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The perceived **leadership attributes** of l**eaders** in Namibian regional **electricity distribution utilities**

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A research proposal submitted to the Faculty of Commerce, Law, and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in Energy Leadership

Johannesburg, 2022

ABSTRACT

This research was a qualitative study on the perceptions of leaders in Namibian Regional Electricity Distribution utilities. The study aimed to address the knowledge gap in leadership attributes of regional electricity distribution utility leaders, required for the effective supply and distribution of electricity services in Namibia.

Regional Electricity Distribution utilities in Namibia are institutions responsible for the supply and distribution of electricity services. A developing country, Namibia has a low electrification rate, however, there is a growing demand for reliable and affordable electricity services. The increasing penetration of renewable energy technologies in Namibia further subjects the utilities to additional challenges.

Regional Electricity Distribution utility leaders need to respond effectively to the changing needs of electricity consumers and suppliers, to ensure that utilities continue to provide and effectively deliver the required services. The success of utilities in delivering quality services highly depends on the leadership of such organisations. Hence, understanding the leadership attributes and leadership styles of Namibia's regional utility leaders is therefore essential for electricity stakeholders including policymakers, regulators, consumers and suppliers.

In undertaking this study, an interpretive approach to qualitative data collected from the interview participants by making use of guided interviews was adopted. The interviews were undertaken amongst selected Executives, Chief Executive Officers and Board Members of the REDs. The findings were interpreted using thematic analysis, and the results from emerging themes are presented.

The research found that leadership has many definitions and there are many leadership styles. However, each individual has unique personal attributes, and this informs their leadership styles in a particular situation and vice versa. Similarly, the study founds multiple leadership challenges facing utility leaders, including political misunderstandings, and leadership buy-in. Utility leaders need consistent engagement with customers and suppliers to answer their changing needs. And consequently, leading to their utilities delivering effective supply and

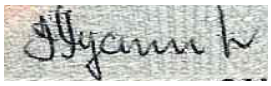
distribution services. The study further found the need for distribution utility leaders to consistently monitor the level of service being delivered, the level of employee engagements and that they should adapt their leadership styles to fit such situations.

The study recommends policymakers to ensure that, the operations of the REDs are harmonized, and that consumers and suppliers have similar experiences regardless of the RED. The study further recommends investments in utility leaders' training and development. In addition, utility leaders must continue to invest in their distribution networks and adopt new technologies. And finally, the Leaders must also create platforms to exchange knowledge and experiences.

KEYWORDS – Leadership, leadership attributes, electricity distribution utilities, service delivery, Namibia, prosumers

DECLARATION

I, Jason Fiindje Iyambo, declare that this research proposal is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in Energy Leadership at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Name: Jason Iyambo Signature: 

Signed at ……Ondangwa……

On the …16…….. day of …December…… 2022

DEDICATION

I dedicate this study to all of mankind, particularly the mothers and children with no access to electricity, especially during the time of extreme difficulties presented by the COVID-19, pandemic. A special dedication is also made to my son Pendukeni Indongo Amupanda, for being tolerant as I focused my energy on this research work.

ACKNOWLEDGEMENTS

Dear God, without your grace this work would not have been possible, I thank you for your protection and strength in seeing through this work.

To my family and friends, thank you for allowing me time to focus on my studies even when you needed me the most. I thank you for the encouragement, support and invaluable advice.

To my classmates and lectures, I say “Ubuntu” - I am because of you!

To my supervisor, I express my sincere thanks and gratitude for your guidance, encouragement and moral support from the very beginning to the last day, thank you! You were always there whenever I reached out to you, continue to do it for others.

To my employer, colleagues, and interview participants, I wholeheartedly thank you for understanding me and putting up with my requests in completing this research work.

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LIST OF ACRONYMS

ECB: Electricity Control Board

IPP: Independent Power Producer

kWh: Kilowatt-hour

MW: megawatt

MME: Ministry of Mines and Energy

Nampower: Namibia Power Corporation

PV: Photovoltaics

RED: Regional Electricity Distributor

RETs: Renewable Energy Technologies

REFIT: Renewable Energy Feed-in Tariff

CHAPTER 1. INTRODUCTION

1.1 Purpose of the study

This qualitative study will explore the perceived leadership attributes of leaders in Namibian electricity distribution utilities.

1.2 Context of the study

Energy is central to the prosperity of every economy (Von Oertzen, 2012). Electricity fuels the activities required to improve human capital, industrialisation, and development in general. As such, social and economic development can better be achieved with reliable, sustainable, quality, and affordable electricity services.

Electricity services play a leading role in ensuring access to communication services, the provision of internet services, unlocking entrepreneurial and business activities and providing the means of production.

The need for reliable and quality electricity services can therefore not be overemphasized. Unreliable electricity has a significant impact on the cost of doing business. Both businesses and households rely on electronic devices to perform a wide range of basic and advanced tasks (Jacobs, 2005). Unplanned outages and power interruptions must therefore be managed effectively to ensure minimum disruption of the electricity services, this includes adopting new ways of doing things and getting away from legacy utilities' operational practices.

Service delivery in the electricity value chain rests on the relationship between energy suppliers, electricity consumers, and the performance of the distribution utility company. Therefore, in the quest to ensure reliable energy services, utilities must re-invent themselves to ensure the satisfaction of multiple energy suppliers and electricity consumers with differing needs and expectations as well as levels of influence.

The success of utilities in navigating and venturing into new businesses to deliver quality services highly depends on the leadership of the organisation (Heyns, McCallaghan, & Newton, 2020). Similarly, “successful organisation change is dependent on effective leadership” (Gerstberger & Gromala, 2010, p. 46). The role of leadership in an organisation has further been cemented by Ocheni, Atakpa, and Nwankwo (2012, p. 2), stating that “leadership has to this end become so pivotal that both success and failure of any organisation are attributed to the leadership style of the person or body of persons that pilots the activities of that system”.

Leaders define what the future of an organisation should look like, aligns employees and management with that vision, and inspire them to make it happen despite the challenges (Gerstberger & Gromala, 2010). Furthermore, leaders take charge and have the authority to make decisions, implement such decision, and has a social process of influence whereby the team or organization can do more to increase their ability in effecting change for their sustainability (Abbas & Asghar, 2010). A true leader dares to stand alone and make tough decisions as well as have the compassion to listen to the needs of others (Muteswa, 2016).

In the wake of challenges facing the distribution utilities globally and locally, Namibia distribution utilities need to play a leading role to address issues and respond to consumer behavioural changes, such as the shift to low carbon, low energy use products, and demand for reliable services (von Oertzen, 2019). Similarly, the drive to shift reliance from fossil fuels to renewable energy to decarbonise the industry requires visionary and responsive leadership. Distribution utility leaders need to effectively confront the challenges presented by new technologies, and adapt their business, to retain consumers and remain relevant (Castaneda, Franco, & Dyner, 2017).

The demand for effective electricity services has been exacerbated by the growing adoption of renewable energy technologies (RETs) as a result of the fall in cost for these products such as Solar Photovoltaics Wind, and Biomass products (von Oertzen, 2019).

Similarly, the implementation of RETs has impacted the way the grid is traditionally operated, whereby, while the energy used to be a one-directional flow of electricity, it has become a bi-directional flow of energy with multiple prosumers and storage facilities connected (Moncada, Tao, Valkering, Meinke-Hubeny, & Delarue, 2021; Riveros, Kubli, & Ulli-Beer, 2019). The management of the grid and operation of the power system, therefore, requires effective leadership to ensure that as distribution utility changes and adapts its business models, they become sustainable and avoid the utility death spiral phenomena. The utility death spiral refers to the continual practice of tariff increases to make up for lost revenues as consumers change their behaviour on how they use electricity (Hutchinson et al., 2017; Laws, Epps, Peterson, Laser, & Wanjiru, 2017). It also refers to consumer deflection from the grid to utilise RETs due to high and unreliable grid services and tariffs (Castaneda, Jimenez, Zapata, Franco, & Dyner, 2017; Laws et al., 2017).

In Namibia, the adoption of the Renewable Energy Feed-in Tariff (REFIT) program, as well as the promulgation of the net-metering policy and rules of 2016, and further cemented by the renewable energy policy of 2017, all give impetus to consumers to co-generate and produce power for own use and excess energy into the grid. On the other hand, new Independent Power Producers are now competing with the traditional monopolies such as Nampower, as optional suppliers of energy to distribution utilities albeit at cheaper prices. These practices and supply dynamics put utilities at grand risk, hence the need to adapt their energy service delivery practices to ensure the grid and the utilities remain relevant as stated by Hamwi, Lizarralde, and Legardeur (2021) which therefore requires agile leadership.

While much has been written on leadership and leadership styles and has become primary in the discussion of organisations as per Ocheni et al. (2012), it is of interest to understand the perceived leadership attributes required to effectively lead distribution utilities in Namibia. Leadership perceptions are how experiences are expressed and interpreted (Otara, 2011). The perception of leaders, managers, and employees assists in ensuring an effective climate and conducive working environment, similarly, they assist in the understanding of the

organisation's leader's behaviour (Lee, Martin, Thomas, Guillaume, & Maio, 2015; Otara, 2011).

Understanding the attributes of leaders will ensure utilities keep providing the required grid services and satisfy the provisions of suppliers and consumers as per the provision of customer service charters, despite the current transformation occurring in the industry. The transformation of utilities refers to the changes occurring in utilities, including the adoption of new technologies such as smart meters, and innovative approaches to managing and operating the distribution network (Bryant, Straker, & Wrigley, 2018).

Leaders need to respond effectively to changes in government policy, regulatory measures, industry practices, consumer attitudes and behavioural changes regarding energy use, technology adoption, talent management, and employee retention. In addition, leaders need to ensure the sustainability of their utilities by ensuring they explore cheap alternative energy, mitigate yearly annual tariff increases, manage their organisation effectively, and ensure reliable and quality service provision to the consumers in as to safeguard stakeholder value creation.

1.3 Research problem

The problem addressed in this research is the lack of knowledge of the leadership attributes for regional electricity distribution utility leaders, that are required for the effective supply and distribution of electricity services, with a focus on Namibia.

Multiple studies on leadership theory and organisational performance have been conducted. These studies identified leadership attributes based on theories such as the Great Man theory, the Trait theory, the Style and Behavioural theory, the Contingency theory, Situational leadership theory, as well as, transactional, servant, and transformational leadership theories (Greenleaf, 1970; Heyns et al., 2020; King, 1990; Siangchokyoo, Klinger, & Campion, 2020; Suharyanto & Lestari, 2020; Thompson & Glasø, 2018). This study responded to a gap in the leadership theoretical perspective that best fits a regional electricity distribution utility. The role of organisations leadership is to ensure service delivery is efficient

as well as, effectiveness in organisation performance. Electricity distribution utilities need to deliver services to customers and must achieve their goals to the satisfaction of their shareholders. The leadership attributes necessary for regional electricity distribution utilities such as in Namibia have not been explored. Hence, this study is aimed at understanding the attributes of utility leaders, specifically, their leadership styles.

The energy sector and electricity utilities in particular are facing multiple challenges as a result of technological advancement, consumer choices and conventional methods of utility management practices. These challenges according to Arifin (2019), include the fact that, most distribution network operator executives are aware of the threat presented by distributed renewable energy resources, which are disrupting traditional means of generating electricity, from a one way power flow to a bi-directional flow of electricity amongst other challenges. This implies that the utilities have to consider new techniques of managing power flow to ensure voltages are kept at appropriate standards and reliable services are maintained (Arifin, 2019; von Oertzen, 2018).

In recent times, considering South Africa in particular, power utilities have become a subject of the day, due to persistent power outages, poor service delivery, and ever-increasing tariffs (Heyns et al., 2020). As consumers become aware of their choices, their role in addressing the environmental factors, and their ability to produce own power for self-consumption and possibly income generation, the magnitude of challenges facing utilities, such as revenue assurance, network stability, and employee retention, need to be prioritised. Therefore overcoming these challenges requires sound and effective leadership to ensure business sustainability (Heyns et al., 2020).

Utility leaders are operating under volatile, uncertain, complex, and ambiguous environments (Hart, Pounds, LaShell, & Graham, 2009). Many challenges including regulation, environmental, political, social, and economic issues require unique leadership talent to be resolved comprehensively, for the benefit of greater society.

Although Namibia is yet to experience load shedding, the national utility still imports over 60% of its electricity needs from neighbouring countries, despite the abundance of renewable energy resources at its disposal (Nampower, 2019; von Oertzen, 2018). This put the security of the supply of electricity to ordinary Namibians at risk. In addition, technological advancement impacts electricity users in Namibia, hence the need to understand the Namibian utility leadership attributes required to respond to these changes.

Distribution utilities in Namibia are not just faced with the challenge of maintaining their current customer bases, but also need to find new sales, and create new revenues by expanding grid connections and finding new service areas to obtain additional revenues. The offering of new grid services requires new thinking, innovative approaches, nurturing of talent, and effective leadership (Arifin, 2019; Heyns et al., 2020).

Regional electricity distribution utilities are mandated to ensure the timely provision of electricity services, to both new and existing customers. In addition, they have to execute some of the government tasks towards the policy targets, such as the Harambee Prosperity Plan II, which is a targeted government implementation program for accelerating service delivery and ensuring inclusive economic growth for Namibia between 2016 to 2025 (Staff Reporter, 2021), National Development Plan five which is the fifth national development policy program (National Planning Commision, 2018) and vision 2030 of the Government Republic of Namibia which is a grand vision towards an industrialised Namibia (Reagan, 2012). All these initiatives support and contribute to the United Nations Sustainable Development goals initiatives, particularly goal seven which is a call for equitable access to electricity for all (Nalule, 2018).

While cognisant of the research work done on leadership in general, the setting of this research is about establishing attributes for effective leaders of regional distribution utilities focusing on electricity supply and distribution in Namibia.

1.4 Research Questions

This research aims to answer the following questions.

a) What are the attributes of effective leaders in an electricity distribution utility?

b) How have the leadership styles of Namibian electricity distribution utility leaders steered the affairs of their organizations?

c) What role does the Namibian electricity distribution leadership have in the supply and distribution of electricity services?

1.5 Significance of the study

This study looked at filling two knowledge gaps, one, the theoretical gap in leadership and two, the practical gap in the application of leadership by leaders in the distribution industry.

Firstly, in the theoretical gap the research aims to contribute to the understanding of the role of leadership in the effectiveness of electricity distribution. The role of leadership in organisations is highlighted by many organisational leadership authors such as Abbas and Asghar (2010), Freeman (1989), Gerstberger and Gromala (2010), Heyns et al. (2020), i Solà, i Badia, Hito, Osaba, and García (2016), Jacobsen and Bøgh Andersen (2015), Muteswa (2016) as well as Otara (2011), Siangchokyoo et al. (2020), Zeleke and Kifle (2020) and Thompson and Glasø (2018). They wrote on the role of leadership in organisations and utilities, and leadership qualities of effective leaders. However, in Namibia, the leadership attributes of distribution utility leaders have not been studied. Hence, the research contributes to the literature regarding leadership in the Namibia electricity supply industry which is not academically published, particularly in the three operational regional electricity distribution utilities covered in this study.

Secondly, with regards to the practical gap, the research explores the perceived effective leadership attributes that are required for effective change management as utilities adjust their operations in responding to evolving technology, consumer, and supplier choices, (Aggarwal & Kumar, 2018; Bryant et al., 2018;

Burke & Stephens, 2017; Castaneda, Franco, et al., 2017; Houck & Rickerson, 2009; Namupala, 2019; PwC, 2013; Salite et al., 2021; von Oertzen, 2019). These authors have published works on various power utilities business models, the need for the supply of sustainable quality services in the distribution sector and how leaders should influence and respond to these changes to ensure the utilities remain relevant and effective in the provision of electricity services at affordable cost and reliable supply. This study explored how the leaders in the distribution industry apply their leadership styles in ensuring effective service delivery.

The stakeholders that benefit from the study include policymakers, academic institutions, regulators, industry leaders, managers and employees, as well as scholars.

Policymakers benefit by getting informed feedback on the impact of their policy implementation in the electricity supply industry. Some of the changes seen in the industry are a result of policy decisions, such as the implementation of the Modified Single buyer Market Model, a new electricity market framework in Namibia, which can either impact utilities positively or negatively.

Academic Institutions will benefit by being presented with written literature and reference materials, for use in the delivery and development of course content.

The regulator will benefit from the research results by gaining an understanding of the impact of the regulatory decisions, that have been implemented in the industry.

Industry leaders, managers, and employees will benefit from the up-to-date and theoretical attributes required, to manage their entities effectively amidst the changing needs of consumers and suppliers of electricity.

1.6 Delimitations of the study

This research was focused on the three existing regional electricity distribution utilities in Namibia. It will also only involve selected industry leaders at the executive level of the three utilities. Additionally, the study looked into the leaders'

perception of how leadership influences the effectiveness of service delivery offered to energy suppliers and consumers in their respective utilities. Energy suppliers include the national utility, independent power producers, and prosumers, while consumers are the different end users of electricity and prosumers. The study does not include country-level issues affecting the distribution issues, such as policy implication, political and conflict management between multiple stakeholders.

1.7 Definition of terms

This section provides definitions of the main words used in this study for ease of reference to any reader:

Electricity distribution utilities refer to distribution companies that are licensed for the supply, distribution, and retail of electricity in their respective regions (von Oertzen, 2019)

Leadership refers to the ability and process to positively influence followers by an individual for the benefit or a common goal of a group or organisation (Muteswa, 2016).

Leadership Attributes refer to traits or characteristics that define the behaviour of leaders (Muteswa, 2016)

Prosumers refers to electricity customers that produce and also consume electricity at their premises (von Oertzen, 2018)

Renewable Energy refers to the energy that is harnessed from resources or processes that are naturally replenishing on a human timescale such as solar and wind (Republic of Namibia, 2017).

1.8 Assumptions

In this research, it is assumed that leadership can be learned and that there are specific leadership attributes that are assumed to be more effective than others.

1.9 Structure of the Research Proposal

The report is covered and separated into five chapters.

Chapter 1: is the introduction, revealing the purpose and context of the study, the research problem, the significance of the study, and the research questions. The Chapter provides the basis for the need for research on the subject matter.

Chapter 2: This is the literature review in which the key terms and concepts of the study are elaborated. The key terms for this study are, Leadership, leadership attributes, service delivery, electricity distribution utilities, and Renewable Energy Technologies. The literature review aims to provide the existing knowledge on leadership, particularly the leadership theories that have been studied. it also provides context on the Namibian distribution industry and how it is evolving, from regulatory, customer and technological perspectives.

Chapter 3: In Chapter 3, the research methodology is explained, this explains the research approach including the methodology and detailing the data collection strategy. The methodology used in the study revolves around the research onion framework, the chapter further highlights the ethical and integrity consideration of the research process and details how participants in the data collection process will be protected.

Chapter 4: This chapter is about the research findings and simultaneously presents the discussions pertaining to the findings. The findings are tabulated and presented with each research question and proposition. Thereafter, discussions pertaining to those particular findings are presented with reference to the literature as discussed in chapter 2.

Chapter 5: Chapter five provides the conclusions to the research and recommendations are made about future studies.

CHAPTER 2. LITERATURE REVIEW

2.1 Introduction

This chapter provides a theoretical background on leadership, and effective organisational leadership in the electricity distribution and supply industry. It also covers the Namibia electricity supply Industry institutional framework, and the role of the REDs. The theoretical conceptual framework for leadership in a RED organisation is also proposed in this chapter. The chapter further expands on the key concepts in the questions of the study, and the study propositions, and ends with a conclusion.

An interactive approach was used for the literature review by reviewing journals, scientific articles, thesis, and industry reports on utility services delivery models and relating them to leadership attributes required for distribution utilities. The leadership theories and their effect on organisation leadership discussed are derived from King (1990), Abbas and Asghar (2010), Heyns et al. (2020), Gerstberger and Gromala (2010), Muteswa (2016), as well as Jacobsen and Bøgh Andersen (2015), Otara (2011), (Madana Kumar, 2013), Nawaz and Khan_ PhD (2016) and Nanjundeswaraswamy and Swamy (2014). While utility service delivery models are mainly derived from Bryant et al. (2018), Castaneda, Franco, et al. (2017), PwC (2013), and von Oertzen (2019).

The chapter is presented as follows: Subheading 2.2 is a background discussion on leadership. It starts by defining leadership, followed by a section on leadership theories. After that, a discussion on effective organisation leadership is presented and this is followed by leadership perceptions. The section further discusses the concept of, attributes, and leadership styles that are of relevance to the utility sectors.

Subheading 2.3 discusses the Electricity Supply Industry. It starts with an overview of the Namibian Electricity Supply Industry, and describes the electricity system, this is followed by a short discussion of Renewable Energy. The section further details the electricity market and Namibia ESI framework and discusses the three Regional Electricity Distribution companies which are of interest in this

study namely Erongo Regional Electricity Distribution Company (Erongo RED), Central North Regional Electricity Distribution Company (CENORED), and Northern Regional Electricity Distribution Company (NORED).

Subheading 2.4 provides the theoretical framework emanating from the literature review. Subheadings 2.5 to 2.7 is a discussion based on the three research questions and the development of the propositions that correspond to each research question.

The chapter ends with subheading 2.8, providing concluding remarks on the chapter.

2.2 Background discussion

This section presents the background on leadership, leadership theories, leadership styles, leadership perceptions and effective organisational leadership. It further provides historical and current background information on the Namibian electricity supply industry, the key role players, and policy provisions guiding the industry.

2.2.1 *Leadership*

Organisations exist to provide services, in line with their mission and vision statements. Leaders in an organisation need to ensure this vision and mission is attained not just by the leaders, but by all stakeholders. Leadership refers to the ability and process to positively influence followers by an individual for the benefit or a common goal of a group or organisation (i Solà et al., 2016; Muteswa, 2016). A leader is a person who exercises authority over decisions, implements such decisions, and has a social process of influence in which a group, team, or organisation can do more to increase their ability (Abbas & Asghar, 2010).

2.2.2 *Leadership theories*

Leadership theories have been studied and have evolved, including but not limited to The Great Man theory, studied around 1840, The Trait theory studied

around, 1930 to 1940, Style and behavioural Theory,1950, contingency theory, studied around 1960, Situational leadership theory, as well as Process leadership theory, transactional and transformational leadership theories all, studied around 1970's (Heyns et al., 2020; Khan & Nawaz, 2016; King, 1990; Langhof & Güldenberg, 2020; Lee et al., 2015; Madana Kumar, 2013; Nanjundeswaraswamy & Swamy, 2014; Nawaz & Khan_ PhD, 2016; Shala, Prebreza, & Ramosaj, 2021; Siangchokyoo et al., 2020).

a. *The Great Man Theory*

In his study in the early 1900s, Bowden (1926), equated leadership with personality. The theory suggested that a person who applied their strong behaviours and personalities would become great leaders (King, 1990). The theory asserted that the "capacity for leadership was inherent – that great leader are born and not made" (Kibbe & Chen, 2015; Madana Kumar, 2013, p. 15). It portrays great leaders as those that stood up for their communities and nations, such that they are seen as heroes of their generation (Madana Kumar, 2013; Nawaz & Khan_ PhD, 2016). The word Great Man was coined at a time when leadership was predominated by males, especially in the military (King, 1990; Madana Kumar, 2013).

Although this theory was generally accepted at that time, Nawaz and Khan_ PhD (2016), stated that this leadership concept was morally flawed following the man-led events of leaders such as Napoleon, Hitler, and others, challenged the proponents of the Great Man theory. The theory, therefore, became somewhat irrelevant hence new leadership theories started to emerge.

b. *The Trait Theory*

The Trait Theory of leadership is an extension of the Great Man theory. The Trait theory attempted to remove linkages of an individual and generalise traits that if applied will enhance leadership potential and performance (King, 1990). The theory further presumed that people can inherit particular qualities and characters that would make them better leaders (Madana Kumar, 2013). This included physical traits and personal characteristics that make them unique from non-

leaders. Some of the traits are “height, intelligence, attractiveness, self-confidence, charisma” (Nawaz & Khan_ PhD, 2016, p. 2).

The Trait Theory became contradictory as people with different traits ascend the leadership throne, and more studies revealed non-leaders to have similar or more characteristics as leaders. A study conducted by Jenkins in 1947, as cited in King (1990), provided empirical evidence that there is “no single trait of group of characteristics associated with good leadership”. Hence, the failure to detect common traits in multiple leaders, as well as similar traits being found in non-leaders resulted in the trait theory becoming disfavoured (Madana Kumar, 2013).

c. *Behavioural Theory*

Behavioural theory is a management practice that evaluates the leader’s actions according to how they behave at the workplace. It involves reviewing and observing the leader’s behavioural response to a particular situation. The theory implies that leadership traits can be taught (King, 1990). This theory was developed as a critic of the trait theory, in that, leader’s behaviour determines leadership effectiveness (Derue, Nahrgang, Wellman, & Humphrey, 2011). The Ohio State study according to Schriesheim and Bird (1979), suggested that there are two leadership behaviours, one, that is an initiating structure behaviour and a consideration behaviour. The former is about the extent to which the leader can structure and define the task for his followers in achieving a goal, while the latter, implies the extent to which the leader considers relationships, trust, respect and consideration of feelings for subordinates (Schriesheim & Bird, 1979).

d. *The Contingent and Situation Theory*

The contingent and situation theory is used interchangeably in this research. Hence they are discussed under the same heading. The contingent theory was developed by Fred Fiedler in the 1960s following his research work on leadership effectiveness and situational circumstances (Shala et al., 2021). Fidler studied the leadership styles of multiple leaders in differing contexts, especially in military organisations, in which he argued that effective leadership depends on the contingencies of the situation (Shala et al., 2021).

Other theories included the Path-Goal Theory developed by House in the 1970s which focused less on the situation or leader's behaviour and more on providing enabling conditions for the success of followers (King, 1990); Normative Theory Model, developed by Vroom and Yetton, and focussed on advising the leader to what decision-making behaviour would be most fitting depending on the situation. The Normative model, appealed to many leaders, as despite your traits and level of influence, you could change your behaviour to increase leadership effectiveness in any situation (King, 1990). The essence of contingent theory was that, effective leadership is dependent on one or more factors of personality, behaviour, particular influence and the prevailing situation (King, 1990).

There is no specific leadership style for dynamic environments and situations, especially in volatile and complex industries. Hence, the statement that "there was no unsurpassed way to lead, and those leaders, to be effective, must be able to adapt to the situation and transform their leadership style between task-oriented and relationship-oriented" (Nawaz & Khan_ PhD, 2016, p. 2), still applies to today's utilities.

As the organisation environment changes, effective leaders adapted their leadership styles to fit such situations, hence effective leadership not only depend "on the person or group that was being influenced but also depended on the task, job, or function that was needed to be accomplished" (Madana Kumar, 2013, p. 17).

In their recent study on contingent theory, Shala et al. (2021), suggest that factors such as job satisfaction plays a major role in the leadership styles and leadership responses between followers and managers. Additionally, Suharyanto and Lestari (2020), asserted that, even after the application of contingency theory fell in the 1990s, the theory remains relevant, especially in times of turbulence and pandemics such as the recently experienced Covid-19. Leaders in utilities were not spared, and those that responded rapidly benefitted from managing the adverse impacts of Covid-19 on their organisations.

e. *Transactional Theory*

For organisations to achieve goals and thrive, leaders must recognise the need to reward followers, upon agreement and delivery of given goals. This leadership theory recognised performance with rewards or punishment and hence become known as the Transaction theory (Madana Kumar, 2013). This leadership style included the need to set goals for subordinates, evaluate their performance, train them where necessary, and reward them when goals are achieved. In cases when their output is not achieved, varying consequences would hence follow. This was, therefore, an exchange between performance and rewards, and leaders had a moral obligation to motivate employees, by using rewards and corrective actions and rule enforcement (Nanjundeswaraswamy & Swamy, 2014; Nawaz & Khan_ PhD, 2016).

f. *Transformation Theory*

The Transformation theory of leadership asserts that leaders interact with followers for a common purpose, sharing common values and beliefs (Nawaz & Khan_ PhD, 2016). Transformational leadership is unique in that it is based on intrinsic rather than extrinsic motivation (King, 1990). Further, transformational leadership aims to alter the organisation and people's minds, hearts, understandings, insights, and values, which bring about positive change in the development of the organisation (Nanjundeswaraswamy & Swamy, 2014; Siangchokyoo et al., 2020). Most leadership theories centre around individual attributes, characters and traits. However, for the organisation to achieve its vision, leaders and followers need to put their interests aside for the greater benefit of society and the organisation. Transformational leaders are open to ideas, creative and innovative (King, 1990).

The transactional and transformation theory of leadership remains relevant in running the affairs of public and private institutions (Jacobsen & Bøgh Andersen, 2015; Siangchokyoo et al., 2020). With skills shortages and the need for succession planning, utilities have implemented rewards and recognition policies through performance management systems and have developed sustainable

strategic plans to ensure leaders inspire followers to develop themselves and become future leaders.

g. *Servant Leadership Theory*

In 1970, Greenleaf (1970), produced an essay, on the servant as a leader, in which he outlined the philosophy of servant leadership. Servant leadership centres around the need not only to lead or have power but to serve, for the greater benefit of society. Servant leadership begins with the natural feeling that one wants to serve, to serve first (Greenleaf, 1970; Heyns et al., 2020). “Servant leadership creates a serving culture among followers which, in turn, can enhance business performance” (Langhof & Güldenberg, 2020, p. 2).

This leadership principle is argued to be influenced by religion, and traditional tribal principles of selflessness in which the needs of family and guests are above those of the leaders (Gandolfi & Stone, 2018). Servant leaders tend to develop and empower others to reach their potential. Reaching potential means the organisation is likely to achieve its performance objectives. Hence, if applied correctly, “with power intentions, an authentic and natural form of reciprocity, takes place between the leader and follower, thus increasing workforce engagement and improving organisational performance (Gandolfi & Stone, 2018, p. 6).

Heyns et al. (2020), suggest that servant leaders have a certain influence on management quality, which is one of the high-performance factors for organisations. Servant leadership is demonstrated by expressing humility, authenticity, interpersonal acceptance, stewardship and providing direction towards the attainment of the organisation vision (Heyns et al., 2020).

In their study, Heyns et al. (2020), found that, when a power utility failed to put the needs of others first, it lost the strength and power that servant leadership stands for. This means the organisation fails to deliver efficient and effective services to customers and other stakeholders.

2.2.1 *Perceptions in Leadership*

Perceptions are how humans interpret experiences (Otara, 2011). In organisations, great leaders use perceptions in handling people and organisational issues and in ensuring a conducive working environment (Jacobsen & Bøgh Andersen, 2015; Otara, 2011). However, most studies on leadership perceptions are associated with the view of followers or employees on leadership behaviour (Jacobsen & Bøgh Andersen, 2015; Lee et al., 2015).

Although studies on leadership perceptions have been limited (i Solà et al., 2016), the study of the leader's perception of leadership strategies matters just as the follower's perception does (Jacobsen & Bøgh Andersen, 2015). The leader's perceptions should be studied as they demonstrate how their intended leadership behaviour will impact the organization's performance, as well as, "have an effect through their employee's perception of this leadership" (Jacobsen & Bøgh Andersen, 2015, p. 3).

This study is exploring the leaders' perceptions of their leadership attributes and styles, that would assist them in ensuring they continue to lead their utilities sustainably, effectively serve different suppliers and energy consumer groups, and maintain an effective service delivery to achieve their institutional mandates.

2.2.2 *Effective organisational leadership*

For an organisation to achieve its mission, there must be alignment between its leadership and the way the organization creates its value (Gerstberger & Gromala, 2010). Organisational leadership is not only about influencing the members to act willingly in achieving the organizational goals, but it's also about how organisational structures lead to members achieving their personal goals (Heyns et al., 2020; Ocheni et al., 2012). Organisational leadership styles "have a direct impact on the relations between leaders and an employee, thus affecting both the latter's performance, job satisfaction and the organisation's total coherence" (Zeleke & Kifle, 2020, p. 29).

Leadership should ensure employees or the organisation are satisfied with their jobs, have job security and have familiarised themselves with the organization's policies and have direct and indirect participation in policy decisions (Ocheni et al., 2012).

The object of leadership is to align leadership decisions and actions with the values of the organisation, its values, vision and mission statements for long-term sustainability (Muteswa, 2016). This objective includes building and maintaining trust in the organisation, having clarity of purpose in the organisation, motivating employees and providing adequate resources, skills development, managing performance and engaging employees (Muteswa, 2016). According to Heyns et al. (2020), the degree of success or failure of an organisation is determined by the quality, vision and mission of the leadership.

The distribution utilities in Namibia are operating in a venerable, uncertain, complex and unambiguous environment. The utilities are under severe pressure to remain relevant, which requires them to undertake new business models, and shift from their business as usual and traditional practices to innovative and strategic operating environments. In dealing with disruptive technologies and transformation, utilities, need effective leadership to deal with such situations (Arifin, 2019; Heyns et al., 2020; Shala et al., 2021; Thompson & Glasø, 2018).

The increased choices of consumers, fuelled by the drastic fall in cost for renewable energy technologies, liberalisation of the utility industry by central government and regulatory reforms, means there is a need for utility leaders to step up and sail their organisations to the shores amidst these storms (Kruger, 2022). Utilities need to deliver products and services, and these require selfless leaders, that are not just profit driven, but are there to serve and improve others (Heyns et al., 2020; Siangchokyoo et al., 2020).

The distribution industry is becoming very competitive with multiple factors subjecting and putting the electricity distribution utilities under threat as a result of increased adoption of RETs leading to reduced energy demand from utility providers (Castaneda, Franco, et al., 2017; Chesser, Hanly, Cassells, & Apergis, 2018; Karami & Madlener, 2021; Moncada et al., 2021).

Although there are a lot of policies and guidelines implemented, requesting utilities to avoid the utility death spiral, and change business models to complement and find new revenues streams, there is no clear guide on the leadership attributes and traits required for these utility leaders, while some utilities are just not practising servant or transformational leadership (Heyns et al., 2020; Siangchokyoo et al., 2020).

2.3 Namibia Electricity Supply Industry

This section provides the context of the Namibian Electricity Supply Industry (ESI) and the distribution sector in particular. The Namibian ESI, particularly the distribution sector, is facing regulatory, social, economic, and technological challenges, that require agile leadership as utilities attempt to keep abreast and remain relevant. Industry leaders need specific leadership attributes to be able to respond to this dynamic environment to ensure business sustainability.

Having gained independence from the white minority rule of South Africa in 1990, Namibia inherited a power system network and industry that was mostly state-owned and vertically integrated (Jacobs, 2005). This means that both generation, transmission, and distribution activities were the mandatory function of the state-owned company or local authority/municipalities.

In About 1998, the government of the Republic of Namibia produced a policy position enshrined in the White Paper of Energy Policy of 1998, that aimed to restructure the Electricity Supply Industry, including the implementation of a regulatory entity and unbundling of the state-owned company (Jacobs, 2005).

As a result, three new regional electricity distribution companies were created namely: Northern Regional Electricity Distribution Company (NORED) established in 2001, which is responsible for the supply and distribution of electricity in the northern regions of Namibia. Central North Electricity Distribution Company (CENORED) established in 2005, is responsible for the provision of electricity services in the north-central regions of Namibia. And Erongo Regional Electricity Distribution Company (Erongo RED) Established in 2006, is responsible for the supply of electricity services in the central west of Namibia.

The Namibia ESI has a very strong and well-developed institutional framework that is anchored on sound policies as well as legal and regulatory provisions. The Ministry of Mines and Energy is the overall custodian of the ESI that is mandated to develop policies, in line with the government agenda. The Electricity Control Board (ECB) is the independent regulator of the sector, mandated to develop the regulatory framework for all ESI participants. Nampower is the national utility responsible for the generation, transmission, energy trading, and electricity market operation. Figure 2.3-1 below presents a graphical representation of the Namibian ESI.

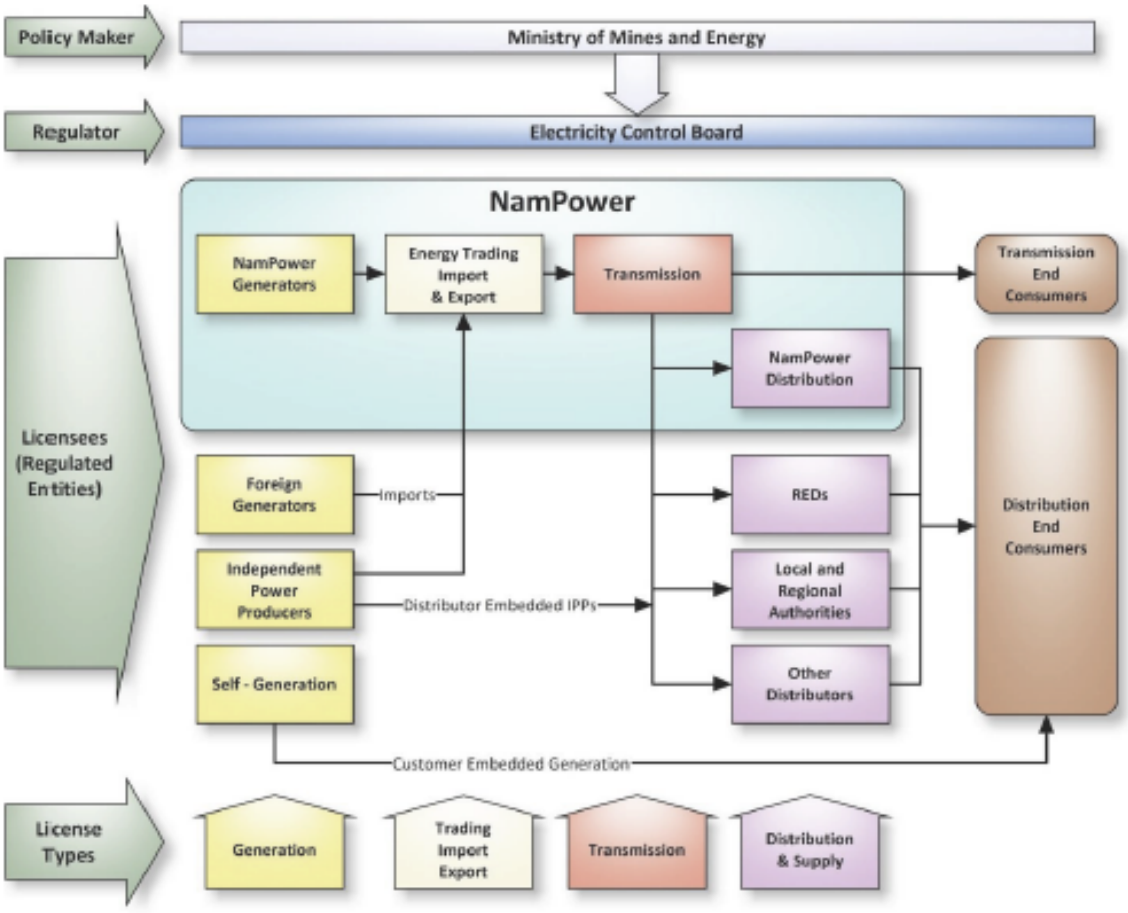


Figure 2.3-1: Namibia Electricity Supply Industry Institutional Structure: Source (Republic of Namibia, 2016, p. 8)

The distribution of electricity is done by regional and local authorities as well as the three operational REDs. The three companies are fully owned by local

authorities and regional councils within their area of operations. Their mandate includes the provision of electricity services as per the conditions of their licenses. The regional utilities have to respond to the needs of the people they serve, including the provision of reliable, quality, and affordable electricity. The need for electricity services have similarly changed as electricity is no more just a want, but one of the basic needs today.

Access to electricity remains one of the greatest challenges in Namibia. Namibia is a vast country with a dispersed population. Due to its lower density per square meter, the provision of electricity to many households remains a challenge, due to high connection costs (Electricity Control Board, 2019).

2.3.1 *The electricity system in Namibia*

The Namibian electricity system is characterised by fleets of local generation assets and electricity imports as depicted in figure 2.3-2 below. The generation fleet is made of fossil-based power plants at Van Eck power station in Windhoek and Anixas Diesel fired power station in Walvis Bay. It also consists of the Ruacana Hydro Power Station, and multiple Solar and Wind power stations.

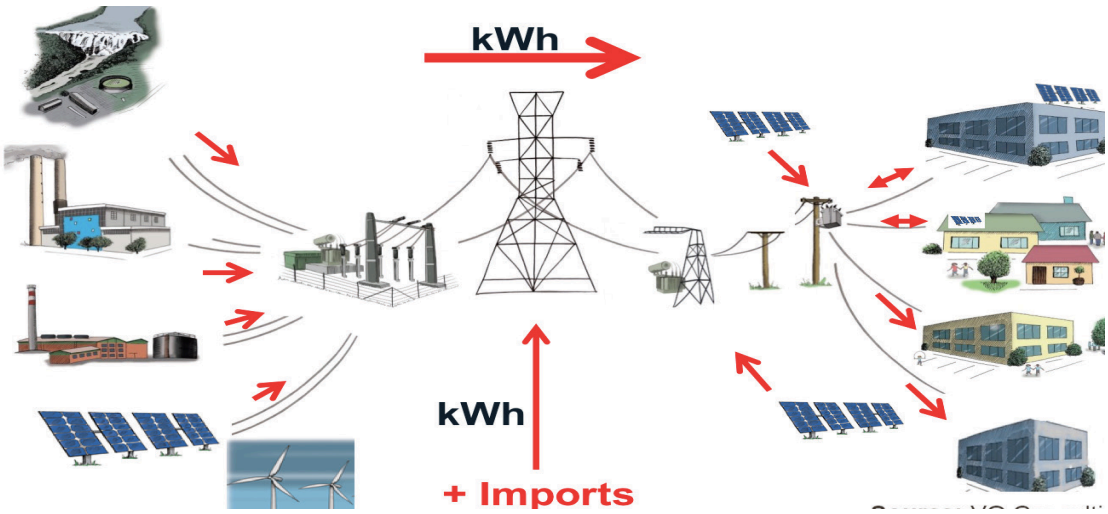


Figure 2.3-2: Energy flows in Namibia: source (von Oertzen, 2018, p. 9)

Namibia has significantly relied on electricity imports to meet local demand (von Oertzen, 2019). The country has been importing over 60% of its energy use from South African utility Eskom (von Oertzen, 2018).

In recent years, the introduction of the REFIT program has greatly accelerated the local generation and uptake of solar and wind renewable energy projects. Local generation through REFIT is highlighted in yellow as shown in figure 2.3.3 below.

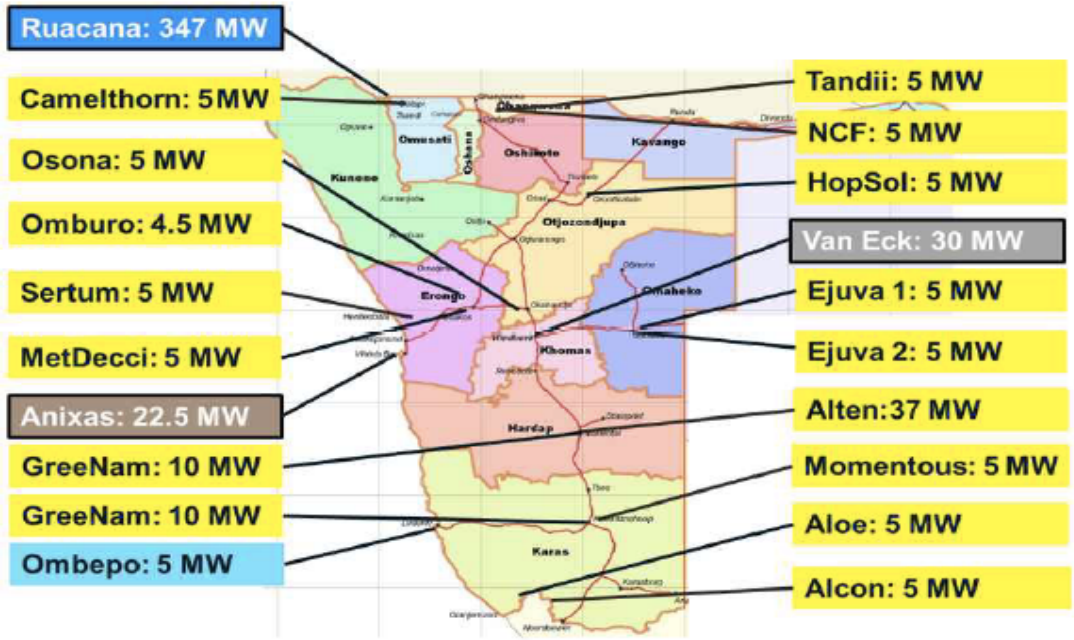


Figure 2.3-3 Local electricity generation in Namibia as at the end of 2019: source (von Oertzen, 2019, p. 42)

2.3.2 *Renewable Energy in Namibia*

Namibia has a vast land with high renewable energy resource potential for Solar, Wind, and Biomass resources. Solar energy is fast becoming a mainstream energy resource in the country, due to favourable policy and regulatory provisions. While on the other hand, wind and biomass resource potential is being explored significantly.

Due to the intermittency that is associated with renewable energy technologies (Ramos, Huayllas, Morozowski Filho, & Tolmasquim, 2020), there has been scepticism on the uptake of renewables, by industry leaders (Von Oertzen, 2012).

However, the price of renewable energy products particularly photovoltaics and wind turbines has seen a dramatic decrease in the past few years. Significantly so, solar and wind prices have reached grid parity and have become much cheaper than conventional energy resources (Kruger, 2022; Von Oertzen, 2012).

2.3.3 *Electricity Market in Namibia*

Following the electricity industry restructuring under the White Paper on Energy Policy of 1998, Namibia adopted the single buyer market framework, where only the National utility Nampower was responsible for purchasing power from generators. As a response to the increased uptake of renewable energy increased competitiveness, and the need for customers' choices a new electricity market framework in Namibia was initiated (von Oertzen, 2019). The Modified Single Buyer Market Model (MSBM) was created to allow Independent Power Producers and contestable customers to transact directly with each other (Republic of Namibia, 2019).

Constable customers include transmission connected users such as mines, distribution utilities, and local municipalities. The MSBM allows these utilities to transact up to 30% of their energy demand between each other (Republic of Namibia, 2019). The choice for distribution utilities to procure energy from elsewhere other than the national utility Nampower means, there is an increased opportunity for affordable energy from Independent Power Producers (Kruger, 2022). Equally, customers also retain similar choices, hence the REDs have to adjust their business models and operational strategies to adapt to the new norm.

a. ***Erongo RED***

Erongo RED distributes electricity in the Erongo Region and surrounding areas. The utility is responsible for the supply and distribution of electricity service to the towns of Walvis Bay and Swakopmund, Omaruru, Karibib, Henties Bay, Usakos and Arandis as well as farmers and rural villages within the region.

Erongo RED (2019), reports that the utility has experienced slower electricity growth due to slower economic growth as well as the availability of alternative

energy resources such as rooftop solar PV that is being made available to customers, this has led to a revenue decline of up to 0.04%. YZN Nambahu, Board Chairperson of Erongo RED Board of Directors in the chairman remarks of the 2019 annual report, states that entities such as Erongo RED must redefine themselves and implement innovative business models and practices to ensure sustainability in responding to slower economic growth and high levels of uncertainty (Erongo RED, 2019).

Graph 2.3.4 below, indicates that 61% of the Erongo RED customers use prepaid electricity, however, this customer segment is only responsible for 17% of revenues, in contrast, 1% of bulk customers are responsible for over 50% of the revenues (Erongo RED, 2019).

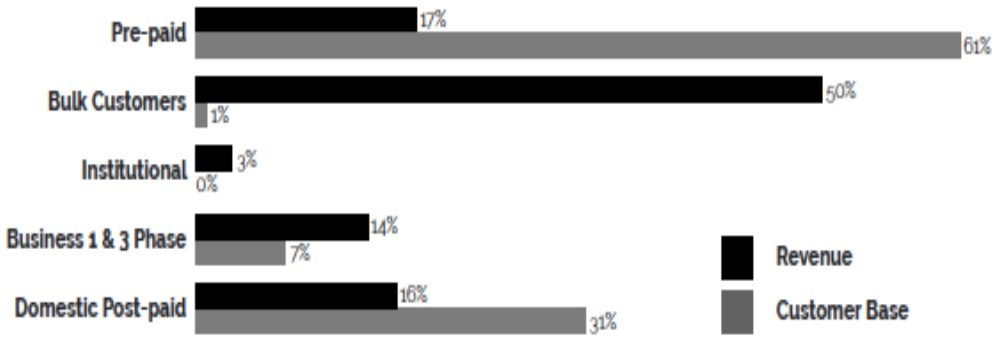


Figure 2.3-4: Revenues sharing from customer segments: Source (Erongo RED, 2019, p. 4).

From the above, it's quite clear that Erongo RED leadership needs to focus on the 1% of customers who are responsible for over 50% of their revenues. This customer segment is mainly businesses, and corporates, including manufacturers and industrial consumers. In dealing with corporates, certain leadership qualities are required to ensure continued business to business relationships. However, although corporates are significant, pre-paid consumers still make up the majority of customers (61%), albeit with only revenues of less than 20%. These consumers play a major role in the political economy, and in shaping the organisation's strategy. Hence, another leadership requisite is to therefore find a balancing act between leading a corporation and ordinary consumers.

Erongo RED purchases the majority of its energy from the national utility Nampower, and hence Nampower remains the largest supplier of energy. However, Erongo RED agreed with OLC Arandis Solar Energy, a 3MW project where Erongo RED procure renewable energy in support of the national strategy to diversify the electricity mix of the country (Erongo RED, 2019; von Oertzen, 2019). Erongo RED had 178 net-metering Solar rooftop installations on the grid totalling about 6.8MW (Erongo RED, 2018).

b. ***CENORED***

CENORED is responsible for the supply and distribution of electricity in central-north Namibia and adjacent areas.

As of 2018, the distributor had a maximum demand of about 43MW as well as total peak demand from rooftop solar systems of about 4.65MW (CENORED, 2018), signifying their customer-side business model strategy. During the same reporting period, CENORED also recorded a total maximum decline of 4% in comparison to the 2017 financial year, which was “attributed to mainly to the continued economic recession, energy-conscious behaviour by customers and to some extent to rooftop solar PV production for own consumption…” (CENORED, 2018, p. 32).

CENORED which pioneered the REDs through large-scale Solar PV projects by distribution licensees in Namibia foresaw the imminent disruptive trends occurring in the distribution sector such as new and cost-effective renewable energy technologies. Hence CENORED diversified her energy suppliers by contracting a few independent power producers to complement energy purchases from Nampower, these include a 5MW Hopsol plant at Otjiwarongo as well as a 3.5MW plant at Grootfontein (CENORED, 2018).

According to their 2018 annual report, CENORED has a customer base of about forty thousand active customers. About 6% of these, are post-paid customers including large power users, industrial and commercial customers, and institutions. This group of customers makes up about 80% of CENORED revenue. On the other hand, 94% of customers are prepaid customers including domestic households and a few businesses which account for about 20% of the

revenue. The table below depicts the composition of the CENORED customer base relative to revenue generation. Table 2.3.1 below presents this information.

Table 2.3-1 CENORED Customer base relative to revenue adopted from (CENORED, 2018, p. 44)

Customer Category	Number of Customers	Revenue'000	%Share
Domestic	335	4,309	1%
Pre-paid customers	37621	136, 515	24%
Post-paid customers	2035	432,617	75%
Total	40261	573 445	100%

New entrants like homeowners, farmers, and businesses generate their electricity and sell excess electricity to the CENORED grid. Accordingly, this reality required a "new way of thinking and new management paradigms of best to deliver a future distribution grid that is intelligent, flexible, reliable and affordable" (CENORED, 2018, p. 16).

c. ***NORED***

Incorporated as the first RED in Namibia in 2001, NORED prides itself as the pioneer for regional electricity distribution in Southern Africa. NORED supply and distribute electricity in the northern eight regions and over 18 local authorities and to half of the Namibian population.

NORED has notified maximum demand of 82MW, making it the second-largest RED in Namibia. With just over 81 000 customers, 96% of the NORED customers are prepaid customers who are responsible for 30% of the revenue (NORED, 2021), while it further states that 4% of the post-paid customers are conventional customers, and account for 70% of the sales. Post-paid customers include

industries, commercial centres such as malls, business entities and institutions. Table 2.3-2 below shows the NORED customer base.

Table 2.3-2: NORED customer base, Author's own compilation

Customer Base	Number	Customer base share
Pre-paid	78 000	96%
Post Paid	3000	4%
Total	81 000	100%

With the above, it is evident that NORED customers are mostly domestic and residential households. While there are a few industries, institutions, and irrigation schemes make up the majority of the post-paid customers. The utility leader, therefore, has a balancing act to perform in serving both of these customers. According to the Electricity Control Board (2020), on average, NORED Electricity has recorded revenue declines for three consecutive years of about 5% as reported in their unaudited financial statements. To date, NORED does not have any renewable energy plant connected to its distribution network, however, on the customer's side, it has about 4.8MW of rooftop Solar Installation (NORED, 2021).

2.4 Conceptual Framework

This study explores leader attributes as perceived by electricity utility leaders and the role they play in influencing organisational success. This assumes that the leader's attributes are based on particular leadership styles and vice versa. These attributes will influence the level of followers' buy-in, into the vision of the leader and consequently inspire the employees in an organisation. Once followers buy-in into the organisational vision is obtained, it results in employee motivation and response which determines how well things get done, eventually resulting in the

quality of services delivered to consumers. The Figure 2.4.5 below provides a graphical representation of the conceptual framework.

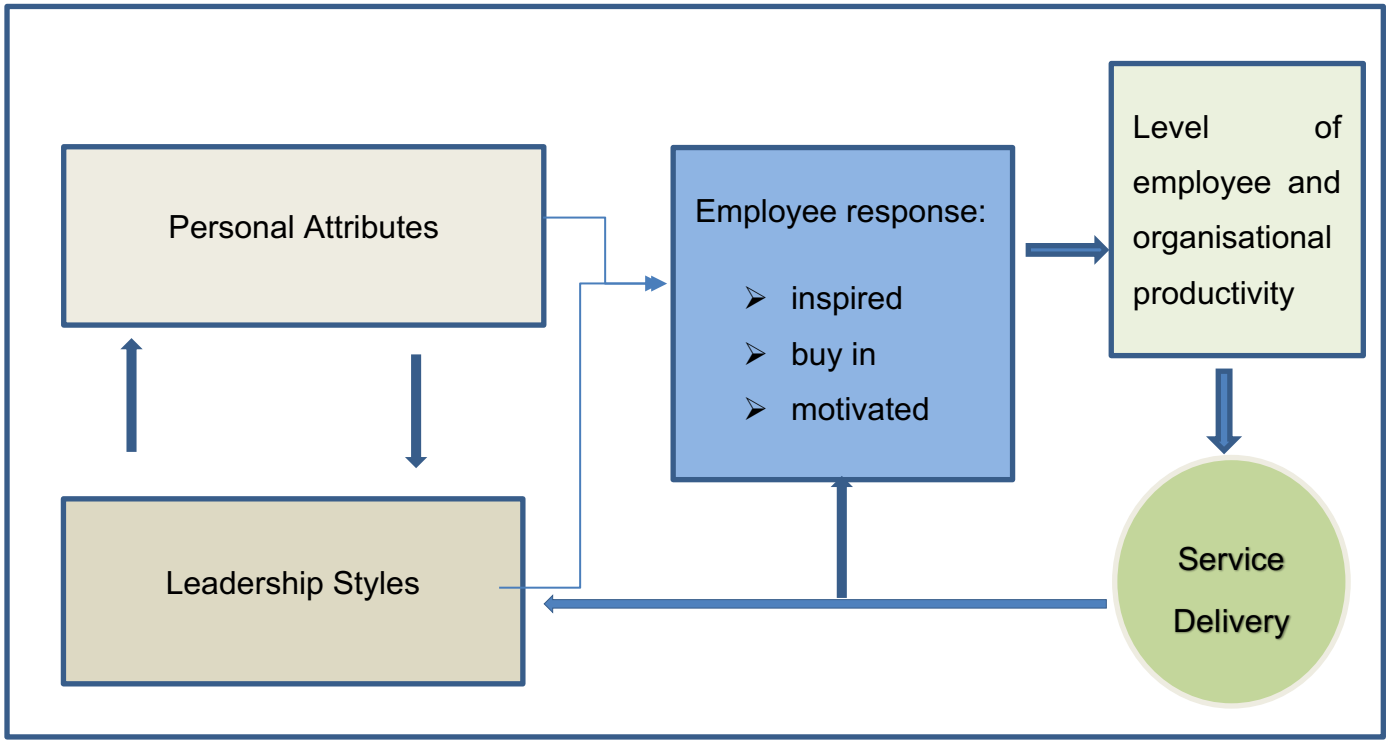


Figure 2.4-1: A proposed conceptual framework. Authors own contribution

From the above concept, the theoretical approach is that the level of service delivered by an organisation can affect on the leadership styles of the leaders. for example, an organisation that is performing poorly will likely results in its leaders taking an autocratic leadership style. Similarly, if the service is excellent, leaders will tend to focus more on servant-ship or transformational leadership approaches. The level of service can also motivate or demoralise the employee to buy into the leader's vision or not to follow the leader respectively, hence there is a theoretical positive feedback loop. The testing of this conceptual framework is beyond the scope of this research.

2.5 First research question: What are the perceived attributes of effective leaders in an electricity distribution utility?

This question brings to the fore the attributes of effective leaders, particularly in an electric utility company. It attempts to identify the individual values and the roles of leaders that make some utilities more successful and effective than others. The question is based on the assumption that leadership is not innate, and can be learned, hence if these specific qualities are learned, adopted and practised by leaders, chances are that such leaders may become effective leaders.

The keywords for this research question are leadership attributes and effective leadership.

2.5.1 *Attributes of effective leaders*

According to Ulrich (2013), the ultimate role of leadership is to bring together both the organization and the individuals towards solving the customer's challenges. While leaders are individuals with the unique abilities to guide the behaviour of others, leadership is about the organisation’s capability to mould future leaders (Ulrich, 2013). While individual leader matters, the leadership of the collective in an organisation matters more (Ulrich, 2013).

Good and effective leaders are those that lead with their head, heart, and hands, which makes them authentic leaders (George, Sims, McLean, & Mayer, 2007). Authentic leaders understand and know themselves and their values, practices and stick to their principles, empower people to lead, and always stay grounded (Gardner, Karam, Alvesson, & Einola, 2021; George et al., 2007; Heyns et al., 2020).

Ocheni et al. (2012), stated that to re-engineer an organisation, effective leaders carry with a barrage of optimism, believe in themselves and know what it takes to achieve the targets. Leaders irrespective of the situation should also be intelligent, have the verbal ability, and reasoned judgment, and should be emotionally stable (Ocheni et al., 2012; Thompson & Glasø, 2018).

2.5.2 *Attributes for successful utilities*

Public utilities are influential in the policy-making process as they are traditionally part of or owned by state entities. These include policies aimed at addressing the transition towards a low carbon economy and the adoption of renewable energy and energy efficiency technologies. Policy directives that encourage consumer participation, competitiveness, and private sector participation or liberalization of the electricity market can also be influenced by utilities.

Utilities' competitive advantage includes the considerable knowledge of operating the grid as well as their asset bases (Heyns et al., 2020). These asset bases and distribution grids, can be managed and deployed efficiently to implement the energy transition and drive new business strategies that not only sustain the business but also address the global challenges of climate change (Frei, Sinsel, Hanafy, & Hoppmann, 2018).

However, many utilities are traditionally risk-averse, resistant to change, and slow to invest in innovation (Frei et al., 2018). Resistance to change is attributed to many factors including the usual notion of "we have always done it this way". Other barriers include the shift from tangible to intangible assets as part of new energy services provision, and regulatory and technological shifts such as investing in new small scale renewable energy generation Fields (Frei et al., 2018).

Depending on the leadership of the utility, a utility can either be a leader or a follower in adopting new business strategies. However, leaders who are proactive, and willing to adopt and explore new opportunities as presented by renewable energy technologies can propel their utilities to success and become the benchmark of others (Heyns et al., 2020).

2.5.3 *Proposition 1*

Leadership attributes determine the effectiveness of a utility leader.

2.6 Second Research question: How have the leadership styles of Namibian electricity distribution utility leaders steered the affairs of their organizations?

Leadership comes in different styles. Also, different circumstances and environments call for different leadership responsiveness, that is equal and able to arrest the situation. The question attempts to provide attributes that accompany effective leadership styles applicable in a utility environment. Business leaders provide influence in the way organisations adapt to changing business dynamics and environment, coupled with differing needs of suppliers and consumers of electricity (Thompson & Glasø, 2018). Utilities are faced with different problems and challenges, and how they adapt their service delivery ethos depends on the type of leaders they have. Hence it is imperative to understand how leadership styles influence the changes in executing the mandates of the utilities.

2.6.1 *Leadership Styles in a utility*

Leadership styles are different philosophical approaches that leaders adopt in piloting affairs or activities of an organisation (Ocheni et al., 2012). Public utilities operate in a regulated environment. Because of this regulatory framework, utilities cannot just be relying on increasing tariffs to meet their financial targets. Utilities have to deliver value to customers through their strategic intents, which can be customer-centric, product and service-oriented or operational excellence (Gerstberger & Gromala, 2010). It further follows that regulated utilities focus more on operational excellence as their number one strategic focus, especially for operation departments that execute the organisation's core mandates (Gerstberger & Gromala, 2010). Operational excellence provides the basis for selflessly serving customers and suppliers and is the departure point towards an outlooking organisation that put the interest of customers and stakeholders first because leadership out to be defined from the outside/in (Ulrich, 2013).

Leaders that put the interest of others first are servant leaders. Servant leaders are those who make cautious decisions and choices to serve others and put the needs of others first (Heyns et al., 2020). Companies that are looking to avoid

and distance themselves from business scandals and disgrace appear to lean towards servant leadership as the panacea for building, or rebuilding an ethical organisation (Minnis & Callahan, 2010).

According to Minnis and Callahan (2010), Robert K. Greenleaf discovered the term servant leadership which he details as a “natural feeling that one wants to serve, to serve first. The difference manifests itself in the care taken by the servant – first to make sure that other people’s highest priority needs are being served” (Minnis & Callahan, 2010, p. 6).

Servant leaders according to Robert Greenleaf’s writing on servant leadership, include, listening, empathy, awareness, healing, foresight, stewardship, building community and commitment to the growth of people (Minnis & Callahan, 2010). While the list is not exhaustive, it provides insight into the character of an effective servant leader. Detailed functional and accompanying attributes for servant leadership styles are observed in Table 2.6-1 below.

Table 2.6-1: Servant Leadership Style Attributes: Adapted from (Minnis & Callahan, 2010, p. 10).

Functional Attributes	Accompanying Attributes
Vision Honesty Integrity Trust Services Modelling Pioneering	Communication Credibility Competence Stewardship Visibility Influence Persuasion Listening Encouragement Teaching Delegation

Leadership styles that have been widely written about include the Laissez-faire, the autocratic/despotic and the democratic styles.

The laissez-faire style of leadership is an approach to leadership that avoids micromanagement of subordinates, subordinates are allowed to carry out their functions and activities as they see fit (Ocheni et al., 2012). Zeleke and Kifle

(2020) assert that the Laissez-faire leadership style allows leaders to be hands-off while group members make the decisions, which is also known as delegative leadership. While the Autocratic or Despotic style of leadership implores that the leader does all the thinking and take decisions, while subordinates are only there to concede and implement the decisions as assigned to them without any input, a command and control approach (Ocheni et al., 2012).

Autocratic leadership suppresses the creativity of the employees and does not motivate workers as its about intimidation and coercion to achieve compliance (Ocheni et al., 2012). On the other hand, the democratic style approach to leadership encourages two-way communication and participation of both the leader and subordinates in finding and solving challenges facing the organisation (Ocheni et al., 2012). Subordinates are encouraged to be creative, and the leader considers their opinion when deciding because two heads are better than one (Ocheni et al., 2012).

As observed above, all the different leadership styles would require individual leaders with different attributes or traits. A democratic leader running a utility that is in a deep crisis would also need to adopt some qualities of an autocratic leader and vice versa to arrest the crisis or situation. Therefore, while leadership styles matter, the qualities and attributes that underpin each leader's approach play a much wider role in steering the organisation. This implies that the changes in utility business models depend on the leadership of the organisation.

2.6.2 *Proposition 2*

The leadership style of a utility leader can improve the steering of an organisation.

2.7 Third research question: What role does the Namibian electricity distribution leadership have in the supply and distribution of electricity services?

This question implores the effect of leadership in the supply and distribution sectors of the electricity value chain. Electricity Distribution Utilities need to

ensure they maintain an effective service to retain customers and remain sustainable and profitable. Similarly, they also have to ensure there they maintain good relationships with the suppliers of bulk electricity, such as the national utility or independent power producers. Furthermore, they need to protect and find new revenue streams as technologies are developed. Electricity as a commodity does not change, however, additional services could be provided, to ensure customers obtain value from the electricity providers. This question, therefore, focuses on utility service delivery provisions to consumers and the supplier's relationships.

2.7.1 *Distribution Utilities Service Delivery Models*

Business models refer to the frameworks that seek to recognise, gauge, and compare how businesses create and deliver value and services (Bryant et al., 2018). It is also how a business adapts its formal and informal strategic and operational struggles to remain profitable (Hamwi et al., 2021; PwC, 2013). Figure 2.7-1 below shows a typical electricity value chain.

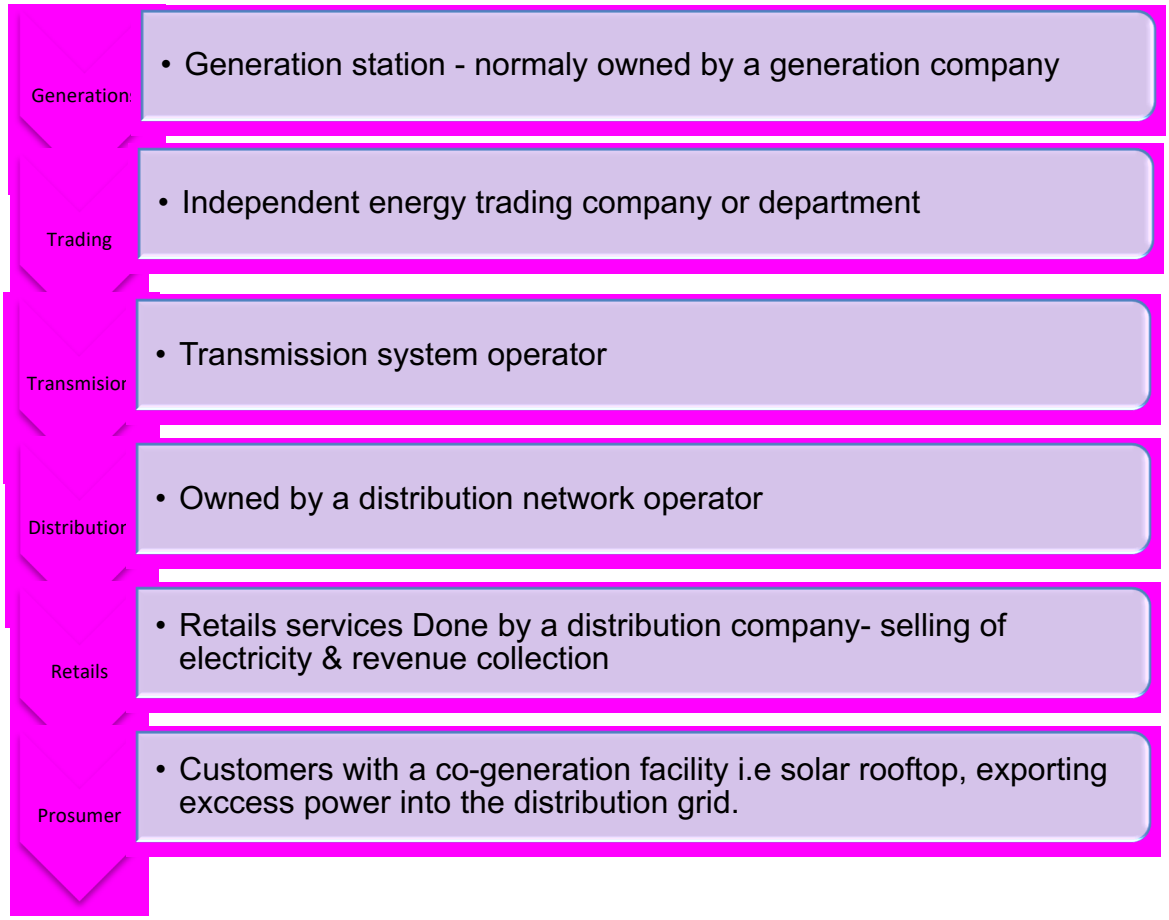


Figure 2.7-1: Typical energy value chain adopted from (Bryant et al., 2018, p. 2)

According to the PwC (2013), 94% of the respondents that participated in their global survey on Energy Transformation and the impact on the power sector business models, expect the existing power utility business model in their market to transform or even be unrecognisable in the period between 2013 to 2030. At the forefront of this compelling change are the disruptive changes occurring in the industry such as Decentralisation, Decarbonization, Digitalisation and Democratisation, including the advancement in distributed generation technologies (Bryant et al., 2018; Karami & Madlener, 2021; PwC, 2013; Rövekamp, Schöpf, Wagon, Weibelzahl, & Fridgen, 2020).

New businesses such as Independent Power producers and other non-utility players are competing for the wallets of the distribution utilities customers, which further leads to shrinking revenue margins in utilities with traditional energy business models approach (Bigliani, Feblowitz, Eastman, Gallotti, & Segalotto, 2015; Bryant et al., 2018; Karami & Madlener, 2021). This is shown in figure 2.7.1-2, where various issues leading to changes and competition in utilities lead to revenue erosion.

In Namibia, some consumers have now become prosumers with little to large solar rooftop installations such as Grove Mall, and other retail shops (von Oertzen, 2019). Prosumers consumes electricity both from the grid and from their power plants (solar rooftops or park) and sell back excess energy to the grid when their demand is low (Riveros et al., 2019).



Figure 2.7.1-2: Utilities in Transition: Source (Bigliani et al., 2015, p. 2)

As utilities face this new competition for revenues from new players, the battle for talent, and global redistribution of energy demand and services, utility leadership have to act immediately to address revenue erosion, and the meet demands of shareholders, customers, suppliers and regulators (Bigliani et al., 2015).

2.7.2 *Utilities Service delivery charters*

As utilities have to deliver public services, regulatory instruments to measure utility performance have been established. This performance measure includes targets for quality of supply and service standards. According to the ECB's Quality of Supply and Services standard NRS048-1 of 2004, service quality is measured in terms of:

a) Commercial quality relates to customer application for connections and billing accuracy.
b) Continuity of supply relates to how the utility deals with and respond to power supply interruptions. Supply interruptions are categorised into two folds, such as planned and unplanned outages. Utilities are required to timely notify customers of planned outages and react promptly to unplanned outages in as to ensure quick restoration of power.

c) Voltage quality, this measure is a technical requirement that aims to measure the actual quality of the voltage supplied at the premises of the customer. It covers the aspect of the supply frequency variations, the voltage magnitude, voltage dips, swells and unbalanced factors amongst a few. Similarly, the bulk supplier of electricity, in this case, the national utility, or IPP also have to ensure that they supply quality electricity to the REDs.

The compliance to quality of supply and service is a further distinction between urban and rural areas. Wherein, it recognises that a utility that operates in an urban area, would not perform similarly to that operating in a rural set-up and vice versa.

Service charters are therefore used as measurement tools to benchmark the service delivery process of the REDs. Compliance to the service delivery charters is beyond the scope of this study.

2.7.3 *The rationale for the REDS*

Before the establishment of the REDs the electricity distribution industry in Namibia was fragmented and the national utility Nampower, as well as the ministry of local government and rural development, played a major role. According to the Namibian white paper on the energy policy of 1998, the REDs were established among others:

a) To capture economies of scale and scope.
b) Achieve uniform pricing policy culminating into harmonised tariffs.
c) integrate grid and non-grid supply, thereby eliminating silos and island supplies.
d) Improve performance standards in service delivery.
e) Ensure local authorities remain financially stable despite not being directly responsible for electricity services, through the provision of surcharges.
f) Improve the operation and maintenance activities.
g) Improve funding and sustainable investment in electrification.
h) Improve planning of rural and urban electrification and project execution.

i) Ensure consumer centricity and improve response to customer complaints.
j) Attract and retain the skilled technical and administrative workforce.
k) Improve the revenue collection and management practices.

2.7.4 *Proposition 3*

Maintaining a reliable supply and distribution of electricity services in a utility requires effective leadership.

2.8 Conclusion of Literature Review

This chapter was a background discussion on leadership, leadership theories, perceptions and effective organisational leadership. The chapter also discussed the Namibia electricity supply industry, and the distribution sector focusing on the three existing REDs. The chapter further discussed the main concept and research questions for the study.

Leadership theories have been studied and have evolved. These theories include the Great Man theory, Trait Theory, Behavioural theory, situational and contingent theory, servant theory, transactional and transformational theory. Studies of leadership perceptions have mainly been done on followers, however, leaders' perceptions are also relevant to study.

Utility leaders need to ensure they respond to the changing utility environments. Hence, REDs need to equally respond to the changing needs of the consumers and suppliers. The Namibia electricity supply industry has a strong institutional framework with a key role being played by the Ministry of Mines and Energy who are setting the policy direction of the industry. The Electricity Control Board provides regulatory oversight of the industry and ensures compliance.

The three distribution companies, Erongo RED, CENORED and NORED, are regional utilities, that were formed in the early 2000s. These companies are part of the electricity value chain, where they serve as a link between energy suppliers and consumers of electricity. In executing their mandates REDs have to ensure

quality services are delivered to both customers and suppliers, in line with the provisions of the Quality of Supply and Service standards.

The chapter ends with research questions that are proposed to be undertaken in the research, to find ways to address the challenges facing the industry. The research attempt to answer the following questions: 1) What are the attributes of effective leaders in an electricity distribution utility? 2), How have the leadership styles of Namibian electricity distribution utility leaders steered the affairs of their organizations? 3), What role does the Namibian electricity distribution leadership have on the supply and distribution of electricity services?

The propositions to these questions are restated as follows:

2.8.1 *Proposition 1: Leadership attributes determine the effectiveness of a utility leader.*

2.8.2 *Proposition 2: The leadership style of a utility leader can improve the steering of an organisation.*

2.8.3 *Proposition 3: Maintaining reliable supply and distribution of electricity services in a utility requires effective leadership.*

Table 2.8-1 Consistency table: research questions and propositions

RQ #	Research Questions	Prop	Proposition
1.	What are the attributes of effective leaders in an electricity distribution utility?	1.	Leadership attributes determine the effectiveness of a utility leader
2.	How have the leadership styles of Namibian electricity distribution utility leaders steered the affairs of their organizations?	2.	The leadership style of a utility leader can improve the steering of an organisation.
3.	What role does the Namibian electricity distribution leadership have on the supply and distribution of electricity services?	3.	Maintaining reliable supply and distribution of electricity services in a utility requires effective leadership

CHAPTER 3. RESEARCH METHODOLOGY

Introduction

This chapter describes the methodology that will be followed in addressing the research questions as discussed in Chapter One.

The chapter is structured as follows, subheading 3.1, provides context to the research approach, which details the research methodology that was undertaken for this research. Subheading 3.2 is about the research design, giving a brief description of the overall study that was undertaken. Subheading 3.3 details the data collection methods that were used to collect the data for the research. Subheading 3.4 is about the data samples that were collected. Subheading 3.5 describe the research instruments that were used for the research.

Subheading 3.6 describes the data collection procedures that were adopted for this research. Subheading 3.7 is about data analysis and interpretation of the findings. Subheading 3.8 provides the limitations of the study, while subheading 3.9 details the trustworthiness of the study. And finally, subheading 3.10 provides the ethical considerations for the research.

3.1 Research approach

In this study, the research approach was based on the research onion framework, which details a systematic approach to conducting research. Developed by Saunders, Lewis, and Thornhill (2019), the research onion framework is a pictorial explanation of the step by step strategies on how to come up with a well-balanced and thought-out research using an analogy of peeling an onion. This framework guides on all aspects of the research, including the philosophical approach, assumptions, methodology choice, research design, data collection and analysis (Saunders et al., 2019). Figure 3.1.1 below indicates the research onion framework.

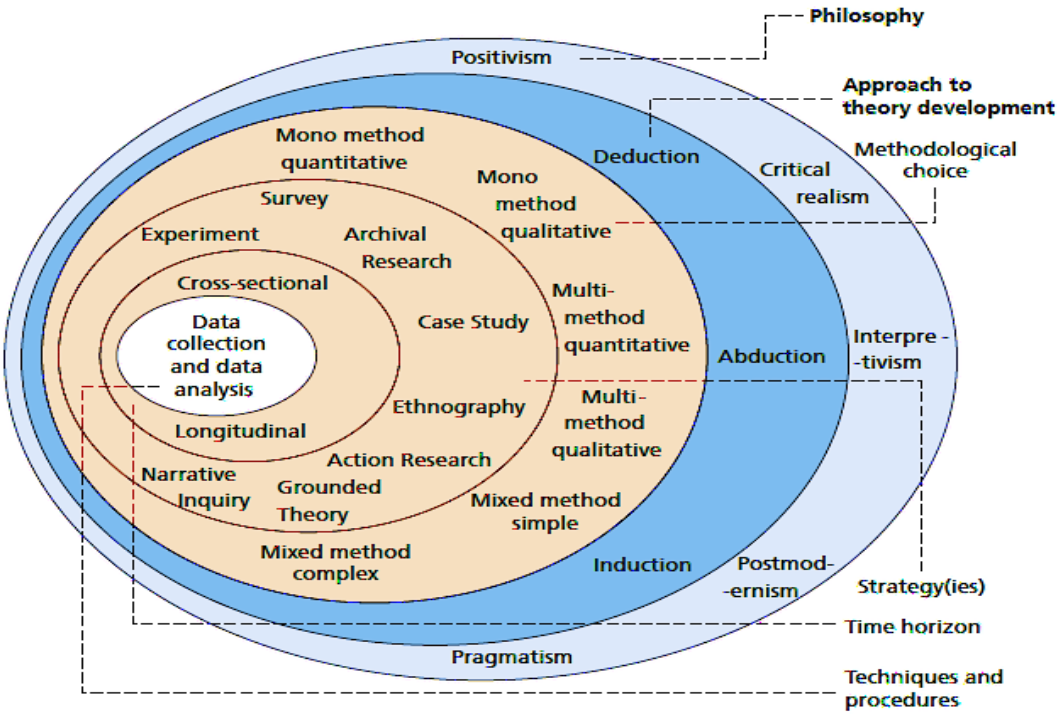


Figure 3.1-1 Research Onion Framework: Source (Saunders et al., 2019, p. 130)

Research philosophy: Interpretivism

This study was therefore an interpretive approach, to the diverse individual narrative on leadership and the need to ensure service delivery in Namibia's electricity distribution utilities. Interpretivist research creates new and enhanced understandings of the contexts, such as looking at organizations behaviour from the perspective of different groups (Alharahsheh & Pius, 2020; Ryan, 2018; Saunders et al., 2019). The purpose of interpretivism research is to create new, richer understandings of social worlds and contexts (Saunders et al., 2019). This means looking at the organisation from a perspective of different groups of people particularly the leaders as done in this study. The research makes an epistemological assumption as stated by Saunders et al. (2019), that knowledge is subjective.

Research approach: Induction

The study took an induction approach which aims to study the thinking and opinion of individual perceptions on leadership attributes through interviews.

Saunders et al. (2019) and Woiceshyn and Daellenbach (2018), stated that the induction approach is used in understanding social contexts wherein, data is analysed using themes to eventually develop a conceptual framework, and develop a theory.

Methodological Approach: Mono method qualitative

Multiple methods can be used to undertake studies on social contexts. However, for this research, a qualitative research methodological approach was undertaken. Qualitative research is used to study human behaviour in organizational development (Mohajan, 2018; Saunders et al., 2019). Baskarada (2014), stated that this methodology is commonly used by researchers as a tool for evaluation and organisational learning. Leadership studies are concerned with individuals' behaviour that would lead to organisational development. Therefore, this methodology was used to study the people's perception of leadership in general and how it influences the need for service delivery in regional electricity distribution utilities in Namibia.

Research strategy, time horizon, and procedures

The research strategy used is based on a narrative using guided interview on into the case of the REDs in Namibia (Saunders et al., 2019). The study takes the cross-sectional approach, as data collection is only done at one particular time (Cohen, Manion, & Morrison, 2017). While the procedure includes data collection through interviews and performing thematic analysis.

It is also assumed that all utilities to participate are going through some form of change. It is further assumed that, those interview participants were able to accept and partake in the guided interviews especially taking cognisance of the Covid 19 restrictions.

3.2 Research design

Research design is the actual process of doing the research project, it "addresses the research questions, relevant propositions/hypotheses, the unit of analysis, the logic linking the data to the propositions and the criteria for interpreting the

findings" (Baskarada, 2014, p. 5). Thus, a research design is a conduit through which the steps of data collection and analysis provide a research conclusion to the research questions.

The unit of analysis describes what the study case is about, and in which setting it will take place such as in an organisation, group or individuals (Baskarada, 2014). This study was undertaken to analyse the three regional distribution electricity organisations in Namibia, the interpretation of the obtained data included benchmarking against best practices. The three organisations are studied together because multiple cases lead to more conclusive outcomes compared to a single case research (Baskarada, 2014).

The interview approach is undertaken since this research was conducted in a real-life and current setting of the three utilities. The interview was an in-depth interview, a narrative collection of individual constructs, asking mainly why and how questions, to obtain an in-depth understanding of their views regarding effective leadership and attributes that are required for utility leadership. The advantage of this approach is that participants are purposively chosen and not randomly selected, however, some participants were not available, or others were not willing to participate in the research.

3.3 Data collection methods

The qualitative research is aimed to explore the leadership phenomena in Namibia's regional utilities, therefore, an inductive approach (Saunders et al., 2019), was undertaken. For this research, an in-depth interview was used to collect the data. The approach aimed at deeply understanding the cases to enable the development of the construct (Baskarada, 2014). This approach is taken as it allows the researcher to put to the respondent's questions that arose from the background theories on the subject matter.

The interview undertaken in this research was unstructured, that is, an interview that did not impose any predetermined answer (Baskarada, 2014). The interview process made use of open-ended questions which allowed for more flexibility both in answering and following up on questions when something interesting

came up (Baskarada, 2014). The interview followed an interview process as per table 3.3-1 below.

Table 3.3-1: The Interview process as undertaken: adapted from (Baskarada, 2014, p. 12).

Steps	Content
1. Introduction and orientation	The researcher introduced themselves, exchanged contact details and explained the purpose of the interview. The researcher then introduced the topic and described the study and the interview process. Clarifications of any expectations, sharing of data, confidentiality and any other issue was also made.
2. Information Gathering	The interviewer used the interview guide to put questions to the responded and recorded the answers for later analysis and interpretation.
3. Closing the interview	in the closing stage, the interviewer reviewed the key interview highlights, the actionable items, and confirmed the correctness of the information with the respondent. The interviewer then thanked the respondent and seek permission for future engagement and contacts.

3.4 Population and sample

In this research, the data were gathered from three organisations which are the regional electricity distribution utilities in Namibia, namely Erongo RED, CENORED and NORED. The information was requested from the selected Board of Directors of the three REDs, Chief Executive Officers and selected Executive Managers in these organisations who are knowledgeable and experienced. These executives were chosen with the assumption that they hold a bird's view of their respective organisation strategies.

3.4.1 *Population*

The research only involved selected executive managers, the Chief Executive Officers, and the Board of Directors of the three regional utilities in Namibia as well as Executives. Middle managers and employees were not included. The reason for exclusion is that employees and managers are followers of the organization leaders. The research did not consider the gender or age of the respondents in analysing the data.

3.4.2 *Sample and sampling method*

The research employed a purposive sampling method, whereby interview participants were intentionally selected based on their knowledge and experiences to be able to provide answers to the research questions (Johnson, Adkins, & Chauvin, 2020; Sebele-Mpofu, 2021; Tracy, 2019). In qualitative research, the objective of sampling is about maintaining a balance in obtaining rich and experiential descriptions from participants in the study, and available resources such as time and money, without ignoring the value and contributions of possible participants from the whole population (Sebele-Mpofu, 2021).

Accordingly, the sample size has to be "big enough to allow the emergence of novel and richly textured understanding of the phenomenon, but small enough to enable an in-depth understanding and analysis of the same phenomenon" (Sebele-Mpofu, 2021, p. 14). The selection of sample size is interdependent on many factors, including the aim of the study, the longitudinal length of the study,

the setting, the theory of the study, and participant experiences (Sim, Saunders, Waterfield, & Kingstone, 2018).

According to Baskarada (2014), the appropriate number of interviews depends on the size of the unit of analysis, the theory under investigation, the scope of the study, and the time frame available, however, 15 interviews are considered sufficient for a case study. Sim et al. (2018), cemented that, numerical guidelines from an empirical investigation found that, sample sizes from 10 to 17 are considered sufficient for qualitative research, as interviews will likely achieve saturation within those figures. Therefore, for this research, due to the organisation size, a total of 17 interviews will be conducted, however, only 11 participants were available.

3.5 The research instruments

The research made use of an in-depth interview. It's an oral interview, where a series of questions were put to the respondents in an attempt to answer the main three research questions. The interview had a total of 20 questions that are subdivided into three themes. The interview sessions were held in a quiet area, mostly at the offices of the respondents. This allowed for collection and access to any other supporting document from that particular organisation, which assisted in understanding that organization's activity. The interview sessions were recorded on paper as well as electronically for future reference. The interview guide is attached to this document as Annexure A.

3.6 Procedure for data collection

For this research, the procedure for data collection was a direct approach to the respondents and hold one on one interviews. However, respondents were first reached by telephone, to notify the respondents of the intention to be part of the interviews and followed up with emails to confirm appointment dates. Direct phone calls were also made, and confirmation was done through short message services and notifications. Face to face interviews was selected due to a relatively small number of participants.

3.7 Data analysis and interpretation

In this research, the data were analysed using thematic analysis (Lochmiller, 2021). The purpose of data analysis is to bring meaning to the information provided by the participants, by looking out for similarities and differences which results in new gaps, that give meaning to new or emerging theories (Lester, Cho, & Lochmiller, 2020; Lochmiller, 2021). While the interpretation of the data followed a coding process as explained by Carmichael and Cunningham (2017), who suggested that, each transcript must be analysed individually into themes.

In this analysis method, data were read through, thought of, and aligned to their specific themes in line with the main research questions, to arrive at a proposition (Saunders et al., 2019). In preparing the data for analysis, the interview audio recording and notes were grouped into the respondent's profiles or positions and the organisations they represent, this is then stored in a computer.

Secondly, the transcripts were then thoroughly studied, to get more insight and understanding of the expressions of the participant's perspectives. This process was done manually. Third, more insight was obtained, through transcribing the data, and assisted in obtaining the meaning of the collected data and identifying possible gaps. As the information becomes more understandable, the analysis proceeded with linking the observed data to the research concepts. The transcripts were then consolidated and compared accordingly.

3.8 Limitations of the study

As anticipated, the one weakness in this study related to the study design approach that only used interviews as a source of data. This was a limitation as face to face contact with some participants was not possible, due to various reasons. Alternative or multiple methods could have assisted in getting to all the participants using fewer resources. Some participants were unable to attend a face to face interviews due to them being in isolation because of Covid-19. Therefore, not all 17 participants that were initially planned were interviewed, however, the sample size of 11 was still sufficient.

3.9 Trustworthiness

This section describes how the trustworthiness of the study and its results were achieved. The trustworthiness of qualitative research is determined by transferability, dependability, credibility and confirmability.

3.9.1 *Transferability*

Transferability is about ensuring that the researcher provides in-depth contextual information so that readers can determine whether the results apply to their or other situations (Johnson et al., 2020). This research provides context to the leadership attributes of leaders in Namibia's electricity destitution utilities, the obtained findings can be expanded to other areas of interest about the Namibian electricity supply industry and leadership in general.

3.9.2 *Credibility*

For the research to be deemed credible, the researcher has to confirm and impart to the readers "supporting evidence that the results accurately represent what was studied" (Johnson et al., 2020). In this research, internal validity and credibility were maximised by looking at and iteratively analysing the patterns and similarities in the data collected from the respondents. These similarities and patterns were then coded into categories and main themes to test the hypothesis.

3.9.3 *Dependability*

Dependability is a test of whether the study process is clearly described such that it could be repeated by another investigator or researcher and still achieve the same results (Baskarada, 2014; Johnson et al., 2020). Dependability for this research was ensured by keeping clear documentation and filing of the field data collection procedures, and the interview guides, and ensuring the interview reports and records are kept safe. The documents are filed in duplicate to ensure no process or procedure is lost.

3.9.4 *Confirmability*

Confirmability of the research study is about ensuring that there is no bias in the processing and interpretation of the study results and that the results and the information from the study are communicated clearly to their intended study beneficiaries (Johnson et al., 2020). The interpretation of the results was done without bias and to represent the factual responses of the participants. This information was then systematically organised into a report.

3.10 Ethical considerations

Every research needs to ensure that moral principles and values are upheld throughout the whole research process (Johnson et al., 2020). Permission letters were obtained from the companies and participants signed consent forms. The consent form explained the rights of the participants. In conducting this study, an ethical clearance was obtained from the Wits Business School and is attached to this report in annexure E.

The research ensured absolute confidentiality and respect for the participants, their dignity and fundamental rights such as freedom of expression were also upheld. The information gathered was only used for the research and no other use. This information was also filed securely and would not be accessible by anyone else other than the researcher. Finally, the results were reported truthfully and honestly.

3.11 Consistency table research questions, propositions, data collection and data analysis

This table provides a summary of the research questions, propositions, data collection and data analysis.

Table 3.11-1: research questions, propositions, data collection and data analysis

RQ #	State Research Question	Pro #	State Proposition	Data collection detail	Data analysis method
1	What are the attributes of effective leaders in an electricity distribution utility?	1.	Leadership attributes determine the effectiveness of a utility leader	Interview Guide questions, 1, 2, 3, 4, 5,6, 7	Thematic analysis
2.	How have the leadership styles of Namibian electricity distribution utility leaders steered the affairs of their organizations?	2.	The leadership style of a utility leader can improve the steering of an organisation.	Interview guide questions 8,9,10,11, 12, 13, 14	Thematic analysis
3.	What role does the Namibian electricity distribution leadership have on the supply and distribution of electricity services?	3.	Maintaining reliable supply and distribution of electricity services in a utility requires effective leadership	Interview guide questions 15,16,17,18,19,20	Thematic analysis

CHAPTER 4. FINDINGS & DISCUSSION

4.1 Introduction

This chapter presents the research findings and discusses the findings concerning the research questions and propositions in Chapter 2.

The research did not have any demographic considerations, it was, however, purposively addressed to respondents who have served or are serving in executive positions, Chief Executive Officers, or Board Members of the Regional Electricity Distribution companies in Namibia. The data was collected from eleven participants that positively accepted the invitation. The profile of the respondents is presented in Table 4.1-1 below.

Table 4.1-1: Profiles of respondents by positions

Description of respondent type	Number sampled
Number of Chief Executive Officers	1
Number of Executive Managers	7
Number of Board of Directors	3
TOTAL number of respondents	11

Because this is a qualitative study, the findings, and their discussion are presented together. The chapter, therefore, starts by presenting the findings and discussions about Proposition 1, followed by Proposition 2, and finally Proposition 3. The chapter ends with a summary of the findings.

4.2 Findings pertaining to Proposition 1

The first proposition is that leadership attributes determine the effectiveness of a utility leader. in this section, the results are presented as per emerging themes from the interview participants. These themes are leadership by definition, the leadership attributes and leadership challenges as experienced by the respondents. The results are presented in a table format, whereby column one,

indicates the three themes, while column two presents the interview participants' comments. The themes were deduced from the discussions held with the interview participants as they answered the research questions. Table 4.2-1 below summarises the findings of this proposition.

Table 4.2-1: Findings pertaining to proposition 1

Theme	**Interview Participant's views/comments**
Defining Leadership	Interview participants stated that leadership is about having a vision, inspiring, goal setting, influencing, helping, being available, forward-thinking, leading and directing, being a servant, unifying, and setting the tone to achieve the objectives of an organization.
Leadership Attributes	Interview participants suggested that a utility leader's attributes should centre around, understanding, communication, listening, decisiveness, fairness, transparency, self-awareness, integrity, empowerment, empathy, collaboration, consultation, exemplary, selflessness, trust, respect, discipline, and participation. persuasion, engaging, dynamic, pragmatic, firm and tolerant of others' views.
Leadership Challenges	Interview participants observe the leadership challenges including, buy-in, being undermined, disrespect, rigidness, reluctance, indecisiveness, no teamwork, not living the values, misunderstanding, political challenges, lack of

	knowledge and skills transfers, egotism and competition.

Table 4.2-1 above, presents the summarised findings on the interview questions that relate to proposition one. The section below discusses these results in detail relating them to the literature review.

In the literature, leadership is defined as the ability to influence followers towards achieving a common organisational goal or objectives (i Solà et al., 2016). These sentiments were shared by interview participants 5, 6 and 8. Interview participant 5 states that “leadership is a process of influence, influencing other people to follow your ideas or vision”. While Interview Participant 6, stressed that, “in business, leadership is about giving guidance, the vision of where the organisation want to go, want it wants to achieve and a leader, then charges the way that his followers need to follow”. Eventually, “leadership is about the capability to influence good corporate governance at the business level in any given situation” according to interview participant 8.

The Transformation theory of leadership asserts that leadership is about bringing the leaders need to interact with followers for a common purpose and the general good of the organization (Nawaz & Khan_ PhD, 2016). Hence, interview participant 1, argues that leadership is about being available to help and not being a hindrance. Interview participant 2 suggests that leadership is about inspiring the followers, and interview participant 4 urges that, leadership is that “aspect of servant-ship, showing the direction, bringing the team together, to achieve whatever goal one has set themselves for or to achieve”. Further, Interview Participant 11 states that leadership must be “inspiring and creating a sense of ownership”. These views of the three participants echo Ulrich (2013), who states that the ultimate role of leadership is to bring together both the organization and the individuals towards solving the customer's challenges.

To lead an organization, one needs to be prepared to work with individuals of diverse backgrounds and be prepared to comprehend institutional dynamics,

especially in the field of energy and electricity, in particular, which is impactful to all stakeholders. A leader's attributes are those qualities that define an individual value and define their approach to leading authentically. Authentic leaders understand and know themselves and their values, and practices and stick to their principles, empower people to lead, and always stay grounded (George et al., 2007).

According to interview participant 1, self-awareness and trust are the main attributes. Because if you are not aware of yourself, you will not know how to approach the next person, so you can draw the best out of them. Interview participant 2 states that transformational leadership is needed, in that, it is about imparting knowledge and empowerment and having an open-door policy. Another required attribute according to Interview participant 3, is listening. A leader must be a good listener, and "must understand themselves before you get to understand others". The same participant further went on to state that, a leader must "have emotional intelligence and integrity in every situation", which therefore borders on authentic leadership. Interview Participant 6 stressed that nothing is achieved without proper communication, hence, a leader must be able to consult, and communicate his vision and objective of the institutions.

According to interview participant 1, "leading people is a complex thing". This is because of various leadership challenges including rigidness and reluctance, especially to the uptake of technology in the electricity industry. Another issue as expressed by Interview Participant 11 is that "there is a visible lack of confidence in decision-making, which results in critical strategic areas of improvement left hanging". Utility leaders cannot afford to be indecisive.

Although there are young people with good qualifications, the people are still "scared of change", says Interview Participant 1. This situation can arise when there is no buy-in. Interview Participant 6 indicated that as a leader "you can have a superb vision and strategy, but when you don't have a buy-in from all stakeholders you can fail, because you can only succeed when everybody supports you". Leadership buy-in can only happen, when you consult, consider the views of everybody, including the lowest-ranked employee, and communicate effectively.

Another challenge in utility leadership, however, is the misunderstanding between management and the boards. These situations arise due to the governance structure of the REDs. According to Interview Participant 3, political office bearers are appointed as board members. Interview participant 5, states that “politicians have a challenge on their understanding of issues, mainly due to their level of qualifications, this brings an absolute misunderstanding of the legal issues of an organization”. Interview participants 3, question how, “a billion-dollar company is being directed by councilors, of whom don’t have any knowledge about electricity, nor knowledge about corporate governance, or any managerial knowledge?”. This situation brings with it mistrust between administrators and political board members because, of frequent changes that occur in political leadership. This leads to a situation where a CEO’s terms might not be renewed because of these misunderstandings, to the detriment of an institution.

An effective leader will therefore need to take cognizance of these notable challenges, ensure that, there is an absolute understanding of the environment they are operating in, avoid egoism, be consultative, listen to the plight of internal and external forces, be firm yet strict, and keep abreast with technology. Similarly, a leader must be self-aware, communicate effectively and empower others to lead. Interview participant 9, states that to be effective, leaders must “create a culture of accountability, creativity, and innovation”

Authentic leaders understand and know themselves and their values, and practices and stick to their principles, empower people to lead and always stay grounded (George et al., 2007). Good and effective leaders lead with their hands, hearts, and head. This means effective leaders in utilities must lead by example. Interview participant 1 indicated that “for me to drive people to be there, I have to be there so that I can then pull them or bring them”. Interview participant 1 further went on to say that, “people sometimes just want to see, they cannot follow you on a dream, you have to show them, on dream alone, it’s difficult”. This is a demonstration of leading with the hands.

In conclusion, to ensure leadership effectiveness, a utility leader needs to be influential and must be able to inspire people to follow or buy into his or her vision. There is no perfect way to lead, every situation will require unique leadership,

hence, a leader must be dynamic and agile. Self-awareness, and awareness of the environment the leader is operating in, to confront the multiple challenges that one may face is another consideration. In this dealing, leaders must maintain high levels of integrity, be decisive, and respectful, and trust their subjects because everything starts and ends with leadership.

4.3 Findings pertaining to Proposition 2.

The second proposition is the leadership style of a utility leader can improve the steering of an organisation. Table 4.3-1 below highlights the key findings collected from the participants. For this section, the themes are leadership styles, decision-making, and change management. Again, there are two columns with corresponding views as deduced from the participants.

Table 4.3-1: Findings pertaining to Proposition 2

Themes	**Participants' views/comments**
Leadership Styles	Participants indicated that different situations call for different leadership styles. However, one needs to have an open view and avoid details and look at the bigger picture. They indicated some leadership styles such as collaborative, participative, consultative, dictatorial, democratic, laissez-faire, persuasive, autocratic, bureaucratic, and engaging leadership styles. Coaching, team working, and transformational leadership styles.
Decision making	A leader needs to make decisions. in achieving this, leaders according to interview participants must be persuasive, decisive, fair, transparent, consistent and honest. They also need to have well-understood and clear policies and

Change Management	guidelines. In addition, they must be able to account for and take responsibility, empower the next in line, be proactive, lead by example, and provide feedback. Leaders also need to have strong oversight and awareness. To effect change and ensure things get done, leaders, according to participants, should, be exemplary, live and demonstrate the values, listen to all, reach out to the employees, and understand all stakeholders. They must also ensure a productive and healthy workforce, maintain a good culture, and ensure the right people are in the right places. Leaders must communicate effectively and must measure performance. In addition, there must be communication, support and collaboration among leaders at all levels of the organization.

This section discusses the findings in comparison to the literature review in answering the second research question in chapter 2.

In the literature, it is discussed that different circumstances and environments call for different leadership responsiveness, that is equal and able to arrest any situation. Ocheni et al. (2012) emphasized that leadership styles are different philosophical approaches that leaders adopt in piloting affairs or activities of an organisation. Reflecting on this, Interview Participant 1 suggested that, a leader has to be dynamic because a leadership style “depends on situation to situations and people to people” this echoes the literature by King (1990) and Suharyanto and Lestari (2020). It is highlighted that leaders tend to be more open to people they trust, than those they don’t trust.

While it's okay to be casual, Interview Participant 3 indicated that a leader also needs to be strict, and need to dictate and demand, otherwise you will not get results the participant warns. Results are obtained when a leader openly discusses with employees and stakeholders, listens to their issues, consults on decisions and involves everyone in the process. Interview Participant 4 sums this up by saying that, "by participative thinking, you inherently acknowledge collective thinking".

Interview participant 6 stated, "your leadership style must be able to give people comfort that they are valued, their contribution is taken, and whatever they contribute to the organization is rewarded". This happens when a leader has a democratic or laissez-faire approach to leadership as argued by Ocheni et al. (2012) and Zeleke and Kifle (2020) respectively.

Another factor that emerged is that a leader needs to make decisions quicker, however, they must be able to stand up for that decision, account and take responsibility as stated by Interview Participant 8. In the words of Interview participant 5, "If you are unable to persuade stakeholders to buy into the new strategy, your decision-making slows down, and then you are unable to respond quickly to the challenges you are facing".

Change management is another factor to measure organizational effectiveness. Contemporary utilities are faced with multiple challenges, especially with increasing penetration of renewable energy technologies, demand for services, and consumer choices. Therefore, utilities need to adopt new technologies, and business processes and implore new ways to do things faster and cheaper. This requires effective change management and decisive leadership. Interview Participant 11 amplify this by stating that, leaders must communicate, support, and collaborate with other leaders at all level of the organization, because "different departments operate differently depending on the leader within that department" hence there is no uniformity, which, therefore, prohibits change implementation.

If a leader is unable to adapt to changes quickly, it might hurt how one manages and run a business and execute that mandate. According to Interview Participant

5, “If your style is that of lay back- laissez-faire style, you will slow down on the mandate and shareholders are going to come very fast on you”.

In conclusion, steering an organization highly depends on the style of a leader. Organizations are dynamic, especially in the electricity sector with so much complexity and volatility. Therefore, utility leaders must be dynamic and agile leaders, with the ability to read the situation and apply their leadership skills consistently in such situations. Leaders need to recognize the changing needs of their organization and must be very decisive. Whilst consulting and considering the views of the subjects, leaders must be bold enough to take decisions and stand for those decisions. Leaders must recognize that they cannot satisfy the needs of everyone but should rather balance the interests of all stakeholders.

4.4 Findings pertaining to Proposition 3.

The third Proposition is that maintaining reliable supply and distribution of electricity services in a utility requires effective leadership. The themes in this section are the value of customers, the values of the suppliers and the need for service delivery in the REDs. Table 4.4-1 below indicates the findings of this proposition.

Table 4.4-1: Findings Pertaining to Proposition 3

Theme	**Participants’ views/comments**
Customers	Interview participants recognize the need for REDs to value their customers. The utility leaders should, therefore, listen to the needs of the customers, understand these needs, communicate constantly with customers, and stakeholders, and timely attend to their queries. It is also good to have call centres and service

	charters for monitoring the quality of services being offered by the RED.
Suppliers	Interview participants noted the bargaining powers of the suppliers, including bulk and complementing independent power producers within the REDs. Prosumers need to be recognized. Utility leaders need to ensure there is consistent engagement, and communication and be transparent in their dealings with the suppliers. REDs must honour their commitments and share and exchange knowledge.
Service Delivery	Respondents indicated the need for utility leaders to ensure REDs continue fulfilling their mandates. Utilities must ensure minimum power interruptions, and consider the environmental, social and governance framework. REDs must recognize the role of teamwork and that they are not in competition with anyone. REDs and utilities need to embrace technology and provide the needed services to the people. Utility leaders must also strengthen their decision-making and be future-focused, through periodic market sounding and analysis.

The below section reflects the findings on proposition 3 relative to the literature review.

The Regional Electricity Distribution utilities in Namibia were established following the adoption of the Namibian White Paper on Energy of 1998. The core mandates for these institutions are to supply and distribute electricity within their

area of jurisdiction. Accordingly, their purpose is to ensure, customers at the end of the line are provided with reliable and affordable electricity services, cut red tape and ensure appropriate maintenance of the network infrastructures.

Interview Participant 7 indicated that “the interest of customers is only to have cheaper electricity available at all times”, therefore, utilities “must approach their customers and understand their needs”. Interview Participant 5 suggests that utilities must segment their customers, because “you need targeted investments by introducing things that suit them, big business needs constant and reliable energy, but that comes at a premium”. This sentiment is indeed correct as reliable electricity comes at high costs. The cost of electricity is the main driver in customers shifting towards adopting RETs by installing solar rooftops and becoming prosumers or completely getting off the grid (Riveros et al., 2019). Hence, and according to Interview Participant 3, customers must be treated equally and given some flexibility to for instance export compensable excess energy into the grid.

Flexibility, according to Interview participant 3, is “important, especially with regards to Solar Rooftops, we have allowed them to put up solar to a certain extent, had we not allowed them, some would have gone up in arms, come off the grid completely, but because we listened to them and responded to their needs it was the only way we were able to keep customers”. The competition for the wallet of customers can only be won by utilities if utilities adopt new technologies and consistently engage their customers while responding to their needs as quickly as possible (Bigliani et al., 2015). Utility leaders must therefore strive for customer satisfaction because, according to Interview participant 7, “a satisfied customer will always feel guilty about leaving”. While interview participant 10 states that “the secret to keeping a customer is to satisfy their needs”.

Another factor that utility leaders must consider is the bargaining power of bulk energy suppliers. REDs do not generate electricity and mainly rely on the generation and transmission utility for the purchasing of electricity units, which they sell to their end consumers (Nampower, 2019). However, REDs such as Erongo RED and CENORED have supply agreements with Independent Power

Producers for diversification of their energy mixes and procure small quantities of energy from these. Therefore, the REDs must have business applications or protocols that are “in sync with good business practices” according to interview participant 8. According to interview participant 6, REDs must honour their electricity accounts in full as one of the good business practices.

There must, therefore, be consistent stakeholder engagements, transparency and regular communication between REDs and bulk energy suppliers. Interview Participant 3 indicated that utility leaders must create platforms to exchange notes with bulk suppliers, have one-on-ones and provide feedback through telephone or email communications.

The object of distribution utilities is to ensure service delivery. Interview Participant 4 stated that utility leaders must make everyone understand why REDs exist, “what and who do we serve, and by when we should serve them”. Servant-ship is at the core of utility business transactions as demonstrated in (Heyns et al., 2020).

With similar views was, interviewed Participant 3, who indicated that they “have made the people understand the importance of service delivery and payments for services that are being delivered”. Interview participant 3 went on to say, “If the leadership is not correct, we will be left not able to supply electricity to our clients, projects will not be carried out, such as bulk upgrades and network maintenance”. Interview participant 3 indicated that, for everyone to deliver they must be at peace and at ease. Leaders must understand “why is the person miserable, why are they disengaged”. A disengaged employee is not a productive employee, and this happens when there is no job satisfaction. Organisational leadership style “have a direct impact on the relations between leaders and an employee, thus affecting both the latter’s performance, job satisfaction and the organisation’s total coherence” (Zeleke & Kifle, 2020, p. 29). The sentiments expressed herein by participant 3, tend to support the conceptual framework as discussed in chapter 2 and as argued by Zeleke and Kifle (2020). It, imply that the level of service delivery influences the leadership style which also influences the followers to buy-in and motivation.

Electricity is a regulated industry; hence, utility leaders, therefore, need to ensure that employees are aware of regulations, standards and service delivery charters. The services charters are instruments that are used as a yardstick to ensure service provisions of a utility and encompass all stages in the provision of electricity services, such as turnaround times for applications, quotations, connections, and power restorations period.

For employees to deliver, utility leaders must ensure that the employees are well looked after and that the right people are employed at the right positions. Interview Participant 6 indicated that electricity is no longer a luxury but a basic need. Therefore, it does not matter which RED is serving whom, consumer experience for electricity in Namibia must be the same regardless of which RED is serving which region. This is because REDs ought not to compete with each other but must play a complementary role especially when it comes to issues of tariffs. Interview participant 6 went on to say that, The RED model supports the issue of cross-subsidization, as those who cannot afford a high-end engineer can leverage that engineer that the RED company has and would not have to carry that cost. Participant 5 further supports the RED model by stating that “the Idea of the REDs is the best because it was meant to assist small local authorities to provide better services”.

Service delivery is however impacted by leadership instability as a result of the directorship of the REDs. According to interview participant 3, the issue of directorship of the REDs needs to be reviewed, because, “you have a situation where an employee is a councilor, and also a union member, this person represents the shareholder as well, so it brings confusion and conflict in running the affairs of an organization”. Managing conflict is the primary role and leadership and leaders must be situation aware and behavior ready to deal with such conflicts (Thompson & Glasø, 2018). These views are further supported by interview participant 5, who states that “political leaders leading a corporate entity does not sit well with business principles”. This is because politicians do not understand the mandates of the REDs and are more into satisfying their constituencies to retain votes.

REDs must therefore work on what they do best, to justify their existence or face political rash, or consumer uprising. Interview participant 5, suggests that REDs must try to reduce their operational costs and must ensure everyone that needs electricity has access, to increase revenues and be able to pay more surcharges and dividends. Interview participant 7 states that utility leaders must understand their customer bases and take cognizance that their continued existence depends on the customers. Utilities must therefore continue to invest in infrastructure to minimize outages. Interview participant 7 also cautioned that "REDs are not competitors, so they have to share knowledge, by creating a platform to share ideas and exchange notes".

Interview Participant 11, states that REDs need to strengthen their decision-making and be future-focused. To do this, they need to ask themselves do they differentiate themselves, from the rest. In other words, what is the REDs unique value proposition and what value do they add to the stakeholders? REDs must therefore perform the Strength Weakness Opportunity and Threats (SWOT) analysis all the time. Market sounding and scanning the environment is one of the strategic leadership tools (Ulrich, 2013). Participant 11 further says that REDs needs to continuously review existing strategies to align with market trends, and have a clear business continuity plan, with purpose-driven objectives to meet current and future demands. Diversifying the workforce to attract new ideas and knowing what competitive advantage the RED has and should be considered.

Another finding to emerge from this study is the leadership appointment at the board level of the REDs. The findings revealed a high degree of misunderstandings between political leaders as board members and accounting officers or executives of the REDs. The view is that Board members of the REDs, as ultimate leaders, must be individuals with a certain degree of academic qualifications, experience and knowledge both in company administration and at least have a certain understanding of the industry.

In conclusion, the ultimate goal of a utility is to deliver quality services, particularly supply and distribution services. Customers need to have electricity when they need it, and suppliers need to be paid when their accounts are due. It is, therefore, needed to recognize the role of consumers and suppliers in the electricity value

chain. Utility leaders need to listen to the consumer's needs and respond to those changing needs as quickly as possible. Similarly, REDs must have a transparent relationship with bulk suppliers because, in the end, they are all serving one customer at the end of the line. The REDs need to ensure they maintain their networks, to ensure reliable and affordable quality electricity to customers. In so doing, REDs will maintain their relevance and execute their mandates effectively.

4.5 Summary of the findings

There are multiple perceptions of utility leadership and leadership attributes. Utility leaders recognise that there is no single definition of leadership, but that leadership is about having a vision, goal setting and about influence.

Every leader is unique in their way, but participant recognises that leaders need to have certain qualities to be able to effectively lead their subjects. Some of these attributes include collaboration, collective thinking, consultative, participative, listening and communication. Leaders also need to exercise mutual respect, and trust, be fair, helpful and be exemplary in their dealings. Therefore, leaders must be authentic.

While there are many different leadership challenges, leaders need to ensure that they remain grounded and focus on the bigger goal and objectives. Every situation presents an opportunity to exercise different leadership styles, utility leaders, therefore, need both elements of democratic, autocratic or laissez-faire, transformational and coaching leadership styles.

Utility leaders recognize the role of customers in their business. Hence, they stressed the need for the continuous ability to listen to these customers through regular engagements. Organisations need to respond to the changing needs of customers otherwise they risk losing them to new market participants. Participants also understand the need for REDs to maintain good relationships with suppliers, including the need to honour their commercial obligations.

The findings also confirm the theoretical conceptual framework as proposed in chapter 2. This means leaders need to consistently adapt their leadership styles to the organisation's performance and employee stratification levels.

Finally, the participant recognises that REDs must ensure they deliver on their mandates otherwise there is going to be a public outcry on their existence. The REDs need to relook into the appointment of board members as the ultimate utility leaders and develop new board charters that speak to their leadership needs.

4.6 Comparison of literature review and own findings

The Table 4.6-1 below provides a summarised comparison between the data obtained in the literature and the research findings.

Table 4.6-1: Comparison of literature review and findings

RQ #	State Research Question	Pro #	State Proposition (literature review response to RQ)	Findings from own study
1	What are the attributes of effective leaders in an electricity distribution utility?	1.	Leadership attributes determine the effectiveness of a utility leader. Leaders must be, intelligent, have the verbal ability, and reasoned judgment, and should be emotionally stable. Other attributes are vision, honesty, integrity trust, services, modelling pioneering, communication, credibility, competence, stewardship, visibility, influence, persuasion, listening, encouragement, teaching, delegation	The study found that effective leadership attributes include: understanding, communication, listening, decisiveness, fairness, transparency, self-awareness, integrity, empowerment, empathy, collaboration, consultation, exemplary, selflessness, trust, respect, discipline, and participatory. persuasion, engaging, dynamic, pragmatic, firm and tolerant of others' views. These attributes play a major role in the effectiveness of a utility leader.
2.	How have the leadership styles of Namibian electricity distribution utility	2.	The leadership style of a utility leader can improve the steering of an organisation. Servant Leadership. Democratic Leadership, Autocratic leadership, and the	The findings indicated that indeed the leadership styles of a utility leader when applied correctly have a positive bearing in steering an organisation.

RQ #	State Research Question	Pro #	State Proposition (literature review response to RQ)	Findings from own study
	leaders steered the affairs of their organizations?		Laissez-faire leadership style. These styles are dependent on leadership theories such as Transformation theory, Great Man Theory, Trait theory, Transactional theory, and contingency theory.	They indicated some leadership styles such as collaborative, participative, consultative, dictatorial, democratic, laissez-faire, persuasive, transformational, coaching autocratic, bureaucratic, and engaging leadership styles. The participants recognize the need for succession planning, performance management and situational leadership. These coincide with transformation, transactional and contingency theory respectively.
3.	What role does the Namibian electricity distribution leadership have on the supply and distribution of electricity services?	3.	Maintaining a reliable supply and distribution of electricity services in a utility requires effective leadership. Electricity Distribution Utilities need to ensure they maintain an effective service to retain customers and remain sustainable and profitable. Similarly, they also have to	Respondents indicated the need for utility leaders to ensure REDs continue fulfilling their mandates, by ensuring reliable and affordable electricity services. Utilities must ensure minimum power interruptions, and consider the environmental, social and governance framework. REDs must recognize the role of

RQ #	State Research Question	Pro #	State Proposition (literature review response to RQ)	Findings from own study
			ensure there they maintain good relationships with the suppliers of bulk electricity, such as the national utility or independent power producers. Utility leaders must ensure thy improve performance standards in service delivery. Ensure local authorities remain financially stable despite not being directly responsible for electricity services, through the provision of surcharges. Improve the operation and maintenance activities. Improve funding and sustainable investment in electrification. Improve planning of rural and urban electrification and project execution. Ensure consumer	teamwork, and that they are not in competition with anyone. REDs and utilities need to embrace technology and provide the needed services to the people. The utility leaders should, therefore, listen to the needs of the customers, understand these needs, communicate constantly with customers, and stakeholders, and timely attend to their queries. Leaders need to consistently adapt their leadership styles to the organisation's performance and employee stratification levels. Utility leaders need to ensure there is consistent engagement, and communication, and be

RQ #	State Research Question	Pro #	State Proposition (literature review response to RQ)	Findings from own study
			centricity and improve response to customer complaints. Attract and retain the skilled technical and administrative workforce.	transparent in their dealings with the suppliers. REDs must honour their commitments, and share and exchange knowledge. Political leaders that are appointed as board members of the REDs present a challenge to the utility leadership.

CHAPTER 5. CONCLUSIONS & RECOMMENDATIONS

5.1 Introduction

This chapter provides a synopsis of the research findings of the proposition as derived from the research questions discussed in Chapter 1. The chapter concludes by interpreting these findings to answer the research questions. Each research question is answered in each section. The chapter ends with a recommendation and possible future work.

5.2 Conclusions regarding research question 1

The first research question was what are the perceived attributes of effective leaders in an electricity distribution utility? The proposition made to this question is leadership attributes determine the effectiveness of a utility leader.

The question gauges to understand the perceived attributes of effective leadership in an electricity distribution utility. Put differently, the question aims to find out what it takes to be an effective leader because utilities exist to deliver services to customers. The success of utilities in venturing into new businesses and delivering quality services highly depends on the leadership of the organisation (Heyns et al., 2020). Similarly, “successful organisation change is dependent on effective leadership” (Gerstberger & Gromala, 2010, p. 46). Business leaders in the electricity supply industry are operating under volatile, uncertain, complex, and ambiguous environments (Hart et al., 2009). Many challenges including regulation, environmental, political, social, and economic issues require unique leadership talent to be resolved comprehensively, for the benefit of society.

According to literature, good and effective leaders are those that lead with their heads, heart, and hands, which makes them authentic leaders (George et al., 2007). Authentic leaders understand and know themselves and their values, and practices and stick to their principles, empower people to lead, and always stay grounded (George et al., 2007). Effective leaders have certain values or attributes

including being intelligent, having the verbal ability, reasoned judgment, and should be emotionally stable. Other attributes are vision, honesty, integrity, trust, services, modelling pioneering, communication, credibility, competence, stewardship, visibility, influence, persuasion, listening, encouragement, teaching, and delegation.

From the findings, respondents indicated the attributes of effective leaders to include, being understanding, communication ability, listening skills, decisiveness, fairness, transparency, self-awareness, integrity, empowerment, empathy, collaborative, consultation, exemplary, selflessness, trust, respect, discipline, and participatory. persuasion, engaging, dynamic, pragmatic, firm and tolerant of others' views.

In this research question, there are no fundamental differences between the literature and the findings. However, what is notable is that every leader has personal values that they identify with. The findings revealed the participants view on the way their companies operate, which is a reflection of the company's organizational culture. The assumption made that leadership is not innate but can be learned and was therefore validated because three of the 11 participants indicated that, training and development and having a good culture is required to overcome leadership challenges.

5.3 Conclusions regarding research question 2

The second research question was about how the leadership styles of electricity distribution utility leaders steer the affairs of an organization. The proposition to this question is, the leadership style of a utility leader can improve the steering of an organisation.

The question attempted to provide attributes that accompany effective leadership styles applicable in a utility environment. Business leaders provide influence in the way the organisations adapt to changing business dynamics and environment, coupled with differing needs of suppliers and consumers of electricity. Utilities are faced with different problems and challenges, and how they adapt their service delivery ethos depends on the type of leaders they have.

According to Ocheni et al. (2012, p. 2), “leadership has to this end become so pivotal that both success and failure of any organisation are attributed to the leadership style of the person or body of persons that pilots the activities of that system”. Leaders need to respond effectively to changes in government policy, regulatory measures, industry practices, consumer attitudes and behavioural change regarding energy use, technology adoption, talent management, and employee retention. In addition, leaders need to ensure the sustainability of their utilities by ensuring they explore cheap alternative energy, mitigate yearly annual tariff increases, manage their organisation effectively, and ensure reliable and quality service provision to the consumers in as to safeguard stakeholder value creation.

Leadership styles include the Laissez-faire leadership style, autocratic/despotic and democratic styles of leadership, transactional, transformation and servant leadership.

Servant leaders according to Robert Greenleaf’s writing on servant leadership, includes, listening, empathy, awareness, healing, foresight, stewardship, building community and commitment to the growth of people (Heyns et al., 2020; Minnis & Callahan, 2010). The laissez-faire style of leadership is an approach to leadership that avoids micromanagement of subordinates, subordinates are allowed to carry out their functions and activities as they see fit (Ocheni et al., 2012).

Zeleke and Kifle (2020) assert that the Laissez-faire leadership style allows leaders to be hands-off while group members make the decisions, which is also known as delegative leadership. While the Autocratic or Despotic style of leadership implores that the leader does all the thinking and take decisions, while subordinates are only there to concede and implement the decisions as assigned to them without any input, a command and control approach (Ocheni et al., 2012).

From the findings, the respondents identified the following leadership styles, Collaborative, participative, consultative, dictatorial, democratic, laissez-faire, persuasive, autocratic, bureaucratic, and engaging leadership styles. The participants recognize the need for succession planning, performance

management and situational and servant leadership. These coincide with transformation, transactional and contingency, and the servant as leader theory respectively.

It can be deduced here that, there are no definite leadership styles for utility leadership. Utility leaders must be dynamic and agile leaders, with the ability to read the situation and apply their leadership skills consistently in such situations. Leaders need to recognize the changing needs of their organization and must be very decisive. While it is good to consult and consider the views of the subjects, leaders must be bold enough to take decisions and stand for those decisions. Leaders must recognize that they cannot satisfy the needs of everyone but should rather balance the interests of all stakeholders. These will result in the effective steering of an organization.

5.4 Conclusions regarding research question 3

The third research question was about the role leadership has in the effective supply and distribution of electricity services. The proposition made to this question was that, maintaining reliable supply and distribution of electricity services in a utility requires effective leadership.

The question implored the effect of leadership on the supply and distribution of the electricity value chain. Electricity Distribution Utilities need to ensure they maintain an effective service to retain customers and remain sustainable and profitable. Similarly, they also have to ensure they maintain good relationships with the suppliers of bulk electricity, such as the national utility or independent power producers. In the wake of challenges facing the distribution utilities globally and locally, Namibia distribution utilities need to play a leading role to address issues and respond to consumer behavioural changes, such as the shift to low carbon, low energy use products, and demand for reliable services (von Oertzen, 2019).

Distribution utilities are not just faced with the challenge of maintaining their current customer bases, but also need to find new sales, and create new revenues by expanding grid connections and finding new service areas to derive

additional revenues. New independent power producers are now competing with the traditional monopolies such as Nampower, as optional suppliers of energy to distribution utilities albeit at cheaper prices. These practices and supply dynamics put utilities at grand risk, hence the need to adapt their energy service delivery practices to ensure the grid and the utilities remain relevant (Hamwi et al., 2021).

From the literature, Leadership is needed in maintaining effective supply and distribution of electricity services. Electricity Distribution Utilities need to ensure they maintain an effective service to retain customers and remain sustainable and profitable. Similarly, they also have to ensure that they maintain good relationships with the suppliers of bulk electricity, such as the national utility or independent power producers.

Utility leaders must ensure they improve the performance standards in service delivery. Ensure local authorities remain financially stable despite not being directly responsible for electricity services, through the provision of surcharges and must improve the operation and maintenance activities of the REDs.

Utility leaders need to improve funding and find sustainable investments for peri-urban and rural electrification including project execution. Ensure consumer centricity and improve response to customer complaints. They must also aim to attract and retain the skilled technical and administrative workforce. This must be done through targeted training and development and continuous professional development.

From the findings, Respondents indicated the need for utility leaders to ensure REDs continue fulfilling their mandates, by ensuring reliable and affordable electricity services. Utilities must ensure minimum power interruptions, and consider the environmental, social and governance frameworks. REDs must recognize the role of teamwork, and that they are not in competition with anyone. REDs and utilities need to embrace technology and provide the needed services to the people.

The utility leaders should, therefore, listen to the needs of the customers, understand these needs, communicate constantly with customers, and stakeholders, and timely attend to their queries. Utility leaders need to ensure

there is consistent engagement, and communication and be transparent in their dealings with the suppliers. REDs must honour their commitments, share and exchange knowledge.

The research finds that leadership is central to the effective supply and distribution of services by Namibia's regional electricity distribution utilities. The research also finds that leaders need to consistently adapt their leadership styles to the organisation's performance and service delivery levels and employee stratification levels. Should the leadership of these organizations fail, there are risks of job losses, insufficient network maintenance increased interruptions. There are also risks of projects not being carried out such as bulk supply upgrades which will compromise the grid stability and eventually lead to network congestion and other systems instabilities. Finally, customers will find alternative cheaper suppliers of electricity and leave the grid. Leaders, therefore, need to play an active role in ensuring that REDs continue to do what they are good at, and remain sustainable and efficient.

There is a need to separate the political leadership of the REDs from administrative leadership. Board members should be appointed from the administrative arms of the shareholders.

5.5 Consistency table: Consistency table: research questions, conclusions and contribution to knowledge

Table 5.5-1 provides a concluding summary of the research question, the research proposition, the conclusion and the contribution to the literature as a result of this study.

Table 5.5-1 Consistency table: research questions, conclusions and contribution to knowledge

RQ #	State Research Question	State literature-based proposition or hypothesis	State conclusion or answer based on own research	Highlight key differences between your initial propositions/hypotheses and your findings
1	What are the attributes of effective leaders in an electricity distribution utility?	Leadership attributes determine the effectiveness of a utility leader.	Effective leadership is dependent on many attributes. There is no defined set of attributes that can define a single leader, each attribute can be applied depending on the nature and context of an organisation.	The findings supported the existing literature that, there are certain attributes required to be an effective leader, but these are not finite. They all depend on the personality of an individual, the context of the organisation they work in, and many other situations.
2.	How have the leadership styles of Namibian electricity distribution utility leaders steered the	The leadership style of a utility leader can improve	There are no one particular leadership styles for utility leadership. Utility leaders must be dynamic and agile leaders, with the ability to read the situation and apply their leadership	The findings supported the literature that, the success of an organization depends on the leadership style of a leader. There are also many leadership styles, and there is no perfect one to lead a utility.

RQ #	State Research Question	State literature-based proposition or hypothesis	State conclusion or answer based on own research	Highlight key differences between your initial propositions/hypotheses and your findings
	affairs of their organizations?	the steering of an organisation	skills consistently in such situations. This will assist them in steering their organizations towards reaching their goals.	
3.	What role does the Namibian electricity distribution leadership have on the supply and distribution of electricity services?	Maintaining reliable supply and distribution of electricity services in a utility requires effective leadership	Utility leaders have a significant role to play in ensuring that utilities deliver services in the supply and distribution of the electricity value chain.	Service delivery is the main objective of any utility. Leaders need to consistently adapt their leadership styles to the organisation's performance and employee stratification levels. Leaders need to balance the interests of customers at the end of the line, and that of suppliers at the other end and ensure the institution deliver the services they were established to provide. Political leadership

RQ #	State Research Question	State literature-based proposition or hypothesis	State conclusion or answer based on own research	Highlight key differences between your initial propositions/hypotheses and your findings
				creates friction in the administration of the REDs, and this need to be revised.

5.6 Recommendations

The following recommendations are made to the stakeholders as follows:

Although there are no particular attributes that make an effective leader, utility leadership inclusive of board members, the executives and managers and supervisors need to undertake leadership training or courses to improve their leadership skills. With the current challenges facing the REDs and the growing demand for services by stakeholders, utility leaders need to adopt leadership styles, particularly of servant leadership and transformational leadership. These leadership styles put the interest of customers and followers first, which will result in effective service delivery. Leaders are recommended to constantly monitor levels of performance for the organisation, monitor levels of employee engagement, motivation and adapt their leadership styles. This can be done using leadership survey tools as well as performance management systems.

Leaders are also recommended to share their leadership challenges in managing their particular organisations to learn from each other. Policymakers particularly the Ministry of Mines and Energy, need to ensure a conducive environment is created for organisation leaders to thrive.

It's also recommended that, leaders need to balance the interests of customers at the end of the line, and that of suppliers at the other end and ensure the institution delivers the services they were established to provide. Utility leaders are recommended to improve funding and find sustainable investments for peri-urban and rural electrification including project execution, and investment in the maintenance of distribution networks and systems.

In arresting the friction created by political leadership, it is recommended that business models and the governance framework for the REDs be revised. This could include, creating a statuary act for the REDs as well as revising the mandates of these institutions.

It is further, recommended that industry leaders create platforms to exchange knowledge and share success stories on how their specific institutions have

overcome certain challenges. REDs must also conduct staff exchanges for employees to share experiences and harmonise their operations.

Relying on one method to collect data was a limitation in this study, it is therefore recommended that a mixed or multi-method qualitative study be used to reach a large population, especially during periods of pandemics.

5.7 Suggestions for further research

This study looked at the leader's perceptions of leadership in the REDs. Since most organisations are becoming consumer-centric, further studies are suggested on the customer's and suppliers' perception of the leadership of electricity distribution utilities in Namibia. In addition, a study on the governance framework appropriate for the REDs to address the perceived conflict between board members and the executives are suggested. Such a study will highlight the impact of political appointees on the Boards of the REDs in Namibia, how it affects the operations of the REDs, and propose alternative structures and governance framework.

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ANNEXURE A: Participant Information Sheet

Research title: The perceived **leadership attributes** of **leaders** in Namibian **regional electricity distribution utilities.**

Dear valued participant,

My name is Jason Iyambo and I am a Master of Management student at the Witwatersrand University in Johannesburg, South Africa. In completing my studies, I am conducting research on The perceived **leadership attributes** of **leaders** in Namibian regional **electricity distribution utilities**. My findings could be of help to policymakers, the electricity industry, leaders, and employees of the utilities.

Owing to your industry knowledge, skills, and experience as an Executive Manager, /Chief Executive Officer/ Board Member at CENORED/ NORED/ Erongo RED, I am humbly appealing for your participation in my study through a one-hour face to face interview. This interview can take place at any place of your choice and convenience and where there would be minimum disturbances or interruptions. The interview will be highly confidential as your name, organization, and any other information that could possibly identify you will not be mentioned or recorded. All interview materials will be locked up in a cupboard, or saved on a password-protected laptop, and shall not be shared with any other person. A thematic coding process will be used in the analysis of my results, and for the presentation of my final research report.

I further request that you allow me to electronically record the interview to ensure I have a reference point, should I miss anything you tell me, this will ensure the interview is captured correctly. All recordings shall be destroyed once the research is accepted and completed. Kindly take note that, your participation is completely voluntary, and you have the right not to answer any specific question and may choose to withdraw from the study, without any negative consequences on your part.

Further on, there will be no monetary incentives or benefits in participating in my study. However, I will be gland to share the summary of the finding results should you feel the need. Should you have any further questions on this study, kindly contact me or my supervisor on the below contacts.

I thank you for your valued willingness to participate in this study,

Your Faithfully,

Jason Iyambo, jayiyambo@gmail.com, +264 811 427025

Supervisor Name: Kurai Chitima, kuraic@gmail.com +27 83961 1461

ANNEXURE B: Participant Information Sheet

Participant consent form

Research title: The perceived **leadership attributes** of **leaders** in Namibian regional **electricity distribution utilities.**

Student name: Jason Iyambo

I, ……., agree to participate in the research project named above. The study has been explained to me and I understand what my participation will involve. Please circle the relevant options below.

a.	I agree that my participation will remain confidential	YES NO
b.	I agree that my participation is voluntary and that I can withdraw at any time without consequence	YES NO
c.	I agree that the researcher may use anonymised quotes from my interview in the research report and publications	YES NO
d.	I agree that the interview may be audio recorded	YES NO
e.	I agree that I will not be remunerated for participating in the study	YES NO

Signature: ……

Name (optional) ……

Date ……

ANNEXURE C: Research Instrument

Interview Guide

Interview Guide

Part A: Research Question 1: What are the attributes of effective leaders in an electricity distribution utility?

Themes: Leadership and Leadership Attributes

Interview Question 1. How would you define the word leadership?

Interview Question 2. What leadership attributes do you identify with?

Interview Question 3. How do you describe yourself as a leader?

Interview Question 4; What leadership challenges are you experiencing?

Interview Question 5. What makes an effective leader in the electricity distribution industry?

Interview Question 6. How do your leadership attributes assist you in effectively managing organizational change management?

Interview Question 7. Is there anything else you would like to mention on leadership and leadership attributes in your organization?

Part B: Research Question 2: *How have the leadership styles of Namibian electricity distribution utility leaders steered the affairs of their organizations?*

Theme: Leadership Styles

Interview Question 8. What leadership styles do you follow?

Interview Question 9. How have these leadership styles assisted in your decision-making?

Interview Question 10. How have these leadership styles influenced change in your organization towards adopting new strategies?

Interview Question 11. How have these leadership styles assisted in dealing with diverse interest groups in your company?

Interview Question 12. How does your leadership style ensure employee satisfaction, performance, and retention?

Interview Question 13. How have your leadership styles ensured things get done effectively in your organization?

Part C: Research Question 3. What role does the Namibian electricity distribution leadership have on the supply and distribution of electricity services?

Themes: Utilities Service Delivery

Interview Question 14. How do you ensure a healthy relationship with your bulk electricity suppliers?

Interviews Question 15. How does your leadership ensure service is delivered in compliance with the electricity distribution utility service charter?

Interview question 16. How does your leadership assist in managing the diverse interests of energy consumers?

Interview Question 17. What leadership strategies are you implementing to ensure your company retains its customers?

Interview question 18. What leadership strategies are you implementing to retain and attract new energy suppliers such as IPPs & Prosumers respectively?

Interview Question 19. What are the risks, should your organization not provide the necessary leadership in the provision of electricity services?

Interview Question 20: What can your organization's leadership do, in ensuring you continue fulfilling the rationale for the establishment of the REDs?

Annexure D: Thematic Analysis Table

Attached to the report.

ANNEXURE E: Ethics Approval Notification

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg

Wits Business School

Wits Business School Ethics Committee
Constituted under the University Human Research Ethics Committee (Non-Medical)

Ethics Clearance Certificate

Ethics protocol number: WBS/EL1966873/114
This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below).

Project title	The perceived leadership attributes of leaders of Namibian electricity distribution utilities
Investigator / Researcher	Mr Jason Iyambo
Nature of Project	MM (Energy Leadership)
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed confidentialty.
Issue Date of Certificate	2022-06-09
Expiry date	Date of submission of the project report
Chairperson	Prof Anthony Stacey ☎ +27 11 717 3587 +27 82 880 4531 anthony.stacey@wits.ac.za

Declaration by Researcher

One copy must be signed by the Researcher and returned to the Chairperson of the Wits Business School Ethics Committee.

I fully understand the conditions under which I am authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I undertake to resubmit the protocol to the Committee.

Signature

2022-06-09
Date:

ANNEXURE F: Permit Letters

Permit letters were obtained from Erongo RED, NORED and CENORED.

TEL +264 (64) 201 9000 TOLL FREE 96000 FAX +264 (64) 201 9001 EMAIL support@erongored.com.na
ERONGO RED BUILDING REG NO 2004/074 91 HAGE GEINGOB STREET P O BOX 2925 WALVIS BAY NAMIBIA

University of the Witwatersrand

Private Bag 3
WITS
Johannesburg, South Africa
2050

Enquiries	Alta Smit
Physical Address	91 Hage Geingob Street
Telephone	+264 (64) 201 9000
Facsimile	+264 (64) 201 9001
E-mail	fmbango@erongored.com.na
Date	24 June 2021

To Whom It May Concern

Dear Sir/Madam

Permission to Conduct Academic Research

This letter provides permission and authorise **Mr Jason Iyambo,** student number 1966873, of the Witwatersrand University in South Africa, to conduct research through interviews with some of our organisation leaders on the following subject matter: *"The Perceived Leadership Attributes for Evolving Electricity Distribution Business Models of Regional Utilities in Namibia."*

The interviews shall be made with the appropriate members of the Executive Management Committee, (EXCO), the Chief Executive Officer, and the Board.

The information provided shall be the views of that individual on the title of the research and this information must only be used for the purpose of the research and must not be published elsewhere.

All interview information will be treated as confidentiality.

Authorised by:

Erongo Regional Electricity Distributor (Pty) Ltd
ERONGO red
25 JUN 2021
Office Of The Chief Executive Officer

Fessor Mbango
CHIEF EXECUTIVE OFFICER

NORED
Electricity For Development

NORED ELECTRICITY (PTY) LTD | P.O. BOX 639 | ONDANGWA | NAMIBIA | TEL: +264 83 282 2100 | FAX: +264 83 282 901
24 HOURS CUSTOMER REPORTING CENTRE TEL: +264 83 282 2123 | TOLL FREE: 08000 00100 | www.nored.com.na

Enquires: Ms Etegameno Indongo-Antindi
Tel.: 264 83 282 2147

23 June 2021

Mr Jason Fiindje Iyambo

P O Box 971

Ondangwa

Email: jayiyambo@gmail.com

Dear Mr Iyambo,

RE: PERMISSION TO CONDUCT ACADEMIC RESEARCH

Title: The Perceived Leadership Attributes for Evolving Electricity Distribution Business Models of Regional Utilities in Namibia.

The subject matter refers.

This letter provides permission and authorise **Mr Jason Iyambo,** student number 1966873, of the Witwatersrand University in South Africa, to conduct research through interviews with some of our organisation leaders.

The interviews shall be made with the appropriate members of the Executive Management Committee, (EXCO), the Chief Executive Officer, and the Board.

The information provided shall be the views of that individual on the title of the research and this information must only be used for the purpose of the research and must not be published elsewhere.

All interview information must be treated with confidentiality.

Authorised by:

NORED ELECTRICITY (PTY) LTD
OFFICE OF THE
CHIEF EXECUTIVE OFFICER
2021 -06- 2 3
P.O. Box 639 Ondangwa
Tel: 083 282 2101
Fax: 083 282 2901

FILLEMON NAKASHOLE
CHIEF EXECUTIVE OFFICER

DIRECTORS: MR. D H HAMUTENYA (CHAIRPERSON), MR. B MBUERE UA MBUERE (DEPUTY CHAIRPERSON), MR. W MERTENS, MR. B WALUBITA, MR. F H KOITA, MR. J K UUSHINI.
Co.Reg. No. 2001/0228

P. O. Box 560,
Otjiwarongo,
Namibia.

Tel: 067 314 100
Fax: 067 304 701
E-mail: ukasete@cenored.com.na

Dear Mr Jason Iyambo,

SUBJECT: PERMISSION TO CONDUCT ACADEMIC RESEARCH

The subject matter refers.

Research Title: *The Perceived Leadership Attributes for Evolving Electricity Distribution Business Models of Regional Utilities in Namibia.*

This letter provides permission and authorises Mr Jason Iyambo, student number 1966873, of the Witwatersrand University in South Africa, to conduct his research through interviews with some of CENORED leaders.

The interviews shall be conducted with the Network Engineering & Expansion department, the office of the Chief Executive Officer, and one member of the Board of Directors of CENORED.

The information provided herein shall be the views and opinions of that individual on the title of the research and this information must only be used for the purpose of the research and must not be published elsewhere.

All interview information must be treated with confidentiality.

Authorised by:

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Robert Kahimise
CHIEF EXECUTIVE OFFICER

Company Registration no: 2003/0153
Directors: M. Matyayi (Chairperson), K P Iyambo (Deputy Chairperson), R. Kahimise (Chief Executive Officer)
A. Barlow, V. Gabriel, J. A. /Urib, K. Sinvula, E. Katjiku, I. David,
U. Kasete (Board Secretary)

Shareholders: Tsumeb Municipality, Grootfontein Municipality, Otjiwarongo Municipality, Outjo Municipality, Khorixas Town Council, Okakarara Town Council, Otavi Town Council, Kamanjab Village Council, Otjozondjupa Regional Council, Kunene Regional Council, Oshikoto Regional Council. NamPower