

**Critical Analysis of the Right to Access Electricity for the Destitute in South
Africa: Issues and Challenges**

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ABSTRACT

This mini-dissertation examines and articulates the right to access electricity for the destitute in South Africa. Further, this mini-dissertation finds that high tariffs on electricity impede the accessibility and realisation of electricity as a human basic need. As a result, this mini- dissertation submits that accessibility and affordability of electricity as human basic need are compromised. Subsequently, the destitute are unable to afford and access electricity as encapsulated in the legislation. Therefore, this mini- dissertation submits that there must be investment in energy technologies to meet electricity demands. Furthermore, this mini-dissertation submits that there should be radical deployment of renewable energy in order to provide sufficient and affordable electricity to all, including the destitute. The investments in the building of the new power stations (Medupi, Kusile and Ingula) is welcomed by this mini-dissertation since it will solve the load shedding challenges which has affected South Africans and threaten the economic growth.

Keywords: Energy, electricity, high tariffs, South Africa, destitute and accessibility.

DECLARATION BY STUDENT

I, **Adv. Lesiba Benedict Moshoeu** declare that “Critical Analysis of the Right to Access Electricity for the Destitute in South Africa: Issues and Challenges” hereby submitted to the University of Limpopo, for the degree of Masters in Development and Management Law has not been previously submitted by me for a degree at this or any other university; that is my work in design and execution and that all material contained herein has been duly acknowledged.

Moshoeu L.B (Adv.)

Date

DEDICATION

I dedicate this mini-dissertation to my mother Mrs Lily Raesibe Moshoeu who believed in me throughout my academic life. It is due to your parental love and respect that I realised I should always work hard, fly and let the sky be my limit. You contributed a lot to my academic success. It is also dedicated to my late grandmother Mrs Melidah Moshoeu who could not physically see the achievement of her grandson due to her untimely death.

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My LLM classmates for support, motivation and extra efforts made. To Mr Sefoka I M and Mr Phaladi N H thanks for sharing ideas together, time, support, motivation and the extra efforts made. Special thanks to my friend Mr Clement Legodi and my mentor Adv. Monare Makoti for their motivation and always inspiring me. To 2016 classmates I have only two words for you, “thank you”

God bless you.

LIST OF ABBREVIATIONS

ANC	African National Congress
BLS	Baseline Survey
BOT	Built Operate Transfer
CEA	Canadian Electricity Association
CEO	Chief Executive Officer
CRHPC	China Resources Holding Power Company
COSATU	Congress of South African Trade Unions
CSIR	Council for Scientific and Industrial Research
DoE	Department of Energy
ECA	Eskom Conversion Act
ESKOM	Electricity Supply Commission
FBE	Free Basic Electricity
FI	Final Investigation
GDP	Gross Domestic Product
GEAR	Growth Employment And Redistribution
GTZ	Gesellschaft für Technische Zusammenarbeit
IPPP	Independent Power Producer Procurement Programme
IRP	Integrated Resource Plan
KWH	Kilowatt- Hour
MW	Megawatts
MYPD3	Third Multi-Year Price Determination

NDP	National Development Plan
NEF	National Electrification Forum
NER	National Electricity Regulator
NERSA	National Energy Regulator of South Africa
NGP	New Growth Path
OUTA	Organisation Undoing Tax Abuse
RCA	Regulatory Clearing Account
RDP	Reconstruction Development Programme
RFP	Request for Proposals
SDPC	State Development Planning Commission
SOEs	State-Owned Entities
SONA	State Of Nation Address
SPA	Special Pricing Agreements
TVET	Technical Vocational Education and Training.

LIST OF INTERNATIONAL INSTRUMENTS

Canadian instruments: Policy, Departments and Legislations:

Canadian Constitution 1982

Canadian Electricity Association (CEA)

Economic Action Plan

China instruments: Policy, Departments and Legislations

China Resources Holding Power Company (CRHP)

China High in and high out policy (1991)

The Brightness Program and Developing Rural Power through Wind both
launched 1996

Built Operate Transfer (2001)

Baseline Survey Projects (2002)

Accelerated Growth Programme (2004)

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Electricity Act, 42 of 1922

Canadian Constitution, 1982

Electricity Act, 40 of 1987

Electricity Act, 15 of 1991

The Constitution of the Republic of South Africa, 1996

Prevention of Organised Crime Act (POCA), 121 of 1998

Eskom Conversion Act, 13 of 2001

National Energy Regulation Act, 4 of 2006

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2. *S v Monitoor* 1996(1) SACR 514(c)
3. *Matiela v Lesotho electricity Corporation* (clv/APN/1979)
4. *Mazibuko and Others v City of Johannesburg and Others* (CCT 39/09) [2009] ZACC 28; 2010 (3) BCLR 239 (CC); 2010 (4) SA 1 (CC) (8 October 2009).
5. *The Organisation Undoing Tax Abuse v The National Energy Regulator of South Africa and Others* (24365/2016) [2016] ZAGPPHC 479 (8 April 2016)
6. *Matiela v Lesotho electricity corporation* (clv/APN/1979). 28; 2010 (3) BCLR 239 (CC) ; 2010 (4) SA 1 (CC) (8 October 2009)

CHAPTER ONE: INTRODUCTION

1.1. Historical background to the study

The evolution of the electricity in South Africa dates back approximately 1882,¹ and stretched quite quickly to give assistance to the improvement of wide gold mining actions in the inner of the state.² In 1910, under the Union of South Africa,³ electricity systems were advanced by the combination of civic and private services that appointed discrete mechanical values and were governed by a range of the district and by-laws passed by municipalities.⁴ Through 1920, the government initiated to take into consideration the idea of a coordinated electricity system that may supply at low cost and ample electricity to lift the country's economic development.⁵

Furthermore, in 1922, the electricity supply was only allocated and utilized by the industries to the exclusion of the residential consumers or households as legislated in the Electricity Act.⁶ In 1948, the state guidelines were aimed at addressing the desires of the affluent marginal white population group.⁷ Again energy guidelines, such as electricity provision, which concentrated on safeguarding allocation for mining, harmful substance and farming industries, which designed the pillar of the economy of the country.⁸ In 1987, the electricity in South was controlled by the Electricity Control Board.⁹

¹See Amusa H, Amusa K & Mabugu R. "Aggregate demand for electricity in South Africa: An analysis using the bounds testing approach to integration" (2009) 10, Energy Policy Vol 37p 4167-4175.

² See Amusa H et al, page 4167 - 4175.

³ See Amusa H, Amusa K & Mabugu R "Aggregate demand for electricity in South Africa: An analysis using the bounds testing approach to integration" (2009) 10, Energy Policy Vol 37p 4167-4175.

⁴ See Amusa H, Amusa K & Mabugu R "Aggregate demand for electricity in South Africa: An analysis using the bounds testing approach to cointegration", 2009, Energy Policy, Vol 37, Issue 4167-417. P 4167–4175.

⁵ See Amusa H, Amusa K & Mabugu R "Aggregate demand for electricity in South Africa: An analysis using the bounds testing approach to cointegration", 2009, Energy Policy, Vol 37, Issue 4167-417. P 4167–4175.

⁶ Electricity Act, 42 of 1922.

⁷ See Davidson O and Mwakasonda S, "Electricity access for the poor: A study of South Africa and Zimbabwe Energy Sustain Development" Energy Research Centre, University of Cape Town (2004) Vol. VIII, No 4, p. 26–40.

⁸ Electricity Act, 40 of 1987.

⁹ See Amusa H et al, page 4167 – 4175.

In the same year, Eskom Act¹⁰ was aimed at decrease in electricity high tariffs to contain input prices and assist manufacturing reform, rewarding partly for exchange rate decrease. Furthermore, to assist public infrastructure requirements including national and manufacturing grid electricity and other energy projects.¹¹

The National Electricity Forum was introduced in 1991. Since the introduction of the forum the focus was on addressing the imbalances in accessibility and affordability of the electricity services, particularly in the marginalised remote areas.¹² These recommendations were used by the drafters to give birth to Reconstruction Development Programme (RDP) 1994 which identifies energy as a basic need.¹³ The RDP was centred on meeting human basic needs which amongst others include affordability of electricity for all.

In 1995, following Electricity Control Board's failure to maintain and sustain electricity, the National Electricity Regulator (NER) was introduced as a replacement.¹⁴ Pursuant to this, Growth Employment and Redistribution (GEAR) Policy was introduced in 1996 which intended to promote public investments, public infrastructure needs include local and manufacturing network electricity. It was further aimed at the reduction in tariffs to facilitate that electricity must be affordable and accessible to the destitute communities.¹⁵ However, the reality reveals that GEAR failed to meet its objectives. In response to the failure of GEAR Policy government established White Paper on the Energy Policy in 1998.¹⁶

¹⁰ Eskom Act, 40 of 1987.

¹¹ See Vukeya, V, "The Impact of Infrastructure Investment on Economic Growth in South Africa", University of Zululand, 2015, Dissertation (Degree of Master of Commerce) (Economics).

¹² The National Electrification Forum of 1991 to 1993.

¹³ This is the Policy of the government which was crafted in 1994.

¹⁴ National Electricity Regulator (NER) 1995. See also Davidson O and Mwakasonda, S A 2004. "Electricity access for the poor: a study of South Africa and Zimbabwe" in Energy for Sustainable Development, Vol. VIII (4) page 26-40.

¹⁵ Growth, Employment and Redistribution a Macroeconomic Strategy (accessed at [http:// www.treasury.gov.za/publications/other/gear/chapters.pdf](http://www.treasury.gov.za/publications/other/gear/chapters.pdf), retrieved 22 March 2016, at 16:18PM)

¹⁶ Department of Mineral and Energy, "White Paper on the Energy Policy of the Republic of South Africa" 1998.

This policy was aimed at crafting determinations for reform of South African Energy (including the electricity).¹⁷ According to the white paper, the government objective on electricity policy was to create the electricity sector which will serve as the machine for progress, improvement and success in South Africa.¹⁸

In 2003, the Republic of South Africa permitted private-sector electricity production. It was agreed that the prospect power generation would be separated among Eskom – to produce 70% of South Africa’s electricity - and other power producers – to produce 30% of South Africa’s electricity.¹⁹ The electricity supplier now wishes to purchase from independent power producers electricity to prevent its insufficient of generating capacity.²⁰

The National Energy Regulator of South Africa (NERSA)²¹ became operative in 2008, but given the fact that, the anticompetitive nature of South Africa’s electricity market, the regulators leading role thus far has been to decide Eskom’s price requests.²² In 2010, framework of the New Growth Path (NGP) (vision 2020) which was aimed at reinforces provincial incorporation on energy, together with the Southern African Power Group, again related to an emergency advances in electricity interconnectors, and also opens other chances for improving uncontaminated energy through middle and southern Africa.²³

In the same year, the state introduced the National Development Plan (NDP) vision 2030, which aimed at access of electricity to needy households in South Africa and reducing high electricity tariffs. However, electricity in South Africa is expensive and costly.²⁴ Therefore, this makes it difficult for the poor or destitute households to afford electricity and also hampers the NDP’s vision to make electricity accessible to the

¹⁷ Department of Mineral and Energy, “White Paper on the Energy Policy of the Republic of South Africa” 1998.

¹⁸ Department of Energy, *Ibid*.

¹⁹ Department of Minerals and Energy Electricity Overview (accessed at <[http:// www. energy.gov. za/files/ electricity_frame.html](http://www.energy.gov.za/files/electricity_frame.html) retrieved 24 March 2016 at 19:40Pm).

²⁰ See Linley D (2010) Blackout alert. (accessed <<http://www.mg.co.za/article/2010-10-08-blackout-alert>> retrieved 08 March 2016 at 08:14 AM.)

²¹ See National Energy Regulator of South Africa, “Background Paper on Climate Change in South Africa” Workshop discussion draft, Mandela Institution 2006.

²² The National Energy Regulation Act 4 of 2006.

²³ See The New Growth Path (accessed <http://www.gov.za/about-government/government-programmes/new-growth-path>, retrieved 22 March 2016, at 11h31 AM.)

²⁴ See National Planning Commission, Chapter 4 of the National Development Plan, 2010 at page 147.

needy households, thus there is a need for the reduction of high tariffs to enable the needy to access and afford electricity.

1.2. Statement of the research problem

Notwithstanding the fact that the right of access,²⁵ to free basic electricity is legislated and duly intact in the legislations and policies such as free basic electricity policy 1998, National Energy Regulator, 1987, the National Energy Regulation Act , 2006,²⁶ Reconstruction Development programme (RDP),²⁷ Growth Employment and Redistribution ,²⁸ New Growth Path,²⁹ and National Development Plan,³⁰ the reality reveals that the destitute (poor) cannot enjoy the perpetual usage of free basic electricity due to financial predicaments. Moreover, the financial distress hampers the right of access to free basic electricity,³¹ due to the high electricity tariffs.

1.3. Research questions

The research question is whether electricity as a human basic need is accessible and affordable as provided in various legislations?

1.4. Literature review

High electricity tariffs in south Africa is a major concern as it hampers the objectives of the laws and policies which were enacted with the aim of making electricity affordable and accessible as a human basic need. The destitute household still find it

²⁵ See, Sefoka I, Odeku K, "Providing Ample Access to Quality Education in South Africa", Socio economica, 2015.

²⁶ The National Energy Regulation Act 4 of 2006.

²⁷ This is the Policy of the government which was crafted in 1994.

²⁸ This is a government Policy which becomes effective in 1996 after the failure of Reconstruction Development Programme (RDP).

²⁹ This is an economic Policy which was adopted by government in 2010.

³⁰ This is an economic Policy which has been adopted by government in 2010. This is a blueprint for government and all government Programmes must be aligned with it.

³¹ See Okafor C, Okechukwu E and K Iloanya. "An Analysis of the Policy Framework on Electricity in South Africa: Public Interest Approach", AFRREV IJAH An International Journal of Arts and Humanities, Vol 4, 2015.

difficult to access electricity due to its perpetual high tariffs even though the legislations stipulate much on its accessibility.

1.4.1. Access to electricity in South Africa post 1994

According to Malzbender “despite the achievements in providing access to electricity made by the National Electrification Programme, for many poor people true access to electricity is a problem that goes beyond connectivity and ultimately depends on affordability.”³² In most cases, disadvantaged households are incapable of accessing electricity due to inability to afford the minimum amount for electricity.³³ “In addition to this, many poor people are burdened with high arrears, electricity cut-offs and poor service quality”. The same sentiment was shared by Carol when she alluded that Electricity tariffs have risen at a rate higher than inflation since 2006.³⁴

The study shares the same sentiment, however Carol and Malzbender did not focus on the cause of high electricity tariffs and the consequences, such as load shedding, pulling off the investors, communities protest. Due to the perpetual and increase of household electricity demand, the electricity supply tariff remains high. Even though, the Electricity Act made provisions for the supply of the electricity to the residential consumers the household faces challenges of high electricity tariff due to perpetual day to day increase of household or population.

As a result, this gives birth to high electricity tariff, because the households demand outstrips the supply of electricity. In terms of the White Paper on electricity the country was under pressure of the electricity supply in 2007, this was caused by the lack of

³² See Malzbender D, and Kamoto B, “Domestic Electricity Provision in the Democratic South Africa” 2005 paper p2.

³³ See Department of Minerals and Energy. White Paper on the Energy Policy of the Republic of South Africa. 1998.(accessed http://www.energy.gov.za/files/policies/whitepaper_energypolicy_1998, retrieved 20 July 2016, at 01h31 AM.)

³⁴See Paton C, “South Africa’s electricity is still cheap”, 2014. Paton, C, South Africa’s electricity is still cheap, 2014. Pather R “Brian Molefe resigns from Eskom” Mail & Guardian 11 Nov 2016.

maintenance of power stations as the result of poor maintenance as well as growing in energy demand.³⁵

Further, in 2004 the State started admitting that electricity supply was inadequate for the emerging economy, uplifting the Department of Minerals and Energy to demand plans on how to raise productivity by minimum of 1000 Megawatts (MW) yearly from the year 2007.³⁶ Eskom's problems continuous unchanged, ultimately getting their elevation in 2008 this is when the country started to experience electricity shutdown the whole country. It also went to the level wherein even the electricity which was reserved for the emergency also ended. This was the stage where electricity usage started to have some rules on how electricity must be used especially in certain during the peak hours.

As the result, the government official also admitted that the country is experiencing shortage of electricity. This statement was supported by the former Minister of Public Enterprises,³⁷ Alec Erwin alluded that "decision was taken to charge Eskom with providing 70 per cent of new capacity".³⁸ "It is the underlying reason for the conditions with which we are now faced, he said". Mbeki acknowledged that, it is important for the deployment of investment on electricity generation. The study partially agrees with.

Reconstruction Development Programme (RDP) 1994 makes provision that electricity is one of the priorities to begin with in order to meet human basic needs.³⁹ In terms of the RDP 1994 electricity is one of the basic needs, however it very difficult for the destitute to afford it, as a result of high electricity tariff price. In terms of the White paper on Energy Policy,⁴⁰ the leadership started with the current state of the electrification plan which is dedicated to implement realistic statutory and other

³⁵ White Paper on Electricity 1998.

³⁶ See Fill FM "The Electricity Crisis in Soweto" (2001) Occasional Paper no 4, Municipal Service Project Johannesburg p1.

³⁷ White Paper on Electricity 1998.

³⁸ The former President Thabo Mbeki announced this in his debate on electricity investments and renewable energy in Cape Town 2008.

³⁹ See O'Malley's The Reconstruction and Development Programme (RDP) (accessed <https://www.nelsonmandela.org/omalley/index.php/site/q/03lv02039/04lv02103/05lv02120/06lv02126.htm> retrieved 16 March 2016 at 16: 48 PM.)

⁴⁰ This is a White Paper on energy Policy 1998.

methods, within its accessible resources, to increasingly recognizing the aim of worldwide household to be equipped and have access to electricity.⁴¹

One of the functions of National Energy Regulator of South Africa (NERSA)⁴² is to authorises and give a mandate for the increase of the tariffs and charges, of electricity. Again, is to guarantee that the concern and desires of contemporary and imminent electricity consumers are secured.⁴³

However, electricity users are not enjoying the benefits of using electricity due to the high electricity tariff, which becomes more difficult for the destitute people to utilise.⁴⁴ The National Development Plan vision 2030 is aimed at promotion of social equity through affordable electricity tariff and sustainable subsidies for the destitute residential consumers.⁴⁵

According to Zuma, in his State of the Nation Address “the country has made important improvement in the application of the strategy.⁴⁶ “Progress has been made to steady the electricity supply”.⁴⁷ “There has been no load shedding since August (2015) which has brought remedial for the destitute households and industry alike”. Government has puts lot of money in investing in electricity particularly in the completion of Medupi and Kusile power stations.

However, reality reveals that, even though there is enough money to complete the two projects, that is Medupi and Kusile power stations, South Africans still suffer and experience shortages of the electricity nationwide. Furthermore, government is aimed at providing extra units from Ingula power station will be joined in 2017. The study partially agrees with, however the President failed to address electricity high tariff rate

⁴¹ This is a White paper on energy Policy 1998.

⁴² National Energy Regulator of South Africa, (accessed at <https://new.nersa.org.za>, retrieved 04 September 2016 at 18:57 PM.)

⁴³ See Ruppel O “Sustainable Energy Solutions for Southern Africa” The Brenthurst Foundation, Discussion Paper 3, 2015.

⁴⁴See National Energy Regulator South Africa, Decision on the Implementation of Eskom’s MYPD2 Regulatory Clearing Account. National Energy Regulator of South Africa (accessed at <http> See: retrieved 16 March 2016, 16: 50 PM.)

⁴⁵ See Chapter 4 of the National Development Plan Vision 2030, p 147.

⁴⁶ The president announced this in his State Nation Address (SONA) on the 11 February 2016.

⁴⁷ See Paton C, “South Africa’s electricity is still cheap”, 2014. Paton, C, South Africa’s electricity is still cheap, 2014. Pather R “Brian Molefe resigns from Eskom” Mail & Guardian 11 Nov 2016.

as matter of agency, radical measures need to be taken, in order to make electricity more affordable and accessible to all.

Although the access to electricity is significant; however, it can be realised if it is affordable. The objective of the Electricity Act⁴⁸ is aimed at promotion for the maintaining and sustained presence of the National Electricity Regulator⁴⁹ and governs supply of electricity and related matters. The government came up with another strategic plan in order to fight against inaccessibility and affordability of the electricity by declared the Free Basic Electricity Policy, and difficulties interrelated to energy, more specifically electricity services.⁵⁰ The perpetual inability of majority of people pay and their increasing debts results in electricity cut- offs by electricity supplier. As result, people make unlawful electricity connections to meet their basic needs.⁵¹

According to Banks and Schäffler “the power demand is not the only reason to reflect another energy supply substitutions”.⁵² They further notice that South Africa’s is largely based on coal. Coal has various other usages; as a result, it is necessary for coal to be conserved for imminent use. Coal and several energies, releases energy when burned. ⁵³ Moreover, if South Africa could attempt to use renewable energy as an alternative energy would reduce its economic weakness to the costs of imported fuels.⁵⁴

⁴⁸ The Electricity Act 41 of 1987.

⁴⁹ See Ziramba E “The demand electricity in South Africa” Energy Policy, 2008.

⁵⁰ See Davidson O and Mwakasonda S “Electricity access for the poor: A study of South Africa and Zimbabwe Energy Sustain Development” (2004), Energy Research Centre, University of Cape Town, Vol. VIII, No 4, p. 26–40.

⁵¹ See Fill Flynn M “The Electricity Crisis in Soweto” 2001, Municipal Service Project, Johannesburg, Occasional Paper no 4, p1.

⁵² See Banks D and Schäffler J “The potential contribution of renewable energy in South Africa” (2006): 2nd Edition (2006) p7.

⁵³ See O’Malley’s “The Reconstruction and Development Programme (RDP)” (accessed <https://www.nelsonmandela.org/omalley/index.php/site/q/031v02039/041v02103/051v02120/061v02126.htm> retrieved 16 March 2016 at 16: 48 PM.)

⁵⁴ See O’Malley’s “The Reconstruction and Development Programme (RDP)” (accessed <https://www.nelsonmandela.org/omalley/index.php/site/q/031v02039/041v02103/051v02120/061v02126.htm> retrieved 16 March 2016 at 16: 48 PM.)

1.4.2 Why investment in renewable energy is key in South Africa?

Furthermore, Department of Energy is also aimed at trying to put more focus on gas, nuclear and biomass as an alternative energy supply technologies. The Department focus on wind, solar and hydro as renewable energy resources to meet the country's prospect for electricity demand. The department is intended to address that, there is an effective and varied energy combination for worldwide access within a renewed energy sector.⁵⁵ However, the process is not at rapid speed due to lack of qualified and experience electrical expert's engineers.⁵⁶ In responding to the issues of the shortage, the Department of Energy also came with the exchange programmes in order to address shortage of engineers.

Turner alluded that "implementing renewable energy technologies and manufacturing capabilities, there would be sustainable energy infrastructure to carry the country in to the next millennium and the government must embark upon this path with all due speed".⁵⁷ The Council for Scientific and Industrial Research (CSIR) provide that, collective contribution of wind energy and solar power make a great contribution to the economy.⁵⁸ South African Wind and Energy Association indicated that the benefits of the renewable energy will assist the economic growth and living conditions by recruiting more foreign.⁵⁹

Clair, Moilwa and Ryan are of the view that "there is a need for the rapid deployment of renewable sources of energy on the basis that the renewable energy-based electricity gives a chance for South Africa to address the country's energy security needs and that renewable technologies now represent the most cost-effective solution to the country."⁶⁰

Moreover, increasing renewable energy in South Africa's power mix enables the country to reduce its reliance on coal-fired power stations, and opens the opportunity

⁵⁵See O'Malley's The Reconstruction and Development Programme (RDP) (accessed <https://www.nelsonmandela.org/omalley/index.php/site/q/03lv02039/04lv02103/05lv02120/06lv02126.htm> retrieved 16 March 2016 at 16: 48 PM.)

⁵⁶ See South African Government Energy: South Africa Year book 2014-2015, 15 February 2015.

⁵⁷ See Turner J "A Realization to Renewable Energy Future" Science Vol 285, 30 JULY 1999.

⁵⁸. See Turner J "A Realization to Renewable Energy Future" Science Vol 285, 30 JULY 1999

⁵⁹ See Turner J "A Realization to Renewable Energy Future" Science Vol 285, 30 JULY 1999

⁶⁰ See Montmasson-Clair G, Moilwa K and Ryan G "Review of Regulators Orientation and Performance Review of Regulation in Renewable Energy" (Trade and Industrial Policy Strategies (TIPS),2014, page 18.

for these to be refurbished, in turn, reducing the risk of power outages.⁶¹ In this way, while renewable energy, particularly wind and solar, cannot meet base-load requirements, they allow for other energy sources to do so.⁶² Additionally, Samantha, Ralph and Kirchner indicate that renewable energy can decrease the exposure of power generation to bill peril.⁶³ Price instability due to fuel cost differences can be reduced which affects the risk structure of generation collections.⁶⁴ This result favours renewables and increases their competitiveness.⁶⁵

According to Davidson, “they should be technological approaches to reduce overall costs of increasing access to electricity by the poor in order to make electricity accessible and affordable to the poor”.⁶⁶ Dincer asserts that “energy amongst poorest people remains distinct prospect on basis of affordability to the poor households”. Moreover, Reddy is of the view that, there is no sufficient and adequate electricity which can be supply at the reasonable price to the destitute; even those who stay at the remote areas can have accessibility and affordability, enjoy the usage of electricity. Reality reveals that, it is very difficult for the needy to at least have an accessibility and affordability of purchasing electricity of 50kpm, which will be used for the purpose for lighting, cooking, economic development, however electricity is not affordable, accessible and realisable by the marginalised communities.⁶⁷

In terms of Beneficiation Strategy,⁶⁸ coal is abundant and currently most affordable source of energy to meet energy demands in South Africa. Moreover, the strategy recommends for the alternative use of other sources of energy due to harmful emissions associated with coal generated energy. It recommends that there is a need

⁶¹ See Montmasson-Clair G, Moilwa K and Ryan G “Review of Regulators Orientation and Performance Review of Regulation in Renewable Energy” (Trade and Industrial Policy Strategies (TIPS) 2014, page 18.

⁶² See Vukeya, V, “The Impact of Infrastructure Investment on Economic Growth in South Africa” University of Zululand, 2015, Dissertation (Degree of Master of Commerce) (Economics

⁶³ See Olz S, Sims R and Kirchner N “Contribution of Renewable to Energy Security”2007, p38.

⁶⁴ See Olz, S, Sims R and Kirchner N “Contribution of Renewable to Energy Security”2007, p38.

⁶⁵ See National Electricity Regulator (NER) 1995. See also Davidson O and Mwakasonda, S A 2004. “Electricity access for the poor: a study of South Africa and Zimbabwe in Energy for Sustainable Development” Vol. VIII (4) page 26-40.

⁶⁶ See Davidson O “Electricity Access to the poor: A study of South Africa and Zimbabwe”, 2005, p47.

⁶⁷ See Dincer I “Energy is the Convertible currency of technology” 2013.

⁶⁸ See Beneficiation Strategy 2011(See also Integrated Energy Planning Report 2013 page 28).

to diversify coal energy and also revert to renewables in order to reduce the emissions from coal.

Furthermore, use of other alternatives will also assist in ensuring that there is no concentration in a single source of energy and this will instigate meet the energy demand and avoid load-shedding. The challenges facing electricity in South Africa, the result on the economy has been felt.⁶⁹ The South African economy is mainly based on the exports from valuable natural resources to funding its recent account debit, the effect of load shedding on mining sectors led to downfall of rand while the economic growth of the country is under pressure to compete with other countries. As a result, the mining sectors are unable to produce sufficient natural resources such as gold, platinum and diamond.⁷⁰

Again, the investors in mining sectors also voiced out their concerns on energy during Investing in African Mining Indaba, which was held in Cape Town from 9th February until 12th February 2015.⁷¹ The mining investors suggested that mining operations should give more consideration to solar generation. In Namibia, solar generation is currently having success stories where mining operations relies on solar energy.⁷² By use of solar energy, the mining operations will be able to produce sufficient deposits minerals without any interruptions electricity cut off and the economy of the country will be steady. The country will produce more mineral deposits and exported more to the other countries. Eventually there will be economic development in South Africa that will boost the rand to compete with other currencies.

Electricity high rate is costly and expensive for one to afford it, on the other hand the country is under pressure of job loss as result of electricity high rate prices, some of the industries cannot afford to produce too much products, to add salt on injury, lot of people started to protests against high access tariff rate for example the community of Mankweng who were protesting access rate.

⁶⁹See Van der Nest G “The economic consequences of load shedding in South Africa and the State of the electrical grid” Tralac law Centre NPC, Paper, 11 February 2016.

⁷⁰See Van der Nest G “The economic consequences of load shedding in South Africa and the State of the electrical grid” Tralac law Centre NPC, Paper, 11 February 2016.

⁷¹ See South African Government Energy: South Africa Year book 2014-2015, 15 February 2015.

⁷² See Dincer I “Energy is the Convertible currency of technology” 2013.

Finance Minister Gordhan said that, “at his press briefing ahead of his 2016 Budget Speech that tariff increases should only be approved if they are necessary, and not just to make things more comfortable”. “We need to improve governance, financial management and state-owned entities’ contribution to the developmental agenda.”⁷³

In the Budget Review, Treasury said “further efficiency improvements are necessary at Eskom to ensure moderation in future tariff increases”⁷⁴ “state owned entities are not sacrosanct,” Gordhan said.⁷⁵ “We are willing to take a tougher look at them.”⁷⁶ His remarks derived a day prior Nersa was arranged to declare likely electricity price escalations through a tariff hike to fund Eskom’s deficits.⁷⁷ However, the reality shows that the destitute will be unable to access and afford electricity due to increase on the average tariff for normal tariff customers be increased by 9.4% for the 2016/17 financial year only.⁷⁸ Only elite will have access and afford electricity, while the destitute will be unable to access and afford electricity due to high electricity tariff.

Apart from the high tariffs, the electricity theft is another stumbling block towards electricity accessibility. Electricity theft is a serious challenge in South Africa, such as stealing electricity cables and transformers by the *isinyoka*.⁷⁹

1.4.3. Relevant case laws

In *S v Ndebele*⁸⁰ the three accused were charged with theft of electricity under Prevention of Organised Crime Act 121 of 1998.⁸¹ The charges in question were related to the manipulation of the vending machines as alluded above, so as to result in theft of electricity.

⁷³ See Pretorius W, Le Cordeur M “Nersa approves 9.4% electricity price hike” Mail and Guardian Media Report, 01 March 2016.

⁷⁴ See Nicholaides G “Nersa” approves Eskom Tariff Hike” Eyewitness News 01 March 2016.

⁷⁵ See Nicholaides G “Nersa” approves Eskom Tariff Hike” Eyewitness News 01 March 2016.

⁷⁶ See Nicholaides, G “Nersa” approves Eskom Tariff Hike” Eyewitness News 01 March 2016.

⁷⁷ See Nicholaides, G “Nersa” approves Eskom Tariff Hike” Eyewitness News 01 March 2016.

⁷⁸ See Nicholaides, G, “Nersa” approves Eskom Tariff Hike” Eyewitness News 01 March 2016.

⁷⁹ *Isinyoka* is a Zulu name given to electricity theft.

⁸⁰ See *S v Ndebele and Another* (ss16/2010) (2011) ZAGPHC 41.

⁸¹ Section 2(1) (e) of the Act 121 of 1998.

In *S v Monitoor*⁸² it was then decided that electricity was in fact capable of theft and the law had already been advanced by judgments of relating in particular to theft of incorporeal and theft of credit in particular. Based on the nature of the enterprise undertaken by Eskom where it concludes contracts with vendors in terms of which it supplies vending machines to those vendors and the nature of the enterprise undertaken by the accused (control and possession of vending machines) the two accused were found guilty.

Theft of electricity and illegal connection is experienced by other countries. In *Matiela v Lesotho electricity Corporation*⁸³ the claimant sign up no binding contract for the supply of electricity to his household and paid without deposit. The claimant, however, attained by foul to attach the current to his house through the box which was in fact connected but which contained no meter. He sealed the box and consumed electricity for six months. After this was discovered, steps were taken to what seems to have been brazen theft of electricity. The applicant alleged to be unmindful, the applicant is fortunate that he has not been accused for theft. Chief Justice Mr Justice Cotran point out that, this is distinctive case where the procedure of the Court has been ill-treated and to show its dissatisfaction the applicant will pay the respondent's costs on attorney and client basis.

High electricity tariffs, costs and electricity theft hamper the progressive realization of access to electricity and affordability as a human basic need. Therefore, the legislature must not only focus on tariffs reduction but also instigate government in protection and elimination of electricity theft so as to ensure that electricity is accessible to all.

In *Organisation Undoing Tax Abuse (OUTA) v National Energy Regulator of South Africa and Others*.⁸⁴ In the North Gauteng High Court where the gist of the matter was the increase in high electricity tariffs.⁸⁵ The Organisation Undoing Tax Abuse is an organisation aimed to fight for tax payers by questioning tax policy and destitute.⁸⁶

⁸² See *S v Monitoor* 1996(1) SACR 514(c).

⁸³ See *Matiela v Lesotho electricity corporation* (cIv/APN/1979).

⁸⁴ See *The Organisation Undoing Tax Abuse v The National Energy Regulator of South Africa and Others* (24365/2016) [2016] ZAGPPHC 479 (8 April 2016).

⁸⁵ See *the Organisation Undoing Tax Abuse v The National Energy Regulator of South Africa and Others* (24365/2016) [2016] ZAGPPHC 479 (8 April 2016) at para 26.

⁸⁶ The main purpose of Organisation Undoing Tax Abuse (OUTA) v National Energy Regulator of South Africa and Other is for "the promotion, protection and advancement of the Constitution of the Republic of South Africa by challenging taxation policy and/or the regulatory environment where the aforesaid is considered to be irrational unfit [sic] or ineffective for the purpose intended" and "seeks to promote a prosperous South Africa with effective,

Outa was against the decision of Nersa by approving 9,4 per cent electricity hikes. However, in this matter the high court ruled in favour of Nersa.⁸⁷ The high electricity tariffs increased in April 2016. As result, this will have negative impact to the destitute.⁸⁸ Again, prior handing down judgement court should have put the interest of the destitute in forefront. For the high court to allow electricity high tariffs, this means that, the destitute will be more burdened. Again, their socio economic rights will be negatively affected.

In *Mazibuko and Others v City of Johannesburg and Others*⁸⁹ the court dealt with the question of the realization of socio economic right (access to sufficient water) under the provisions of section 27 (1) (b) of the Constitution.⁹⁰ This case law deals with the right to adequate access to water, as a basic need, from the municipality. The Court dealt with this matter, ordering that the municipality must provide access to policy determined quantity of water for free to the most vulnerable members of the society in Soweto, having the understanding that water is a basic need necessary to sustain life.⁹¹ Thus the Court found that the municipality's decision to cut-off water even for the destitute was unlawful.

Essentially this case concerned the adequate access to basic municipal services for the members of the community living in Soweto. Like water, electricity is an essential service that is rendered by the municipality of the City of Johannesburg to the residents of Soweto. It is a commodity that is required and on which even the most vulnerable members of the society like children rely in order to improve their lives. For instance, children need power to light up when they prepare their school work at home and in the evening. Further, during the severely cold winter months, children and the elderly are mostly affected and need electricity to keep warm and to cook meals.

practical and enforceable taxation policies, and corrupt free conduct in the use of taxes collected". See pars 6-8 on indexed p 8; OUTA 's constitution (i.e. annexure "IH2" to the founding papers) on indexed p 41 -53.

⁸⁷ See Para *The Organisation Undoing Tax Abuse v The National Energy Regulator of South Africa and Others* (24365/2016) [2016] ZAGPPHC 479 (8 April 2016 at para13.

⁸⁸ See, Nicholaides G "Nersa approves Eskom Tariff Hike" Eyewitness News 01 March 2016.

⁸⁹ See (CCT 39/09) [2009] ZACC 28; 2010 (3) BCLR 239 (CC); 2010 (4) SA 1 (CC) (8 October 2009) .

⁹⁰ Section 27 (1) (b) of the Constitution states that everyone has the right to have access to sufficient food and water.

⁹¹ See *Mazibuko and Others v City of Johannesburg and Others* (CCT 39/09) [2009] ZACC 28; 2010 (3) BCLR 239 (CC) ; 2010 (4) SA 1 (CC) (8 October 2009) para 1.

Therefore, the principles enunciated in the bill of rights are equally applicable, also taking into account the provisions of section 27 (1) (c) of the Constitution which enjoins organs of the state to assist those who may not be able to support themselves.⁹² Relying on this judgment, therefore, it can be argued that the most indigent members of the society, including children and the elderly, should be provided with a minimum amount of electricity for free per household every month for their sustenance.

It is thus obvious that the lack of adequate access to electricity in certain instances has adverse, albeit indirect, impact on the other socio economic rights such as the right to access basic education. The state is obliged in terms of section 27 (2) to take reasonable measures to ensure the realisation of these rights, which, this study contends has to include the provision of electricity.⁹³ If electricity is unavailable, it will also have impact on the children because they cannot do school work or do robust work due to the access to materials for school work. This is a developmental issue, socio economic rights to modern energy.

1.5. Aims and Objectives of the study

This mini dissertation is aimed at critical, examination of legislation, policies and documents providing and promoting the right of access to free basic electricity in South Africa, especially to the destitute. The key objective of this mini dissertation is to access the provision and affordability of free basic electricity to the destitute in South Africa. The other objective relevant to the key objective is to ensure that there is reduction of electricity costs to accommodate the poor (destitute).

1.6. Research Methodology

The research methodology adopted in this study is purely non-empirical (qualitative) generally acceptable in legal research activities. This research will be library based and rely heavily on scholarly legal lexicons including but not limited to textbooks,

⁹² See Nicholaides G “Nersa approves Eskom Tariff Hike” Eyewitness News 01 March 2016

⁹³ Section 27 (2) of the Constitution of the Republic of South Africa 1996.

articles, online materials, case laws, legislations, regulations, policies, previous works and the collection of papers dealing with the law regulating electricity in South Africa.⁹⁴

1.7. Significance of proposed research

The study will benefit members of the society, emerging businesses, non-governmental organisations, Eskom and department of minerals and energy. This study will further instigate government to realise that electricity is a human basic need and it must be affordable to all. This study will also assist young and emerging scholars who are intending to study in the similar topic to bring insight into their programmes. The study will also benefit students who are studying energy law and engineering.

1.8. Scope and Limitations of the Study

This mini dissertation comprises of five chapters. Chapter one is an introductory chapter which lays down the foundation. Chapter two discusses the legislative and framework policies. Chapter three deals with issues and challenges in providing electricity in South Africa. Chapter four is a comparative study between South Africa with other countries. Chapter five deals with conclusion drawn from the whole study and make recommendations.

⁹⁴ See Sefoka, I,Odeku K, “Providing Ample Access to Quality Education in South Africa”, Socio economica, 2015.

CHAPTER TWO: LEGISLATIVE AND POLICY FRAMEWORKS

2.1. Introduction

The legislature has enacted laws and policies which are aimed at ensuring that electricity is accessible and affordable for all including the poor households. Such laws and policies include: Reconstruction Development programme (RDP) 1994,⁹⁵ Growth Employment and Redistribution 1996,⁹⁶ Eskom Conversion Act 2001,⁹⁷ Free Basic Electricity Policy 2003,⁹⁸ The National Energy Regulation Act 2006,⁹⁹ National Growth Path 2010 (NGP)¹⁰⁰ and National Development Plan 2010 (NDP)¹⁰¹. Notwithstanding passing of these legislations; the target is not yet reached and this indicates poor implementation of these laws to effect affordability and accessibility. The destitute (needy or poor) cannot enjoy the perpetual usage of basic electricity due to financial predicaments as the electricity is expensive and costly.

2.2. The National Electrification Forum of 1991 to 1993

The National Electricity Forum (NEF) was introduced in 1991. Since the introduction of the forum the focus was on addressing the imbalances in accessibility and affordability of the electricity services, particularly in the marginalised remote areas. Further, NEF is aimed at eradicating the apartheid electricity supply method and focus on an equivalent and access to electricity in households.¹⁰² This was the result after Eskom took an initiative to come with the accelerated electrification programme.¹⁰³ However, the reality reveals that, only the elite were able to access and afford electricity while the destitute were unable to access and afford electricity. The destitute

⁹⁵ This is the Policy of the government which was crafted in 1994.

⁹⁶ This is a government Policy which becomes effective in 1996 after the failure of Reconstruction Development Programme (RDP).

⁹⁷ Act 13 of 2001.

⁹⁸ Free Basic Electricity Policy 2003.

⁹⁹ The National Energy Regulation Act 4 of 2006.

¹⁰⁰ This is an economic Policy which was adopted by government in 2010.

¹⁰¹ This is an economic Policy which has been adopted by government in 2010. This is a blueprint for government and all government Programmes must be aligned with it.

¹⁰² White Paper on Electricity 1998. See also, Marquard B, Bekker, B, Eberhard, Gaunt, T, "South Africa's Electrification Programme an Overview and assessment" Paper, University of Cape Town, 2007, p11.

¹⁰³ The National Electrification Forum of 1991 to 1993.

rely heavily on other sources such as coal, paraffin, woods, and gas. Notwithstanding the fact that, NEF was aimed at responding on the imbalances in access to electricity in households, however the marginalised people were unable to enjoy and reap the benefits of electricity.¹⁰⁴

2.3. Reconstruction Development Programme (1994)

In 1994, the legislature enacted Reconstruction Development Programme (RDP) which was aimed at making electricity accessible and affordable as a human basic need. Reconstruction Development Programme is defined as “an integrated, coherent socio-economic policy framework.¹⁰⁵ RDP focused mainly on meeting human basic needs which included: jobs, land, housing, water, electricity, telecommunications, transport, a clean and healthy environment, nutrition, health care, and social welfare.”¹⁰⁶

The post democratic government transition came with strategy or plan to open doors to many households especially to those who stay in the remote villages to retrieve electricity.¹⁰⁷ The fast electrification program intended that the numeral of electricity customers allied to the nationwide network augmented extremely above the years.¹⁰⁸ Reconstruction Development Programme (RDP) makes provision that electricity is one of the priorities to begin with in order to meet human basic needs.¹⁰⁹

In terms of the RDP Policy electricity is one of the basic needs, however it very difficult for the destitute to afford it, as a result of high electricity tariff price. RDP also stipulates that “although energy is a basic need and a vital input into the informal sector, the vast

¹⁰⁴ Ziramba E "The demand for residential electricity in South Africa", Energy Policy, Elsevier, Vol 36, Issue 9, September 2008, University Of South Africa, , P3460–3466.

¹⁰⁵ This is the Policy of the government which was crafted in 1994.

¹⁰⁶ RDP White paper, September 1994.

¹⁰⁷ See Ziramba E "The demand for residential electricity in South Africa", Energy Policy, Elsevier, Vol 36, Issue 9, September 2008, University Of South Africa, , P3460–3466.

¹⁰⁸ See O 'Malley' S “The Reconstruction and Development Programme(RDP)” (accessed <https://www.nelsonmandela.org/omalley/index.php/site/q/031v02039/041v02103/051v02120/061v02126.htm> retrieved 16 March 2016 at 16: 48 PM.)

¹⁰⁹ See O 'Malley' S, The Reconstruction and Development Programme(RDP) (accessed <https://www.nelsonmandela.org/omalley/index.php/site/q/031v02039/041v02103/051v02120/061v02126.htm> retrieved 16 March 2016 at 16: 48 PM.)

majority of South African households and entrepreneurs depend on inferior and expensive fuels".¹¹⁰ As result of inaccessible electricity and affordable women in Rural areas found in a situation where they have no other alternative but to face a heavy load gathering wood to make fire woods which is an inefficient and unhealthy fuel.¹¹¹ Town families are challenging by elevated prices for paraffin and gas. Coal, where it is accessible, is not expensive but consequences in brutal health difficulties, poorly paid labour force, and the failure to assess and adopt environmental prices. Therefore, the use of coal, gas or woods could culminate provided the poor households are able to afford electricity. The reality physically on the ground depicts that, at least 36 per cent of South African households are electrified, but this result shows that about three million households are living without electricity.¹¹²

However, the RDP was regarded as the keystone of government development policy; it did not deliver as it was believed particularly in terms of electricity infrastructure and economic growth which wedged negatively on the policy itself.¹¹³ This is the Policy of the government which was crafted in 1994. It was designated that the new democratic government knowledgeable some difficulties in the insinuation of the RDP such as a accessibility and affordability to ensure that the poor or needy people enjoy the benefit of the electricity.¹¹⁴ The study partially agree with, the reality reveals that RDP failed to fulfil its objective, to focusing on the meeting basic needs or to put people basic needs at the forefront and eradicating the poverty, instead the destitute were unable to accessibility and affordability to electricity.

The RDP makes clear provisions on accessible and affordable electricity, however there is no realization; government must take radical measures to ensure rapid

¹¹⁰ This is the Policy of the government which was crafted in 1994.

¹¹¹ This is a government Policy which becomes effective in 1996 after the failure of Reconstruction Development Programme (RDP).

¹¹² See Reconstruction Development Programme (accessed [http:// www. sahistory. org.za/sites/ default/files/ the _reconstruction_and_development_programm_1994.pdf](http://www.sahistory.org.za/sites/default/files/the_reconstruction_and_development_programm_1994.pdf), retrieved 07 April 2016 at 12:13 PM.)

¹¹³ See South Africa's Key economic policies changes since 1994-2013(accessed at [http:// www. sahistory. org.za/article/south-africa%E2%80%99s-key-economic-policies-changes-1994-2013#sthash.tqs8ituC](http://www.sahistory.org.za/article/south-africa%E2%80%99s-key-economic-policies-changes-1994-2013#sthash.tqs8ituC).)
dpuf[http://www. sahistory.org.za/article/south-africa%E2%80%99s-key-economic-policies-changes-1994-2013](http://www.sahistory.org.za/article/south-africa%E2%80%99s-key-economic-policies-changes-1994-2013), retrieved 07 April 2016 at 12:51PM.

¹¹⁴ Growth Employment and Redistribution 1996 (GEAR).

changes to accessibility and affordability of the electricity to the destitute, while policy co-ordination and implementation methods used were unverified fruitful.

This study submits that RDP failure on the basis that it did not prioritise electricity as a basic human need on the basis that it was centred heavily on the alleviation of poverty on the households. Therefore, RDP was supposed to have dealt with electricity and alleviation of poverty on equal basis because they are both pressing human basic needs. The government was supposed to have stretched much on the accessibility and affordability of electricity rather than poverty alleviation.

2.4. The Constitution of the Republic of South Africa (1996)

The Constitution empowers both National and Provincial to pass legislations to regulate the supply of electricity within their defined jurisdiction.¹¹⁵ It is in that capacity that government of the Republic of South Africa established the National Energy Regulator (NER) to regulate the supply and pricing of electricity to various consumers. Even though NER was promulgated to effect supply of electricity, the reality indicates clearly that there is no accessibility and affordability of electricity as a basic need to the destitute on the basis that electricity is expensive and costly.

It is clear that the constitution encourages the supply of electricity through NER but it does not provide much on the pricing of the electricity to the destitute households. This creates a room where the supplier gets too much discretion to charge high tariffs on the basis that the laws on electricity do not expressly dictates the rates at which the pricing must be carried out. It is therefore the submission of this study that in order to cure this pricing freedom on the part of the suppliers, the constitution or NER must enact a legislation containing a specific provision that will be clear with regard to the rate at which suppliers must charge electricity taking in to account the interest of the destitute households at heart.

¹¹⁵ See provisions of Schedule 4 Part B of the Constitution.

2.5. Growth Employment and Redistribution (GEAR), 1996

Growth Employment and Redistribution (GEAR) Policy was established in 1996, after the RDP failed to guarantee that electricity is accessible and reasonable to all households to the inclusion of the poor. One of its purposes was to promote and puts more investments in public infrastructure, public investments needs include local and manufacturing grid electricity.¹¹⁶ Moreover a reduction in tariffs to facilitate that electricity must be affordable and accessible to the destitute communities.¹¹⁷ As a consequence of the real decline, a paying lowering of tariffs is wanted, within the setting of an orderly implementation of approved tariff realignment.¹¹⁸

Therefore, in June 1996 actual current exchange rate is somewhere at 12 per cent lower in January value, should pass important acceleration of the tariff reductions to which South Africa is dedicated in terms of World Trade Organisation agreement.¹¹⁹ However, these improvements will be organized to lesser prices for manufacturing inputs and lower-income households, to avoid high electricity tariffs.¹²⁰ GEAR was to ensure that tariffs are reduced to make electricity affordable.

2.6. White paper on Energy Policy (1998)

White paper on Energy Policy provides that “government is committed to the promotion of access to affordable and sustainable energy services for disadvantaged and households, in rural areas and wide range of other community”.¹²¹ It also provides that energy must be accessible at reasonable price and being affordable by the

¹¹⁶ This is a government Policy which becomes effective in 1996 after the failure of Reconstruction Development Programme (RDP).

¹¹⁷ Growth, Employment And Redistribution A Macroeconomic Strategy (accessed at [http:// www. Treasury .gov.za/publications/other/gear/chapters.pdf](http://www.treasury.gov.za/publications/other/gear/chapters.pdf), retrieved 22 March 2016, at 16:18PM.)

¹¹⁸ Growth Employment and Redistribution 1996.

¹¹⁹ This is a government Policy which becomes effective in 1996 after the failure of Reconstruction Development Programme (RDP).

¹²⁰ See Department of Financing, Republic of South Africa, Growth, Employment and Redistribution a Macro Economic Strategy, p21.

¹²¹ See White Paper on the Energy Policy of the Republic of South Africa, 1998, p4.

destitute. Moreover, the policy encapsulates the recent government's policy on electrification.¹²²

This policy document supplies the basic way in which energy service delivery plans and their application towards reaching the nationwide goals.¹²³ Currently, the push of South Africa's electrification program is on service delivery rather than the facility of energy to prolific purposes.¹²⁴

The supply manufacturing faces a numeral of tests if it is to encounter electrification goals and carry on to offer at reasonable cost, fairly value to afford the destitute to use electricity without any fear, quality supplies to clients.¹²⁵ Furthermore, the government is dedicated to the increase of access to affordable and maintainable energy services for the side-lined households.¹²⁶ The supply manufacturing will accordingly be reorganized into provincial electricity suppliers. Government will launch intermediate procedures that will lead up to the formation of self-governing district electricity providers. The current condition of the electrification programme is revised and government is dedicated to applying sensible statutory and additional methods, within its accessible resources, to increasingly comprehending the objective of worldwide home access to electricity.¹²⁷

The values for pricing policy are stated.¹²⁸ Government believes electricity prices to develop slowly cost-reflective at all stages of the manufacturing. Again methods to meeting development in electricity request are also deliberated. In forthcoming government, should invite more public contribution in decisions on big public sector electricity investments, and will need assessments using combined resource planning (IRP).¹²⁹ Government gives negative response towards recruiting more investors on electricity sector to compete with the current electricity supplier which is Eskom.

¹²²See White Paper on the Energy Policy of the Republic of South Africa, 1998, p4.

¹²³ This is a government Policy which becomes effective in 1998 after the failure of Growth Employment and Redistribution 1996 (GEAR).

¹²⁴ White Paper on Energy Policy 1998.

¹²⁵ This is the Policy of the government which was crafted in 1994.

¹²⁶See O 'Malley' S The Reconstruction and Development Programme(RDP) (accessed <https://www.nelsonmandela.org/omalley/index.php/site/q/031v02039/041v02103/051v02120/061v02126.htm> retrieved 16 March 2016 at 16: 48 PM.)

¹²⁷ White Paper on the Energy Policy of the Republic of South Africa,1998.

¹²⁸ White Paper on the Energy Policy of the Republic of South Africa,1998.

¹²⁹ White Paper on the Energy Policy of the Republic of South Africa,1998.

Competition is needed in electricity sector which will enable the consumers to choose which electricity network they prefer to use at reasonable costs.¹³⁰ Eskom will be reorganized into distinct generation and transmission companies. Reality reveals that the electricity is affordable only to the elite and to the exclusion of the marginalised and vulnerable households. Therefore, it is the submission of this study that high electricity tariff must be reduced, thus making electricity accessible and affordable to the destitute.

2.7. Eskom Conversion Act (2001)

Eskom Conversion Act (ECA) is aimed at promotion of universal access to affordable electricity, taking into consideration the price tag of the electricity, monetary sustainability and the competitiveness of Eskom.¹³¹ However, this ECA, failed to achieved its aim, due to electricity high costs and there is no realization of accessibility and affordability of electricity to the destitute. The ECA has been tested and still destitute cannot enjoy the electricity usage. Therefore, there is a need for a legislative intervention to guarantee that electricity is reasonable to all. The legislature need to bring up the reduced tariffs to ensure that the country at large enjoy electricity usage.

2.8. Free Basic Electricity Policy (2003)

This policy document is aimed at to enable the application of Free Basic Electricity (FBE) Services by Municipalities as Service Authorities.¹³² Further, it brings the FBE Services in, “addressing the energy imbalance in the domestic sector.¹³³ Although the electrification plan is emerging well, it rapidly recognized that there is a prerequisite to deal with affordability and accessibility concerns in electrified houses.¹³⁴

The state proclaimed policy determined to deliver free basic services to underprivileged families in 2000. In this respect, “water, sanitation and energy were

¹³⁰ White Paper on the Energy Policy of the Republic of South Africa,1998.

¹³¹ Eskom Conversion Act 13 Of 2001.

¹³² Free Basic Electricity Policy 2003.

¹³³Free Basic Electricity Policy 2003.

¹³⁴This is a government Policy which becomes effective in 2003 Free Basic Electricity Policy 2003.

recognized” as basic services to be maintained by Government's plans with regard of needy households. The government declared the Free Basic Electricity (FBE) Policy to report affordability difficulties related to energy, more precisely electricity services.¹³⁵ For majority of consumers the on-going incapability to pay and rising debts finally lead to electricity – cut-offs by Eskom. In order to make meet ends, their basic needs people found themselves practicing unlawful or illegal grid connections.¹³⁶

Again, policy document anxieties itself with electricity funding difficulties to unfortunate homes in universal and electricity (grid and non-grid) in accurate. As designated above, important development has been complete in providing wealth supports for electrifying deprived communities.¹³⁷ Little electricity intake arrangements show that destitute households do not profit from the competence and environmental benefits afforded by electrification due to the severity of deficiency.

This policy seeks to report ways and means through which government interferences can bring about remedial to poor electrified households and guarantee optimum socio-economic benefits from the National Electrification Programme. This policy suggests a methodical way through which poor households can be recognized.

For majority of folks the current lack of ability to pay and escalating debts eventually lead to electricity – cut-offs by Eskom. In order to meet their basic needs people make unlawful grid connections.¹³⁸

FBE also provides that, the normal poor household does not consume more than 50 kwh of electricity per month, the distribution of free basic electricity is set at 50 kwh, based on the usefulness that poor households could derive from that amount of energy.¹³⁹ We also recognise that this benefit can be increased through the well-organized utilization of energy and reserves interferences for the same amount of energy.

¹³⁵See Davidson O and Mwakasonda S “Electricity access for the poor: A study of South Africa and Zimbabwe Energy Sustain Development”, (2004), Energy Research Centre, University of Cape Town, Vol. VIII, No 4, p. 26–40.

¹³⁶ See, Fiil-flynn and Sec 2001.

¹³⁷ This is a government Policy which becomes effective in 2003 Free Basic Electricity Policy 2003.

¹³⁸ This is the Policy of the government which was crafted in 1994.

¹³⁹ This is a government Policy which becomes effective in 2003, Free Basic Electricity Policy (FBE).

The free basic electricity did not cater enough for the households as the usage was limited to only 50kwh per households thus the poor or marginalized households could not enjoy free basic electricity. The study urges that the electricity was free in principle as the household were limited to a certain usage. Therefore it is the submission of this study that free electricity must not be limited and if limited it must not be seen as free electricity on the basis that the households don't get to use it for free in its totality.

2.9. White Paper on Renewable Energy (2003)

The same year South Africa introduced another white paper on Energy.¹⁴⁰ This paper was aimed to generate more electricity through renewable energy sources precisely biomass, wind, solar and small-scale hydro, by 2013.¹⁴¹

Subsequently, the government's authorization of the White Paper requested by the Department of Energy (DoE) to put more effort to improve a renewable energy plan for the addition of renewable energies into the standard energy that will be at reasonable costs or to meet the needs of the destitute.¹⁴²

The idea of the DoE was to make sufficient and reasonable energy accessible to emerging societies by adding the recent supply of fossil fuel based energy with another energy manufactured at an equitable cost, consequently filling the basic needs of the emerging division and simultaneously supporting the real use of South Africa's massive substitute energy resources.¹⁴³ This idea was dignified in the Integrated Resource Plan¹⁴⁴ (IRP) which was created by the DoE in 2010, and lastly gazetted by the Minister of Energy on 6th of May 2011.¹⁴⁵

According to the IRP the Government accepted to elevation South Africa's whole connected electricity volume by 170% to 454TW by 2030, 3725 MegaWatts (MW) of

¹⁴⁰ This is government Policy which becomes more effective in the same year, White Paper on Renewable Energy 2003.

¹⁴¹ See, [History-of-Renewable-Energy-in-South-Africa](http://www.bowman.co.za/News-Blog/Blog/History-of-Renewable-Energy-in-South-Africa) (accessed at [www.bowman.co.za/News-](http://www.bowman.co.za/News-Blog/Blog/History-of-Renewable-Energy-in-South-Africa)

[Blog/Blog/History-of-Renewable-Energy-in-South-Africa](http://www.bowman.co.za/News-Blog/Blog/History-of-Renewable-Energy-in-South-Africa), retrieved 06 April 2016 at 09h10 AM.)

¹⁴² White Paper on Renewable Energy, 2003.

¹⁴³ Department of Energy 2015 (DOP).

¹⁴⁴ This is the government plan which aimed at providing the energy in South Africa.

¹⁴⁵ White Paper on the Energy Policy of the Republic of South Africa, 1998.

which would come from renewable energy technologies.¹⁴⁶ “The IRP allocates out how the 3725 MW of new generation capacity would be apportioned between each renewable energy technology, and that the new generation capacity should be achieved using, and should be executed in accordance with, the specified apportioned capacities and technologies as listed in the IRP”.¹⁴⁷ The procedure for obtaining the new generation volume as stated in the IRP is known as the Renewable Energy Independent Power Producer Procurement Programme (IPP Programme).¹⁴⁸

However, in 2011 the DoE emancipated the Request for Proposals (RFP) for the IPP Programme which was planned to procure the necessary 3725 MW.¹⁴⁹ “The allocation to the various renewable energy technologies was as follows (i) 1 850 MW for onshore wind generated power; (ii) 200 MW for concentrated solar thermal generated power; (iii) 1 450 MW for solar photovoltaic generated power; (iv) 12.5 MW for both biomass and biogas generated power; (v) 25 MW for landfill gas generated power; (vi) 75 MW for small hydroelectric generated power; and (vii) 100 MW for an unspecified number of small-scale IPP projects of less than 5 MW.”¹⁵⁰

Furthermore, in October 2012 the Minister declared that “a further 3200 MW would be allocated to the IPP Programme, with most of the new allocation being assigned to offshore wind and solar power generation (being 1470 MW and 1075 MW respectively).”¹⁵¹ Again the Minister of Energy has indicated that the new distribution will only be allocated once the distribution of the first 3725 MW has been confirmed.¹⁵²

Be that as it may, the reality reveals that the initiatives taken by the government in terms of introducing renewable energy measures to try increase capacity of electricity supply are not enough to meet the demands of the individuals and such measures did not assist in any way to reduce the high tariffs. The renewable energy method must lead to reduced tariffs of electricity.

¹⁴⁶White Paper on the Energy Policy of the Republic of South Africa,1998.

¹⁴⁷White Paper on the Energy Policy of the Republic of South Africa,1998.

¹⁴⁸ Department of Energy 2015 (DOP).

¹⁴⁹ Department of Energy 2015 (DOP).

¹⁵⁰ This is a government Policy which becomes effective in 2003 Free Basic Electricity Policy 2003

¹⁵¹ This is an economic Policy which was adopted by government in 2010.

¹⁵² Department of Energy 2015 (DOP).

2.10. The National Energy Regulation Act (2006)

In 2006, the legislature enacted National Energy Regulation Act and its objectives are as follows:

- “Achieve the efficient, effective, sustainable and orderly development and operation of electricity supply infrastructure in South Africa.
- To ensure that the interests and needs of present and future electricity customers and end users are safeguard and met, having regard to the governance, efficiency, effectiveness and long-term sustainability of electricity supply industry within the broader context of economic energy regulation in the Republic.
- Aimed at to facilitate universal access to electricity.
- To facilitate investment in the electricity supply industry.
- Promote the use of diverse energy sources and energy efficiency.
- To promote competitiveness and customer and end user choice.
- Facilitate a fair balance between the interests or customers and end users”.¹⁵³

Furthermore, The National Energy Regulator (NERSA) is a controlling authority recognized as a juristic person in terms of Section 3 of the National Energy Regulator Act, 2004 (Act No. 40 of 2004) .¹⁵⁴ NERSA’s main objectives is to regulate the electricity, piped-gas and petroleum pipelines industries in terms of the Electricity Regulation Act, 2006.¹⁵⁵

It also results from legislation governing and suggesting the role and functions of the Regulator. NERSA has formulated the following five strategic outcome orientated goals:

- “Facilitate security of supply to support sustainable socio economic development in South Africa.
- Facilitate investment infrastructure in the energy industry to support sustainable development in South Africa.
- Promote complete and efficient functioning of the energy industry in order to sustain socio-economic development in South Africa.

¹⁵³ The National Energy Regulation Act 4 of 2006.

¹⁵⁴ Department Of Energy 2015 (DOP).

¹⁵⁵ See, Electricity Regulation Act 4 of 2006.

- Facilitate affordability and accessibility in the energy industry to balance the socio-interests to all stakeholders in support of development of South Africa and better life for all”.¹⁵⁶

It is also aimed at facilitate electricity tariffs and also to issue licences to the electricity supply. In as much as NERSA is mandate to ensure that it promotes socio-economic developments, this study is of the view that it must place electricity accessibility and affordability at the forefront of its top priorities and ensure that the poor households are electrified at a reasonable and affordable price. This will enable the poor households to enjoy the benefits of electrification and realization or fulfilment of human basic needs.

2.11. National Growth Path (2010)

In 2010, framework of the Economic Growth Path (NGP) (vision 2020) which reinforces local integration on energy, including the Southern African Power Pool, linked to urgent improvements in electricity interconnectors, and exploring other chances for attractive clean energy across dominant and southern Africa.¹⁵⁷

National Growth Path 2010 aimed at the imbalances and defeating poverty, and also to rearrangement of the South African economy status to improve its performance.¹⁵⁸ Frequently poor households are unable to reap the benefits of being linked to the electricity grid since they unable afford even the minimum amount of electricity obligatory for their basic needs.¹⁵⁹ “In addition to this, many poor people are burdened with high debts, electricity cut-offs and poor service quality”.¹⁶⁰

Due to the perpetual and increase of household electricity demand, the electricity supply tariff remain high. Even though, the National Growth Path Policy, made provisions for the supply of the electricity to the residential consumers the household

¹⁵⁶ Department of Energy 2015.

¹⁵⁷ See Growth, Employment and Redistribution a Macroeconomic Strategy (accessed at [http:// www. Treasury .gov.za/publications/other/gear/chapters.pdf](http://www.treasury.gov.za/publications/other/gear/chapters.pdf), retrieved 22 March 2016, at 16:18PM.)

¹⁵⁸ This is an economic Policy which was adopted by government in 2010.

¹⁵⁹ This is the Policy of the government which was crafted in 1994.

¹⁶⁰ See, Malzbender D “Domestic Electricity Provision in the Democratic South Africa” (accessed at [www. queensu.ca/msp/pages/Project Publications/Series/4.htm](http://www.queensu.ca/msp/pages/Project%20Publications/Series/4.htm), retrieved 05th April2016 at 19:39 PM.)

faces challenges of high electricity tariff due to perpetual day to day increase of household or population. Reality reveals that the electricity is affordable only to the elite and to the exclusion of the marginalised and vulnerable households. Therefore, it is the submission of this study that high electricity tariff must be reduced, thus making electricity accessible and affordable to the destitute.

Subsequently, NGP was introduced to ensure that there is access to electricity following the failure of RDP and GEAR. This study submits that it serves no purpose to enact lot of pieces of legislation while the government or private sectors are not practically doing anything to see to it that electricity is fully realized, accessible and affordable. Therefore, there is a need that private sectors and the government must co-operate together to effect accessibility and affordability of electricity for the benefit of the poor households.

The reality reveals that the country has much on legislations aimed at accessibility of electricity but the implementation nor the enforcement of those laws to influence such accessibility and affordability is poor on the basis that despite having laws and policies on electricity the poor households still continue to be victims of high tariffs.

Moreover, policies cannot enforce themselves if the government is not enforcing them to compel both private and public companies to ensure that electricity is affordable and accessible to all.

Therefore, it is the submission of this study that there must be co-operation between all the stakeholders in the nation's electricity system to ensure that electricity is made affordable and realizable to the destitute households through reduction of high tariffs.

2.12. The National Development Plan, 2010 (NDP)

The National Development Plan (NDP) acknowledges that “the poor households are unable to afford the minimum amount of the electricity and they rely heavily on other sources such as coal, paraffin, gas”.¹⁶¹ NDP is aimed at promoting the accessibility and affordability of electricity to the destitute. Furthermore, in 2016 NERSA approved 9, 4 per cent electricity hikes, the destitute will be more burdened by this latest

¹⁶¹ See Chapter 4 of the National Development Plan, 2010.

development.¹⁶² The NDP's vision could only be achieved and made reality subject to the reduced and low electricity prices with which the poor and the elite could afford.

The NDP's vision to ensure that electricity hikes are low could only be achieved provided the government and Eskom provide an appropriate facilitation and take rapid measures that will enhance the process and increase the capacity of the stations already in place to provide electricity to the households. Moreover, in order to see or witness the success of NDP, the government must also take measures or invest more on energy mix or renewable energy in order to increase the capacity of the production. These will also assist in the reduction of the use of detrimental alternatives such as coal or wood for fire by the households.

If Eskom increases its production capacity, the poor households will be less burned or attacked by the ill-health resultant for the use of dangerous electricity alternatives that produces smokes that are detrimental to the health of the poor people. By making electricity affordable the government or Eskom will also be assisting in the eradication of diseases that come with other unsafe fire alternative sources.

2.13. Conclusion

The accessibility and affordability of electricity is provided for in distinct legislations, however, the reality depicts that the poor or marginalized households in South Africa still continue to suffer from the high costs of electricity thus not enjoying what the laws and policies have stretched in their provisions being accessibility and affordability. Therefore, this calls for urgent government intervention in terms of the reduction of the high tariffs in realization of the legislative mandate to made electricity accessible and affordable to all. Furthermore, policies aimed at affordable electricity for all must be appropriately implemented.

¹⁶²See Nicholaides G "Nersa approves Eskom Tariff Hike" Eyewitness News 01 March 2016.

CHAPTER THREE: ISSUES AND CHALLENGES

3.1. Introduction

This chapter emphasizes on the issues and challenges that affect electrification and their impact towards the goal of achieving accessibility and affordability of electricity in South Africa to the destitute. It highlights the importance of renewable energy deployment in order to provide sufficient and affordable electricity to all, including the destitute. It further encourages investment in energy technologies to meet electricity demands.

3.2. Lack of leadership

The shortages of leadership skills, lead to Eskom not have a proper plan to overcome the electricity crisis in South Africa. Nevondwe alluded that, “ethics or integrity is the foundation and reason for state owned enterprise to function effectively.”¹⁶³ The continuously changing of leadership shows that, the leadership of Eskom has been tested. On the matter of leadership, the King III Report needs the board of directors to deliver real leadership built on moral foundation.¹⁶⁴ Furthermore, reasoning behind the morals of corporate governance, which requires the board of directors to ensure that the company is run decently, is that as this is attained the company earns dignity and respect and endorsement of those affected by and affecting its operations.¹⁶⁵

Unfortunately, South African citizens lost hope or trust due to perpetual changing of leadership of Eskom, which gives a poor performance to accessibility and affordability of electricity to all households. The inconsistent leadership of Eskom, who are appointed due to cadetship or political interferences, also played a major role in

¹⁶³See Nevondwe L, Odeku K and Tshoose,I, “Promoting the Application of Corporate Governance in the South African Public Sector”2014 Mediterranean Journal of Social Sciences, Volume 40, page 261-275. See also Nevondwe L,” Corporate Governance Principles Lessons to be learnt, The Thinker” Volume 44,2012, page 17.

¹⁶⁴ See Nevondwe L, Odeku K and Tshoose,I, “Promoting the Application of Corporate Governance in the South African Public Sector” 2014 Mediterranean Journal of Social Sciences, Volume 40, page 261-275. See also Nevondwe L,” Corporate Governance Principles Lessons to be learnt, The Thinker” Volume 44,2012, page 17.

¹⁶⁵ Department of Energy 2015 (DOP).

electricity supplier crisis. For instance, this was evident made by Eskom Chief Executive Officer (CEO) for his resignation commencing from the 1st January 2017.¹⁶⁶

For the government Para status to perform its function in a dignified manner, there must be led by a leadership with a guidance of good corporate governance such as ethics and morals to its citizenship. As the result, lack of leadership in Eskom, the country started to experience to suffer more electricity downfalls time to time, to electricity demand at times overtaking supply.¹⁶⁷

Initially, people requisite more information from Eskom on how will deals with the electricity supply. – an idea that motivates people. Furthermore, South Africans need to be informed on what is happening in electricity sectors, particularly to all the stakeholders who contribute to the economic growth of the country. Again the leadership that can put the needs of the people in forefront with more determination and ready to serve and loyal to its country.¹⁶⁸

However, the leadership of Eskom did well in the past years by providing right of access to electricity to its citizens, but with the current leadership electricity in South Africa is nightmare to the entire population. Due to their failure to ensure that everyone has right of access to electricity. Moreover, another factor could be that population growth does not meet electricity demand.

3.3. Load shedding

Load shedding is defined as “measure of last resort to prevent the collapse of the power system country-wide”.¹⁶⁹ The government is under pressure of electricity supply to the country as a whole. It clearly shows that, the electricity users cannot enjoy the benefits of the electricity due to its inadequate power station capacity to supply enough electricity to the households. As result the shortage of electricity power station capacity in South Africa contributes to a failure to provide electricity to

¹⁶⁶ See Pather R “Brian Molefe resigns from Eskom” Mail & Guardian 11 Nov 2016.

¹⁶⁷ See Van der Nest, G “The economic consequences of load shedding in South Africa and the State of the electrical grid” Tralac law Centre NPC, Paper, 11 February 2016.

¹⁶⁸ See Yelland C “New concerns on the state of the electricity supply industry in South Africa” Articles: Energize 6, EE Publisher, August 16th, 2009, page 5- 6.

¹⁶⁹ See Load Shedding Frequency Asked Questions (accessed at [http:// www. Eskom .co.za/ documents/ Load Shedding FAQ. pdf](http://www.Eskom.co.za/documents/LoadSheddingFAQ.pdf),pg 1, retrieved 01 May 2016 at 12: 13 PM.)

everyone. Further, the electricity supply becomes unstable, which can cause it to take long time to be reinstated or go back to its normal position.¹⁷⁰ When power is not enough, Eskom can thus any escalation supply or decrease demand to bring the system spinal into balance. The variance between supply and demand come to be small, we refer to the system becoming “close-fitting”.¹⁷¹

Subsequently, load shedding was firstly introduced in South Africa by electricity supplier in 2008. Since 2008, the electricity shutdown was experienced again in 2014 due to the lack of power stations.¹⁷² President Zuma also in his speech at the African National Congress’ (ANC) 103rd anniversary celebrations in Cape Town mentioned:¹⁷³ ‘We are not remorseful about the energy issue.¹⁷⁴ It is a problem that caused by the apartheid era. However, majority of the people disagreed and thoughts his argument is in immaterial and not prolific, some disapproving his quarrel as ‘revisionism’ as he puts blame to the recent electricity matters on the historical.¹⁷⁵

The loading obstacle can culminate only if the government invest more on renewable energy or energy mix to increase the capacity of Eskom thus enabling Eskom to make electricity accessible and affordable for all. The same sentiment was shared by Yelland when he alluded that there must be alternative measures in place to avoid electricity- cut.¹⁷⁶

3.3.1. The effects of load shedding

As result, when load shedding happen mining operations are blackout and in numerous occasions it proceeds for several hours for mineworkers to be an expatriate from the mines.¹⁷⁷ As the result of shut down, mines productive become very little as was not been expected and wastes prolific time. Further, Smelters and plants take too much time to resume afterward a breakdown in power supply, cause the traffic

¹⁷⁰ See Yelland C “New concerns on the state of the electricity supply industry in South Africa” Articles: Energize 6, EE Publisher, August 16th, 2009, page 5- 6.

¹⁷¹ Department of Energy 2015 (DOP).

¹⁷² See, The president Jacob Zuma, in his speech at the African National Congress’ (ANC) 103rd anniversary celebrations in Cape Town, 2014.

¹⁷³ See Department of Energy 2015 (DOP).

¹⁷⁴ See Department of Energy 2015 (DOP).

¹⁷⁵ See Department of Energy 2015 (DOP).

¹⁷⁶ See Electricity Regulation Act 4 of 2006.

¹⁷⁷ See Department of Energy 2015 (DOP)

management systems to be out of order and traffic lights cause substantial delaying and a less in productivity, some workers depend largely on reliant on social network services and technology have no alternative but to shut down, clinics, schools, hospitals have come under augmented pressure and various government management or administration services such as home affairs just close as a result of load shedding.¹⁷⁸

Further, the economic growth has been affected due to lack of adequate productivity and many workers lost jobs.¹⁷⁹ South Africa depend powerfully on the gross domestic products of its valuable natural resources to funding its present account debit the influence of load shedding on mining processes (which are energy concentrated) has led to a robust decline of the rand as well as a time-wasting of monetary advance and descending reviews in growth predictions.¹⁸⁰ A number of rankings assistances have also reduced the country's credit rating, which has had an immoral influence on the viewpoint of the country as a venture endpoint.¹⁸¹

The incapability of South Africa to facility its electricity desires has led to descending reviews of economic progress and financier self-assurance in the economy.¹⁸² The increasing effect of the overhead on the economic capacity and position of the nation is meaningfully harmful. However, the reality reveals that demand outstripped the supply, therefore the destitute will not have accessibility and affordability of the electricity and as an alternative they must rely on woods, candles, gas and paraffin.

3.4. High electricity tariffs rate

High tariffs hamper the enjoyment and usage of the electricity as proclaimed and contemplated in distinct legislations and policies. Subsequent lot of underprivileged people are loaded with too much debt, electricity deadline and deprived service delivery".¹⁸³ Reality reveals that the electricity is affordable only to the elite and to the

¹⁷⁸ See, Electricity Regulation Act 4 of 2006.

¹⁷⁹ Department of Energy 2015 (DOP)

¹⁸⁰ Department of Energy 2015 (DOP)

¹⁸¹ Department of Energy 2015 (DOP)

¹⁸² Department of Energy 2015 (DOP)

¹⁸³ This is a government Policy which becomes effective in 2003 Free Basic Electricity Policy 2003.

exclusion of the marginalised and vulnerable households. Therefore, it is the submission of this study that high electricity tariff must be reduced, thus creating electricity reachable and reasonable to the destitute.

However, electricity accessibility and affordability are not realised on the basis of high electricity tariffs. The destitute are incapable to enjoy the benefits of electricity due to the fact that, they are unable to afford or purchase at least the slightest amount of electricity prerequisite for their basic needs. Moreover the underprivileged households are hampered with high costs of electricity. This high tariff hampers the accessibility and affordability of electricity as a human basic need.

The Impact of high electricity tariffs rate on the Poor households, just like every other consumer, will have to dig deeper into their needy pockets to purchase electricity. Perhaps it is high time the government increases its electricity subsidy and this will lead to increase in electricity supply which will lessen the demands and make electricity affordable to the destitute.¹⁸⁴

3.5. Lack of maintenance in generating electricity

Another challenge in providing electricity in South Africa is lack of maintenance in generating electricity. The electricity supplier in South Africa has been not capable to save its current plant operating at sufficient levels of consistency. Again shutdowns are not only as a result of insufficient generation capacity.¹⁸⁵ Further, perpetual disruptions and failures in generation plant.¹⁸⁶ The supply chain management of Eskom should make sure that all the power stations are maintained and are in good shape at all costs to generate sufficient electricity.

A proper maintenance of the power stations and which are well equipped with new technologies of generating electricity will assist in reducing electricity pressure. Eskom's management have to revise its primary energy procurement strategies,

¹⁸⁴ See Mabhula, B "Electricity Tariff Hikes: Impact and Possible Solutions" 2010, afesis-corporan Media Report.

¹⁸⁵ See Newbery D and Eberhard A "South African Network Infrastructure Review Electricity," 2008, Pretoria p53, Paper, National Treasury and Development of Public Enterprise.

¹⁸⁶ See Mabhula B "Electricity Tariff Hikes: Impact and Possible Solutions" 2010, afesis-corporan Media Report.

maintenance and operation systems. The latest development that, Medupi and Kusile are only predictable to be distributing commercial power into the grid by 2019 and 2020 which is years late schedule.¹⁸⁷ In addition, Eskom's main objective is to supply electricity in well-organized and maintainable way, comprising its generation, transmission, and distribution and sales.¹⁸⁸

Eskom is a serious and tactical donor to the South African government's target of energy safety to supply electricity in the country as well as economic development and success. Maintenance was delayed, recent generators shut down and there were unintended power outages. According to Eskom spokesperson "maintenance in the previous years, from about 2010, has been deferred."¹⁸⁹ "We need money to make sure that we finish the projects we are currently busy building,"¹⁹⁰

Yelland is of the view that "the construction of Medupi and Kusile had proceeded without knowing where the money would come from to pay for the projects". "A few years into the projects, they had to be delayed until government had put a funding plan in place." "This resulted in major delays in the construction of the foundations of Medupi and Kusile."¹⁹¹

3.6. Electricity theft

The electricity supplier in South Africa is also concerned that electricity theft is uncontrollable or is out of control. As a result Eskom is loss billions each year especially in the area where people practices electricity theft by stealing electricity cables and other apparatus.¹⁹² Electricity theft is a serious challenge in South Africa, such as stealing electricity cables and transformers by the isinyoka.

Due to the electricity theft such as stealing of electricity cables and illegal electricity connections lead to electricity tariffs rate. Unfortunately, when it comes to electricity

¹⁸⁷See Yelland C "New concerns on the state of the electricity supply industry in South Africa" Articles: Energize 6, EE Publisher, August 16 ,2009.

¹⁸⁸ See South African Press Association, "We're in a financial crisis: Eskom" January 9, 2015.

¹⁸⁹ See Yelland C "New concerns on the state of the electricity supply industry in South Africa" Articles: Energize 6, EE Publisher, August 16 ,2009.

¹⁹⁰ See Department of Energy 2015 (DOE).

¹⁹¹ See Ismail A "Exclusive 6: reasons why Eskom is load shedding" Fin 24, media report, 14 November 2014.

¹⁹² See Staff Writer "Electricity theft in South Africa is out of control" June 1, 2015.

theft, South Africa lacks appropriate legislative framework.¹⁹³ The Electricity Act (No,4 of 2006) still falls short in several crucial areas.¹⁹⁴ There is no clear definition of electricity theft and although certain municipalities have passed by laws addressing these gaps, Eskom is not able to make use of these regulations for its own purposes.¹⁹⁵

However, the legislations such as section 2(1) (e) of the Prevention of Organised Crime Act (POCA)¹⁹⁶ which deals with the charges in question were related to the manipulation of the vending machines as alluded above, so as to result in theft of electricity, the reality reveals that the electricity theft is one of the challenges which delays the electricity to be accessibility and affordability as a result the electricity supplier is forced to increase the high tariffs rate. The reality reveals that the electricity theft is one of the challenges which delay the electricity to be accessible and as a result the electricity supplier is forced to increase the high tariffs rate.

3.7. Illegal Connections

Operations Khanyisa has been launched.¹⁹⁷ Apart from costing municipalities billions of rand each year, illegal electricity connections can be fatal, with almost daily reports of people, especially children, losing their lives as a result.¹⁹⁸ The escalating costs incurred by Eskom and local municipalities affects the stability of the national grid, could contribute to rising prices, slower economic growth as well as have a bad or negative impact on government's target of hundred per cent access to electricity by 2018.¹⁹⁹ Operation Khanyisa,²⁰⁰ Eskom plan that targets to end electricity theft, has said that such theft takes place, all over the place and is committed by people from all walks of life, including commercial people, farmers, and Eskom personnel's.²⁰¹

¹⁹³ See Ismail A "Exclusive 6: reasons why Eskom is load shedding" Fin 24, media report, 14 November 2014

¹⁹⁴ See, Landile C "Power up against electricity theft" IMIESA, February 2011, p63.

¹⁹⁵ See Department Of Energy 2015 (DOP)

¹⁹⁶ Act 121 of 1998.

¹⁹⁷ See Yelland C "New concerns on the state of the electricity supply industry in South Africa" Articles: Energize 6, EE Publisher, August 16th, 2009, page 5- 6.

¹⁹⁸ Department of Minerals and Energy.

¹⁹⁹ See Yelland C "New concerns on the state of the electricity supply industry in South Africa" Articles: Energize 6, EE Publisher, August 16th, 2009, page 5- 6.

²⁰⁰ See Department of Energy 2015 (DOP).

²⁰¹ See Vermeulen J "This is how people steal electricity in South Africa" Mybroadband, 14 January 2015.

Further it is also indicated that some Eskom technicians are involved in illegal connection to do extra money for them.²⁰² The other side of the challenge is that a number of Eskom illegal connections are dangerous and do not fulfil with the regulations and Eskom technicians, it becomes very difficult for one to report these connection, cannot tell the difference between.²⁰³ This is how far previously respected Eskom has degenerated. Our electricity supply future is bleak indeed.

3.8. Meter tampering

The electricity breaching is another problem facing Eskom. This is an electricity theft which electricity users continue to do in order to avoid paying electricity.²⁰⁴ This also known as meter tampering. This occurs in our communities all over the country. By meter tampering simple means that breaching of electricity so that, they cannot pay anything. In other words they will use electricity free of charge.²⁰⁵ This is against the municipal by-laws.²⁰⁶

Notwithstanding the fact that penalties of such offences that, any one contravening with the provisions of the municipal by-laws shall be found guilty of a crime and will be accountable to pay a fine of not less than R2000.00 failure to pay an amount of less than R2000. 00 will be sentenced to jail for a period of less than 12 months.²⁰⁷

As with other forms of electricity theft, this happens in communities all over South Africa.²⁰⁸ However meter tampering is also a major issue to the electricity supply in South Africa. Eskom should impose hash laws or enforce laws that will make any

²⁰²Department of Energy 2015 (DOP)

²⁰³ Department of Energy 2015 (DOP)

²⁰⁴ See, Luksich, N and Lehferna A, “South East African Climate Consortium Student Forum” Rhodes University, 2012, paper, p 4.

²⁰⁵ See *Ibid.*

²⁰⁶ See Luksich, N and Lehferna A, “South East African Climate Consortium Student Forum” Rhodes University, 2012, paper, p 4.

²⁰⁷ See *Minnaar N.O. and Others v Ekurhuleni Metropolitan Municipality* (10716/2013) [2015] ZAGPPHC 342 (22 May 2015), para 15. See also Council Resolution: MI195/2001 dated 29 November 2001 and CC71/2002 dated 26th of March 2002; date of commencement, 24th of April 2002.

²⁰⁸ See Luksich, N and Lehferna A, “South East African Climate Consortium Student Forum” Rhodes University, 2012, paper, p 4.

person who is involved in any illegal meter tampering to be sentenced for a period of ten years or more.

3.9. Poor Strategic plan

The Eskom one of the strategic plans is intended to provides electricity in order to develop economic growth and promote the quality standard of living in South Africa and eradicate poverty by installing electricity to the destitute.²⁰⁹ However, the reality reveals that electricity supplier failed to offer electricity in an effectual and supportable way, comprising its generation, transmission, and delivery and trades, as result the destitute are burdened with electricity high tariffs rate.²¹⁰

The poor strategic plan also had a huge impact in completing some of the power stations at record time, instead the process of completing power stations such as Medupi were delayed, thus negatively impacting on electricity accessibility. Further, Eskom failed to come with a time frame within which Medupi and Ingula power stations will be completely finished, if there was any target the country will not facing the electricity crisis as we speak.

3.10. Financial management constraints

“Eskom does have financial issues. According to Eskom spokesman Phasiwe “It is true that we are having financial crunch and we are currently in discussion with government to get us out of this financial difficulty,”²¹¹ “Last year we indicated that we need R50 billion in terms of the work we are doing for operational issues.”²¹² The state committed to assist in this issue by funding Eskom with R20billion which will support the operational problems; however that money was not enough.²¹³

Again, Eskom was trying to weigh some options to recruited more investors to assist in financing in the projects to complete to build the power stations namely Medupi,

²⁰⁹ See Mandate, Vision, Mission (accessed at http://www.eskom.co.za/OurCompany/CompanyInformation/Pages/Business_Vision.aspx, retrieved 03 May 2016 at 19 h11PM.)

²¹⁰ See Luksich, N and Lehferna A, “South East African Climate Consortium Student Forum” Rhodes University, 2012, paper, p 4.

²¹¹ See Pather R “Brian Molefe resigns from Eskom” Mail & Guardian 11 Nov 2016.

²¹² See Luksich, N and Lehferna A, “South East African Climate Consortium Student Forum” Rhodes University, 2012, paper, p 4.

²¹³This is the Policy of the government which was crafted in 1994.

Ingula and Kusile. In addition, lack of financial strength also played a significant role to its poor production capacity; Eskom's equilibrium sheets have not been in decent shape, which mixes the utility's incapability to provide the needed electricity. Lack of finances is the cause for lack of access to electricity.

3.11. Non-competitive electricity supplier

Lack of competitive electricity supplier, on the other hand gives Eskom more power to suggest electricity increment to National Electricity Regulator South Africa (NERSA). Department of Energy needs to invite more electricity supplier to bid for electricity at reasonable price. More electricity supplier competition is needed in order to compete with Eskom. The destitute will select, which suits them. This will stop Eskom to be monopoly; therefore electricity will be accessible and affordable to the penurious.

3.12. Municipality's debts

According to Acting Chief Executive of Eskom Zethembe Khoza ,“failure to pay for electricity weakens Eskom's constitutional duty to generate and supply electricity to metropolises, cities countrywide on a monetarily maintainable basis”.²¹⁴ “ Due to this conditions, Eskom then decided to use its right according to the provisions of the Electricity Regulation Act 4 of 2006 and the supply arrangement with municipalities, which permitted us to disconnect the supply of electricity to non-payment municipalities”.²¹⁵

In addition, Eskom announced its purposes to cut electricity supply to non-payment municipalities in South Africa as the beset power usefulness pursues to instigate the procedure to cover the money that owed by the municipalities.²¹⁶ In an announcement, Eskom said it had started with the plan by alert all stakeholders “who are likely to be

²¹⁴ Eskom moves to leave 20 Municipalities in the Dark, eNCA, 10 April 2015.

²¹⁵ This is the Policy of the government which was crafted in 1994.

²¹⁶ This is the Policy of the government which was crafted in 1994.

substantially and unfavourably pretentious” of its purposes to cut electricity commencing from 5 June 2015.²¹⁷

²¹⁸ Due to non- payment of the electricity by the municipalities is the reasons communities are not enjoy the benefits of the electricity usage. Also, Eskom announced that it recognized that the stoppage of electricity supply “might be the reason the destitute and consumers are burdened with high electricity tariffs rate and may harmfully disturb the delivery of other services, however, customer stoppage is always the latter alternative to be done”. The highest 20 non-payment municipalities are presently indebted to Eskom to the total of R3.68bn.²¹⁹ As a result, the Eskom is forced to increase the electricity tariffs due to the failure by the municipalities to pay their debts.

3.13. Lack of power stations

The electricity users in South Africa have to be familiar with the shortages of power until Eskom can make another alternative to produce sufficient electricity to meet demand.²²⁰ For creation of Medupi power station was seems to be the answers for the country but currently Medupi is not yet completed or power station aimed to change this crisis.²²¹ However, finishing point is nowhere in prospect. This is notwithstanding a main landmark attained by Medupi in March 2015, which saw the organization of one of its units into the nationwide grid.²²²

The main target of Eskom was to complete Medupi Power Station within a period of four years, however this was not the case because currently its over seven years without completion, only one unit has been completed with only 794 MW capacity.²²³ The delays by Eskom to complete to build its plants, also plays a major role for

²¹⁷This is the Policy of the government which was crafted in 1994.

²¹⁸ See Ismail A “Exclusive 6: reasons why Eskom is load shedding” Fin 24, media report, 14 November 2014.

²¹⁹ See Ismail A “Exclusive 6: reasons why Eskom is load shedding” Fin 24, media report, 14 November 2014

²²⁰ See The State of electricity in South Africa (accessed at <http://www.politicsweb.co.za/news-and-analysis/the-state-of-electricity-in-south-africa>, retrieved 11 May 2016 at 18: 42pm.)

²²¹ See Phaahla E “The state of electricity in South Africa, Helen” Suzan. Foundation, 05 August 2015.

²²² See The State of electricity in South Africa (accessed at <http://www.politicsweb.co.za/news-and-analysis/the-state-of-electricity-in-south-africa>, retrieved 11 May 2016 at 18: 42pm.)

²²³ See The State of electricity in South Africa (accessed at <http://www.politicsweb.co.za/news-and-analysis/the-state-of-electricity-in-south-africa>, retrieved 11 May 2016 at 18: 42pm.)

accessibility and affordability of the electricity by the destitute. For example, it's been a while since Medupi power station is under construction, even now is not yet completed, therefore the electricity demand outstripped the supplier.

3.14. Lack of skills development

Reality reveals that, South Africa depends on other country when it comes to engineers. The country imports skills development from countries such as China, India, Russia and Canada particularly for energy law. This is evident through the majority of Chinas engineers in Medupi Power Station. This approach indicates that, South Africa does not put more effort to promote skills equivalent to China. The department of energy must recruit more students to further their studies in energy. Furthermore, DOE need to encourage students to study artisan and electrical engineering. South Africa needs to take radical change by sending more students to acquire scarce skills from other countries particularly in energy.

This must be done through the bilateral agreement between the countries. First priority must be given to electricians due to lack of skills and not enough availability of skills.²²⁴ Notwithstanding the fact that, South Africa has good institutions which producing engineers, such as Technical Vocational Education and Training (TVET) Colleges and Universities, but they are not doing enough to compete with other engineers especially at power station level. If South Africa can prioritise energy programmes to a level where we can produce our own power stations without depending from other countries, the issue of imported skills will come to an end.

3.15. Solutions to the pitfalls in providing electricity in South Africa

- Eskom should employ people with relevant qualifications and experience in managerial positions.
- Further, it must recruit more foreign investors to finance projects such as Medupi, Ingula and Kusile power stations.

²²⁴ See Load Shedding Frequency Asked Questions (accessed at [http:// www. Eskom .co.za/ documents/ Load Shedding FAQ. pdf](http://www Eskom .co.za/ documents/ Load Shedding FAQ. pdf),pg 1, retrieved 01 May 2016 at 12: 13 PM.)

- Eskom must have a maximum units level which can be given to each Municipality, if any municipal can reach that maximum without paying Eskom is than that Municipal will automatically experience electricity shut down.
- Government must intervene to assist in hiring more securities personnel's to prevent electricity theft.
- Invest more in skills development programs particularly in energy security by sending students to acquire more skills from other countries.
- Introducing Solar energy will assist a lot, for example if Eskom can be able to electrified all households including, the remote areas with solar energy, during day it will generates electricity so that can be used during the peak hours.
- Solar energy is free and never gets exhausted.

3.16. Conclusion

The availability and affordability of electricity in South Africa is not only impeded by high tariffs but also electricity theft, load-shedding lack of finance management and lack of power stations.²²⁵ The supply of Electricity can be improved only if the government and private sector co-operate together to increase the capacity and meet the demand of the households. Further, electricity can be sustainable and cost-effective if there is more than one supplier hence without power monopoly.

²²⁵ See Department of Energy 2015 (DOP).

CHAPTER FOUR: A COMPERATIVE STUDY

4.1. Introduction

This chapter deals with comparative analysis between South Africa, Canada and China. Moreover, it reflects on how the three countries sustain the electricity and minimise the high tariffs rate in order to ensure that electricity is accessible and affordable. Furthermore, it focuses on the legislative policies, frameworks and lesson that South Africa can learn from these countries, and how electricity is accessible to the destitute in those countries.²²⁶

4.2. Electricity in Canada

Canada is one of the best country in the world in terms of producing electricity and it also ranked number five biggest in the Worldwide as the biggest electricity producer, creating about 6% of worldwide energy supplies.²²⁷ In terms of section 92A.(2) of the Canadian Constitution of 1982 ²²⁸, Constitution states that, “in each province, the council may make laws in relation to the local electricity produced from one province to another part province of Canada of the primary production from non-renewable natural resources and forestry resources in the province and the creation from services in the province for the generation of electrical energy, but such laws may not approve or provide for inequality in prices or in supplies exported to another part of Canada”.²²⁹

The government of Canada prioritises the electricity price to be at the level where everyone can access and afford including the destitute. Pursuant to Canadian constitution, the Economic Action Plan was established which targeted the transfer and promotion of skills to the Canadian electricians in order to capacitate them and

²²⁶ See [Www.Mcser.org](http://www.Mcser.org).

²²⁷ See Energy Policy of Canada (accessed at https://en.wikipedia.org/wiki/Energy_policy_of_Canada, retrieved 12 June 2016 at 17h13PM.)

²²⁸ Canadian Constitution of 1982 Section 92A (2).

²²⁹ See <http://laws-lois.justice.gc.ca/eng/const/page-4.html> (Accessed on the 12 June 2016 at 13h08 PM). See also, electricitygovernance.wri.org.

enhance their electrical capacity.²³⁰ Moreover, it was centred on the skills development and putting electricity at the forefront of the Canadian people's needs.²³¹

4.2.1. Generation Capacity in Canada

Canadian government relies much on hydroelectricity, in other words the main source of electricity in Canada is from hydroelectricity, it generates about 55 per cent of total capacity.²³² Further, the rest are from coal, natural gas, and nuclear plants. In addition Canadian government also d relies on the following as a source of energy, wind, solar, and biomass although contribute to a small volume.²³³ The Sea Provinces depend on a mixture of hydro, various fossil fuels, nuclear, and non-hydro renewable resources and diesel-fuelled.²³⁴ The Canadian energy security system is more advanced; it is in line with the new skill, macroeconomics, groundwork, and government strategy and curriculums constantly effect on how energy is produced, transferred, and used up in Canada.²³⁵

Canadian government allocated its tasks when it comes to electricity supplier, and the natural resource management amongst the central government and ten distinguish provincial governments.²³⁶ Whereas the central government is instructed to supervise comprehensive ecological, cross jurisdictional and nuclear issues, the provinces have power over the improvement and operation of electricity generation, transmission and distribution.²³⁷ In this situation, every province has occupied its specific method of electricity strategy, subsequent in an extensive range of possession and

²³⁰ See Raitt L Canadian Electrical Association Labour Relations Symposium accessed at [http://www .labour .gc .ca/eng/ resources / news/speeches/raittl/2013/130325.shtmlee](http://www.labour.gc.ca/eng/resources/news/speeches/raittl/2013/130325.shtmlee), retrieved 22 June 2016 at 20:14PM.

²³¹ See Rait L Canadian Electrical Association Labour Relations Symposium (accessed at <http://www .labour .gc .ca/eng/ resources / news/speeches/raittl/2013/130325.shtmlee>)

²³² See Raitt, L, Canadian Electrical Association Labour Relations Symposium accessed at <http://www .labour .gc .ca/eng/ resources / news/speeches/raittl/2013/130325.shtmlee>

²³³ See Raitt, L, Canadian Electrical Association Labour Relations Symposium accessed at <http://www .labour .gc .ca/eng/ resources / news/speeches/raittl/2013/130325.shtmlee>

²³⁴ See Raitt, L, Canadian Electrical Association Labour Relations Symposium accessed at <http://www .labour .gc .ca/eng/ resources / news/speeches/raittl/2013/130325.shtmlee>.

²³⁵See National Energy Boards Energy Future Series, Canada's Energy Future 2016, Energy Supply and Demand Projections to 2040 (EF 2016).

²³⁶ See International Electricity Summit – April 2015, Okinawa, Japan.

²³⁷See Canadian Electricity Association International Electricity Summit, Background Brief – Canada, Okinawa, Japan – April 2015, Okinawa, page 2.

manufacturing structures. As a result, each province has a mandate to control and supply electricity system in a sufficient.

4.2.2. Canadian Electricity Association (CEA)

The Canadian Electricity Association (CEA) is aimed at representative's the voice of the Canadian electricity industry from province to province.²³⁸ CEA associates are dedicated in providing safe, consistent, maintainable, and reasonable electricity to Canadians at place of work or work place and at home. Canada is rich with plentiful and various natural resources. The Canadian electricity supply depends more largely on hydro, nuclear and wind.²³⁹ Every area has established its particular electricity system centred on the impression of electricity "self-sufficiency" according to the sole natural resources within their own terrestrial borders.²⁴⁰ The concept of self-sufficiency must be applauded in the sense that it makes electricity access more manageable as it makes it easier for each province to provide electricity to its population.

4.3. Electricity in China

China Resources Holding Power Company (CRHP)²⁴¹ is the electricity supplier in China like Eskom in South Africa. Its main duty is to sustain and control of power stations and for coal mines all over the parts of China.²⁴² Between 1988 and 1997 the government made an intensive determination to encourage local electrification.²⁴³ The owner of energy companies, which is known as O Estado, imposed a variety of policies

²³⁸ See Canadian Electricity Association International Electricity Summit, Background Brief – Canada, Okinawa, Japan – April 2015, Okinawa, p2.

²³⁹ See Statistics Canada Gross domestic product (GDP) at basic prices by North American Industry Classification System (NAICS), by province and territories accessed at [http:// www. Electricity .ca/ media/ Presentations/ International ElectricitySummit2015.pdf](http://www.Electricity.ca/media/Presentations/InternationalElectricitySummit2015.pdf), retrieved 12 June 2016 at 15:48 PM.

²⁴⁰ See Canadian Electricity Association International Electricity Summit, Background Brief – Canada, Okinawa, Japan – April 2015, Okinawa, p2.

²⁴¹ This is an independent company which supplies electricity in China, aimed at providing electricity to the whole Provinces of China.

It further ensures that people who stay in rural areas to have access to electricity at the reasonable prices. Moreover, the main focus is on the destitute of the Republic of People of China.

²⁴² See, Pereira M G "Evaluation of the Impact of access to electricity: A Comparative analysis of South Africa, China, India and Brazil, "Renewable and Sustainable Energy Reviews, 2011.

²⁴³ See Canadian Electricity Association International Electricity Summit, Background Brief – Canada, Okinawa, Japan – April 2015, Okinawa, p2.

intended to promote disadvantage area through access to electricity.²⁴⁴ For example tasks comprising persons called: serving Agriculture – serving Farmers; helping rural villages to develop the economic, this is done through the establishment of the project aimed at minimise and eradicate poverty at the same time cultivate rural and urban household's electrification.²⁴⁵

In addition, other current programs comprise the Brightness Program and Developing Rural Power through Wind,²⁴⁶ together introduced in 1996.²⁴⁷ However, China like other countries has its own challenges when it comes to electricity supply. One of the most challenging issues realised as a result of the state of China in meeting the demand for electricity inaccessible houses comprises: outmoded apparatus and anxieties around protection in relation to supply; a badly intended and created system, with an ineffective outline, lack of an eminence of apparatus and procedures and important sufferers; disjointed administration of the system and encounters of benefits amongst the mediators; abnormal of electricity prices for final consumers, interim as a deterrent to ingesting.²⁴⁸

The Brightness Program was mandated to develop the socio economic rights and surrounding environment of people situated inaccessible zones by means of electricity supply from dispersed bases.²⁴⁹ The aim was to provide about 23 million persons using solar and wind power, with an ordinary capacity of 100 W per capita.²⁵⁰ The main aim of the project was to target the destitute in order to reduce poverty, including investments more on electricity supply to the disadvantage population of China. The

²⁴⁴ The State of electricity in South Africa (accessed at <http://www.politicsweb.co.za/news-and-analysis/the-state-of-electricity-in-south-africa>, retrieved 11 May 2016 at 18: 42pm.)

²⁴⁵ See <http://laws-lois.justice.gc.ca/eng/const/page-4.html> (Accessed on the 12 June 2016 at 13h08 PM). See also, electricitygovernance.wri.org.

²⁴⁶ This are programmes which aimed at promoting accessibility and affordability of electricity in rural areas and living Conditions for the people of China.

²⁴⁷ See Luksich, N and Lehferna A, "South East African Climate Consortium Student Forum" Rhodes University, 2012, paper, p 4.

²⁴⁸ See Pan J, Meng L, Xiangyang W, Lishuang W, Elias R, Victor DG, et al. *Rural elec-trification in China 1950–2004: historical processes and key driving forces*. Program on Energy and Sustainable Development Stanford University, CA, USA; 2006.

²⁴⁹ See Ismail A "Exclusive 6: reasons why Eskom is load shedding" Fin 24, media report, 14 November 2014

²⁵⁰ See Ismail A "Exclusive 6: reasons why Eskom is load shedding" Fin 24, media report, 14 November 2014

State Development Planning Commission (SDPC)²⁵¹ program was facilitated by the State Development Planning Commission (SDPC) around 1996 and 1999.²⁵²

China puts more investment in electricity programmes by recruiting more companies from foreign countries such as Germany *Deutsche Gesellschaft für Technische Zusammenarbeit* (GTZ),²⁵³ which provided finance for domestic programmes related to the electricity, this including of machinists staff so as to enhance Chinese electricity capacity.²⁵⁴ The government of China put the electricity as a basic need or in forefront to the destitute and also to minimise the electricity high tariffs by introducing initiative projects such as Developing Rural Power which targeted rural communities of China to each household to be electrified. Thus one of the reasons China is in the top five countries which are more advanced with electricity, electricity equipment, and electricity skills.

In 1991, a “high-in and high-out” policy²⁵⁵ was established which permits electricity tariffs to vary according to petroleum costs and other manufacture costs.²⁵⁶ Infrequently, the Chinese government has to decrease the pace of fee restructurings for anxiety of motivating inflation.²⁵⁷ State-owned power enterprises have disputed that they are not allowable to increase tariffs to reflect the escalations in fuel costs.²⁵⁸ In order to make appropriate regulatory framework controlling external investment in the power sector, the Electricity Law approves the power of the State Development Planning Commission (SDPC) in the determination of precise tariffs.²⁵⁹

Further, the government established Built Operate Transfer (BOT) projects in order to attract the investor’s to invest more on the energy especially by building more electricity power plants. However, most of the foreign investors were not interested by investing in China due to lower electricity tariffs. The main objectives of BOT was to

²⁵¹ This is commission that is elected in China to be responsible in ensuring that electricity are accessible and affordable to the rural villages.

²⁵² See <http://laws-lois.justice.gc.ca/eng/const/page-4.html> (Accessed on the 12 June 2016 at 13h08 PM). See also, electricitygovernance.wri.org.

²⁵³ *Deutsche Gesellschaft für Technische Zusammenarbeit* (GTZ) this is the name of the company from Germany provided finance for local training of operators and technical staff so as to enhance Chinese electricity capacity.

²⁵⁴ Department of Energy 2015.

²⁵⁵ This is a government policy that was introduced in China aimed at reducing the tariffs rate.

²⁵⁶ Department of Energy 2015 (DOP).

²⁵⁷ Chapter 4 of the National Development Plan Vision 2030, p 147.

²⁵⁸ Department of Energy 2015 (DOP).

²⁵⁹ Department of Energy 2015 (DOP).

draw external investment to give funding power schemes in economically fewer advanced provinces of China, especially focused more on the destitute of China to accessibility and affordability of the electricity at reasonable price.²⁶⁰

The Accelerated Growth Programme was also introduced which was aimed at accessibility and affordability of electricity to the impoverished at low electricity tariffs. Moreover, focused on improve of living conditions of the destitute to afford the electricity. Baseline Survey Project was introduced which was aimed at providing households with permanent access to electricity. The energy was supplied by means of connected methods of photovoltaic panels and diesel generators.²⁶¹ Electricity was allocated according to the districts by means of mini-networks, with the intention to target those who stay in remote areas.²⁶²

4.4. China as a Model of South Africa on electricity high tariffs

The Chinese government puts the demand of the destitute who located at the remote areas as the first priorities, by supplying electricity through mini- networks. Thorough electricity supply methods such as photovoltaic panels, diesel generators, hybrid, wind and solar system China residents are therefore able to access the electricity despite their economic status. Moreover, this indicates that, China government puts the distribution of the electricity towards the destitute as forefront priority.

Furthermore, the mini-networks which aim to provide the electricity to remote areas to have access to the electricity at low costs. As the result the disadvantage population of china can have access and afford electricity at the equitable price. Furthermore, in 2016, Nersa approved 9.4 per cent electricity hikes, the destitute will be more burdened by this latest development.²⁶³

²⁶⁰ See Raitt L, Canadian Electrical Association Labour Relations Symposium accessed at [http://www .labour .gc .ca/eng/ resources / news/speeches/raittl/2013/130325.shtml](http://www.labour.gc.ca/eng/resources/news/speeches/raittl/2013/130325.shtml) on the 14 July 2017 at 17h 00 pm.

²⁶¹ See Canadian Electricity Association International Electricity Summit, Background Brief – Canada, Okinawa, Japan – April 2015, Okinawa, p2.

²⁶² See footnote 228 (page 43 above)

²⁶³ See Macdonald L “Judge dismissed Outa’s court bid to halt Eskom Price hike” Fin 24, 31 March 2016.

4.5. Conclusion

Canada and china put more investment in electricity to ensure that there is more supply to the households. There was introduction of mini-networks which aims at making electricity affordable and accessible to the destitute. These countries focus largely on skills development in order to ensure that their electricians are more capacitated. This indicates clearly that they put electricity at the forefront of their needs and ensure that electricity is accessible to all.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

This mini-dissertation had revealed that legislation on electricity encapsulate that electricity must be affordable and accessible. However electricity accessibility and affordability are not realised on the basis of high electricity tariffs. The destitute find it very difficult to access and afford at least a minimum of electricity household usage. Moreover the poor households are burdened with high costs of electricity. This high tariff hampers the accessibility and affordability of electricity as a human basic need.

Given the fact that South African economic status is in crisis, the destitute will suffer more due to perpetual electricity increment the accessibility and affordability of electricity as legislated in various legislation aimed at meeting the needs of the destitute households and improving their standard of living. Moreover, the destitute are continuously unable to afford the minimum amount of electricity due to high tariffs. High tariffs hamper the enjoyment and usage of the electricity as proclaimed and contemplated in distinct legislations and policies. Therefore, this calls for urgent legislative intervention in terms of the reduction of the high tariffs in realization of the legislative mandate to made electricity reachable and inexpensive to all.

The availability and affordability of electricity in South Africa is not only impeded by high tariffs but also electricity theft, load-shedding lack of finance management and lack of power stations. The supply of Electricity can be improved only if the government and private sector co-operate together to increase the capacity and meet the demand of the households. Further, electricity can be sustainable and cost-effective if there is more than one supplier hence without power monopoly.

This study revealed that, it is very difficult for the destitute to afford and access minimum electricity per household due to financial predicament. Free Basic Electricity (FBE)²⁶⁴ is the quantity of electricity, which is estimated ample to offer required electricity facilities to a deprived family.²⁶⁵ However, the destitute still suffering more

²⁶⁴ This is a government Policy which becomes effective in 2003. It was aimed at providing Free Basic Electricity at the minimum of 50 kWh per households.

²⁶⁵See Macdonald L “Judge dismissed Outa’s court bid to halt Eskom Price hike” Fin 24, 31 March 2016.

due to the electricity tariffs. The free basic electricity is not enough to do some other domestic work. In other words, free basic electricity limits the needy to do other works. This quantity of energy will be adequate to be used for few things, in other words it means that the electricity amount is limiting the destitute to use electricity with confident and pride.²⁶⁶ However, this electricity will be used for basic things such as cooking, required heating water, ironing and lighting.²⁶⁷ Access to basic energy and other basic resources have an important part to play towards improving the wellbeing of customers. The government's purpose is to backing the penurious by allowing the legislation of free basic services.²⁶⁸

Canada and china put more investment in electricity to ensure that there is more supply to the households. There was introduction of mini-networks which aims at making electricity affordable and accessible to the destitute. These countries focus largely on skills development in order to ensure that their electricians are more capacitated. This indicates clearly that they put electricity at the forefront of their needs and ensure that electricity is accessible to all.

South African electricity system must learn more from Canada and China on the basis that they put more investments on electricity, training on their electricians and enactment of the programmes and projects aimed reduction of high electricity hikes thus encouraging accessibility and affordability of electricity. In this way they increase their generating capacity and skills development of the electricians to ensure that there is too much productivity of electricity. Therefore, these projects and programmes are readily implemented to ensure that they reach their targeted goals in terms of making electricity accessible.

²⁶⁶ www.energy.gov.za.

²⁶⁷ See Macdonald L “Judge dismissed Outa’s court bid to halt Eskom Price hike” Fin 24, 31 March 2016.

²⁶⁸ See Macdonald L “Judge dismissed Outa’s court bid to halt Eskom Price hike” Fin 24, 31 March 2016.

5.2. Recommendations

Therefore this study makes the following recommendations:

- The policies and legislations that regulating electricity in South Africa should be amended to cater the destitute and the electricity user at reasonable cost.
- NERSA must enact regulation that will prescribe reduced amount of electricity which will enable the destitute to afford electricity.
- There must be rapid acceleration of renewable energy to increase electricity supply.
- The government must recruit more investors to instigate Eskom in power supply, thus this will lead to high tariffs reduction and avoid or minimise high demand of electricity outstripping supply.
- The state must provide sufficient budget on electricity to ensure that the supply meet the demand.
- First priority must be given to energy security due to scarce level of skills and insufficient obtainability of skills.²⁶⁹
- There must be radical deployment of investment on electricity generation.
- The Department of energy must increase energy supply technologies to ensure that demand is met.
- Adequate inductions or/and training should be provided to the appointed members of the Eskom to ensure that they fully understand their duties. In addition, their appointment should not be based on political affiliation or powers but rather on the level of understanding and qualifications. If members have a certain level of literacy it would make induction and training more effective and they will also be productive.

²⁶⁹ See Department of Energy 2015.

- In otherwise, the government must invest more bidders for the electricity supplier. The deployment of renewable energy supply in South Africa will contribute to more sustainable energy supply in the country and the demand would not outstrip the supply as there would be various alternatives for the energy supply.
- To prevent load shedding, municipalities should be able to remotely switch off or reduce the supply to appliances that consume a lot of electricity during times when there is a shortage on the grid.
- To prevent meter tempering, the municipality by laws need to enforced to those who practicing this illegal act, for example whichever person violating or failing to obey any municipal By-laws shall be charged of crime, which is equivalent to an amount of not more than R2000 or sentenced for not 12 years imprisonment.²⁷⁰
- Further, use of other alternatives will also assist in ensuring that there is no concentration in a single source of energy and this will instigate meet the energy demand and avoid load-shedding.
- Moreover, the deployment of renewable energy to the energy mix will assist in cultivating safety of electricity supply in South Africa and decrease the environmental effect of electricity generation, which is presently controlled by coal-fired power plants.²⁷¹ Moreover, renewable energy will add more value to the change of energy resources by the enactment of a correctly managed programme of action that will offer adequate inducement for the maintainable improvement of the renewable energy-focused in businesses.²⁷² By the virtue of the above solutions the electricity high tariffs will be reduced and the destitute will be enabling to accessibility and affordability of the electricity.

²⁷⁰ See Newbery D and Eberhard A “South African Network Infrastructure Review Electricity,” 2008, Pretoria p53, Paper, National Treasury and Development of Public Enterprise.

²⁷¹ Davidson O, Winkler H, Kenny A, Energy Policies for Sustainable development in South Africa Options for the future, Energy Reserch Centre University of Cape Town April 2006.

²⁷² Department of Minerals and Energy, White Paper on the Promotion of Renewable Energy and Clean Energy Development : Part one – Promotion of Renewable Energy August, 2002.

- The legislature must impose harsh penalties to the perpetrators of electricity theft in order to ensure that they are deterred from stealing.
- Recruitment of private companies to instigate Eskom in terms of energy supply and investments.
- Eskom must enhance their skills development in order to ensure that electricians are capacitated.
- South Africa can deploy and introduce waste energy as an alternative to reduce the electricity crisis.
- Eskom must introduce solar electricity system to each every household, which will generate electricity during the day and in the evening will automatically be ready to supply to all households.

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