGOCO	South African National Non-Governmental Organisation Coalition
SDBIP	Service Delivery and Budget Implementation Plan

## Chapter 1: Introduction and background to the study

### 1.1. Introduction

The Eastern Cape, positioned on the southeastern coast of South Africa is one of the nine provinces of the Republic of South Africa. It covers 168 966 km.<sup>2</sup>. The capital city of the Eastern Cape is Bisho and the largest town in the province is Port Elizabeth.

The OR Tambo District Municipality is one of six district municipalities in the Eastern Cape Province. The municipality is located to the east of the Eastern Cape Province, on the Indian Ocean coastline and covers 12 096 km<sup>2</sup> of land in the Eastern Cape (Stats SA 2011). It consists of five local municipalities, namely; King Sabata Dalindyebo, Nyandeni, Mhlontlo, Port St Johns and the Ingquza Hill Municipality. Our focus will be on one of the five local municipalities, namely the King Sabata Dalindyebo Local Municipality.

King Sabata Dalindyebo Local Municipality (KSDLM) covers 3 028 km<sup>2</sup> and comprises two magisterial areas, Mthatha and Mqanduli and their surrounding rural areas. The municipality is largely rural in character with the urban areas concentrated around the towns. It had a population of 451 710 in 2011 (Stats SA 2011). The number of households in 2007 was 93 382, and this increased to 95 382 in 2011 (Stats SA 2011).

In terms of the Constitution, municipalities have a mandate to ensure that all citizens receive the services they need to satisfy their basic needs (Van der Waldt, Khalo, Nealer, Phutiagae, Van Niekerk & Venter 2014:45).

This study was used to investigate municipal service delivery in the KSDLM, focusing mainly on the capacity of the municipality to provide electricity services.

Two electricity distributors, namely Eskom and KSDLM, provide electricity within the King Sabata Dalindyebo boundaries. The study excluded Eskom customers and therefore the focus was on the areas supplied by the King Sabata Dalindyebo Local Municipality, as a licenced electricity distributor. The specific areas of the study include the urban areas of the Mthatha magisterial area consisting of residential and commercial areas. This chapter provides an overview and the rationale of the study whilst also outlining the research question and objectives. In addition, the research design and methodology used in gathering data are discussed. The chapter concludes by giving a synopsis of the other chapters of this report.

## **1.2. Overview and rationale of the study**

The relative lack of research on municipal service delivery in the KSDLM, specifically on the provision of electricity and the fact that the researcher is a former resident having experienced how electricity provision has deteriorated to a point where services are inadequately delivered to the communities of the above-mentioned municipality provided the primary motivation for this study.

Electricity interruptions no longer come as a surprise or shock to the residents of the KSD Local Municipality. As a former resident of Mthatha, the researcher remembers Mthatha as a clean city, where almost every young adult was working and living life fully. Today it is a shadow of what it used to be with potholes in the streets of the CBD itself and rife unemployment, which has led to an increased crime rate in Mthatha.

Mthatha is experiencing what is known as a “brain drain”. In a paper by Kasey Kissick (2012:1), although she mostly refers to health care workers, the author states that in this case, brain drain refers to educated professionals leaving their country of birth to seek better living conditions while some seek better paying employment. This has had a major effect on education and businesses and has resulted in the deterioration of Mthatha. Young professionals seek better standards of living through better employment, health care, better education for their children in other provinces and the citizens left behind have to deal with the situation, no matter how unbearable it is. The researcher therefore wanted to highlight the challenges experienced by the KSD Local Municipality and the citizens residing within this municipality.

## **1.3. Research Question**

The research question that was formulated was: Is the electricity provision in the King Sabata Dalindyebo Local Municipality adequate; if not, what are the challenges faced by this municipality?

## **1.4. Research Aim**

The research question therefore led to the aim of the research, this being to describe the key challenges to the provision of electricity in the King Sabata Dalindyebo Local Municipality.

## **1.5. Research Objectives**

The following objectives meant to realise the above-mentioned aim were:

- to do a literature study concerning electricity services provided in South Africa;

- to study electricity service delivery in the context of South African policy and regulatory framework; and
- to assess the provision of electricity services in the King Sabata Dalindyebo Local Municipality.
- to provide recommendations based on the findings.

## **1.6. Research Design and Methodology**

### **1.6.1. Research Design**

This was an empirical research study focused on use of primary and secondary data. Primary data were collected using both questionnaires and unstructured interviews whereas secondary data were obtained from the literature review; documentary analysis by which the researcher examined policies; annual reports and analysed organisational information.

### **1.6.2. Research Methodology**

The sampling methods that were employed involved non-probability sampling, with the researcher using the method of Purposive or Judgemental sampling. Non-probability sampling relies on available subjects, for example people who are met in the street. It is said to be the most used method but the riskiest method because one must use this method with greater caution to ensure not to generalise from the data (Babbie & Mouton 2015:166). Purposive or judgemental sampling is a method by which the researcher will select a sample on the basis of knowledge of the population in consideration of the purpose of study (Babbie & Mouton 2015:166). This means that not everyone has an equal chance of being chosen. Babbie and Mouton state that this sampling is used in some instances where one wishes to study a subset of a larger population where one can easily identify members of the subset when enumeration of the whole population would be impossible (Babbie & Mouton 2015:166).

The researcher distributed 50 questionnaires to 50 households in a chosen community within the municipality; one questionnaire per household. To widen the sample, the researcher invited interested participants using social media (Facebook) to provide email addresses so that the researcher could email additional questionnaires. This meant that the participants would return their responses by emailing them back to the researcher and the researcher could therefore still maintain a degree of control regarding responses.

The researcher also conducted interviews. For this, the sample comprised one municipal official in the electricity department, two ward councillors, and three business stakeholders.

For the purpose of this research, the researcher looked at the Mthatha magisterial area, which has 29 593 households (Stats SA 2011). From among the households, the researcher

selected at municipal customers. As one customer might have had many households, the distribution of questionnaires was based on King Sabata Dalindyebo customers.

## **1.7. Summary**

KSDLM caters for 451 710 citizens and, as stated in the rationale, “brain drain” has serious implications for the development of Mthatha. Poor service delivery has resulted in professionals emigrating to other provinces and sharing their wealth of knowledge and skills in the upliftment of other provinces and even other countries.

The research report is divided as follows:

Chapter 2 discusses the literature on South African local government, focusing on service delivery and challenges that municipalities face when delivering the services.

Chapter 3 provides the context of the case study; for the purpose of this research the researcher concentrates on the town of Mthatha under the KSDLM.

Chapter 4 deals specifically with electrical service delivery, in looking at the policy and regulatory framework.

Chapter 5 assesses the provision of electricity services in the KSDLM by focusing on reviewing KSD Local Municipality documents such as the Master Plan, IDP, SDBIP, etc.

Chapter 6 comprises the presentation of data and data analysis

Chapter 7 concludes this report and makes recommendations.

## **Chapter 2: Literature Review on electricity services provided in South Africa**

### **2.1 Introduction**

Electricity plays an important role in the improvement of human life. Apart from its social benefits, electricity is also a driving factor in the economy. The researcher looked at the provision of electricity in South Africa and how it has impacted the lives of the poor while also catering for its revenue generation. Electricity usage ranges from communication and transportation to production. Local government plays an important role in the electricity industry in South Africa. The literature review involved an in-depth look at concepts that underpin the study. Amongst others, the researcher explored literature on Local government in South Africa and its rich history, cooperative governance system, and looked at the concept of developmental local government and how citizens can interact with their government. Electricity infrastructure management and maintenance furthermore are discussed. The researcher looked at two electrical equipment installations and how they should be maintained. Lastly, the discussion turns to challenges facing municipalities.

### **2.2 South African Local Government in context**

South Africa has accomplished many things since 1994 when it gained democracy. Constitutional negotiators in 1993 agreed to include local government as a chapter in the Constitution of 1994 and it was therefore improved in the 1996 Constitution (Heymans 2006:47). Local Government has undergone several phases of reform since 1994 which included the focus on undoing the apartheid legacy, deracialising municipalities and stabilising and consolidating structures and systems (Heymans 2006:47). Local Government can be understood in the context of transformation from the apartheid to the new democratic system (Heymans 2006:47).

Apartheid has left its imprint on South Africa's human settlements and municipal institutions. Transformation requires an understanding of the historical role of local government in creating and perpetuating local separation and inequity, and the impact of apartheid on municipal institutions as identified in Section A of the White paper on Local Government (Republic of South Africa [RSA], 1998). The entire system of local government in South Africa prior to 1994 was defined according to race (Heymans 2006:48), however the White Paper on Local Government states that segregation was already a policy by the time apartheid was introduced in 1948. According to the White Paper, the Group Areas Act was the key piece of apartheid legislation that instituted strict residential segregation and compulsory removal of black people to "own group" areas. This segregation aimed at limiting the extent to which white affluent

municipalities bear the financial burden of servicing the disadvantaged black areas (RSA, 1998). The article by Chris Heymans states that, because of this segregation, black people were also deprived of their political rights (Heymans 2006:48); however, urban economies were dependant on black workers and the laws to prevent the inflow of blacks to urban areas were not that effective which led to the recognition of the permanence of Africans in urban areas. The need for political structures therefore increased and it became necessary to include them at a level where they now had political rights (Heymans 2006:48).

Community Councils were introduced in 1977 but they never had any political credibility. In 1982, these councils were replaced by Black Local Authorities (BLAs), which had elected councils and administrative capacity. Coloured and Indians were given voting powers for advisory committees in their areas with even less power than the BLAs and no administrations of their own (Heymans 2006:48). White people meanwhile could vote for elected municipalities with administrative and fiscal capacities.

Most local government revenue was self-generated, mainly through property tax and service delivery to residents and business in urban areas. This, however, was most suitable to white municipalities that had smaller populations to serve and large concentrations of economic resources to tax as spelled out in Section A of the White paper on Local Government (RSA, 1998).

Regional Services Councils (RSCs) were introduced in the 1980s to develop functional links between the various racial local governments and to address fiscal shortcomings of smaller white municipalities and BLAs.

Heymans states than an increase in the resistance to apartheid in the 1980s was led by activists whose target was local government as it was the sphere of government closest to the people (Heymans 2006:49). The activists were calling for institutional unification of local governments across the racial divide as well as the use of local revenue for the benefit of all residents (Heymans 2006:49). The late 1980s saw the collapse of the BLAs as the system remained effectively ungovernable until the negotiations to end institutionalised apartheid in 1994.

The inclusion of Local government as a chapter in the Constitution in 1994 paved the way for reforms in local government that came in three phases (Heymans 2006:49). The pre-interim phase lasted from 1993 to 1995 during which time local government negotiating forums were established. The 1995 municipal elections marked the start of the interim phase when the major focus was on deracialising municipalities (Heymans 2006:49). This phase pended a full investigation on the future options for local government that would be properly aligned with

the national constitutional process. The municipal election then gave rise to the creation of 843 transitional municipalities these combined white and black areas that had been separated spatially, institutionally and fiscally (Heymans 2006:50).

The interim phase saw the development of the Local Government White Paper which spelled out a new vision for “developmental local government”, with ideas about constitutional and functional roles of local government (Heymans 2006:50). Though deracialising remained an important objective, the emphasis was now on democratising local government, focusing more on its capacity to deliver the services, enhancing integrated development planning and management and achieving fiscal sustainability (Heymans 2006:50). Subsequent legislation such as the Municipal Structures Act of 1998, the Municipal Systems Act of 2000, the Intergovernmental Fiscal Relations Act, the Municipal Finance Management Act of 2004 and related budget reforms and the Municipal Property Rates Act of 2004 provided the legal framework for the implementation of these policies (Heymans 2006:50).

The third reform started in the year 2000. This time the emphasis was mostly on a comprehensive process of demarcating municipal boundaries (Heymans 2006:50). According to Kotze and Taylor (2010:198), the new system of local government was introduced in South Africa in 2000, it was correctly placed as the sphere of government closest to the citizens, so that it could give meaning and substance to the basic political commitment that the people shall govern.

Six metropolitan councils that incorporated urban and rural areas and reduced the overall number of municipalities from 843 to 283 were established. Heymans states in his paper that the demarcation came with an elaborate process to define powers and functions of the different categories of municipalities, as well as further evolution of the fiscal framework (Heymans 2006:50). The South African Local Government Association (SALGA) defines municipalities as organs of state that consist of political structures, administration of the municipality and communities within the municipal area; they are the core institutions within the sphere of local government (SALGA 2011).

The South African government consists of the National, Provincial and Local spheres of government. All three spheres are distinctive, interdependent and interrelated, as stipulated in the White Paper on Local Government (RSA, 1998). As Van der Waldt *et al.* (2014:89) explain: “Local Government refers to regulating society and administering services on a mass scale”. There are three categories in the local government structure, namely; category A, which represents the Metropolitan municipalities; category B representing local municipalities; and category C representing district municipalities. South Africa today is administratively divided into nine provinces consisting of 257 municipalities. These Municipalities comprise 8

Metropolitan municipalities, 44 district municipalities, and 205 local municipalities. There are two Metropolitan Municipalities (category A) in the Eastern Cape, six district municipalities (category C) and thirty-seven local municipalities (category B), which includes King Sabata Dalindyebo municipality. “Category B municipalities are Local Municipalities that share municipal executive and legislative authority in their area with the district municipality within whose area they fall” (Van der Waldt *et al.*, 2014:8). King Sabata Dalindyebo Local Municipality falls under the OR Tambo District Municipality.

The Provincial and National government support the 257 Municipalities in order to ensure that services are rendered to the citizens of South Africa and this supports the notion of cooperative governance, which we look at in the next section.

### **2.3 Cooperative Governance in South Africa**

The concept of cooperative governance comes from the recognition that government cannot do it alone and that working relationships need to be formed between government, the private sector and the civil society.

The spheres of government are directed by the Act to co-operate in all aspects of government (Van der Waldt *et al.*, 2014:65) and therefore, as Section C of the White paper on Local Government (RSA, 1998) states, these spheres follow the principles of cooperative governance as laid out by the Constitution. The way in which National and Provincial government exercise their legislative and executive authority must not impede nor compromise the ability of municipalities to exercise their legislative and executive power (Van der Waldt *et al.*, 2014:65).

In certain instances, national government may intervene in provincial affairs and provinces may intervene in local affairs. As such, the Constitution provides for these circumstances and procedures under which Parliament may adopt legislation on an exclusive provincial matter; how the national government may intervene in a provincial matter at the executive level; and under which circumstances transfer of funds to a province may be stopped. The provinces have similar powers of intervention in respect of local affairs.

Cooperative governance in the municipal setting refers to how the community organises itself, determines its priorities, allocates resources, and holds public bearers accountable (Van der Waldt *et al.*, 2014:176). It requires moving towards including civil organisations, private sector organisations, community groups and social movements in the sharing of power (Van der Waldt *et al.*, 2014:176). An important key to the concept of cooperative governance is the existence of effective organisational arrangements and facilitation of two-way communication, which would lead to higher levels of visibility, transparency, access and willingness of all

committed actors to become involved and participate actively towards collaborated service delivery and sustainable development (Van der Waldt *et al.*, 2014:176).

There has been a noticeable increase in the number of municipal managers who have turned to collaborative arrangements for service delivery (Hilvert & Swindell, 2013:241). Hilvert and Swindell have found that cities and towns and other districts are learning to work effectively with other local governments, non-profit organisations, the private sector and their own citizens to deliver quality services in a cost efficient and effective manner (Hilvert & Swindell, 2013:241).

Section C of the White paper on Local Government (RSA, 1998) states that cooperative government is aware of the complexity of government in the recent years and therefore mention that, for a country to meet its challenges effectively, all its components should work together. This involves:

- collectively harnessing all public resources behind common goals and within a framework of mutual support;
- developing a cohesive, multi-sectoral perspective on the interests of the country as a whole, and respecting the discipline of national goals, policies and operating principles;
- coordinating their activities to avoid wasteful competition and costly duplication;
- utilising human resources effectively;
- settling disputes constructively without resorting to costly and time-consuming litigation; and
- rationally and clearly dividing between them the roles and responsibilities of government, so as to minimise confusion and maximise effectiveness.

(RSA,1998)

It is clear from the above that, when the three spheres of government work together, there is efficient use of public resources, activities are coordinated and human resources are utilised to ensure that municipal services are delivered to the people. Municipalities, as mentioned in the previous chapter, have a mandate to ensure that all citizens receive the services they need to satisfy their basic needs; however, for this to be achieved, there needs to be consultation with the citizens to ensure that municipalities are aware of the services needed by the citizens and this is where the concept of developmental local government is important, which is to be discussed next.

## **2.4 Developmental Local Government and Community Participation**

Section A of the White paper on Local Government (RSA, 1998) creates the foundation for new developmental local government system which focuses on working with the communities

to create sustainable human settlements, providing better quality of life while fully meeting social, economic and material needs of the citizens.

This means that sustainable ways to meet the community's social, economic and material needs and improve the quality of their lives have to be found.

Developmental local governance is committed to working with citizens and groups of people within the community (Van der Walddt *et al.*, 2014:21). This ensures that the social, economic and material needs are met to facilitate progressive and sustainable improvement in the lives of people in the community.

Amtaika quotes Korten who defines development as a process by which the members of society increase their personal and institutional capabilities to mobilise and manage resources to produce sustainable and justly distributed improvements in their quality of life which is also consistent with their own aspirations (Amtaika 2013:50). From this definition, development can be viewed in different ways: one can say that development never ends; it involves social justice, sustainability and inclusivity; it is people centered; it is about change and uncertainty as well as about freedom of choice and the role played by institutions. Due to its proximity to the people, local government is the vehicle through which development can be achieved.

There is a notable difference between informal community action and statutory local government. This, amongst others, includes the fact that community development centres are mostly organised on a voluntary basis and are quite flexible, whereas local government has a compulsory nature and greater complexity. Community development is strengthened by its leadership and the social groups while local government activities are determined by formal institutionalised procedures; the effectiveness of community development relies on their educative processes, social norms and public opinion, while the powers of local government are entrenched in law and carry the force of legal sanction. Community development also, and importantly, depends on voluntary contributions when it comes to finance whereas local government operates under statutory powers that ensure regular and general donation of funds (Amtaika 2013:53).

Community development bodies act as a medium of communication between the municipalities and the people and thus ensure the responsiveness to local needs by the municipality. Amtaika (2013:55) points out that these bodies assist in the provision of local facilities, arouse the interest of the public in local management and encourage the community participation as well as good citizenship and thus strengthening the effectiveness of the local government institution.

Van Der Waldt *et al.* describes the importance of a good relationship between municipalities and the communities they serve. Further to this, Amtaika states that to have a developmental local government requires institutions that are responsive to their electorates and clients by providing incentives to direct investments in support of development goals (Amtaika 2013:53).

The Municipal Systems Act, 2000 (Act No. 32 of 2000) (RSA 2000) emphasises that municipalities must develop a culture of municipal governance by encouraging and creating conditions for the local community to participate in the affairs of the municipality; for example, the preparation, implementation and review of the Integrated Development Plan (IDP); monitoring of performance; evaluation of the performance impact; and preparation of budgets. According to Maxegwana, Theron and Draai (2015), it has however been proven that there can be frequent public participation meetings but still not translate to participants being able to analyse or identify their needs based on what will improve their lives. Working documents on the National State of Local Government in South Africa from the Department of Cooperative Governance and Traditional Affairs (GOCTA) state that representative government is complemented by the right of communities to participate in the decisions that affect development in their areas, and municipalities have a corresponding duty to encourage community participation in matters of local governance (COGTA, 2009:13).

In an article by Gwala *et al.*, (2015:55), the authors allude to the fact that public participation processes actually alienate the public and often the officials handling the processes would in fact define what the agenda is and what the solution will be and thus the public do not often attend or participate in the meetings. In their study, they observed that there was a poor public turnout during the public meetings, which indicated that the community mistrusted and lacked confidence in the officials (Gwala *et al.*, 2015:67).

The South African government has existing structures in which citizens can participate. These structures allow for the voices of citizens to be heard and it is where the community can express themselves in terms of their rights. Such structures include the local elections, Non-Governmental Organisations (NGOs), Community Based Organisations (CBOs), Ward committees, Traditional Leadership as well as Open Council Meetings.

It is a requirement of developmental local government that there must be consultation with and participation by the community. In terms of Section 152(2) of the Constitution of the Republic of South Africa (RSA 1996), "municipalities must strive within their financial and administrative capacity to achieve the objects set out in Section 152(1) which emphasises, amongst others, the need to encourage the involvement of communities and community organisations in local government matters" (Kotze & Taylor, 2010:208).

The communities can engage with their government and make their voices heard, amongst others through structures such as the Non-Governmental Organisations and Community Based Organisations, in ward committees, traditional leadership as well as open council meetings, all of which are discussed below.

#### **2.4.1. NGOs and CBOs**

Non-Governmental Organisations play a pivotal role especially in country where democracy is in transition. In a book by Van der Waldt *et al.*, the authors state that a shift in the focus of NGOs has been noted in that they previously focused more on ensuring that citizens were able to exercise their democratic rights, while the focus now is more on bringing government to the people (Van der Waldt *et al.*, 2014:39). Among NGOs that promote sustainable democracy, those that ensured that people knew and exercised their democratic rights focus on building solid institutions from grassroots level to ensure participation in the electoral process while those that focus on bringing government to the people, being proponents of participatory governance, examine and engage with government processes (Van der Waldt *et al.*, 2014:40).

The emergence of the South African National NGO Coalition (SANGOCO) in 1995 was to coordinate the NGO input into government policy and to ensure that there would be civil society representation in that policy.

Community Based Organisations (CBOs) such as taxpayers' associations and civic associations play an essential role in democratising decisions made by municipalities and contribute in the development of communities, as well as empower communities through teaching new skills. A study was conducted by the Human Sciences Research Council to look at the membership age groups active in the civil organisations. What they found was that, in terms of membership, "the 35 – 49-year age group appeared to be the most active in civil society organisations; the 25 – 34 age group was the most active in political activities; while the 18 – 24 years' group was more active in youth organisations" (Van der Waldt *et al.*, 2014:41). The older generation, those 35 years and older, were more involved in religious, women's and anti-crime organisations (Van der Waldt *et al.*, 2014:41).

Van der Waldt *et al.* proceeded to allude to the fact that CBOs were challenged in respect of citizen participation in that they did not know the functions of local government and how they could influence local government to benefit the communities (Van der Waldt *et al.*, 2014:41). Contrary to NGOs, CBOs had limited understanding of how participatory democracy complements political legitimate and legally responsible structures and local government authorities has also been shown to lack enough capacity to embrace the principles of participatory governance (*ibid.*). It is therefore essential that relationships are formed between

CBOs and local government by looking at the constraints faced by local government in engaging public participation and training CBOs in forming relationships with the local councils.

#### **2.4.2. Ward Committees**

The Constitution of South Africa (RSA 1996) and key legislation such as Chapter 4 of the Local Government: Municipal Systems Act (2000) and Chapter 4 of the Local Government: Municipal Structures Act (1998) provide a legal framework for participatory local democracy and ward committees in particular. Ward committees were included in the legislation as a way of providing an opportunity for communities to be heard in a structured and institutionalised way at the local government level. Ward committees are the structures that make it possible to narrow the gap between local municipalities and communities, since ward committees are supposed to have knowledge and understanding of the citizens and communities they represent.

Most municipal areas are divided into wards for the purpose of local government elections and each ward is represented by a ward councillor. Section 33 of the Local Government: Municipal Structures Act (RSA 1998) stipulates a certain criterion for the establishment of committees. The municipality must be entrusted to establish a committee of the anticipated kind and the establishment of the committee must be necessary, taking into account:

- the extent of the functions and powers of the municipality;
- the need for the delegation of those functions and powers in order to ensure efficiency and effectiveness in their performance; and
- the financial and administrative resources of the municipality available to support the proposed committee

(Municipal Structures Act 1998)

A ward councillor must also be the chairperson of the committee and not more than ten other persons may be elected as members (Ward Committee Resource Book 2005). The council may make administrative arrangements to enable ward committees to perform their functions and exercise their powers effectively.

The council must make rules regulating:

- the procedure to elect the members of the ward committee (that is the members other than the ward councillor). This procedure must take into account the need for women to be equitably represented in a ward committee and for a diversity of interests in the ward to be represented;
- the circumstances under which those members must vacate office; and

- the frequency of meetings of ward committees.

(Ward Committee Resource Book 2005)

The Council may dissolve a ward committee if the committee fails to fulfil its object to enhance participatory democracy in local government.

In deciding whether to dissolve a committee, the following may serve as indicators:

- where a committee has failed to meet for a period of six months or on three scheduled meeting dates;
- where the members of a committee have decided to dissolve it; or
- when maladministration, fraud, corruption or serious malpractice has occurred

(Ward Committee Resource Book 2005)

A ward committee “is an advisory body without any executive powers; independent; represents the interests of the ward residents; and it is impartial, performs its functions without fear, favour or prejudice” (General Powers and Function of the Municipal Council). Citizen and community participation is an essential part of effective and accountable governance at a local level. International experience has shown that one way of achieving successful and lasting models to ensure that citizen participation takes place is through establishing structured and institutionalised frameworks for participatory local governance (Ward Committee Resource Book 2005).

A partnership between South Africa and Australia, the Australia-South Africa Local Governance Partnership, conducted a survey in the year 2004 from which they suggested the following pre-conditions for the success of ward committees:

- for the process of participation to be meaningful and to be seen as meaningful:
- for both parties – the municipality and the public – to listen to each other rather than just talk to each other
- to make it clear at the outset who makes the final decision, for example, if the views of the community are different to that of Council, whose view will prevail?
- for resources to support the process – in all examples of good practice, public participation is funded. In some cases, public participation is the object of a special programme, such as the renowned participatory budgeting process in Porto Alegre, Brazil, which involves thousands of community members each year supported by a team of municipal employees dedicated to facilitating the process

- to ensure that information relevant to the participative process is conveyed in a manner that is relevant and understandable to the communities involved, which may require the use of local language
- to understand the distinction between:
  - providing information
  - consultation
  - participation
- and being clear which is being used in particular circumstances
- to provide feedback on the participation process and the final decision that emerges
- to include officially elected councillors in the participatory process
- to ensure that policies exist that guide municipal staff in the manner and the reasons for participation
- to recognise that meetings are only one form of participation and unless properly managed, can bias input in favour of those that are vocal and/or articulate

(Ward Committee Resource Book 2005)

Ward committees enable Local Government to fulfil their mandate of ensuring representative democracy and democratising development; they ensure that government is accessible and that councillors, as part of those who govern, are known to the citizens, live within their communities, understanding their wards including the challenges facing their wards (Ward Committee Resource Book 2005). Ward councillors ensure that communities are organised partners of local government and contribute to inclusive decision making (Ward Committee Resource Book, 2005).

### **2.4.3. Traditional Leadership**

Traditional leadership is indigenous to South Africa. The Constitution of South Africa has set out a framework that recognises the institution of traditional leadership (Van der Waldt *et al.*, 2014:42). Traditional leadership also has a culture of embracing democracy. Chapter 12 of the Constitution of South Africa, Act 108 of 1996 (as amended) (RSA, 1996) recognises traditional authorities and states that the national legislation may provide a role for traditional leadership as an institution at local level on matters affecting local communities (Section 211).

The role of traditional leaders in the development of the local area and community includes:

- Making recommendations on land allocation and the settling of land disputes.
- Lobbying government and other agencies for the development of their areas.
- Ensuring that the traditional community participates in decisions on development and

- Contributes to development costs
- Considering and making recommendations to authorities on trading licences in their areas in accordance with law

(White Paper on Local Government 1998)

Strengthening democracy requires the participation of all leaders including religious, traditional as well as the elected leaders. It is necessary for municipalities to ensure that there are mechanisms to ensure integrated, structured and coordinated involvement of the Houses of Traditional Leaders in various processes of policy development (Van der Waldt *et al.*, 2014:42).

#### **2.4.4. Open Council Meetings and councillors**

Section 19 of the Local Government Municipal Systems Act ensures accessibility and transparency in that Section 32 of the Act stipulates that the council meetings and those of its committees should be open to the public as well as the media. These meetings must be announced in good time so that the community is aware of the date and time. Such meetings are held so that different stakeholders in the community can participate in council activities such as budgeting and planning processes and the community as such should be aware of how they should contribute.

The White Paper on Local Government clearly states that municipal councils play a central role in promoting local democracy (RSA, 1998). In the council, councillors must be responsible for representing the community's interest and encouraging the participation of citizens in the design and implementation of municipal programmes. It is therefore the responsibility of every councillor to ensure that delivery of programmes are aligned with the preferences of the community. Councillors must be available during working hours and these working hours should be advertised for the advantage of the citizens to enable them to consult with the community. It is also advised that the council offices have a complaints book so that the citizens can write their complaints and record problems they are encountering with regard to the services they receive (Van der Waldt *et al.*, 2014:43).

Various services are rendered by the municipality to its community but the focus of this research study was on electricity service delivery, thus the following discussion is on municipalities as electricity service authorities.

### **2.5 Municipalities as Electricity Service Authorities**

Electricity distribution is a local government competence. The Constitution states that municipalities have the "executive authority and right to administer electricity reticulation in

their area of jurisdiction subject to legislation and regulation by national and provincial government” (SALGA 2014:1).

The Municipal Systems Act No. 32 of 2000 establishes municipalities as service authorities and presents the difference between “authority” and “provider”. The South African Local Government Association (SALGA) states that the “authority function” includes the development of policies, drafting by-laws, setting tariffs, making arrangements for the financing of investments in services, deciding on how services are provided and regulating the provision of services in terms of the by-laws and other mechanisms, whereas the “service provider”, which could be the municipality itself or an external provider, is the entity that undertakes the actual provision of the service, for example, maintaining the electricity network or selling electricity to customers” (SALGA 2014:1). The Municipal Structures Act No. 117 of 1998 was the determining Act on whether local or district municipalities were the default service authorities. In the case of electricity, health and water services, the default option was that these responsibilities were allocated to district municipalities unless a local municipality was authorised to perform the function by the national minister responsible for local government (SALGA 2014:1).

In the case of electricity, arrangements existing at the time of establishment of local and district municipalities in the year 2000 were maintained; this was due to the anticipation of the reform of the electricity distribution industry (SALGA 2014:1).

In terms of the Constitution, local government has executive authority and the right to administer electricity distribution, while national and provincial governments legislate this function. This authority includes the right to enter into service provider agreements with entities that can provide the distribution function on behalf of local government (SALGA 2014:2).

In a paper presented by SALGA to the Association of Municipal Electricity Utilities (AMEU), the following assumptions are made:

- All municipalities with a NERSA distribution licence are electricity service authorities. This list comprises 164 local municipalities, 1 district municipality and 8 metropolitan municipalities;
- Where local municipalities have not been authorised and/or do not hold a distribution licence, then the district is the electricity service authority.

(SALGA, 2014:4)

With respect to electricity distribution, municipalities that are electricity service authorities have ...the duty to develop electricity services policy, to pass and implement by-laws with respect to the electricity distribution function, to plan for electricity distribution, the right to manage

electricity distribution and trading themselves (as this is a municipal service according to the Constitution) and the right to appoint service providers other than the municipality, the right to set service fees and surcharges and the duty to regulate and monitor external electricity providers and the effectiveness of electricity distribution services in its area.

(SALGA, 2014:5)

The Local Government Budgets and Expenditure Review (LGBER) states:

National government is responsible for ensuring the generation of electricity and its transmission across the country, the state-owned electricity company, Eskom, is responsible for over 95 per cent of electricity generation and all transmission in the country and as a sphere of government, municipalities are responsible for the distribution of electricity to consumers

(RSA, 2011:143)

Municipalities depend on effective revenue and debt collection practises to sustain expenditure associated with service delivery. Due to high poverty and unemployment levels, basic services cannot simply be withheld to citizens who cannot afford to pay for the services, municipalities must provide these services in a sustainable manner, however, it is not expected that a municipality provides beyond its financial capabilities and resource constraints (Van der Waldt *et al.*, 2014:45). This is also expressed in Section 152 (1) [c] of the Constitution in terms of which local government is required to strive, within its financial and administrative capacity to promote social and economic development.

To cater for the poor therefore had two problems, being; the inability to pay rates that are being owed to the municipality and secondly the mandate that municipalities have to provide basic services in a sustainable manner. To resolve the first problem Eskom and municipalities responded to the high rate of non-payment and the limited development of the infrastructure by installing pre-paid meters in households (Makonese, Kimemia, Annegarn 2012:167). Prepaid systems allow users to consume energy only when they have credit in an electricity account, as supply is discontinued when such credit is exhausted. From the consumer's perspective, prepayment systems may result in a better understanding of how much energy is being consumed, inducing more control of energy use and budget management (Makonese *et al.* 2012:168). From a utilities' service point of view, prepayment reduces risk of consumption without payment and improves cash flow, furthermore, there are no account posting costs, no meter readers required, and no disconnection and reconnection fees and other administrative hurdles (Makonese *et al.* 2012:168).

To resolve the second problem of providing basic services for everyone, the national government then came up with what is known as the Municipal Indigent Policy which is intended to guide the national initiative to improve the lives of indigents and to improve access

to free basic services. What poor people in South Africa have in common is the need to access affordable basic services (e.g. electricity) that will facilitate their productive and healthy engagement in society (National Framework for municipal indigent policies 2012:2). The policy provides a framework for how this could be achieved at local government level. An amount of 50kWh per household per month has been defined as the basic amount of electricity to be provided free to the indigent and the policy states that this amount of electricity is suitable to meet the needs for lighting, media access and limited water heating and basic ironing (or basic cooking) (National Framework for municipal indigent policies 2012:23). There are concerns over the sufficiency of the amount of electricity, particularly for cooking which is clearly a basic need and thus considerable attention has been given to improving the distribution of paraffin and bottled gas as alternative fuels which have greater efficiency for thermal requirements (heating and cooking) than electricity (National Framework for municipal indigent policies 2012:23). The source of funding for the indigence subsidy is the Equitable Share contribution from the energy component made by the government from the national treasury while in exceptional circumstances this can be supplemented from other revenues (National Framework for municipal indigent policies 2012:23). Statistics South Africa notes that there were 2,4 million households receiving free basic electricity from municipalities during the 2011/12 period, with municipalities in Western Cape and Mpumalanga reporting the largest proportions of households receiving free basic electricity (43,6% and 39,5% respectively), whereas, over the five-year period (2008 to 2012), municipalities in Mpumalanga had the highest increase in households receiving free basic electricity (from 220 106 reported in 2008 to 279 044 in 2012) (Stats SA 2011).

However, not all households and businesses are supplied with electricity by municipalities as Eskom supplies a large number of customers directly. NERSA grants Municipalities with a distribution licence for a particular area, for the purpose of this research the researcher discusses the KSDLM as an electricity service authority. There are areas where ESKOM is an electricity service authority. Municipalities as service providers must also maintain the electricity infrastructure network. The importance of asset management is discussed next.

## 2.6 Infrastructure Asset Management

Asset Management is defined by (Davis, 2016:7) as

...a mind-set which sees physical assets not as inanimate and unchanging lumps of metal / plastic / concrete, but as objects and systems which respond to their environment, change and normally deteriorate with use, and progressively grow old then fail / stop working / die; an approach that looks to get the best out of the assets for the benefit of the organisation and/or its stakeholders and it is about understanding and managing the risk that is associated with owning an asset.

Robert Davis also defines what Asset Management is not, stating that it is

...not a substitute for quality management, like other management processes, should be subject to scrutiny through a quality process to ensure rigour; it is not just for engineers, everyone working in a company that owns or operates assets should be interested, this includes those working in procurement, finance, personnel, service, planning, design, operations, administration, leadership, marketing and sales; it is not a purely academic discipline, whilst it is a worthy subject for academic review and advancement, it is primarily a pragmatic, hands-on subject.

(Davis, 2016:9).

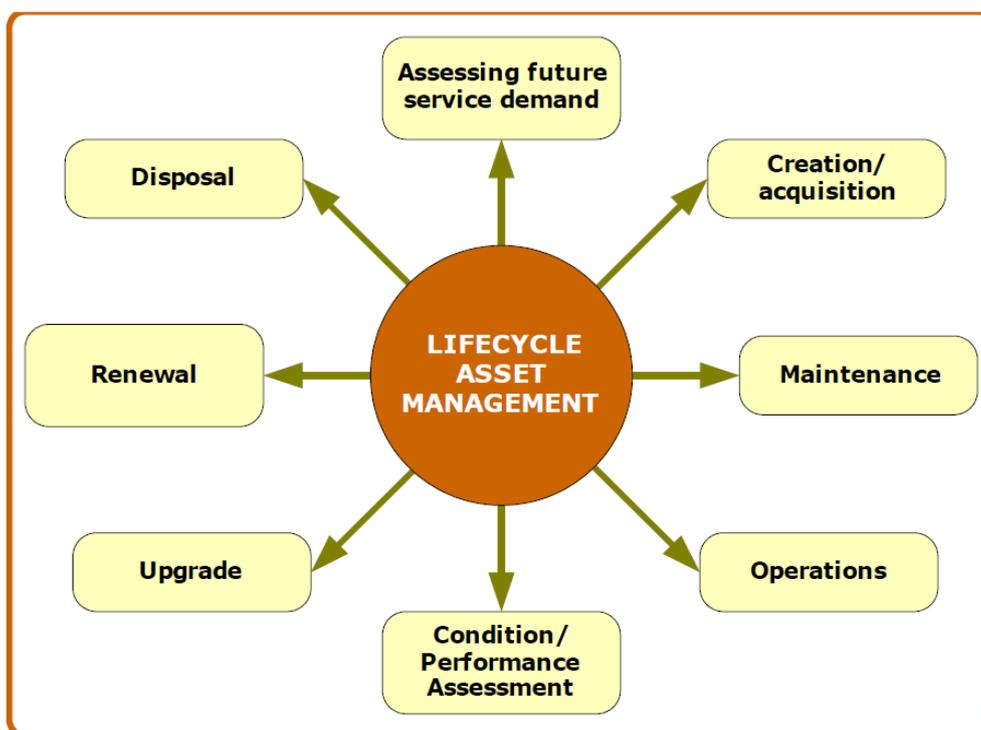
The objective of asset management, as mentioned by Boshoff, Childs and Roberts (2009:21), is “to provide affordable levels of service that have been agreed with customers in the most cost-effective way for present and future customers”. “Affordable levels of service agreed with customers” means that the communities must be involved in decision making with regard to the outcomes of providing the service, and outcomes on the environment as well as the broader community (Boshoff *et al.*, 2009:21) and “In the most cost-effective way” focuses on two other key concepts – decision making regarding the life cycle and optimal benefit resulting from decision making (Boshoff *et al.*, 2009:21). Lifecycle decision making involves:

- That municipalities have strategies for managing assets across the lifecycle, i.e., not constructing them and then ignoring them until they catastrophically fail;
- that the lifecycle strategies take into account critical assets and risk management, so that risks are identified and steps are taken to manage these to minimise risk exposure over the asset lifecycle;
- that decisions are made on when to create, replace and upgrade assets considering the lowest lifecycle cost of the asset, not just the cheapest construction cost.

(Boshoff *et al.*, 2009:21)

Optimal decision making, as stated by (Boshoff *et al.*, 2009:21), “makes use of techniques to make decisions about the lowest lifecycle cost solution (as described above) but also takes into account other outcomes associated with that decision – social, cultural and environmental outcomes”. “Optimal decision making isn’t just applied at an asset level; the techniques are also used to prioritise projects at a sector and cross-sector level, to ensure the best outcomes for the community for the least expenditure” (Boshoff *et al.*, 2009:21).

Lastly, the objective states “for present and future customers” which means that the assets have to be managed in such a way that the cost does affect only one generation, which may be unfair. It has to be understood that the demand for services will change over time, and this will involve long-term and sustainable infrastructure development and funding (Boshoff *et al.*, 2009:21).



**Figure 1: Guidelines for Infrastructure Asset Management in Local Government**

Source: Guidelines for Infrastructure Asset Management in Local Government

In Figure 1, above, the activities involved in the life cycle of asset management are presented graphically. The responsible person, the asset manager, is concerned in the planning of activities contained in the asset life cycle such as forecasting demand as well as service needs; the analysis of the gap between the current capability of the asset and what is needed to meet future demand, as well as developing a works programme that closes the gap (Boshoff *et al.*, 2009:20).

Maintenance of an asset is one of the activities listed in the asset management lifecycle, thus the researcher discusses this in detail below.

## 2.7 Maintenance of the electricity infrastructure

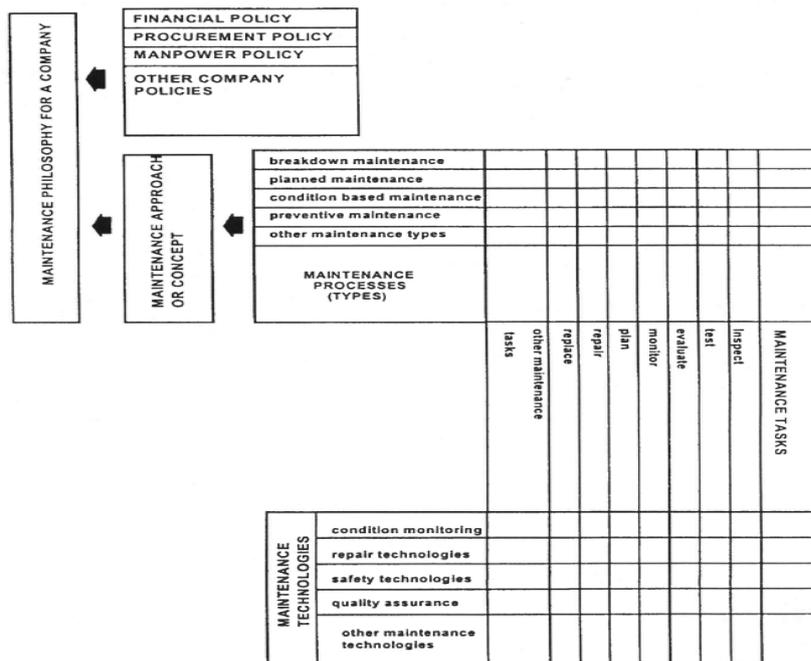
Electricity utilities companies handle a large number of electrical equipment (circuit breakers, transformers, cables, etc.). Most of these have been utilised for many years and most of them have reached the end of their life cycle, meaning that they are more likely to fail (Andruşcă, Adam, Irimia & Baraboi, 2012:513). Proper maintenance of electrical equipment is important because:

- they belong to the expensive equipment category;
- the costs for maintenance of these equipment represent a large percentage of maintenance budgets; and
- their failures, adversely affect the system reliability and the existing monitoring technologies within the power station

(Andruşcă *et al.*, 2012:513)

A paper by the Hartford Steam Boiler Company states that the problem of electrical failures will worsen as the electricity infrastructure age, unless active steps are taken to encounter the trend (Hartford Steam Boiler, 2013:1). The Hartford Steam Boiler Company also states that a routine preventative maintenance programme can prevent more than two thirds of the electrical system failures and that such routine maintenance allows the owner of the equipment to schedule electrical outages at convenient times instead of being obliged to fix major problems caused by the untimely failure of the electrical equipment at inconvenient times (Hartford Steam Boiler 2013:1).

(Andruşcă *et al.*, 2012:515) define maintenance as “all technical and organisational actions that are performed on the installations and their components to maintain the capacity to realise the function for which they were designed”. The operation of any installation requires financial resources for its maintenance and the budget size depends on the complexity of installation and on the obligation to ensure continuity in operation (Andruşcă *et al.*, 2012:515). Figure 2 below illustrates a hierarchical representation of maintenance terminology.



**Figure 2: Hierarchical representation of maintenance terminology**

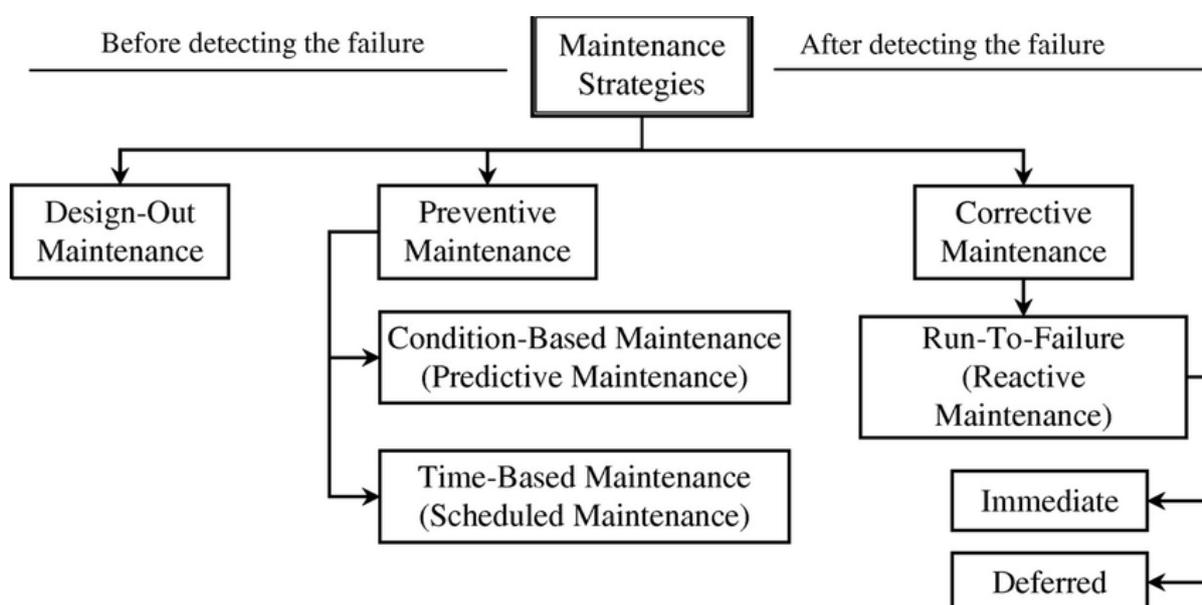
**Source: Vosloo & Visser, 1999**

According to Vosloo and Visser, a maintenance philosophy is at the highest level of guiding principles for maintenance and also includes aspects of other policies within a specific organisation (Vosloo & Visser, 1999:27). The purpose of a maintenance philosophy in an organisation is stated as “to form the framework of principles from which the maintenance policies for each technical system can be deduced” (Vosloo & Visser, 1999:28). When Reliability Centred Maintenance (RCM), Total Productive Maintenance (TPM) and Business Centred Maintenance (BCM) are used exclusively and in full, it is referred to as a philosophy. When only certain components are used in some instances, it is regarded as a concept or an approach (Vosloo & Visser, 1999:28).

A maintenance approach is system specific and is given shape by a specific combination of different maintenance systems (Vosloo & Visser, 1999:28). The approach consists of a combination of maintenance types or processes. A maintenance process functions within a maintenance approach to ensure that a certain type of maintenance is done (Vosloo & Visser, 1999:28). Included in these processes are planned maintenance; corrective maintenance; time-based maintenance; and condition-based maintenance (Vosloo & Visser, 1999:28).

A maintenance process consists of several maintenance tasks that are not exclusive to each process, as stated above, but several processes can have a specific task as an element while maintenance tasks are tasks done in a maintenance process. Some of the tasks may be found in most of the maintenance processes, as illustrated in Figure 2, using the grid that is drawn

between maintenance processes and maintenance tasks (Vosloo & Visser, 1999:28). Maintenance technologies refer to the skills, knowledge and tools utilised in maintenance such as condition monitoring, repair technologies, safety technologies and quality assurance (Vosloo & Visser, 1999:28). In a paper by Andrușcă *et al.* (2012:514), the authors state that “maintenance strategies have evolved over the years from time-based preventive maintenance to condition-based maintenance, to reliability-based maintenance and also to risk-based maintenance, which leads to cost savings, an important element in terms of liberalization the market”. The necessity to reduce costs over the entire lifetime of the asset has led to various maintenance systems and concepts, as illustrated in Figure 3 below.



**Figure 3: Maintenance Strategies**

Source: Lean thinking for a maintenance process (2015)

Corrective maintenance represents all of the maintenance activities that are performed to restore the asset’s condition in order to perform the functions for which it was designed after occurrence of a fault or after a wilful interruption of the asset mission when the occurrence of a fault which could not be prevented becomes imminent (Andrușcă *et al.*, 2012:515).

Preventive maintenance represents the overall maintenance activities that are performed at predetermined time intervals or correspond to predetermined criteria to prevent the occurrence of a fault or reduce the probability of failure in time. This type of maintenance can be of two types: maintenance based on predetermined criteria and maintenance based on condition and it aims to ensure the long life of the asset (Andrușcă *et al.*, 2012:515).

Predetermined criteria-based maintenance (PCBM) is the set of regular maintenance activities performed no matter what the technical condition of the electrical equipment is, through which performance is maintained/restored (Andruşcă *et al.*, 2012:515). This kind of maintenance is usually performed according to the criterion of time interval. In the case of some electrical equipment (circuit breakers, switchgears) it is performed according the criterion of occurrence of events in addition to the criterion of time interval (Andruşcă *et al.*, 2012:515). These criteria may include the frequency of the short-circuit commutations; the short-circuit commutations number; and the operation time (Andruşcă *et al.*, 2012:515). PCBM refers to current maintenance strategy and is used in electricity companies and also in many industries and utilities, it is based on inspection and maintenance activities of electrical equipment operating at a constant time period set by the manufacturer of the electrical equipment and staff experience and can prevent many failures, but can cause unnecessary interruption, operator costs, waste of money and time, if the maintenance interval is too brief (Andruşcă *et al.*, 2012:515). In addition, if the maintenance interval is too long, unexpected accidents can occur at intervals of inspection and maintenance activities during the operation of the asset (Andruşcă *et al.*, 2012:516).

Condition-based maintenance (CBM) includes the overall activities of determining/forecasting the technical condition of electrical equipment and the activities of maintaining/ restoring performance, as required, which arise from carrying out such activities (Andruşcă *et al.* 2012:516). CBM is the maintenance activity that aims to eliminate unnecessary maintenance activities and also to act over the equipment condition when one parameter of the equipment is not functioning at its normal capacity (Andruşcă *et al.*, 2012:516). Maintenance strategy based on knowledge of the technical condition must be well established and implemented to reduce maintenance costs by significantly reducing the number of inspections and unnecessary maintenance activities (Andruşcă *et al.*, 2012:516). Using this type of maintenance reduces the risk of total failure, because it will indicate when a parameter is not within normal operational limits and when the operator has to intervene (Andruşcă *et al.*, 2012:516).

Reliability centred maintenance (RCM) represents a series of actions and measures that aim to determine the schedule and the content of the preventive maintenance activities that should be performed to maintain and eventually restore, when necessary, the technical condition of an asset by using failure mode analysis; safety analysis; operational analysis; and criticality analysis (Andruşcă *et al.*, 2012:516). The fundamental purpose of RCM is to preserve the function or operation of a system with reasonable cost. It can be defined as a combination of maintenance strategies in an optimal way in order to reduce risk in the system (Andruşcă *et al.*, 2012:516). This type of maintenance involves the replacement of electrical equipment or

an ensemble, in consideration of the recommendations of the designer concerning its lifetime (Andrușcă *et al.*, 2012:516). RCM has the advantage of reducing maintenance costs and improving the safety indicators of the power stations and power system as a whole, but retains a certain risk of failure in the important equipment such as transformers, circuit breakers, overhead lines, etc. It is a powerful tool for prioritising the activities of replacement and refurbishment, because the failed state of equipment can immediately lead to the question of whether it is more economical to do maintenance or to replace equipment (Andrușcă *et al.*, 2012:516).

Risk-based maintenance represents all the preventive maintenance activities based on a high volume of monitoring; the knowledge of the parameters' evolution of the important equipment; the knowledge of the component characteristics and performance of the equipment; the knowledge of the replacement cost of the equipment itself and its components; and knowledge of the associated costs (Andrușcă *et al.*, 2012:516). This type of maintenance requires having a database covering "equipment performance; evolution of the operational parameters; monitoring and diagnosis of the equipment; recording of the events in each important element of the equipment (transformer, circuit breaker, etc.); and the cost of interruption in electricity supply in the function of the nature of consumers (Andrușcă *et al.*, 2012:516).

- Design-out maintenance focuses on eliminating the cause that results in maintenance being required by acknowledging the design of the asset, thereby making it easier to maintain it during its life cycle

(Mostafa, Dumrak, Chileshe & Soltan, 2015:240)

For the purpose of this research, the researcher looked at two pieces of equipment, namely Power Transformers and Circuit- Breakers and how they should be maintained according to the National Rationalised Specifications.

### **2.7.1. Power Transformers**

The National Rationalised Specifications (NRS089-3 2009:3) set out maintenance work to be done on power transformers and circuit breakers and define duties of field staff and specialists. It is stated that visual inspections should be carried out monthly in the case of power transformers (NRS089-3 2009:4). When inspecting the power transformer, the following procedures should be recorded:

- check all bushings for chips, cracks or broken sheds. A maximum of 20% of chipped, cracked or broken sheds is permitted on an insulator;
- check pollution levels on bushings;
- check for any insulating oil leaks;

- check oil levels in all conservators, tap changers, diverters and bushings (taking into consideration the effect of ambient temperature). Maximum and minimum levels to be clearly marked on all gauge glasses;
- ensure that all gauge glasses are clean and legible;
- check silica gel, it [should] not be more than 30% pink from the bottom upwards;
- ensure that all breather oil baths are filled to the correct level and [are] free of water and dust;
- check all explosion vent diaphragms for cracks, visible oil or other damage. The diaphragms [must] not be painted;
- check whether all surge arresters are station type arresters (preferably mounted on the transformer);
- check surge arrestors for cracked or broken porcelain, signs of flashover (e.g. soot around seals on porcelain), and broken or punctured vents;
- ensure that diverters' surge relief valves are in the 'service' position;
- check whether the mechanism box door seal is intact;
- check whether the mechanism heaters are working;
- record all tap change operations using OLTC counters and OLTC minimum and maximum pointers where fitted. Minimum and maximum pointers [to] be reset after the value is recorded;
- record maximum winding and oil temperatures and also the temperatures indicated at the time of reading. Minimum and maximum pointers [to] be reset after the value is recorded. The ambient temperature at the time of recording [must] also be noted; check tap change mechanism boxes for cleanliness and for any general or obvious defects;
- ensure that all off-circuit tap switches are locked in position;
- check whether seals on all auxiliary connection boxes and temperature gauge housings are in order;
- listen for any audible discharges;
- check whether the radiators are warm at the bottom indicating satisfactory operation;
- check whether radiator cooling fans are clear of obstructions and ensure that all valves are open. (This can be done by "feeling" the temperature of the fins. A colder fin will indicate insufficient oil circulation normally caused by a half-closed valve);
- check all cooling fans and oil pumps for correct operation;
- check whether all tertiary connections are correctly shrouded and insulated;
- ensure that valves on fins of transformers are in the open position;
- check whether the operating labels are securely mounted and legible from the operating point;
- check whether the earth straps are in good condition and effectively connected;

- ensure that the oil catchment area is clear of all stones and free of any debris and water; and
- check for corrosion and paint of all metal work.

(NRS089-3 2009:4-5)

Table 1 illustrates the checklist for condition monitoring and scheduled maintenance of power transformers.

**Table 1: Checklist for Condition Monitoring and scheduled maintenance of Transformers**

Substation: \_\_\_\_\_ Date: \_\_\_\_\_

Panel/Bay: \_\_\_\_\_ Make: \_\_\_\_\_ Serial No: \_\_\_\_\_

TASK	DONE BY DEPARTMENT	Date/REMARKS
<b>CONDITION MONITORING</b>		
1 Oil samples taken		
2 Infrared scanning		
3. Bushing tests		
<b>SCHEDULED MAINTENANCE</b>		
1 All safety precautions in place		
2 Clean the transformer		
3 Repair of hot connections		
4 Oil leaks repaired		
5 Tap changer diverter maintenance		
6 Cooling system maintenance		
7 Protection maintenance		

CHECKED BY (PRINT NAME) \_\_\_\_\_ SIGNATURE \_\_\_\_\_

ACCEPTED BY (SUPERVISOR) \_\_\_\_\_

**Source (NRS089-3 2009:14)**

When maintaining a transformer, the following actions are performed:

- **Cleaning:** A transformer needs to be taken out of service for maintenance purposes. When this happens, the transformer is cleaned [to remove] any dirt or oil that has accumulated on the transformer. [It] might be necessary to use steam or high-pressure cleaning (NRS089-3 2009:10).

- Oil leaks: Where there are oil leaks, ...authorized specialist workshop personnel [repair] the leaks and also [check] the oil level [and], if deemed necessary, top up the oil ensuring that the oil used for topping complies with the standard oil adopted by the local supply authority (NRS089-3 2009:10).
- Tap changer/diverter: All work on tap changers shall be carried out by specialist staff only (NRS089-3 2009:4-10). This maintenance shall be scheduled according to the original equipment manufacturer recommendations, if that is not available then according to the local authority structured process (NRS089-3 2009:10).
- Bushings: Bushings shall be tested for tan delta and capacitance and the test cap shall be inspected. This shall be done at the same time as tap changer/diverter maintenance for convenience, (with a maximum interval of five years) and shall be carried out by specialist staff only. The earthing of the test cap on the bushing shall also be checked. An anti-pollution medium shall be applied to the bushings in accordance with the local supply [authority's] requirements (NRS089-3 2009:10).
- Cooling system: Faulty oil pumps, flow indicators and cooling fans should be replaced and the faulty units shall be sent to the workshop for repairs. Replacement of these items shall only be carried out by specialist personnel (NRS089-3 2009:10).
- Transformer winding temperature device: A transformer winding temperature device is usually a small current transformer placed in a pocket on the transformer and shall be checked for calibration and to ensure that it is covered with oil.

(NRS089-3 2009:10)

### **2.7.2. Circuit-breakers**

The National Rationalised Specifications (NRS089-3 2009:7) state that inspections should be carried out on all circuit breakers and oil-immersed isolators to check for abnormal conditions on the equipment. The condition of the equipment has to be recorded on approved checklists and should be handed over to the maintenance planner for equipment history data capturing (NRS089-3 2009:7). Table 2, below, illustrates the recommended maintenance for high-voltage circuit breakers.

**Table 2: Recommended maintenance for high-voltage circuit breakers**

Sub Type	Predetermined (Time)	Condition Based (Time)	Overhaul (Time)	Overhaul (Condition)
Air Blast	1 Monthly	3 Yearly Minor 1 Yearly Trip Test	9 Yearly Major	As OEM recommends
Bulk Oil	1 Monthly	1 Yearly Minor	3 Yearly Major	$(1/12)n$ Counts Major
SF6	1 Monthly	No Minor Service (Routine Inspection Suffices) 1 Yearly Trip Test	12 Yearly Major	$((1/12)^2)n$ Counts Major
Minimum/ Small Oil	1 Monthly	1 Yearly Minor	3 Yearly Major	$(1/12)n$ Counts Major
Vacuum	1 Monthly	3 Yearly Minor 1 Yearly Trip Test	9 Major Yearly	As OEM recommends

Source: NRS089-3 (2009:18)

When maintaining a circuit breaker, the following actions are performed:

- Circuit-breaker trip testing: The circuit-breaker must be tested to prove its mechanical operation under the following circumstances:
  - if the circuit-breaker has not been opened and closed under normal or fault condition for the period specified in the maintenance plan; or
  - if the period since the previous operation exceeds the period recommended by the manufacturer; or
  - if the trip testing of the circuit-breaker has been recommended by a circuit breaker specialist or by the maintenance manager

Trip testing of the circuit-breakers shall always be performed by activating the controls provided at the point furthest from the equipment, e.g. supervisory controls, the trip test button provided on the control panel or the remote-control handle.

(NRS089-3 2009:11).

Planned maintenance of circuit breakers is governed by the following:

Overhauls on all circuit breakers shall be carried out in accordance with the manufacturer's specifications, as local conditions dictate. Maintenance tasks shall be carried out by specialist personnel only and shall be in accordance with approved, relevant maintenance work instructions / Task Manual.

(NRS089-3 2009:11).

The researcher now proceeds to look at the electricity service provided in South Africa, the National Rationalised Specifications that should be adhered to in terms of electricity supply and quality of service.

## **2.8 Electricity Supply and Quality of Service in South Africa**

The supply of electricity is one of the critical deliverables that the government carries through its different spheres. The National Department of Energy (DoE) is generally tasked with formulating policy and legislation on energy matters for the country including the generation, transmission and distribution of electricity and also coordination of access to electricity services in the country. The focus of this study is limited to the distribution of electricity to the individual households. Section 156 of the Constitution of the Republic of South Africa mandates local government to reticulate electricity and gas including providing streetlighting within their areas of responsibility (RSA 1996). The electrification of domestic housing is planned and implemented in terms of the Integrated National Electrification Plan (INEP) with Eskom and some municipalities being implementing agencies to ensure the successful provision of the services. The Department of Energy Annual Report 2016/17 states that between 1994 and 2017 about seven million households have been provided with access to electricity and access to electricity has now increased to 90% of the households in South Africa (DoE Annual Report 2017:2).

The provision of electricity generally improves the lives of people and ensures a quality of life that is acceptable and therefore places a responsibility to electricity utilities including municipalities to ensure that electricity provision is not of poor service.

Poor service delivery has been a dominant topic in South Africa for the past number of years. South Africa has witnessed violent protests due to lack of services rendered or the poor services being delivered to the people. Van der Waldt *et al.*, 2014:164) define service delivery as “the provision of public activities, benefits or satisfactions”. The authors further define basic municipal service as a service that is necessary to ensure an acceptable and reasonable quality of life that, if not provided, would endanger public health or safety or the environment.

Municipal service, however, is defined as a service that a municipality provides or may provide in terms of its powers and functions to or for the benefit of the area for which it is responsible, irrespective of whether such a service is provided through an internal or external mechanism (Van der Waldt *et al.*, 2014:164). In terms of the Constitution, municipalities have a mandate to ensure that all citizens receive the services they need to satisfy their basic needs (Van der Waldt *et al.*, 2014:45).

The service delivery mandate of local government is set out in Section 156 of the Constitution. Van der Waldt *et al.*, (2014:55) list the responsibilities of local government as stated in Section 152 of the Constitution of the Republic of South Africa, which require that local municipalities should:

- Provide democratic and accountable government for local communities;
- Ensure the provision of services to communities in a sustainable manner;
- Encourage the involvement of communities and community institutions in the affairs of local government.
- Promote a safe and healthy environment; and
- Promote social and economic development (Section 152).

(RSA, 1996)

In terms of Section 156, Schedule 4B and 5B of the Constitution of the Republic of South Africa provide the mandate for local government and that mandate states that electricity and gas reticulation is the competence of local government.

The National Rationalised Specifications (NRS047-1 2002:5) outline various service activities and the minimum standards for measuring the quality of service provided to customers by electricity utilities in South Africa. The standard addresses common basis for evaluating quality of service with regard to granting distribution licences; monitoring the performance of licensees on an ongoing basis; and dealing with customer complaints. For the purpose of this research project, however, the focus was on monitoring the performance of licensees on an ongoing basis as well as dealing with customer complaints. A licensee is a supply authority licensed by the National Electricity Regulator to distribute electricity.

According to the (NRS047-1 2002:17) the licensee has to try to keep supply interruptions to a minimum and when there are planned interruptions to the supply, the licensee has to ensure that customers are given adequate notice. If a customer or a group of customers has suffered a series of interruptions within a short period, the licensee has to endeavour to prevent coincident planned interruptions from affecting the same customer(s) for at least two months, but it has to be understood that “urgent remedial work might require a planned interruption to rectify the cause of such a series of interruptions” (NRS047-1 2002:17).

The licensee furthermore has to make use of appropriate media to inform customers of future major interruptions (NRS047-1 2002:17). The information that has to be supplied includes:

- the time that the interruption(s) will occur or is/are planned to occur;
- the area(s) that will be affected;

- the nature of the problem, or the reason for the planned interruption;
- the action that will be taken to restore the supply or to minimize disruption;
- the time at which it is anticipated that the supply will be restored; and
- notification that customers are to treat the supply as live at all times.

(NRS047-1 2002:17)

Service activities that influence the quality of service when dealing with customer complaints, enquiries and requests have to be managed. This involves having available service centres in suitable locations; telephone services; response times; and time taken to resolve problems (NRS047-1 2002:18).

Table 3 illustrates the service activities for measuring and reporting on customer complaints, enquiries and requests.

**Table 3: Recommended maintenance for high-voltage circuit breakers**

1	2	3	4
Service Activity	Measure of Service	Minimum standard	Reporting format
Customer Complaints	Time to respond and resolve		See 4.6.1 of NRS 047-2
Customer Enquiries	Time to respond and resolve		See 4.6.2 of NRS 047-2
Customer Requests	Time to respond and resolve		See 4.6.3 of NRS 047-2

**Source: NRS047-1 (2002:18)**

The National Rationalised Specifications (NRS047-1 2002:18) state that, 90% of general complaints or enquiries received telephonically or in person should ideally be handled without referral on a one-stop basis. "Written customer complaints should be responded to in writing within two working days and the problem should be resolved within two weeks" with a target percentage success of at least 95%" (NRS047-1 2002:18).

The National Rationalised Specifications further state that management of the service activities that influence the quality of service in dealing with telephone services is influenced by the provision of telephone services; business hours; telephone answering response times; duration of calls; and management of telephone answering centres (NRS047-1 2002:19). Service activities for measuring and reporting on telephone services are presented in Table 4 below:

**Table 4: The service activities for measuring and reporting on telephone services**

1	2	3	4
Service activity	Measure of service standard	Minimum standard	Reporting format
Essential telephone services	Provision of essential telephone services	See 4.7.2	See 4.7.1 of NRS 047-2
Specific telephone services	Provision and performance of specific telephone services	See 4.7.3	See 4.7.2 of NRS 047-2
Call handling	Response and talk times	See 4.7.4	See 4.7.3 of NRS 047-2

Source: NRS047-1 (2002:19)

According to the National Rationalised Specifications (NRS047-1 2002:19), a 24-hours telephone service should be provided for reporting faults and emergencies. The licensee has to provide the telephone service for complaints, requests and queries and this has to be available during normal office hours. The licensee should ideally provide the telephone services and the performance standards as stipulated in Table 5, below:

**Table 5: Telephone services and the performance standards**

1	2
Service	Performance standard
Information requests	At least 90 % of queries handled on a one-stop basis without referral
Payments	100 % of payments handled on a one-stop basis without referral
Reports of faults	100 % of fault reports not resolved telephonically are referred to the dispatcher as part of the customer contact
Claims	100 % of all claims referred to responsible person as part of the customer contact
General complaints	At least 90 % of general complaints handled on a one-stop basis without referral
Meter readings	100 % of all meter readings recorded accurately and allocated to correct point of delivery
Emergency reports	100 % of all emergency reports acted on immediately

Source: NRS047-1 (2002:20)

The recommended performance standards for the telephone services are:

- 85 % of incoming calls should be responded to within 15 s,
- the average response time should be shorter than 10 s,
- the lost call rate should be less than 2 %,
- 90 % of all incoming calls should be dealt with within 5 min,
- referrals should be a maximum of 10 % of calls where a one-stop service is a possibility,
- 90 % of misdirected calls should be closed within 30 s, and

- the availability of the fault and emergency services should be better than 1 h downtime per year.

(NRS047-1 2002:20)

Municipalities face challenges in delivering the quality electricity service and this may be due to various reasons discussed in the following section.

## 2.9 Municipal Challenges

The researcher relied on the Local Government Medium Term Strategic Framework (MTSF) findings that indicate that an amount of over a billion rand is invested to support and capacitate a municipality per annum, which, however, is not translating to optimum performance (Local Government MTSF, 2014). While significant progress in trying to resolve backlogs in service delivery by the Metropolitan Municipalities has been noted, these advances have been obscured by challenges related to increased urbanisation and immigration (Local Government MTSF, 2014).

As indicated, municipalities operate in complex environments which impact on performance on four levels: the individual, institutional, environmental and macro social economic levels (Local Government MTSF, 2014).

The White Paper on Local government further lists the challenges faced by municipalities as:

- Skewed settlement patterns, which are functionally inefficient and costly.
- Extreme concentrations of taxable economic resources in formerly white areas, demanding redistribution between and within local areas.
- Huge backlogs in service infrastructure in historically underdeveloped areas, requiring municipal expenditure far in excess of the revenue currently available within the local government system.
- Creating viable municipal institutions for dense rural settlements close to the borders of former homeland areas, which have large populations with minimal access to services, and little or no economic base.
- Great spatial separations and disparities between towns and townships and urban sprawl, which increase service provision and transport costs enormously. Most urban areas are racially fragmented, with discontinuous land use and settlement patterns. Municipalities in urban areas will need to develop strategies for spatial integration, while managing the continuing consequences of rapid urbanisation and service backlogs.
- Creating municipal institutions which recognise the linkages between urban and rural settlements. There is a wide variety of urban settlements, ranging from those which

play the roles of local or regional service centres (supplying services to rural areas and other towns), to functionally specialised towns (such as mining towns) and administrative centres (common in former homeland areas). Importantly, almost all towns are functionally linked to rural areas, relying on their hinterlands for productive economic activity and providing critical centres for the delivery of social services.

- Entrenched modes of decision-making, administration and delivery inherited from municipalities geared for the implementation of urban and rural apartheid.
- Inability to leverage private sector resources for development due to a breakdown in the relationship between capital markets and municipalities, the lack of a municipal bond market and the poor creditworthiness of many municipalities.
- Substantial variations in capacity, with some municipalities having little or no pre-existing institutional foundations to build on.
- The need to rebuild relations between municipalities and the local communities they serve. Municipalities should be particularly sensitive to the needs of groups within the community who tend to be marginalised, and responsive and accessible to people with a disability

(White Paper on Local Government 1998)

A contributing factor to a functional municipality is political leadership. In assessing municipalities, it is therefore important to look at such leadership (COGTA, 2009:10). An assessment looks at the effectiveness, capability and integrity of the local council leadership (COGTA, 2009:10). Symptoms of these can be viewed in the extent of maladministration and corruption and how deeply these have been contributory factors to the negative performance of administrations and councils.

Provincial assessments that have been conducted indicate the reasons for distress in municipalities to be:

- tensions between the political and administrative interface;
- poor ability of many councillors to deal with the demands of local government;
- insufficient separation of powers between political parties and municipal councils;
- lack of clear separation between the legislative and executive;
- inadequate accountability measures and support systems and resources for local democracy; and
- poor compliance with the legislative and regulatory frameworks for municipalities

(COGTA, 2009:10)

Cloete (2002:287), states that some of the most significant challenges faced by local government in general in South Africa include:

- inexperienced and/or uncommitted officials and political representatives;
- vested interests and an organisation[al] culture not conducive to the new realities;
- municipal structures, processes and technologies that are not aligned with the new paradigm;
- a lack of funding and resources from local revenue, and from other governmental levels; and
- a lack of ability to adjust to new policy imperatives.

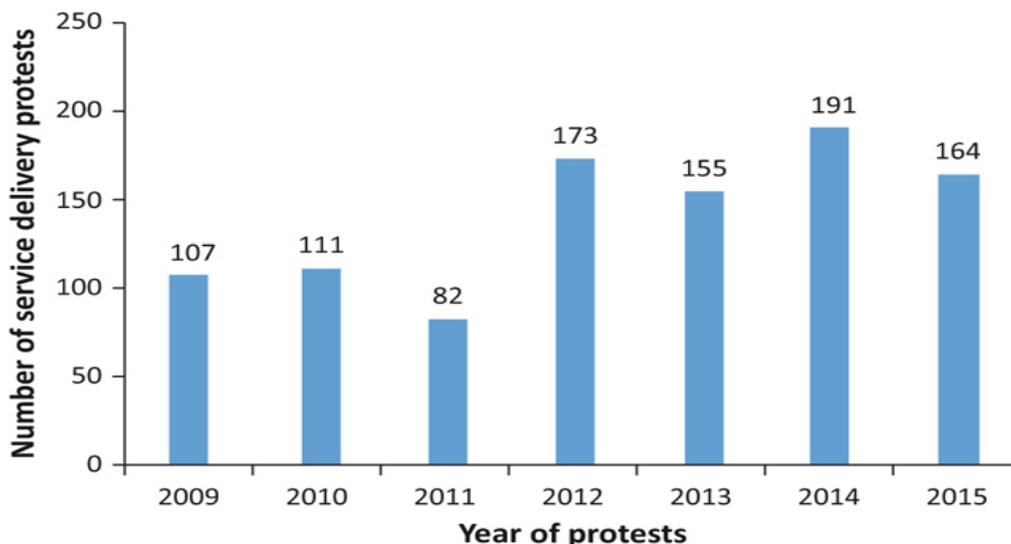
An assessment by COGTA (Cooperative Governance and Traditional Affairs), has revealed that

...party political factionalism and polarization of interests over the last few years, and the subsequent creation of new political alliances and elites, have indeed contributed to the progressive deterioration of municipal functionality and evidence has been collected to dramatically illustrate how the political / administrative interface has resulted in factionalism on a scale that, in some areas, it is akin to a battle over access to state resources rather than any ideological or policy differences.

(COGTA, 2009:10).

The assessment document further states that lack of values, principles or ethics in these cases indicates that there are officials and public representatives for whom public service is not a concern, their priority is accruing wealth at the expense of poor communities (COGTA 2009:10).

A developing culture of nepotism and patronage is now so widespread in numerous municipalities that the formal municipal accountability system is ineffective and inaccessible to many citizens (COGTA 2009:10). With social institutions, including the media and civil society, having been ineffective in increasing municipal accountability and oversight, citizen confidence and trust in the system has deteriorated to a point where communities have resorted to public protests to show their lack of trust, thereby revealing “the alienation of citizens from local government” (COGTA 2009:10). The graph in Figure 4 depicts major service delivery protests by years.



**Figure 4: Major service delivery protests by years**

**Source: Olivier (2017)**

Urbanisation has been noted as a key determinant in service delivery protests and not necessarily because of worse service delivery backlogs. COGTA has acknowledged that:

...councillors have been accused of being arrogant and insensitive to the needs of the community; there has been lack of effective complaints management and no coherent systems in place to measure service delivery or the quality of client interface are some of the political reasons underlying protest action

(COGTA, 2009:10)

## 2.10 Summary

This chapter has provided findings from a literature review in which the history of local government and the provision of electricity has been discussed. The existing literature indicates that strict residential segregation led to black people being placed in “own group” areas which limited the extent to which white affluent municipalities bore the financial burden of servicing disadvantaged black areas. Local government’s revenue being self-generated through property tax and service delivery to residents and businesses in urban areas meant that white communities benefited.

There are three spheres of government in South Africa, the being National, Provincial and Local Government. National and Provincial government need to support and work with the Local Government in order to ensure that services are delivered to the people. In doing this, caution must be taken to ensure that the way in which National and Provincial government exercise their legislative and executive authority does not impede or compromise the ability of municipalities to exercise their legislative and executive power. The concept of cooperative

governance recognises the fact that government cannot operate in a vacuum; working relationships need to be formed with the private sector and with civil society.

Developmental local government is built on three pillars, namely sustainability, participation and improvement of quality of life. Structures are in place to ensure full participation of citizens in matters of government such as the local elections; non-governmental organisations and community-based organisations; ward committees; traditional leadership; and Open Council Meetings. Such structures are complemented by the right of communities to participate in the decisions that affect development in their areas and a corresponding duty on municipalities to encourage community participation in matters of local governance.

Electricity distribution is a local government competence. The Constitution states that municipalities have the “executive authority and right to administer electricity reticulation in their area of jurisdiction subject to legislation and regulation by national and provincial government” (SALGA 2014:1).

About seven million households have been provided with access to electricity and access to electricity has now increased to 90% of the households in South Africa as stated by the Department of Energy Annual Report 2016/17 however old and frail infrastructure is one of the factors hindering quality service delivery in South Africa therefore asset management is key as an approach that aims to get the best out of the assets for the benefit of the organisation and/or its stakeholders and is about understanding and managing the risk that is associated with owning an asset.

Lastly, municipalities are not without challenges, an assessment by COGTA has stated. These range from political and administrative tensions to lack of funding from local revenue. With the implementation of free basic services municipalities need to ensure that they have effective and efficient ways of generating revenue. One of the strategies has been the implementation of the prepaid electricity that ensures that citizens owe the municipality as little as possible. The White Paper on local government highlights that one of the problems is the inability to rebuild broken relations between municipalities and the local communities they serve while Cloete focuses on the human element and states that inexperienced and/or uncommitted officials and political representatives present a major challenge in municipalities.

## Chapter 3: Case Study: Context of the Research

### 3.1 Introduction

King Sabata Dalindyebo Local Municipality covers 3 028 km<sup>2</sup> and comprises of two magisterial areas, Mthatha and Mqanduli and their surrounding rural areas. The researcher focused on Mthatha, looking at the location of the town, tourism potential, the infrastructure and electricity provision. The condition of the electricity infrastructure including the different challenges faced by the municipality in managing and maintaining the infrastructure was highlighted.

### 3.2 Strategic/Geographical location, Economy and Tourism Potential of Mthatha

The town is positioned between two Metropolitan municipalities on the N2, 232km from East London (Buffalo City Metropole) and 429 km from Durban (eThekweni Metropole).

Due to varying climatic conditions in the KSDLM area, there is diverse agricultural potential, including wool, beef, maize, vegetables, deciduous and tropical fruits, forestry and fishery. It also is a great tourist destination (KSD Annual Report, 2015a).

The informal sector comprises over 3000 hawkers scattered throughout Mthatha and its surrounding areas. According to the KSD Integrated Development Plan, the figure is estimated to consist of 95% Africans, 85% of whom are women who earn less than R1000 per month (KSD IDP 2015b). Roughly 33% of the traders sell fruit and vegetables (KSD IDP 2015b:85). Challenges facing these informal traders are lack of finance, lack of training and capacity, public transport, access to basic services, lack of business support, poverty, equipment and crime, making it impossible for them to compete with larger retailers (KSD IDP, 2015b:85).

The vegetable cluster has the Kei Fresh Produce which boosts the economy of Mthatha. The total capacity of the market is R120 million, but presently reaches a maximum capacity of R30 million, and less than 5% of the supply originates from KSD farmers (KSD Annual Report, 2015a).

Mthatha is well situated at the centre of major surrounding areas and has more than five vertical malls and centres, which makes it suitable for a logistics industrial cluster (KSD Annual Report, 2015a). The town is considered a major commercial hub in the district as it provides goods and services for all the surrounding magisterial areas within the OR Tambo District Municipal area and the entire former Transkei district. Load transport activity is dominated by tertiary industries and telecommunications. Mthatha is a trading hub, hence warehousing, logistics and communication are concentrated here to revive movement and storage of goods (KSD Annual report, 2015a).

Manufacturing has declined significantly. The small amount of local manufacturing activity is highly concentrated in the local market for serving producers, which are bakeries, abattoirs, and metalwork, machine and repair shops. Timber-related manufacturing also plays a role (KSD Annual Report, 2015). However, an article by A. Graham published by News24 reveals that there used to be 250 factories between Mthatha and Butterworth (102 km from Mthatha) which have closed down and that most of the town's businesses have bought their own generators due to frequent blackouts. They further state that the ratepayer's association, which includes black, white, coloured and Indian members, hold regular meetings with the municipality but nothing develops from these meetings (News24, 2011).

Many jobs were lost due to the closure of businesses and this resulted in an upward spike in crime and rapid deterioration of the town. Another cause of Mthatha's depression was moving the administrative capital to Bisho (231 km from Mthatha) in the former Ciskei homeland (News24 2011).

Mthatha is also known to be home to renowned former President Nelson Mandela of South Africa and the rich Xhosa cultural heritage. There are two museums, one named after the world icon and the other named after his place of birth. Those are the Mandela Museum in the Mthatha CBD and the Mvezo Museum in the outskirts of Mthatha. The city of Mthatha is a tourism gateway with Coffee Bay, Hole in the Wall and the whole of the coastal area representing a strong recreational tourism node but it has limited infrastructure and is hampered by the fact that it is not easy to access due to uneven terrain. The major infrastructure problem lies in both lack of adequate facilities in camping areas and accessibility of the coastline. The researcher will proceed to discuss Mthatha as a town, the population as well as the economy of Mthatha.

### **3.3 Understanding Mthatha**

Mthatha is named after the river that flows through the town know as Umtata River and was founded in 1879 (Dzinotyiweyi, 2009:6). It was previously named "Umtata" and was the capital city of the former Transkei homeland, but was renamed "Mthatha" in March 2004. Major economic activities in the surroundings are forestry and agriculture, although agriculture is more subsistence in nature.

As one of the two towns that make up King Sabata Dalindyebo Local Municipality, Mthatha had a total population of 96 114 people comprising of 29 593 households in 2011 (Stats SA 2011). This in contrast with Gwinyai Dzinotyiweyi's statement in 2009 that 150 000 people live in Mthatha however caters for the needs of 1.5 million people who live within a 50-km radius of the town as a result, there is intense commuter activity between Mthatha and its surrounding settlements (Dzinotyiweyi, 2009:7).

Prior to the 1994 elections, Mthatha was a highly politicised town, images of protests were published frequently and boycotting of rates had been crippling the municipality since 1990 (Harrison, 2010:25). A severe economic decline emanated from that, with the withdrawal of both public and private sector investment and immense job loss. Harrison however reported a turnaround in the economic situation during the five years preceding this research, with developers again investing in the town, building malls and hotels and refurbishing the Mthatha airport. The upgrading of the N2 between East London and Mthatha and the promised rebuilding of the Kei Rail also boosted investor confidence (Harrison, 2010:25). From these upgrades, there were indications of Mthatha again emerging as alive with possibilities characterised by development, persistence, entrepreneurship, people, intrigue and, sadly, filth and crime (Harrison, 2010:25). In this regard, Harrison stated:

Mthatha's economy is performing within a government vacuum, there is a widespread institutional failure, evident in the collapse of the bulk sanitation system, the pollution of the river through direct sewer run-off and accumulated solid waste, the pot-holed roads, the illegal bakkie taxis carting off passengers to the surrounding rural villages, and the competition on the pavements between delivery vehicles, taxis, hawkers and pedestrians.

Numerous reports from the King Sabata Dalindyebo Local Municipality (KSDLM) have referred to development applications waiting approval (Harrison, 2010:25). The construction for both the expansion of the Mthatha airport and the Mthatha stadium has commenced, but there are serious hindrances to the development of Mthatha that require addressing. Harrison explained that the town is landlocked, "both on the outskirts where it merges into rural trust land and within the town where historical mismanagement has resulted in complex and dual land and property ownership titles that discourage private sector finance" (Harrison 2010:25).

According to Harrison, the public sector, in the form of the Eastern Cape Development Corporation (ECDC) owns widespread property within the central business district but was acting "more like a frustrated landlord than an entrepreneurial developer" (Harrison 2010:25). The town is also subject to numerous land claims, which have led to prolonged development processes in part because provincial departments lack information and systems to address the claims (Harrison 2010:26). He reported on a dire shortage of industrial, commercial and residential property space which led to steep rentals and prevented many from locating themselves within the town therefore development was being pushed to the town's periphery, which encourages urban sprawl and drives up the costs of service delivery.

In spite of all this, Harrison (2010:27) identified strong benefits that could sustain long-term development in the town. These include the fact that Mthatha is centrally located with a direct market of 1.5 million people, the magnificent river that could be revitalised, major transport

linkages between the town, other urban centres and the rural hinterland. Then there are the people of Mthatha with their local knowledge, aspirations and skills, the excellent soil and climate, the linkages between the town and major tourist attractions along the coastline and the spending power of the population. Harrison further proposed that Mthatha has competitive advantages in that it has the Nelson Mandela Museum and the Walter Sisulu University which needed to be harnessed to change the economic trajectory of the region. Perhaps the strongest positive force in supporting much-needed change is seen as the dreams the people of Mthatha have for their children and grandchildren; a quality university and schools (Harrison 2010:27).

For the current research, visual inspections on selected electricity reticulation network assets were conducted in the CBD and the surrounding areas within the KSDLM to determine their condition. This investigation was undertaken from the conviction that Mthatha's advantage is that it is strategically located, which could benefit the town's economy and tourism, which the researcher discusses below.

### 3.4 Infrastructure in Mthatha

Severe infrastructure constraints have been found in Mthatha. The bulk of the electricity network was developed many years ago and therefore the demands of the current population were not being met at the time of the investigation. Serious challenges were also noted with regard to the operation and maintenance of the infrastructure (Harrison 2010:25). A discussion of this, with photographic evidence of lack of maintenance, follows.



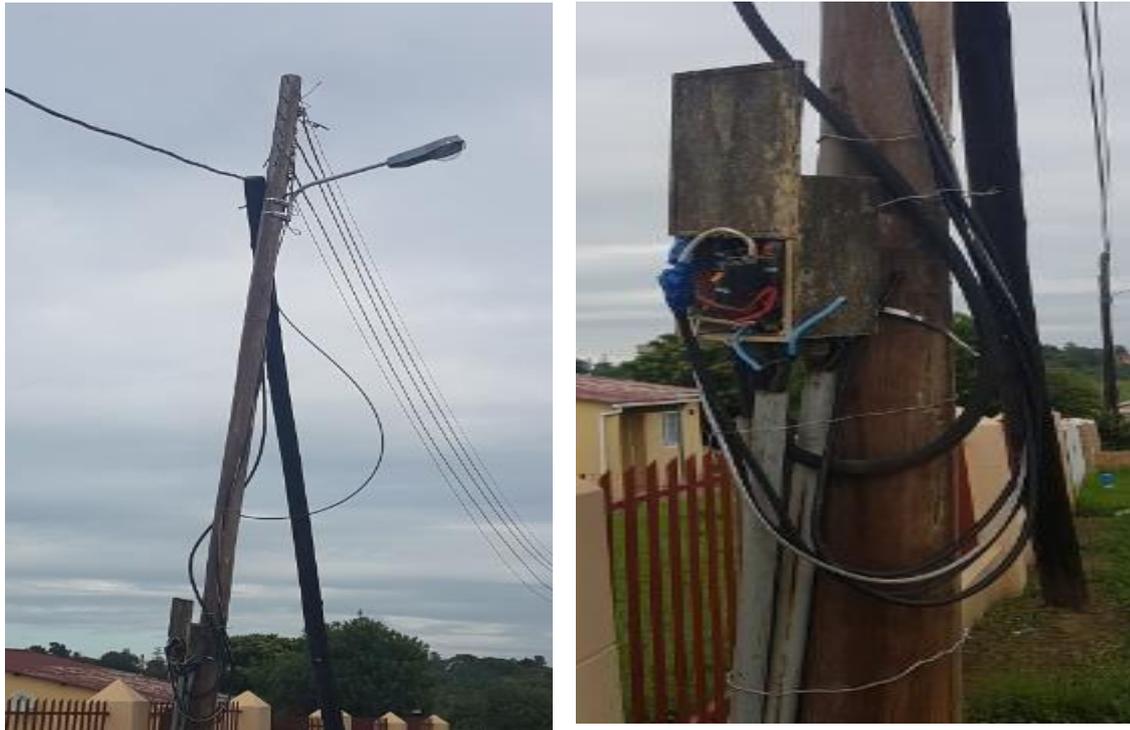
**Figure 5: Miniature substation (a)**

The miniature substation shown in Figure 5 above is typically used for electricity distribution and transforms voltage from 11kV to 230V, which is appropriate for consumption at individual households and small commercial/industrial installations. It is mainly part of the KSDLM electricity reticulation secondary network and is installed on a sidewalk in a residential area. A number of defects can be identified: the enclosure is rusted at the bottom with holes that can provide access to live electricity connections. Corrosion treatment, painting and removal of vegetation and rubble is required in order to improve its condition. The corrosion and deterioration of paintwork occurs over a period of time and this reveals lack of maintenance interventions. The corrosion and the potential exposure of live electrical connections render the KSDLM in contravention of the Electrical Machinery Regulations (EMR) of the Occupational Health and Safety Act. Regulation 6 (1) (g) states that “An employer or user shall cause enclosed premises housing switchgear and transformers to be of such construction that persons cannot reach in and touch bare conductors or exposed live parts of the electrical machinery” (Electrical Machinery Regulations Act 85 of 1993).



**Figure 6: Miniature substation (b)**

The miniature substation shown in Figure 6 has overgrown vegetation around it, revealing lack of inspection and maintenance interventions. In terms of NRS 089-3-2, there must be monthly visual inspections although the number of inspections depend on environmental conditions NRS 089-3-2 (2009: 4). There is also visible dumping of rubbish next to and around the substation. This exposes the KSDLM maintenance staff to potential unhealthy conditions and the overgrown vegetation can harbour potentially dangerous animals and creatures like snakes and poisonous spiders. The substation is generally difficult to access for maintenance.



**Figure 7: Electrical cables and connections**

Figure 7 depicts electrical cables, cable terminations and circuit breakers connected in a connection box. The box is not enclosed thereby exposing the electrical connections to the adverse weather elements like wind, varying temperature and precipitation, amongst others. The connection box and the circuit breaker are not labelled. The cables are also not strapped neatly onto the pole. The exposed electrical connections are a safety risk to members of the public and the staff of KSDLM.



**Figure 8: Electrical Substation**

Source: NERSA 2015

Figure 8 above depicts a substation with overgrown vegetation. NRS 089-3-1 states that “all substations and the major primary plant equipment within them shall be inspected at least once a month or as prescribed by an RCM study. The substation yard shall have a layer of 35mm stone of a depth of at least a 100mm that is clear of weeds, sand and debris” NRS 089-3-1 (2009: 4).



**Figure 9: Circuit Breaker**

**Source: NERSA 2015**

Figure 9 reveals non-compliance in that the circuit breaker is leaking oil with the potential of contaminating the ground below it, resulting in contravention of applicable environmental prescripts.



**Figure 10: Transformer**

**Source: NERSA**

Figure 10 above shows non-compliance in that the transformer is leaking oil.



**Figure 11: Substation cable trenches**

**Source: NERSA**

The covering for trenches of the cable routes inside the substation yard depicted in Figure 11 are missing. One of the inspection items stipulated on NRS 089-3-1 is that trenches must be covered and free from damage, NRS 089-3-1 (2009: 4).



**Figure 12: Damaged roof of substation building**

**Source: NERSA**

Figure 12 shows the substation building roof is damaged and the switchgear and other electrical equipment are exposed to adverse weather conditions.



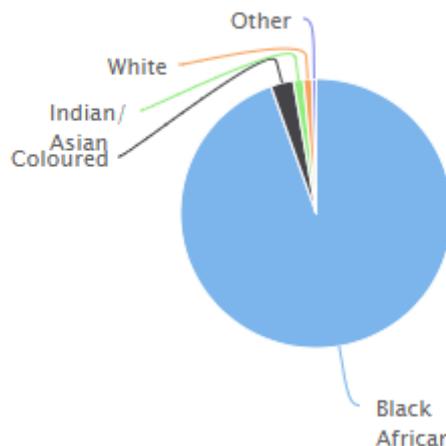
**Figure 13: Sprigg Street Substation**

**Source: KSDLM Annual Report 2015/16**

The condition of the Sprigg Street substation as depicted in Figure 13 is poor, with foreign objects dumped inside, next to and around the substation yard. This makes it difficult to access the substation for maintenance purposes and exposes the maintenance staff of KSDLM to health risks and unsafe conditions. NRS 089 requires that the substation yard must be free of debris, amongst others. Clause 5.1(d) of NRS 089-3-1 states that high voltage yards (including the 1m firebreak) may not have loose wires and weeds, debris and unused equipment (NRS 089-3-1, 2009: 4). The community of Mthatha is follows below.

### **3.5 Communities around Mthatha**

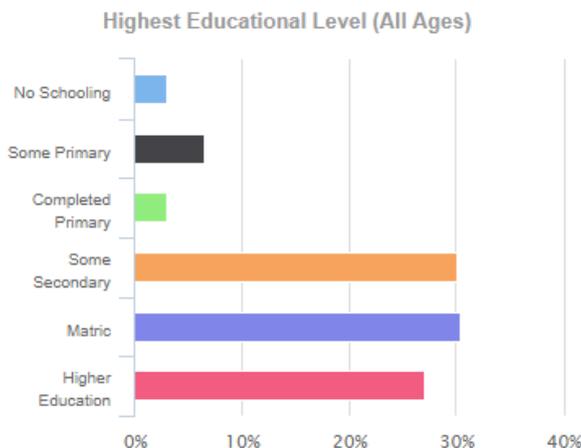
Statistics South Africa shows that the population of Mthatha was reported as 96 114 in 2011). Young children aged from 0 to 14 years made up 25% of the population, while people aged 15 to 64 years comprised 71.9% and those of 65 years and older made up 2.6% of the population of Mthatha (Stats SA 2011). Considering racial groups depicted in Figure 14, below, Mthatha had a 1% White population group, 1.2% were of the Indian group, 2.7% fell in the coloured group and the majority of 94.6% were of the Black population group (Stats SA 2011).



**Figure 14: Population Groups**

Source: Stats SA 2011

Education levels across all ages as depicted in Figure 15 below show that about 27% of the whole population has received higher education and 30.4% has acquired Matric education while 3% of the population never attended school (Stats SA 2011).



**Figure 15: Highest Education Level (All ages)**

Source: (Stats SA 2011)

Of the 29 593 households around Mthatha recorded in the Census in 2011 55.8% were female headed; 89% lived in formal dwellings and 87.1% of the households had electricity (Stats SA 2011).

Dzinotyweyi (2009:8), quoted by Harrison, stated stating that “racial income inequality [was] also apparent amongst the town’s residents; the average annual income for black people [was] R15 762 compared to R41 875 for coloureds and R131 583 for whites”. The impact of HIV/AIDS also affected population growth which was at 0.7% per annum compared to 1993

when the population growth rate was at 10% (Dzinotyiweyi, 2009:8). Harrison (2010:25) found that 52% of the people in Mthatha were unemployed and two thirds of the population in the catchment area lived in poverty. He also stated that a large number of households was dependent on government grants (Harrison 2010:25).

The next section is focused on electricity provision in Mthatha.

### **3.6 Electricity provision in Mthatha**

Mthatha has been experiencing problems with the provision of electricity which has been unstable and unreliable due to three sub stations running at 20-30% overload, dilapidated high voltage distribution lines that regularly collapse in storms. This means that regular electrical outages have been causing frustration for businesses and residents alike (Mashiri, Mokonyama, Mpondo, Chakwizira & Mdunge, 2014:329). To improve the situation, a grant of R160m was made available to the KSD Local Municipality by the Eastern Cape Provincial Treasury and a process of Presidential Intervention (PI) funded the KSDLM to the value of R4 billion.

The Municipality undertook projects in the effort to enhance customer satisfaction and to comply with the NERSA license conditions to reduce the frequency and duration of power interruptions which included the refurbishment of the bulk lines (66kV lines) from Eskom to Sidwadwa and Unitra substations; upgrades of the medium voltage lines that supply power to major load centres, reducing the risk of failure, improving the safety of operators; upgrades of cable networks to reinforce the CBD (KSD Annual report 2015a).

Although the KSDLM was supported by the National Treasury as well as the PI, the funds have not been enough to carry out work to an extent that provides accepted levels of reliable electricity.

### **3.7 Summary**

Mthatha as a centrally located town with various tourist attractions and Mthatha being the home of the world's icon, Nelson Mandela should be performing much better than it is currently performing. It is a city with high unemployment rate, however, and more than half of the population living in poverty.

Education levels in Mthatha portray a worrying picture as only 27% of the population has higher education. The black community comprises 94.6% of the population; income inequality amongst residents is revealed by the average annual income for black people being at R15 762 compared to R41 875 for coloureds and R131 583 for whites.

The infrastructure of Mthatha is old, vandalised and dilapidated and suggests that maintenance of the equipment is not performed regularly, as shown in this chapter, hence the poor electricity provision in Mthatha.

This chapter has also indicated that support has been granted to the KSDLM in terms of funds allocation, but this has not been enough.

## **Chapter 4: A study of electricity service delivery in the context of South African policy and its regulatory framework**

### **4.1. Introduction**

The various laws and policies that regulate the provision of electricity to the citizens by municipalities are guided by the following:

- The Constitution of the Republic of South Africa, 1996 (Act 108 of 1996);
- White Paper on Local Government 1998
- Municipal's systems Act, 2000 (Act 32 of 2000)
- Municipal Structures Act, 2000 (Act 33 of 2000)
- Municipal Finance Management Act, 2003 (Act 56 of 2003);
- Electricity Regulation Act, 2006 (Act 4 of 2006)
- National Developmental Plan
- Integrated Developmental Plan
- Integrated Urban Developmental Finance

This chapter considers each Act, Regulation, Law and Policy that guides electricity service delivery to the citizens.

### **4.2. Constitution of the Republic of South Africa**

The Constitution of South Africa, Act 108 of 1996 (as amended) (RSA, 1996), grants certain responsibilities to local government called the objects of local government (Section 152(1)). These responsibilities are that Local Government “must provide a democratic and accountable government, ensure provisions of services in a sustainable manner, promote social and economic development, and promote a safe and healthy environment (Section 152). Considering “the developmental duties of municipalities”, the Constitution states that “the needs of the citizens must be met and that they should take part in provincial and national programmes” (Section 153). The Constitution further outlines the powers and functions of the municipalities and states that “a municipality has executive authority in respect of, and has the right to administer the local government matters listed in Part B of schedule 4 and Part B of Schedule 5 and any other matter assigned to it by national or provincial legislation” (Section 156). Section 154 (1) of the Constitution requires both the National and the Provincial Governments “to support and strengthen the capacity of municipalities to manage their own affairs, to exercise their powers and to perform their functions” by legislation or other means. Failure in this regard may result in the invocation of section 100 of the Constitution by the national sphere of government to the provincial sphere.

In terms of Section 154 (1) and Sections 155 (6) and (7) of the Constitution, “Provincial supervision, monitoring and support of local government is a Constitutional obligation’. In terms of Section 139 of the Constitution, “the provincial sphere can intervene in a municipality within its jurisdiction”. The departments for local government were established and mandated to oversee and support municipalities for these obligations to be met.

### **4.3. White Paper on local government**

The researcher has noted the focus in the White Paper on maintaining sustainable measures for the development of the community.

The White Paper on Local Government (RSA, 1998) states, “Developmental Local Government puts forward a vision of a developmental local government, which centres on working with local communities to find sustainable ways to meet their needs and improve the quality of their lives” (Section B). To realise this vision, municipalities are encouraged to build local democracy by developing strategies and mechanisms to continuously engage with citizens, business and community groups. The White Paper requires active participation of citizens at four levels as voters, participants in the policy process, consumers and service-users and as partners in the mobilisation of resources. The White Paper furthermore makes it clear that “municipalities should be guided by accessibility and affordability of services, quality of products and services, accountability of services as well as Integrated Development and services” when they choose their delivery options (RSA, 1998).

### **4.4. Municipal Systems Act, 2000 (Act 32 of 2000)**

The Municipal Systems Act No. 32 of 2000 (RSA, 2000), states that there should be participation in respect of integrated development management (Section 16(1)). The Act states that “in the absence of an appropriate municipal wide structure for community participation, a municipality must establish a forum that will enhance community participation in”:

- the drafting and implementation of the municipality’s Integrated Development Plan (Section 29(1)); and
- the monitoring, measurement and review of the municipality’s performance in relation to the key performance indicators and performance targets set by the municipality (Section 40).

Section 5(1) of the Municipal Systems Act 32 of 2000 sets out Rights and Duties of Members of the Local Community and specifically outlines the citizen’s right to:

- contribute to the decision-making process of the municipality; and submit written or oral recommendations, representations and complaints to the municipal council or to another political structure or a political office bearer or the administration of the municipality.

The Municipal Systems Act 32 of 2000 (RSA 2000) prescribes how the local government organisation should be structured and states that the municipality must be organised in such a manner that it is able to:

- be responsive to the needs of the local community;
- facilitate a culture of public service and accountability amongst its staff;
- be performance orientated and focussed on the objectives of local government set out in section 152 of the Constitution and its developmental duties as required by section 153 of the Constitution;
- ensure that its political structures, political office bearers and managers and other staff members align their roles and responsibilities with the priorities and objectives set out in the municipality's integrated development plan;
- establish clear relationships, and facilitate co-operation, co-ordination and communication, between –
  - its political structures, political office bearers and its administration
  - its political structures, political office bearers and administration and the local community;
- organise its political structures, political office bearers and administration in a flexible way in order to respond to changing priorities and circumstances;
- perform its functions -
  - through operationally effective and appropriate administrative units and mechanisms, including departments and other functional or business units; and
  - when necessary, on a decentralised basis;
- assign clear responsibilities for the management and co-ordination of these administrative units and mechanisms; and
- hold the municipal manager accountable for the overall performance of the administration (Section 51).

#### **4.5. Municipal Structures Act, 2000 (Act 33 of 2000)**

The researcher has noted that the Municipal Structures Act 44 of 2003 puts in place structures in Municipalities to ensure efficient and effective service delivery and to ensure that the municipalities involve the communities.

The Municipal Structures Act 117 of 1998 states that Municipalities must have municipal councils that adhere to the following:

- Each municipality must have a municipal council (Section 18(1));
- A municipal council must meet at least quarterly (Section 18(2));
- A municipal council consists of a number of councillors determined by the MEC for local government in the province concerned by notice in the *Provincial Gazette* (Section 18(3));
- A municipality has the power to designate councillors determined by the MEC for local government as full-time, An MEC'S determination must be in accordance with a policy framework as maybe determined by the Minister after consulting the MECS for local government" (Section 18(34).

King Sabata Dalindyebo currently has 35 wards spread over 3 028 km<sup>2</sup> of land. The Municipal Structures Act stipulates that a metro or local council that decides to have ward committees must establish a ward committee for each ward in the municipality (Section 73).

Section 74 states the powers and functions of the ward committees and states that "a ward committee may make recommendations on any matter affecting its ward to the ward councillor or through the ward councillor to the metro or local council" (Section 74).

The Municipal Structures Act further states that one or more committees may be established if necessary for the effective and efficient performance of any of its functions, and that the council must determine the powers of a committee (Section 79).

#### **4.6. Municipal Finance Management Act, 2003 (Act 56 of 2003)**

The Municipal Finance Management Act, 2003 (Act 56 of 2003), regulates municipalities by monitoring spending. As stated in the ward committee resource book (2005:17), the purpose of the Municipal Finance Management Act is to:

- bring about transparent and effective financial management in municipalities and municipal public entities (such as the Johannesburg Bus Company). This Act must indicate clearly what both the obligations and the liabilities are to the responsible officials and structures
- the MFMA also sets up a Municipal Financial Recovery Service. This allows the National Treasury (NT) to intervene where a municipality faces a financial emergency
- another key provision is a chapter on debt which shows the difference between short-term borrowing and long-term capital investment.

The aim of the Municipal Finance Management Act is to regulate contracts that have future implications on the budget (Section 33). Section 41 of the act allocates responsibility to the National Treasury to monitor payments of bulk resources as well as the pricing structure of organs of state for the supply of electricity, water or any other bulk resources that may be prescribed, to municipalities and municipal entities for the provision of municipal services. Section 33 states:

A municipality may enter into a contract which will impose financial obligations on the municipality beyond a financial year, however, if the contract will impose financial obligations on the municipality beyond the three years covered in the annual budget for that financial year, it may do so only if has solicited the views and recommendations if the contract involves the provision of their services or any other service as may be prescribed.

(Section 33).

#### **4.7. Electricity Regulation Act, 2006 (Act 4 of 2006)**

The purpose of the Electricity Regulation Act 4 of 2006 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; and to provide for matters connected therewith.

(Act 4 of 2006)

The objects of the Electricity Regulation Act 4 of 2006 are to:

- achieve the efficient, effective, sustainable and orderly development and operation of electricity supply infrastructure in South Africa;
- ensure that the interests and needs of present and future electricity customers and end users are safeguarded and met, having regard to the governance, efficiency, effectiveness and long-term sustainability of the electricity supply industry within the broader context of economic energy regulation in the Republic;
- facilitate investment in the electricity supply industry;
- facilitate universal access to electricity;
- promote the use of diverse energy sources and energy efficiency;
- promote competitiveness and customer and end user choice; and
- facilitate a fair balance between the interests of customers and end users;
- licensees, investors in the electricity supply industry and the public.

(Section 2)

The National Energy Regulator of Southern Africa (NERSA) established by section 3 of the National Energy Regulator Act is the custodian and enforcer of the regulatory framework provided for in this Act (Section 3).

#### **4.8. National Developmental Plan (NDP)**

The National Development Plan is an overarching long-term planning initiative by government to state what they would like to achieve by year 2030. It was developed by the National Planning Commission that is responsible for long-term strategic planning for the country (NDP 2013:15). The development plan was adopted as the cornerstone and blueprint for a future economic and socio-economic development strategy for the country by the South African Government and the African National Congress (ANC) at Mangaung in December 2012 (NDP 2013:20). It has four objectives:

- Providing overarching goals for what we want to achieve by 2030;
- building consensus on the key obstacles to achieving these goals and what needs to be done to overcome those obstacles;
- providing a shared long-term strategic framework within which more detailed planning can take place in order to advance the long-term goals set out in the NDP; and
- creating a basis for making choices about how best to use limited resources

(NDP 2013:16).

The NDP has prioritised “procuring at least 20 000MW of renewable electricity by 2030, importing electricity from the region, decommissioning 11 000MW of ageing coal-fired power stations and stepping up investments in energy-efficiency” (NDP 2013:36). It was envisaged that the proportion of people with access to the electricity grid would rise to at least 90 percent by 2030, with non-grid options available for the rest and that an additional 29 000MW of electricity would be needed by 2030. That about 10 900MW of existing capacity was to be retired, implied that new build of more than 40 000MW would be necessary. According to the plan, at least 20 000MW of this capacity was expected to come from renewable sources (NDP 2013:55).

The NDP also states that the objectives with regard to electricity are:

- Move to less carbon-intensive electricity production through procuring at least 20 000MW of renewable energy, increased hydro-imports from the region and increased demand-side measures, including solar water heating;
- move Eskom's system operator, planning, power procurement, power purchasing and power contracting functions to the independent system and market operator and accelerated procurement of independent power producers;

- ring-fence the electricity distribution businesses of the 12 largest municipalities (which account for 80 percent of supply), resolve maintenance and refurbishment backlogs and develop a financing plan, alongside investment in human capital;
- revise national electrification plan and ensure 90 percent grid access by 2030 (with balance met through off-grid technologies)

(NDP 2013:56)

#### **4.9. Integrated Developmental Plan (IDP)**

Integrated development planning is a process through which municipalities prepare a strategic development plan for a five-year. The Integrated Development Plan therefore is the principal strategic planning instrument that guides and informs all planning, budgeting, management and decision making in a municipality (Patel, 2002:4).

The Municipal Systems Act No. 32 of 2000 (RSA, 2000) states that all municipalities – Metros, District and Local Municipalities – have to embark on an integrated development planning process to produce integrated development plans (IDPs). This therefore is a legislative requirement and the IDP has a legal status as it supersedes all other plans that guide development at local government level (Patel 2002:4).

#### **4.10. Integrated Urban Development Framework (IUDF)**

The key actions of the Integrated Urban Development Framework (IUDF) include developing and implementing norms and standards for municipal solid waste management, electricity, and road maintenance, and response to service delivery interruptions, health and safety services and public spaces in all residential developments (Integrated Urban Development Framework 2016:30).

One of the Framework's priorities is to create liveable and safe human settlements while directly addressing the unique conditions and challenges facing South Africa's cities and towns. This vision for South Africa recognises that the country has different types of cities and towns, each with different roles and requirements (IUDF 2016:8). The IUDF states that "people are reacting not only to the lack of housing but also to the lack of improvement in the quality of their lives, despite the massive built environment investments being made" (Integrated Urban Development Framework, 2016:30).

To achieve the framework's transformative vision, four overall strategic goals are introduced:

- Spatial integration: To forge new spatial forms in settlement, transport, social and economic areas;

- Inclusion and access: To ensure people have access to social and economic services, opportunities and choices;
- Growth: To harness urban dynamism for inclusive, sustainable economic growth and development; and
- Governance: To enhance the capacity of the state and its citizens to work together to achieve spatial and social integration

(IUDF 2016:8)

These four strategic goals stated above inform the priority objectives of the nine policy levers premised on the understanding that:

- integrated urban planning forms the basis for achieving integrated urban development, which follows a specific sequence of urban policy actions - Cities and towns that are well planned and efficient, and so capture the benefits of productivity and growth, invest in integrated social and economic development, and reduce pollution and carbon emissions, resulting in a sustainable quality of life for all citizens;
- integrated transport that informs - Cities and towns where goods and services are transported efficiently, and people can walk, cycle and use different transport modes to access economic opportunities, education institutions, health facilities and places of recreation;
- integrated human settlements - Cities and towns that are liveable, integrated and multi-functional, in which all settlements are well connected to essential and social services, as well as to areas of work opportunities;
- integrated urban infrastructure network systems - Cities and towns that have transitioned from traditional approaches to resource-efficient infrastructure systems, which provide for both universal access and more inclusive economic growth;
- efficient land governance and management - Cities and towns that grow through investments in land and property, providing income for municipalities, which allows further investments in infrastructure and services, resulting in inclusive, multi-functional urban spaces;
- economic diversification and inclusion - Cities and towns that are dynamic and efficient, foster entrepreneurialism and innovation, sustain livelihoods, enable inclusive economic growth, and generate the tax base needed to sustain and expand public services and amenities;
- empowered communities - Cities and towns that are stable, safe, just and tolerant, and respect and embrace diversity, equality of opportunity and participation of all people, including disadvantaged and vulnerable groups and persons;

- effective urban governance - Cities and towns that have the necessary institutional, fiscal and planning capabilities to manage multiple urban stakeholders and intergovernmental relations, in order to build inclusive, resilient and liveable urban spaces; and
- Sustainable Finances - Cities and towns that are supported by a fiscal framework that acknowledges the developmental potential and pressures of urban spaces, manage their finances effectively and efficiently, and are able to access the necessary resources and partnerships for inclusive urban growth.

(IUDF 2016:8)

#### **4.11. Summary**

Section 152 of the Constitution (RSA, 1998) assigns certain responsibilities to the Local Government. A requirement is that local government must provide an “accountable government”. A municipality must be able to account for its actions and give reasons if the municipality is not delivering what it has promised. Local government also has a duty to promote social and economic development. For example, ensuring that there is proper sanitation in a community improves their wellbeing and ensuring that there is sustainable electricity delivery improves the quality of life of the communities.

Section 27 of the Electricity Regulation Act (2006) is clear in stating that municipalities must “comply with all technical and operational requirements for electricity networks determined by the regulator and execute its reticulation function in accordance with national energy policies”.

It is clear from the South African policy and its regulatory framework that electricity provision is prioritised as one of the key deliverables of a local government and, as recognised by the Urban Development Framework priorities (IUDF), that there are unique conditions and challenges facing South Africa’s cities and towns. As blanket approach would not work in addressing those, the White Paper on Local Government requires active participation from citizens at four levels, namely as voters; participants in the policy process; consumers and service-users; and as partners in resource mobilisation. In Section 16(1) of the Municipal Systems Act 32 of 2000 (RSA 2000), a further requirement states that there should be community participation in the formulation and implementation of the IDP through monitoring, measuring and reviewing the performance of the municipality, while spending is monitored through the Municipal Financial Management Act.

## **Chapter 5: Assessing the provision of electricity services in the King Sabata Dalindyebo Local Municipality**

### **5.1 Introduction**

This chapter presents an assessment of the provision of electricity by the King Sabata Dalindyebo Local Municipality with reference to the KSDLM policy documents. The researcher conducted an in-depth analysis of the current electricity provision and compared it to what the standards and literature stipulate as the correct way to provide electricity to the community. Two important documents were analysed, the KSDLM Electricity Master Plan as well as the KSDLM IDP. The annual report states that the Vision of the KSDLM is to be a developmental municipality that “strives for socio-economic transformation thereby improving the lives of people” and the Mission is stated as: “King Sabata Dalindyebo will strive to be a developmental municipality that is able to provide to the best of its ability” KSDLM Annual Report (2015a:16). Lastly, this chapter looks at the presidential intervention that was granted to the KSDLM in 2009.

### **5.2 KSD Electricity Master Plan**

In April 2009, the KSDLM commissioned a firm of consulting engineers to conduct a study of the status of the electricity network including investigating and identifying the scope of work required to upgrade the electricity network and the improve the electricity service provided to the residents of Mthatha. The KSDLM’s Masterplan for the Electricity Network was compiled from this exercise and submitted to the municipality. Its main objectives were to

...provide an acceptable quality of supply to all types of consumers, cater for the future and existing growth in electricity demand, upgrade the existing primary 66kV & 11kV electricity networks, refurbish existing MV switchgear, ensure the safety of personnel and public in general, ensure that the electricity network meets all the requirements of the various regulations

KSDLM Masterplan (2010:4).

While a number of studies have been conducted on power quality or quality of supply for different reasons, the focus of the current study on quality of supply was limited to its definition and what is deemed acceptable levels of quality of supply. According to the Republic of South Africa Grid Code Definitions, quality of supply is defined as “Technical parameters that describe the electricity supplied to customers according to NRS048 standard and any other NERSA prescribed requirements” (Distribution Code Definitions, 2007:6). The Electricity Suppliers Liaison Committee (ESLC) consists of key stakeholders in the electricity industry in South Africa and includes electricity distributors like licensed municipalities and Eskom. The

ESLC is a custodian of the electricity industry specifications and ensures the drafting, publishing and updating of rationalised specifications. This is done through constituting different working groups focused on specific electricity industry streams. The NRS 048 working group drafted and periodically updates the NRS 048 specification which is a National Rationalised Specification focusing on quality of supply. Part 2 of NRS 048 deals with voltage quality parameters that may influence typical operations of the electricity dependent processes of customers. Each of the voltage quality parameters is depicted and, where suitable, similarity levels, restrictions, and assessment methods are specified where these similarity levels and restrictions provide measures of acceptable voltage quality at the point of supply NRS 048-2 (2003:4). The voltage parameters referred to above are deviations from reference or declared voltages supplied to individual customers.

Declared voltage is defined as “a fixed voltage as agreed to between the customer and the utility” NRS048-2 (2003:10). In the absence of any agreement, according to NRS 048-2, supply voltage in the case of nominal system voltages above 500 V, may not differ from the declared voltage by more than 5% for more than 10 consecutive minutes NRS 048 (2003:11). For supplies direct to customers at voltages less than 500 V, the maximum voltage deviation may not be greater than specified in Table 6 (NRS 048, 2003:12).

**Table 6: Maximum deviation from standard or declared voltages**

1	2
Voltage level (V)	Limit (%)
< 500	± 15%
≥ 500	±10

**Source: NRS 048-2 (2003:12)**

It is imperative for electricity distributors to maintain acceptable levels of quality in electricity supply in order to ensure that the agreed supply voltages to the customers are maintained. This is mainly because all appliances used by customers, whether it is in the domestic, commercial or industrial sectors, are rated in terms of voltage, amongst others. For example, the charger for the laptop computer used to type this thesis is rated at a voltage range of between 100 to 240 volts. If the supply voltage from the electricity supply authority is outside of these parameters, there is potential damage to the laptop computer that can occur and result in financial and other losses, including potential injury to the person in contact with the computer at the moment of damage. In South Africa, in the case of Low Voltage networks, the reference voltage is the standard voltage (230 V/400 V) NRS 048 (2003:10). Although providing an acceptable quality of supply was cited as one of the objectives of the KSDLM, the KSDLM Masterplan did not include details of the quality of supply voltage parameters.

According to the KSDLM Masterplan, the municipality operates an electricity distribution network consisting of four 66/11kV primary intake substations connected to the Eskom 66kV network at Zimbane Substation. The primary 66/11kV intake substations distribute electricity to industrial, commercial and domestic customers located throughout the KSD licensed area of supply, utilising a combination of 11kV underground cables and overhead power lines, which connect to 11kV/400V secondary substations. The secondary substations comprise 11kV switchgear, transformers and low voltage equipment, and provide nominal 400V electricity services to customers in Mthatha (KSDLM Masterplan, 2010:2). The electricity distribution network configuration of KSDLM is in line with other networks elsewhere and within industry norms. According to Cugnet, (1997:9),

Distribution networks make up the last link in the chain of supplying energy. Their density and their complexity are usually larger than for the transmission systems which feed them through distribution substations. Distribution networks also have specific characteristics which distinguish them from transmission networks. The main differences lie in the number of particular types of devices, multiphase possibilities and widely varying types of loads

The KSDLM Masterplan identified the primary 66kV and 11kV networks including critical components like switchgear and transformers as being old and in some instances, having been in service for more than 40 years and approaching the end of their economic lives. This forms part of the KSDLM electricity distribution network.

The distribution system is fed through distribution substations and these substations have an almost unlimited number of designs based on contemplation such as load density, high side and low side voltage, land availability, reliability requirements, load growth, voltage drop, cost and losses, etc. (Cugnet, 1997:5). Generally, the 66kV electricity network is used to supply electricity to customers in various areas within the KSDLM boundary through interconnecting different substations mainly with overhead power lines. The substations and specifically transformers are generally used to reduce the voltage so that the electric power that is distributed to the customers is in smaller and appropriate amounts. Consequently, one substation will supply many customers with power.

The KSDLM Masterplan revealed the extent and condition of the 66kV primary network and substations specifically the 66kV overhead power lines extending from the Eskom substation to the KSDLM Switching Stations. The overhead powerlines are constructed from wood poles that are susceptible to a number of conditions, e.g. environmental conditions (wood rot and decay/loss of material), fire and vandalism, amongst others. The KSDLM Masterplan of 2010 indicated that the original wood pole structures had been inspected and core samples had been analysed to determine their condition. The majority of the wooden supporting structures

showed signs of fire damage, and core samples indicated that they were no longer suitable for reliably supporting electricity powerlines. The powerlines furthermore were located within an electricity servitude that varied in width up to 50m and extended from the Mbuqe switching station around the perimeter of the original urban edge of Mthatha (KSDLM Masterplan, 2010:17). For any supply authority, the servitude is generally the identified and demarcated piece of land that is reserved for the provision of the electricity service; the overhead lines or cables are installed on this land. It is also on this piece of land that the maintenance staff of the supply authority access the electricity infrastructure for maintenance and repairs. In the code of practice (NRS 089-2-4 – Maintenance of electricity networks), the servitude is defined as “the organisation servitudes registered in the Deeds Office as well as rights obtained in terms of a signed Wayleave Agreement” (NRS 089-2-4, 2011:3). It is therefore imperative to have easy access to the servitude in order to continue to effectively provide the service. In the case of KSDLM the Masterplan revealed that the suitability of the servitude had been degraded by “the permission granted to Eskom in 2003 to install a 132kV steel pole power line from Natal in the KSD servitude which reduced the space available for KSD use, the construction of many informal housing units within the servitude and the absence of any censure on the residents by the KSDLM legal department” This resulted in “maintenance access to the servitude [having] become difficult ... and KSD no longer [ensuring that] the grass levels are managed to prevent damage to the wooden supporting structure from fires” (KSDLM Masterplan, 2010:17).

The above statement reveals a lack of maintenance interventions of the electricity infrastructure that is not in line with industry norms and applicable prescripts. NRS 089 requires that

Servitude roads necessary for the patrol and maintenance of lines shall be maintained so that they are useable at all times, encroachment on the supply authority’s servitudes of new buildings, extensions, tennis courts, swimming pools and barns, shall be reported immediately, especially if the servitudes are located below the lines, or inside the stipulated safety clearance.

NRS 089-2-1 (2011:7)

The safety of the KSDLM maintenance staff and members of the public would also be compromised if the wood poles were not suitable to support the electricity conductors. If the staff had to climb the pole in order to effect repairs to the conductors on top of the pole, the poles may not have been able to carry the weight of the staff member, structurally fail and fall to the ground, possibly injuring the said staff member. If the pole fell when there was a member of the public or a vehicle passing close to it, this would cause injury to persons or damage to property. These risks rendered the KSDLM susceptible to litigation and public liability claims.

The concept of Asset Management also requires the KSDLM to have processes and measures in place to ensure that the electricity infrastructure is maintained and in acceptable condition. PAS 55, an international standard on Asset Management defines asset management as “The systematic and coordinated activities and practices through which an organization optimally manages its physical assets, and their associated performance, risks and expenditures over their life cycle for the purpose of achieving its organisational strategic plan.” If one considers the life cycle stages of assets, the lack of maintenance of the servitude and the unacceptable condition of the wood poles is not in line with the requirements. In a paper for the 2008 Electricity Distribution Summit, Bekker (2008:1). stated: “A sustainable approach to the management of an electrical supply network can only be found in organisations that fully embrace all the principles of Asset Management.”

During the 2014/15 financial year, the National Energy Regulator of South (NERSA) conducted compliance audits on 12 electricity distribution licensees as part of its mandate to monitor and enforce compliance as part of the licence conditions. One of the licensees identified for the audit was KSDLM. The audit scope covered aspects that form part of the distribution licence conditions. These, among others, are the financial matters, strategic planning, asset management practices, quality of supply and service, key network operation and information technology, organisational tactics (HR and procurement processes), legal conditions, repairs and maintenance, as well as physical network condition. For the purpose of this study the focus was on asset management as well as repairs and maintenance. The compliance report revealed that “70% of the electricity network in KSDLM has an average age older than 30 years” (NERSA Compliance Audit Report, 2015: 16). This collaborates the findings of the KSDLM Masterplan which stated that “Many of the major elements of the KSD electricity assets have now been in service for almost 40 years, and are approaching the end of their economic life” (KSDLM Masterplan, 2010: 2).

### **5.3 KSD Integrated Development Plan**

The KSDLM IDP Review of 2015/16 states that “The Municipal turn-around Strategy identified what is referred to as the Local Government Ten Point Plan. This plan points to the following matters: Improve the quality and quantity of the municipal basic services to the people in the areas of access to water, sanitation, electricity, waste management, roads and disaster management” (KSDLM IDP, 2015b:2). According to the KSDLM IDP Review, the municipality is also addressing electrification backlog by connecting 1082 households in Zimbane and Ilitha Township, a project that was near completion. The IDP further states that an investigation was conducted on the electrification backlog of Mthatha and funding was requested from the Department of Energy for 2000 units to be electrified after the installation of the Thornhill Substation to cope with the new load. The municipality started its upgrading of the network

with a loan from the Development Bank of Southern Africa and funding from the Department of Energy. The following projects have therefore started: “Emergency network upgrade Phase 1 – connecting the CBD to the Hillcrest Substation, Network upgrade Phase 2 – installing new mini-substations, cables and kiosks in the CBD so as to comply with the National Electricity Regulator of South Africa’s safety regulations, The preparation of the 20 year Electrical Master Plan, Sidwadwa Substation – procurement of a new and larger transformer, Thornhill Substation – procurement of a new and larger transformer as well as new switchgear and protection equipment ” (KSDLM IDP 2015b:106).

The municipality embarked on community-based planning initiatives whereby communities raise local service delivery challenges, which can be included in the planning of ward-based projects. Amongst other challenges raised by communities is the need for the “installation of electricity to all households” (KSDLM IDP 2015b:3).

The KSDLM Integrated Development Plan furthermore seeks to address, amongst others, shortage of electricity, high mast lights and streetlights (KSDLM IDP 2015b:3).

The 2015/16 IDP Review also identifies issues per Key Performance Area (KPA) to be addressed as part of its strategic plan for the municipality. Focusing on Energy (Electricity) as part of the Infrastructure and Service Delivery, a number of interventions have been identified, such as “electricity infrastructure backlogs (18%); project prioritization policy is not available; the cables and sub-stations are old and some permanently damaged and require total replacement - replacement of substation requires huge amounts of budget, shortage of funds and human resource capacity, lack of electricity in some of the newly built households of ward 3, 4, 31, 19, 28, 18, 9, 32, 5, 6,10, 11 and 14, the whole of ward 21 has no electricity”(KSDLM IDP 2015b: 178).

The KSDLM 2015/16 Annual Report depicts a number of interventions by the municipality in order to address the challenges of power outages experienced by residents. According to the report,

The Municipality undertook the following ambitious projects in the effort of enhancing the customer satisfaction and to comply with the NERSA license conditions by reducing the frequency of the power interruption and the reducing the duration of power interruptions: Refurbishment and upgrade of the sections of the bulk lines (66kV lines) from Eskom to 2 of our major substations, namely Sidwadwa and Unitra substations and the project is under construction, Refurbishment of the medium voltage (11kV lines) lines that supply power to our major load centres like Ngangelizwe, Khwezi and its extension, Mbuqe and its extension, Waterfall, Mdlekeza, Maiden farm, New Brighton, Hillcrest, Ncambedlana, Northcrest, Phase, Wellington prison, Nkululekweni, Zamukulingisa industrial, Sidwadwa View, WSU, Bhongweni,

Eskom, Ilitha and these projects are 80% complete , Refurbishment of cable networks to reinforce the CBD, Holiday inn, Myezo, Fortgale and the project is 98% complete, Refurbishment of 14 medium voltage substation in order to reduce the risk of failure, reduce public liability, improve operator safety and to extend the life of this critical infrastructure, Implementation of the control centre and SCADA in order to monitor the power system remotely and to safeguard the electricity infrastructure and to ensure the safety of the operators/electricians, Procured crane truck and a cherry picker, Implementation of Mqanduli phase 3 and 6 project, Procurement of Service provider to implement the electrification of Polar Park.

(KSDLM Annual Report, 2015/16:124)

#### **5.4 Presidential Intervention within the KSD Local Municipality**

The President of South Africa visited Mthatha and while he was there, the communities aired their concerns about their town and how service delivery has deteriorated over the years. In August 2009, the president declared Mthatha a Rapid High Impact Presidential Intervention Node (Impact Economix, 2014:1). At the emergence of this presidential intervention, the initial plan was to adopt the KSDLM Master Plan (Impact Economix 2014:7) This Master Plan comprised of 280 short-, medium- and long-term projects towards vision 2030, while the Presidential Intervention did not specify the completion date (Impact Economix, 2014:7):

The President constituted an Inter-Ministerial Committee (IMC), chaired by the Minister of Performance Monitoring, Evaluation and Administration in the Presidency; a technical IMC was also established, chaired by the Director-General in the Presidency; the IMC and the Technical IMC have worked with the Office of the Premier which provides oversight and facilitates implementation through the Provincial Cabinet Committee; a Provincial Working Group (PWG) was established to drive implementation, chaired by the Superintendent General: Local Government and Traditional Affairs.

To enable delivery, the IMC formed seven work streams in 2011. These involved: Energy, Waste and Environment Management; Human Settlements; Transport and mobility; Water and Sanitation; Social Development and Health; Local Economic Development; and Governance and Communication (only established later in the process) (Impact Economix, 2014:7).

It is noted from the above that, although the president announced the Presidential Intervention in August 2009, the technical IMC and work streams were formed only in 2011. and the Project Management Unit was formed at the end of 2012 (Impact Economix, 2014:7).

Impact Economix (2014:17) also reported that the KSD PI work streams and PWG were in agreement that the problems to be addressed by the PI should include developing shared vision leading to producing results; capacity of KSDLM for operations and maintenance and lack of sustainability plans to prevent premature re-investment; inter-governmental relations including clear roles and responsibilities over the MTEF; and the lack of integrated planning between departments (including duplication and funding over different financial years); as well as political interference in administrative processes

The evaluation's attempt to identify the root causes of the situation at the KSDLM was accomplished through extensive literature on the KSDLM, which included reviewing of KSDLM reports, documents and input from informants (Impact Economix, 2014:16).

The evaluation report states that there is an indication of political and administrative instability in that the municipality has had seven municipal managers in eleven years and there has been a very high staff turnover, which also affected service delivery (Impact Economix, 2014:18). It is stated in the report that the KSDLM is struggling to attract and retain skilled personnel, which may be due to various reasons including locational disadvantages and poor schooling services (Impact Economix, 2014:18). Reasons for the municipality battling to secure sufficiently qualified individuals include the poor image of the municipality, uncompetitive salary levels, and lack of social amenities in and around the KSDLM (Impact Economix, 2014:18).

**Table 7: Education levels at the KSDLM**

	Number	Percentage
Total number of staff	1 125	100%
Number of staff without grade 12	485	43%
Number of staff with senior Certificate only	473	42%
Number of staff with tertiary/ accredited professional training	167	15%

**Source: IDP 2011/12**

The evaluation found that the KSDLM was politically and administratively dysfunctional and there was a lack of human resource capacity. This has been proven by the fact that the municipality has had seven municipal managers between September 2001 and March 20012. There was an increase in expenditure of R4 billion on infrastructure including roads, water, electricity and the airport. The evaluation determined that the PI has not dealt with the underlying issues of the KSDLM which included Leadership challenges; financial management; filling of vacancies; and institutional competition. The evaluation recommended that the KSDLM should immediately proceed to fill vacant Section 56 posts, as well as other

urgent vacancies (e.g. technical and engineering), and ensure the appointment of suitably qualified incumbents. The Presidency (and/or the provincial Department of Cooperative Governance and Traditional Affairs (COGTA) was expected to assist to ensure that staff appointed are high quality.

The evaluation report states that service delivery had improved as R4 billion was spent on infrastructure and collaborated work within the three spheres of government (Impact Economix, 2014:22). The PI has been accredited in improving electricity supply as well as reduction in traffic congestion, although challenges still remain in both these areas, the appointment of Implementing Agents for electrical engineering services around October 2009 for 3 years also assisted with the development of an Electricity Master Plan and the implementation of electrical system improvement projects, and there has been progress in connecting households (Impact Economix 2014:22).

The Presidential Intervention has also faced various challenges including project delays, poor quality of work by contractors, confusion about the sustainability of these projects after the presidential intervention (Impact Economix, 2014:22).

The report (Impact Economix, 2014:22) noted the following as being excluded from the PI:

#### **5.4.1. Leadership**

One of the major problems of the KSDLM is based on leadership and political rivalry. As an example of this, there are councillors who are fighting for positions and as a result are neglecting service delivery. When interviewed, a member of the OR Tambo District Municipality Mayoral Committee stated that, when the ANC factions get into office, they “are reckless and do not serve anyone equally. We need a united force to deliver services”. Problems are not addressed satisfactorily, for example the filling of posts or dealing with the audit outcomes. Until issues around leadership are resolved it will be difficult to address the root causes of problems and have a sustained impact on the municipalities, and hence on development in the area. This undermines both normal operations as well as the PI.

#### **5.4.2. Organisational capacity**

The PI has not addressed the organisational capacity of the KSDLM, although it has stated that the KSDLM should urgently finalise the appointment of experienced senior management within the municipality. The fact that there is no experienced senior management has affected the PI negatively in that there is no central repository for the storage of PI documents thus impacting the effect on institutional memory and there was no place where all documents could be found when it was time for the evaluation.

### **5.4.3. Challenges around revenue and expenditure management**

The management of revenue and expenditure are the problems affecting the survival of the municipalities. Challenges included a valuation roll that is out of date; the indigent register not having been updated; losses regarding water and electricity; and the abuse of overtime. In addition, respondents suggested that the equitable share allocation to the KSDLM is misused for purposes other than to cover free water and electricity and guidelines that are provided to guide the use of the equitable share are not adhered to by the municipality.

### **5.4.4. The communication/marketing of the KSD PI**

With regard to communication and marketing of the KSD, the PI has not necessarily prioritised the private sector as a key target group and a plan in this regard needs to be considered/developed and resourced.

A local business development strategy is needed with a focus on contractor development e.g. for improving Construction Industry Development Board grading, as well as establishing a forum of local businesses and key partner agencies who are already implementing useful supplier development support programmes, for instance the Construction Industry Development Board; local commercial banks; the Small Enterprise Development agency; the Eastern Cape Development Corporation; the Foundation of African Business & Consumer Services (FABCOS); and the Border Kei Business Chamber, (Impact Economix, 2014:22).

Attracting private sector investment, improving the performance of the education system and strengthening the local circulation of income through reducing income leakages are critical to support local people's opportunities for, and ability to access, sustainable employment opportunities. Currently, consumer expenditure is mainly at national retail chains and government contracts are going to national/regional businesses from outside the area (Impact Economix, 2014:22).

## **5.5 Summary**

The KSDLM Masterplan identified a number of initiatives to be undertaken to improve the quality of the electricity supply and the service provided to the communities of KSDLM. The repairs, maintenance and refurbishment of the primary KSDLM electricity network including critical network components that have become old and obsolete will improve the quality of the electricity supply. The provisions of the NRS 048 specification which stipulate levels regarding the quality of supply that supply authorities have to maintain, specifically the agreed voltages that have to be supplied to the customers, need to be met.

In August 2009, the KSD Presidential Revitalisation Programme publicly announced that President Jacob Zuma would make a “massive intervention” within six months. At the time the President stated that, when people come to Mthatha, they are coming to the home of Nelson Mandela, but on entering Mthatha are welcomed by potholes and broken down sewage systems. The President further stated; “We cannot allow Mthatha, the main town in this region to die, because it is dying. We will send a delegation of Ministers under the leadership of the Minister of Performance and Evaluation in the Presidency to come here” (President, 2009). He said a decision had been taken about Mthatha and Ministers had been chosen to ensure the revitalisation of the city. At the emergence of this presidential intervention, the initial plan was to adopt the KSDLM Master Plan which proposed 280 short- medium- and long-term projects towards vision 2030, although the completion date of the Presidential Intervention was not specified.

Emphasised in the chapter is the fact that the focus of the study on quality was the “technical parameters that describe the electricity supplied to customers according to NRS048 standards and any other NERSA prescribed requirements”. The KSDLM policy documents have given proof of the municipality not following the norms and standards of electricity provision.

The turn-around strategy announced in the KSDLM IDP 2015/16 referred to a Ten Point Plan which included the improvement of the quality and quantity of the basic municipal services to the people in the areas of access to water, sanitation, electricity, waste management, roads and disaster management (KSDLM IDP, 2015b: 2). The IDP seeks to address shortage of electricity, high mast lights and streetlights (KSDLM IDP 2015b:3).

Leadership, organisational capacity, challenges with regard to revenue, expenditure and management, as well as the communication/marketing of the KSDLM PI were excluded from the PI. These are crucial aspects of running an organisation and absence of such expertise could be detrimental to the operation of the organisation.

## Chapter 6: Data Analysis

### 6.1. Introduction

This chapter presents the methodology used in this research, the design, and the sample population. The researcher furthermore notes findings, analysis of the data obtained through the community questionnaire using charts, and discussions thereof. The analysis of the community question is presented in summary format for both Section A and Section B.

### 6.2. Research Methodology and Design

Research methodology is defined as the framework associated with a particular set of paradigmatic assumptions that a researcher uses to conduct research, i.e. the scientific method, ethnography, and action research (O'Leary, 2004:85). The case study method was used by the researcher. This is a rigorous study of a single unit that investigates an interaction of the unit with its context (Babbie & Mouton, 2015:281). For this research, the unit of study was the King Sabata Dalindyebo Municipality.

The sampling method employed was a non-probability sampling for which the researcher combined methods of purposive or judgemental sampling, convenience sampling and quota sampling. According to Vehovar, Toepoel and Steinmetz (2016:21) purposive sampling follows some judgement by the researcher in looking for a kind of 'representative' sample or even in seeking diversity until some criteria are satisfied. Babbie and Mouton (2015:166) state that it is sometimes appropriate for a researcher to select the sample on the basis of his or her knowledge of the population, its elements and the research aims. The researcher selected a community of 50 households within the municipality for collecting data.

The research tool employed in this study was a structured questionnaire designed in the form of a Likert scale. The questionnaire contained "strongly agree", "agree", "disagree", "neutral" and "strongly disagree" as response categories. Babbie and Mouton (2015:153), have warned that it would be impossible to judge the strengths of an agreement intended by the respondents if a researcher permitted ambiguous responses.

Advantages of the Likert Scale are that it is easier to use and to understand for both the researcher and the respondent and that coding as well as interpretation is easier and takes less time to explain. Limitations with the Likert scale is that wording of the descriptive categories most probably affects the responses and artificial categories might not be sufficient to describe a complex continuous, subjective phenomenon (Hasson & Arnetz, 2005:2). Furthermore, too many response categories may lead to difficulties in choosing and too few may not provide enough choice or sensitivity, forcing the respondent to choose an answer that

does not represent the person's true intent (Hasson & Arnetz, 2005:2). Finally, a total score from a multi-item Likert index may be the result of many different combinations of ratings, which leads to a loss of information about the scale items (Hasson & Arnetz 2005:2).

The researcher administered the questionnaires to the owners of the selected households, namely the rate payers. Purposive sampling entails the deliberate choice of participation due to the qualities of the participant (Etikan, Abubakar, Rukayya & Alkassim, 2016:2). Participants who were rate payers were chosen to evaluate how they felt about the services they were receiving versus the rates they pay.

The researcher also conducted face-to-face interviews with a sample of the population. Purposive sampling was used. This means that the sample comprised a municipal official from the electricity department, two ward councillors of opposing political parties and three business stakeholders of the KSD local municipality. For the purpose of this study, structured interviews were used as a supporting tool for these interviews. Interviews are frequently used as tools to access people's experiences, inner perceptions, attitudes, and feelings about reality (Zhang & Wildemuth, 2016:1). (Zhang, Wildemuth 2016:1) quote (Fontana & Frey, 2005) in stating that "based on the degree of structuring, interviews can be divided into three categories: structured interviews, semi-structured interviews, and unstructured interviews.

A structured interview has a set of predefined questions that are put to all respondents in the same order (Zhang & Wildemuth, 2016:1). This is intended to minimise the effects of the instrument and the interviewer on the research results. Structured interviews are similar to surveys, except that they are administered orally rather than in writing.

Etikan *et al.* (2016:1) further note that the researcher is making use of convenience sampling when subjects are chosen due to close proximity to the researcher. Convenience Sampling is a type of a non-probability sampling where the target population meets certain criteria such as ease of access, geographical proximity, availability and willingness to participate as included in the purpose of the study. To widen the sample, the researcher used convenient sampling in that interested participants were invited through social media (Facebook) to provide email addresses so that the researcher could email them the questionnaires. Sixty-five emails with questionnaires were sent and the researcher received 48 questionnaires in response. In total, the researcher received 98 responses composed of the 50 questionnaires distributed to 50 households and the 48 questionnaires received via email.

### 6.3. Data Analysis

The section below will look at the data collected through questionnaires distributed to the community of the KSDLM. A total of 98 questionnaires were received.

#### 6.3.1. Community Questionnaire

A questionnaire (refer to Annexure 1) was administered to a total of 98 respondents. As stated above, 50 questionnaires were administered to a community where the researcher physically distributed and all 50 questionnaires. These were completed and returned to the researcher. The researcher then emailed 65 questionnaires to interested parties and 48 questionnaires were returned.

The questionnaire consisted of two Sections; Section A sought to establish the perception of the community regarding the services provided by the KSDLM and Section B was designed to assess the quality of service offered by the KSDLM.

The researcher used a Likert Scale as shown in Table 8:

**Table 8: The Likert Scale**

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

A written summary of the responses for Section A follows:

Question number 1 asked whether the respondents knew what an integrated development plan (IDP) is. This question aimed to assess whether the community was aware of the strategic goals for their community and whether, the community as part of the IDP process was participating or not.

- 17% strongly disagreed with the statement. This means that they did not know what an IDP is;
- 13% disagreed therefore they do not know what and IDP is;
- 30% were neutral; they either know or they are not sure what an IDP is;
- 24% agreed to knowing what an IDP is; and
- 14% strongly agreed that they knew what an IDP is.

Question number 2 asked whether the municipality's vision and mission were widely known by the people who live in the area. This was to assess the interest of the community in its municipality.

- 31% strongly disagreed that the municipality's vision and mission were widely known by the people who live in the area;
- 21% disagreed that the municipality's vision and mission were widely known by the people who live in the area;
- 30% of the respondents were neutral. They are not sure whether or not the municipality's vision and mission are widely known by the people who live in the area;
- None of the respondents agreed that the municipality's vision and mission were widely known by the people who live in the area; and
- 18% strongly agreed that the municipality's vision and mission were widely known by the people who live in the area.

Statement number 3 concerned whether electricity is rarely interrupted in the KSDLM.

- 64% of the respondents strongly disagreed that electricity was rarely interrupted in the KSDLM;
- 11% disagreed that electricity was rarely interrupted in the KSDLM;
- 4% of the respondents were neutral and not sure whether or not electricity was rarely interrupted in the KSDLM;
- 4% agreed that electricity was rarely interrupted in the KSDLM; and
- 16% strongly agreed that electricity is rarely interrupted in the KSDLM.

The 4<sup>th</sup> statement enquired whether the respondents called the KSDLM helpdesk when electricity was interrupted.

- 17% of the respondents strongly disagreed that they call the KSDLM helpdesk when electricity is interrupted;
- 23% disagreed that they call the KSDLM helpdesk when electricity is interrupted;
- 17% were neutral on whether they call the municipality's helpdesk or not;
- 34% agreed that they call the KSDLM helpdesk when electricity is interrupted; and
- 8% strongly agreed that call the KSDLM helpdesk when electricity is interrupted they.

Statement number 5 enquired whether the restoration of electricity supply occurred within eight hours.

- 43% strongly disagreed that restoration of electricity supply occurred within 8 hours;

- 38% disagree that restoration of electricity supply occurred within 8 hours;
- 6% were not sure whether restoration of electricity supply occurred within 8 hours or not;
- 8% agreed that restoration of electricity supply occurred within 8 hours; and
- 4% strongly agreed that restoration of electricity supply occurred within 8 hours.

Statement 6 enquired whether the KSD technical staff/technicians are knowledgeable and professional.

- 13% strongly disagree that the KSDLM technical staff/technicians are knowledgeable and professional;
- 16% disagreed that the KSDLM technical staff/technicians are knowledgeable and professional;
- 39% were neutral regarding whether the KSDLM technical staff/technicians are knowledgeable and professional or not;
- 26% agreed that the KSDLM technical staff/technicians are knowledgeable and professional; and
- 6% strongly agreed that the KSDLM technical staff/technicians are knowledgeable and professional.

The seventh statement enquired whether the respondents are able to purchase KSDLM Electricity Units conveniently closer to home.

- 10% of the respondents strongly disagreed that they are able to purchase KSD Municipality Electricity Units conveniently close to home;
- 17% disagreed that they are able to purchase KSDLM Electricity Units conveniently close to home;
- 4% of the respondents were not sure whether they are able to purchase KSD Municipality Electricity Units conveniently close to home or not;
- 39% agreed that they are able to purchase KSDLM Electricity Units conveniently close to home; and
- 30% strongly agreed that they are able to purchase KSDLM Electricity Units conveniently close to home.

Statement number 8 enquired whether the KSDLM's electrical network was well maintained/looked after.

- 57% strongly disagreed that KSDLM's electrical network was well maintained/looked after;

- 26% disagreed that KSD's electrical network was well maintained/looked after;
- 9% of the respondents were not sure whether KSDLM's electrical network was well maintained/looked after or not;
- 4% agreed that KSDLM's electrical network was well maintained/looked after; and
- 4% strongly agreed that KSDLM's electrical network was well maintained/looked after.

Statement number 9 enquired whether, if respondents had a choice of another supply authority, they would still choose KSD Municipality as a service provider.

- 45% strongly disagreed that if they had a choice of another supply authority, they would still choose KSDLM as a service provider;
- 18% disagreed that if they had a choice of another supply authority, they would still choose KSDLM as a service provider;
- 24% of the respondents were not sure whether if they had a choice of another supply authority, they would still choose KSDLM as a service provider or not;
- 12% agreed that if they had a choice of another supply authority, they would still choose KSDLM as a service provider; and
- 0% strongly agreed that if they had a choice of another supply authority, they would still choose KSDLM as a service provider.

The last statement of Section A, statement number 10, enquired whether respondents were satisfied with the overall service of the KSD municipality.

- 54% strongly disagreed that they were satisfied with the overall service of the KSDLM;
- 23% disagreed that they were satisfied with the overall service of the KSDLM;
- 22% were not sure whether they were satisfied with the overall service of the KSDLM or not;
- 0% agreed that they were satisfied with the overall service of the KSDLM, and
- 0% strongly agreed that they were satisfied with the overall service of the KSDLM.

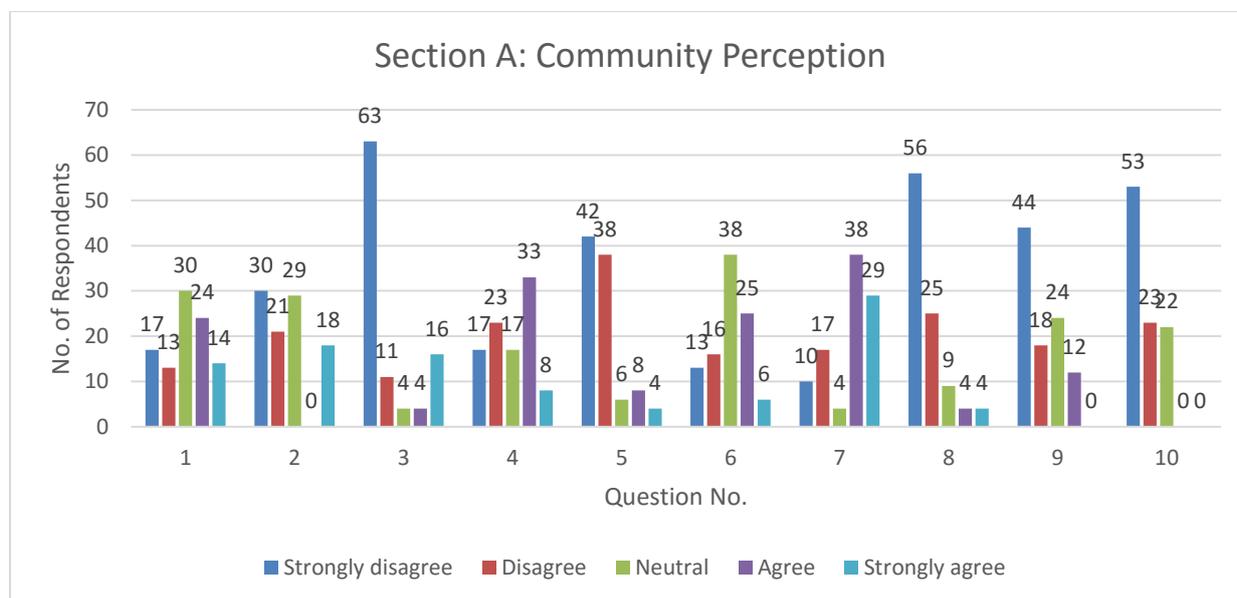
The researcher analysed the data received from the questionnaires, using MS Excel. There were 10 questions and/or statements. A summary of the responses for Section A is given in Table 9 as follows:

**Table 9: Summary of KSDLM Community Perceptions**

## Section A: Community Perception

QUESTION NO	QUESTION	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I know what an integrated development plan (IDP) is.	17	13	30	24	14
2	The municipality's vision and mission is widely known by the people who live in the area.	30	21	29	0	18
3	Electricity is rarely interrupted in the KSD Municipality.	63	11	4	4	16
4	When electricity does get interrupted, I call the KSD Municipality helpdesk.	17	23	17	33	8
5	The restoration of electricity supply occurs within 8 hours	42	38	6	8	4
6	The KSD technical staff/technicians are knowledgeable and professional.	13	16	38	25	6
7	I am able to purchase KSD Municipality Electricity Units conveniently closer to my home.	10	17	4	38	29
8	The KSD electrical network is well maintained/looked after.	56	25	9	4	4
9	If I had a choice of another supply authority, I will still choose KSD Municipality as a service provider.	44	18	24	12	0
10	I am satisfied with the overall service of the KSD municipality.	53	23	22	0	0

Figure 16 below presents a summary of the respondents' answers to Section A of the questionnaire which aimed to establish the community's perceptions on the electricity service delivered.



**Figure 16: KSD Community Perceptions**

A written summary of the responses for Section B follows below:

The 1<sup>st</sup> statement was, when electricity is interrupted, I know a number to call. This question was aimed to assess the behaviour of the respondents when electricity is interrupted.

- 45% strongly disagreed that when electricity is interrupted, they knew which number to call;
- 7% disagreed that when electricity is interrupted, they knew which number to call;
- 3% of the respondents were not sure whether when electricity is interrupted, they know knew which number to call or not;
- 31% of the respondents agreed that when electricity is interrupted, they knew which number to call; and
- 14% strongly agreed that when electricity is interrupted, they knew which number to call;

Statement number 2 was, when I call the call centre, I always get through and someone always answers the call.

- 44% strongly disagreed that they always got through and someone always answered the call when they called the call centre;

- 29% disagreed that they always got through and someone always answered the call when they called the call centre;
- 15% of the respondents were not sure whether or not they always got through and someone always answered the call when they called the call centre,
- 12% agreed that they always got through and someone always answered the call; and
- 0% strongly agreed that they always got through and someone always answered the call when they called the call centre.

The 3<sup>rd</sup> statement was, when I call the call centre, they listen to my query and provide me with a reference number for my call.

- 39% strongly disagreed that when they called the call centre, their queries were listened to and they were provided with a reference number for the call;
- 19% disagreed that when they called the call centre, their queries were listened to and they were provided with a reference number for the call;
- 27% of the respondents were not sure whether or not when they called the call centre, their queries were listened to and whether they were provided with a reference number or not for the call;
- 9% agreed that when they called the call centre, their queries were listened to and they were provided with a reference number for the call;
- 6% strongly agreed that when they called the call centre, their queries were listened to and they were provided with a reference number for the call;

Statement number 4 was, at the call centre, they always ask for my meter number to identify me.

- 29% of the respondents strongly disagreed that they always asked for their meter numbers to identify them at the call centre;
- 24% disagreed that they always asked for their meter numbers to identify them at the call centre;
- 15% of the respondents were not sure whether or not they always asked for their meter numbers to identify them at the call centre;
- 21% agreed that, they always asked for their meter numbers to identify them at the call centre;
- 10% strongly agreed that they always asked for their meter numbers to identify them at the call centre;

The 5<sup>th</sup> statement was, at the call centre, they ask me further questions and give instructions on what I should do to identify what the problem is, before they disconnect the call.

- 41% strongly disagreed that, at the call centre, they asked them further questions and gave instructions on what they should do to identify the problem before they disconnected the call;
- 16% disagreed that, at the call centre, they asked them further questions and gave instructions on what they should do to identify the problem, before they disconnected the call;
- 17% of the respondents were not sure whether or not at the call centre, they asked them further questions and whether they gave instructions or not on what they should do to identify problem, before they disconnected the call;
- 26% agreed that, at the call centre, they asked them further questions and gave instructions on what they should do to identify the problem, before they disconnected the call; and
- 0% strongly agreed that at the call centre, they asked them further questions and gave instructions on what they should do to identify the problem, before they disconnected the call.

Statement number 6 was, the technicians respond to my call within a few hours.

- 31% strongly disagreed that the technicians responded to their calls within a few hours;
- 37% disagreed that the technicians responded to their calls within a few hours;
- 16% of the respondents were not sure whether or not the technicians responded to their calls within a few hours;
- 16% agreed that the technicians responded to their calls within a few hours; and
- 0% strongly agreed that the technicians responded to their calls within a few hours.

The 7<sup>th</sup> statement was; I constantly get notified on progress of my query.

- 45% of the responds strongly disagreed that they constantly were notified of progress of their query;
- 37% disagreed that they constantly were notified of progress of their query;
- 14% of the respondents were not sure whether or not they constantly were notified of progress of their query;
- 4% agreed that they constantly were notified of progress of their query; and
- 0% strongly agreed that they constantly were notified of progress of their query.

Statement number 8 was, I am notified in advance when there are planned interruptions.

- 48% of the respondents strongly disagreed that they were notified in advance when there would be planned interruptions;

- 19% disagreed that they were notified in advance when there would be planned interruptions;
- 10% of the respondents were not sure whether they were notified in advance when there would be planned interruptions or not;
- 16% of the respondents agreed that they are notified in advance when there would be planned interruptions; and
- 6% strongly agreed that they were notified in advance when there would be planned interruptions.

The 9th statement was, I am able to lodge/submit electricity account queries to KSD Municipality and they get investigated.

- 38% strongly disagreed that they were able to lodge/submit electricity account queries to KSD Municipality and they would get investigated;
- 26% disagreed that they were able to lodge/submit electricity account queries to KSD Municipality and they would get investigated;
- 21% of the respondents were not sure that they were able to lodge/submit electricity account queries to KSD Municipality or not and that they would get investigated or not;
- 9% of the respondents agreed that they were able to lodge/submit electricity account queries to KSD Municipality and they would get investigated; and
- 6% of the respondents strongly agreed that they were able to lodge/submit electricity account queries to KSD Municipality and they would get investigated.

The last statement; statement number 10 of Section B of the questionnaire was, the KSD Municipality occasionally communicates with its customers about electricity safety, electricity tariffs and other electricity services.

- 64% of the respondents strongly disagreed that the KSD Municipality occasionally communicated with its customers about electricity safety, electricity tariffs and other electricity services;
- 28% disagreed that the KSD Municipality occasionally communicated with its customers about electricity safety, electricity tariffs and other electricity services;
- 4% of the respondents were not sure whether or not the KSD Municipality occasionally communicated with its customers about electricity safety, electricity tariffs and other electricity services;
- 0% agreed that the KSD Municipality occasionally communicated with its customers about electricity safety, electricity tariffs and other electricity services; and

- 4% strongly agreed that the KSD Municipality occasionally communicated with its customers about electricity safety, electricity tariffs and other electricity services.

The summary of the responses for Section B is as follows:

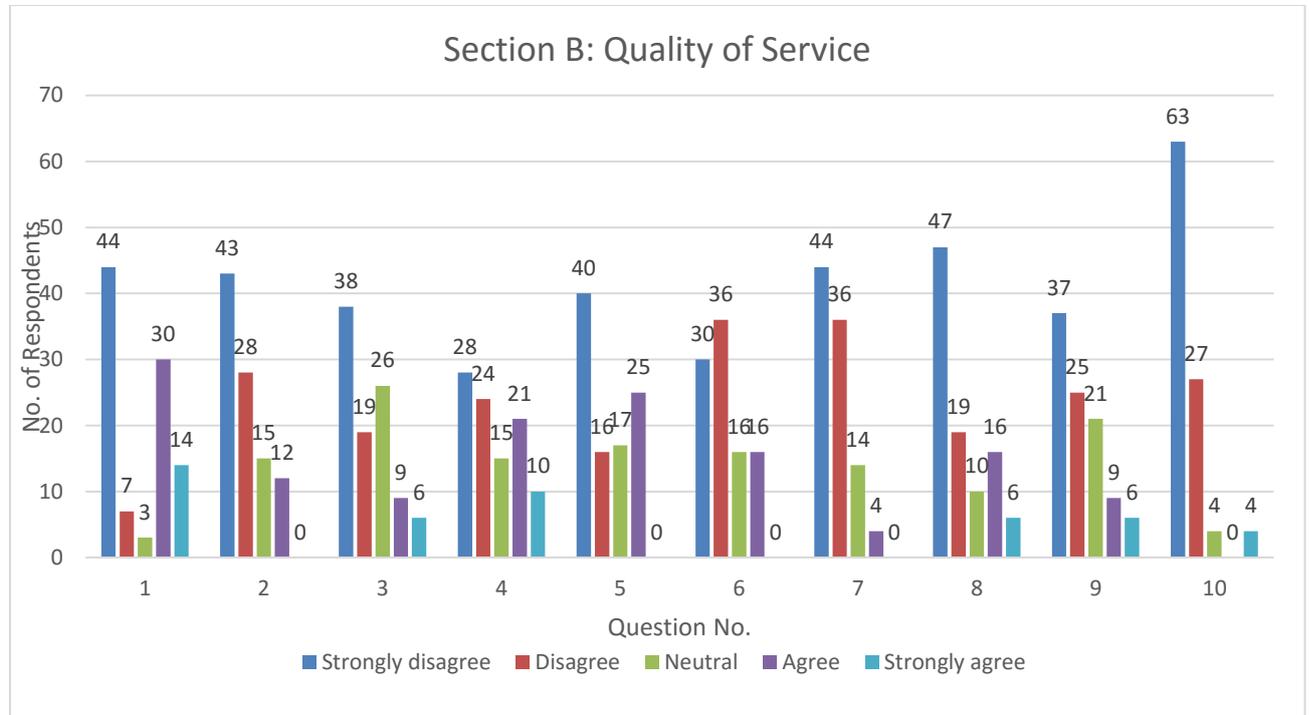
**Table 10: Summary of KSDLM Service Quality**

Section B: KSD Municipality Quality of Service

NO	QUESTION	1	2	3	4	5
1	When electricity is interrupted, I know a number to call.	44	7	3	30	14
2	When I call the call centre, I always get through and someone always answers the call	43	28	15	12	0
3	When I call the call centre, they listen to my query and provide me with a reference number for my call.	38	19	26	9	6
4	At the call centre, they always ask for my meter number to identify me.	28	24	15	21	10
5	At the call centre, they ask me further questions and give instructions on what I should do to identify what the problem is, before they disconnect the call.	40	16	17	25	0
6	The technicians respond to my call within a few hours.	30	36	16	16	0
7	I constantly get notified on progress of my query.	44	36	14	4	0
8	I am notified in advance when there are planned interruptions.	47	19	10	16	6
9	I am able to lodge/submit electricity account queries to KSD Municipality and they get investigated.	37	25	21	9	6
10	The KSD Municipality occasionally communicates to its customers about electricity safety, electricity tariffs and other electricity services	63	27	4	0	4

Figure 17 below presents a summary of the respondents' answers to Section B of the questionnaire. There were 10 questions and/or statements.

**Figure 17: KSDLM Service Quality**



## 6.4. Interviews

Structured interview sessions were conducted with specific KSDM stakeholders which included the KSDLM Official, Business stakeholders and an employee in a small company located centrally in the CBD of Mthatha. A set of questions prepared for the purpose of the study was used.

### 6.4.1. Interview with KSD Official

The researcher aimed at interviewing two officials at the KSD Municipality, however no second official was available to answer the interview questions (refer to Annexure 4 for the interview questions).

The researcher asked the official whether the KSD Municipality has an electricity Maintenance and Refurbishment Master Plan to which the official responded that they do not have a maintenance plan but have an Electricity Master Plan from which all refurbishment programmes are developed. The official confirmed that there are outages and these are frequent with an average of 20 outages per month and 220 per annum. The official further stated that the average duration of the electricity interruptions is six hours to restoration times. The researcher asked whether the municipality is able to draw trends from the interruptions

that occur, to which she responded and stated that they do analyse the trends and that the one specific trend is an increase of outages during extreme weather conditions. She cited the problem areas as a “Big 5”, that is, Ngangelizwe, Ikwezi, Mbuqe, Mbuqe Extension and Mthatha West. The reason for this is that the ‘Big 5’ were among the first townships to be electrified and infrastructure was very old. In addition to old infrastructure, Ngangelizwe is severely overloaded due to illegal connections and consumers exceeding the subsidised connection threshold. Infrastructure is vandalised. This, in fact, was a localised problem and Mthatha West shares the same problem with Ngangelizwe.

The researcher asked whether any corrective actions were taken by the Municipality to resolve the frequency of interruptions in the supply of electricity, to which the KSDLM official responded that the Municipality is the recipient of Provincial Treasury grant funding to refurbish critical areas of its electrical network. A panel of electrical contractors has been appointed to provide support to the department in carrying out maintenance.

When the official was asked about a dedicated call centre for electricity, she stated that there is a 24-hour service call centre and that the call centre has 4 telephone lines with its own operator working a shift cycle to ensure that a 24-hour service is available. She emphasised that the call centre could only be accessed by telephone and not by SMS or walk-in. The researcher asked what the call centre’s average response time was and whether they used a reference system. The official responded, saying that the average response time was 30 seconds and they used a reference numbering system. She further stated that the call centre used an electronic database to log calls to assign calls to a resource. There is no interaction between the call centre attendant and a customer unless specifically requested by the customer prior to assigning a resource. She further stated that outstanding faults are followed through and the customer is communicated with. She emphasized the fact that accurate customer master data are available.

The researcher asked the official whether there was any evidence of non-technical losses in the network; she responded that there are and stated financial resources are very limited in comparison to the extent of maintenance work that need to be carried out, as in most municipalities in the country. The researcher asked whether the system of delegation enabled the officials to execute their functions properly in the provision of electricity services to the residents of KSD Municipality, to which she responded by saying electricity delegation powers were limited to operations and maintenance.

#### **6.4.2. KSD Business Interview**

Three business people were interviewed separately, namely the President of the OR Tambo District Chamber of Business (ORTCB), Mr Ntlabati; an employee in an architectural company

in the CBD of Mthatha, Mrs Ngedle; and Mr Mbizo, who is managing Northcrest Super Spar in Mthatha. Refer to Annexure 5 for the interview questions.

The first question asked was, “As the business community within KSD Municipality, what is your view of electricity service delivery in the municipality in terms of reliability of electricity supply, the turn-around time to attend to requests/complaints/queries from business, etc.?” Mrs Ngedle’s response was similar to that of Mr Ntlabati in that they both agreed that electricity in the KSD Municipality is unpredictable and there is no communication from the municipality in advance to warn the citizens of planned disruptions. Mr Mbizo, however, mentioned that, as Northcrest Super Spar, they are made aware in advance whether electricity will be interrupted or not and he therefore feels that the municipality does try to assist and meet them halfway in that respect.

When asked how accessible and responsive the KSDLM is to the local business community’s electricity needs, the president of the ORTCB responded to say that the KSD Municipality is not accessible at all and they as business leaders have been complaining to say that they must at least be made aware of interruptions and duration of those, but this seems to be falling on deaf ears. Mrs Ngedle and Mr Mbizo both stated that, even when reporting a fault, phones go unanswered or when you finally complain, you never hear from them again regarding your complaint.

The researcher asked how Local Economic Development is impacted by the electricity service delivery in KSD, looking specifically into rural development; new business investments; and small and micro enterprise development, to which all respondents agreed that the hardest hit are the small businesses with no electricity back-up like generators; they end up paying their staff without making any profit and most of them are shutting down business as a result. Mrs Ngedle emphasized that, as a small business in the CBD, being without electricity for days is damping the company’s image and they lose business because they are customer driven. Without electricity, the company’s computer software cannot run and therefore there is no production for the day. Retailers like Super Spar are big franchises and therefore have strategies in place to assist, for example, in having generators on standby that kick in immediately when there is a sudden interruption in electricity. In terms of investors, Mr Ntlabathi further elaborated that the situation with the KSD Municipality is a major deterrent to investors because the investors would ask about electricity, crime, infrastructure, etc. and make their decision based on the answers they get. The researcher asked whether they as the business fraternity are satisfied that the KSD Council has passed an adequate budget and has capacity for a reliable and efficient delivery of electricity services in the KSD Municipality. Mr Ntlabati responded that they always get good feedback and promises and a good picture

is portrayed by the Municipality officials but that does not translate to the service they deliver. Responses from Mrs Ngedle and Mr Mbizo were similar to Mr Ntlabathi's response.

The researcher asked, "In your view, how is the local business community influencing policy development in KSD relating to the provision of electricity services, e.g. municipal by-laws, service delivery plans, etc.? Is the business community aware of the applicable policies regarding provision of electricity services?" In terms of bylaws, Mr Ntlabathi responded to say that they have been engaging the municipality with regard to enforcing the bylaws in matters like business to be licenced, and KSD Municipality officials have been saying in the past five years that they are implementing new bylaws. Business is trying to work together with the KSDLM, but so far nothing has come out of that. Mr Mbizo stated that no consultation or engagements have occurred in that regard between them as the business and the local municipality since joining the franchise, and Mrs Ngedle's response was similar to Mr Mbizo's response.

To the question of "What are the major developmental challenges that the KSD Municipality is facing from a business perspective?", Mr Ntlabathi alluded to the fact that they have lost out on business opportunities due to land claims and poor service delivery because of the inability of the KSD Municipality to operate efficiently. Both these factors have an influence on new business ventures that were in the pipeline. Business people have lost out on business opportunities and the community could have benefited from the jobs that were to be created. Mrs Ngedle shared the same sentiments and stated that, in her line of business, they need investors to come to Mthatha because this may assist their company should more malls or business parks be built. She emphasised that that could create more jobs for the citizens of Mthatha because that could also ensure that their small business grow. Mr Mbizo stated that the state of electricity provision in Mthatha lowers the buying power of customers. He stated that people around the area he services are mostly unemployed and thus with lower buying power, which then affects their profits as a business.

The researcher further asked whether there were any flagship projects that the KSD Municipality was implementing to ensure improved reliability of the electricity supply and possibly address specific business community needs that the business community was aware of, to which Mr Ntlabathi responded that there had been plans to build a power station near Hillcrest two years previously and also mentioned that they have acquired a new engineer who was promising that unplanned electricity interruptions would be a thing of the past. None of that has materialised, however. Mr Ntlabathi added that some excuses made by the municipality include vandalism of the electricity infrastructure, but there were places that have not had electricity for more than three days. Mrs Ngedle's responses were similar in that she highlighted the fact that businesses have been promised that the electricity provision situation

would improve once an engineer was hired. That was more than a year ago, and no changes have transpired. Mr Mbizo stated that he knew work had been done in the substation closer to the Northcrest Super Spar, but that has not translated in fewer interruptions in the provision of electricity.

To the question, of whether the KSD Municipality have adequate skilled personnel to deliver an efficient and reliable electricity service, e.g. Engineers, Technicians, Electricians, etc., Mr Ntlabathi said he had another house out of Mthatha which was serviced by Eskom and he, in comparison, he gets better service from Eskom technicians in terms of the work they do as well as their turnaround time. Mrs Ngedle stated that it starts at the call centre where you become disappointed because of them not answering the phone or, if they do, you are made to feel that you are disturbing them and that they are there doing you as a customer a favour when you actually receive the service, which may happen be two days after reporting a fault. Mr Mbizo alluded to the fact that there is room for improvement in the way the municipality deal with calls at the call centre because he, after logging a call as a client, does not know whether or when a technician will come or whether they would come at all.

The researcher asked whether there were any private public partnership initiatives or projects in which the local business community were engaged with the KSD Municipality; Mr Ntlabathi responded to say that there was a company that spoke about alternative energy, but nothing had come of that due to land claims and investors not being able to put in money where problems still have to be resolved. Mrs Ngedle as well as Mr Mbizo were not aware of any projects.

The last question concerned whether there were any pockets of excellence in the provision of electricity services by the KSD Municipality. The three respondents expressed similar views in that there may be an interruption in the service at any given moment and they would not know when it would be restored so there were no pockets of excellence at all in their view. Even in the CBD area, business people were complaining and this impacted on profits, increased unemployment numbers and decreased the standard of living.

#### **6.4.3. Councillors Interview**

Two councillors were interviewed separately; Councillor Nelani, Member of Mayoral Committee for Rural and Economic Development (Ward 05 Cllr) affiliated to the African National Congress and Councillor Raymond Knock, a Proportional Representative (PR) Councillor affiliated to the opposition political party, the Democratic Alliance. Refer to Annexure 6 for the interview questions.

The first question posed to the councillors was about their views, at a political level as councillors, of electricity service delivery in the KSDLM. Councillor Nelani responded, saying that the situation was improving, it used to be worse than currently. The capacity used to be less than the demand; as a result, the office of the President intervened. With the assistance of the Presidential Intervention (PI) three electricity substations (Sidwadwa substation, Thornhill and the Hillcrest substation) were upgraded in terms of capacity. This fell short of one substation, the Unitra substation, which needed more money to be upgraded. The President was in Mthatha in 2013 for the opening of the substations. However, as time went by, it was realised that the capacity of the newly capacitated substations was still not enough to handle the demand. An assessment was conducted which concluded that more than R500 million was required to stabilise KSDLM Electricity. As Municipality they then consulted Provincial Government which then assisted with the sum of R160 million. The councillor continued to state that, with all the assistance the municipality had received thus far, change was noticeable, but assistance had not been enough to address the stability of electricity provision in the KSDLM. Councillor Knock shared the same sentiments in that much has been done to assist the KSDLM to improve on service delivery but no results had been yielded at the time.

When asked about the perception of the community on the provision of electricity, councillor Nelani stated that the suburb that was most affected in his constituency was the one he resides in, which is Sidwadwa. Mr Nelani is responsible for servicing the following areas in urban Mthatha: Myezo, South ridge Park, Section of Southernwood as well as Sidwadwa. The community of Sidwadwa is the more vocal one in terms of complaints about the electricity provision. Electricity in Sidwadwa is affected by changing weather conditions, thunderstorms and rain or windy conditions guarantee that electricity will be interrupted. Mr Nelani stated that each time electricity is interrupted he has a duty to call the electricity department so that they come and check and that they act quickly as he calls the department directly from the Director to the Manager of the electricity department and if he fails to get them, he resorts to the manager's Personal Assistant. Mr Nelani stated that he does sometimes call the call centre but the electricity issue in Mthatha is very sensitive, hence the call directly to the management of the electricity department. The call centre has been available for a while however; in the new administration they have added additional resources for effective and efficient operations. Councillor Knock stated that the community has lost faith because of the current situation and that the issue of electricity is always raised in all meetings with the community, but people receive no joy from the responses and the non-reaction of the officials of the KSDLM.

The councillor was asked how the community was involved in the ward committees. He responded, saying there are very clear guidelines on how ward committees should operate

and it is stipulated that there should be 10 members in each ward and stated that it is as such in his ward. He stated that they elect members according to where they lived and they spread throughout the ward to ensure that each member was able to give feedback to the communities to ensure that each report or message reaches everyone in the community. There is a standing item on community issues which includes issues of electricity on a monthly basis. Councillor Knock stated that even the attendance of community meetings is affected because of the fact that the communities have lost faith. The communities feel that the same things are said over and over with no action being taken.

To the question of “Is the councillor satisfied that the council has passed an adequate budget for a reliable and efficient delivery of electricity services in the KSD Municipality?” he stated that, as mentioned earlier, the demand of electricity was beyond what had been budgeted for, hence the PI and support from the Eastern Cape Provincial Government. He further stated that, budget would only correlate in terms of maintenance and all when the electricity backlog was addressed and demand was met in terms of the size of the KSDLM, Councillor Knock stated that the KSDLM has challenges regarding collection of rates, thus affecting revenue and therefore affecting the budgets. He further stated that more funds would be available to include in the budget if policies were implemented in the correct way and governance was practised.

Mr Nelani stated that there are appropriate policies and by-laws in place regarding the provision of electricity services in the KSDLM. The bylaws are comprehensive in addressing every aspect of the community and every aspect of the services provided by the municipality. They govern the relationship between the community and the municipality in terms of what needs to be done. Councillor Knock stated that policies and by-laws are not the problem. He stated that the KSDLM has great policies and bylaws but implementation is the major challenge. He further said that, if there is no implementation, one might say that the KSDLM has useless policies and by-laws.

The researcher asked the councillors whether the officials are provided with adequate support to effectively perform functions related to provision of electricity services. The Mr Nelani responded, saying its yes and no. The electricity department is equipped with all the necessary equipment to ensure service is delivered. In the last number of years, however, from 2013 to date, the municipality has been under financial constraints because a sum of R300 million demanded by a private construction company that had an agreement with the KSDLM to develop a shopping mall. The development never materialised due to land claims and therefore they sued the municipality, stating that the work had been done, although the physical development had not started, and the fact that they were to make profit from the development. The amount dented the budget in that money was taken from all reserves as

well as from the operating budget and therefore cash flow became problem. Mr Knock stated that, prior to the current manager, there was a manager (Head: Electrical Engineer) with seven qualified electricians in his department who was easily accessible to both his staff and the councillors. When there was a major fault, the councillor stated, you would find this manager on site and he would know exactly what was happening. Mr Knock stated that there currently was a manager with 15 qualified electricians but performance has dropped. He further stated that the department does not function as well with more resources as it did before with lesser resources.

Are the communities supportive of the municipality's service delivery projects? Mr Nelani responded to say that, yes, as councillors they were forced to explain the current status to the communities and the stakeholders and as such they sourced their support in those endeavours. Mr Knock indicated that the communities are hopeless and not enthusiastic anymore.

To the question of whether the development plans and service delivery initiatives of the municipality address the needs of the communities in relation to electricity services, Mr Nelani responded that they do. KSDLM is growing fast and therefore they are forced to have a master plan that also speaks to growth and the development plans. The area used to be under developed for quite some time and has now picked with in such a fast pace that every department, including the electricity department, needed to cater for the development – developments such as the renewal of the Mthatha airport as well as the new malls being built in and around Mthatha. Mr Knock also responded to say that development plans and service delivery initiatives of the municipality address the needs of the communities, but those are on paper and nothing is fully implemented.

To the question of whether the council is providing adequate oversight, Mr Nelani emphasised that only three services are provided by the KSDLM municipality: refuse removal, roads and electricity provision and they therefore were forced to perform thorough oversight. He further stated that when they are in council meetings, in the executive, in mayoral committees, nothing else discussed is other than provision of electricity. Mr Knock stated that full oversight would mean that they do site visits as well to all substations and depos, but that has not been done. He stated that they had only visited one substation in this year (2017).

The researcher asked, "One of the functions of municipal councils is to charge service fees (in this case for the provision of electricity services), is the KSD municipality executing this function properly in your view?" Charging services are regulated by the National Energy Regulator of South Africa (NERSA) and NERSA, together with the department of energy, are looking at prices being charged. However, with the KSDLM, Mr Nelani stated that they are

running the municipality at a loss in that what they are obliged+ to charge according to NERSA's prescriptions, which are below what they should be charging and therefore they do not break even. This therefore affects electricity revenue, which then impacts on budget and subsequently on service delivery. Councillor Knock stated that collection is a challenge at the KSDLM and that there was a need for proper implementation of policies in this regard.

The following question was: Is there a coherent policy framework for the system of delegations to facilitate the execution of day-to-day tasks in order to ensure continued service delivery? The councillor said yes, delegations from the Council to the Executive Mayor to the Portfolio Heads to the Director, to even a lower level ensured that an instruction was carried through. There was a coherence policy framework and proper delegation was executed and facilitated day-to-day task, but there still was a need go further and manage performance from lower levels. Councillor Knock shared similar views with councillor Nelani in this regard.

The researcher wanted to know: Do the KSD municipal committees e.g. portfolio committees exercise their functions properly? Do progress reports on the provision of electricity services get presented by officials and discussed by the committee? Are there any specific problem areas or trends identified by the relevant portfolio committee about provision of electricity services in KSD? Councillor Nelani responded that, in a council system, you are forced to perform thorough oversight. There are monthly reports by directors to a standing committee and when that presentation is presented, the committee ensures that they put questions to the executive to ensure that all issues are addressed. If the committee is not satisfied, they need to come back and respond to issues that were not addressed until a report is passed with recommendation about what needs to be done and what the concerns are. There has been significant improvement in the standard of reporting, councillors are taken to workshops at universities to ensure that they are capacitated to do their work. Councillor Knock stated that reports are presented, but follow-up is a challenge. If a question that was raised needed for further investigation, there is no follow-up on that investigation at the next council meeting.

The councillor was asked whether, specific complaints regarding provision of electricity services raised by the communities feature in the constituency/ward/consultation meetings and how are these addressed. The councillor agreed that there are complaints and the process is that, when they receive a complaint, they take it and report it in their monthly reports to the Speaker to check issues that are raised and discuss the possible solution and how to resolve it. They also check if they need assistance from the office of the speaker, which could be escalated to the MEC, and then give feedback to the community. Councillor Knock agreed, specifically about the unreliability of the supply. He said that the only reasons given is that there currently is no budget to upgrade the old electrical infrastructure.

In answering the question, are there motions that are proposed during the municipal council meetings related to the provision of electricity services? Mr Nelani said that there were and they are taken to the portfolio head until it is resolved. Councillor Knock's response was similar.

The last question posed to the councillors concerned whether any new electricity projects commissioned recently were officiated by the municipal council/councillors in any ward within KSD in the past financial year. What was the project? How did the community benefit from it? Are there any projects that are behind schedule/in backlog that you are aware of? Are you aware of the reasons for the delays in these projects? Are there any corrective action items in place to address the delays? Mr Nelani responded to say that the project currently funded by the Eastern Cape Provincial Intervention to increase delivery of electricity to the access points started in 2015. This project was still in progress, however behind schedule. What was pleasing was that they were in the last stages of the project. The community benefited in that the community of the particular ward where work was being done would be employed in the project as community liaison officers (CLO). When a project needs to employ people, the report from the contractors to the community is done through the ward councillors so that people can be employed; this is how the community would benefit unless a rare skill needs to be outsourced because it is not available within the community. Mr Knock responded by telling about this big project called "Revitalisation of Mthatha". Within this project are different others which also include upgrading the electricity infrastructure. The challenge has been that allocated funds are not enough for the work that is still to be done.

## **6.5. Discussion of Findings**

Responses on the questionnaire indicated that half of the community is not aware of what the IDP is. Councillor Nelani, however, stated that, when choosing ward committees, the representatives of the ward spread throughout the area to ensure that everyone within the ward received feedback and was able to give input. It is important for the communities to know what an IDP is in order to know what is planned for their ward, to be able to give input on the IPD. This promotes social cohesion and an active citizenry and facilitates holding the public representatives accountable.

The Mission and Vision of Municipalities should be aligned to the community's needs. However, only 18% of the community knew what the vision and mission of the KSDLM is. It is in the best interest of the community to know what the vision and mission of the Municipality is in order to give input. As an example, a municipality that says their vision is to be the number one destination for a music festival while there is rife poverty, cry for houses; it shows that the municipality's vision and mission is not aligned to that of the community. In that case, the

communities should be able to ask how that vision meets their needs. However, if people do not know what the vision is, chances are that it does not meet their needs.

Electricity is more often than not interrupted in the KSDLM and 75% of the respondents agreed. According to the (NRS047-1 2002:17),

...the licensee shall try to keep supply interruptions to a minimum and when there are planned interruptions to the supply, the licensee shall ensure that customers are given adequate notice. "Where a customer or a group of customers has suffered a series of interruptions within a short period, the licensee shall endeavour to prevent coincident planned interruptions from affecting the same customer(s) for at least two months, with the understanding that urgent remedial work might require a planned interruption to rectify the cause of such a series of interruptions.

However, the KSDLM official stated that they have an average of 20 outages per month and 67% of the respondents were in agreement about not being notified of planned interruptions. Both business representatives were in agreement that electricity in the KSD Municipality is unpredictable and there is no advance communication from the municipality to warn the citizens about planned disruptions

Only 42% of the communities call the municipality's helpdesk to report a fault. There could be a number of reasons for this, one of which could be that, according to Councillor Nelani, they had just capacitated the call centre with additional resources and that the communities may not know about this. Another reason could be that, even when affected parties do report that there is no electricity, it takes more than eight hours to restore the electricity, with 81% of the respondents affirming this, while the KSDLM official said they take six hours to restore electricity. It may also be that respondents (29%) regard the KSD technical staff/technicians as not being knowledgeable and not professional or were unsure (39%) about this. A further 52% of the respondents reported that they did not know the number to call and 73% of the respondents found that there was no guarantee that the call would be answered. NRS 047-1 states that 85% of incoming calls should be responded to within 15s and the average response time should be shorter than 10s. Respondents indicated overwhelmingly that they are not notified on the progress of their query. (The KSDLM official disagreed and stated that the average response time was 30 seconds and they used a reference numbering system, and that the call centre had an electronic database to log calls to assign calls to a resource that makes it easier when providing feedback to customers.) The business representatives agreed that the KSDLM is not accessible and they as business leaders had complained and asked to be made aware of interruptions and the duration of those, without success and that, even when reporting a fault and phones were answered there was no follow through.

As mentioned in Chapter 2, electrical equipment failures adversely affect electricity reliability and existing monitoring technologies. The KSDLM official agreed that they do not have a maintenance plan, which meant they do not have a preventative maintenance strategy and they more often are reactive. The official explained that there were non-technical losses in the network and that, as with most municipalities in the country, financial resources were limited compared to the extent of maintenance work needed.

From the point of view of 83% of the respondents, the KSD electrical network is not well maintained, which could result in the many electricity interruptions.

While 92% of the respondents disagreed with the statement that the KSDLM communicates or educates customers about electricity safety, electricity tariffs and other electricity services, 77% of the respondents disagreed about being satisfied with the overall service of the KSD municipality and no respondents indicated satisfaction with the overall service of the KSD municipality.

The business representatives agreed that the hardest hit were the small businesses that had no electricity back-up like generators and ended up paying their staff without making any profit, so that most of them were shutting down. Mrs Ngedle emphasised that, as a small business in the CBD, being without electricity for days' damages the company's image and they, being customer driven, lose business because the company's computer cannot run and therefore there is no production for the day. Mr Ntlabathi elaborated that the situation with the KSD Municipality is a major deterrent to investors. He mentioned a company that spoke about alternative energy, which came to nothing due to land claims and investors not being able to put money where problems still need to be resolved. Good feedback and promises and the good picture portrayed by municipal officials do not translate to the service they deliver. The business representatives were in agreement that an interruption in the service could occur in any given moment and they would not know when it would be restored. They could not identify any pockets of excellence at all; even in the CBD area business people were complaining and this impacted on profits, raised unemployment numbers and decreased the standard of living.

The KSDLM official, Councillor Nelani and Councillor Knock shared similar views with regard to assistance from the Eastern Cape Provincial Intervention in alleviating the problems they are facing in the KSDLM. Councillor Nelani alluded to the fact that with all the assistance the municipality has received thus far, change is noticeable, but the assistance has not been enough to address the stability of electricity provision in the KSDLM. The lowest point for the KSDLM occurred in 2013 because of land claims when the municipality was sued for R300 million by a private construction company, which a dire financial situation for the KSDLM. Councillor Nelani stated that, although progress had been made, there was room for

improvement and more could still be done. Councillor Knock indicated that the KSDLM needed to assess itself internally and own up to their responsibility for the current state of affairs.

## **6.6. Limitations**

The study investigated people's perceptions of the status of electricity provision in KSDLM. Owing to the complexity and rural nature of the KSDM, this study could not be extended to the whole local municipal area and the district municipality. One respondent, the second official, was not available for the interview, citing lack of management approval.

## **6.7. Summary**

This chapter focused on the methodology employed in the study. A self-administered questionnaire divided into two sections, Section A (to establish the perceptions of the community on the services provided by the KSD Municipality) and Section B (to assess the quality of service offered by the KSD Municipality). The questionnaire employed a Likert scale with an unambiguous ordinality of response categories. Its advantages and disadvantages have been specified.

Interviews were also conducted with an official, two councillors and three business representatives in the KSDLM. The business representatives' responses were similar to the community responses in that electricity in the KSDLM is unreliable and that there is no communication from the municipality to alert them in advance that electricity will be interrupted and when they may expect restoration of the service.

Although interviewed separately, the business representatives' responses were similar in that they believe the impact of the unstable electricity provision is more destructive to the small upcoming businesses; has an effect on the increase of unemployment and the crime rate in Mthatha; affects investment opportunities; and is not assisting in ensuring the economic growth of the KSDLM.

Councillor Nelani and the KSDLM official were of the view that the electricity situation is much better than it was before, but that there is room for improvement. Councillor Knock's closing remarks were that the KSDLM's service is deteriorating and that the organisation needs to ensure that all policies are implemented properly to improve the current state of affairs.

## Chapter 7: Conclusion and Recommendations

### 7.1. Introduction

The purpose of this chapter is to present conclusions drawn from the study followed by recommendations for overcoming the challenges and constraints identified through this study, which was aimed at improving electricity service delivery in the King Sabata Dalindyebo Local Municipality.

### 7.2. Conclusion

This study was undertaken to investigate electrical provision in the KSDLM, which serves two towns, namely Mthatha and Mqanduli. The researcher is a former resident of the KSDLM, which explains the interest in conducting this research.

The existing literature suggests that apartheid has left its imprint on South Africa's human settlements and municipal institutions. Transformation requires understanding of the historical role of local government in creating and perpetuating local separation and inequity, and the impact of apartheid on municipal institutions. Cooperative governance is about collaboration and inclusive efforts with civil organisations, private sector organisations, community groups and social movements.

Electricity distribution is a local government competence. The objectives of Local Government dictate that local government must be accountable and ensure that they promote social and economic development. This includes proper management of the electricity infrastructure. Asset management is defined by Davis (2016:7) as

...a mind-set which sees physical assets as objects and systems which respond to their environment, change and normally deteriorate with use, and progressively grow old then fail / stop working / die; an approach that looks to get the best out of the assets for the benefit of the organisation and/or its stakeholders and it is about understanding and managing the risk that is associated with owning an asset.

An asset manager, is concerned in the planning of activities contained in the asset lifecycle such as the forecast of demand need as well as service need, the analysis of the gap between the current capability of the asset and what is needed to meet future demand as well as developing a works programme that closes the gap (Boshoff *et al.*, 2009:20). Also, part of the asset management lifecycle is the maintenance of an asset (Andrușcă *et al.*, 2012:515) define maintenance as:

...all technical and organisational actions that are performed on the installations and their components to maintain the capacity to realise the function for which they were designed. The

operation of any installation requires financial resources for its maintenance and the budget size depends on the complexity of installation and also on the obligation to ensure continuity in operation.

It is stated that the problem of electrical failures will worsen as the electricity infrastructure ages, unless active steps are taken to counter the trend. Routine preventative maintenance programmes can prevent more than two thirds of the electrical system failures and that this routine maintenance allows the owner of the equipment to schedule electrical outages at convenient times instead of fixing major problems caused by the untimely failure of the electrical equipment (Hartford Steam Boiler, 2013:1).

The National Rationalised Specifications (NRS047-1 2002:5) outline various service activities and the minimum standards for measuring the quality of service provided to customers by electricity utilities in South Africa. The standard addresses the common basis for evaluating quality of service with regard to granting distribution licences, monitoring the performance of licensees on an ongoing basis, as well as dealing with customer complaints. This research was focused on monitoring the performance of licensees on an ongoing basis as well as dealing with customer complaints.

Literature also suggests that municipalities are not without challenges; the White Paper on Local Government states that some of the challenges that municipalities face include

... substantial variations in capacity, with some municipalities having little or no pre-existing institutional foundations to build on and the need to rebuild relations between municipalities and the local communities they serve. Municipalities should be particularly sensitive to the needs of groups within the community who tend to be marginalised, and responsive and accessible to people with a disability.

It is clear from the South African policy and its regulatory framework that electricity provision is prioritised as one of the key deliverables of a local government and that, as recognised by the Urban Development Framework priorities, unique conditions and challenges face South Africa's cities and towns and therefore a blanket approach would not work in addressing those. White Paper on Local Government requires active participation of citizens at four levels as voters, participants in the policy process, consumers and service-users as well as partners in resource mobilisation. Section 16(1)) of the Municipal Systems Act 32 of 2000 (RSA 2000) further states that there should be community participation in the formulation and implementation of the IDP towards monitoring, measuring and reviewing the performance of the municipality.

Non-probability sampling was used for this study. This relied on purposive or judgemental sampling, which meant that researcher selected the sample “on the basis of knowledge of the population in consideration of the purpose of study” (Babbie & Mouton 2015:166). A questionnaire was designed for the community and was completed; in total, the researcher received 98 completed questionnaires. Structured interviews were conducted by the researcher with an official from the KSDLM, KSDLM councillors and two business representatives.

The KSDLM councillors offered different views on the current state of electricity provision in Mthatha, as Mr Nelani was of the view that the situation is improving whilst Mr Knock felt that the situation was getting worse and more emphasis has been on non-availability of funds. Mr Knock stated that there actually is a need to exercise governance and proper implementation of policies within the KSDLM.

Business representatives as well as the community were unanimous in that electricity provision in Mthatha has deteriorated over the years, citing that what is making the situation worse is the fact that they receive no communication from the municipality. Business emphasised how economic development has been affected and the fact that businesses are closing down and the community of Mthatha is losing jobs, which is leading to the increase in the unemployment and crime rate.

### **7.3. Recommendations**

In the section below, the researcher has highlighted problems that have been noted in this study and has thus made recommendations.

#### **7.3.1. Customer or community satisfaction on delivery of electricity services**

The researcher interviewed members of the community to test their perceptions on several aspects of their interaction with KSDLM regarding the provision of electricity services. The community perception questionnaire required community members to comment on “electricity is rarely interrupted in the KSDLM”. More than 60% of the respondents strongly disagreed with this statement. More than 80% of the respondents disagreed with Statement number 5, which was “the restoration of electricity supply occurs within 8 hours”, with 43% strongly disagreeing. Concerning “if I had a choice of another supply authority, I will still choose KSD Municipality as a service provider” more than 60% disagreed with the statement. The last statement of section A of the community perception survey was “I am satisfied with the overall service of the KSD municipality.” More than 70% of the respondents disagreed, with 54% strongly disagreeing. The responses indicate the dissatisfaction of the communities with the level of service provided by KSDLM.

In terms of the Back to Basics Strategy adopted by COGTA in 2014, the focus in local government should be delivering services to the people.

Clause 4.5.3 of NRS 047-1 prescribes restoration of electricity supply after forced interruptions. A forced interruption is defined as “An interruption that occurs when a component is taken out of service immediately, either automatically or as soon as switching operations can be performed, as a direct result of emergency conditions, or is caused by human error or by the improper operation of equipment” NRS 047-1 (1999: 6). During the interview with the KSDLM Official, the official mentioned a figure of six hours for average restoration time, but no evidence was available to corroborate the statement.

- The researcher recommends that KSDLM meets and adheres to the requirements of NRS 047 in relation with restoration of supply, fault reporting process, the number and duration of interruptions of supply and the processing of requests for electricity supply.
- The researcher recommends that KSDLM conducts a community survey to establish the level of satisfaction of the community with the provision of electricity services.
- The researcher recommends that KSDLM establishes and makes use of communication structures with various community sectors to engage on electricity service related matters and address customer feedback issues. The use and capacitating of the existing IDP public participation forums to fulfil this role is encouraged. It is suggested that appropriately skilled staff members or a service provider/s be tasked to attend the forum meetings and field queries related to electricity services.
- The researcher recommends that the customer complaints and queries to the KSDLM Call Centre or Fault Reporting Centre be lodged through SMS, the internet and emails over and above the normal telephone service in order to provide more accessibility.

### **7.3.2. Human Resources – Staff recruitment and retention**

For any organisation to deliver on its mandate, appropriately skilled and experienced staff are an integral part of the organisation. The 2015/16 KSDLM Annual Report identifies a number of staff related challenges in the KSDLM Project Management Unit. These include high staff turnover, remuneration lower than the approved business plan and remuneration that is not in line with other municipalities. It is common knowledge that remuneration is not the only factor that employees consider when seeking employment but disparities in remuneration for similar types of work can contribute to high staff turnover.

The 2015/16 KSDLM Annual Report depicts that only 22% of the staff of KSDLM have a tertiary accredited professional training as shown in the table below.

Total Number of staff	Number of staff without grade 12	Number of staff with Senior Certificate only	Number of staff with Tertiary / accredited professional training
1388	814	574	308

Source: KSDLM Annual Report (2015: 190)

Staff working in the Electricity Services environment need to constantly improve their knowledge and skills base.

- The recommendation is that KSDLM investigates the salary scales of the staff and ensure that they are in line with industry norms. A number of other industries require the skills of electricians, technicians, engineers, etc. and source from the same pool of skilled staff as the KSDLM.
- The recommendation is that an investigation be done on introducing an allowance for all electricians that are specialised and can do switching on the Medium voltage electricity network in terms of NRS 040. This will ensure that there is extra remuneration in recognition of the specialised skill and the risks associated with the switching operations.
- The recommendation is that KSDLM encourages its staff to further their studies through support programmes like financial assistance and mentoring programmes.

### 7.3.3. Governance Systems and structures

The maintenance of municipal infrastructure requires that the municipality has capacity and systems in place to set up or adopt and comply with benchmarks for acceptable levels of maintenance of their infrastructure. The Back to Basics Strategy makes it clear that planning, implementation and maintenance of basic infrastructure is critical for sustaining basic standards of living and economic activity in our towns and cities. It would be in the best interest of the KSDLM Electricity Department as the custodian of the various infrastructure assets to know all assets and types of assets in their network and make use of reliable tools to store and process asset information. Databases can be used to analyse the status of the organisation and thereby make informed decisions. It is also important that the Electricity Department of KSDLM as a business unit has guidelines in place when conducting day-to-day business in order to ensure consistency in decision making and to develop a culture of compliance. The KSDLM Masterplan identifies residents building onto the servitude of the 66kV overhead lines and residents connecting illegally to the KSDLM electricity network. This further reduces the capacity of the municipality to provide an acceptable level of electricity service and overall creates the perception of tolerance with lawlessness and noncompliance. The following is recommended:

- KSDLM should initiate a project for taking stock of and capturing all electricity infrastructure assets and categorise them into functional locations and asset classes. This will assist in determining what maintenance activities are required and on which sections of the electricity network.
- It is recommended that KSDLM develops an asset management strategy for the electricity network and have an asset management policy in place.
- It is recommended that KSDLM invests in the procurement of a Computerised Maintenance Management System that will be utilised to plan, schedule and execute maintenance of the electricity network.
- It is recommended that KSDLM Electricity Department develops business processes and/or standard operating procedures for the execution of the different tasks required for the delivery of the electricity service.
  - It is recommended that the KSDLM Electricity Department seeks support from the KSDLM Legal Department in order to decisively deal with noncompliance issues affecting the business of electricity services e.g. illegal connections, illegal structures/buildings etc.

#### **7.3.4. Project Management**

A number of interventions are necessary in order to bring the condition of the KSDLM electricity network to acceptable levels. The KSLDM Masterplan identified a number of projects that require implementation in order to alleviate the effect of the ageing electricity network. The projects at the time totalled R 295 million with the smallest project valued at R 5 million. The successful implementation of these types of projects requires above the norm project management capacity within KSDLM in order to achieve good value for money. Total reliance on service providers or consulting engineers for this type of service can introduce business risks for a municipality such as KSDLM. One of the challenges identified in the 2015/16 KSDLM Annual Report is the high turnover of staff at the Project Management Unit of the KSDLM. This is a risk to the spending of allocated capital budgets and execution of capital projects.

It is recommended that:

- KSDLM increases the capacity of the PMU or explores the option of shared PMU services with other local municipalities within the OR Tambo District Municipality.
- KSDLM builds capacity within the entire organisation by identifying suitable and interested staff within the existing staff complement to be trained as Project Managers.

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## Annexures

### Annexure 1: Community Questionnaire

Researcher : Indiana Gqwede  
 Student Number : 17987067  
 Contact Details : 021 483 9024/ 083 585 9396

#### IMPORTANT NOTES:

You are kindly requested to complete this questionnaire for the purpose of assisting the above-mentioned student to fulfil the requirements for a thesis for the degree of Master in Public Administration at Stellenbosch University.

- It should take approximately **10 MINUTES** to complete this questionnaire
- **BOTH** sections must be completed
- Your responses in this questionnaire will be treated with **CONFIDENTIALITY** and **ANONYMITY**.
- Kindly exercise your **HONESTY** in completing this questionnaire.
- KSD Local municipality - King Sabata Dalindyebo Local municipality

Please consider each question carefully and rate the extent to which you **Agree** or **Disagree** with the items by crossing (**X**) in an appropriate box. Where 1 to 5 is equal to:

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Ward:

Suburb:

## Section A: Community Perception

NO	QUESTION	1	2	3	4	5
1	I know what an integrated development plan (IDP) is.					
2	The municipality's vision and mission is widely known by the people who live in the area.					
3	Electricity is rarely interrupted in the KSD Municipality.					
4	When electricity does get interrupted, I call the KSD Municipality helpdesk.					
5	The restoration of electricity supply occurs within 8 hours					
6	The KSD technical staff/technicians are knowledgeable and professional.					
7	I am able to purchase KSD Municipality Electricity Units conveniently close to my home.					
8	The KSD electrical network is well maintained/looked after.					
9	If I had a choice of another supply authority, I will still choose KSD Municipality as a service provider.					
10	I am satisfied with the overall service of the KSD municipality.					

Section B: KSD Municipality Quality of Service

NO	QUESTION	1	2	3	4	5
1	When electricity is interrupted, I know a number to call.					
2	When I call the call centre, I always get through and someone always answers the call					
3	When I call the call centre, they listen to my query and provide me with a reference number for my call.					
4	At the call centre, they always ask for my meter number to identify me.					
5	At the call centre, they ask me further questions and give instructions on what I should do to identify what the problem is, before they disconnect the call.					
6	The technicians respond to my call within a few hours.					
7	I constantly get notified on progress of my query.					
8	I am notified in advance when there are planned interruptions.					
9	I am able to lodge/submit electricity account queries to KSD Municipality and they get investigated.					
10	The KSD Municipality occasionally communicates to its customers about electricity safety, electricity tariffs and other electricity services					

**Comments:** .....

.....

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.....

.....

**Thank you for spending time and completing the questionnaire. Your assistance is appreciated.**

## Annexure 2: Letter to request permission to conduct research

20 Peter Carter Street  
Northcrest  
Mthatha  
5099  
13 October 2016

The Director: Technical Services  
King Sabata Dalindyebo Local Municipality  
Mthatha  
5099

Dear Mr Z Ngovela

I am a student doing my Masters in Public Administration with the University of Stellenbosch with student number 17987067. As a requirement to complete this Degree, I have to conduct a research study.

I am looking into conducting a research titled: **“An assessment of the challenges faced by King Sabata Dalindyebo Local Municipality in respect of the provision of electricity services”**.

The relative lack of research on municipal service delivery in the King Sabata Dalindyebo Municipality and the fact that I was born, grew up and studied within the boundaries of the above-mentioned municipality is the primary motivation for this study.

The intention is to look at the current state of electricity provision in the municipality and the effect it has to the community. I would like to come up with suggestions to improve the service delivery levels to the KSD residents

I grew up in Mthatha and am currently studying in Cape Town thus my research is for the benefit of my hometown. The familiarity of the people, the surroundings and the passion I have for the town will assist me in fully conducting this research and thus ensure the achievement of my Master's degree.

May I please be granted approval to conduct the research.

Regards



.....  
Indiana Gqwede  
083 585 9396

### Annexure 3: Permission Granted to conduct research

TELEPHONE :047-5014309  
:047-5014061



INFRASTRUCTURE DEPARTMENT  
OFFICE -217-2<sup>ND</sup> FLOOR MUNITATA  
SUTHERLAND STREET  
P. O. BOX 45  
MTHATHA  
5099

E-MAIL [luvuyos@ksd.gov.za](mailto:luvuyos@ksd.gov.za)

---

14 October 2016

20 Peter Carter Street  
Northcrest  
Mthatha  
5099

Dear Indiana Gqwede

**PERMISSION LETTER TO CONDUCT THE RESEARCH**

This is to acknowledge receipt of your request to conduct research at KSD Municipality.

I here grant you permission to conduct the research and you can consult should you need assistance.

Yours Faithfully

  
.....  
**Z.H. NGOVELA**  
**DIRECTOR TECHNICAL SERVICES**

## **Annexure 4: KSD Official Interview Questions**

### **Information Sheet for the Research Participants**

**Purpose of the Study:** I am a student doing my Masters in Public Administration with the University of Stellenbosch with student number 17987067. As a requirement to complete this Degree, I have to conduct a research study. I have chosen to conduct a study which focuses on the challenges faced by the King Sabata Dalindyebo (KSD) Local Municipality in providing electricity services.

**Study requirement from participant:** The study will require the participant to respond to the questions posed by the researcher/student.

**Reasons for taking part:** The participants who are chosen are those who are suitable and they qualify to provide the data for this study. In this case, you have been chosen because you are an official in the KSD Municipality and within an electricity department.

**Choice and Consent:** The participants will not be coerced into participating, but they will have to participate voluntarily. Participants will have to sign a consent form if they understand and are willing to participate in the study. The participants are allowed to withdraw before the study commences, if they wish to do so.

**Confidentiality:** The information obtained from the participant will be kept confidential and the participant's anonymity will be ensured.

**Results:** The results will be presented in the thesis. They will be seen by my supervisor and the external examiner. The thesis may be read by future students in the course. The study may be published in a research journal and results will be made available to participants should they want to see the results.

If you understand and agree to the above, please sign the consent form.

Consent Form

Full Name:

Designation:

I..... agree to participate in Indiana Gqwede's research study.

The purpose and nature of the study has been explained to me in writing.

I am participating voluntarily.

I give permission for my interview with Indiana Gqwede to be recorded.

I understand that I can withdraw from the study at any time, before it starts or while participating.

I understand that I can withdraw permission to use the data within two weeks of the interview, in which case the material will be destroyed.

I understand that anonymity will be ensured in the write-up by disguising my identity.

I understand that anonymous quotations from my interview may be used in the thesis and any subsequent publications if I give permission below:

Signed..... Date.....

## Interview Questions for the official

1. Does King Sabata Dalindyebo Local Municipality have electricity Maintenance and Refurbishment Master Plan?
2. Are there frequent electricity interruptions at this Local Municipality?
3. How many per month or per year?
4. What is the average duration of these interruptions?
5. As the Municipality, are you able to analyse trends in the interruptions?
  - a. What are the trends?
  - b. Where are the problem areas?
  - c. Are there any specific reasons?
6. What are the corrective actions taken by the Municipality to resolve the frequency of interruptions in the supply of electricity?
7. Does the Municipality have a dedicated call centre for electricity queries?
  - a. Is the call centre a 24-hour service or limited hour service?
  - b. Does the municipality have enough resources for the call centre? Human capacity as well as telephone lines?
  - c. Is the call centre accessible by SMS, email, telephone or walk-in?
8. What is the call centre's average response time?
9. Does the call centre use a reference numbering system?
10. What system does the call centre use to assign a call to a resource e.g. a computerized maintenance management system?
11. Does the call centre attendant interact with the customer before assigning the call to a resource?
12. Does the call centre follow up on long lead time outages to notify the customer that they are still attending to their query?
13. Is the Customer Master Data available and accurate?
14. Is there evidence of non-technical losses in the network?
15. Are there adequate resources at your disposal to effect appropriate maintenance of the electrical network?
16. Is the system of delegation enabling you to execute your functions properly in the provision of electricity services to the residents of KSD Municipality?

## **Annexure 5: KSD Business Interview Questions**

### **Information Sheet for the Research Participants**

**Purpose of the Study:** I am a student doing my Masters in Public Administration with the University of Stellenbosch with student number 17987067. As a requirement to complete this Degree, I have to conduct a research study. I have chosen to conduct a study which focuses on the challenges faced by the King Sabata Dalindyebo (KSD) Local Municipality in providing electricity services.

**Study requirement from participant:** The study will require the participant to respond to the questions posed by the researcher/student.

**Reasons for taking part:** The participants who are chosen are those who are suitable and they qualify to provide the data for this study. In this case, you have been chosen as a business stakeholder in the KSD Municipality.

**Choice and Consent:** The participants will not be coerced into participating, but they will have to participate voluntarily. The participant will have to sign a consent form if they understand and are willing to participate in the study. The participants are allowed to withdraw before the study commences, if they wish to do so.

**Confidentiality:** The information obtained from the participant will be kept confidential and the participant's anonymity will be ensured.

**Results:** The results will be presented in the thesis. They will be seen by my supervisor and the external examiner. The thesis may be read by future students in the course. The study may be published in a research journal and results will be made available to participants should they want to see the results.

If you understand and agree to the above, please sign the consent form.

Consent Form

Full Name:

Designation:

I..... agree to participate in Indiana Gqwede's research study.

The purpose and nature of the study has been explained to me in writing.

I am participating voluntarily.

I give permission for my interview with Indiana Gqwede to be recorded.

I understand that I can withdraw from the study at any time, before it starts or while participating.

I understand that I can withdraw permission to use the data within two weeks of the interview, in which case the material will be destroyed.

I understand that anonymity will be ensured in the write-up by disguising my identity.

I understand that anonymous quotations from my interview may be used in the thesis and any subsequent publications if I give permission below:

Signed..... Date.....

## Interview Questions for the Business Community

1. As the business community within KSD Municipality what is your view of electricity service delivery in the municipality in terms of reliability of electricity supply, the turn-around time to attend to requests/complaints/queries from business etc.
2. How accessible and responsive is the KSD Municipality to the local business community's electricity needs?
3. How is Local Economic Development impacted by the electricity service delivery in KSD looking specifically into rural development, new business investments, small and micro enterprise development?
4. Are you satisfied that the KSD Council has passed an adequate budget and has capacity for a reliable and efficient delivery of electricity services in the KSD Municipality?
5. In your view, how is the local business community influencing policy development in KSD relating to the provision of electricity services e.g. municipal by-laws, service delivery plans etc. Is the business community aware of the applicable policies regarding provision of electricity services?
6. What are the major developmental challenges that the KSD Municipality is facing from a business perspective?
7. Are there any flagship projects that the KSD Municipality is implementing that the business community is aware of to ensure improved reliability of the electricity supply and possibly address specific business community needs?
8. Does the KSD Municipality have adequate skilled personnel to deliver an efficient and reliable electricity service e.g. Engineers, Technicians, Electricians, etc.?
9. Are there any private public partnership initiatives/projects that the local business community is engaged with the KSD Municipality?
10. Are there pockets of excellence in the provision of electricity services by the KSD Municipality?

## **Annexure 6: KSD Councillor Interview Questions**

### **Information Sheet for the Research Participants**

**Purpose of the Study:** I am a student doing my Masters in Public Administration with the University of Stellenbosch with student number 17987067. As a requirement to complete this Degree, I have to conduct a research study. I have chosen to conduct a study which focuses on the challenges faced by the King Sabata Dalindyebo (KSD) Local Municipality in providing electricity services.

**Study requirement from participant:** The study will require the participant to respond to the questions posed by the researcher/student.

**Reasons for taking part:** The participants who are chosen are those who are suitable and they qualify to provide data for this study. In this case you have been chosen because you are Ward Councillor in the KSD Municipality.

**Choice and Consent:** The participants will not be coerced into participating, but they will have to participate voluntarily. The participant will have to sign a consent form if they understand and are willing to participate in the study. The participants are allowed to withdraw before the study commences, if they wish to do so.

**Confidentiality:** The information obtained from the participant will be kept confidential and the participants anonymity will be ensured.

**Results:** The results will be presented in the thesis. They will be seen by my supervisor and the external examiner. The thesis may be read by future students in the course. The study may be published in a research journal and results will be made available to participants should they want to see the results.

If you understand and agree the above, please sign the consent form.

## Consent Form

I..... agree to participate in Indiana Gqwede's research study.

The purpose and nature of the study has been explained to me in writing.

I am participating voluntarily.

I give permission for my interview with Indiana Gqwede to be recorded.

I understand that I can withdraw from the study at any time, before it starts or while participating.

I understand that I can withdraw permission to use the data within two weeks of the interview, in which case the material will be destroyed.

I understand that anonymity will be ensured in the write-up by disguising my identity.

I understand that anonymous quotations from my interview may be used in the thesis and any subsequent publications if I give permission below:

Signed..... Date.....

## Interview Questions for the Councillor

1. At a political level, as a Councillor, what is your view of electricity service delivery in the KSD Municipality?
2. What is the perception of the community with regard to electricity provision?
3. How is the community involved in the ward committees (Public Participation)?
4. Are you satisfied that the Council has passed an adequate budget for a reliable and efficient delivery of electricity services in the KSD Municipality?
5. Are the appropriate policies and by-laws in place regarding the provision of electricity services in the KSD Municipality?
6. Are the officials provided with adequate support to effectively perform their functions related to provision of electricity services?
7. Are the communities supportive of the municipality's service delivery projects?
8. Do the development plans and service delivery initiatives of the municipality address the needs of the communities in relation to electricity services?
9. Do you believe the Council is providing adequate oversight over the work of the municipal administration especially about provision of electricity services?
10. One of the functions of municipal councils is to charge service fees (in this case for the provision of electricity services), is the KSD municipality executing this function properly in your view?
11. Is there a coherent policy framework for the system of delegations to facilitate the execution of day-to-day tasks in order to ensure continued service delivery?
12. Do the KSD municipal committees, e.g. portfolio committees, exercise their functions properly? Do progress reports on the provision of electricity services get presented by officials and discussed by the committee? Are there any specific problem areas or trends identified by the relevant portfolio committee about provision of electricity services in KSD?
13. In the constituency/ward/consultation meetings, are there specific complaints regarding provision of electricity services that the communities raise and how are these addressed?
14. Are there motions that are proposed during the municipal council meetings related to the provision of electricity services?
15. Are there new electricity projects commissioned recently officiated by the municipal council/councillors in any ward within KSD in the last financial year? What was the project? How did the community benefit from it? Are there any

projects that are behind schedule/in backlog that you are aware of? Are you aware of the reasons for the delays in these projects? Are there any corrective action items in place to address the delays?