TOWARDS AN ENERGY SAVING CULTURE: AN ANALYSIS OF THE ESKOM ENERGY EFFICIENCY COMMUNICATION CAMPAIGN

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DECLARATION

I Eric Khoza hereby declare that the work I am submitting under the research topic 'Towards an Energy Saving Culture: An analysis of the Eskom Energy Efficiency Communication Campaign' is my own research project and has not been submitted anywhere else for obtaining an academic qualification.

December 2020

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ABSTRACT

This study presents an evaluation of how a sample of Eskom's residential customers decoded the communication campaign that was meant to encourage them to adopt a culture of energy saving in order to avert the total collapse of the national electricity grid.

The study was conducted in three district municipalities across Mpumalanga province. The data collection process, including the research instrument, was informed by the overall objectives of the study. This qualitative study consisted of a multi-stage approach in which one-on-one interviews and focus group interviews were the primary data collection methods.

The findings revealed that the campaign was generally a success, as the messages were understood by the participants who, in turn, implemented certain measures to ensure that the national power grid was stable. It was also established by means of the study that Eskom and government need to bring down the cost of compact fluorescent lights (CFLs) and ensure that proper consultations are prioritised at the beginning of campaigns.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ANNEXURES

ACRONYMS

FBE – Free Basic Electricity

CFL – Compact Fluorescent Light

SADC – Southern African Development Community

SABC – South African Broadcasting Corporation

Words used interchangeably in this study

Eskom / Power utility
Load shedding / power cuts / power shortages / power crisis / black-out
Electricity/ Power / Energy
Energy efficiency / Energy saving
Compact Fluorescent Light (CFL) / Energy saver
Incandescent light bulb / Traditional light bulb
Customers / Energy consumers / Energy users
Ghost vending / illegal electricity vouchers
Izinyoka / illegal connection
COP17/COP 17

CHAPTER 1: INTRODUCTION

1.1 Background and summary of the study

As the national electricity supplier, Eskom is faced with the responsibility of ensuring that South Africans have reliable electricity supply at all times. In the wake of countrywide power cuts, dating back to 2008, Eskom embarked on a campaign to educate South Africans to save energy in order to avoid a total electricity blackout. This study is an evaluation of Eskom's energy efficiency communication campaign. This study sought to investigate the following: were residential customers engaged or consulted in the initial planning stages of the project. To what extent did the recipients of the message of the energy saving campaign understand the message, and how did they receive or interpret the message?

The study took place in the three district municipalities of Mpumalanga (Ehlanzeni, Nkangala and Gert Sibande). Focus groups were conducted consisting of residential electricity customers from each of the district municipalities, who had been exposed to the campaign. One-on-one interviews were also conducted with an Eskom representative to find out how the campaign was planned, rolled-out and evaluated in relation to its own objectives.

1.2 Context of the study

The South African power utility, Eskom, has been under severe pressure for a number of years regarding the provision of electricity. According to Eskom Holdings' website on reserve margins (2014a), signs of Eskom's difficulty to cope with electricity demand in South Africa began to surface in January 2008 when rotational load shedding had to be introduced. Eskom, a state owned enterprise, currently "provides 95% of electricity in South Africa and 45% of electricity in Africa. The remaining 5% of electricity is supplied by Independent Power Producers (IPPs)" (Eskom Holdings, 2014b). There is clearly a great demand for electricity and this demand increases

annually as more and more South Africans are connected to the electricity grid. This is a great responsibility for Eskom. According to Eskom's website on surplus (Eskom Holdings 2018), Eskom's reserves were at a critically low level of 8% in 2008, against the international standard of 15%. The website acknowledges that 8% was insufficient to provide reliable supply to meet the customer demand. In an effort to respond to the challenge of electricity demand, Eskom undertook a number of projects. According to Eskom's website on the build programme (Eskom Holdings 2013), from an infrastructural and capacity perspective, Eskom started building the Medupi power station at Lephalale in Limpopo province in 2007. This is a six-unit power station that will produce 4 800 MW upon completion. Eskom's media statement dated 3 April 2017 (Eskom Holdings 2017c), announced that Medupi unit 5 began to contribute power to the grid on 17 December 2017. The statement further revealed that unit 6 of Medupi had already been contributing power to the grid since 23 August 2015. A subsequent Eskom statement dated 01 June 2017 (Eskom Holdings 2017d), confirmed that Medupi Unit 4 was synchronised into the national grid on 31 May 2017.

Another capacity expansion initiative by Eskom was the 4 800 MW Kusile power station located near Witbank in the Mpumalanga province. The six unit Kusile power station construction work began in February 2008. Eskom's media statement dated 14 March 2017 (Eskom Holdings 2017b) revealed that Unit 1 of Kusile began to contribute full load of power on 10 March 2017, while Unit 2 and Unit 6 were still under construction at that time. It was clear that Eskom has made considerable progress on building power stations as a measure to increase its capacity in order to meet the growing demand for power supply.

Eskom's build programme budget is estimated at R385 billion by 2013 and Eskom aims to double its capacity from 40 000 MW to 80 000 MW by 2026 (Khobai 2013: 42), but its budget would have to rise to a trillion in order to achieve this. As an interim measure, Eskom also initiated load shedding in cases of severe pressure on the supply grid.

Another avenue that Eskom explored was to encourage South Africans to save and use electricity wisely. This took the shape of a national energy saving campaign in

2008. Eskom's energy saving campaign carried out via SABC television in the form of power alerts, which showed the updated status of electricity consumption, requesting customers to reduce load. The SABC radio, newspapers, SMSes, stakeholder engagements and customer education forums formed part of the campaign. According to Van der Merwe (2010), writing in Engineering News, a R1.23 billion budget was set aside to implement the campaign and this included 40 million compact fluorescent light (CFL) bulbs being distributed nationwide resulting in a saving of 2 372 MW in the evening peak during 2010.

This study sought, therefore, to analyse the energy saving campaign as well as the reception or response thereto by the South African community. South African adults in three district municipalities in Mpumalanga province (Gert Sibande, Ehlanzeni and Nkangala) were targeted for this study. Mpumalanga has 11 power stations and, as a result the residential customers have been aggressively exposed to the energy saving campaign, particularly the customer education forums. The power utility's electricity generation footprint, coupled with the strong presence of the energy efficiency campaign, made Mpumalanga an ideal province to conduct the study. The study targeted people living in townships, rural and urban areas (black, white, coloured and Indian). In achieving the objectives of the study, the researcher drew from participatory communication theories in terms of analysing the campaign and its roll out and Stuart Hall's encoder/decoder theory in an effort to understand how the audiences received the campaign.

1.3 Research problems and aims

- **Research aims and objectives**

Given the time, effort and resources that Eskom will spend building new capacity while balancing the demand and supply of electricity currently, and the efforts focused on the energy efficiency campaign, it is worth studying how Eskom's residential customers have responded to the campaign to save electricity thus far.

Eskom launched the energy efficiency communication campaign with the aim of influencing customers to be energy efficient in order to avoid power cuts. The study analysed the roll-out of the campaign as well as the reception of the messages of the campaign by the target audiences.

The objectives of the study were to:

- Determine the attitudes, opinions, knowledge levels and reception of the energy efficiency campaign by Eskom customers
- Determine what the residential customers have learnt from the campaign and the electricity saving measures they have implemented.
- Assess the energy efficiency campaign against the theoretical framework of participatory communication theories.
- Make recommendations on the outcomes of the research to Eskom

1.4 Research methodology

1.4.1 Research design

The study adopted a qualitative research methodology. Within the paradigm of qualitative research, the study assumed a phenomenological approach. De Vos *et al.* (2005: 270) argue that a phenomenological approach aims to understand and interpret the meaning that subjects give to their everyday lives. “Phenomenologists are concerned with understanding social and psychological phenomena from the perspectives of the people involved” (Welman, Kruger and Mitchell 2005: 192). Therefore, the participants’ experience of a phenomenon was examined in this study. The phenomenological approach was relevant because the study concerned itself with the target audience attitudes, beliefs and experiences of the energy saving campaign and their behaviour in as far as saving electricity is concerned.

The overall study took the form of an audience analysis. Within the audience analysis the study used a number of focus groups. The focus group participants discussed what they knew about the campaign and their reaction towards it.

1.4.2 Limitations of the study

There were financial, time and human resource constraints in conducting this study. Research funding was limited to R10 000. Since the study was qualitative in nature and focused on a relatively small sample size, the results are not generalizable. Therefore, the findings of the study are limited to the individuals who participated in it. Judgemental sampling limits sample representativeness and external validity.

1.5 Structure of dissertation

Chapter 1

This chapter provides an introduction and background to the study as well as an overview of the research problem. The objectives of the study are also outlined in this section.

Chapter 2

This chapter presents the theoretical framework that informed the study. The theoretical framework consists primarily of development communication theory as well as a discussion of Stuart Hall's encoder/decoder theory.

Chapter 3

This chapter provides an overview of the research methodology. The method utilised to gather data that will help provide answers to the research objectives and questions is discussed in detail.

Chapter 4

This chapter provides an overview of the data analysis and the interpretation of the results. Data obtained during field work is analysed in order to provide relevant responses that help to deal with research questions and ultimately reach a finding.

Chapter 5

This chapter presents the findings and a critical discussion of the findings. This chapter enables the researcher to determine whether or not the objectives of the study have been met and all research questions have been addressed.

Chapter 6

This chapter offers conclusions and recommendations with a view to highlighting the most suitable approach to promote the energy efficiency campaign.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter presents a literature review sourced from academic books, academic journals and online materials. This chapter deals with the theoretical framework of the study ranging from communication campaigns, development communication, participatory communication and reception theory. The above theoretical concepts will be explained in detail in order to understand how campaigns are developed and implemented with a view to achieving a desired change in behaviour. This chapter will also review similar studies conducted in an attempt to change consumer's behaviour towards saving energy. The literature review served as a guideline for the practical field work that was undertaken by the researcher.

2.2 Contextualisation

2.2.1 Brief background of Eskom

Eskom as a state utility has the responsibility to provide power to South Africans. This section of the chapter examines how Eskom was established, has been managed, and has evolved. The discussion is divided into pre-democracy era and post-democracy era for a better understanding of Eskom's mandate and transitions in relation to the two eras. The background also deals with the challenging time faced by Eskom in the form of load shedding and how Eskom is responding to this challenge.

2.2.1.1 Eskom pre-democracy era

According to the Eskom annual report (Eskom Holdings 2011: 02) Eskom, then known as the Electricity Supply Commission (ESCOM), was established in South Africa in 1923. "Eskom was responsible for the establishment and maintaining electricity supply undertakings, on a regional basis, for the whole of South Africa. Electricity was to be supplied efficiently, cheaply and abundantly to government departments, railways and

harbours, municipalities and industry." (Eskom Holdings 2013: 6). The report further highlighted that the power utility completed a successful build programme between the 1960 and 1990 amounting to 35GW.

Eskom's 90th heritage publication (Eskom Holdings 2013) highlights that Independent Power Producers (IPPs) played a major role in the early developmental stages of the electricity industry. The heritage publication points out that in the past there were various electricity undertakings in South Africa, but the Power Act of 1910, which was passed by the colonial government defined electricity as a public service, which paved a way for government to take over the private electricity undertakings. This means power producers were operating independent from government until the state passed the Power Act in 1910. According to the publication, Eskom was formed in 1923, in accordance with the Electricity Act 42 of 1922, which was passed by Parliament with a mandate to provide cheap and abundant electricity while ensuring that the provisioning of electricity is regulated, controlled and run by a parastatal. At that stage, ESCOM did not provide electricity to the poor people of the country who were mainly blacks in rural areas and townships.

Eskom governance

Eberhard (2004: 1-3) indicates that ESCOM was controlled by Commissioners appointed by the Minister and further confirms that Eskom gradually took over the ownership of private power producers. This led to the notable take-over of Victoria Falls and Transvaal Power Company in 1949. The heritage publication affirms that the formation of ESCOM saw the establishment of a consolidated electricity industry to drive industrialisation and development in general.

ESCOM power station construction

According to Eberhard (2004), ESCOM built a number of power stations in response to increasing electricity demand from the mines, the mining towns, the migration of people moving from rural to urban areas in search of better labour opportunities and economic growth in general. The power stations built by Eskom in the 1920s reflected a need for economic opportunities to be spread in the country and as a result Salt River power station was built in Western Cape, Sabie River Gorge power station in Mpumalanga and Colenso power station in KwaZulu-Natal. Some of the major power

stations built by Eskom around the 1940s and 1960s were the Klip power station in 1940, Taaibos and Wilge in 1954, Highveld in 1959, Ingagane in 1963, with Komati power station, the largest of them all with an installed capacity of 1 000MW, being built in Mpumalanga.

ESCOM funding for power station construction

Eberhard (2004: 1) explains that the government provided financial guarantees for ESCOM to build power stations because it was expensive and electricity was seen by the state as an important driver of industrialisation.

Figure 2.1: The first Eskom Logo adopted in 1923
Source: Eskom Holdings (2013)

According to Kenny in Theunissen (2006: 12), Eskom in the pre-democracy era acted autonomously, which enabled Eskom to build power stations in time, within budget and to produce cheap electricity. Kenny indicates that Eskom acted like a ministry with its own laws during the pre-democracy era. Eskom was owned by the state, reporting to government, but the pre-democracy government never imposed strict instructions such as determining when and how should Eskom conduct its programme of building power stations. Kenny further argues that during the pre-democracy era Eskom appeared to carry its electricity supply mandate very well. Theunissen (2006: 12) reveals that Eskom had much needed support from government which enabled Eskom to borrow money to fund its capacity expansion programme at a very low interest rate.

Gigaba, in his capacity of then Minister of Public Enterprises, stated in his message on the occasion of Eskom's celebration of its 90th anniversary on 1 March 2013

(Eskom Holdings 2013: 3), that the provisioning of electricity in 1923 was for the small minority of South African society and that the majority of South African citizens did not have access to cheap, reliable and efficient electricity. Eskom acknowledges that at the time of the democratic transition in 1994, only 40% of the South African population had access to electricity with the majority of those being white people (Eskom Holdings 2013: 31).

Gaunt (2008) posits that political pressure began to mount on government during 1970s and 1980s and as a result Eskom extended its electrification to cover farms, rural service centres, support agriculture and develop rural areas. Bekker *et al*. (2008: 3131) indicate that Eskom began to accept the responsibility of electrifying households in the 1980s and mid 1990s and further highlight that there was a general belief that the electrification of households was going to compensate for Eskom's overbuilt generation sector that had a massive surplus electricity. ESCOM was transformed and officially called Eskom in 1987.

Figure 2.2: The second Eskom Logo adopted in 1987
Source: Eskom Holdings (2013)

2.2.1.2 Eskom post-democracy era

Eskom regulation

The Eskom annual report of 2011 (Eskom Holdings 2011: 32) stated that Eskom is regulated by the National Energy Regulator of South Africa (NERSA) in accordance with the Electricity Regulation Act (4 of 2006). The Act provides that Eskom should generate, transmit and distribute electricity in a manner that is efficient, effective, and sustainable in order to drive development for South Africa and the Southern African Development Community (SADC) region, by ensuring investment and universal access to electricity, while ensuring diverse energy sources and energy efficiency. Eskom's Annual report (Eskom Holdings 2011) further indicates that NERSA has the power to regulate imports and exports of electricity, determines electricity prices and tariffs and the conditions under which electricity should be sold. The report further reveals that Eskom has a nuclear licence from the National Nuclear Regulator, which regulates the operation of its nuclear power station and related matters.

It can be observed from the above discussion that Eskom is regulated differently in the post-democratic dispensation era. In post-democratic dispensation, Eskom has taken a posture of a developmental organisation that seeks to provide electricity for all the citizens of the country and the region. In the pre-democratic era, electricity was mainly for industrialisation and a few privileged individuals.

Eskom electricity supply status

"Eskom currently supplies 95% of Electricity in South Africa and 45% of electricity in Africa. The remaining 5% of electricity is supplied by Independent Power Producers (IPPs)" (Eskom Holdings 2014a). The Eskom website further reveals that its total generating capacity amounts to 42 000MW, generated from 27 power stations throughout the country, 13 of which are coal-fired power stations, mostly found in Mpumalanga. The Eskom website also indicates that coal is its primary/main source of energy. The Eskom annual report (Eskom Holdings 2011: 2) highlights that Eskom is ranked amongst the top 20 utilities in the world, while Pelkman and Veenswijk (2008: 42) recognise Eskom as Africa's leading electricity company. The Eskom 2011 annual

report further reveals that Eskom buys and sells electricity in the Southern African Development Community (SADC) region.

Pelkman and Veenswijk (2008: 1) point out that the abolition of apartheid compelled the South African government to begin to deal with the challenges of social inequalities, and create a political, social and economic balance that reflects the population of the country. In transforming the South African society, access to electricity was given attention and that meant Eskom had to transform in order to align with the democratic dispensation.

In 1990, as presented by Davidson *et al*. in Ziramba (2008) Eskom undertook an extensive electrification programme that saw 2.8 million homes electrified between 1994 and 1999 and the connections are expected to reach 11.4 million by 2025. Peters, Minister of Energy at the time, wrote in the introduction to her Department report "A survey of energy-related behaviour and perceptions in South Africa: the residential sector" (South Africa, Department of Energy 2013: iii) that the South African government has taken a stand to prioritise the universal access of electricity across all races and classes of its citizens. The report points out (2012: 231) that from 1994 to 2012 the South African government increased the electricity connections to households from 30% to 87% and continued in its mission to achieve 92% connections by 2014. Statistics from the national census (2011: 61) indicate that 84% of 51.7 million South Africans have access to electricity compared to 58% households in 1996.

It can be argued from the above discussions that political transition has played a major role in transforming South African society, particularly access to electricity as a basic need for black people in townships and rural areas as compared to the past where electricity was meant for industry and a few privileged citizens of the country.

Figure 2.3: Eskom logo introduced in 2002
Source: Eskom Holdings (2013)

2.2.2 Eskom power shortages – national power system under strain

Eskom was generally praised for its intensive electrification programme, but the connections of many households and other supply related factors put the power utility under severe power shortages. A discussion on Eskom's power shortages is presented in the section below.

The National Treasury (South Africa, National Treasury 2011: 144) indicates that South Africa had an abundance of electricity between the 1970s and 2000s and Eskom was able to supply electricity at a very low price, but due to the growth of the economy in 2006, the power utility could not cope with the national demand for electricity.

Ziramba (2008) highlights as well that since the electrification of households increased, electricity demand in the residential sector increased as well. As the universal access of electricity for all gained momentum, Eskom was met with power constraints challenges. Bekker *et al*. (2008) state that Eskom had a huge reserve margin of 55% at the beginning of an intensive national electrification programme in the 1990s due to the overbuilding of power stations in the 1980s.

Gaunt (2008) states that Eskom began to slow down the construction of power stations in the late 1980s. The huge reserve margin has since collapsed due to the high demand for electricity because of an intensive electrification programme and developmental needs of the country, which are in their nature electricity intensive.

The Department of Public Enterprise report of 2007 (South Africa, Department of Public Enterprise 2007: 06) indicated that Eskom's reserve margin had been on a steady decline over the years. The reserve margin declined 25%, 20% and 16% in 2001, 2003, and 2005 respectively. Eskom's annual report of 2008 (Eskom Holdings 2008: 47) revealed that Eskom's reserve margin was at 8%, against the international standard of 15%. According to Eskom's website on reserve margins (Eskom Holdings 2014b), Eskom began to implement rotational load shedding as a way of protecting

the national grid from a total collapse. According to African Eyewitness News (2015), Eskom encouraged the citizens of the country to reduce consumption while it continued with planned maintenance for the aging power generating fleet.

Eskom permission to build versus government's attempt to privatise the generation sector (IPPs)

According to Kenny and Etzinger in Theunissen (2006: 12), the Eskom power shortages were predictable as far as 10 years previously, but the government instructed Eskom not to build any more power stations. Kenny and Etzinger confirm that government continued with the deregulation policy and was persistent in its quest to attract independent power producers (IPP's) to enter into the South African energy market without success, resulting in Eskom being granted permission to build power stations late in 2004. The government simply wanted to achieve the privatisation of the generation sector of Eskom. Gcabashe (cited in Pelkman and Veenswijk 2008: 43) indicates that Eskom had last built a power station in 1985, whilst the demand for electricity has been on the rise since 1994. It is evident that the demand was going up while there were no measures implemented to deal with the imbalance of demand and supply.

Pelkman and Veenswijk (2008: 43) argue that signs of Eskom struggling to deal with power shortages were visible in November 2005 when Koeberg, South Africa's only nuclear power station, had a break down and businesses in Cape Town experienced a huge impact.

It can be observed from the above discussions that the reluctance of IPPs to participate in the energy market and government's late granting of permission for Eskom to build new power stations drove the nation into a power crisis. The South African power crisis was foreseen well ahead of time, but measures to deal with the situation were implemented too close to the crisis point, making it impossible to avoid load shedding.

In response to the increasing strain on the power system due to increased demand, the power utility embarked on measures to deal with the situation.

Implementation of load shedding (demand exceeding supply)

Defining load shedding

With the introduction of power cuts in South Africa, various sectors of society, business and life in general had to learn about and understand what load shedding was as it became a reality in late 2007 and early 2008. Load shedding is defined below and a discussion on how load shedding works is provided.

According to Eskom (Eskom Holdings 2016), load shedding is when there is not enough electricity available to meet the demand from all Eskom's customers. In such cases it is necessary to interrupt supply to certain areas because this is an effective way to manage power cuts in a rotational way and, it is done as a last resort to avoid a total national collapse of power supply.

Eskom's annual report (Eskom Holdings 2008: 46) reveals that load shedding was implemented between October 2007 and February 2008 in order to protect against a total blackout throughout South Africa. The report further highlights that municipalities also carried out load shedding on their customers in an effort to assist Eskom to manage the national power shortages because the electricity sold by municipalities to its customers is generated by Eskom. The Eskom (Eskom Holdings 2008) report states that electricity cannot be stored in excess for future use. As a result, Eskom asked the large power users to voluntarily reduce load while also utilising additional sources of energy such as hydro, gas turbines and costly diesel generators during peak times when the demand is high, to supplement coal and nuclear sources of energy.

Eskom continues to supply Southern African Development Community (SADC) region

The Eskom annual report (Eskom Holdings 2008: 48) reveals that Eskom was being criticised for supplying neighbouring countries (SADC region) while South Africa was having electricity challenges. Eskom's response was that immediate halting of supply

to neighbouring countries would have a negative impact on the regional economy and pointed out that those countries were also subjected to a 10% base load reduction and were expected to implement manual load shedding when the power system was under pressure. The Department of Public Enterprise (South Africa, Department of Public Enterprise 2007: 7) indicated that due to the power shortages Eskom was investigating the possibility of importing power from neighbouring countries to address the situation. Load shedding is conducted according to schedules available at www.eskom.co.za and www.poweralert.co.za.

NERSA enquiry into Eskom's load shedding

As the national regulating body of energy in South Africa, NERSA had to dig deep into Eskom's operations in order to find facts around load shedding and what measures the power utility had put in place to deal with the power cuts.

The 2008 NERSA (National Energy Regulator of South Africa [NERSA] 2008: 04) inquiry into the national electricity supply and shortages found that there were five incidents of load shedding in November 2007, four in December 2007 and 14 in January 2008. These 23 days of load shedding resulted in R50 billion worth of loss due to reduced economic activity. Bisseker (2015) concurs with NERSA that load shedding was very disruptive and had a severe impact on business operations, traffic, industry, mining operations, commerce, hospitals and the daily lives of South Africans. Eskom's annual report (Eskom Holdings 2008: 49) confirmed that load shedding was very disruptive; hence Eskom offered an apology to its customers.

According to the Treasury (South Africa, National Treasury 2011: 144), Eskom had a slight breather when the global recession began in 2008 which resulted in a decrease of economic activity by 1.7 % in 2009.

It is clear that Eskom has a huge responsibility to ensure the security of supply for the citizens and the economy by managing the demand and supply of electricity throughout South Africa and, not only in this country but in the SADC region as a whole.

Eskom build programme – capacity expansion

Eskom embarked on a massive build programme to increase capacity. Eskom started a process to revitalise and bring into the national grid some of the old and unused power stations.

Eskom recommissioning old power stations

As Eskom ran deep into a power crisis, the power utility had to begin with the capacity expansion programme after being given permission to build additional power stations in 2004 by the South African government. Zulu (former Eskom National Spokesperson) in Theunissen (2012:14) assured the citizens of the country when he indicated that Eskom had recommissioned Camden, Grootvlei and Komati power stations in order to bring 3 500 MW to its network. Zulu further confirmed that Eskom would build new power stations, one in Limpopo (Medupi) and one in Mpumalanga (Kusile).

Eskom build programme

According to Eskom's website on the build programme (Eskom Holdings 2007a), the 4 800 MW six unit Medupi power station, was started in Lephalale (Limpopo) in 2007. Another sister power station under construction is the 4 800 MW six unit Kusile power station near Witbank in Mpumalanga. Medupi unit six was synchronised on 02 March 2015 to start contributing power to the national grid, while good progress has been made to speed the commissioning of Kusile unit 1 despite multiple counts of labour disputes that delayed the building of the power stations.

The Department of Public Enterprise (South Africa, Department of Public Enterprise 2007: 09-10) stated that Eskom was also investing on building a four unit, 1334 MW Ingula Pumped Storage Scheme in KwaZulu-Natal, which started to be constructed in 2005. According to Eskom's media desk (2016), unit two of Ingula was synchronised on 25 March 2016. Eskom's media desk (2017a) announced in a statement that all 4

units at Ingula pumped storage scheme had been commercialised and would produce a total of 1 332 MW.

Funding for Eskom's build programme

Eskom Holdings (2007b) revealed that Eskom's investment in the capacity expansion programme in order to double its capacity from 40 000 MW to 80 000 MW by 2026 was estimated at R343 billion. Eskom's annual report of 2008 (Eskom Holdings 2008: vii) indicates that government as a sole shareholder of Eskom provided R60 billion of the finance in the form of a loan, while other funds were raised via tariff increase and loans from other funders. Government also assisted Eskom to acquire the remaining funding from other funders by providing Eskom with government bond guarantees meaning that if Eskom failed to pay the debt, government would pay on behalf of Eskom. According to the Department of Public Enterprise (South Africa, Department of Public Enterprise 2007: 7) Eskom would fund 50% of the capital expenditure requirements from retained earnings, with the balance financed from debt.

Etzinger in Theunissen (2012: 13) submits that it takes seven to eight years to build a power station, while the Eskom annual report in 2008 (2008: 64) indicates that it would take 8 to 10 years because the process involved site selection, awarding of contracts, site establishment, construction and commissioning. The implication of such a lengthy period to build a power station was that South Africans could not in a real sense have a reliable and continuous supply of electricity without the possibility of load shedding given the electricity shortage in the country at the time. The section that follows on energy efficiency will outline in detail how Eskom embarked on a campaign to educate citizens to save electricity as one of the many ways to avoid load shedding

2.3 Climate change

As the world becomes increasingly aware of the negative effects of emissions, power utilities around the world begin to look for various ways to reduce greenhouse emissions and Eskom is no exception. As Eskom builds new power stations to increase its capacity, it (Eskom) has to strive to diversify its sources of energy in order

to avoid impacting the environment negatively (climate change). Eskom is heavily reliant on coal to make electricity, and the build programme presents Eskom with an opportunity to use other sources of energy (diversification).

The Eskom annual report of 2011 (Eskom Holdings 2011: 16) suggested that South Africa had no obligation to reduce greenhouse emissions, but was committed to conduct its operations in a way that supported global efforts to combat climate change while balancing the economic and societal electricity needs of South Africa. The 2011 annual report further presents Eskom's six points for climate change:

- Diversification into technologies other than coal.
- Energy efficiency initiatives.
- Innovation through research.
- Demonstration and development.
- Adaptation to the negative impact of climate change.
- Investment through carbon market mechanisms.

In the official opening address, for COP 17 in Durban 2011, South Africa, Zuma (2011) highlighted that, developed countries must lead the global efforts to reduce greenhouse gas emissions. It is commitments like the ones made during COP17 that propels Eskom to diversify its sources of energy when constructing power stations in future in an attempt to cut down or eliminate greenhouse emissions. Bad weather patterns have a potential to spark natural disasters, which can affect the quality of life for people in general and can adversely affect the quality of electricity supply. It can be noted from the above discussion that government and Eskom are aware of the negative effects of climate change and are making efforts to address the matter when it comes to electricity generating mechanisms.

According to Greenpeace South Africa (2011), nuclear is dangerous and coal is not environmentally friendly as it causes pollution. Greenpeace is campaigning for renewable sources of energy. A number of protests have been staged by this activist organisation against the use of coal as a primary source of energy. Amongst other concerns Greenpeace is challenging Eskom on matters relating to the costs related to the building of a nuclear power station, dangerous radioactive waste, the non-

renewable nature of nuclear sources of energy and the fact that it takes less time to build a renewable energy capacity compared to nuclear which takes at least 10 years to build.

Figure 2.4: Greenpeace protesting at Kusile power station construction site near Witbank
Source: Greenpeace South Africa (2011)

Nuclear in South Africa

The energy shortages presented Eskom with an opportunity to look at other sources of energy when building new power stations. The Eskom annual report (Eskom Holdings 2009:68) indicates that government is taking the lead regarding the building of a new nuclear power station due to the magnitude of the nuclear building project and huge cost implications that come with building a nuclear power station. Investigative journalist Faull (2014) indicates that South Africa is aiming for 9 600 MW nuclear energy at a cost of not less than R800 billion. This type of investment is another way of diversifying South Africa's primary sources of energy that could bring an end to over reliance on coal.

Koeberg power station

According to Eskom (Eskom Holdings 2016), Koeberg power station in Cape Town is the only nuclear power station in South Africa. Eskom reveals that Koeberg began to

contribute 1 800 MW into the total generating capacity in 1985. Faull (2014) argues that Koeberg power station steam generators have aged and need replacement. Faull further indicated that Eskom aims to install six steam generators at Koeberg by 2018.

According to an article published online by Masondo (2011), the environmental activist group Greenpeace condemned the government for allowing nuclear power stations to be built in South Africa, citing the Fukushima nuclear disaster that took place in Japan in 2011.

It is clear that investing in nuclear power generation partly addresses Eskom's plan of diversification of technologies other than relying on coal when building new power stations. Eskom should however take the learnings of the Japan 2011 Fukushima nuclear disaster and prioritise the replacement of the six old generators at its Koeberg nuclear power station as they present a safety risk. The section that follows presents some highlights of the Fukushima nuclear disaster.

Figure 2.5: Koeberg power station
Source: Eskom Holdings (2016) By Eskom

Fukushima power station nuclear disaster

According to Morris-Suzuki *et al.* from Greenpeace (2012: 11), Japan was hit by an earthquake and Tsunami which led to a nuclear disaster in 2011. The authors indicate that the earthquake and tsunami exposed a weakness in the regulation and

management of Japan's nuclear power industry. The problems of Fukushima Daiichi's exposure to natural disasters were evident some 35 years before the accident, but nothing was done to prevent this disaster from happening. Morris-Suzuki *et al*. (2012: 9) warn that nuclear can never be safe and that nuclear generation should be phased out.

Morris-Suzuki *et al*. (2012: 37) identify the four main contributors to the radioactivity from the three nuclear reactors in Fukushima as follows:

- Design and technical issues.
- Governance.
- Management and regulatory weaknesses.
- Systemic failure of current nuclear safety assessments

Morris-Suzuki *et al*. (2012:29-33) further state that the electricity supplier, Tokyo Electric Power CO (TEPCO), was faced with massive compensation claims including costs to decommission the plant's reactors projected to reach $500bn to $650bn. The report further alludes that these amounts prompted the Japanese government to intervene to support TEPCO, but the victims of Fukushima never received enough compensation, as the costs were very high.

Figure 2.6: Fukushima Nuclear Power Station radiation disaster in Japan 2011
Source: Morris-Suzuki *et al*. (2012)

2.4 Energy efficiency campaign

One of the measures used by Eskom to respond to the power challenges was that of educating the nation and encouraging electricity users to use electricity sparingly.

Due to the massive power cuts late in 2007 and in January 2008, Eskom introduced a campaign to educate the citizens of the country on how to save electricity while new power stations were being built. The campaign began in January 2008 and its aim was to change the behaviour of South Africans to begin to utilise electricity sparingly. The campaign was implemented in the form of many related projects which will be presented below. For the purpose of this study, the researcher was more interested in finding out how the customer education forums were conducted and how residential customers responded to the interventions.

2.4.1 Implementation of the campaign and tactics

According to Eskom's website (Eskom Holdings 2008) the campaign began by informing South Africans through the media about the national power constraints. Energy saving tips formed part of the messages issued via SABC television, SABC radio and newspapers. Another medium that was utilised was SMSes which carried the same energy saving tips. Eskom power alerts were shown on SABC TV stations and radio to communicate the state of electricity supply throughout South Africa in real-time.

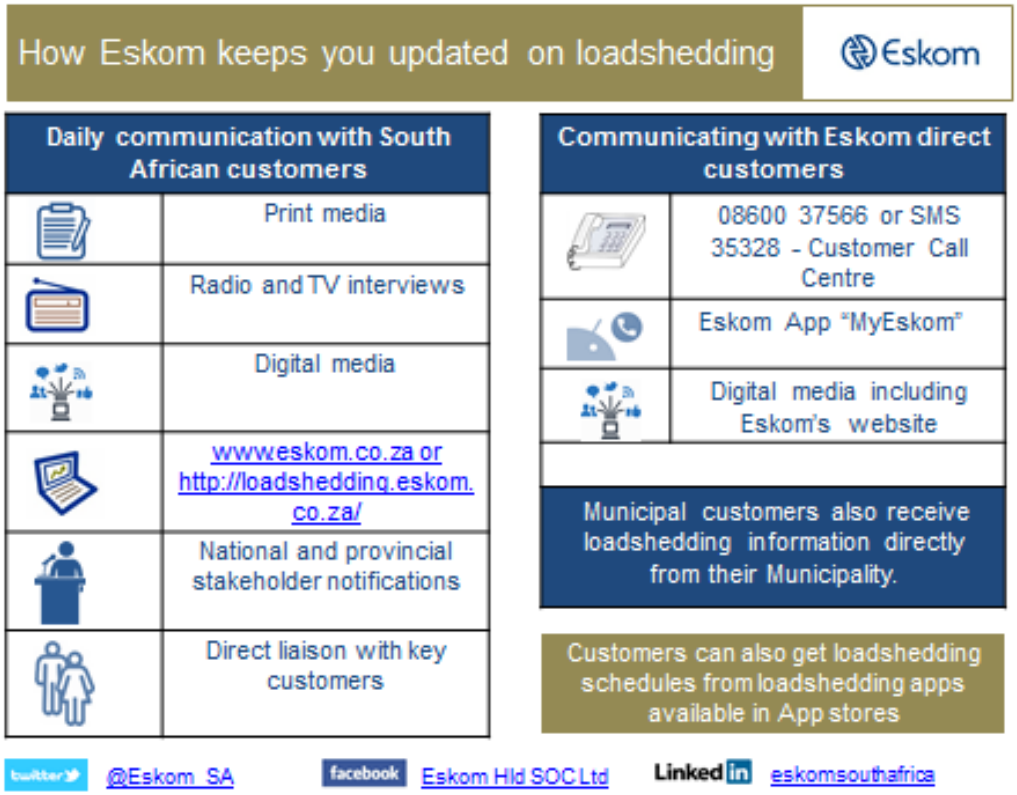

Figure 2.7: Load shedding Communication channels
Source: Eskom Holdings (2019)

2.4.1.1 The power alert

Electricity usage is usually high during peak periods starting from 07h00 to 10h00 and from 18h00 to 21h00. Electricity usage is highly dependent on human behaviour and as a result a national power alert was developed by Eskom in 2006 to facilitate residential demand response. The objective of the power alert is to appeal to residential household consumers of electricity to change their consumption patterns based on power alerts broadcast on national television (SABC 1, SABC 2 and SABC 3). The success of this approach was dependent on members of the public responding to real-time appeals to save electricity (Poweralert.co.za, n.d.)

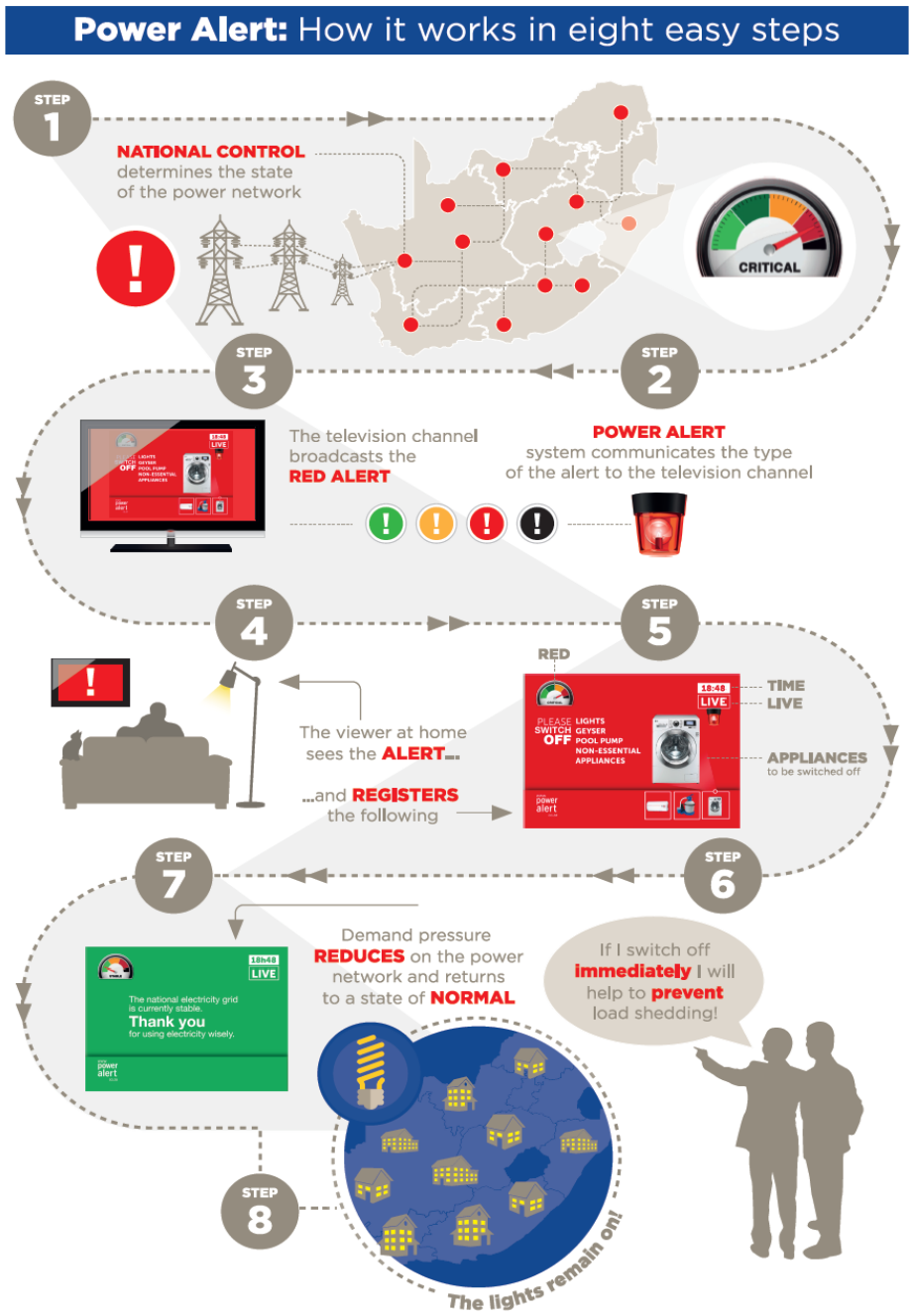

Figure 2.8: How the national power alert works.
Source: Poweralert.co.za (n.d.)

2.4.1.2 Distribution of compact fluorescent lights

Another initiative, according to Van der Merwe (2010) writing in *Engineering News* was that of distributing compact fluorescent lights (CFLs) to replace the traditional light bulbs as CFLs use less electricity. Van der Merwe indicates that R1.2 billion was set aside for the energy efficiency campaign as a whole and over 40 million CFLs were

distributed nationwide resulting in a saving of 2 372 MW in the evening peak in 2010. According to the Eskom annual report (Eskom Holdings 2008: 71) the energy efficiency programmes aimed to achieve a saving of 3 000 MW in 2012 and 8 000 MW in 2025.

Eskom in collaboration with the South African government took the energy saving campaign to another level in 2011. The energy saving campaign gained a face-lift in 2011 when it collaborated with the “49M” campaign.

2.4.1.3 The 49M campaign

In 2011, Eskom intensified the call to save energy by introducing a behaviour change campaign called 49M. “49M is an Eskom initiative, endorsed by government and business partners, spurring an urgent need for 49 million South Africans to embrace energy savings as a national culture, and joining the global journey towards a sustainable future” (Eskom 49M n.d.). The key messages of the 49M campaign are “Remember your power” and “If you are not using it switch it off”. This project, like many other related tactics is not a new campaign, but a new way of advancing the call for the people of South Africa to continue saving electricity.

According to Eskom’s 49M Campaign, a saving of 670 MW was achieved through the broadcasting of the power alert on television during the 2010 FIFA World Cup. The NERSA annual report (2008: 32) highlights that the June 2008 Electricity Distribution Maintenance Summit held under the theme ‘Towards a sustainable electricity distribution industry’ resolved that attention should be given to electricity infrastructure supplying the 2010 FIFA World Cup. This assisted many stakeholders to become more meaningfully engaged and focused on initiatives that were meant to ensure the security of supply during the 2010 FIFA World Cup tournament.

The Eskom Media Desk (Eskom Holdings 2016) reported that up until 2016 Eskom successfully distributed 64 million energy-saving lamps throughout South Africa since 2006, and that Eskom planned to roll out 10 million CFL’s between November 2015 and March 2017. This door-to-door campaign involved customers exchanging their old

style globes for CFLs for free as CFLs save up to 80% energy and millions of people in the world are switching to this energy saving lamp. The Energy Survey conducted by Department of Energy (South Africa, Department of Energy 2013: 187) found that Eskom's 49M campaign was a step in the right direction to promote an energy saving culture amongst South Africans.

It can be noted from the above presented facts that the 49M campaign was not a new campaign or a separate campaign, but a face-lift of an existing campaign to save energy which promoted a consolidated call for all citizens to save electricity.

Ozinsky (writing in Cape Info.Com, 2006) suggested a few tips that can be implemented that require very little behaviour change and no costs at all:

- Turn the geyser temperature down to 60° C.
- Use less hot water.
- Switch off equipment when not in use.
- Reduce pool pump operating hours.
- Reduce excessive heating or cooling.

There are many energy efficiency tips available for residential customers that can be accessed via www.eskomdsm.co.za.

According to Eskom's website (Eskom Holdings 2014c) Eskom conducted a number of customer education forums to educate residential customers about saving energy. It was further revealed by Eskom that the campaign was a national initiative that was rolled-out continuously in all the nine provinces. Tips on how to save energy such as using CFLs, etc. were shared by Eskom. Customers were advised to act promptly and switch-off non-essential appliances when the power alert appeared on televisions or when information about power constraints was shared via other forms of media. This helped Eskom to achieve the load reduction needed at a particular moment but, ultimately Eskom's goal was to change the behaviour of South Africans, including residential customers, to adopt a culture of using electricity sparingly in their everyday lives.

2.4.2 Conclusion

The above section provided an overview of the implementation of the energy efficiency campaign as one of the measures that Eskom undertook to respond to the power crisis. The discussion dealt with the platforms or medium (media and customer education forums) used to carry the messages; saving tips shared in an effort to reduce consumption while waiting for the building of new power stations to be concluded. The power alert campaign was presented and the importance of changing light bulbs to CFL was explained. The 49M campaign run by government was discussed to highlight how it complemented the energy efficiency campaign run by Eskom. The power saving campaign aimed to influence and motivate residential customers to save. This research study attempted to evaluate whether the power saving communication campaign was a success or not.

2.5 Related research

2.5.1 World perspective on energy saving

The World Energy Council (2013: 6-7) states that in the 21st century, developed countries who are the pioneers of industrialisation have a better understanding of energy efficiency. However, populations in developed countries represent only 20% of the world population and are no longer experiencing any population growth, while the developing countries continue to observe a significant growth in population. The report further alludes to the challenges of climate change, citing the need for cleaner energy and more effective energy efficiency tactics. The growth in population size of South Africa and the implementation of developmental initiatives that are electricity intensive would translate into high energy consumption. High electricity consumption has a potential to put strain on the national grid, hence the need for Eskom to educate the citizens of the country about saving electricity.

Smithers (cited in Ayre 2013) states that in the UK there is a lack of awareness of energy efficiency and this is causing challenges in meeting carbon reduction targets set for 2050. Smithers further challenges the world to begin to take energy efficiency

as a matter of high importance. South Africa never experienced massive load shedding until 2007 and 2008. Prior to this period, there had been no campaign by Eskom aimed at encouraging its customers to save electricity. The series of load shedding during the period stated above prompted Eskom to start encouraging electricity users to save electricity.

According to the World Energy Council (2013: 26) one of the favourite measures to save electricity is the use of compact fluorescent lights (CFLs) because it uses two-thirds less energy and may last 6 to 10 times longer than incandescent light bulbs. These energy saving bulbs are cost effective despite their higher initial cost.

According to online information published by World Bank (2013), Mexico has achieved an energy efficiency milestone by distributing almost 23 million energy-saving light bulbs for free. The report further reveals that exchange points (1100 exchange points in 2011/2012) for incandescent bulbs with CFL bulbs were established, resulting in 5.5 million Mexican families now using these energy saving bulbs.

The Save the World by Saving Energy online blog (2012) highlights that energy efficiency lighting is the easiest and most affordable way of saving energy. The report indicates that if every household in the United States replaces one incandescent bulb with a CFL, the energy saved is enough to light 3 million homes per year.

In a research study conducted to determine the influence of usage of CFLs in existing buildings in Lagos, Nigeria, Johnson, Odekoya and Umeh (2012) reported that the use of CFLs is low in Nigeria due to inability to measure the saving benefits of CFLs on electricity bills, affordability and installation. The authors recommend that sustainable energy management in residential areas can be achieved through the use of CFLs, saying that if Nigeria can replace incandescent lights with CFLs, the country can save 40MW of electricity (2012: 65).

It is evident that changing the traditional lights with CFL is favoured in most countries as a simple way to achieve energy usage reduction. However, there are more options that can be utilised to save energy in the residential sector. This study will examine

the various saving measures promoted by Eskom in South Africa and how the residential customers are responding to these measures.

2.5.2 South African perspective on saving energy

According to the Department of Energy (2012: 187) in South Africa, only 20% of South African households are aware of energy saving measures. Poor households constitute a significant proportion of residential customers who are not aware of energy saving measures. The energy survey report conducted by the DOE reveals that 81% of South Africans support that government should spend money on energy saving campaigns and the study confirms that Eskom has taken the right direction to educate South Africans to change their behaviour in support of the energy saving campaign.

“Major energy savings can only be achieved through changes in people’s behaviour, and that depends on informing them about what options exist. The World Summit on Sustainable Development (2002) sensitised the nation about the impact that energy use has on the World’s weather systems. In this era of climate change, South Africa needs to take more urgent measures to reduce energy usage than in the past.” (Mlambo-Ngcuka 2005: ii). Mlambo-Ngcuka highlighted that in South Africa issues around electricity usage are taken for granted and as a result high consumption of energy is experienced. This view confirms that people are used to the abundance of electricity and the state is appealing to the citizens to change the way they utilise electricity.

According to the energy efficiency strategy of South Africa (South Africa, Department of Minerals and Energy 2005: 03), the national energy saving target was set at 12% by 2015. The 12% target was set in relation to the national energy demand forecasting, taking into account the economic growth at the time. In addition, Eskom itself “embarked on a Demand Side Management programme to help reduce the requirements for investment in new power generation capacity.” (South Africa, Department of Minerals and Energy 2005: 8). This energy efficiency strategy suggests that it is crucial to have such a strategy in order to have sustainable energy. Sustainable energy supports the economy of South Africa, which is energy intensive.

The strategy is divided into sectors; this study is more concerned about the strategy for the residential sector. The section that follows presents a brief discussion on saving strategies for residential customers.

2.5.2.1 Residential sector energy saving strategy

The energy efficiency strategy (South Africa, Department of Minerals and Energy 2005: 32) indicates that a demand reduction of 10% was targeted for residential customers by 2015. This would mean a 1% target to be achieved each year from the year 2005 until 2015. Generally, higher standards of living and economic growth of 2.8% per annum and, the electrification programme has caused a strain on electricity reserves in South Africa. The energy efficiency strategy proposes that implementing mandatory standards, appliance labelling, efficient lighting and standards for non-electric appliances such as energy efficient coal stoves, wood stoves and liquid fuel stoves, should be comprehensive enough to achieve the goals of energy consumption reduction in the residential sector by 10%.

The residential saving strategy is centred around public awareness campaigns that comprises of energy saving tips and power alerts shown on television. The challenge is in the diverse nature of residential customers and that changing people's behaviour is not straightforward.

It is clear that Eskom has the support from government when it comes to energy saving initiatives. This study was interested in finding out whether the residential customers heeded the call to save electricity by 10%.

2.6 Free basic electricity (FBE)

South Africa, as a developing country, is faced with the challenges of poverty therefore there is a lack of money to access basic human services such as electricity. Gaunt (2008: 3127) indicates that even when areas were electrified people were too poor to afford electricity and government had to deliver on its manifesto of promising people "free services".

The Free Basic Electricity (FBE) amount of 50 kWh per month per indigent household was introduced by government in 2003 as a relief measure for the poor (South Africa, Department of Energy 2013: 72). The main purpose was to fulfil cooking, lighting and to cater for television and radio. According to the Treasury (South Africa, National Treasury 2011: 157), even though households are being electrified, poor households need to access the benefits of using electricity. Respective municipalities have funded FBE since 2004/2005 through equitable share.

The introduction of FBE is a clear demonstration that the democratic government wants all South Africans, rich or poor to have access to electricity. This means that indigent households can now use more electricity compared to when they had to pay for all the units they used. As expected, this policy adds an element of strain to the national grid. The Treasury budget and expenditure review of 2011 (South Africa, National Treasury 2011: 159) confirmed that municipalities pay Eskom FBE units consumed by households according to the FBE standard rates even in areas where electricity is supplied directly by Eskom, resulting in a funding of R9.5 billion in 2011/2012. The Treasury review indicates that where poor people cannot be connected to the grid, they are provided with free basic alternative sources of energy such as paraffin, gas, liquefied petroleum and bioethanol gel. In 2008-2009 8 087 160 consumers received free basic electricity compared to 107 105 consumers who received free alternative sources of energy.

The survey of energy-related behaviour conducted by the Department of Energy (South Africa, Department of Energy 2013: 72) highlighted that academics praised the government for introducing FBE but were critical that the 50 kWh was too little to ensure quality of life.

2.7 Conceptual and theoretical framework

This study aimed to evaluate how the target audience of the campaign interpreted and understood the messages of the campaign. The conceptual and theoretical framework for this study comes from the broader field of developmental communication because

development communication is a field of study that seeks to understand how to promote positive social change. This approach is relevant because Eskom's campaign on energy saving was about promoting a nationwide culture of saving energy, which can be viewed as a positive societal change. Participatory communication arises from development communication and advocates for the inclusion of recipients of developmental initiatives in their own developmental process or initiatives. The recipients/target audience of the messages must decode the campaign messages in order for them to be influenced in a particular way. Stuart Hall's (1980) reception theory or encoder/decoder theory guided the researcher to understand how the recipients of the campaign engaged in the decoding process.

2.7.1 Communication campaigns

The following section presents various definitions of communication campaigns. Once the various definitions have been presented and analysed, subsequent details will look at how communication campaigns are developed, implemented and evaluated.

2.7.1.1 Defining communication campaigns

Rice and Atkin (2013: 3) define public communication campaigns as "purposive attempts to inform or influence behaviours in large audiences within a specified time period using an organized set of communication activities and featuring an array of mediated messages in multiple channels generally to produce non-commercial benefits to individuals and society". The above definition resonates with Salama's (n.d.) definition of communication campaigns: "Public communication campaigns are campaigns that use the media, messaging, and an organized set of communication activities to generate specific outcomes in a large number of individuals and in a specified period of time."

In analysing the above definitions of communication campaigns it becomes clear that a public communication campaign carries a certain message or a set of messages aimed at influencing the behaviour of a large number of receivers via the media, and is generally complemented by a series of other communication activities in order to

achieve pre-determined outcomes that benefit an individual and society over a specified period of time. It is crucial for the campaigner to understand all the tenants of a communication campaign and how each one of them influences the other.

The media is an important carrier of the campaign message (s), therefore Rice and Atkin (2013: 10) suggest that the media channels utilised to carry the campaign messages must reflect the choice of media usage of the targeted audience. Selecting the appropriate means of communication is essential in ensuring that the message reaches the target audience. The choice depends primarily on factors related to communication type, target audience, media characteristics and costs. It is important to understand the habits and preferred media of the target audience in order to better capture their attention with the message. There is significant researched evidence to conclude that the effectiveness of communication campaigns is influenced by the message type and presentation style, as well as certain aspects of the person receiving the message (Cable 2013: 50).

This essentially means that the right media should be chosen to reach a specific audience. Eskom as a campaigner, seeking a positive change in the usage of electricity, has the responsibility to carefully select and utilise specific media and communication activities that will ensure that the campaign message reaches its targeted receiver (residential customers). In addition to the use of appropriate media for the selected receiver of the campaign, Coffman (2002:06) brings an understanding that an individual behaviour change campaign is characterised by influencing belief, attitudes, social norms and producing a change in behaviour. This study understands Eskom's energy saving campaign to have been a behaviour change campaign so its success can be tested by whether or not it succeeded in changing the behaviour of its residential customers to begin to save electricity.

In order to change behaviour, campaign designers need to understand why people behave the way they do (Fishbein,*et al.* 2001). Brookes, Peters and Limbert (2013: 465) state that in order to change the behaviour of individuals through a communication campaign, the campaigner (in this case Eskom) should understand exactly why people behave in a certain way towards energy usage. In order for a communication campaign to be effective in changing behaviour Kreuter and Wray

(2003) state that such a campaign (in this case Eskom's energy efficiency campaign) should be tailored and relevant to a specific audience (residential customers).

The section below looks at other tactics that seek to further illustrate how communication campaigns can be conducted with specific reference to social marketing and the communication-persuasion matrix.

Social marketing

Social marketing and the communication-persuasion matrix are identified by Rice and Atkin (2003: 3-4) as the most effective and comprehensive ways of delivering a communication campaign to target audiences. Social marketing is audience-centred, using an attractive combination of campaign components (conceptions of product, costs and benefits, as well as audience segmentation, policy change, and competition) to achieve the aims of the campaign. "Social marketing is the adoption of strategic marketing practices to promote social change" (Robinson *et al.* 2014 cited in Evans 2016). Robinson *et al.* further identify a marketing mix as the most important criteria of social marketing as it holistically focuses on all the issues that relate to the product, price, place, and promotion. An additional 4 P's of the marketing mix as further suggested by Robinson *et al.* are people, process, purse strings and physical evidence. Social marketing provides 'guiding principles' for voluntary behaviour change, focusing on people's specific perceived needs, desires, and beliefs and the 'price' they believe they have to 'pay' (e.g., loss of time, embarrassment, diminished pleasure) to adopt recommended practices (Austen and Austen 2007; Lefebvre 2013). Key features are to offer relevant 'tips' and to reduce constraints (Aldoory and Bonzo 2005). In reference to Eskom's campaign, the energy saving tips for residential customers are part of the overall national campaign.

Communication-persuasion matrix

The communication-persuasion matrix is recognised as an input model because it focuses on input variables such as source, message, channel and the audience. The output deals with matters relating to how the audience or recipients of the message are exposed to the message and how they process the message until the intended outcomes of the campaign are realised such as a change in attitude, beliefs, values and behaviour. Rice and Atkins (2003: 9) state that for people to change their attitudes, beliefs, values, and behaviour, they need to be persuaded with reasons why they should support a particular campaign. People prefer to be told about the benefits of supporting a particular course of action. Another interesting factor as presented by Rice and Atkin (2003) is that persuasion plays a reinforcing role to the people who already understand the campaign so that they can play an advocacy role to the newer recruits of the campaign.

Eskom in its efforts to persuade South African citizens to save energy would presumably have looked at presenting the benefits of supporting the energy saving campaign. The campaigner would have also looked at how to maintain the number of people supporting the campaign while doing everything possible to recruit more people to support the campaign. Eskom's campaign is clearly a campaign that seeks to influence the citizens of the country (In the case of this study, Eskom's residential customers in Mpumalanga) in order to achieve a positive behaviour change.

2.7.1.2 Types of public communication campaigns

Coffman (2003) identify two distinctive types of campaigns:

- Campaigns aiming for institutional and policy change such as laws and policies.
- Campaigns aiming for change in individual behaviour and social norms and attitudes.

Salama (n.d) confirms the above two main types of public campaigns as follows:

- 'Public will' campaigns attempt to mobilize public action for policy change. A public will campaign attempts to legitimize or raise the importance of a social problem in the public eye as the motivation for policy action or change.
- 'Individual behaviour change' campaigns attempt to change in individuals the behaviours that lead to social problems or promote behaviours that lead to improved individual or social well-being.

Raab and Rocha (2011:07) argue that awareness can be found in both types of campaigns as their aim could be to influence people's attitudes or get public attention and support on certain policies and laws (or both).

Table 2.1 shows with the comparison between public will campaigns and individual behaviour change campaigns.

Table 2.1: A comparison of public will campaigns and individual behaviour campaigns

Campaign Type/ Goal	Individual Behavior Change	Public Will
Objectives	- Influence beliefs and knowledge about a behavior and its consequences - Affect attitudes in support of behavior and persuade - Affect perceived social norms about the acceptability of a behavior among one's peers - Affect intentions to perform the behavior - Produce behavior change (if accompanied by supportive program components)	- Increase visibility of an issue and its importance - Affect perceptions of social issues and who is seen as responsible - Increase knowledge about solutions based on who is seen as responsible - Affect criteria used to judge policies and policymakers - Help determine what is possible for service introduction and public funding - Engage and mobilize constituencies to action
Target audience	Segments of the population whose behavior needs to change	Segments of the general public to be mobilized and policymakers
Strategies	Social marketing	Media advocacy, Community organizing and mobilization
Media Vehicles	Public service/affairs programming; Print, television, radio, electronic advertising	News media; Print, television, radio, electronic advertising
Examples	Anti-smoking, condom usage, drunk driving, seat belt usage, parenting	Support for quality child care, afterschool programming, health care policy

Source: Salama (n.d.)

Evaluating a campaign

Implementing a campaign is not the end process in ensuring a successful campaign. The campaign strategies need to be evaluated in order to determine their effectiveness in changing the behaviour of the target audience. Campaign evaluation is essentially a way of determining which strategies were effective and which ones did not assist the campaign at all (Parvanta 2010). Similarly, Brookes, Peters and Limbert (2013: 466) highlight that evaluating the campaign is necessary in order to check whether the campaign's goals and objectives have been achieved.

Evaluating a campaign can either be formative evaluation or back end evaluation. Formative evaluation (front-end evaluation) addresses the strengths and weakness of the campaign prior to it being implemented. The target audience of the campaign give their opinions and ideas about the campaign prior to the launch and explore the key message, the preferred visual designs and the channels of communication. Formative evaluation basically helps the campaigner to shape the campaign as it deals with the scope of the problem, campaign strategies, target audience, the messages, the messengers and other factors that can work in favour or hinder the campaign (Valente 2001). Back end evaluation on the other hand is conducted after the campaign has been implemented and should include a process evaluation, which assesses the implementation and distribution of the strategy and aspects such as the message, the design and the campaign materials. Evaluation also deals with the aspect of both perceived and actual behaviour change (Corcoran 2000; National Cancer Institute, 1992).

An intervention may generate more favourable social norms regarding the promoted behaviour, which, in turn, may enhance self-efficacy and intentions to engage in the behaviour. Over time, campaigns may also garner community support, as persistent campaign messages create shifts in attitudes about the promoted behaviour (Robinson *et al.* 2014 cited in Evans 2016). Indeed, upon evaluating the campaign, evidence that proves the effectiveness of campaign strategies can be useful in attracting support for the continuation of such campaigns in other locations (Corcoran 2007). In fact, it is not a luxury for a campaigner to evaluate a campaign; it should be viewed as a way of finding out the successes and failures around the campaign that

can serve as a reference for similar projects in future. Evaluating a behaviour change campaign helps to identify the difference between the actual behaviour and the achieved desired behaviour in the case of a successful campaign.

Cable (2013: 51) identifies the four main types of campaign evaluation as being: formative, process, outcomes and impact.

Table 2.2 presents the comparisons or features of each type of evaluation as per Coffman (2002:13)

Table 2.2: Types of evaluation

Evaluation Type	Definition/Purpose	Example Questions
1. Formative	Assesses the strengths and weaknesses of campaign materials and strategies before or during the campaign's implementation.	• How does the campaign's target audience think about the issue? • What messages work with what audiences? • Who are the best messengers?
2. Process	Measures effort and the direct outputs of campaigns – what and how much was accomplished. Examines the campaign's implementation and how the activities involved are working.	• How many materials have been put out? • What has been the campaign's reach? • How many people have been reached?
3. Outcome	Measures effect and changes that result from the campaign. Assesses outcomes in the target populations or communities that come about as a result of grantee strategies and activities. Also measures policy changes.	• Has there been any effective change (beliefs, attitudes, social norms)? • Has there been any behaviour change? • Have any policies changed?
4. Impact	Measures community-level change or long-term results that are achieved as a result of the campaign's aggregate effects on individuals' behaviour and the behaviour's sustainability. Attempts to determine whether the campaign caused the effects.	• Has the behaviour resulted in its intended outcomes (e.g., lower cancer rates, less violence in schools) • Has there been any systems-level change?

Source: Coffman (2002)

2.8 Development communication

2.8.1 Defining development communication

Communication forms a cornerstone of planned social change, materializing as the subject of development communication theorizing, research, and practice (Dutta 2011; Melkote 1991). McPhail (2009: 3) defines development communication as the process of intervening in an individual's day-to-day life in a systematic or strategic manner with either media (print, radio, telephony, video and the internet), or education (training, literacy, schooling) for the purpose of positive social change. The change could be economic, personal (as in spiritual), social, cultural, or political.

2.8.2 The evolution of development communication

Waisbord (2018), states that development theories were borne after the demise of colonisation around the 1950s and 1960s as a means to try to address the gap between the developed Western world and the third world communities such as those in Africa. According to Oyelaran-Oyeyinka (2014: 89), the so called "Marshall plan" developed by the United States of America (USA) worked very well in reviving the Western Europe countries in less than 10 years after the Second World War. The success of the Marshall plan gave rise to the idea that developed countries can drive development for underdeveloped continents such as Africa, Asia and Latin America in the 1960s. This was the time when African nations gained freedom from their colonisers and these countries focused their efforts on establishing strong socio-economic conditions with the hope of improving the living standards of their people. The sole aim of development, as defined by Melkote (1991: 229), "is to raise the quality of life of populations, including increase income and well-being, eradicate social injustice, promote land reform and freedom of speech, and establish community centres for leisure and entertainment". Oyelaran-Oyeyinka (2014: 90) view "development communication as the use of communication techniques, technology, principles, and practices in the process of development".

In attempting to understand and explain the information transmission process, the Shannon and Weaver (1949) sender-receiver linear model of communication played an influential role historically. In part this model informed early approaches used to transmit information that would supposedly bring about change (Figure 2.9).

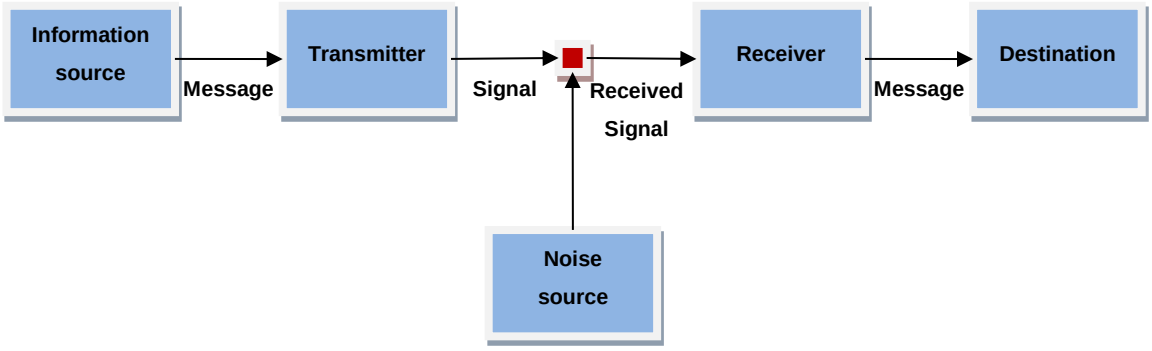

Figure 2.9: Shannon and Weaver's model of communication
Source: Marcel (2012: 31)

In the above model of communication by Shannon and Weaver, a message is generated by an information source. The message is encoded and transmitted as a signal along a communication channel. Any interference in transmitting the signal through the channel is called noise, resulting in the transmitted signal being different from the received signal. The receiver transmits the signal again into a message to a destination, somebody who consumes and processes the message (Foulger 2004; Beynon-Davies 2010: 392). Shannon and Weaver's model is a linear communication model because communication is flowing only in one direction, from a sender to a receiver (Wood 2013: 9). In this model, the receiver is not afforded an opportunity to provide feedback to the sender. The sender therefore is also compromised because the sender is not in a position to know if the receiver has understood the message correctly.

According to Melkote and Steeves (2001), the existence of a development communication paradigm (also known as the dominant paradigm) was designed to promote modernisation. In this approach to development, the developed world took the initiative to communicate as much information as possible to the underdeveloped or Third World countries with a view that constantly exposing these underdeveloped countries and their people to certain messages people would change their lives and traditional way of doing things and align themselves with the changing global trends.

It should be noted however that the people in the underdeveloped world were not actively involved in their own development initiatives. The dominant paradigm of developmental communication did not achieve significant results. A brief discussion of modernisation driven by the dominant approach to development is presented in the section below.

Modernization theory for development

According to Melkote and Steeves (2015: 386), Fjes (1976) proposed that modernization was one of the most powerful paradigms to originate after World War II, with enormous social, cultural, and economic consequences. According to Melkote and Steeves (2015: 386), Rogers (1976) stated that modernization was based on neo-classical economic model seeking to benefit Western economies because it was mainly concerned with economic growth and as a result promoted capital-intensive industrialization, high technology, private ownership of factors of production, free trade, and the principle of laissez-faire. Rogers (1983: 49) described this type of communication in development as to play the role of transferring technological innovations from the development agencies to their clients to create an appetite for change through raising a climate for modernization amongst the members of the public. This model is based on communication as a 'top-down' approach to achieve change.

Melkote and Steeves (2015: 836) cited Portes (1976) who observed that Western countries regarded themselves as highly industrialised, well developed, and regarded African and Asian countries as traditional and underdeveloped. The Western countries perceived themselves as being self-sufficient and having the necessary means and capacity to deal with their own challenges (ranging from social, cultural, technological, and economic challenges encountered in the process of social change), while the underdeveloped countries were regarded as not having the capacity to deal with their own developmental challenges. The underdeveloped countries were meant to believe that the only way to achieve development was to modernize and that would mean they had to follow the lead of Western countries in order to realise meaningful modernization. Pieterse (2010: 1–35) writes that 19th century worldviews placed the Europeans as the "sole inhabitants of modernity". This essentially means that change

was to be brought from the outside by more “advanced” peoples to developing countries. Modernization in its original format of “top-down” approach was utilised to change people’s knowledge and practices by the Western powers with a complete disregard of indigenous socio-economic and cultural practices.

Scholars who believed in the modernization or Westernisation approach to development held the view that underdeveloped societies were in a state of deficit and stagnation, which led to many problems. To overcome these problems the delivery of information from the more modernised western setup and developed society was adopted. This would then result in the reduction of the challenges of, inter alia, disease, hunger, poverty and illiteracy, which were believed to be ultimately because of a lack of information, knowledge and modern skills (Servaes, 2008; Melkote and Steeves, 2001).

Pamment (2015: 202) notes that the dominant paradigm recognises the media as an important component of delivering social change. McQuail’s (1977 cited in Ngomba 2011) understanding of the primary role of media existence is still relevant today. McQuail (cited in Ngomba 2011:10) reveals that the media was developed primarily in Europe and North America in the 1930s with the responsibility and power to shape opinions, beliefs, change habits of life, actively mould behaviour and impose political systems. The media was supposedly used by the more knowledgeable to influence the less knowledgeable who were considered to be lacking in information in order to align to the global expectations.

In this model, media channels were believed to have the ability to change how citizens of developing countries experienced the world around them. The media was used as a tool and the citizens of those countries were regarded as passive audiences waiting to receive transformational information that would eventually bring about positive social change. In attempting to understand and explain the information transmission process, the Shannon and Weaver (1949) sender-receiver linear model of communication played an influential role.

According to Fair (1989: 131) and Lerner (1958: 78), early theories of development communication emphasised that the media and the information distributed via the

various media channels are instigators of transformation and modernization. Fair and Lerner further indicate that the early theories of development communication believe the media has the capacity to influence the attitudes and behaviour of people living in developing countries to transform from a traditional into a modern society. Lerner (1958) and Inkels and Smith (1974) highlight that media such as newspapers, radio, cinemas, television, etc. were utilized to penetrate the society as a way of promoting modernization. The number of television sets and newspaper consumption were used to measure modern attitudes, but media penetration alone was later considered not a reliable indicator of modernisation and a change in beliefs, attitudes and behaviour. The media penetration tended to be concentrated among the elite and the transmission of information did not automatically result in transformation of beliefs, attitudes and behaviour.

Criticism of the modernization theory

Modernization theory was criticised by the dependency theorist Frank (1969, cited in Kapoor 2002) who indicated that the development ideas brought by the West were exploitative because they placed the developed Western countries in positions of power which benefitted the developed countries at the expense of Third World countries such as those in Africa. Servaes (2008) argues that the problems of the underdeveloped world were created by the way the developed countries dominated world politics and the world economy and that the problems were political rather than due to a lack of information as it was understood by proponents of modernization theory. This essentially reflects that colonisation had brought about the view that underdeveloped countries are not capable of solving and dealing with their own challenges and development hence the dissemination of as much information from the West was meant to promote and support modernization with a strong view that it will stimulate and effect positive social changes.

In response to the belief that people in developing countries should be regarded as audiences in the global communication arena, Downing (2001 cited in Vatikiotis 2005) suggests that local, social and political issues as well as issues of development can be communicated via alternative media such as radio, video, press and the internet as these alternative forms of media can help people to become more involved by

localising information regarding development. Dependency theorists believe that the interests of the underdeveloped world would be better served if they are not linked to the global market, hence developing countries must find a way to deal with their connectedness to developed countries.

The proponents of the participatory approach to development communication also challenged the modernization theory. Modernization was challenged for promoting the channelling of information from the so-called “developed” Western world into the so-called “underdeveloped” world without involving the receivers of development initiatives in the initiation and implementation of their own social changes. The placement of the underdeveloped countries as “just” audiences of their own development communication has come under attack by participatory communication theorists. The traditional model of development communication (dominant paradigm) was criticised because it only concerns itself with changing the behaviour of individuals without considering their socio-economic and cultural context. Paolo Freire’s (1970) participatory approach to communication advocates for local engagement with critical awareness of power structures. The birth of the participatory approach to development communication convinced Rogers (a proponent of the dominant paradigm and the author of the diffusion of innovations theory) to begin to regard communication as a “process by which participants create and share information with one another in order to reach a mutual understanding” (Rogers 1976: 231). Communication was no longer viewed as a persuasion tool but as a means to a meaningful engagement that elevates the so-called traditional audience to participate in projects of social change. The participatory approach to development communication is presented in detail in the section below.

Participatory communication approach

The 1970s saw the birth of the participatory communication theory emanating from critics of the modernization theory of development. The participatory approach replaces the traditional “top-down” approach with a “bottom-up” approach to development communication (Huesca 2008; Inagaki 2007).

According to Lewin and Patterson (2012: 41) “Participatory communication is a concept and practice involving citizens co-creating and sharing knowledge, experiences, and desires in order to pursue agendas of their own choosing”. In this approach, new ideas and research results are generated through a mutual learning process and contribute to foster knowledge for local action (Mertens, Saint-Charles, Mergler, Passos and Lucotte, 2005: 644). Participatory communication places more emphasis on creation or engagement rather than the products resulting from the process.

Lewin and Patterson (2012) indicate that Freire’s work has been hugely influential in participatory development and communication. This is precisely because his work influenced the engagement of grassroots people in their own development and considered socio-economic factors as well as cultural differences. Culture and participation emerged as two key threads that were incorporated into the newly configured development narrative of the 1980s and 1990s, with development structures such as the World Bank and USAID running participatory programs (Adhikarya 1994; McAnany 2012; Mefalopulos 2008).

According to Muturi and Mwangi (2009, Paolo Freire (1970) theorised a “participatory communication approach that was characterised by dialogue, receiver- centredness and a conscious awareness of social structure.” Participatory communication has the ability to adapt to different forms and formats according to specific local needs so that no single development communications blueprint can impose itself over the varying views and cultural differences encountered in development work (Dagron 2001). Freire (1970 cited in Muturi and Mwangi 2009) argued that citizens have the capacity to map and understand their own local problems and possible solutions through a dialogic process that can help them make meaning of their circumstances and available choices. Kheerajit and Flor (2013: 704-705) emphasise that people at grassroots level such as villagers and the urban poor are primary stakeholders. In the participatory approach, the people at grassroots level identify problems and solutions to those problems independently from powerful people or external institutions. Participatory models emphasize recipient involvement, co-presence, and participation as opposed to the linear vertical paradigms of development communication. This approach has the

potential to initiate change in recipient perception and intention by providing an environment that encourages free and open expression, and fosters ownership over the process of change, and encourages voluntary participation (Inagaki 2007).

Kheerajit and Flor (2013: 705) argue that if people understand the reason for a particular change and ultimately voluntarily change their practices and activities, such changes are likely to be more long lasting. In participatory communication for social change, people work together to make changes at the community level or societal level rather than merely being subjected to change by people in positions of power. This ensures that people are not just told to change, but are part of negotiations concerning their own change. Furthermore, local people participate in the various stages of the development project (Ondrik 1996: 95). The idea of involving people in their own development is strongly advocated by Eversole (2003: 781) because it enables local people to be active subjects rather than passive objects of their own development. This means that local people can have a fair opportunity to engage in dialogue since open dialogue is central to the implementation of participatory processes. This narrative regards local people as “agents of change” rather than “objects of change” capable of analysing their own situations and providing specific solutions that address their unique challenges.

Ngomba (2011: 06) warns participatory communication practitioners that people in the areas in need of development are not ‘dumb’ as they possess the knowledge and skills that can advance development in their communities when they are involved in the planning, execution and evaluation of development initiatives.

Uphoff (1985 cited in Muturi and Mwangi 2009) identified four stages at which participation in a development project should take place. Uphoff’s contribution is still relevant today:

1) Participation in decision-making: people are involved at the initial stage to conceptualise and plan for a community project. They can influence decisions.
2) Participation in implementation: people are mobilized and actively involved in the implementation and have responsibilities and tasks.
3) Participation in evaluation: people are involved to engage about the successes and criticise certain aspects of the project.

4) Participation in benefit: people enjoy the positive outcomes of a project.

Equal participation by all stakeholders in all stages of a project is critical, but participation in the decision-making stage of an intervention is the most important since it allows people to take control of the project aimed at influencing their lives positively. Unlike the top-down approach, the bottom-up approach is not a technique to change people's knowledge, attitudes and practices but, rather a way to get people to voluntarily be part of an engagement process in order to understand why a certain change is needed and to be part of the change process (Kheerajit and Flor 2013: 705). Melkote and Steeves (2001), state that a sense of ownership is important because without it, the targets of the message and intervention are more likely to reject it. The consultations with stakeholders serve to motivate them to feel that they are part of the energy saving campaign and, therefore increases the chances of stakeholders to support the campaign.

The participatory communication approach has led to a change in the media space to align to this reality. Local people are no longer viewed as beneficiaries of development but, rather active agents in the participatory approach to development. The recipients of development information are now recognised as producers and disseminators of such information. Alignment in the media space means that audiences are now viewed as active and rational as well as producers of media content as opposed to being only consumers (Ngomba 2011: 11-12).

Indeed, participating in a project gives people a sense of involvement in their lives and communities, and provides them with a sense of ownership and skills that they can use beyond the timetable of development projects (Kavinya, Alam and Decock 1994). Thus, stakeholder involvement in program planning and implementation is important in participatory communication.

Criticism of participatory communication

Participatory communication has achieved massive popularity and support for introducing and promoting dialogue but, understandably, is not without criticism. Lewin and Patterson (2012: 41) point out that despite the popularity and growth of

participatory methods, the linear approach to communication still dominates in many development interventions. While the top-down approach to communication is fading away in favour of bottom-up approach that gives the ordinary people the voice, Servaes (2008) argues that much participatory communication is still corporate communications or public relations posing as participatory communication. Servaes and others believe that many interventions are still faking participatory communication undermining the true value of grassroots participation in development projects. This suspicion of faking participatory communication is confirmed by Dutta and Basnyat (2008: 11) that some projects, even though they may take a participatory format, might still have a pre-determined agenda and as such should be regarded as top-down projects where participation is used as a tool for achieving predetermined change.

The bottom-up approach as popularly known by participatory theorists can be more challenging to implement than what the theory seems to suggest. A participatory approach to communication can be too demanding, as it requires extensive stakeholder engagements and that can be quite demanding in terms of time consumption, human resources and the financial burden that goes with all the logistical processes. These challenges in the participatory approach can frustrate communicators, resulting in communicators adopting minimal stakeholder involvement in a development intervention (Muturi and Mwangi 2009). Contributing people-related factors include the attitudes of all stakeholders involved, development workers, project communities, and their leaders (Agunga et al: 2006). This means when a lot people or stakeholders are involved in consultations regarding a project, there is a risk of having to deal with different views. The results of dealing with various and especially contradicting views takes time and, can lead to a delay in implementing the actual project. It remains to be seen how Eskom consulted with its customers and whether or not that happened within the allocated period.

White (1994) cites three limitations of the participatory approach:

1) Participatory communication processes are not a panacea for development due to the nature of the problem at hand and the time frame required to resolve the problem. Participatory processes focus on the “root-causes” of poverty and oppression on a long-term basis. Participants who are looking for short term

solutions and interventions may not want to participate in long-term goals processes.

2) Concepts of participation and manipulation can be viewed from many perspectives. When an intervention is aimed at “selling” solutions to the “target audience”, the interventionist may bring unfamiliar cultural practices. The participatory social communicator who has a pre-determined set of reality and values may hope that the targeted people will perceive their oppression the way he or she sees it and as a result can be accused of a manipulative tactic.
3) The social communicator often overlooks the price people pay for taking part in the participatory process. The social communicator must avoid thinking that the targeted people have nothing else to do. The participatory process that lacks either long- or short-term benefits can be rejected by the targeted audience. People have a choice to utilise their time in activities that lead to benefits.

In reference to the study at hand, the researcher seeks to find out whether the recipients (in this case Eskom’s residential customers) of the energy efficiency campaign were consulted regarding this matter of national importance. It is critical to find out if they participated in the design and implementation of this intervention as participation would have somehow enabled them to participate in decision-making, ultimately allowing them to forge some form of ownership of the campaign.

2.9 Reception theory (encoder-decoder theory)

The section below presents the encoder-decoder theory as conceived by Stuart Hall. In 1973, Hall was motivated to develop his model of encoding and decoding mediated messages as a “reaction against a tradition of Marxist film criticism found in the film journal screen” (Baran and Davis 2012). Hall observed that the media sends a message to the receiver and the receiver interprets the message for possible meaning. Fundamentally, Hall’s interest came from his observation that, although a message can be sent to a receiver, if the receiver cannot capture and understand the meaning, it means the receiver is absolutely not in a position to engage the message and cannot at the end of such a communication process be influenced in any particular way due to lack of understanding of the message. Another challenge put forward by Hall was

that even if the intended receiver understands the message, it does not necessarily translate into the desired action from the part of the receiver. Hall's encoder-decoder theory is relevant in testing the communication campaign of Eskom. This study investigated recipients' understanding of Eskom's energy efficiency messages. The researcher is also interested in evaluating whether the campaign was supported or not by the recipients of the campaign's messages.

Hall's 1970 encoder-decoder theory attempts to explain how people in positions of power influence others with their messages via the media in the mass communication space. Hall's perspective was that the media was being used to influence societal ideologies and proposed that more research should be conducted on the media's "ideological effects". The dominant approach to communication as presented by Carey (1989: 15) is cited in Kropp (2015: 5) as the transfer of signals or messages over a distance for the purpose of control. The Communication of messages in this regard is essentially a tool to influence the society to support the energy saving campaign. Communication is viewed as a process of giving information to others. To Hall, communication is a process of "linked but distinctive moments – production, circulation, distribution/consumption, reproduction" (Hall 1980). Although each of these is a distinctive practice, together they form a "complex structure in dominance" (Hall 1980: 128). Davis (2004) indicates that Hall was concerned that the media considered the interpretive role of receivers as passive rather than active recipients of the message. Hall (1980) argues that there is activity at both the level of the media producer and the media receiver, and this relationship should be understood and not ignored by media practitioners.

It can be said in reference to the above discussion that Hall has taken a stance to recognise the recipients of messages as active interpreters of the message, ultimately making them active communicators. Hall identified three major ways in which people understand a message; preferred (dominant) reading, negotiated reading, and oppositional reading (Kropp 2011: 14).

Dominant –hegemonic position

In this instance, the receiver decodes the connoted meaning exactly as the communicator has encoded it. It is for this reason that some authors prefer to refer to this type of reading as ‘preferred reading’. Kropp (2011) posits that the recipient in preferred reading unconditionally accepts what has been communicated to them at ‘face value’. Generally, audiences consume what has been defined and presented to them via the media by people in control of media resources and agendas. Kropp (2011) believes that the minds of these audience members are sharpened for a possible meaning of events that are either global or of national interest. Hall (cited in Durham and Kellner 2006: 71-72) further indicated that the elites are linked to professionals in the media industry and tend to get enough exposure to promote their ideas or ideologies. Thus, the social thinking of other classes in society is dominated by ideas of the dominant class (Espiritu 2011). Those who have greater access to the media and those who believe that their class or idea is more dominant than other classes or ideas are more likely to be the ones promoting their ideas to the less dominant class or idea. In the case of the Eskom energy saving campaign, Eskom is the one attempting to influence people to save energy. The expectation from the campaigner (Eskom) might be that the campaign will be understood and supported as planned. Turner-Vorbeck (2003:17) conclude that dominant or hegemonic reading is more likely to be adopted by children because children are more likely to accept something when it is familiar to them. Children are not capable of thoroughly interpreting messages compared to adults, hence they need their parents and teachers to direct them and teach them the right interpretation of text or any other types of messages. Adults are matured compared to children and they are capable of interpreting messages according to their own choice of reading. If they choose a dominant reading, they do so with knowledge that they in fact understand the information in accordance with the intentions of the communicator. This brings the conclusion that adults can successfully utilise other types of reading such as negotiated code or oppositional code as opposed to children who are dependent on someone to help them understand information. A brief discussion of negotiated code and oppositional code is presented in the next sections.

Negotiated code or position

Hall's negotiated code is still relevant today (Espiritu 2011) as it posits that information generally flows from the communicator who applies a hegemonic approach when sending a message to the receiver. The receiver decodes information using a combination of adaptive and oppositional approach in negotiated reading. In the negotiated reading, even though the communicator applies the hegemonic or dominant approach, the receiver is flexible to apply his or her mind in understanding the message and adapting it to local conditions as opposed to consuming it or acting on it as per the communicator's expectation. Espiritu (2011) indicates that even though the receiver may have adapted the message in accordance to its relevance to the local conditions, the receiver may still choose to oppose such message or events. In reference to this study, residential customers (receiver) may adapt the message (i.e. making suggestions on how the campaign can work better) according to their specific local conditions and then decide whether to support the campaign. It is highlighted for instance in Kropp (2011) that an individual reader may partially embrace the preferred meaning and instead of rejecting it, the receiver finds a way to negotiate or change its meaning to more closely suit the receiver's needs. Readers are more likely to adopt a negotiated reading approach when their cultural background is different from that of the communicator. This enables readers from different cultural groups to be more aware of each other's cultural practices (Turner-Vorbeck 2003: 17).

Oppositional code

According to Hall (cited in Durham and Kellner 2006: 172-173) it is possible for the receiver to understand the message but the receiver can then choose to detotalize the message in the preferred code in order to retotalize the message into an alternative framework of reference. Hall defines a person who consumes information that is opposite to that person's class, compared to the individual who consumes information that identifies with his or her class, as an oppositional code person. Another feature of the oppositional reading, according to Kropp (2011), is that an individual reader or viewer can decode the text according to his or her cultural influences and, in this case, the preferred ideological meaning as intended by the communicator may be understood but not accepted or agreed upon by the receiver. Turner-Vorbeck (2003: 17) indicates that oppositional reading is more likely to be utilised amongst educated

readers, as they are able to interpret a message within its context and decide to refuse it.

In this study, the researcher attempted to understand how the receivers of Eskom's campaign decoded the campaign message (dominant, negotiated or oppositional code)

2.10 Conclusion

The literature review presented Eskom's background in order to understand how Eskom operated pre-democracy and post-democracy. This provides a clear understanding of the significant increase in demand for electricity post-democracy and the attendant consequences. Relevant past studies and related findings were shared in this section. Sharing such information enables a better view on how other countries in parts of the world have conducted similar campaigns and to establish whether Eskom has followed similar methods. The theoretical framework was presented which ultimately serves as a guide in terms of research strategy or design. The following chapter will present the research methodology of the study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology, which is the approach that enabled the researcher to provide answers to the research questions and objectives of the study. A qualitative research method was utilised for the purpose of this study.

3.2 Research design

Within the paradigm of qualitative research, the study assumed a phenomenological approach. De Vos *et al.* (2005: 270) state that a phenomenological approach aims to understand and interpret the meaning that subjects give to their everyday lives. In this approach, "Phenomenologists are concerned with understanding social and psychological phenomena from the perspectives of the people involved" (Welman, Kruger and Mitchell 2005: 192). Therefore, the participants' experience of a phenomenon is examined in this study. The phenomenological approach is relevant because the study concerns itself with the target audience's attitudes, beliefs and experiences of the energy saving campaign and their behaviour in relation to the saving of electricity is concerned.

The overall study took the form of an audience analysis. Within the audience analysis the study used a number of focus groups. The focus group participants discussed what they knew about the campaign and their reaction towards it.

3.3 Population/target population

"Population is people but can also be defined as any group or aggregate of individuals, groups, organisations, social artefacts/objects (e.g. mass-media message), or social interactions and events" (Du Plooy 2009: 108). The population refers to possible units of analysis for the undertaken study. Mpumalanga is the home of 11 power stations, the highest number of generating units per province in the country; hence, its

population was aggressively targeted for the energy saving campaign. This study, therefore, will be focusing on homeowners residing in Mpumalanga. The study was conducted in the three district municipalities (Ehlanzeni, eNkangala and Gert Sibande) in Mpumalanga.

The energy efficiency campaign was run predominantly in Mpumalanga, particularly through customer education forums. The campaign was run in all three districts of Mpumalanga under study. The researcher wanted to establish how the message was understood and if any saving measures were implemented because of the campaign.

The Eskom Energy Services Manager in Mpumalanga province was recruited to participate in the study as well; this manager was responsible for implementing the energy saving campaign in Mpumalanga and was responsible for overall customer forums on energy efficiency in the province. The manager was interviewed in order to understand the process of conceptualising and implementing the energy efficiency campaign. The researcher was particularly keen to determine whether the process they followed was aligned with the participatory theoretical framework.

3.4 Sampling method

Non-probability sampling was employed for this study. Welman, Kruger and Mitchell (2005: 67) state that not all units of analysis have a chance to be included in non-probability sampling. This means there is no equal chance for all the units of analysis to be included in the sample.

Welman and Kruger (2001: 62) indicate that non-probability sampling is less complicated, takes less time and less money to conduct compared to probability sampling. This type of sampling was relevant in this study given the time and financial constraints.

Within the paradigm of non-probability sampling, the researcher employed purposive sampling. Welman, Kruger and Mitchell (2005: 69) indicate that in purposive sampling the researcher uses experience, ingenuity or previous research findings to select units

of analysis in a manner that the selected sample may be regarded as a true representation of the population of the study. This sampling method is based on the judgement of the researcher in selecting participants who are perceived to have the characteristics or attributes (access to electricity and exposure to the campaign messages) that are typically associated with the targeted population of the study.

A total number of 30 people living in the three district municipalities in Mpumalanga participated in the focus groups. 10 people were selected in each district to form a focus group. The researcher attended one Eskom customer education forum per district and selected 10 people in each intervention for the focus group interviews.

The researcher asked and gained permission from the session facilitator to randomly approach people attending the forum. The researcher asked the people if they were homeowners who were also Eskom customers. The prospects who responded affirmatively were then asked if they are willing to participate in the study. The first ten people who indicated a willingness to participate in the study then formed part of the focus group interview. This ensured that only people who were exposed to the campaign participated in the focus group interviews.

The Eskom build programme was expected to be concluded in 2018, but these forums will continue since they are aimed at building and sustaining a saving culture beyond the build programme.

3.5 Measuring instrument

“Focus groups are a group interview. They are a means of better understanding how people feel or think about an issue, product or service” (De Vos *et al.* 2005: 299).

The focus group participants were recruited during Eskom’s customer education forums on energy efficiency. The information letter and confidentiality form were supplied on site to the participants for completion as a way of consenting to participate in the focus groups. A tape or voice recorder was used to record interviews in the three

targeted districts of Mpumalanga province. All interviews were done in quiet places such as a classroom, community hall, and Homebase community care centres.

The researcher interviewed the focus group members using key questions. Key questions served as a guideline to get specific answers but the researcher also asked probing questions to get in-depth information. The researcher was flexible to ask follow-up and supplementary questions to focus group members where a need for further details or clarity was observed. The researcher did not provide the questions to participants in advance in order to avoid participants preparing for answers in advance. This approach enabled the researcher to adjust questions during interviews in order to test certain aspects that needed more clarity.

The researcher focused on homeowners/customers who had been exposed to the campaign, particularly the customer education forums, in order to understand how they decoded the messages of the campaign.

3.6 Data analysis

Patton (2002: 432) states that qualitative analysis transforms data into findings. Data from audio tapes (recorded during each focus group) were transcribed to text, taking into account pauses, phrases, mispronunciations and incomplete sentences. The analysis of the data was done away from site after the completion of all the interviews in the three districts. Audiotapes have the advantage of capturing comments impartially which allows the researcher to focus on the flow of the interview. The tapes containing the original comments of the focus groups interviews were preserved and labelled accordingly.

Qualitative data analysis is important because it assists in explaining why certain things are happening in a particular way with those people in that setting. A relationship matrix was used to demonstrate how concepts were connected. The matrix was used to capture the extent to which the participants in the study supported the campaign if indeed they supported it. Focus group knowledge and learnings of the campaign were examined and tested against the intentions of the campaign. The effects of the

campaign, such as the implemented saving measures, were examined to determine the support or resistance towards the campaign.

Each district had its own matrix, which contained some of their quotes and summaries. All matrices were then compared and merged into one matrix representing all the districts. The researcher then identified important variables that assisted in reaching a finding.

3.7 Pretesting

According to Bryman and Bell (2007: 273) piloting and pre-testing the questions is crucial mainly in self-completion questionnaires where the interviewer is not present to eliminate any confusion that may arise. In reference to this study, the researcher was available to conduct all the interviews, clear up any confusion during the interviews and therefore did not conduct a trial study. The researcher handed over key questions to an experienced researcher to check them for relevance and reliability.

3.8 Delimitations/scope

The energy efficiency campaign study took place in the three district municipalities (Ehlanzeni, eNkangala and Gert Sibande) in Mpumalanga. Only homeowners who were Eskom customers and who were willing to participate in the study were targeted for the study. The homeowners must have been exposed to the campaign in order to provide relevant and adequate data for the study.

3.9 Validity and reliability/trustworthiness (qualitative research)

Du Plooy (2009: 133) argues that reliability in qualitative research deals with the trustworthiness and credibility of procedures, accuracy of data interpretation and confidence in findings. Interviews were recorded, transcribed from audio tapes into text, then analysed in order to produce a finding. In this study, an experienced professor acted as a judge to ensure that misrepresentation and bias did not happen. Validity of measurement ensures that the study measures what is intended to be

measured. The expert-jury validity approach was assumed for this study. Qualitative research experts evaluated the merit of the measures. Key questions of the study were assessed by a professor from a South African university and the research supervisor at the Durban University of Technology to determine whether the questions were measuring what they were supposed to measure. Interview questions were subjected to scrutiny as a way of testing “how good” the measure was.

3.10 Anonymity and confidentiality

A researcher has the responsibility of ensuring anonymity of the participants. The identity of the participants have not been revealed in this study. Participant personal details regarding names, surnames, gender, and age, date of birth, initials and diagnosis were anonymously processed into the study report. Participants were informed that they would abandon their participation in the study at any stage.

The researcher has the responsibility to ensure confidentiality of information. The information shared by the participants will remain between the researcher and the participants. The voice recorder and consent forms will be kept in a locked safe. All the data collected for the study will be destroyed after the completion of the report. Confidentiality will protect the participant from negative consequences resulting from participating in the study.

3.11 Ethical considerations

The ethics checklist from Durban University of Technology was fulfilled. There were no major ethical considerations aside from the ethical prerequisites.

An information letter with a voluntary participation clause was issued to all participants including the marketing manager and they voluntarily either decided to agree or decline to participate.

The information letter had an anonymity clause. The details of participants such as names, surname, addresses and other information do not have any significance to the

study and as such were not used in the research report. The voice recorder and the consent form will be kept in safe for the duration of the study. All recorded information will be deleted or destroyed 6 months after the conclusion of the study. The consent forms will be burnt in a fire in the designated area.

3.12 Conclusion

The research design has been provided in detail in this section. A qualitative approach was utilised to target focus groups in three district municipalities of Mpumalanga. Issues of validity, reliability, anonymity, confidentiality and ethical considerations are described in the above section. Every member of the focus group and the Eskom representative were made aware that participation is voluntary and that no monetary rewards or any form of reward was available resulting from participation.

CHAPTER 4: DATA ANALYSIS

4.1 Introduction

The purpose of collecting data is to process it (the data) into meaningful information such that findings can be derived. In this chapter, data analysis is presented based on questions and answers provided in the field during focus groups interviews as well as the interview between the researcher and the Eskom representative. Data analysis is presented per district (Ehlanzeni, Nkangala and Gert Sibande).

Data analysis is presented in a thematic format. This enables similar questions or questions that seek to achieve certain answers to be grouped together to ensure coherent probing and appropriate responses.

4.2 Analysis of participant data

4.2.1 Awareness and knowledge about load shedding and Eskom's energy saving campaign

Q: Have you ever heard of load shedding?

All focus group members in Ehlanzeni indicated that they knew about load shedding. One respondent said: "Load shedding is when electricity is not enough and customers have to share the electricity that is available around the country".

Gert Sibande focus group members indicated that had they heard about load shedding. A participant in Gert Sibande said: "Load shedding is done on a rotational basis and everyone is on schedule to be switched off at a particular time".

All focus group members in Nkangala confirmed that they knew about load shedding. One participant said: "Eskom used to have enough electricity in the past but not

anymore. There is currently not enough electricity to supply everyone and all businesses".

It is clear from the above responses that all focus groups (Ehlanzeni, Gert Sibande and Nkangala) had heard about power cuts and demonstrated a fair understanding of load shedding.

Q: What do you understand about electricity shortages?

The Ehlanzeni focus group were of the view that power shortages were generally a result of demand exceeding supply. A participant said: "Electricity shortages means the country has more electricity demand than what Eskom can supply at a specific time so power cuts become a solution to the problem". It is clear from the above response that the respondent understood the power cut situation and was not blaming the government or Eskom for not preparing adequately as the demand for power supply had increased. This kind of understanding suggests that the respondent was taking a dominant reading of the situation. Two respondents however, argued that Eskom could have taken measures to avoid power cuts if they had been more proactive in forecasting and planning for the future.

The Gert Sibande focus group were of the view that electricity shortages happen when electricity supply is not enough for everyone to use at the same time. A participant explained power shortages as follows: "When electricity is not enough from Eskom the municipality is also affected. This is because the municipality gets electricity in bulk from Eskom and then supply to its customers". It is noted from the above response that the respondents understood that when Eskom experiences demand and supply challenges, customers that are supplied from the municipality are also affected by national power shortages because Eskom is the main supplier of electricity to municipalities in South Africa. This focus group demonstrated an advanced understanding of electricity shortages. The above responses indicate that the respondents had taken a dominant reading of the power cut situation.

The Nkangala focus group were of the view that electricity shortages were a result of system overload. A participant said: "Power cuts are a problem especially in the

evening when everyone is cooking. The problem is that everyone is using more electricity at the same time". It is clear from the above responses that this focus group understood power shortages and they took a dominant reading of the situation.

Q: Do you believe power shortages are disruptive or non-disruptive?

The Ehlanzeni focus group perceived power cuts to be very disruptive. A participant said: "People's lives could be in danger if power cuts happen. Hospital theatre procedures can be disrupted by power cuts". Other respondents added that food is spoiled and people who turn to using candles for basic lighting have to deal with the risk of houses being burnt down. It was clear that this focus group understood that power cuts have a negative impact on Eskom's customers and the country in general.

The Gert Sibande focus group perceived electricity shortages to be very disruptive. A participant said: "Electricity shortages are bad for people's lives and it affects businesses as well". The group brought into sharp focus the financial implications of replacing rotten food, buying paraffin for basic lighting and increased criminal activities resulting from power cuts. It was clear that businesses and customers suffered tremendously from the situation and that they were caught by surprise because they were then expected to look for alternative means of energy which proved to be far too costly for the majority of the respondents.

The Nkangala focus group also perceived electricity shortages to be very disruptive. A participant said: "When you go home from work expecting to find food and you are told that power has been off for more than four hours and no one was able to cook, its chaos". It was clear that focus group members valued electricity and their lives were disrupted without it. The respondents were shocked and frustrated at Eskom's inability to cope with the energy demand and called for speedy resolution to the devastating power crisis.

Q: Have you heard of Eskom's energy efficiency campaign?

The Ehlanzeni focus group indicated that they had heard about Eskom's energy saving campaign. "Eskom wants everyone to save power in order to continue supplying us

with electricity without too much disruption". It was clear from the response that the respondents knew about the energy saving campaign, which calls for all citizens to save in order to avoid power disruptions.

Gert Sibande respondents confirmed their knowledge of the energy saving campaign. A participant said: "Yes, it is all over the radio and television that there is not enough electricity and people must save energy". This response clearly confirmed that members of this focus group had heard about power shortages and that Eskom was running a campaign to encourage customers to save electricity.

Nkangala respondents indicated that they knew about Eskom's campaign to save electricity. "Eskom came to my village to educate people especially on Saturdays". It was clear that the Nkangala focus group members knew Eskom's campaign.

Q: In which medium did you hear about the energy saving campaign?

In Ehlanzeni, media such as radio, television, newspapers, word of mouth and Eskom people doing customer education were mentioned as platforms utilized to carry the campaign's messages. A respondent said: "I read about this in the newspapers and people talk about it every day". It was evident that multiple platforms had been utilized to spread the messages of the campaign.

In Gert Sibande, mediums such as radio, television, local newspapers, pamphlets and Eskom presentations during community meetings as platforms were utilized to carry the campaign's messages in their area. "I heard about energy saving from someone who came from Eskom to attend our community meeting who shared some tips on how to save energy". It was evident that Eskom used a variety of media platforms in delivering the campaign's messages in an effort to encourage customers to use electricity sparingly.

In Nkangala, media channels ranging from Eskom's customer education initiatives, school forums and local radio were disclosed as mediums of the campaign. "We often hear Eskom people on radio doing interviews about energy efficiency" said a

participant. It was evident that multiple platforms were utilized to carry the campaign's messages.

Q: Do you understand how the power alert works?

Eskom's power alert appearing on national television was one of the many tools utilized to encourage customers to react timeously by switching off during power constraints. The power alert had various colour patterns (green, orange, red and brown) with each color representing the status of power supply. The three focus groups demonstrated a good understanding of how the Eskom national power alert works. All focus group participants explained what the different colour patterns mean for the power system. The focus group members used their own words to explain their basic understanding of the different colours in the power alert, without having to refer to Eskom's power alert material during interviews. There were no materials offered to assist the participants with responses during the interviews and that demonstrates that they had a good level of understanding of how the national power alert works. The basic explanations offered by the focus groups can be summarised as follows: **Green** means there is sufficient power and the system is stable; **orange** means the system is beginning to take strain and people must start using electricity sparingly; **red** means the power supply is under pressure and people must switch-off as many appliances as possible to avoid load shedding; and **brown** means the systems is under severe pressure and people should switch off everything except a few lights and the television. It was clear from the above responses that residential customers understood how the power alert worked and the appropriate reaction expected from them as consumers of electricity.

4.2.2 Public or customer participation in the campaign

The Ehlanzeni focus group indicated that they were not involved in the initiation, planning, decision-making and implementation stages of the campaign. "I was not part of the meetings but I'm part of the campaign" said a respondent. Another respondent said: "there were no meetings about the upcoming campaign, but we were visited by Eskom people to present about energy saving tips". Judging from the above

responses, it seems that residential customers were not part of the participatory process. Although they were not consulted ahead of the campaign, they still participated in the energy-saving campaign. The respondents also indicated that they would have liked to be part of the consultation process in order to make contributions.

The Gert Sibande focus group felt that Eskom did not do enough in terms of consulting them as Eskom rushed to get started with the campaign because they did not want to engage in time consuming consultations with customers. In the words of one of the respondents, “They took all the decisions and our role is to save energy that’s all”. The residential customers in this focus group felt that if Eskom had consulted them, they would have advised that people who steal electricity would affect the campaign.

The Nkangala focus group was not engaged as individuals and community structures such as Community Development Forum (CDF) and other structures did not indicate that Eskom had consulted them about an upcoming energy saving campaign. They believed that if there were any sort of consultations, it would have been at national level as provinces and districts felt that they were left out. “We are a community waiting to be told exactly what needs to be done and we will support it. We do not make laws, we follow the laws”, said a respondent.

Participants generally had a strong sense of lack of participation or engagement (initiation, planning, implementation and evaluation) of residential customers by Eskom; however, residential customers nevertheless supported the campaign as a matter of national interest. None of the focus group members in all the districts mentioned anything regarding any kind of engagement whatsoever, except that Eskom came to spread the energy saving messages. Eskom’s approach in the energy saving campaign was contrary to participatory communication for social change approach. The paradigm of participation for social change contends that people should work together to make changes at the community level or societal level rather than just being subjected to change by people in positions of power. Judging from all the responses, focus group members were expected to receive the campaign messages and to support the campaign by implementing energy saving tips as there were no consultations that could have allowed residential customers to make contributions or influence the campaign in any manner.

4.2.3 Opinions and perceptions about the energy saving campaign

The Ehlanzeni focus group held the view that Eskom was doing enough in terms of their messaging and that people should support the campaign as Eskom cannot achieve energy saving alone. There was agreement amongst members of this group that Eskom was doing enough customer education on energy efficiency and they believed the CFL bulbs were good for saving energy, however not all customers could afford these bulbs. One respondent said: “It is very difficult to replace a CFL as it is expensive”. There was also a belief that saving electricity would have a direct financial benefit. “Saving money is another benefit because saving electricity cuts down my electricity budget”. This focus group raised a concern that Eskom was not giving them feedback on whether their savings were helping in reducing the strain on the grid or not. A respondent said “I want to know if my savings are making a difference. I need to know so that I can do more or be certain that I am making a positive difference.” Feedback is important in ensuring that participants of a campaign are kept updated with the progress of the campaign.

Participants in the Gert Sibande focus group perceived that Eskom’s campaign is doing well, but people who steal electricity (*izinyoka*) had no reason to support the campaign as they did not pay for electricity. This focus group was also concerned that they do not receive the results of the campaign from Eskom. A participant said: “I think by virtue of Eskom sometimes showing green and sometimes showing red, it means there is some progress made when it comes to saving”. Communication is a vital tool in ensuring support and feedback of the campaign; however, the above response implies that customers did not receive proper feedback from Eskom. There was great support for the introduction of the CFL, but the cost of replacing this light bulb has proven to be challenging to Eskom’s residential customers. One participant highlighted that “the CFL price is way too expensive. Eskom and government should work on finding a way to make a cheaper one if they want people to continue buying the CFL. If that does not happen, it will mean people will have to go back to their incandescent light bulb”.

The Nkangala focus group perceived that energy saving have to do with nation building. A respondent said: “Power shortage is our baby and all of us must save energy and build this nation”. There is a serious concern about electricity thieves who do not care about the energy saving campaign. A respondent said “We continue to save but those who are stealing continue to steal too. Eskom should do something about electricity theft as there is no need for people who are stealing electricity to save what they do not pay to use”. Based on this and other similar responses, it is clear that Eskom needs to work closely with law enforcement agencies to ensure that those who steal electricity are dealt with and information is shared with the public on how well the challenge of izinyoka is dealt with. The respondents generally felt that their efforts to save electricity were being undermined by izinyoka. This group as well was concerned that Eskom was not communicating to them the savings made by residential customers. Feedback is essential in campaigns involving the masses as one participant hinted that “Only statistics from Eskom can tell us whether we have made some savings or not”. The focus group members applauded the benefits of the CFL but they raised a concern regarding the cost of the CFL globe; one member complained and said: “CFL is not well priced and that is killing the campaign because people believe in it but they can’t buy it because of the high price”.

It was clear from the above discussion that the three focus groups believed that the CFL bulbs can save electricity but the cost of this energy saving bulb is expensive compared to the incandescent light bulb. Despite government and Eskom’s efforts to provide one free CFL for each household and the introduction of the CFL exchange programme, it is clear that one globe was not enough to cater for lighting needs of households. Furthermore, despite the long-lasting life span of this globe (CFL), residential customers carry the burden of replacing this globe at the end of its life span. Another interesting point was that the burden to replace all the incandescent lights with energy savers rest on the shoulders of house owners. Based on the above, it is clear that it is highly possible that in the event where residential customers struggle to buy energy saving lights, they may fall back to using incandescent lights due to affordability.

As far as the reception of the energy saving campaign messages is concerned, the majority of the focus group members in the three districts demonstrated that they had

received the campaign messages as intended by Eskom via different platforms, including the media. This meant that participants did what Eskom advised them to do when the power alert appeared on television and other forms of media. This kind of reception is consistent with the dominant reading classification by Hall (1970). The campaign adopted the linear approach to communication as explained by Shannon and Weaver (1949), where the campaigner (Eskom) sent a message to the recipients (residential customers) via a channel with the intention that the receiver would act in line with the campaign by saving energy, but the receiver was not afforded an opportunity to provide feedback to the campaigner. The campaign sought to influence the behaviour of residential customers to save electricity by convincing them that doing so was a part of nation-building, since electricity is such a strategic resource and a matter of national importance. According to the campaign, a stable power supply would possibly mean economic growth and development for the people of South Africa. The campaign was mainly aiming to change people's attitudes, beliefs, values and actions towards electricity usage. Rice and Atkin (2013:9) posits that for people to change their attitudes, beliefs, values, etc. they need to be persuaded with reasons why they should support a particular campaign. People prefer to be told about the benefits of supporting a particular course of action. The notion that saving energy was an act of national importance towards nation building was at the centre of persuading people to support the campaign. Another interesting factor as presented by Rice and Atkin (2013) is that persuasion plays a reinforcing role for the people who already understood the campaign as they can play an advocacy role for the newer recruits of the campaign. The campaign's approach was to ensure that more and more residential customers were recruited to support the campaign. The campaign's idea was that if people started to talk about the benefits of saving energy then others would be more inclined to join the campaign.

It was clear that participants never had the opportunity to be flexible in terms of engaging the campaign initiator, Eskom, particularly because their needs were not noted and incorporated in the campaign. They (residential customers) were considered only in terms of how they would react to the campaign's messages. Eskom used the media to expose its customers to the campaign messages and customers supported the campaign because they held the belief that Eskom is the only institution mandated to provide energy, so Eskom knows what needs to be done by everyone in

order to turn-around the power cuts situation. It was, however, noted that those who do not pay for electricity were believed to not be participating in the campaign as they had no reason to save something (electricity) which they can simply steal. This suggests that one of the key aspects that should have been incorporated into the campaign, had Eskom consulted the community, is the challenge of *izinyoka* and how Eskom was dealing with them.

4.2.4 The learnings derived by participants from the overall campaign messages (tips)

Energy saving tips and learnings shared by the Ehlanzeni focus group:

1. Switch off all appliances after use.
2. Switch-off appliances when they are not being used.
3. Boil only the amount of water needed, do not flood the kettle.
4. Keep the refrigerator closed (do not open unnecessarily).
5. Iron all the clothes at the same time.
6. Use a kettle to boil water and not the stove.
7. Change to energy saving bulbs (CFLs).

Energy saving tips and learnings shared by Gert Sibande focus group:

1. Switch off appliances not in use (take them out of the electricity plug to avoid standby power consumption).
2. Saving electricity can help save money.
3. Boil only the water needed for tea or enough for any other purpose.
4. Open the fridge only when it is necessary.
5. Automatic appliances such as kettles and irons save more electricity than appliances that are manual.
6. Switch-off all appliances when electricity is cut as appliances may burn when electricity comes back.

Saving tips and learnings shared by Nkangala focus group are as follows:

1. Save electricity to save money.
2. Save electricity to save jobs.

3. Replace incandescent light bulb with the CFL.
4. If bedrooms are not occupied, switch the lights off in those unoccupied rooms.
5. If electricity is not saved, the risk of load shedding increases.
6. Check the power alert on national television.
7. Use solar energy rather than rely only on electricity for energy.

4.2.5 Support for the campaign and actions implemented towards saving energy

The Ehlanzeni focus group supported the campaign and amongst other things participants highlighted was that they did switch off power as and when Eskom required them to do so as well as advised their neighbours to do the same. The group also said that CFLs were expensive but 12 out of 15 participants indicated they had changed to CFLs. The other three participants indicated that such change was impossible due to the costs of purchasing a CFL. One respondent indicated that she had postponed buying a geyser until the power crisis from Eskom improves. All the focus group members indicated that they only boil the amount of water they need and iron all their clothes at the same time. Generally, most of the tips learnt during the campaign were reported to have been implemented by this group.

Participants in Gert Sibande supported the campaign. One participant said, “I switch-off when Eskom say I must do so. I also use energy saving globes”. A participant indicated that he had resolved to purchase automatic appliances since their ability to switch on and off represent a savings opportunity. Ironing for everyone at the same time, not opening the fridge unnecessarily and using less water were cited in this group as some of the measures to save the national grid. As far as CFLs were concerned, 13 out of 15 participants indicated that they used CFLs in their houses, while 2 participants indicated that they did not receive the free CFLs as they were not at home during the free distribution campaign, so they only hear from their neighbors that is saves electricity, they have never tried using it and, they are waiting for the next free distribution of these light bulbs.

The Nkangala focus group indicated their support for the campaign especially during peak hours (5pm to 9pm). Peak hours is the time when most people are at home and everyone is using electricity for various purposes such as ironing, cooking, cleaning swimming pools, etc. “The overriding principle is to switch off the heavy consuming electricity equipment in order to drastically reduce power usage” said a participant. There was, however, one participant who was hesitant to spend money on implementing the campaign who said “I will wait for others to implement their saving plans and I will sort of emulate what works so that I do not spend money on things that will not assist this campaign”. The campaign appeared to have received overwhelming support as 12 out of 15 participants indicated that they had implemented most of the energy saving tips.

The above reports focus group reports indicate that Eskom’s energy saving campaign was well received and well supported by the participants as a matter of national importance. Most participants were of the view that CFLs save power but they stated that they are very costly and Eskom and government should make them cheaper.

4.2.5.1 Residential customers’ suggestions to improve the energy efficiency/saving campaign

Suggestions from the Ehlanzeni focus group:

Eskom should intensify the fight against electricity theft. Eskom should fight ghost vendors as they appear to sell cheap electricity to people, resulting in people not wanting to save. The campaign should reach institutions such as schools, churches and other public places in order to reach more people. There was a feeling that although people receive Free Basic Electricity (FBE), issues of illegal connections and ghost units continue to disturb the campaign and children sometimes die as a result of exposure to electrical wires used for illegal connections.

Suggestions from the Gert Sibande focus group:

“Eskom must try to do more radio adverts in order to reach more people” said one participant. Eskom should target community leaders’ meetings, which include councillors and traditional leaders. The group said: “The biggest fight for Eskom is to stop customers from stealing electricity and to stop people who work for Eskom from assisting people to connect illegally”. Eskom should consider rewarding those who save energy and punish those who are not saving. Ghost vending was raised as a challenge to the campaign as people are tampering with their meters. One participant said: “This situation can only change if people see the danger of buying ghost units and doing illegal connections”.

Suggestions from the Nkangala focus group:

The participants generally felt that the campaign could have achieved more if the right people were appointed to run the campaign. “Eskom must allocate jobs to local people. They can help spread the message faster and they can report on accurate human behaviour around here”. Incorporating saving water and electricity as part of the agenda in all public gatherings can help to not only solve the problems of water and electricity shortages, but also help to deal with climate change. There was a view that more messages should be brought to the attention of the people. Eskom should deal with those who are not buying electricity since they have no reason to support this type of campaign.

Table 4.1 represents the ratings of the three focus groups (Ehlanzeni, Gert Sibande and Nkangala) on the five statements provided.

Note :(A) Only 5 out of 15 respondents (In their respective focus groups) were allowed to respond per statement.

(B) Ratings are presented out of 5 respondents (see table 4.1).

(C) Ratings of all focus groups are added together in the analysis - making 15 respondents. Not all 45 participants responded to the statements.

Table 4.1:

Statement	Focus Group Name	Rating
I understand Eskom's energy saving campaign messages	Ehlanzeni Gert Sibande Nkangala	4 out of 5 3 out of 5 4 out of 5
When I see power alert, I switch off immediately	Ehlanzeni Gert Sibande Nkangala	3 out of 5 3 out of 5 3 out of 5
I replaced incandescent light bulbs with CFL	Ehlanzeni Gert Sibande Nkangala	3 out of 5 3 out of 5 2 out of 5
I attend Eskom's customer education forums	Ehlanzeni Gert Sibande Nkangala	4 out of 5 4 out of 5 2 out of 5
I share energy saving tips with friends and relatives	Ehlanzeni Gert Sibande Nkangala	4 out of 5 4 out of 5 3 out of 5

Table: Ratings of the three focus groups

Analysing data from the above table:

- Understanding the Campaign's messages

It is clear from the data recorded in Table 4.1 that 11 out of 15 respondents understood the campaign's message very well. Therefore, we can conclude that the majority of participants understood the campaign's message.

- Reaction to the power alert

Nine respondents indicated that they switch-off when the power alert dictates so. Six other people were disadvantaged due to access to timeous communication mediums such as radio and television, otherwise they indicated that they switched-off based on information supplied to them by their neighbours

- Replacement of Incandescent lights with CFL

Eight out of 15 people indicated that they had changed from incandescent lights to CFL, with seven participants indicated that they struggled to buy CFL's, citing affordability reasons.

- Attending Eskom's customer education forums/initiatives

The majority of the participants (10 out of 15) indicated that they attended Eskom's forums.

- Sharing of the campaign's messages amongst residential customers

Participants shared the campaign's messages amongst themselves. Twelve out of 15 participants indicated that they share tips with one another, especially with those who do not have access to radio and television.

4.3 The section below presents data analysis for the interview of the Eskom representative

4.3.1 Reasons for Eskom to roll-out load shedding (demand versus supply)

"The demand for electricity is driven by increasing or slow economic growth, cold weather, wet coal, insufficient coal stock, maintenance and breakdown of generating units amongst other things". The Eskom representative indicated that when demand exceeded supply, Eskom had to implement load shedding in 2008. Thus, the power shortages were driven by a number of factors that led to the demand exceeding the supply in the year 2008.

4.3.2 The reason for Eskom to implement energy efficiency campaign (what does it seek to achieve)

The Eskom representative indicated that Eskom introduced the energy efficiency campaign with the aim of encouraging customers to reduce energy consumption on a

permanent basis. It can be said that as the demand exceeded supply, Eskom had to come up with initiatives that sought to stabilize the state of electricity supply throughout South Africa. Eskom mobilized many energy sectors, residential customers included, to start using power sparingly.

4.3.3 What is the difference between Eskom's energy saving campaign and the government's 49M campaign?

The Eskom representative indicated that both Eskom's energy saving campaign and the 49M campaign aimed to achieve a reduction in energy consumption. Eskom drove the energy saving campaign, while government through the Department of Energy drives the 49M. Eskom assisted the Department of Energy in their 49M campaign in order to ensure alignment of messaging. It was clear that government introduced the 49M campaign to assist the energy efficiency campaign led by Eskom to improve the support of the campaign as an issue of national importance.

4.3.4 Public participation or consultation regarding the energy saving campaign

The Eskom representative indicated that customer working groups and customer forums were established for consultations with a view to helping customers understand the campaign better. This approach suggests that consultations conducted by Eskom regarding the campaign were not aimed at understanding the community and its needs. Such consultations were meant "just" for the community to understand the campaign and for Eskom to gauge how the campaign messaging would influence residential customers in favour of the campaign, thus customers' needs were not incorporated into the campaign with this type of approach. "Customers are involved when messages for the campaign are being developed". When Eskom embarks on a new campaign, it involves targeted forums consisting of approximately 20 participants to help determine which marketing technique can work better. It is noted, however, that customers' contribution is limited "Customers do not have much say on decision making but have influence on what can work to the broader customer audience". It can be noted from the above response that Eskom has done some form of consultations

with targeted forums to work on the campaign's messaging, but those customers have limited power to make decisions. According to Eskom, public participation was done but with certain limitations.

Communication for development places the local people as traditional receivers of developmental messages. Pamment (2015: 202) notes that the dominant paradigm recognises the media as an important component of delivering social change. The traditional model of development communication (dominant paradigm) was criticised because in its nature, it only concerns itself with changing the behaviour of individuals without considering their socio-economic and cultural factors. The traditional model of developmental communication is consistent with Eskom's approach to the campaign. The campaign was more concerned about communicating as much information as possible via the media and other forums with a view that people exposed to the campaign's messages would change and become energy efficient, as opposed to considering people's views, which can end up delaying the communication of messages, as consultative processes can be very long in their nature. The campaign's mission was to get the messages to as many people across the country as possible without delay in order to ensure electricity stability. The dominant paradigm takes a form of linear approach to communication as identified by Shannon and Weaver back in the 1940s. Wood (2013: 09) believes that the linear model of communication concerns itself with sending a message to the receiver and the receiver has to consume such a message without an opportunity to respond to the message. This leaves the sender with no idea as to how the message was received and interpreted for meaning and action. The belief is that the receiver will eventually conform to the message as it comes from a more influential person or institution to the less influential and less developed who is waiting for developmental programmes to be rolled-out and act in support of such programmes.

The dominant paradigm as discussed above mainly recognises the media as an important role player, while placing people as passive participants in the programmes that are aimed at their own development.

The discussion that follows deals with participatory communication approach for social change in reference to the Eskom' campaign.

Consultations conducted by Eskom are in contrast with participatory communication approach as theorised by Paolo Freire in the 1970s. Muturi and Mwangi (2009) explain clearly that Freire's participatory communication approach is characterised by dialogue, receiver-centredness and a conscious awareness of social structure. The work of Paolo Freire in 1970 elevated the local people to become active role players in their own development. In this approach, local people are no longer viewed as just beneficiaries of the project results.

In reference to Eskom's campaign, consultation processes were mainly concerned with testing how residential customers would react to the campaign's messages as opposed to understanding the community and its needs. This places residential customers as merely recipients of the campaign, as opposed to active communicators who can in turn engage meaningfully in a participatory process. Since the campaign was meant to ensure power supply stability, it placed residential customers as beneficiaries of the campaign. Meaning, if residential customers understand and react positively to the campaign's messages their electricity supply would not be interrupted and by virtue of having constant supply of electricity, their efforts would be rewarded. Upholf (1985, cited by Muturi and Mwangi 2009) suggest four stages of a participatory process: decision making, implementation, evaluation and beneficiary. Eskom's consultation process leaned more towards the beneficiary stage, placing residential customers as people who are mainly directed to save electricity, which is a top-down approach, compared to a down-top approach, where people in less powerful positions are not controlled by people in more powerful positions. Ngomba (2011: 6) warns participatory communication practitioners that people in the areas in need of development are not 'dumb' as they possess the knowledge and skills that can advance development in their communities when they are involved in the planning, execution and evaluation of development initiatives.

4.3.5 The mediums and forums utilized for the energy saving campaign

The Eskom representative indicated that the campaign was carried out via radio, newspapers, television, customer forums and pamphlets. A wide range of customers were reached and school children were targeted in order to introduce them to an

energy saving culture while they are still young. The power alerts carried on national television were one of the most prominent tactics for the campaign. The platforms promoted key messages such as replacing inefficient bulbs with energy efficient bulbs, switching off electrical appliances when not in use, switching off lights when rooms are not occupied. Various tips were shared to shape the minds of residential customers to implement saving initiatives and practices.

4.3.6 Has the campaign achieved its objectives?

"People responded positively to the campaign by saving certain megawatts during power constraints. When customers respond positively to the power alert, Eskom saves electricity equal to one power station in the space of 10 to 15 minutes". The Eskom representative indicated that residential customers were advised not only to save when the power supply was under strain, but to make saving a culture. The awareness level regarding this campaign was high among residential customers. The distribution of CFL saved 70% of electricity in households on lights only.

It is clear from the above response that Eskom held the view that the campaign received a positive response as people saved electricity in response to the power alert. The CFL was cited as an initiative that was proven to save a lot of electricity.

4.3.7 What are the learnings of the campaign?

The Eskom representative indicated that an independent marketing agency evaluates Eskom's campaigns and helps Eskom review some of its unclear messages. "The agency speaks directly to residential customers and Eskom is not involved". Feedback received by Eskom from the agency indicated that residential customers were supporting the campaign by means of implementing some of the energy saving initiatives like replacing lights with CFLs and switching off electrical appliances when the system was under pressure. Another reality as indicated by the Eskom representative was that the energy saving campaign would continue even when the supply system became stable as the campaign aimed to sustain the saving culture.

It can be confirmed from the above responses that Eskom has been promoting a saving culture as opposed to only asking customers to save when the system is under pressure. It is clear that Eskom evaluates the energy saving campaign from time to time in order to improve it going forward via an independent agency. It should be noted however that residential customers are not receiving the results of the evaluation of the energy saving campaign done by the agency. Therefore, Eskom knows the results and customers do not know how much of a difference they make to the campaign's aims and objectives.

4.4 Conclusion

The data analysis section focused on the interviews conducted with the residential customers residing in Ehlanzeni, Nkangala and Gert Sibande district municipalities in Mpumalanga. The Eskom representative for the campaign was also interviewed and the data is analyzed as well. The analysis will help the study reveal whether or not Eskom has succeeded in motivating the residential customers to save energy. The analysis indeed show that most South Africans are aware of the power shortages in the country and are reacting to the situation. Chapter 5 will present a detailed findings and discussion of the study.

CHAPTER 5: FINDINGS AND DISCUSSION

5.1 Introduction

Chapter 4 dealt with the analysis of data that was collected during fieldwork. Chapter 5 will present the findings of this study. The findings of the study are based on information collected during fieldwork through a questionnaire. A questionnaire and focus groups were the instruments of data collection in this qualitative study. The questionnaire was aligned to specific themes as highlighted in Chapter 4 of the study. The themes were used in order to group related questions together to ensure that data was collected in an orderly manner. These themes will also assist in presenting the findings of the study in an orderly manner.

The presentation of findings in this study will be done in the following manner:

- The findings and discussion for the Ehlanzeni, Nkangala and Gert Sibande focus groups will be presented first, with each consisting of 15 participants.
- The findings derived from the Eskom campaign representative will be presented second. Only one Eskom energy saving campaign representative was interviewed for the study.

5.2 Focus groups (residential customers) research findings

It is important to revisit the aims and objectives of the study as they provide the main reason why this study was conducted.

The objectives of the study as presented in Chapter 1 were:

- Determine the attitudes, opinions, knowledge levels and reception of the energy efficiency campaign by Eskom customers.
- Determine what the residential customers have learnt from the campaign and the electricity saving measures they have implemented.
- Assess the energy efficiency campaign against the theoretical framework of participatory communication theories.

- Make recommendations on the outcomes of the research to Eskom.

Before we deal with the findings, let us recap the themes that will be followed in presenting the findings:

- Awareness and knowledge about load shedding and Eskom's energy saving campaign.
- Public or customer participation in the campaign.
- Opinions and perceptions about the energy saving campaign.
- The learnings derived by residential customers from the overall campaign messages (tips).
- Support for the campaign and actions implemented towards saving energy.
- Residential customers' suggestions to improve the energy efficiency/saving campaign.

5.2.1 The findings and discussions of the study (focus groups)

5.2.1.1 Theme 1:

Awareness and knowledge about load shedding and Eskom's Energy saving campaign.

Question 1: Have you ever heard of load shedding?

- The respondents in all focus groups indicated that they had heard about load shedding. This is a clear indication that the Eskom power shortages were widely spread and known to residential customers.

Question 2: What do you understand about electricity shortages?

- Forty out of 45 participants explained clearly their understanding of power shortages. The finding is that they understood power cuts to be a result of Eskom struggling to balance the demand and supply of power. Customers supplied directly by the municipalities also experienced power cuts, since

municipalities get power from Eskom and redistribute it to their customers. This is compelling evidence that residential customers made efforts to understand what is troubling the national power giant, Eskom.

- The other five respondents confused electricity faults and planned outages with national power shortages.

Question 3: Do you believe power shortages are disruptive or non-disruptive?

- All 45 participants found power cuts to be very disruptive. Furthermore, participants had a fear that people would lose their lives if electricity in hospitals went off. The cost of replacing electricity with paraffin and other sources of energy was found to be unbearable. It can be confirmed that no institution, including essential services like hospitals, clinics, police stations, prisons, etc. were spared from the power crisis. Effectively, this means that Eskom was under a lot of pressure and could not keep up with electricity demand.

Question 4: Have you heard of Eskom's energy efficiency campaign?

- Forty two participants confirmed that they had heard about Eskom's energy saving campaign and they understood very clearly what was required to support the campaign.

- Three participants said they had heard about the campaign but they were not sure if their savings were assisting the campaign since their households' consumption was low.

- A finding is therefore made that Eskom's campaign was successful in spreading the campaign's messages to many electricity consumers in the residential sector.

Question 5: In which medium did you hear about the energy saving campaign?

- The overwhelming majority (38) of participants received the campaign's messages via platforms such as radio, television, newspapers, pamphlets, community meetings and customer education. McQuail (cited in Ngomba 2011: 10) confirms that the media is used by those that are more knowledgeable to transmit information to those that are less knowledgeable with a view to effect positive social change. Indeed, the media was found to be the most prominent platform to share the campaign's messages.

- Seven out of 45 participants indicated that they do not have access to television, radio and newspapers due to financial challenges. The seven participants said they rely on word of mouth through community meetings, customer education forums and other face-to-face interaction to receive the campaign messages. This means that customers who could not afford to buy campaign carrier items such as newspapers, radio and television were less exposed to the campaign's messages compared to those customers who could afford to access these media.

Question 6: Do you understand how the power alert works?

- Forty-five participants indicated that they understood how the power alert works. They explained clearly the meaning of the different colours used in the power alert, and their reaction to each colour.

- It is interesting to note though that 38 respondents indicated that they were able to react timeously when they were asked to do so via mediums such as television and radio. The seven respondents who could not afford to buy a television or radio were found to react too late to the power alert as they had to rely on others to inform them about the status of electricity supply in the country. They were also struggling to switch their supply back on their supply because they had to wait for others to inform them to do so. Overall,

the power alert was found to be helpful, but was quite challenging for the less well-resourced people to cope with.

5.2.1.2 Theme 2:

Public or customer participation in the campaign

Eskom's campaign on energy efficiency aimed to achieve positive social change by means of energy usage reduction. From a developmental communication for social change perspective, it is confirmed on Theme 1, Question 5 that the campaign utilised the media (radio, television, newspapers, etc.) to deliver energy saving messages to its customers (residential). The use of media to spread the campaign is consistent with the traditional model of developmental communication (dominant paradigm). Pamment (2015: 202) notes that the dominant paradigm recognises the media as an important component of delivering social change. McQuail (cited in Ngomba 2011: 10) confirms that the media is used by the more knowledgeable to transmit information to the less knowledgeable with a view to effect positive social change. This is found to be consistent with the campaign's approach; as the campaigner, Eskom wanted to share energy saving tips to the customers who knew less or nothing about energy saving tactics. In this approach residential customers are just audience members in developmental projects that concern them. It is very clear that they did not invest much time, effort and resources to do consultations with residential customers, but chose rather to focus on campaign messaging via the media. The traditional model of development communication (dominant paradigm) is criticised by Paolo Freire (1970) because it only concerns itself with changing the behaviour of individuals without considering socio-economic and cultural factors.

Paolo Freires' (1970) participatory approach to communication is supported by Lewin and Patterson (2012:40) who state that the dependency theory prompted the existence of participatory communication that favoured local engagement with critical awareness of power structures. From a participatory communication for development perspective, Upholf (1985 cited in Muturi and Mwangi 2009) identified four stages of participatory communication for development: decision making, implementation,

evaluation and benefit. This study finds that Eskom's consultative process was not in line with the identified stages of participatory process for development communication. The recipients of the campaign did not take part in the decision making as they believed that Eskom was capable of taking all the decisions. They were not part of implementation strategies, and not involved in the evaluation of the campaign. Residential customers become much more involved only at the benefit stage since they would have electricity stability, as a matter of national importance.

The campaign's approach is in contrast with Lewin and Patterson's (2012) views regarding how Freire's work has been hugely influential in participatory development and communication. This is precisely because his (Freire) work influenced the engagement of grassroots people. According to Muturi and Mwangi (2009), Paolo Freire (1970) theorised a "participatory communication approach that was characterised by dialogue, receiver-centredness and a conscious awareness of social structure." Eskom's approach is found to be inconsistent with the participatory approach to developmental communication as the campaigner's main focus was about passing on the campaign's messages rather than focusing on time consuming consultations. This study found that participants did not have an opportunity to influence the campaign that was aimed at them, but had to just receive, embrace, and act in support of the campaign. The idea of involving people in their own development is strongly advocated by Eversole (2003: 781) because it enables local people to be active subjects rather than passive objects of their own development. Kheerajit and Flor (2013: 704-705) state that people need to be part of negotiations that are aimed at creating change in their lives. The campaign's approach is not in line with the above expectations. Melkote and Steeves (2001) state that a sense of ownership is important because without it the targets of the message and intervention are more likely to reject it. In the case of this study, it is, however, noted that participants accepted the campaign and implemented a number of initiatives to support the campaign even though they were not properly consulted by Eskom.

5.2.1.3 Theme 3:

Opinions and perceptions about the energy saving campaign.

This theme first looks at both positive and negative opinions of the campaign. It concludes by looking at reception of the campaign's messages.

- Residential customers' positive opinions about the campaign:

  - ✓ CFL saves energy and Eskom and government should make these energy savers cheaper and from time to time provide CFLs for free.
  - ✓ Eskom is applauded for running the CFL exchange programme.
  - ✓ Eskom's campaign is doing well and customers should support the campaign.
  - ✓ Residential customers understand how the power alert works.
  - ✓ By saving energy, customers believe they save money too as they pay less on their bills or prepaid power.

- Residential customers' negative opinions about the campaign:

  - ✓ CFL is expensive, not everyone can afford it. If Eskom and government do not come up with price reduction mechanisms, customers will have no choice but to go back and use incandescent light bulbs, resulting in regress.
  - ✓ Another fact about free CFLs is that one light bulb received during the campaign was not sufficient to cater for all lighting needs of a household, which delays the replacement of other traditional light bulbs by the household.
  - ✓ Access to CFL exchange points appeared to be a challenge as customers had to travel to reach exchange points, which were mainly located in towns or well-developed areas compared to townships and villages.

- ✓ Eskom is not providing feedback of the campaign to residential customers.
- ✓ People who steal electricity do not have a reason to save energy.

- The Reception of the campaign's messages

As far as the reception of the campaign's messages is concerned, it is found that Eskom utilised different media platforms to disseminate the energy saving messages in the three districts. As explained by Shannon and Weaver (1949), the campaigner (Eskom) took a linear approach whereby the campaign's messages were sent to residential customers via different channels in order to achieve positive social change in the form of a reduction in energy consumption, but no platform was provided for the target audience (customers) to provide feedback to the campaigner. Rice and Atkin (2013:09) argue that for people to change their attitudes, beliefs, values, etc. they need to be persuaded with reasons why they should support a particular campaign. In reference to this campaign, it is found that customers were meant to understand the energy saving campaign as a matter of national importance, since electricity is the main driver of economic development and it drives the development of people's lives in general. Customers received the campaign and responded to the national power alert appearing on national television. The reception of the energy saving campaign is found to be consistent with the dominant reading classification by Hall (1970). The respondents understood the message as it was encoded by the communicator, without putting any kind of blame on Eskom and government regarding Eskom's preparedness to adequately plan and deal with increased demand. Eskom came with the message; customers received the campaign, supported the campaign and did not participate in the decision-making processes. The campaigner had some consultations with the residential customers but the focus was to test how the messages would perform in changing people's attitudes, behaviour and beliefs towards the campaign and not time consuming (bottom-up) consultations as it was critical for Eskom to start immediately with the national energy saving campaign.

5.2.1.4 Theme 4:

The learnings derived by residential customers from the overall campaign messages (tips).

It is found that Eskom succeeded in ensuring that residential customers learnt and gained knowledge about saving electricity. During the interviews, residential customers who participated in the focus groups were able to highlight a number of energy saving tips. Amongst the basic tips residential customers learnt were to switch-off appliances that are not in use and switch off appliances after use. Because electricity was constantly on and off customers learnt to switch off their appliances due to fear of equipment damage when power came back on. Customers constantly checked the national power alert on television in particular during peak hours (between 17:00 and 21:00) in order to react timeously and save the power grid. Another prominent tip was that of replacing the incandescent light with the CFL bulbs. Another interesting finding is that Eskom was able to convince residential customers that by saving electricity, customers would be saving their money too. The logic was that when a customer consumes less, the customer pays less. A full list of energy saving tips received from focus groups is found in Chapter 4.2.5.1.

5.2.1.5 Theme 5:

Support for the campaign and actions implemented towards saving energy.

All focus group members highlighted that they supported the campaign and they switched off appliances when the power alert required them to do so.

- The following measures were implemented by residential customers in support of the campaign:

Thirty seven out of 45 participants indicated that they had changed their traditional lights to CFLs. Participants indicated that they acted timeously to the power alert, except those that had to wait for their neighbours to advise them what to do since they

had no access to radio and television (affordability). Thirty two participants indicated that their meaningful energy saving contribution was more on basic electricity usage such as cooking, ironing, refrigeration, switching off the lights, stop using two plate stoves as heating mechanisms. Thirteen participants indicated they have geysers and swimming pool pumps, which they switch-off when the power alert requires them to do so.

- Although the overwhelming majority of the participants for saving electricity applauded the CFLs, there were some challenges relating to this energy saver bulb.

Despite the fact that CFLs were said to save power, 8 out of 45 participants said they could not afford the price of the CFLs as they are very expensive compared to the usual lights they use in their houses. Another notable concern is that the distribution of free CFLs by the government and Eskom did not cater for all households.

Some participants pointed that they were not at home when the free CFLs were distributed, resulting in them missing the opportunity to receive one. There is also a finding that the CFLs exchange points were mainly found in towns which meant they were not accessible to people living away from town. Participants also held the view that if the energy saving campaign was of national importance, then Eskom and government should be committed in terms of distributing more energy CFLs.

5.2.1.6 Theme 6:

Residential customers' suggestions to improve the energy efficiency/saving campaign.

There was a suggestion that Eskom should focus heavily on fighting electricity crime as people who steal electricity through illegal connections, find no reason to save it. Furthermore, Eskom should deal with people who sell its electricity units illegally at a much cheaper rate, as people who buy such electricity units find no reason to save power. It is clear from the above response that the reading by consumers is a

negotiated one. This is precisely because they accept the argument presented by the campaign but their view was that Eskom must deal with izinyoka in order for the objectives of the campaign to be met. The stealing of electricity is persistent even though municipalities grant Free Basic Electricity (FBE) of 50 kWh per month to each indigent household. Eskom needs to find ways of dealing more directly with this problem. Eskom is advised to spread its message as widely as possible by collaborating with government to allow for pledges to save water and electricity to be part of agenda items in public meetings. This approach will enhance Eskom and government's approach to place energy saving campaign as an issue of national importance. There is also a strong view that Eskom should employ local people who are jobless to help with the spread of the campaign in the regions or areas where these people live. Even though the media has been cited as an important carrier of the camping messages, there is a suggestion that Eskom should increase its advertorials relating to this campaign. Another critical suggestion was that Eskom should extend its scope of consultations or engagements in order to allow the customers to contribute meaningfully by sharing ideas, participate in decision making and implementation, but mostly importantly for the residential customers to share with Eskom their local problems that can hamper the campaign's efforts.

5.3 The section that follows presents key discussions with the Eskom energy efficiency representative

The discussion below interrogates what Eskom was seeking to achieve, as narrated by the Eskom representative during the interview, versus the reaction of residential customers who participated in the three focus groups.

5.3.1 Reasons for Eskom to roll-out load shedding (demand versus supply)

- The main reason from within Eskom for implementing load shedding was because demand was exceeding supply.
- Participants indicated the same understanding that the power cuts were due to nationwide power shortages.

5.3.2 The reason for Eskom to implement energy efficiency campaign (what does it seek to achieve)

- The main reason for implementing the energy efficiency campaign was to encourage customers to save energy.
- As noted in the finding under Theme 1 (section 5.2.1.1), 100% (45) of participants said that they knew about the energy efficiency campaign and what they (customers) were expected to do to support the campaign. This proves that Eskom was successful in spreading the word about this campaign.

5.3.3 What is the difference between Eskom's energy saving campaign and the government's 49M campaign?

- Government through the department of energy drives the 49M campaign whereas Eskom drives the energy efficiency campaign. The collaboration between Eskom and government proved that this campaign was of national importance.
- Indeed, Eskom managed to convince participants (residential customers) to view the campaign as a matter of national importance in order to attract positive support for the campaign.

5.3.4 Public participation or consultation regarding energy saving campaign

Dutta and Basnyat (2008: 11) argue that some projects, even though they can take a participatory format, might have a pre-determined agenda and as such should be regarded as top-down projects where participation is used as a tool for achieving predetermined change. The campaign's approach is in line with the above discussion by Dutta and Basnyat. The Eskom consultation approach was mainly about testing how the residential customers would receive the message. It is found that residential customers were not having any sort of influence in the decision making of the campaign, except to assist the campaigner to judge how effective the tips and campaign messages were likely to be in changing energy users' behavior.

Eskom did not use a bottom-up approach, as this requires extensive stakeholder engagements and that can be quite demanding in terms of time, human resources and

the financial burden that goes with all the logistical processes (Muturi and Mwangi 2009). Eskom had a pre-determined agenda, which was to avert a more severe power crisis. A minimal stakeholder engagement in a form of testing its approach to the campaign was adopted. Judging from the campaigner's approach, it is clear that not enough time was invested to allow for the receivers (residential customers) of the campaign to make meaningful contributions (bottom-up). The choice was made to implement the campaign sooner rather than later in order to turn the power crisis around. The responses provided during interviews by residential customers and the campaign representative seems to provide a finding that consultations conducted by Eskom were not meant to empower the targets of the campaign, but to serve the agenda (energy efficiency) of the campaigner.

It can be concluded that Eskom managed to get its campaign in gear immediately by using this approach to stakeholder engagements, resulting in energy users learning how to save energy sooner than later.

5.3.5 The mediums and forums utilized for the energy saving campaign

- A finding is made that Eskom utilized multiple platforms to spread the campaign's medium.
- Indeed, the residential customers who were in the focus groups indicated that they heard about the campaign on the radio, television, newspapers, pamphlets, etc. A finding was made that the media is the most influential carrier of the messages. This is consistent with the response of the focus groups.

5.3.6 Has the campaign achieved its objectives?

- In accordance with the findings from the focus groups, it is clear that the objectives of the campaign were achieved, but not without challenges and suggestions. Measures implemented because of the campaign and challenges relating to the campaign are listed in Theme 5 (section 5.2.1.5), while suggestions to improve the campaign are listed on Theme 6 (section 5.2.1.6). The campaign confirms that the CFL is more energy efficient

compared to the incandescent light bulbs. Eskom applauded the reaction to the power alert by residential customers. Indeed 38 out of 45 participants indicated that they switched off when they saw the power alert message, except those who have the challenge of accessing radio and television due to affordability issues as indicated in Theme 1 (5.2.1.1)

- The residential customers who received the free CFLs and those who could afford to buy confirmed that the CFLs were more energy efficient than incandescent bulbs.

5.3.7 What are the learnings of the campaign?

- A finding is made that Eskom evaluated this campaign through an independent agency. It is unfortunate that the findings of such an evaluation could not be obtained for the purpose of this study. Eskom's vision is to promote an energy saving culture compared to a once-off effort of saving only when the power alert dictates so.

CHAPTER 6: RECOMMENDATION AND CONCLUSION

6.1 Recommendations

The recommendations below emanate from the findings of the study as presented in Chapter 5.

- Public participation should be separated from dominant paradigms where pre-determined outcomes take preference to consultations. The target audience (residential customers) should be afforded an opportunity to influence campaigns that are aimed at influencing their lives.

- There is an argument that those who do not purchase electricity (izinyoka) find no reason to save it. There is a strong view that had Eskom consulted with customers at the initial stages of the campaign, customers would have recommended that Eskom incorporate the matter of izinyoka as one of key components of the campaign. It is recommended that Eskom deal decisively with the matter of izinyoka as it undermines the efforts of those that save energy.

- There are strong views that government and Eskom should provide free CFLs to households in order to ensure that people do not fall back into using incandescent light bulbs.

- The affordability of message carrier channels such as television and radio sets came as an issue of concern; therefore, campaigners are advised to find alternative means to communicate their messages timeously to all their target audiences.

- There was a finding that says the campaign did not provide proper feedback to the residential customers; hence, it is recommended that the campaign details be shared with energy users.

- Eskom supplies some countries in the SADC region; as such, it is recommended to undertake a study that investigates how those countries implemented saving measures during the power crisis period.

6.2 Suggestions for further study

There were certain interesting elements, which were discovered during the study but could not be presented, as they do not form part of the scope of the current study. Future researchers are encouraged to explore the following:

- Compare which medium was the most effective in carrying out the energy efficiency campaign.
- Compare Eskom's energy efficiency campaign with those of other African countries.
- Make a comparison of how different energy sectors contributed towards the energy saving campaign.
- Provide a detailed study on the free CFL distribution and CFL exchange programme.
- The contributions of the 49M campaign in the energy saving campaign.
- The impact of illegal connections and ghost vending units on the overall energy saving campaign. This will unearth whether indeed people who do not buy electricity participated positively in the campaign or not, since there is a finding that says those whom do not pay for electricity find no reason to save power as it is free for them.
- A study on how residential customers in the urban areas responded to the campaign.

- **Shortcomings of the study**

  The study on the Eskom energy efficiency campaign was a success, however not without challenges and shortcomings.
- The study was conducted in the residential areas categorized as rural and townships. There were attempts to access urban areas, but residents cited

security issues as reasons why they could not participate in the study. The budget allocated for the study was not sufficient to provide security measures.

- Figures related to the energy consumption prior to the campaign and after the campaign were not made available to the researcher, thus making it impossible for the researcher to compare energy saving figures with the responses from the participants, resulting in the researcher relying solely on the words of the participants and the campaign's representative from Eskom.

6.3 Conclusion

The conclusion below emanate from the findings of the study as presented in Chapter 5

There is a general conclusion that Eskom's energy efficiency campaign was a success. The campaign helped the power utility to deal with power cuts to a certain extent, while Eskom was building new power stations to increase capacity. The question remains whether the power utility will continue with its campaign to encourage citizens to save power even after increasing power supply capacity at the end of the build programme. Another critical conclusion is the observation that the power utility is losing a lot of money through illegal means such as illegal connections, unlawful electricity vouchers and other irregularities have been cited as obstacles to this campaign. It can be said that amongst all saving measures implemented by the residential customers, the CFL has emerged as the best measure to save power; however, the cost factor is hindering low-income households from using it consistently as the price is rather expensive. Residential customers are pleading with Eskom and government to bring the CFL price down. Participants expressed the view that the campaign would have achieved greater results if there had been meaningful engagements with residential customers at the initial stages. The study has succeeded in answering the research questions based on the themes aligned to the objectives.

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ANNEXURES

Annexure 1: Letter from the researcher to the Eskom representative

LETTER OF INFORMATION

Title of the Research Study:

Towards an energy-saving culture: An analysis of the Eskom energy efficiency communication campaign.

Researcher: Eric Khoza MTech Public Relations Management
Supervisor/s: Dr Veena Rawjee Parboo and Mr. Zwakele Ngubane

Brief Introduction and Purpose of the Study:

Eskom has been faced with challenges to balance the demand and supply of electricity in South Africa. Eskom has embarked on a campaign to encourage customers to save electricity. I am undertaking to conduct a study in the three district municipalities of Mpumalanga that seeks to evaluate the energy efficiency communication campaign. The findings of the study will be used only for the purpose of this study. A journal publication may be produced for this study.

Outline of the Procedures:

I am conducting a study on Eskom's energy efficiency communication campaign for the purpose of completing my studies in MTech Public Relations Management. This letter aims to recruit you as a participant and it aims to outline the procedures and expectations. I hope to conduct a face-to-face interview with you in a quiet place convenient to you and a voice recorder will be used to gather data. Participation in this research is voluntary and you are requested to complete a consent form as a way of agreeing to participate in this research study. The interview will take place within 1 hour and you will be requested to answer certain questions as honestly as possible.

Risks or Discomforts to the Participant:

I have not identified any risks as the researcher; however participants can make the researcher aware of any risk (s) or fears related to this study.

Benefits:

The recommendations of the study could be made known to the Eskom energy efficiency representative (yourself) upon request.

Annexure 2: Letter from the researcher to the focus group

LETTER OF INFORMATION

Title of the Research Study:

Towards an energy-saving culture: An analysis of the Eskom energy efficiency communication campaign

Researcher: Eric Khoza MTech Public Relations Management
Supervisor/s: Dr Veena Rawjee Parboo and Mr. Zwakele Ngubane

Brief Introduction and Purpose of the Study:

Eskom has been faced with challenges to balance the demand and supply of electricity in South Africa. Eskom has embarked on a campaign to encourage customers to save electricity. I am undertaking to conduct a study in the three district municipalities of Mpumalanga that seeks to evaluate the energy efficiency communication campaign. The findings of the study will be used only for the purpose of this study. A journal publication may be produced for this study.

Outline of the Procedures:

I am conducting a study on Eskom's energy efficiency communication campaign for the purpose of completing my studies in MTech Public Relations Management. This letter aims to recruit you as a participant and it aims to outline the procedures and expectations. This study will be conducted in a focus group set-up and interviews will be conducted in a quiet place such as a school classroom, community hall or gazebo. Participation in this research is voluntary and upon completing a consent form participants will participate in a group of 6 to 12 people .The interviews will take place within 2 hours and you will be requested to answer certain questions as honestly as possible.

Risks or Discomforts to the Participant:

I have not identified any risks as the researcher; however participants can make the researcher aware of any risk (s) or fears related to this study.

Benefits:

The focus groups will be mentioned in the report. A Journal with the findings of the study may be published.

Annexure 3: Editing certificate

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EDITING CERTIFICATE

Re: **ERIC KHOZA**
Master's dissertation: **TOWARDS AN ENERGY SAVING CULTURE: AN ANALYSIS OF THE ESKOM ENERGY EFFICIENCY COMMUNICATION CAMPAIGN**

I confirm that I have edited this dissertation and the references for clarity, language and layout. I returned the document to the author with track changes so correct implementation of the changes and clarifications requested in the text and references is the responsibility of the author. I am a freelance editor specialising in proofreading and editing academic documents. My original tertiary degree which I obtained at the University of Cape Town was a B.A. with English as a major and I went on to complete an H.D.E. (P.G.) Sec. with English as my teaching subject. I obtained a distinction for my M.Tech. dissertation in the Department of Homoeopathy at Technikon Natal in 1999 (now the Durban University of Technology). I was a part-time lecturer in the Department of Homoeopathy at the Durban University of Technology for 13 years.

Dr Richard Steele
24 November 2020
per email