The role of trade unions in shaping the Just Energy Transition in South Africa: A case study of Komati Power Station

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A research report 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, 2024

ABSTRACT

The Just Energy Transition (JET) represents a critical shift in South Africa's energy landscape. As such, there is a need for a socially inclusive and environmentally sustainable energy transition from fossil fuels to renewable energy sources. This study investigated the role of trade unions in shaping the JET, through a case study of the Komati Power Station located in Mpumalanga province, South Africa. This case study explored how trade unions influence policy negotiations, and advocate for worker rights, and community benefits during the decommissioning of coal-powered plants. The study deployed a qualitative methodology to evaluate the role of trade unions in shaping the JET. The analysis revealed that trade unions serve as one of the stakeholders that advocate for job security, reskilling initiatives, and equitable social outcomes in the JET process. In-depth interviews were conducted with union representatives, power station workers, and policymakers. The study found that interests of labour representatives and those of environmentalists as well as policymakers were misaligned. Furthermore, the study revealed that effective collaboration between trade unions and responsible government policymaking entities is essential to ensure that the JET transition fosters an inclusive economic and environmental justice. Finally, the study showed that preventing potential negative socio-economic impacts on communities that are dependent on the coal economy would result in JET. These findings contribute to the broader JET discourse and demonstrate the role of labour movements in driving policy advocacy.

DECLARATION

I, Lesego Sekano, declare that this research report 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: Lesego Sekano Signature: *Lesego Sekano*

Signed at ……Fourways……

On the …27……. day of …February…… 2025….

DECLARATION OF PUBLICATION

A research paper that will be submitted to a suitable peer-reviewed journal for publication, after examination by the University of Witwatersrand.

DEDICATION

This work is dedicated to my beloved daughters, KB Duma and AB Duma, whose love, laughter, and unwavering support have been my greatest source of strength and motivation. May this achievement serve as a reminder that perseverance, dedication, and hard work can open endless doors of possibility. I hope this journey inspires you to chase your dreams fearlessly and believe in the power of knowledge.

I also dedicate this research to my mother and father, whose love, sacrifices, and unwavering belief in me have shaped my journey. Your guidance, wisdom, and endless support have been the foundation of my perseverance, and I am forever grateful for the values you have instilled in me.

To my family, friends, and mentors, thank you for your encouragement and support throughout this journey. Your belief in me has been a guiding light, and I share this achievement with each of you.

Finally, I dedicate this work to all those striving for knowledge and progress in the energy sector. May this research contribute to meaningful change and inspire future advancements.

It was your grace that saw me through and for that I want to say – Thank You God!

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my supervisor, Dr Stanley Semelane, for his invaluable guidance, insightful feedback, and unwavering support throughout this research journey. His expertise and encouragement have been instrumental in shaping the direction of this study.

I would also like to extend my appreciation to WITS University, particularly the Energy Leadership leaders, for providing an intellectually stimulating environment that fostered the development of this research. A special thanks to Dr Bruce Young for his valuable insights and contributions, which greatly enriched my understanding of the subject matter.

Furthermore, I am grateful to all individuals and organisations who participated in this research study, offering their time, knowledge, and perspectives. Your input was crucial in shaping the findings of this research. I would also, like to acknowledge the support of my colleagues, friends, and mentors Dr Ayanda Nteta, whose encouragement and intellectual discussions helped shape this report.

Finally, my deepest gratitude goes to my family for their unwavering love, patience, and encouragement. To my beloved daughters, KB Duma and AB Duma, thank you for being my greatest source of inspiration and strength. Your love and support have been the driving force behind my perseverance, and this achievement is as much yours as it is mine.

Thank you all for your support and contributions

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LIST OF ACRONYMS AND ABBREVIATIONS

Put these into alphabetical order

APFED	Asia-Pacific Forum on Environment and Development
COSATU	Congress of South African Trade Unions
COP	Conference of Parties
DEA	Department of Environmental Affairs
DMRE	Department of Mineral Resources and Energy
DOE	Department of Energy (USA)
GHG	Green House Gas
ILO	International Labour Organisation
IRENA	International Renewable Energy Agency
IRP	Integrated Resource Plan
ITUC	International Trade Union Confederation
JET	Just Energy Transition
JETF	Just Energy Transition Framework
JET-IP	Just Energy Transition-Investment Plan
JETP	Just Energy Transition Partnerships
LPT	Labour Process Theory
MW	Megawatts
MLP	Multi-Level Perspectives
NDC	National Determined Contributions
MLP	Multi-Level Perspectives
NGO	Non-Governmental Organisations
NPC	National Planning Commission
PCCC	Presidential Climate Change

	Commission
PPPs	Public-Private Partnerships
REIPPPP	Renewable Energy Independent Power Producer Procurement Program
StatSA	Statistics South Africa
UNFCCC	United Nations Framework Convention on Climate Change

CHAPTER 1. INTRODUCTION

1.1 PURPOSE OF THE STUDY

The purpose of this research is to investigate and analyse the role that trade unions can play in negotiating a sustainable just energy transition in South Africa. This case study seeks to evaluate how South Africa can achieve a just energy transition through a qualitative approach.

The study examines the role that trade unions, as agents of worker interests and rights, can play in seeking to advance a just transition policy that not only promotes environmental sustainability but also effectively regulates the phasing out of environmentally harmful industries. Additionally, it will emphasise the significance of creating green jobs and providing skills and training.

1.2 CONTEXT OF THE STUDY

As the world grapples with the urgent need to transition from fossil fuels to renewable energy, the role of various stakeholders becomes crucial in ensuring a just and equitable shift. In South Africa, trade unions have historically played a pivotal role in advocating for worker rights and social justice (Ibsen & Tapia, 2021). Their involvement in shaping the Just Energy Transition (JET) can play a significant role in balancing environmental imperatives with socio-economic needs. This research will explore the role and impact trade unions could have in achieving a just energy transition in South Africa, with a specific focus on the Komati Power Station.

1.2.1 Relevance of Trade Unions in Shaping the Just Energy Transition

The JET aims to decarbonise energy systems while ensuring that the process is fair and inclusive (Vandaele, 2019). Trade unions, with their deep-rooted connections to workers and communities, are uniquely positioned to champion the cause of a fair transition (Dufour & Hege, 2020). They can advocate for policies that protect jobs, secure fair wages, and ensure the retraining and

reskilling of workers affected by the shift from coal-based energy to renewable sources. This case study examines the implications of the Komati Power Station shutdown, an emblematic case that offers a concrete example of how unions can influence the trajectory of JET in South Africa. By actively participating in negotiations and decision-making processes, unions can ensure that the transition does not exacerbate existing inequalities but rather contributes to sustainable development and social justice.

1.2.2 Current Issues in the Just Energy Transition in South Africa

According to Naude (2023), South Africa's heavy reliance on coal has not only contributed to significant greenhouse gas emissions but has also entrenched economic dependencies and social vulnerabilities in coal mining regions. The transition to renewable energy is fraught with challenges, including the potential loss of jobs, economic instability in coal-dependent communities, and resistance from vested interests. Additionally, the slow pace of policy implementation and the lack of strategies to address the socio-economic impacts of the transition pose significant hurdles (Swilling, Musango & Wakeford, 2016). South Africa's progress toward meeting its Paris Agreement goals has been hindered not only by economic and infrastructural challenges but also by issues related to political commitment and policy incoherence.

1.2.3 Political Commitment and Challenges:

While the government has shown political will by updating its climate goals, including the commitment to net-zero emissions by 2050, inconsistencies in implementation and competing priorities have caused delays. South Africa remains heavily reliant on coal for its energy production, and there has been resistance from powerful stakeholders within the coal industry. This underscores the broader challenge of balancing economic growth, energy security, and job preservation in coal-dependent regions (UNDP, 2013).

Despite President Cyril Ramaphosa's administration pushing for more aggressive climate action, such as the establishment of the Presidential Climate

Commission, there has been criticism that climate-related policies often conflict with other government agendas, particularly in the energy sector. For instance, Eskom, the state-owned utility, faces political pressure to balance the imperatives of energy security, economic development, decarbonisation and financial constraints, making the transition away from coal difficult. Furthermore, South Africa's renewable energy infrastructure remains unreliable, compounding the challenge of achieving climate targets (UNDP,2013).

1.2.4 Incoherence and Policy Misalignment:

One of the most significant issues South Africa faces is the incoherence between national and regional policies. While the National Development Plan (NDP) emphasises decarbonisation, energy strategies at the provincial and regional levels often continue to rely on coal because of its perceived short-term benefits. Additionally, there is misalignment between South Africa's climate strategies and its socio-economic policies, particularly those aimed at tackling unemployment and poverty. These socio-economic issues are politically sensitive and are often prioritised over environmental concerns, creating further policy conflict (World Resources Institute, 2021; UNFCCC, 2023).

South Africa's ambition to meet the Paris Agreement targets is hampered by inconsistent political commitment and conflicting policy priorities. While there is political will at the national level, practical constraints, and competing interests undermine the coherence and timely action required to address climate change effectively (Swilling, Musango & Wakeford, 2016). These obstacles highlight the need for stronger policy alignment, more robust infrastructure for renewable energy, and careful management of the socio-economic consequences of the energy transition.

1.3 THE RESEARCH GAP

Despite the acknowledged need for a just energy transition, there is limited research on the specific roles and contributions of trade unions in this process. Current studies often miss the practical ways in which unions can influence policy and practice, as well as the results of their involvement (Naude, 2023;

Marino et al., 2019, Satgar, 2018; Dufour & Hege, 2020). This research aims to address this gap by examining the role of trade unions in promoting a Just Energy Transition through the Komati Power Station case study. It seeks to gather insights into how unions can help contribute to a fair and equitable energy transition in South Africa and beyond (Baker, 2015; Satgar, 2018).

According to Satgar (2018), understanding the role of trade unions in the Just Energy Transition is crucial for crafting policies that are both environmentally sustainable and socially just. Through the case study of the Komati Power Station, this research will examine the potential benefits and challenges of union involvement.

The study aims to provide a roadmap for other regions facing similar energy transitions and serves as a practical guide for policymakers, unions, and stakeholders committed to fostering a just and sustainable energy future. Through a comprehensive analysis, this paper will examine specific legislation and policy concerning the electricity sector and climate change, thereby illustrating how informed and active participation by trade unions could significantly influence policy outcomes, whether for better or for worse. Ultimately, the findings of this paper aim to underscore the role that trade unions can play in shaping a just transition towards a sustainable and resilient future for South Africa.

Due to the escalating environmental problems, South Africa is committed to contributing to achieving the Paris Agreement goals, which aim to rapidly transform the global energy system towards low-carbon and climate-resilient economies (Dufour & Hege, 2020). For the South African context, this means that the overdependence in fossil fuel industries needs to be managed. On the contrary, this poses a risk of increased unemployment for coal-dependent regions (Diedricks, 2021). As a result, transitioning from coal to low-carbon technologies such as wind, solar, hydro, gas, etc. would require the involvement of stakeholders such as research institutions, policymakers, trade unionists, and communities at large (Diedricks, 2021). South Africa has made some progress in aligning with the Paris Agreement's climate goals but faces significant challenges. The country updated its Nationally Determined Contributions

(NDCs) in 2021, committing to reduce greenhouse gas (GHG) emissions to between 350-420 MtCO2e by 2030 and aiming for net-zero emissions by 2050. This marked a more ambitious stance compared to its 2016 targets, which had projected higher emissions (UNDP,2020).

Despite these commitments, the country still heavily relies on coal for energy, and transitioning to a low-carbon economy has been slow. Reports indicated that South Africa is struggling to meet its Paris Agreement goals, with challenges stemming from insufficient financial resources and the complexities of managing a just transition for its coal-reliant economy (UNFCCC, 2023). Additionally, reaching its 2050 net-zero goal will require substantial investments, and there are concerns over the alignment of national policies with the Paris Agreement's 1.5°C target (UNDP,2020).

In this case study, we focus on the role that unions can play in shaping a just energy transition in South Africa through examining the challenges that were experienced in the Komati Power Station shutdown. Komati Power Station was commissioned in 1979, and it had a total capacity of 1000 MW (Patel, 2024). At its highest operational peak, the Komati power plant employed 1600 employees. Figure 1-1 shows the Komati Power Station

Figure 1-1: Komati Power Station (Google Maps, n.d.)

According to Patel (2024), Komati has a population of between five to six thousand inhabitants. A fully operational Komati Power Station created between three to four thousand jobs. Moreover, Burton et al., (2018), showed that one coal sector worker supported at least fourteen people. Therefore, ensuring that the voice of stakeholders such as trade unions are allowed to contribute and shape the just energy transition processes is significantly important. When the South African Government endorsed the implementation of shutting down Komati Power Station there was minimal stakeholder consultation, particularly, with trade unions. Moreover, the socio-economic impacts of the energy transition associated with the shutdown were not adequately planned for. The Komati Power Station shut down by Patel (2024), indicated the following: "*My takeaway from the experience is that the people at Komati genuinely care for the community. They were honest about their failures and lessons learnt. The transition is a lot more difficult than it seems. My heart bleeds for the people of Komati who will reel as the transition plods along. The country is in a tough place. Make the planet more liveable by getting rid of coal — but at what cost? At the cost of livelihoods and a sustainable life for vulnerable people.*"

The communities that were dependent on Komati Power Station for economic survival had not planned for alternative economic opportunities in Komati (Naude,2023). The government had also not planned for alternative economic diversification options that would ensure that Komati and surrounding areas continue to thrive (Patel, 2024).

Trade unions have historically played a significant role in negotiating for the rights of workers (Vandaele, 2019). As a result, the hypothesis of this study assumeed that a robust consultation with trade unions in shutting down the Komati Power Station would have alleviated some of the challenges, such as unemployment, reduced socio-economic activities, loss of local government revenue, and beneficiation opportunities, amongst others (Daniel, 2022).

To fully explore this topic, it is important to highlight the significant impact that trade unions have had in leading the complex negotiations and ratifications of key International Labour Organisation (ILO) conventions related to sustainable development and employment in South Africa (Vandaele, 2019).

As the South African energy sector transitions from coal-based power plants to low carbon energy sources due to climate change, there is a need to ensure the participation of trade unions is incorporated. South Africa is faced with one of the highest unemployment rates in the world, and StatsSA (2023) recorded joblessness of approximately 34.9%. This means that an energy transition that is not carefully planned is likely to perpetuate the already high unemployment rate in South Africa. According to Daniel (2022), trade unions have been advocating for a just energy transition and arguing that job preservation should be the priority for the global South since Sub-Saharan Africa contributed the least to the climate change problem. Moreover, the poor management of the Komati Power Station shutdown has forced the South African government to defer the shutdown of other coal power stations that were scheduled to decommission before 2030 (Bloomberg, 2024).

Table 1-1shows a total of 10030 megawatts (MW) of coal power plants that will be decommissioned by 2030 (IRP,2019). This means that those that have depended on the value chain provided by these coal power plants are likely to be impacted by the proposed coal shutdown. Hence, this study attempted to understand the role that trade unions in Soth Africa could play in ensuring that a just energy transition is achieved.

Table 1-1: Decommissioning of 1030 MW (IRP,2019)

Year	Coal (MW)	Coal Shut-Down (MW)	Nuclear (MW)	Hydro (MW)	Storage (MW)	PV (MW)	Wind (MW)	CSP (MW)	Diesel & Gas (MW)	Other (MW)
Current Base	37,149	-	1,860	2,100	2,912	1,474	1,980	300	3,830	499
2019	2,155	2,373	-	-	-	244	300	-	-	-
2020	1,433	557	-	-	-	114	300	-	-	-
2021	1,433	1,403	-	-	-	300	818	-	-	-
2022	711	844	-	-	513	400	1,000	1,600	-	-
2023	750	555	-	-	-	1,000	1,600	-	-	500
2024	-	-	1,860	-	-	1,600	-	-	1,000	500
2025	-	-	-	-	-	1,000	1,600	-	-	500
2026	-	1,219	-	-	-	1,600	-	-	-	500
2027	750	847	-	-	-	1,600	-	2,000	-	500
2028	-	475	-	-	1,000	1,600	-	-	-	500
2029	-	1,694	-	1,575	1,000	1,600	-	-	-	500
2030	-	1,050	-	2,500	-	1,000	1,600	-	-	500
Total Installed Capacity 2030 (MW)	**33,364**	**1,860**	**4,600**	**5,000**	**8,288**	**17,741**	**600**	**6,380**	**-**	**-**
% Total Installed Capacity	43	2.36	5.84	6.35	10.52	22.53	0.76	8.1	-	-
% Annual Energy Contribution	58.8	4.5	8.4	1.2	6.3	17.8	0.6	1.3	-	-

With this backdrop, Table 1-1 illustrates that the pressure of combating the impact of climate change has led South Africa to accelerate the adoption of policies that would enable the implementation of low-carbon technologies. As part of this process, South Africa gazetted an Integrated Resource Plan (IRP) policy without any energy-just transition plans. The decommissioning programme is shown in Table 1-1 resulted in the Komati challenges that have not been resolved; hence, there is a need for trade unions to shape how a just energy transition should be implemented (Cock, 2018).

Marino et al (2019) assert that the South African unions are against the acute unemployment that is faced by coal phasing out regions such as Komati. Moreover, the study on the just energy transition policy framework at the Komati Power Station intersects directly with South Africa's unemployment problem. As South Africa moves away from coal towards low-carbon energy sources, closures of coal-fired power plants like Komati is inevitable. These closures pose a direct threat to the livelihoods of thousands of workers employed in the

coal mining and power generation sectors. According to Lehndorff et al., (2017), while the climate change problem has been elevated in the global south, there are no concrete plans that would ensure that the South African transition will be just and fair. Therefore, South Africa needs to ensure that the global energy transition pressure led by the global north should not compromise the coal sector workers and communities. As a result, the study would assess the role of trade unions in mitigating the potential socio-economic risks associated with energy transition (Daniels, 2019).

Figure 1-2 depicts the South African unemployment rate by age group for the period 2021 to 2022.

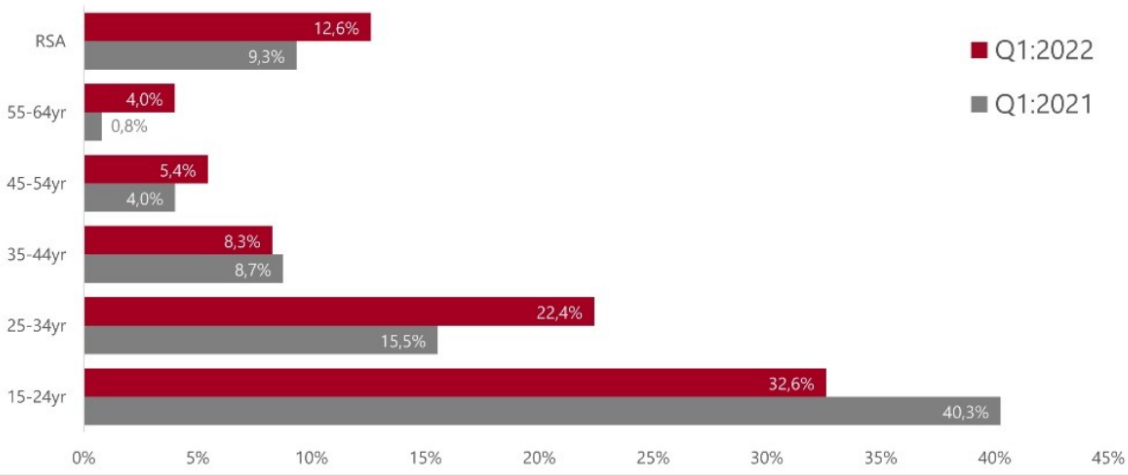

Figure 1-2: Unemployment Rate by Age Group in South Africa 2021-2022 (Stats SA, 2022)

The impact of unemployment extends beyond economic hardship to encompass broader social and health implications. High levels of unemployment contribute to poverty, inequality, and social unrest, posing significant challenges to South Africa's social cohesion and stability. Furthermore, unemployed individuals often face mental health issues, loss of self-esteem, and reduced access to essential services such as healthcare and education.

There is a recognised global transition towards sustainable energy systems to mitigate the impacts of climate change and shift away from using environmentally unfriendly energy sources (Boersma and Van de Graaf, 2010; Goldthau and Sovacool, 2012). While South Africa is heavily dependent on coal

to meet its energy needs, it had pledged reduce carbon emissions to between 350–420 $MtCO_2e$ by 2030.by 2030 (PCC,2021). In efforts to keep its commitment to the people and the environment, the South African government began implementing renewable energy resources to meet its energy needs. The Department of Electricity and Energy's Integrated Resource Plan 2010 proposed adding 17,800 MW of renewable energy power plants by 2030, and introduced the Renewable Energy Independent Power Producer Programme (REIPPPP) to achieve this goal. This new energy initiative had profound implications for the country's economy, its 40 million electricity users, and the health of its natural environments. The DOE realised the importance of restructuring the energy sector while ensuring sustainability for the future. However, it has been noted that sufficient policy frameworks are absent to guide fairness and inclusivity during the transition of energy sources in South Africa (PCC, 2022). South Africa gazetted an IRP policy that will decommission coal power stations and advance renewable energy power plants. These changes will have a profound negative impact on employment and job creation.

Global calls for reducing carbon emissions through the reduction of the use of fossil fuels such as coal have subjected workers to what has been termed the “jobs versus environment” dilemma. The just transition will not happen by itself. It requires initiatives, plans, and policies. Workers and communities dependent on fossil fuels will not find alternative sources of income and revenue overnight. This is why transformation is not only about greening the economy and phasing out polluting sectors; it is also about new jobs, new industries, new skills, new investment, and the opportunity to create a more equal and resilient economy. Thus, just transitioning to a cleaner energy system must prioritise job creation, skills development, and the equitable distribution of economic opportunities, particularly in regions heavily reliant on fossil fuel industries. Investing in education and training programmes that equip individuals with the necessary skills for renewable energy jobs cannot only mitigate unemployment but also enhance social inclusion and economic empowerment. Moreover, reskilling of coal sector employees can play a significant role in ensuring that employment opportunities are created not only in the coal sector. This means that other sectors such as agriculture, green energy and low carbon manufacturing etc

also have a role to play in mitigating socio-economic risks that are associated with the South African Energy Transition (Patel,2024). Just transition through social dialogue is the key. The *Paris Agreement (2015) notes that," …taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities,* "A Just Transition means ensuring efficient and coherent climate change mitigation and adaptation policies and regulations that limit labour market disruptions and job losses and support for workers and companies impacted by the transition. With social dialogue, government, business, trade unions, and civil society groups can collaborate in the regional, national, industry, and community planning and policies that are necessary for a just transition to zero emissions. Social dialogue will bring the policy coherence we need to ensure that climate action also means job creation and community renewal. It allows us to bring together industrial strategy, innovation, deployment of clean technologies, and investment in green infrastructure, along with the measures we need to smooth out the transition: social protection, skills training, redeployment, labour market policies, and community development and renewal. At its heart, just transition requires us to leave no one behind. Thus, the participation of trade unions is imperative to the whole process of just transition.

According to COSATU (2018), a trade union is an independent, permanent, and representative association of workers formed to protect and promote their collective interests and to assist its members in matters of mutual concern. The above definition suggests the complex involvement of trade unions in the workforce and workplace. The literature research on trade unions in South Africa suggests that they have been an integral part of political changes and restructuring where the state was undergoing social, economic, and political transformation. In line with the definition of a union itself, it was highly anticipated and widely acknowledged by experts that trade unions would play a decisive and paramount role in determining the fate and outcome of restructuring initiatives, especially in relation to public enterprises (Buhlungu, 2010; Webster & Joynt, 2019). Extensive research and empirical evidence from around the globe indicates that no company, regardless of its size or sector, can

undergo a comprehensive and impactful transformation without the active and meaningful involvement of its workforce (ILO, 2021). The workforce, being the primary listener and the primary stakeholder group, is invariably the most profoundly affected by the intricate political changes that invariably pervade the realm of just transition, thus bringing the role of social dialogue to the forefront. This reality unquestionably applies with exceptional precision and relevance to the illuminating case of the South African energy sector.

Social dialogue is a well-established instrument that has gained traction, especially amongst developed countries, and its use is being explored to deal with an array of national challenges, particularly in developing and fragile states. The ILO (2013) defines social dialogue as “all types of negotiation, consultation, or information sharing among representatives of governments, employers, and workers or between those of employers and workers on issues of common interest relating to economic and social policy." It has three major components, namely, information exchange (which is an important precondition for its more substantive forms), consultation (which is not only a means through which social partners share information but is also the mechanism to engage in dialogue on pertinent issues), negotiation, and dispute resolution. (“Giving Social Dialogue a Chance—Friedrich Ebert Foundation”) Typically, all forms of social dialogue are either informal and ad hoc or formal and institutionalised. (ILO, 2013). Ghellab, (2009) notes that there are three reasons often cited to promote social dialogue as an instrument of sound governance of change, namely, (i) through information sharing, the quality of policy design and strategies for recovery can be improved; (ii) social dialogue helps build trust in and commitment to policies, making it easier for their rapid and more effective implementation; and (iii) it helps to resolve inevitable differences and avoid conflicts of social cohesion and stability. Furthermore, unemployed individuals often face mental health issues, loss of self-esteem, and reduced access to essential services such as healthcare and education.

With the official unemployment rate already approaching 35%, (StatsSA, 2022) the potential impact of plant closures on local communities and the broader economy cannot be overstated. Trade unions play a crucial role in advocating

for the rights of these workers and ensuring that they are not left behind in the transition to renewable energy. By negotiating with government agencies, energy companies, and other stakeholders, trade unions seek to secure job retention, retraining programmes, and community development initiatives for affected workers. Therefore, the study's focus on the role of trade unions in enabling an inclusive Just Transition policy framework directly addresses the unemployment problem in South Africa, offering potential solutions to mitigate its impact on vulnerable communities.

In conclusion, this study aimed to show the role that trade unions can play in enabling an inclusive Just Transition policy framework in South Africa through the Komai shutdown case study.

1.4 RESEARCH PROBLEM

In order to address the urgent need for a just energy transition, South Africa is confronted with substantial obstacles in achieving a viable and fair transition. This is primarily due to the country's heavy dependence on coal for electricity generation. The upcoming deactivation and conversion of the Komati Power Station to renewable energy exemplify this larger trend. The project seeks to develop and evaluate policy frameworks for a just energy transition that considers the social and economic effects on affected communities and the workforce, while also prioritising energy security and environmental sustainability.

Coal plays a significant role in South Africa's energy landscape, as it is responsible for powering around 82% of the country's electricity generation (DMRE, 2023). According to Eskom (2020), the Komati Power Station, situated in Mpumalanga province, has played a crucial role in South Africa's energy landscape, boasting an impressive installed capacity of 1,000 megawatts (MW) (Eskom, 2020). Nevertheless, in response to the growing imperative to decrease carbon emissions and shift towards sustainable energy alternatives, the South African government has made a firm commitment to decommission and repurpose coal-fired power plants such as Komati.

The shift away from coal has significant consequences for both the labour force and the communities in the vicinity. As per the International Labour Organization (ILO) report (ILO,2020), the coal mining sector in South Africa has a workforce of more than 90,000 individuals, and the industry also indirectly supports around 400,000 jobs (ILO, 2020). The closure of coal mines and power plants poses a significant threat to the livelihoods of individuals in already vulnerable regions, further worsening the issues of unemployment and economic hardship.

In addition, it is significant to address the Just Transition in a way that promotes fairness and protects the environment. Communities that have been historically marginalised have unfortunately been disproportionately affected by environmental pollution and health hazards linked to coal mining and combustion (Mathee et al., 2017). Thus, any policy framework for a Just Energy Transition must place utmost importance on the needs and well-being of these communities, as well as the workforce impacted by plant closures.

The current body of research recognises the importance of examining South Africa's energy transition, but there is still a notable lack of knowledge regarding the impact and role of trade unions in promoting an inclusive Just Transition policy framework (Mathee et al., 2017). Trade unions play a crucial role in advocating for worker rights and social equity during the energy transition process (Healy & Barry, 2017). Nevertheless, the extent of their contribution and influence in facilitating a just transition, especially through the examination of the Komati shutdown case study, has not been thoroughly investigated.

1.5 RESEARCH OBJECTIVES

Based on the described research problem, the objectives of this study are as follows:

i. To Document and analyse the trade unions' positions, input, and advocacy during the decision-making processes leading to the closure of Komati Coal Power Station as part of the Just Energy Transition in South Africa.

ii. To Critically assess how trade unions' inputs on fairness and their proposals for a Just Energy Transition were incorporated into the planning and implementation of Komati Coal Power Station's closure.
iii. To Evaluate the extent to which outcomes of the Komati Coal Power Station closure validate trade unions' concerns on energy transition in the country.
iv. To Develop policy recommendations, from lessons learnt from the Komati experience, on trade Unions' best practices in influencing and ensuring just energy transition in a country like South Africa.

1.6 SIGNIFICANCE OF THE STUDY

This study will explore the role that trade unions can play in shaping the South African Just Transition and give an overview of the strategic positioning and impact of trade unions, particularly in facilitating and promoting a Just Energy Transition policy in South Africa that has a strong voice of those that are likely to be impacted in the energy transition process. While other civil society organisations and social movements have contributed to developing and implementing a Just Transition policy, this study focused exclusively on the distinctive contributions of trade unions. This focus is justified by the unions' steadfast commitment and strategic actions in advocating for a transition that prioritises worker rights and social justice (Swilling & Annecke, 2012).

Trade unions have historically been pivotal in shaping labour policies and ensuring that transitions in energy sectors are equitable and inclusive (Mundt, 2018). In the context of South Africa, trade unions can strategically position themselves as key stakeholders in the energy transition dialogue, leveraging their influence to secure policies that protect the livelihood of workers while advancing environmental goals (Stevis & Felli, 2015). Despite the broader literature on environmental activism in South Africa, there remains a significant gap in understanding the specific contributions and strategies of trade unions in the Just Energy Transition (Cock, 2019).

The role and impact of trade unions in the South African energy transition context discourse have not been thoroughly examined, despite being a crucial stakeholder group. Through an examination of the Komati Power Station, this research aims to provide insights into the role that trade unions can play in just transition policy framework development.

Energy transition in South Africa is crucial to sustainable development, affecting environmental policy, economic resilience, and social equity. This shift is crucial to sustainable growth. This study's empirical relevance stems from its concentration on the Komati Power Station, a microcosm of the greater issues and opportunities presented by the change from coal to renewable energy. Moreover, the study aims to highlight the importance of including trade unions in the transitioning process, which has an impact on workers and communities.

Stakeholder Benefits

i. **Trade unions**: provides valuable insights into strategies that can help trade unions effectively advocate for the rights and interests of coal sector workers during the energy transition. It empowers them to actively participate in policy discussions and decision-making processes.
ii. **Policy Makers**: Supporting a fair energy transition requires an understanding of how to effectively create policies and implement them.
iii. **Energy Sector Businesses**: Understand the implications of the transition for operations, investment opportunities, and corporate social responsibility.
iv. **Affected Communities and Workers**: Identify avenues for engagement, advocacy, and benefiting from the transition process.
v. **Academic Community**: Contribute to the theoretical and empirical literature on energy transitions, policy frameworks, and sustainable development.

1.7 DELIMINATION OF THE STUDY

In examining the role of trade unions in shaping the Just Energy Transition in South Africa, specifically through a case study of Komati Power Station, it is crucial to define the scope and boundaries of the research. Delimitations serve to clarify the study's focus and the areas it intentionally excludes, providing a framework that ensures the research remains targeted and manageable (Creswell & Creswell, 2018). This study is centred on understanding the influence of trade unions in the context of Komati Power Station, while acknowledging that various other factors and perspectives are also at play in the broader Just Energy Transition across South Africa. The delimitations outlined below will guide the research, helping to maintain a clear and consistent approach while recognizing the inherent limitations of the chosen methodology and focus (Miles, Huberman, & Saldaña, 2014).

i. **Participant Scope**: The study will be limited to the perspectives of a select group of stakeholders, namely policy/regulatory authorities, energy sector experts, local community leaders, affected workers at Komati Power Station, and union representatives in Komati. It will not include the perspectives of other potential stakeholders such as non-unionized workers, environmental NGOs, or international agencies.
ii. **Focus on Union Perspective**: The primary focus will be on the role of trade unions, particularly through the lens of union representatives and affected workers. The perspectives of policy and regulatory authorities, energy sector experts, and community leaders will be considered, but only in relation to how they interact with or are influenced by trade unions.
iii. **Exclusion of Broader Stakeholder Groups**: The study will not explore the views of broader national or international Organisations, such as multinational corporations involved in the energy sector or international labour Organisations, which could have a significant influence on the Just Energy Transition.

iv. **Geographical Limitation**: The study will focus solely on the Komati Power Station and its immediate stakeholders, excluding other power stations or regions that may also be involved in the Just Energy Transition in South Africa.

v. **Limited Policy Analysis**: The analysis of policy impacts will be limited to those directly affecting the Komati Power Station and the immediate stakeholders involved, rather than a comprehensive analysis of all South African energy policies or broader national labour policies.

vi. **Temporal Limitation**: The study might focus on a specific period during the Just Energy Transition process, excluding historical background or future projections that do not directly relate to the selected population sample's current experience.

vii. **Methodological Limitation**: The research may rely heavily on qualitative data from interviews or focus groups with the identified stakeholders, potentially excluding quantitative data or broader statistical analysis that might offer different insights.

viii. **Exclusion of Broader Economic Context**: The study will not delve deeply into the broader economic implications of the Just Energy Transition on South Africa's economy, focusing instead on the localized economic impact at Komati Power Station

1.8 DEFINITION OF TERMS

i. **Energy Transition**: Changing from an energy system based on fossil fuels to one based on green energy sources, with the goal of lowering carbon pollution and lessening the effects of climate change (IRENA, 2020).

ii. **Just Transition**: A framework to achieve socio-economic justice and equality in the energy transition, minimising negative repercussions on fossil fuel workers and communities (Heffron and McCauley, 2018).

iii. **Policy Framework**: An organised set of rules or principles that help people make choices and act in certain areas; in this case,

the rules and policies that control the energy shift (Jordan and Turnpenny, 2015).

iv. **Renewable Energy**: Energy that comes from natural sources that are replaced faster than they are used up, like waterpower, solar power, and wind power (Boyle, 2012).

v. **Socio-Economic Impacts**: The changes that an action or policy makes to the jobs, income, health, and education of people in a group or society (Barbier, 2019).

vi. **Stakeholder Engagement**: The process of including people, groups, or organisations that may be touched by or have an impact on a decision or action in the process of making that decision (International Association for Public Participation [IAP2], 2018; OECD, 2020)..

1.9 ASSUMPTIONS

Respondent Representation: This statement assumes that the selection of participants for interviews and case studies will result in a broad and representative representation of the viewpoints and experiences connected to the energy transition at Komati Power Station. Taking into consideration the extensive stakeholder engagement approach that is planned, this assumption is acceptable; yet it is subject to the selection bias and the willingness of participants to contribute frank thoughts (Bryman, 2016).

Policy Stability: Assumes a steady energy transition policy environment in South Africa throughout the research. While this assumption makes it easier to look at current policy frameworks, it might be thrown off the energy transition if there are quick policy changes or political shifts (Pierson, 2004).

Data Availability: Considers policy documents, economic studies, and environmental evaluations easy to get and examine. This makes sense because the energy business promises transparency yet considers data access constraints and quality (Kitchin, 2014).

Technological Advancements: The analysis assumes that existing renewable energy technologies can fulfil South Africa's energy demands with legislative

assistance. This assumption is based on worldwide technical trends but sensitive to South African innovation and acceptance (Schot and Steinmueller, 2018).

1.10 STRUCTURE OF THE REPORT

The structure of the research report is outlined in Figure 1-3

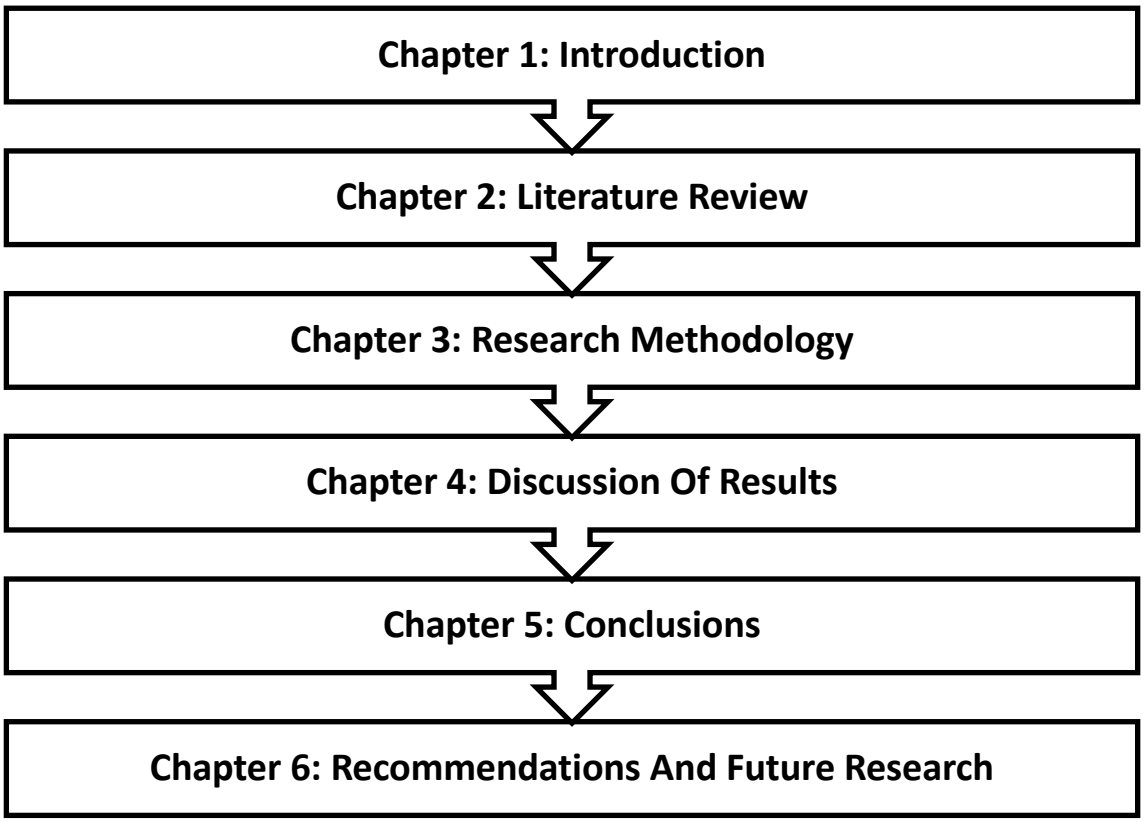

Figure 1-3: The structure of the report

CHAPTER 2. LITERATURE REVIEW

2.1 INTRODUCTION

The literature study covers energy's continual change and how policy frameworks promote justice and sustainability. Energy transfers from fossil fuels to sustainable energy sources are central to climate change and sustainable development talks (Heffron & McCauley, 2018). This section summarises energy transition theory and results. South Africa consumes a lot of coal; therefore, the green energy transition must integrate environmental justice and social fairness together with finances and policy (Cock, 2018). This review will also examine worldwide learning from analogous transitions (Schreurs, 2017). Just energy transition issues are shown by the South African Komati Power Station. How local and global perspectives impact South Africa's fair, environmentally sound, and socially just transition will be examined (Geels, 2014). Trade unions are crucial stakeholders since they promote worker rights and equitable transition strategies. This review will discuss trade unions' contributions, problems, and research gaps in energy transitions worldwide and in South Africa.

The South African Komati Power Station serves as a case study to illustrate the challenges of Just Energy Transition (JET). The focus will be on how local and global perspectives shape South Africa's approach to creating an equitable, environmentally sound, and socially just transition (Geels, 2014). Trade unions are pivotal stakeholders, as they advocate for worker rights and contribute to shaping fair transition policies. This review will highlight the contributions, challenges, and research gaps related to trade unions' involvement in energy transitions globally and within South Africa

2.2 ENERGY TRANSITION

2.2.1 International Perspectives

From fossil fuels to renewable energy, the energy transition includes changes in the economy, politics, and technology. Different countries have dealt with this

change in different ways due to different economic situations, legal systems, and worries about energy security (Arent et al., 2017). Industrialised nations like Germany, the US, and Japan have implemented aggressive energy decarbonisation policies like carbon pricing, renewable energy subsidies, and coal-fired power plant phaseouts (Geels, 2014). The EU's Green Deal intends to reach carbon neutrality by 2050, using financial instruments like the Just Transition Fund to mitigate socio-economic consequences (IRENA, 2020). Emerging economies face many challenges, including inadequate infrastructure, high dependence on fossil fuels for economic stability, and limited access to international climate finance (Healy & Barry, 2017). Developed nations have the institutional and financial capacity to transition smoothly. China, the world's largest emitter, installed a record 357 gigawatts of wind and solar power in 2024, proving that rapid energy transitions are possible with state intervention (Associated Press, 2025). Global divergence emphasises the need for contextualised energy transition solutions since uniform approaches may not apply.

Energy transition politics are complicated, with large, vested interests blocking renewable energy. In countries like the US and Australia, fossil fuel industries dominate policymaking and delay transition attempts (Heffron & McCauley, 2018). Renewable energy sources have long-term environmental and economic benefits, but many developing nations lack the upfront investment and regulatory stability to integrate them (Galgóczi, 2019). In Africa, extractive economies have made politicians wary of phasing out fossil fuels for fear of economic destabilisation and job losses (IRENA, 2020). The Conference of Parties (COP) 26 climate change summit announced the Just Energy Transition Partnership (JETP) to help middle-income states shift off coal with targeted financial and technical support (Climate Commission, 2021). Critics say financial pledges sometimes fall short of the funds needed for large-scale infrastructural reforms (Fankhauser et al., 2018). Thus, while international energy transition visions emphasise global cooperation, structural disparities continue to govern transition pace and type, notably in the Global South.

2.2.2 South African Socio-economic Implications

Due to its coal-based economy and energy source, South Africa's energy transition has significant socio-economic effects. Community livelihoods depend on coal mining and power generation, which employs 90,000 people (Baker, 2020). Decommissioning coal-fired power stations like Komati has raised concerns about mass unemployment, worsening socioeconomic inequities (Financial Times, 2024). Retraining programs are needed to prevent long-term economic displacement since many impacted workers lack the skills to convert into renewable energy (Galgóczi, 2020). The Congress of South African Trade Unions (COSATU) has called for worker reskilling, guaranteed employment, and compensation for coal mine closure victims as part of the energy transition (COSATU, 2021). Despite government promises of a "just transition," labour groups say policy implementation has been slow and exclusive, excluding affected workers from decision-making (Daniel, 2021). This mismatch between policy aims and execution has cast doubt on South Africa's ability to shift fairly while maintaining economic stability.

The energy transition in South Africa affects social fairness and economic transformation beyond employment. The 2019 Integrated Resource Plan (IRP) calls for a move to renewable energy sources like solar, wind, and hydro, however money and implementation have been unevenly allocated throughout areas (Department of Mineral Resources and Energy, 2019). Energy access inequities worsen as new energy infrastructure neglects marginalised groups, particularly rural ones (Cock, 2019). Criticism of South Africa's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) privatisation of renewable energy projects has raised concerns about energy affordability, as market-driven models may prioritise profit over equitable electricity access (Baker et al., 2020). Energy should be a public good, not a commodity, hence trade unions and civil society organisations advocate a state-led transformation (Bell, 2020). To address these issues and prioritise socio-economic justice in South Africa's decarbonisation agenda, the 2021 Just Energy Transition Investment agenda (JET IP) advocate a more inclusive energy transition model (Climate Commission, 2021). Political and economic

interests continue to affect South Africa's transition trajectory, making it unclear how well these policies will be implemented

2.3 THEORETICAL FRAMEWORKS

The models help explain how the energy shift works and what part different groups, especially trade unions, play in it. To show what the just energy shift looks like, this part uses policy analysis, wage studies, and sociotechnical changes.

2.3.1 Socio-Technical Transitions Theory

In order to fully understand how energy systems change, sociotechnical changes theory, especially Geels (2002) Multi-Level Perspective (MLP), is a solid foundation. The MLP postulates that changes happen when the following three types of interaction happen: niche innovations, socio-technical regimes, and socio-technical landscapes. Regimes are the most common rules and practices, and landscapes are made up of bigger, outside forces. Niches are where radical new ideas come from.

To understand how new renewable energy technologies can change existing coal-based energy systems (regimes), as well as the larger socio-economic and political picture (landscape), this theory is important for the JET at the Komati Power Station. Geels (2002) discusses that for transitions to go smoothly, they need to be in sync across all these levels. This is where niche innovations gain traction and question the current systems, which are either helped or harmed by pressures in the landscape.

In the case of Komati Power Station, innovations like green energy technologies need to be backed by policies that facilitate their integration into the existing energy system. Green energy technologies are no longer considered niche but are increasingly becoming mainstream, requiring comprehensive policy frameworks to ensure a smooth transition. Trade unions play a significant role in this transition as they advocate for legislation that safeguards worker rights and ensures that the benefits of the transition are shared across the economy. This

advocacy helps bridge the gap between small-scale innovations and broader governmental shifts toward sustainable energy.

Eberhard (2020), emphasised the importance of creating policies that support workers affected by the transition from coal to renewable energy, particularly in terms of reskilling and education. These policies must ensure that workers and communities directly impacted by the closure of coal-fired plants like Komati Power Station have access to opportunities in the emerging green economy, thereby aligning economic growth with social justice.

The MLP shows how sociotechnical systems change over time and how different people are involved. To make the energy shift fair, we need to work together on technical, social, and political problems. As major groups, trade unions can have a say in how policies are made and push for transition plans that include everyone and think about the bigger social and economic impacts on the areas that will be changed (Cock, 2018a).

2.3.2 Just Transition Framework

Heffron and McCauley (2018), noted that the just transition approach highlights energy transition social justice and fairness. This method appropriately distributes the costs and benefits of transitioning to a sustainable energy system, notably to fossil fuel workers and local people.

This paradigm is crucial for evaluating trade unions at Komati Power Station because it measures energy transition socio-economic consequences and mitigation policy efficacy. Trade unions support fair labour, reskilling, and community development to ensure no group is disproportionately harmed by the transition. Just transition principles improve social justice and protect marginalised populations throughout the energy transition, according to Cock (2018b).

In climate action, the fair transition framework promotes worker rights and decent labour, as required by international labour standards and human rights.

Trade unions support fair transition measures including social protection, skills development, and renewable energy jobs (ILO, 2018).

Just transition is pertinent to South Africa's high unemployment and social inequality. Trade unions like COSATU have called for steps to address these challenges and offer a fair transition for coal-fired power plant closing workers and communities (COSATU, 2018). By advocating for comprehensive social and economic policies, trade unions may help create an equitable and inclusive sustainable energy transition.

2.3.3 Labour Process Theory

Establishing Labour Process Theory (LPT), originally developed by Braverman (1974), explores the intricate relationship between labour, capital, and management within the production process. LPT provides a framework for understanding how the dynamics of control, power, and resistance manifest in the workplace, particularly during periods of industrial change. In the context of energy transitions, this theory becomes crucial in analysing the shift from coal-based production to renewable energy sources and its effects on the workforce, including issues such as job losses, reskilling, and the development of new employment opportunities.

Applying LPT to the case of the Komati Power Station, this theory helps to explain how trade unions negotiate with both management and policymakers to safeguard worker rights during the transition from coal to renewable energy. The theory highlights the inherent conflicts between capital and labour, particularly when companies seek to reduce costs through automation or downsizing, while workers strive to protect their jobs and secure fair wages. According to Braverman (1974), the division of labour and the mechanisation of work processes are often strategies used by capital to exert control over labour, leading to tensions that trade unions must navigate through collective bargaining.

Trade unions, in this context, play a pivotal role in addressing these tensions by pushing for fair transition agreements that ensure job retention, reskilling, and

the provision of social protections. For example, in the case of the Komati Power Station, unions like COSATU have been vocal in demanding retraining programs for workers displaced by the decommissioning of coal plants, ensuring they are equipped with the skills necessary for employment in the renewable energy sector (Kings, 2019). This mirrors global experiences, such as in Germany, where unions successfully negotiated extensive retraining programs for workers affected by the country's just energy transition process the Energiewende ((Schreurs, 2021).

Moreover, LPT emphasises the importance of group bargaining in shaping the direction of energy transitions. In South Africa, trade unions have used their collective power to influence not only workplace policies but also national energy transition strategies. This negotiation process is critical as it determines whether the transition will be fair and equitable for all workers, especially those in marginalised communities who are most vulnerable to job losses (Guerrero, 2018). The transition from coal to renewable energy is fraught with the risk of exacerbating existing social and economic inequalities, which trade unions seek to mitigate by advocating for comprehensive social safety nets and inclusive retraining programs (Baker et al., 2020).

LPT also draws attention to the broader socioeconomic consequences of energy transitions. The closure of coal-fired power plants such as Komati can lead to the destabilisation of local economies that rely heavily on these industries for employment and economic growth. Without intervention, this could result in increased inequality and social unrest. Trade unions, therefore, act as mediators, ensuring that workers are not left behind in the transition to a more sustainable economy. They advocate for policies that prioritise worker rights, including fair wages, safe working conditions, and long-term job security in the renewable energy sector (Guerrero, 2018; Heffron & McCauley, 2021).

Globally, trade unions have demonstrated their capacity to shape the outcomes of energy transitions in significant ways. For instance, in Canada, unions have negotiated early retirement schemes and retraining programs for workers affected by the transition from coal to renewable energy, ensuring that workers are supported throughout the transition (Baker et al., 2020). These examples

provide a blueprint for how South African trade unions, particularly those involved in the Komati Power Station case, can engage with policymakers to ensure a just transition that prioritises both social justice and economic inclusion.

Lastly, LPT highlights the potential for new forms of workforce exploitation that could arise during the energy transition. As renewable energy technologies become mainstream, there is a risk that capital may seek to minimise labour costs by creating precarious, low-wage jobs in the green economy. Trade unions, therefore, must remain vigilant in their advocacy for decent work standards within the emerging renewable energy sector. By pushing for fair labour standards and ensuring that social protections are in place, unions can help to prevent the creation of a two-tier labour system where some workers benefit from the transition while others are left in vulnerable positions (ILO, 2020).

In conclusion, LPT provides a valuable framework for understanding the dynamics of labour, capital, and management during the energy transition. In the case of the Komati Power Station, trade unions are essential to ensuring that workers are not only protected during this transition but are also provided with opportunities to thrive in the new renewable energy economy. By advocating for retraining programs, fair labour standards, and comprehensive social protections, unions can help to create a more equitable and sustainable future for all workers (Guerrero, 2018).

2.3.4 Policy Network Theory

Policy Network Theory, as described by Rhodes (2006), focuses on the intricate relationships between different actors' government agencies, Non-Governmental Organisations (NGOs), industrial stakeholders, and trade unions in the policymaking process. According to this theory, policies are shaped not only by government decisions but also by the interactions and negotiations among various actors, who operate within interconnected networks. The theory emphasises that the success or failure of policies often depends on the strength and structure of these networks, as well as the power dynamics within them.

In the context of the Just Energy Transition (JET) at Komati Power Station, policy network theory provides a useful framework for understanding how trade unions collaborate with other stakeholders to influence energy policy. As South Africa moves away from coal-fired power towards renewable energy sources, the active involvement of trade unions like COSATU, along with environmental organisations, community groups, and government bodies, becomes crucial. These actors work together within a network to promote policies that ensure a fair and equitable transition for workers and communities affected by the closure of coal plants (Joubert, 2020).

The energy transition process involves multiple layers of negotiation. Power relations, bargaining, and the overall structure of the policy network play a significant role in determining the outcomes of these negotiations. Trade unions, with their strong political influence and bargaining power, often strive to push for inclusive transition plans that not only prioritise the environment but also safeguard the socio-economic well-being of workers and communities. For example, trade unions in South Africa have been vocal in demanding retraining programs for displaced coal workers, advocating for policies that align with both environmental goals and social justice (ILO, 2020).

Policy networks have accelerated energy transitions worldwide. In the Energiewende, trade unions, government agencies, environmental groups, and industry partners established a complicated network to make the renewable energy transition economically and socially viable. Trade unions fought for worker rights and minimised coal job losses through reskilling and social protection (Schreurs, 2021). This example shows how policy networks might balance environmental sustainability with social and economic issues to ease transition.

In the case of Komati Power Station, the role of COSATU and other trade unions is to negotiate fair policies that protect workers while promoting a shift towards renewable energy. These unions often collaborate with community Organisations and environmental groups to form coalitions that advocate for policies promoting both environmental protection and economic equity (Joubert,

2020). These coalitions serve to amplify the voices of underrepresented groups, ensuring that their concerns are heard in the policymaking process.

International organisations, such as the ILO and the World Bank, also play a role in these networks, providing financial and technical support for just transition initiatives in South Africa. These Organisations often work with national and provincial governments, as well as local stakeholders, to design policies that support both the transition to renewable energy and the social and economic needs of affected communities. Trade unions leverage these international partnerships to push for policy changes that prioritise worker rights and ensure that no one is left behind in the transition process (ILO, 2020; World Bank, 2021).

At the national level, policy network theory highlights the importance of multi-stakeholder engagement. South Africa's national and provincial governments, working in conjunction with trade unions and industry representatives, are tasked with designing and implementing energy policies that balance the need for economic growth, social justice, and environmental sustainability. These networks allow trade unions to play a key role in shaping policy outcomes by ensuring that worker interests are adequately represented in the energy transition dialogue (Joubert, 2020).

The role of trade unions within these policy networks extends beyond advocating for fair wages and job security. They are also involved in shaping broader societal policies that promote sustainable development, social inclusion, and economic equity. In this regard, trade unions act as a critical link between workers and policymakers, helping to ensure that the energy transition is not only technically feasible but also socially just. COSATU and other trade unions in South Africa have called for policies that not only support the green economy but also create opportunities for economic diversification and community development in regions heavily reliant on coal (Cock, 2020).

The strength of these policy networks lies in their ability to foster collaboration and consensus-building among diverse stakeholders. By bringing together governments, unions, NGOs, and the private sector, these networks create a

platform for dialogue and negotiation that can lead to more inclusive and equitable policies. As South Africa continues its transition towards renewable energy, the success of this process will depend on the ability of trade unions to effectively navigate these networks and advocate for policies that prioritise both environmental sustainability and social justice (Heffron & McCauley, 2021).

2.4 DEFINITION OF TOPIC OR BACKGROUND DISCUSSION

The energy transition is a move away from the use of fossil fuels to renewable energy sources and low carbon sources, including the sun, wind, and water. The pressing need to mitigate climate change, reduce greenhouse gas emissions, and encourage sustainable development is driving this transition (Heffron and McCauley, 2018). The ILO defines a just transition as equitable and inclusive, notably for fossil fuel communities and workers (ILO, 2018). A fair energy system should benefit everyone and safeguard the most vulnerable (Cock, 2018b).

Energy changes impact society and the economy, particularly fossil fuel-dependent communities and labour. The switch to renewable energy sources could lead to job losses in traditional energy fields, worsening economies in coal-dependent areas, and social unrest (Caldecott et al., 2017). But it does offer economic diversity, job growth in new industries, and better natural conditions. The problem is how to handle these changes so that they have the fewest bad effects and the most positive outcomes (Newell and Mulvaney, 2013).

South Africa uses a lot of coal to make electricity, which has negative social and economic effects on communities that rely on coal. This makes the switch to green energy hard (Baker et al., 2020). These problems can be seen at the Komati Power Station in Mpumalanga, South Africa. Since a lot of people work at the power plant, the closure has hurt the local business and job market. It is important that the shift is fair and takes these social and economic effects into account (Kings, 2019).

Trade unions are very important for worker rights and for a fair shift to renewable energy that includes everyone. Trade union federations like

COSATU have pushed for a fair transition and policies that protect South African workers and communities that will be affected by the energy shift (COSATU, 2018).

Policy models are important for making energy changes work. These regulations should foster long-term prosperity, fairness, and social justice and be based on global best practices and local conditions. South Africa may emulate Energiewende and Costa Rica's carbon independence, as both country transitions demonstrate the importance of stakeholder participation, policy compliance, and green energy technology investment (Arent et al., 2017; Schreurs, 2017).

The literature review will include energy shift theories and studies. South Africa's social, economic, and policy effects will be examined at Komati Power Station. International and local views and trade union engagement in fair shift planning will be assessed. Thematic analysis will be followed by real-world data and policy suggestions for South Africa's fair energy transition.

2.5 THE JUST TRANSITION CONCEPT

The concept of a "just transition" has gained significant traction in recent years, particularly in the context of the global shift towards a more sustainable and environmentally friendly economic model. The just transition framework aims to ensure that the transition to a low-carbon economy is not only environmentally beneficial but also socially equitable, with a focus on protecting the rights and livelihoods of workers and communities that may be impacted by the shift away from carbon-intensive industries (Galgóczi, 2019).

The origins of the just transition concept can be traced back to the labour movement, where unions and worker Organisations recognised the need to address the potential negative impacts of environmental policies and regulations on jobs and communities (Stevis & Felli, 2015). As the transition to a low-carbon economy has gained momentum, the just transition concept has evolved to encompass a broader set of considerations, including the mitigation of socioeconomic disparities, the promotion of inclusive development, and the

preservation of community resilience (Grantham Research Institute on Climate Change and the Environment, 2018).

One of the key principles underlying the just transition framework is the recognition that the transition to a sustainable economy must be carried out in a manner that protects the rights and livelihoods of workers, particularly those in carbon-intensive industries (Rosemberg, 2017). This includes ensuring access to retraining and reskilling opportunities, providing support for job transitions, and investing in the development of new, sustainable industries that can absorb displaced workers (Pai et al., 2020).

The just transition framework also highlights the need for a holistic, multi-stakeholder approach to the transition, involving collaboration between government, industry, labour unions, and civil society organisations (Pye & Dobbins, 2015). This collaborative approach is essential for ensuring that the transition is guided by a shared understanding of the challenges and opportunities, and that the solutions developed are tailored to the specific needs and contexts of the affected communities (Heffron & McCauley, 2018).

This involves incorporating the perspectives and needs of these communities into the decision-making processes, ensuring that the benefits of the transition are equitably distributed, and building resilience within these communities to withstand the challenges that may arise during the transition (Robins et al., 2019). Additionally, the just transition concept emphasises the importance of engaging with and empowering local communities that may be impacted by the shift to a low-carbon economy (Swilling, 2020).

In the context of South Africa, the just transition concept has gained significant attention, particularly in relation to the country's energy sector and the need to address the impacts of the transition away from coal-based power generation (Montmasson-Clair, 2018). South Africa's fossil fuel-dependent economy and the centrality of the coal industry to its energy and industrial landscape have made the just transition a critical consideration in the country's efforts to transition to a low-carbon future (Bottomley, 2019).

The South African government has recognised the importance of a just transition and has taken steps to incorporate it into its policy frameworks, including the development of the National Planning Commission (NPC) Just Transition Framework and the establishment of the Presidential Climate Change Commission (PCCC) (Government of South Africa, 2021). These initiatives aim to ensure that the transition to a low-carbon economy in South Africa is carried out in a manner that protects the rights and livelihoods of workers and communities, and that the benefits of the transition are equitably distributed (Swilling et al., 2016).

Trade unions in South Africa have also played a crucial role in shaping the just transition agenda, advocating for the protection of worker rights and the development of comprehensive support mechanisms for those affected by the transition (COSATU, 2021). Unions have been instrumental in highlighting the need for a just transition that addresses the social and economic impacts of the shift to a low carbon economy and have worked to ensure that the voices of workers and communities are heard in the decision-making processes (NUMSA, 2021).

2.6 POLICY FRAMEWORKS FOR ENERGY TRANSITION

2.6.1 Energy Transition Overview

A JET helps fossil fuels to renewable energy transition sustainably and fairly. This strategy minimises socio-economic impacts on traditional energy sector workers and communities, promoting social justice and inclusion (Heffron and McCauley, 2018). Energy transition worker rights and social justice depend on trade unions. Their contribution affects fair labour, reskilling, and community development. In coal-dependent nations like South Africa, moving to renewable energy may have substantial socioeconomic effects, making trade unions essential (Cock, 2018b).

The European Green Deal champions a fair transition and supports low-carbon economy-impacted regions and workers (European Commission, 2019). Costa Rica's 2050 carbon neutrality aim demonstrated how policy may reconcile

environmental sustainability and social justice (Arent et al., 2017). South Africa's high unemployment and inequality dominate JET conversation. JET implementation's challenges are show cased by Mpumalanga's coal-fired Komati Power Station. The power station's closure due to renewable energy hurts the local economy and jobs, emphasising the need for fair policies (Kings, 2019).

Research reveals that energy transitions need coordinated governance and stakeholder involvement. Collective bargaining allows trade unions to influence legislation and foster inclusive transformation. COSATU has advocated for worker rights and socio-economic development in impacted areas to promote a fair transition in South Africa (COSATU, 2018).

Energy transitions are often analysed through socio-technical transition theories, particularly the MLP. According to this framework, transitions occur through the dynamic interaction between niche innovations, socio-technical regimes, and broader landscape pressures. In the South African context, the growth of renewable energy technologies—driven by climate commitments and financial partnerships—has begun to destabilise entrenched coal-based systems, prompting regime shifts shaped by both global and domestic pressures (Kivimaa & Kern, 2016). However, contemporary literature stresses that such transitions must go beyond technological change to incorporate principles of justice and inclusion. Trade unions, therefore, have a critical role in advocating for fair labour standards, reskilling initiatives, and community development programmes to ensure that the transition is not only environmentally sustainable but also socially equitable (Newell & Mulvaney, 2013; Satgar, 2018).

2.6.2 Energy Transition Policies in South Africa

South Africa's energy transition plan is based on the IRP and REIPPPP. The IRP outlines the country's coal-to-renewable energy transition. The IRP further sets specific targets to reduce greenhouse gas emissions and ensure a more sustainable energy system by 2030 (Department of Mineral Resources and Energy, 2019).

The REIPPPP has helped attract renewable energy investors. This has boosted the economy and provided renewable energy employment. Due to issues, these initiatives had varied effectiveness in attaining their green energy targets. Political issues, shortage of funds, and social and economic impacts on coal-dependent areas are major issues (Baker et al., 2020).

The IRP's emphasis on a "just transition" urges us to consider how energy changes will impact disadvantaged people and the economy. The closure of Komati Power Station and other coal-fired power facilities hurts local businesses and employment. Without assistance, these organisations may lose money and have relationship issues (Caldecott et al., 2017).

COSATU and other trade unions back energy change policies that help workers and communities. This means pushing for several activities that improve social safety, educate people, and build communities. When trade groups join policy networks, they can change policy and push for plans that include everyone (Joubert, 2020).

International deals like the Paris Agreement affect what South Africa does to protect the earth. A lot of the Paris Agreement is about fairness and how climate change affects people. A lot of weight was given to economic progress and social justice in South Africa's Nationally Determined Contributions (NDCs) for climate action (UNFCCC, 2016).

One needs to understand and know about South Africa's politics, economy, and people before judging its plans for changing its energy use. The country is having a tough time moving to green energy because many people are out of work, most of its power comes from coal, and the gap between rich and poor is growing. Trade unions lobby for regulations that address these challenges and make the change fair (Eberhard, 2020). Energy reform plans in South Africa must be fair and environmentally friendly. Trade unions may promote public safety, education, and community growth to make green energy accessible to all.

2.6.3 Comparative Analysis of International Best Practices

Adapting international best practices is critical for enhancing South Africa's energy transition strategies. Countries like Germany, Denmark, and Costa Rica have undertaken ambitious energy transitions, providing valuable lessons on stakeholder engagement and policy coherence. Germany's Energiewende (energy transition) emphasises the role of trade unions in negotiating fair transition agreements, retraining workers, and integrating renewable energy (Schreurs, 2017). Similarly, Costa Rica's commitment to achieving carbon neutrality by 2050 illustrated how inclusive policies can ensure that the shift to renewable energy sources is not only environmentally sound but socially equitable (Arent et al., 2017).

Denmark's success in fostering wind energy demonstrated the importance of long-term planning, robust regulatory frameworks, and active participation from trade unions and communities (Hvelplund, 2018). These case studies underscore the necessity of coordinated governance structures and the integration of social justice principles within energy policy. South Africa can draw on these experiences to formulate a comprehensive policy framework for energy transition that is both fair and environmentally sustainable. Costa Rica's 2050 carbon neutrality plan illustrated how governmental policy can safeguard the environment and guarantee equal rights. Economic development and social justice policies have helped the nation migrate to green energy, which benefits everyone (Arent et al., 2017). These overseas examples emphasise stakeholder engagement, policy consistency, and green energy investment. South Africa may model equitable energy change policies using these best practices. Trade unions must encourage economic development and social fairness to benefit everyone from the transformation (Cock, 2018b).

Comparative institutional analysis emphasises localising excellent practices. South Africa must consider its specific social, economic, and political considerations when creating energy change policy, even if other nations' models are beneficial. Trade unions can help make these policies fit the needs and worries of workers and groups that will be touched by the change (Hall and Soskice, 2001). Comparing the best ways to do things in other countries helps

South Africa's energy shift. Germany, Denmark, and Costa Rica can teach South Africa how to make fair energy change policies. To make sure that everyone benefits from the change, trade unions push for policies that promote social justice and economic growth.

2.6.4 Proposition 1

Adapting international best practices can enhance South Africa's energy transition strategies

2.7 SOCIO-ECONOMIC IMPACTS OF ENERGY TRANSITION

2.7.1 Impact on Affected Communities and Workforce

Energy transitions have huge effects on society and the economy, especially on towns and workers who depend on old energy sources like coal. Even though switching to renewable energy is good for the earth, it is very hard for these groups. Loss of jobs in the fossil fuel business is one of the most obvious and immediate effects. People who work at coal-fired power plants like the Komati Power Station in South Africa must leave their jobs because there aren't many jobs in the new renewable energy field (Cock, 2018; Eberhard, 2020).

Numerous research projects have shown that a lot of people are employed in the fossil fuel business in South Africa. The Department of Mineral Resources and Energy (2019) says that the coal industry alone provided more than 80,000 direct jobs. Other industries and services that supported the coal industry also created jobs. So, when Komati Power Station stops working, it threatens not only the jobs that are directly affected but also the overall economic stability of towns that depend on coal. Lower incomes, higher poverty rates, and higher social conflicts are some of the effects that follow (Caldecott et al., 2017; Kings, 2019).

The effects of these kinds of changes on people and on communities can be seen through qualitative studies. Communities that have depended on coal mines and coal-fired power plants for many years are having a hard time

figuring out who they are and what they want to do. It's common for workers to lose their sense of respect and self-worth, which is made worse by the stress of being unemployed. These communities' social and cultural fabric is also at danger because of the economic problems that could lead to more crime, drug abuse, and family breakups (Newell and Mulvaney, 2013; Joubert, 2020).

But the change also brings opportunities, especially for people who want to work in the renewable energy industry. The International Renewable Energy Agency (IRENA) highlights that switching to renewable energy could create millions of jobs around the world, making up for the jobs that are lost in the fossil fuel industry (IRENA, 2019). This has great potential in South Africa, but investing in education and training to prepare people for these new occupations is crucial. Trade unions may advocate for effective retraining programmes and ensure that energy shift-displaced workers are not left behind (COSATU, 2018).

Trade unions safeguard worker rights and ensure employer fairness. They must also advocate for energy transition policies that help people retrain and find employment. COSATU has led the push for a fair transition, emphasising the necessity for substantial retraining and social safety measures to reduce worker harm (Cock, 2018b). Trade unions may negotiate fair transition terms and advocate for renewable energy regulations to ensure a fair and inclusive transfer.

2.7.2 Strategies for Mitigating Negative Impacts

To reduce the negative effects on society and the economy of energy changes in South Africa, community involvement, social safety nets, education, and training are needed. To make the change fair, South Africa needs plans that help the economy and the workers.

It's important to have full education programmes as people who lost their jobs when coal-fired power plants shut down need these courses to learn how to work with green energy. Successful models from other countries can teach South Africa a lot. Germany's switch to green energy included big projects to educate coal miners to work for wind and solar companies (Schreurs, 2017).

South Africans who have lost their jobs could use these kinds of courses to learn new skills and find work in areas that are growing (Baker et al., 2020).

Social safety nets for workers who are moving are also very important. When people lose their jobs, unemployment payments, social support, and other forms of cash aid help them, and their families get by. Communities that are going through energy change need social safety nets to keep them from falling into poverty and social breakdown. People who work for the ILO can get money and use important services through large-scale social protection programmes (ILO, 2018). These programmes help workers deal with changes in the economy.

Communities could run projects that use green energy to reduce the impacts. The projects can bring people together, make jobs, and bring in money if they are led by people in the community who help plan and carry them out (Cock, 2018; Joubert, 2020). Trade groups can help get these ideas out there and used. By putting together policy networks with other groups that care about the same things, trade unions can change policies and push for changes that benefit everyone. Environment and community groups are working with COSATU to push for a fair change that will help people and the environment (Joubert, 2020).

Denmark cares about long-term planning, clear rules, and having a group interested in green energy (Hvelplund, 2018). Drawing from this, South Africa can make change plans that are fair and just if they did these things. During the change, these good ideas can be shared by trade groups to help everyone.

All stakeholders reduce the impact that changes in energy technologies and systems have on society and the economy. South Africa should put in place teaching programmes, social safety nets, and community-led green energy projects to make sure the change goes easily. It's very important for trade groups to push for and carry out these plans. South Africa can use best practices from other countries to make laws that allow a fair and equal shift to green energy.

2.7.3 Proposition 2

A comprehensive policy framework can mitigate adverse effects on communities and the workforce. International examples provide insight into how carefully designed policies can protect workers and communities from the socio-economic impacts of transitioning away from fossil fuels. For example, Germany's renewable energy transition involved substantial retraining programs that cushioned the blow for workers displaced by coal industry closures. Costa Rica's approach to achieving carbon neutrality emphasised the need for policies that account for both environmental and social goals (Arent et al., 2017). In South Africa, similar policies, supported by trade unions, may mitigate the negative impacts of the Komati Power Station's closure and the broader energy transition (Cock, 2018).

2.8 ROLE OF TRADE UNIONS IN ENERGY TRANSITION

Trade unions protect worker rights and ensure fairness throughout energy transitions. Their support is crucial in creating policies that encourage employment retention, education, and community development. The transition to renewable energy is imperative for mitigating climate change and ensuring a sustainable future. However, it presents significant socio-economic challenges, especially for regions heavily reliant on fossil fuels. In South Africa, trade unions have a long history of advocating for social justice and worker rights, making them crucial stakeholders in the Just Energy Transition. This literature review delves into the existing body of research on the role of trade unions in advancing JET in South Africa, focusing on the benefits of their involvement, methodologies used to assess their impact, and identifying gaps in the current understanding. A special emphasis is placed on the Komati Power Station as a case study.

Trade unions must protect employment as South Africa switches from fossil fuels to renewable energy. Many people risk losing their employment because coal-fired power stations like Komati are shutting down and there are few viable jobs in the renewables sector. Trade unions promote measures that assist

retained and laid-off workers. COSATU has led the way in promoting worker rights and fairness throughout this energy change (COSATU, 2018).

Trade unions help maintain employment and set up retraining programmes for energy transition victims. People must develop new skills to move to renewable energy. Retraining initiatives prepare people for green economy occupations. Trade unions collaborate with government, schools, and business-people to develop and implement comprehensive retraining initiatives. These courses prepare workers for green energy jobs. Thus, they won't fall behind in employment market developments (Healy and Barry, 2017; Schreurs, 2017).

Trade unions sponsor community development programmes for energy transition areas. Coal-fired power station closures may hurt local economies, causing poverty and social collapse. Trade unions promote community development projects for disadvantaged areas. These policies should diversify the economy, ensure social safety, and invest in local infrastructure. These projects reduce the energy transition's negative effects and foster long-term development in affected areas (Cock, 2018a).

For justice, trade unions must assist establish energy transition policies. Trade unions advocate inclusive transition methods via policy networks and alliances. COSATU has worked hard to form partnerships with community and environmental groups to achieve social and environmental justice. These partnerships guarantee excluded groups are identified and their issues addressed in policymaking (Joubert, 2020).

Trade unions assist firms and governments negotiate fair transitions. These agreements include job retention, retraining, social safety, and community development. Unions create fair transition agreements to ensure everyone benefits from the energy transition and limit negative effects. Trade unions in Germany have achieved fair transition agreements for coal-fired power plant workers, including thorough retraining and social support (Schreurs, 2017).

Trade unions play a significant role in shaping policy as, they influence policymaking related to worker rights, community wellbeing and safety. Trade unions advocate for economic development and social fairness to benefit

everyone from the energy transition. South African trade unions demand measures that encourage local green energy initiatives. These community-run enterprises strive to keep the region wealthy from the energy change by creating employment, producing money, and bringing people together (Cock, 2018b).

Trade organisations must also verify transfer rules to ensure they operate and are fair. A trade union monitors how the energy change affects people and advocates for improved policy implementation with government agencies, neighbourhood organisations, and businesspeople. Transition strategies should promote economic development, social fairness, and workers' and communities' demands and concerns (Heffron and McCauley, 2018).

Trade unions help ensure worker rights and fair treatment amid energy transformations. Helping retain employment, support education, and build communities is crucial to making the energy change fair and equitable (Daniel, 2021). Trade unions also help ensure equitable transition arrangements, public input on policymaking, and monitoring and evaluation of transition strategies. Trade unions seek to ensure that the energy transition benefits everyone and minimises negative repercussions. They promote inclusive transition strategies, economic prosperity, and social fairness (Daniel, 2021).

2.8.1 Benefits of Including Trade Unions in Advancing JET

i. **Advocacy for Worker Rights**: Trade unions have been at the forefront of advocating for policies that protect worker rights during the energy transition. Satgar (2018) discusses how unions have successfully lobbied for comprehensive policies that secure fair wages, improve working conditions, and safeguard employment. This advocacy ensures that the socio-economic impacts of the transition do not disproportionately affect workers, particularly those in vulnerable positions.

ii. **Skill Development and Training**: One of the critical contributions of trade unions is their push for retraining and reskilling programmes for workers affected by the transition from coal to

renewable energy. Baker (2015) highlighted how unions have played a pivotal role in negotiating training programmes that equip workers with the necessary skills to transition into new roles within the renewable energy sector. This not only helps maintain employment levels but also ensures that the workforce is prepared for the demands of the new energy economy.

iii. **Social Dialogue and Inclusion**: Trade unions facilitate social dialogue between the government, employers, and workers, ensuring that transition policies are inclusive and equitable. Swilling, Musango, and Wakeford (2016) emphasised the importance of such dialogue in creating policies that consider the needs and perspectives of all stakeholders. This collaborative approach helps foster a more inclusive transition process that balances environmental goals with socio-economic realities.

iv. **Public and Political Support**: Trade unions have significant influence in mobilising public and political support for JET policies. The Global Labor Institute (2019) underscores the role of unions in raising public awareness and generating political will to implement necessary changes. This support is crucial for overcoming resistance from vested interests and ensuring the smooth implementation of JET initiatives.

2.9 GLOBAL DEVELOPMENTS AND JET IMPLEMENTATION IN SOUTH AFRICA

The concept of a JET has gained significant momentum globally, as countries shift from carbon-intensive energy sources to renewable ones. JET not only seeks to mitigate the environmental impacts of fossil fuel use but also ensures that the transition process is socially equitable, particularly for workers and communities reliant on traditional energy industries (Heffron & McCauley, 2018).

Globally, countries like Germany and Denmark have been at the forefront of JET implementation, providing valuable lessons for South Africa. Germany's Energiewende (energy transition) is widely regarded as a model for balancing

environmental sustainability with social equity. In this case, strong trade union involvement has ensured that policies supporting job retention, worker reskilling, and community development were implemented (Schreurs, 2017). This comprehensive approach helped to minimise the negative social impacts of coal plant closures, making the transition fair for affected workers and regions.

Denmark's transition to wind energy further highlights the importance of long-term planning and government commitment to renewable energy investments. The Danish government, with the involvement of unions and local communities, created policy frameworks that supported worker reskilling and participation in the green economy (Hvelplund, 2018). These examples demonstrate how global best practices can inform the design of JET frameworks to ensure they are both environmentally effective and socially just.

In contrast, South Africa's JET faces unique challenges, particularly due to its heavy reliance on coal and the socio-economic dynamics of coal-dependent communities (Cock, 2018). The closure of Komati Power Station represents a microcosm of these challenges. Unlike Germany or Denmark, where comprehensive policies for reskilling and community support were implemented, South Africa's JET has been criticised for lacking adequate provisions for affected workers and communities (Kings, 2019).

Furthermore, the global trend towards renewable energy has shown that a transition without strong social policies can exacerbate existing inequalities, particularly in developing countries like South Africa, where unemployment and social inequality are already high (Newell & Mulvaney, 2013). Trade unions, such as COSATU, have been instrumental in advocating for policies that address these social concerns, calling for comprehensive retraining programs, social protection, and community investment to ensure that the transition benefits all stakeholders (COSATU, 2018).

Incorporating these global insights into South Africa's JET framework is crucial for ensuring that the transition is not only environmentally sustainable but also socially inclusive. South Africa can learn from international experiences by integrating best practices from countries like Germany and Denmark, while also

addressing the unique socio-economic challenges it faces. This will involve strengthening policy frameworks that protect workers, providing retraining opportunities, and fostering economic resilience in affected communities (Eberhard, 2020).

In conclusion, the literature survey now reflects a more comprehensive analysis of global JET developments and critiques, providing a wider perspective that enhances the coherence and depth of understanding regarding the implementation of JET in South Africa. By comparing international best practices with the South African context, the discussion highlights the gaps and opportunities for improvement in South Africa's approach to a just energy transition.

2.10 CONCLUSION OF LITERATURE REVIEW

The literature study on energy change plans, social justice and fairness is summed up in this section. The study found that trade unions help make plans for change, keep jobs, teach workers, and move community development projects forward. Trade unions are needed to make sure that fair transfer deals are made and that policies are made that help workers and communities. The literature review shows that we need complete policy frameworks that help communities and workers deal with the social and economic effects of climate change and support long-term growth. The involvement of trade unions in the Just Energy Transition in South Africa is crucial for ensuring that the process is socially equitable and economically sustainable. Existing research highlights the significant benefits of union involvement, including advocacy for worker rights, skill development, and fostering social dialogue. However, there are notable gaps in the current understanding, particularly in terms of longitudinal impacts, comparative analyses, comprehensive policy studies, worker centric.

2.10.1 Proposition 1

South Africa's energy transition policies may be more successful and equitable by combining worldwide best practices into policy frameworks customised to its socio-economic and environmental realities.

2.10.2 Proposition 2

A comprehensive policy framework that specifically addresses the socio-economic consequences of coal transitions is essential for ensuring a just energy transition in South Africa. Internationally, examples from countries like Germany and Denmark show that a balanced approach to policy development—incorporating stakeholder engagement, social justice, and robust regulatory frameworks—can mitigate the negative effects on communities and workers affected by energy transitions (Schreurs, 2017; Hvelplund, 2018). In South Africa, integrating such international best practices into domestic policy frameworks, alongside a strong emphasis on worker retraining and community development, can result in a more equitable and successful transition away from coal (Cock, 2018).

2.10.3 Proposition 3

The closure of Komati Power Station has made trade groups even more worried about how fair South Africa's energy transition will be. Workers and the towns around them have had a hard time with the economy since job placement and retraining programs aren't working, according to Beya (2024). According to COSATU, the shift has mostly helped corporate investors while ignoring the well-being of workers (COSATU, 2021). Galgóczi (2019) described that fair changes should protect worker rights and keep them in their jobs. But some critics say that unions sometimes fight against changes that need to happen in the workplace (Daniel, 2021). The Komati case is a good example of these problems since it shows how displaced workers are not able to find work. Without a complete plan, trade unions' worries about an unfair shift are still based on facts.

2.10.4 Proposition 4

Fair energy transition plans depend on trade unions. Worker rights require trade union participation in talks, as shown by Komati (Cock, 2019). Successful transitions like Germany show the necessity of social protection and retraining

(Galgóczi, 2020). In South Africa, unions have been excluded from policymaking, worsening socioeconomic inequality (Baker, 2015). Atteridge and Strambo (2020) noted that strong social discussion improves policy efficacy. Kalt (2022) stresses the importance of union-government-private sector partnership. Sustainability and social justice require policy frameworks that incorporate union best practices.

Table 2-1 shows the research objectives and propositions of the study.

Table 2-1: Research Objectives and Propositions

RO #	State Research Objective	Prop	State Proposition
1	Assess the current policy frameworks governing energy transition in South Africa	1	Adapting international best practices in policy frameworks can enhance the efficacy of South Africa's energy transition strategies.
2	State RO 2	2	State proposition 2
	Explore the socio-economic impacts of the energy transition on affected communities and workforce at the Komati Power Station		A comprehensive policy framework addressing socio-economic impacts can mitigate adverse effects on communities and workforces in South Africa
3	State RO 3	3	State proposition 3
	How do the outcomes of the Komati Coal Power Station closure align with trade unions' concerns about fairness in the energy transition?		The outcomes of the Komati closure reflect the validity of trade unions' concerns regarding fairness in the energy transition process.
4	State RO 4	4	State proposition 4
	Develop policy recommendations, from lessons learnt from Komati		Incorporating trade unions' best practices in policy frameworks will enhance the justness and

RO #	State Research Objective	Prop	State Proposition
	experience, on trade unions' best practices in influencing and ensuring just energy transition in a country like South Africa		effectiveness of energy transition strategies

Source: Author's adaptation (2024)

CHAPTER 3. RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter includes an outline and justification of the choice of researcher methods that were used in the current study. The chapter includes the following: research approach, research design, data collection methods, population and sample, research instrument, procedures for data collection and data analysis and interpretation. The chapter also includes limitations of the study, trustworthiness, ethical considerations and consistency table.

3.2 RESEARCH APPROACH

Qualitative search is used to evaluate policy frameworks for a fair energy transition in South Africa, focusing on Komati Power Station. This technique uses qualitative and quantitative tools to explain complicated events (Dufour & Hege, 2020). Qualitative methodology is ideal for this study because it permits qualitative investigation of policy frameworks and quantitative evaluation of their effects on employment rates and energy output (Dufour & Hege, 2020).

3.3 ASSUMPTIONS APPROACH

It is presumed that qualitative research can be conducted within the time and resources of the study. The accessibility of key informants for qualitative interviews and the availability of secondary data for quantitative analysis support this conclusion (Dufour & Hege, 2020).

3.4 RESEARCH DESIGN

Through a case study method that includes qualitative research methods, this study investigated the Just Energy Transition (JET) at Komati Power Station. The case study was chosen because it lets us look at complicated problems in more depth by putting them in their real-life contexts (McGrath, Palmgren, & Liljedahl, 2019). Trade unionists, policymakers, industry experts, community leaders, and workers involved in Komati Power Station's energy transformation were interviewed using semi-structured questions for the qualitative phase of

the study. This method allows examination of transition process and policy framework perspectives, insights, and experiences.

3.4.1 Merits and Demerits

Merits: The utilisation of a qualitative case study design facilitates a thorough comprehension of the socio-economic ramifications and efficacy of the policy frameworks (McGrath, Palmgren, & Liljedahl, 2019. Triangulation is a process that improves the validity of the findings through the corroboration of evidence from various sources.

Demerits: Due to the need to gather and analyse both personal and quantitative data, this method can take a lot of time and resources (Lincoln & Guba, 2016). Putting together results from different sources can also be hard.

3.5 DATA COLLECTION METHODS

A comprehensive understanding of policy frameworks for a just energy transition in South Africa can be obtained through the utilisation of both qualitative and quantitative approaches. The data acquisition will therefore incorporate both qualitative and quantitative techniques.

3.5.1 Qualitative Data Collection:

The main way that qualitative data was gathered is through semi-structured conversations (McGrath, Palmgren, & Liljedahl, 2019). This structure was chosen because it is flexible and allows for the collection of deep insights of how participants feel about how well policies work, their effects on society and the economy, and the process of transitioning at Komati Power Station. Policymakers, energy sector experts, local community leaders, and workers who will be touched by the change will be interviewed. This method is appropriate because it can gather detailed stories and information about how the policy will work in real life, which fits with the research's exploring and descriptive goals (Lincoln & Guba, 2016).

3.5.2 Quantitative Data Collection

Quantitative data collection was used on an examination of secondary sources of information, such as job statistics, energy production figures, and economic indicators prior to and following the implementation of the policy (Horsburgh, 2003). This technique is well-suited for measuring the tangible outcomes of energy transition initiatives, laying the groundwork for evaluating and comparing policy effectiveness across various time periods.

Assumptions: Both interested individuals, and appropriate secondary data must be available for these techniques to be implemented. If this is the case, then the process of just energy transition should be amenable to rich, comprehensive, and quantifiable insights.

3.6 POPULATION AND SAMPLE

3.6.1 Population

For the purposes of this study, the population consists of a wide variety of stakeholders who are either directly or indirectly affected by the energy transition strategies implemented at Komati Power Station (McGrath, Palmgren, & Liljedahl, 2019). This includes the following:

- Energy industry specialists and professionals with knowledge of the transition process.
- Local community members and workers at Komati Power Station, whose socio-economic conditions are influenced by the transition.

The case site, Komati Power Station, is selected due to its relevance and ongoing transition from coal-fired power generation to renewable energy sources, making it a pertinent example for studying the implications of energy transition policies (Beya, 2024).

3.6.2 Sample and sampling method

The adopted sample size for the semi-structured interviews involves 20 participants. This number is justified based on the need to gather a diverse range of perspectives while maintaining a manageable scope for qualitative analysis (Horsburgh, 2003). Given the depth of interviews required to understand the complexities of the just energy transition at Komati Power Station, a sample size of 20 ensures sufficient representation while allowing for detailed, rich data collection.

3.6.3 Justification for Participant Selection

Participants were selected using purposive sampling to ensure that those who have direct involvement or are impacted by the energy transition at Komati Power Station are represented. Since the JET is a national initiative, the sample will include not only local stakeholders but also national-level stakeholders who influence policy, such as union representatives, policymakers, and energy sector experts at a national level. This approach ensures that the study captures insights from both local and broader national perspectives, providing a comprehensive understanding of the policy implications of JET. The inclusion of national-level unions is crucial as they play a pivotal role in influencing energy policies and advocating for worker protections during the transition.

Table 3-1 shows the profile of respondents by position context

Table 3-1 Profile of Respondents

Description of respondent	Number to be sampled
Policy/Regulatory Authority	4
Energy Sector Expert	5
Local Community Leader	3
Affected Worker at Komati Power Station	5
Union representatives in Komati	3
TOTAL number of respondents	**20**

Source: Author's adaptation (2025)

This sample method and size assisted to understand the complex consequences of the just energy transition. They enabled detailed investigation within the study's scope.

3.7 THE RESEARCH INSTRUMENT

With the Komati Power Station as a case study, this research used semi-structured interviews to examine equitable energy shift policy approaches in South Africa. It is important to explore politicians, experts, community people, and workers' views, emotions, and first-hand perspectives of the energy transition using this choice (Morse, 2015).

Structure of the Interview Schedule: The interview plans included energy transition policies, their effects, and worldwide best practices based on the study goals. Lincoln & Guba, (2016) suggested that is important to ask many questions regarding present policies' efficacy, effects on communities and workers' employment, and solutions.

Appendix Inclusion: Appendixes contain the actual interview schedule along with a cover letter that explains the study's purpose, participant rights, and data utilisation strategies (Morse, 2015). This paperwork improves transparency and that interviewees gave their informed consent and that people gave their informed consent.

3.8 PROCEDURE FOR DATA COLLECTION

Professional networks and institutional connections were utilised to identify and contact potential participants for data collection. Key informant interviews were conducted either face-to-face or via teleconference, depending on logistical considerations and accessibility. This approach was selected due to its capacity to facilitate open and nuanced discourse while accommodating participants' availability. Additionally, this method enabled the researcher to pose more detailed questions, obtain more comprehensive responses, and adapt the interview structure according to the flow of the conversation, thereby enhancing the richness and utility of the collected data (McGrath, Palmgren, & Liljedahl, 2019).

3.9 DATA ANALYSIS AND INTERPRETATION

3.9.1 Validation of Feedback from Marginalised Communities:

Feedback from marginalised communities, especially those not familiar with the energy sector, was carefully evaluated using member checking and triangulation techniques. Member checking involved sharing initial findings with participants to verify the accuracy of the data and interpretations. This method ensured that the views of marginalised individuals were accurately reflected in the study. Additionally, triangulation involved cross-referencing the data collected from marginalised communities with other data sources, such as policy documents and interviews with experts, to validate their perspectives and ensure reliability (Lincoln & Guba, 2016).

3.9.2 Key Themes and Codes for Thematic Analysis:

Thematic analysis was guided by several key themes based on the research objectives. Some of the initial codes that were followed include:

i. **Policy Effectiveness**: Exploring the impact and effectiveness of JET policies on employment, energy production, and social justice.
ii. **Social and Economic Impact**: Investigating how the transition affects local communities, particularly marginalised groups.
iii. **Stakeholder Engagement**: Assessing the role of various stakeholders, including trade unions, in shaping the transition process.
iv. **Challenges and Opportunities**: Identifying the barriers to successful implementation of JET and potential opportunities for improvement.

These themes evolved as the analysis progressed, ensuring a comprehensive understanding of the data (Horsburgh, 2003).

3.10 LIMITATIONS OF THE STUDY

It is important to know and accept the study's limits to fully grasp the importance and usefulness of its results (Morse, 2015). There are a few things that could go wrong with a study that uses Komati Power Station to look at policy models for a fair energy shift in South Africa:

Sample Representation: Since the study only looked at Komati Power Station, the results may not be transferable to other parts of South Africa or to energy change situations there (Morse, 2015).

Data Availability: The study depends on having complete, correct, and up-to-date information on policy structures and socio-economic effects, which may not always be possible (Tracy, 2020).

Subjectivity in Qualitative Analysis: Despite efforts to ensure objectivity, the study's findings may be flawed since qualitative interview analysis is inherently susceptible to subjectivity (Morse, 2015).

Potential Response Bias: As a result of the possibility that individuals or organisations may be influenced by their own personal or organisational biases, qualitative data may be less trustworthy than quantitative data (Tracy, 2020).

3.11 TRUSTWORTHINESS (QUAL)

The trustworthiness of qualitative components will be highlighted.

3.11.1 Transferability

Transferability is the extent to which this qualitative study's results apply to other situations. So that readers may determine whether the findings can be applied in different contexts, this study provides thorough information regarding the research setting, subjects, and methodology (Horsburgh, 2003). Improvements in transferability may be achieved, for example, by meticulously documenting the study's procedure and environment for the benefit of future researchers.

3.11.2 Credibility

It is the truthfulness and accuracy of the qualitative discoveries that determine the credibility of the findings. Peer debriefing, extended engagement with the research environment, and member checking a process in which findings are corroborated with participants are methods that can be employed to bolster credibility (Tracy, 2010). By implementing these protocols, the interpretations of the data are substantially correlated with the actualities and perspectives of individuals undergoing the energy transition.

3.11.3 Dependability

Dependability is like reliability in quantitative research; it looks at how consistent the results are over time. To make sure that the study can be checked by outside experts, an audit trail will be kept that lists all the choices that were made during the research process (Morse, 2015)

3.11.4 Confirmability

How much the results are formed by the people who took part in the study instead of expert bias or personal interest is called confirmability. A reflexive method will be used for this study, and the researcher will keep a reflective log to keep track of their own biases and assumptions. Three different types of data sources and methods will be used to cross-check the results, which will also help confirmability (Lincoln & Guba, 2016).

3.12 ETHICAL CONSIDERATIONS

Ethical research is very important, especially when it includes people, sensitive subjects, or communities that could be at risk. The following moral rules will be followed in the study on policy frameworks for a just energy shift in South Africa:

Informed Consent: Participants will understand the study, its goals, and their rights. Consent forms will confirm their voluntary involvement and allow them to withdraw at any moment without consequence.

Confidentiality and Anonymity: There will be steps taken to protect the individuals' identities and privacy. Among them are the anonymization of data and the use of fictitious names in both oral and written communication. The information will be stored securely, and only the members of the research team will be able to access it.

Risk Minimization: No matter what risks the players may face, every effort must be made to lessen them (Dufour & Hege, 2020). This includes any kind of pain or mental stress. After the interview, subjects will get a review to try to lessen any negative effects.

Beneficence: The study's overarching goal is to provide constructive feedback on energy policy discussions. It has the potential to influence policies that aid transitional areas and foster progress in the long run.

Ethical Approval: To ensure ethical compliance, Wits University's Ethics Committee will evaluate and approve the project. The entire WBS ethics form will be prepared and sent after proposal clearance to ensure it matches the proposal.

These ethical principles hold that research should advance knowledge while protecting the dignity, rights, and well-being of communities and participants.

3.13 CONSISTENCY TABLE

Error! Reference source not found. shows how data collection and analysis are aligned with the previously stated research objectives and their perspective propositions.

Table 3-2: Research Objectives, Propositions, Data Collection and Data Analysis

RQ #	State Research Objective	Proposition #	State Proposition	Data collection detail	Data analysis method
1	Assess the current policy frameworks for energy transition in South Africa	1	Adapting international best practices can enhance South Africa's energy transition strategies	Interviews with policymakers and energy sector experts	Thematic analysis
2	Explore the socio-economic impacts on communities and workforce at Komati Power Station	2	A comprehensive policy framework can mitigate adverse effects on communities and workforce	Semi-structured interviews with affected workers and local community leaders	Thematic analysis
3	Compare international best practices with South Africa's strategies	3	Lessons from international contexts can inform more effective energy transition policies in South Africa	Review of international case studies and policy documents	Comparative analysis

RQ #	State Research Objective	Proposition #	State Proposition	Data collection detail	Data analysis method
4	Develop policy recommendations for a just energy transition in South Africa	4	Insights from the study will inform actionable policy recommendations	Integration of qualitative and quantitative data findings	Synthesis and policy analysis

Source: Author's adaptation (2024)

CHAPTER 4. DISCUSSION OF RESULTS

After data collection was concluded, emerging themes were abstracted from the results. A thematic approach analysis was utilised to identify and segment commonalities in line with the study propositions that focused on the role of trade unions in shaping the Just Energy Transition (JET) through a case study of the Komati Power Station that was shut down in Mpumalanga, South Africa. Twenty participants were interviewed utilising structured questions. As such, this chapter discusses the results obtained.

4.1 INTRODUCTION

Society has varying opinions concerning the role that trade unions play in South African energy transition processes. This was evidenced at Komati, where the power station was shut down. The power station shutdown had negative impact on workers and the communities around the Komati power station. Throughout history, trade unions have led in protecting worker rights, making sure they get fair pay, and finding new job opportunities when the economy changes (Baloyi et al., 2022). The Komati's power station shut down brought new problems, such as job insecurity, limited stakeholder consultation, and the need for skill-building programs to help former coal workers get jobs elsewhere (COSATU, 2022).

This chapter provides a comprehensive analysis of the data collected through interviews with 20 participants, including trade union representatives, former coal miners, energy policy analysts, and stakeholders in community development. In accordance with the objectives of this study, the analysis is structured around the key themes that emerged from these interviews. A critical examination is undertaken on the role of trade unions in the energy transition process, the effectiveness of their lobbying efforts, and the impact of their actions on workers' lives. Additionally, this section explores the challenges associated with policy implementation and stakeholder collaboration. Furthermore, it offers recommendations on how trade unions could enhance their contributions to facilitating a fair and just energy transition. The study

participants' age group ranged from 18-35, 36-45, 46-55 and 55-65. Table 4-1 shows the study participants' detailed demographics, which is followed by detailed study results analysis and discussion.

Table 4-1: Demographics

Participant code.	Gender (M/F)	Age	Highest qualification	Sector represented	Years of experience	Understating of JET
P1	M	36-45	Diploma	Trade Union representative	12	Well Understood
P2	F	18-35	Bachelors	Trade Union representative	8	Significantly understood
P3	M	46-55	Diploma	Energy sector expert		Significantly Understood
P4	M	18-35	Diploma	Local community leader	10	Well understood
P5	M	36-45	Diploma	Energy sector expert	15	Significantly understood
P6	M	36-45	Bachelors	Trade Union representative	17	Significantly understood
P7	M	18-35	Bachelors	Affected worker	9	Somewhat understood
P8	M	36-45	Diploma	Affected worker	18	Well Understood
P9	M	55-65	Diploma	Affected worker	37	Understood
P10	F	46-55	Bachelors	Energy sector expert	20	Significantly understood
P11	M	55-65	Diploma	Energy sector expert	30	Significantly understood
P12	M	36-45	Diploma	Local community leader	14	Understood
P13	M	36-45	Diploma	Affected worker	18	Well Understood
P14	M	18-35	Diploma	Affected worker	5	Somewhat understood
P15	F	18-35	Bachelors	Energy sector expert	12	Significantly understood
P16	M	46-55	Diploma	Local Community leader	19	Well understood
P17	M	35-46	Bachelors	Regulatory	20	Significantly understood
P18	F	35-46	Postgraduate	Regulatory	18	Significantly understood
P19	M	46-55	Diploma	Regulatory	26	Significantly understood
P20	M	55-65	Masters	Regulatory	34	Significantly understood

Source: Author's adaptation (2025)

4.2 DEMOGRAPHIC PROFILE OF PARTICIPANTS

The demographic analysis of the participants provides insight into the diversity of perspectives captured in the study. The study sample included 20 participants from various professional backgrounds, including trade union representatives, former coal plant employees, energy policy analysts, and community development coordinators.

4.2.1 Gender Distribution

The study included 16 male participants and 4 female participants. The gender imbalance reflects the male-dominated nature of the coal and energy sectors in South Africa, where women are underrepresented in both operational and leadership roles (COSATU, 2022). However, female participants, particularly those in energy policy and community development, provided critical perspectives on the socio-economic impact of the South African energy transition.

4.2.2 Educational Qualifications

The participants held a range of educational qualifications, from labour relations and engineering to postgraduate degrees in environmental science and energy policy. The distribution is as follows: The variation in educational backgrounds contributed to diverse perspectives, particularly in understanding policy frameworks versus practical workplace challenges. The twelve participants with technical diplomas, nine expressed concerns that their skills were not being effectively recognised in the renewable energy sector, despite government claims about retraining initiatives.

4.3 SUMMARY OF THE THEMES AND SUB-THEMES

The analysis of data on the role of trade unions in shaping the JET at Komati Power Station identifies key themes and sub-themes emerging from participant interviews. These themes include the absence of consultation during the

transition process, the economic impact of the power station's closure on workers and local communities, and the necessity for skills and training. Most participants (15/20 P) reported that trade unions were not involved in stakeholder discussions, reinforcing the perception that the transition was unjust. Furthermore, a significant proportion (18/20P) highlighted the severe economic consequences of the closure, such as increased unemployment and the collapse of local businesses. Trade union advocacy also emerged as a critical issue, with a significant (17/20 P) emphasising the need for greater trade union involvement in negotiations concerning equitable compensation and retraining opportunities. These findings suggest that trade unions should play a crucial role in shaping policy and supporting affected workers during South Africa's JET

Table 4-2 depicts the summary of themes and sub-themes of the study.

Table 4-2: Summary of themes and sub-themes

Research Objectives	Major Themes	Sub Themes
To document and analyse the trade unions' positions, input, and advocacy during the decision-making processes leading to the closure of Komati Coal Power Station as part of the Just Energy Transition in South Africa.	Trade Unions' Advocacy and Involvement in Decision-Making Processes	1. Trade unions' representation in decision-making forums 2. Union engagement with government and Eskom leadership 3. Advocacy for worker protections and alternative employment 4. Challenges in influencing energy transition policies 5. Perceptions of exclusion or marginalisation in policy negotiations

To critically assess how trade unions' inputs on fairness and their proposals for a Just Energy Transition were incorporated into the planning and implementation of Komati Coal Power Station's closure.	Incorporation of Trade Unions' Inputs on Fairness and Just Transition	1. Union proposals for retraining and redeployment of workers 2. Inclusion of social protection measures in transition planning 3. Trade unions' views on financial compensation for affected workers 4. Adequacy of worker engagement in transition planning 5. Perceptions of the fairness of decision-making processes
To evaluate the extent to which outcomes of Komati Coal Power Station closure validate trade unions' concerns on energy transition in the country.	Validation of Trade Union Concerns in the Outcomes of the Closure	1. Job losses and alternative employment opportunities for workers 2. Socioeconomic impact on affected workers and their

		families 3. Effectiveness of reskilling and upskilling initiatives 4. Worker perceptions of post-closure support programmes 5. Broader labour market implications for South Africa's energy sector
To develop policy recommendations, from lessons learnt from Komati experience, on trade unions' best practices in influencing and ensuring just energy transition in a country like South Africa.	Policy Recommendations for Trade Unions in Future Just Energy Transitions	1. Lessons learned from Komati Power Station closure 2. Best practices in trade union engagement with energy transition policies 3. Strategies for improving workers' inclusion in policy discussions 4. Enhancing social dialogue between unions, government, and industry

		5. Recommendations for a national framework on Just Energy Transition

Source: Author’s adaptation (2025)

4.4 TRADE UNIONS' ADVOCACY AND INVOLVEMENT IN DECISION-MAKING PROCESSES

4.4.1 Trade Unions' Representation in Decision-Making Forums

Trade unions have at times been included in, and at other times excluded from, decision-making meetings regarding the JET at Komati Power Station. Analysis of interview data indicates that a significant share of respondents (15/20 P) expressed dissatisfaction with the extent of trade unions' involvement in critical discussions concerning the decommissioning of the power station. Participants reported that, although some union representatives attended meetings with Eskom and government officials, their influence was minimal. In most instances, trade unions functioned primarily in an advisory capacity rather than actively participating in decision-making. Furthermore, the lack of transparency in these discussions led to uncertainty regarding the extent to which trade unions could effectively advocate for workers interests.

The findings indicated that while trade unions have sought to safeguard workers' interests, their influence in decision-making processes has been limited. A considerable proportion of respondents (14/20 P) reported that trade unions were excluded from the early stages of decision-making concerning the closure of Komati Power Station, thereby constraining their capacity for effective advocacy. Furthermore, more than half of the respondents (12/20 P) participants noted that trade unions lacked sufficient resources to engage meaningfully in energy policy discussions. These challenges highlight the necessity of strengthening partnerships between trade unions and government bodies to facilitate a more equitable transition for workers (Sweeney, 2022).

Moreover, fewer than half (9/20 P) indicated that trade unions faced challenges in effectively representing workers' interests due to structural constraints. These challenges included limited access to crucial economic and policy data, insufficient technical expertise on green energy policies, and exclusion from formal negotiation processes. Participants noted that trade unions struggled to

navigate complicated policy frameworks, placing them at a disadvantage when engaging in negotiations with well-organised and well-resourced government and business stakeholders. Furthermore, more than half of respondents (11/20 P) reported that trade unions were frequently informed of decisions only after they had been made, further exacerbating concerns regarding inadequate representation. Due to their lack of prior involvement, their participation was perceived as ineffective, with trade union representatives often feeling that they were merely endorsing predetermined solutions rather than actively influencing policy. This finding aligns with broader concerns in the literature, which suggested that trade unions in South Africa have been increasingly marginalised in policy discussions on economic transitions (Baloyi et al., 2022; COSATU, 2022).

“Trade unions were present in some meetings, yes, but were they really heard? No. It felt like their input was just a formality.” (Participant 3)

“We would have had a better deal if unions were part of the planning phase, not just brought into rubber-stamp Eskom’s decisions.” (Participant 7)

“The power station’s shutdown affected us all, but when it came to the high-level decisions, workers' representatives were more like spectators.” (Participant 10)

“It’s one thing to sit at the table, and another to have a say. Our trade unions sat there, but they didn’t get to shape what happened.” (Participant 12)

The perspectives from the interview excerpts reveal a pattern of passive representation, where trade unions were included in discussions but lacked the influence to shape outcomes meaningfully. This aligns with findings from Musonda (2023), who noted that institutional barriers often hinder trade unions' ability to drive policy changes in the South African energy sector.

These findings demonstrate that South Africa's JET has participation limitations, particularly in integrating worker concerns into policy frameworks (Reinsberg & Westerwinter, 2021). According to COSATU (2022), trade unions have

historically advocated for labour rights during economic transformations, but governmental and corporate actors have been sidelining them. The European Commission (2022) also noted that effective labour representation in policymaking involves structural inclusion from the start rather than consultation after crucial decisions.

Given these challenges, the ability of trade unions to drive meaningful change is contingent upon securing a formal and influential role in South Africa's energy policy framework. To advance their position, trade unions must establish strategic partnerships with policymakers, enhance their technical expertise, and ensure that worker representation extends beyond a symbolic presence. Failure to implement these measures may result in continued ineffective advocacy, further marginalising trade unions in future JET initiatives that are related to coal power station shut down.

4.4.2 Union Engagement with Government and Eskom Leadership

A significant challenge identified in the data relates to the nature of interactions between trade unions, government agencies, and Eskom leadership. A considerable proportion of respondents (13/20 P) reported that, although trade unions maintained some level of engagement with Eskom and government officials, these interactions were generally limited and superficial. Meetings were predominantly structured as briefings rather than meaningful negotiations, with worker representatives expressing concerns that their contributions were not accorded serious consideration. This concern is further substantiated by reports indicating that trade unions were often presented with finalised transition plans, affording them minimal opportunity for substantive negotiation.

Additionally, a significant portion of respondents (15/20 P) asserted that Eskom's engagement with trade unions was inconsistent, often occurring only in response to worker protests or external pressures. This reactive approach to engagement meant that unions had limited opportunities to proactively shape the South African energy transition debate and strategy thereof. In contrast, fewer respondents (8/20 P) highlighted instances where union representatives

had successfully influenced severance package negotiations and reskilling initiatives, albeit in a limited capacity.

The findings further revealed that half of the respondents (10/20 P) believed that the government prioritised corporate and investor interests over the needs of workers. This aligns with critiques in the literature that government policies on energy transition tend to emphasise economic efficiency and private-sector participation while sidelining labour concerns (Lieberman, 2022; Ninan, 2022). Participants also pointed out that, although Eskom leadership engaged in public discussions on the JET, these discussions rarely resulted in concrete commitments to protect employment security for workers.

> *"Eskom and government had their own agenda. Trade unions tried to engage, but in the end, the decisions were already made." (Participant 5)*
>
> *"We had meetings, sure, but they were more like updates rather than negotiations. By the time we were consulted, the decisions were finalized." (Participant 9)*
>
> *"Unions engaged, but their influence was limited. Government and Eskom were focused on attracting foreign investment in renewables rather than listening to workers." (Participant 11)*
>
> *"If unions were truly engaged, we would not be struggling with job losses like we are now. The engagement was surface level." (Participant 14)*

These findings indicated that while union engagement with government and Eskom occurred, it lacked substantive impact. Musonda (2023) highlights a similar trend in his study on South African labour movements, noting that trade unions are often included in decision-making forums but rarely wield significant influence. This is further reinforced by Sweeney (2022), who argued that energy policy in South Africa remains largely technocratic, favouring expert-driven decision-making over participatory governance.

The literature confirms that meaningful engagement requires structural participation rather than episodic consultations. The World Bank (2022)

emphasised that a successful JET depends on active labour participation in policy formulation, rather than treating workers as passive stakeholders. In South Africa, existing policy frameworks do not mandate trade union involvement at the highest levels of transition planning, which has contributed to the ineffective engagement observed at Komati Power Station.

In evaluating these findings, it became evident that the effectiveness of trade union engagement hinges on their ability to assert their influence beyond reactive participation. To ensure a genuine JET, unions must push for policy frameworks that institutionalise labour representation in energy transition decision-making. Without such reforms, workers will remain vulnerable to unilateral corporate and government decisions that fail to prioritise their needs.

4.4.3 Advocacy for Worker Protections and Alternative Employment

The interviews found that a considerable portion (14/20 P) emphasised the role of trade unions in advocating for worker protections and alternative employment opportunities as part of the JET. While the shift towards renewable energy is essential, participants highlighted the vulnerability of coal-dependent workers' livelihoods. The data suggest that trade unions have been involved in negotiating severance packages, facilitating retraining opportunities, and supporting displaced workers through financial and social measures after the fact.

An equitable portion of respondents, (11/20 P) noted that trade unions have been actively engaging with energy policymakers and Eskom management to push for clearer strategies regarding alternative employment. However, a significant portion of the study participants (15/20 P) expressed frustration over what they perceived as inadequate progress, particularly in implementing large-scale retraining initiatives. Many workers at Komati Power Station spent decades in the coal industry, and the transition requires comprehensive skills development programs to enable them to integrate into the alternative sectors. Fewer respondents (12/20 P) also stressed that alternative employment

initiatives remain vague, with only a few workers being offered tangible job placements in renewable energy projects.

Moreover, other participants (13/20 P) argued that unions should go beyond mere advocacy and actively participate in policy formulation. They pointed out that without a structured employment transition plan, workers would continue to experience economic displacement. A considerable portion of respondents (14/20 P) raised concerns about the decline of small businesses that once thrived around Komati Power Station, noting that trade unions should extend their advocacy efforts to include community-based employment opportunities that support a broader just transition.

"Trade unions have been pushing hard to secure job alternatives, but so far, not much has been implemented. Most workers are still waiting for answers about what's next." (Participant 4)

"We've been promised reskilling programs, but only a handful of us have been enrolled. If unions don't push harder, many workers will be left behind." (Participant 11)

"Negotiating severance packages is not enough. What workers need is a future—new job opportunities in the energy sector, proper training, and sustainable income. Without that, this transition is just another way of saying 'you're unemployed now.'" (Participant 17)

"We don't just need training. We need real job placement programs that guarantee employment after training. Otherwise, this transition means nothing for the workers." (Participant 8)

"Trade unions need to advocate beyond just wages and severance. They must ensure alternative employment policies are binding, not just vague promises." (Participant 6)

The data highlights significant gaps in the implementation of worker protections and alternative employment strategies, reinforcing concerns that trade unions' advocacy efforts have not yet led to substantial outcomes. Despite active

engagements with policymakers and energy sector stakeholders, the lack of structured employment transition programs remains a major obstacle. This aligns with findings from Baloyi et al. (2022), who argued that trade unions in South Africa have historically faced challenges in shifting from reactive to proactive approaches in shaping just energy transitions. In the same way, COSATU (2022) indicates that a fair transition must include more than just severance payments and retraining. It must also include making sure that displaced workers can find real jobs that match their skills and needs.

Research (Velicu, I., & Barca, S. 2020) also indicated that trade unions have successfully influenced policy changes in other countries. Velicu and Barca (2020) examined cases in European nations where trade unions collaborated with government agencies to secure legally binding job guarantees for workers in coal-dependent industries. These findings suggest that South African trade unions may enhance their effectiveness by advocating for legally enforceable commitments rather than relying on voluntary agreements.

Another challenge identified is the lack of effective coordination between trade unions, the private sector, and government-led employment initiatives. Ward and Sharma (2020) argued that retraining programmes risk failure if they are poorly structured, potentially leaving workers with skills that do not align with labour market demands. This concern was reflected in the interview data, where several participants reported that reskilling programmes often lacked clear pathways to employment.

Unions play a significant role in ensuring that workers' opinions are heard, but they have not had as much power due to limited inclusion in policy making processes. There are no legal or policy-based mechanisms that ensure that workers do not lose out during the energy transition.

4.4.4 Challenges in Influencing Energy Transition Policies

The data found that a considerable portion of respondents (10/20 P) believed trade unions influence JET policies. However, a significant portion (13/20 P) complained about how little influence trade unions have in high-level decision-

making processes, particularly the Komati Power Station shut down. Participants noted stakeholder discussions were mostly performative, with decisions coming before union participation. A considerable portion of respondents (12/20 P) indicated that trade unions are generally viewed as secondary stakeholders in strategic policy debates.

Half of the respondents (10/20 P) cited political and economic restraints as union impact hurdles. According to the respondents (10/20P) trade union perspectives are generally marginalised in JET strategies, which are often influenced by economic interests like international investments in South Africa's renewable energy sector. A considerable portion of respondents (12/20 P) noted that while unions have advocated for worker-centered legislation, government priorities generally favour corporate energy initiatives above worker needs.

The technical complexity of JET policies was identified as a significant challenge by a few respondents (9/20 P). Participants indicated that many trade union representatives lacked expertise in renewable energy, which hindered their ability to engage effectively in energy transition policy discussions with government and industry stakeholders. A considerable amount of respondents (13/20 P) suggested that trade unions should implement technical training programmes for their representatives to enhance their capacity for policy advocacy.

“We are included in discussions, but by the time we get to the table, the decisions have already been made.” (Participant 5)

“Trade unions are always one step behind in these talks. We push for better policies, but government and corporate interests override our input.” (Participant 10)

“The problem is that these discussions are highly technical. Many of us are experts in labour issues, but when it comes to renewable energy policies, we don’t always have the knowledge to argue effectively.” (Participant 13)

“If unions want more influence, they need to train their representatives in energy policy and economics. That’s the only way to challenge the current system.” (Participant 3)

“Energy policies are dictated by economic factors, not worker concerns. We need trade unions to push harder for legally binding worker protections.” (Participant 15)

The data showed that trade unions have a hard time changing JET policies because of the way institutions and structures are set up in South Africa. This fits with what Baloyi et al. (2022) found, citing that unions are important in talks about JET, but they aren't involved in making policy decisions. This is also backed up by COSATU (2022), stating that priorities in the private and public sectors often take precedence over worker issues, which makes union advocacy less effective.

International comparisons show that the union's ability to deal with both the technical and economic parts of the JET is key to their ability to have an impact on energy policy. For example, Reinsberg and Westerwinter (2021) found that trade unions in Germany and Denmark were able to participate meaningfully in high-level talks by using technical knowledge in their advocacy strategies. To gain more power, South African trade unions might need to use similar tactics, like spending money on training and research.

Another problem is that foreign companies have a lot of power over South Africa's energy policies. The European Commission pointed out in 2022 that South Africa's Just Energy Transition Investment Plan (JET-IP) is mainly based on money from outside the country, which puts economic gains ahead of direct worker rights. This makes trade unions' opinions even less important, so it's important for them to push for policy models that put workers first.

Even though these problems exist, unions can still increase their power by building strategic partnerships with other groups, such as environmental and community groups. Lieberman (2022) discussed that multi-stakeholder alliances have worked well to get better protections for workers during times of industrial change. South African trade groups may be able to have a bigger effect on policy if they use these methods. Even though unions are still pushing for fair energy transition policies, systemic hurdles are still making it hard for them to have an impact. To get past these problems, South Africa needs to restructure its strategy in a way that includes building up technical skills, researching policies, and working together with stakeholders more closely to make sure that worker interests are not ignored during the process of just change.

4.4.5 Perceptions of Exclusion or Marginalisation in Policy Negotiations

Participants believed workers and trade unions were excluded from important policy debates about the JET at Komati Power Station. In addition, 12/20 respondents expressly claimed that trade union involvement in decision-making was little or symbolic and generally limited to information-sharing sessions rather than substantive negotiations. Seven participants called the discussions "box-ticking exercises," confirming the idea that important stakeholders, particularly workers, had little to no influence on transition policy. A common complaint was that Eskom, management and government made Komati Power Station shutdown decisions without consulting workers, trade unions, or local communities.

Participants noted that significant policy decisions were typically presented as final strategies rather than open proposals. A few participants 5/20 noted that

unions were "not taken seriously" in stakeholder engagements, and some cited that job security and retraining plans were ignored. A few participants 8/20 complained that business and government decision-makers ignored their opinion despite several discussions. This marginalisation has led workers and trade unions to doubt the Just Energy Transition Framework (JETF), which they feel prioritises environmental aims over coal sector workers' socio-economic viability.

"There were meetings, yes, but they felt like they were just for show. We raised our concerns, but nothing changed in the final plans." (Participant 3)

"We were not involved in real decision-making. By the time we were informed about the shutdown, the decisions had already been made. It felt like we were just being informed rather than consulted." (Participant 8)

"Trade unions tried to represent us, but we weren't given a real platform to shape the discussions. It was more like a formal courtesy rather than a genuine negotiation." (Participant 12)

"We kept asking about retraining and job opportunities, but no one could give us a clear answer. It's like they had already moved on, and we were left behind." (Participant 14)

"When we asked about the economic impact of the shutdown, we were told 'this is happening, and you must accept it.' How is that fair?" (Participant 5)

The responses from participants suggest that workers and trade unions are not sufficiently involved in key decision-making processes, contributing to heightened concerns regarding job security and potential displacement. There is a prevailing perception that the JET is driven by elite interests, with limited consideration for the social and economic realities of those most directly affected, as labour representatives have been marginalised. These findings align with the research of Baloyi et al. (2022), who argued that while South Africa's JET aims to promote sustainability, it often lacks the democratic

mechanisms necessary to ensure that workers and affected communities have meaningful input in policy development.

COSATU (2022) asserted that trade unions play a crucial role in advocating for worker protections during energy transitions; however, they face significant challenges in influencing high-level energy policy decisions. This aligns with the views expressed by participants, who perceived that trade unions were either disregarded or engaged in a largely symbolic capacity rather than being actively involved in decision-making processes. Similarly, Sweeney (2022) argued that energy transitions often serve as contested spaces where competing interests prevail, with governmental and corporate priorities frequently overshadowing worker concerns, particularly in developing economies. The findings of this study support this argument, demonstrating that both trade unions and workers at Komati Power Station were excluded from planning for the transition.

Conversely, some international case studies indicated that meaningful worker participation in JET is achievable when structured engagement frameworks are implemented. Reinsberg and Westerwinter (2021) highlight that more equitable energy transitions in Europe have occurred through multi-stakeholder partnerships with strong labour representation. However, the experience of Komati Power Station illustrated the absence of formalised mechanisms to ensure inclusive decision-making. The European Commission (2022) similarly acknowledged this gap and recommended that South Africa strengthen its JETF by integrating worker concerns at all stages, from policy formulation to implementation.

Given the lack of structured participation mechanisms, the findings suggested that trade unions should advocate for legally mandated worker representation in all discussions related to the energy transition. The absence of transparency and meaningful consultation has contributed to a deterioration of trust among workers, policymakers, and industry leaders, potentially undermining future transition initiatives. Moving forward, it is imperative for policymakers to recognise that exclusionary decision-making processes may ultimately hinder the effectiveness of the JET by reducing stakeholder cooperation and engagement.

4.5 INCORPORATION OF TRADE UNIONS' INPUTS ON FAIRNESS AND JUST TRANSITION

This theme examines how Komati Power Station integrated trade union suggestions on justice and the JET into design and implementation. Trade unions have fought for equitable treatment, retraining, and social support as workers shift from coal to renewable energy and other alternative sectors. The data showed mixed responses, with workers complaining about poor consultation and union proposal implementation.

4.5.1 Union Proposals for Retraining and Redeployment of Workers

The findings indicated that trade unions actively advocated for structured retraining programmes to facilitate a smooth transition for workers shifting from coal-related employment to positions in the renewable energy sector or other industries, with the aim of minimising job losses. A considerable portion of respondents (12/20P) emphasised that trade unions should align retraining initiatives with the demands of the expanding renewable energy industry, focusing on skills that enhance employability in wind, solar, and energy efficiency projects. However, despite these efforts, limited retraining opportunities were made available, and some participants reported that the existing programmes were neither comprehensive nor easily accessible.

Furthermore, (8/20P) respondents noted that trade unions had proposed a phased redeployment strategy to enable a gradual transition for workers rather than abrupt job losses. This approach suggested that employees receive on-site training in new energy technologies prior to plant closures, ensuring a smoother integration into alternative employment. Nevertheless, many participants (14/20P) indicated that these recommendations were largely disregarded, resulting in mass layoffs rather than structured redeployment. Consequently, a significant number of workers faced unemployment with limited alternative job prospects, exacerbating economic challenges in coal-dependent communities.

"We kept telling them that retraining should start before shutdowns, not after. If they had listened, we would not be in this crisis" (Participant 3).

"I attended one of those training sessions, but it was just theory—no practicals, no job placement guarantees. How does that help us?" (Participant 7).

"Trade unions pushed for on-site training programs before closure, but management said funding was an issue. Now we are left with nothing" (Participant 12).

"Some workers have skills that could be useful in solar and wind energy, but without structured retraining, they cannot access those jobs" (Participant 9).

"They said they would redeploy some workers, but most of us just received severance letters with no clear alternative employment" (Participant 14).

These extracts show widespread unhappiness with retraining programs and their apparent inefficacy. Participants believed theoretical training without job placement was insufficient for their employment needs. Some respondents noted that if the transition had been properly managed, personnel would have been redeployed inside Eskom or in growing renewable energy initiatives rather than laid off. This lack of follow-through violates the JET workforce planning criteria of equity and sustainability.

Based on available literature, Baloyi et al. (2022) concluded that JET policies must appropriately fund skills development activities and directly relate them to employment possibilities. The World Bank (2022) noted that retraining workers without an employment plan does not reduce economic disruption in affected communities. According to Chireshe and Bole-Rentel (2022) demand-driven retraining should focus on areas with job development potential. The mismatch between retraining programs and job market needs in Komati reveals a policy gap that hinders the transition plan.

The data analysis showed that trade unions actively advocated for retraining and redeployment, but financial commitment and bureaucratic inertia prevented

its implementation. Retraining was put on the policy agenda by unions, but the failure to implement comprehensive and effective programs highlights fundamental problems in South Africa's JETF. Future endeavours must guarantee that training programs are comprehensive, skills-based, and clearly linked to realistic employment pathways.

4.5.2 Inclusion of Social Protection Measures in Transition Planning

The data indicated that trade unions advocated for social protection measures, including financial assistance, severance packages, and community-based economic programmes, to mitigate the adverse effects of job losses. A considerable portion of respondents (14/20 P) reported that trade unions particularly lobbied for enhanced severance benefits and long-term support mechanisms for displaced workers. However, most respondents of the expressed dissatisfaction with the measures ultimately implemented, citing issues such as delayed severance payments and inadequate financial compensation.

Furthermore, 11/20 respondents indicated that trade unions promoted the establishment of social safety nets, including unemployment benefits and community development funds, to support workers and their families during the transition. Despite these efforts, these initiatives were not fully realised, with some participants reporting that the available financial resources were insufficient to sustain affected households. As a result, many workers experienced economic hardship due to limited alternative employment opportunities, increasing the likelihood of economic marginalisation in coal-dependent communities.

"The severance pay was supposed to help, but it barely lasted a few months. What are we supposed to do now?" (Participant 14).

"Unions asked for long-term financial support, but all we got were once-off payments that don't cover our expenses" (Participant 10).

"Social protection was discussed, but implementation was slow, and many workers were left struggling" (Participant 5).

"If there were proper community support programs, people would not feel so abandoned after the closure" (Participant 8).

"The Just Energy Transition should be about people, but so far, it feels like only businesses are benefiting" (Participant 16).

The responses indicate significant dissatisfaction with the inadequacies of social protection measures. Delays and deficiencies in severance packages highlight a failure to provide sufficient financial support for affected workers. In the absence of structured community programmes aimed at promoting economic diversification, many former coal workers face limited alternative employment opportunities.

According to COSATU (2022), a JET must include strong social protection systems to prevent widespread unemployment and economic deterioration in impacted regions. The European Commission (2022) also stressed that transitional money should be administered fairly to protect vulnerable workers. The World Bank (2022) emphasised the need for long-term economic support rather than short-term financial aid. Trade unions called for substantial social protection measures, but their implementation was poor. Komati's affected villages are struggling due to little financial support and slow policy implementation. Policymakers must prioritise durable social protection mechanisms to ensure displaced people have long-term financial stability and alternative employment possibilities for to achieve an energy transition that is just and fair. Trade unions, government agencies, and private sector actors must work together to build lasting support structures.

4.5.3 Trade Unions' Views on Financial Compensation for Affected Workers

A big worry among the people who took part was how to pay the workers who lost their jobs when Komati Power Station was shut down. Twenty people were interviewed, and thirteen (13/20 P) indicated they were unhappy with their severance packages. Another seven (7/20 P) noted that they had gotten money but felt it was not enough to support their long-term livelihoods. Several people who answered declared that the transition process had left a lot of workers without other ways to make money, leaving them financially vulnerable and unable to meet their basic needs. Ten of the participants also mentioned that the compensation process was not clear since Eskom and other parties weren't always communicating, which made workers' worries even worse.

Some of the respondents (9/20 P) indicated that the money they received as severance did not reflect how many years of work, they had done at Komati Power Station. The mentioned participants cited that the severance payments didn't take inflation, changes in the cost of living, or the effects of sudden unemployment on the economy into account. Additionally, six (6/20 P) participants of the nine stressed that money alone was not an adequate answer since many workers had specific skills related to coal energy that were hard to transfer to other fields. To ensure a fair transition, they pushed for a combined method that included reskilling programs and financial assistance.

Trade union representatives played a crucial role in negotiating compensation for affected workers. However, a fair share of the study participants (11/20 P) indicated that the unions' bargaining power was undermined by the fact that the energy transition had been pre-planned. Most respondents (14/20 P) expressed the view that the negotiations were inequitable, as decisions regarding compensation were primarily determined by government regulations and Eskom's financial constraints rather than direct worker input. Consequently, workers perceived themselves as being marginalised throughout the transition process.

“The severance packages were not enough to sustain a family, especially in a town where job opportunities are scarce. Many of us have spent decades at Komati, and this is how we are repaid?” (Participant 6)

“There was no proper explanation of how the compensation was calculated. It felt like a ‘take it or leave it’ situation.” (Participant 14)

“Financial assistance should have been coupled with structured retraining programs. What good is a lump sum if we have no prospects for future employment?” (Participant 3)

“Eskom and the government should have ensured that the financial packages were fair and aligned with inflation. Instead, we were given a fixed amount that barely covers expenses.” (Participant 10)

“Trade unions tried to negotiate better compensation, but they were sidelined. The decisions were made at higher levels, and we were left to deal with the consequences.” (Participant 2)

The interviews show that Komati Power Station's financial compensation policies contradict JET principles. According to COSATU (2022), displaced workers need financial security to provide economic stability, which correlates with worker unhappiness with South Africa's JET. Baloyi et al. (2022) emphasise that compensation should be tailored for long-term financial security rather than short-term alleviation.

The lack of openness in financial pay echoes worldwide energy transition patterns, where workers are typically sidelined from important decision-making (Reinsberg & Westerwinter, 2021). To achieve equitable financial results for affected workers, just transitions require open and inclusive decision-making processes (European Commission, 2022). The insights from the interviews show that many Komati Power Station workers found the compensation process confusing and non-consultative.

Financial compensation is inadequate, raising questions about the transition's sustainability for affected personnel. To reduce economic instability, Sweeney

(2022) recommended retraining and job programs in addition to financial packages. Insights from the interviews stressed the necessity for a structured remuneration model with skills development opportunities.

Due to their limited bargaining power of trade unions in the South African energy transition process, unions were unable to secure appropriate financial compensation despite their lobbying role. Zulu (2022) agrees that trade unions need more institutional assistance to influence just transition strategies. Union limits at Komati Power Station highlight the need for legislative amendments to improve worker representation in energy transition negotiations.

4.5.4 Adequacy of Worker Engagement in Transition Planning

The majority of individuals involved in the transition planning process at Komati Power Station expressed dissatisfaction with the extent of worker participation. A significant proportion of respondents (16/20 P) reported dissatisfaction with the level of consultation and trade union involvement in decision-making, whereas a small number of participants (4/20 P) believed that trade unions had been meaningfully engaged. Dissatisfied participants (12/16 P), indicated that meetings were largely symbolic rather than genuine opportunities for feedback. Furthermore, respondents (7/16 P) stated that key energy transition policies had already been finalised before workers were invited to discussions.

A recurring theme in the responses was the perceived marginalisation of trade unions in critical decision-making processes. A substantial number of participants (13/20 P) indicated that union representatives were either excluded from meetings where policy decisions were made or were given insufficient time to articulate their concerns. Additionally, respondents (9/20 P) noted that most worker engagement efforts were reactive rather than proactive, meaning that employees were merely informed of decisions rather than actively involved in shaping them.

Another concern raised was the lack of consistent communication between Eskom and government officials. Eleven participants indicated that receiving conflicting information regarding future employment opportunities and retraining

programmes created uncertainty and anxiety. Moreover, ten (10/20 P) respondents emphasised the need for a more structured engagement strategy to facilitate continuous dialogue between workers, trade unions, and policymakers throughout the energy transition process.

> *"The so-called engagement meetings were just for show. They had already decided the outcome, and we were just there to listen." (Participant 8)*
>
> *"Trade unions were supposed to be our voice, but even they were left out of critical discussions." (Participant 5)*
>
> *"How can they say this is a 'just transition' when workers were barely consulted?" (Participant 12)*
>
> *"We were only informed after everything had been decided. No real input from workers was considered." (Participant 9)*
>
> *"There was no clarity on reskilling programs or alternative employment options. It felt like we were being abandoned." (Participant 15)*

The interviews support critiques of worker engagement in South Africa's JET. COSATU (2022) says worker participation should be key to transition planning; however, Komati Power Station workers' testimonials show superficial engagement. The World Bank (2022) stated that just transitions require structured, continuous, and participatory decision-making, which this lack of inclusion violates.

The omission of trade unions from important debates highlights stakeholder representation imbalance. Velicu and Barca (2020) stated that just transitions require strong institutional frameworks for labour unions to advocate for workers' rights. Komati workers' statements imply unions had little effect, bolstering suspicions that corporate and government objectives trumped labour concerns.

The inconsistent communication regarding employment alternatives and retraining initiatives aligns with the argument presented by Baloyi et al. (2022),

which emphasises that just transitions necessitate transparency and clarity. The absence of clear information heightened workers' uncertainty and apprehension, thereby undermining trust in the transition process.

The findings indicate that worker participation in Komati Power Station's energy transition was insufficient. To ensure meaningful involvement of workers and trade unions in decision-making from the outset, future transition processes should adopt a more structured and participatory approach. Without active worker engagement, the legitimacy of South Africa's JET remains into questionable.

4.5.5 Perceptions of the Fairness of Decision-Making Processes

The interviews showed that a lot of workers and trade union representatives thought the way decisions were made about closing the Komati Power Station was unfair and left out a lot of people. Most participants (15/20 P) were unhappy with the amount of engagement and consultation before the transition. They were mostly worried that decisions had already been made and that Eskom and government stakeholders' efforts to discuss matters with trade unions were just formalities and box-ticking exercises.

Fifteen participants (15/20 P) noted that trade unions were left out of the decision-making process, which made it harder for them to successfully speak up for coal sector workers. Some participants cited that even though trade unions went to consultative meetings, their ideas weren't considered enough, which made it seem like choices and decisions had already been made. This feeling of being left out made trade unions and decision-makers distrust each other even more.

Eleven people (11/20 P) also mentioned that it was not clear what was going on with severance packages, retraining programs, and other job possibilities. They noted that important information was either not shared or was shared in a way that was not clear, which left workers worried about their futures. Thirteen participants (13/20 P) cited problems with the process's credibility by pointing out differences between what was stated in the beginning and what happened.

Eight people (8/20 P) who took part in the consultative meetings highlighted that one of the main problems was that it focused too much on economic and environmental issues and not enough on the social effects of the change. They remarked that the views of workers should have been more important in making policies for the transition. In South Africa, Just Energy

> *“Honestly, the meetings felt like a tick-box exercise. We were invited, yes, but it was clear that the decisions were already made. Workers barely had a say in what was going to happen.” (Participant 3)*
>
> *“We kept asking for details about the retraining programs and new job opportunities, but everything was vague. Many of us still don’t know what’s next.” (Participant 7)*
>
> *“The unions tried to push for fairer severance packages and proper reskilling, but our voices weren’t taken seriously. It’s like we were there just to be seen.” (Participant 11)*
>
> *“The transition is happening whether we like it or not, but why were workers not at the centre of decision-making? This is about our livelihoods, yet the government and Eskom only focused on what works for them.” (Participant 14)*
>
> *“We were promised community development projects to make up for job losses, but there is no clear plan. People are losing everything while politicians talk about the future.” (Participant 19)*

Participants' response show that the Just Energy Transition framework's inclusion and fairness criteria are not being followed. Previous studies on South Africa's transition from coal has seen trade unions and workers excluded in policymaking (COSATU, 2022; Ward & Sharma, 2020). This shows a fault in the country's energy transition stakeholder engagement processes.

Global research on Just Energy Transitions support participants' displeasure with ambiguous assurances to alternate jobs and retraining. Velicu and Barca (2020) noted that transition programs often overemphasise economic

restructuring and underestimate worker social and financial pain. Lack of meaningful retraining efforts has increased Komati workers' anxiety and confusion about their future career prospects.

Huber (2022) also criticised energy transitions for failing to address employment problems, which he claims perpetuates disparities. Participants (11/20 P) cited that transparency difficulties shows that inadequate communication tactics have exacerbated workers' discontent, reinforcing the idea that the transformation is being forced. However, the government's counterargument that the Just Energy Transition Investment Plan (JET-IP) is a long-term process with advantages must be considered (European Commission, 2022). Perhaps, but Komati workers' immediate economic disruptions imply that transition plans must include short-term measures to reduce job losses and financial instability.

Komati's findings support worldwide Just Transition debates, as trade unions struggle to influence policy (Reinsberg & Westerwinter, 2021). Participants reported a lack of participatory decision-making, which is consistent with Sweeney (2022) findings that transitions generally prioritise technological and financial factors over labour. Musonda (2023) also noted that government energy transition plans favour foreign investment and economic growth over grassroots social solutions. In Komati, community development promises have not materialised, leaving workers and local companies scrambling to adjust.

Several international case studies give various models. Before coal facilities were phased down in Germany, unions, government, and industry worked together to provide people with retraining and alternative employment (Lieberman, 2022). Conversely, Baloyi et al. (2022) have critiqued South Africa's transformation for its weak worker social protection structure. Thus, incorporating international best practices into South African transformation procedures could resolve the encountered challenge.

This section examines the extent to which the closure of Komati Power Station aligns with or contradicts the concerns raised by trade unions. The transition to renewable energy is widely promoted as essential for South Africa’s economic and environmental sustainability. However, the closure of Komati Power Station

has generated significant concerns, particularly among trade unions, regarding its social and economic impact on workers and local communities.

The transition has been accompanied by several challenges, including job losses, limited alternative employment opportunities, and inadequate consultation mechanisms. Most respondents (14/20 P) reported that workers have been the most adversely affected by the transition, with minimal efforts made to facilitate their reintegration into the labour market. Existing research indicated that South Africa's JET strategy has not sufficiently prioritised worker retraining or investment in local communities (Baloyi et al., 2022; COSATU, 2022). These concerns are corroborated by testimonies from affected workers, which highlight significant shortcomings in the implementation of the transition, despite its theoretically equitable objectives.

4.5.6 Job Losses and Alternative Employment Opportunities for Workers

The interviews revealed that job security was the primary concern following the closure of Komati Power Station. A considerable portion of respondents (10/20 P) reported losing their employment without being provided with clear alternatives. Many long-serving employees, some with decades of experience, were displaced without adequate support to transition to alternative sectors. Furthermore, participants (8/20 P) emphasised that their existing skill sets were predominantly aligned with coal-fired power generation, presenting significant challenges in transitioning to alternative sectors. The uncertainty surrounding job prospects within the alternative employment sectors has heightened feelings of anxiety and resentment among the workforce.

An additional key finding is the failure of government and industry stakeholders to fulfil their commitments regarding worker retraining and job placement. Participants (9/20 P) indicated that they had been promised employment opportunities in solar and wind energy projects, yet no tangible outcomes had materialised. Moreover, a small number of the study participants (5/20 P) expressed dissatisfaction with the retraining programmes offered, noting that these programmes were inadequate and poorly aligned with the actual job

opportunities available. This lack of coherence between policy intentions and their practical implementation suggests a significant disconnect among the stakeholders responsible for facilitating the energy transition, this is in line with the argument that is elevated by the European Union and the World Bank (European Commission, 2022; World Bank, 2022).

> *"I worked at Komati for over 18 years, and when the station shut down, I was told there would be training programs to help us get new jobs. But up to now, I am still unemployed, and no one has given me any clear answers." (Participant 16)*
>
> *"They kept saying there would be jobs in solar and wind, but where are those jobs? Many of us have been left stranded with no income and no real prospects." (Participant 5)*
>
> *"We raised concerns about job security from the beginning, but they assured us that the transition would create opportunities. Now, workers are jobless, and the promises remain unfulfilled." (Participant 9)*
>
> *"It's not just about losing our jobs; it's about being abandoned. If they had really planned for this transition properly, we would not be in this position." (Participant 3)*
>
> *"I retrained for solar panel installation, but there are no actual jobs available in my area. I feel like the training was just a formality." (Participant 14)*

The narratives from participants confirm a key failure in South Africa's JET: the lack of a structured and reliable pathway for employment continuity. The testimonies reflect deep frustration with the process, reinforcing findings from previous research that emphasise how energy transitions in developing economies often neglect workforce reintegration (Zulu, 2022; Reinsberg & Westerwinter, 2021). The repeated concerns about broken promises and inadequate retraining highlight systemic shortcomings in government and industry commitments. Also, the evidence shows that even though there was talk about opportunities in renewable energy, these opportunities have not

materialised in a way that successfully takes in workers who have lost their jobs.

Compared to examples from other countries, like Germany, the South African model does not seem to have strong support systems (Huber, 2022). In Germany, large-scale programs to retrain workers and financial safety nets were put in place to make the shift easier before coal factories were shut down. The South African model, on the other hand, has left many workers without job security, which has raised questions about the fairness of South Africa's energy transition. This difference shows that policies are not always carried out the way they're supposed to, and changes need to happen right away to make sure that the workforce does not get left behind. In the end, trade unions' warnings about the dangers of rushed and unplanned closings have materialised, signalling poor planning and inadequate policy implementation.

4.5.7 Socioeconomic Impact on Affected Workers and Their Families

Komati's closure affects coal-dependent towns beyond job losses. A significant share of the study participants (12/20 P) reported financial problems after the Komati Power Station shut down, many highlighting troubles with regard to supporting their families. Losses of jobs have increased dependence on social grants and informal work, which give unstable income. Out of the twenty study participants, twelve participants (12/20 P) indicated that they were jobless while seven (7/20 P) indicated that they had to work temporarily and accept lower-paying jobs to survive. Due to financial restrictions, four (4/20 P) revealed that they had to relocate to other places where there might be increased potential employment opportunities.

Beyond economic suffering, there have been psychological and emotional effects. Participants (13/20 P) reported rising stress, anxiety, and depression amongst former Komati Power Station workers. This supports studies that shows unexpected economic disruption can have serious mental health implications, especially when employment is central to identity and stability (Ward & Sharma, 2020). The declining purchasing power of ex Komati workers

has negatively impacted small businesses and the local community's economic contribution.

> *"I used to provide for my family without any problems, but now we are struggling. My kids had to stop school since we could not afford the fees." (Participant 12)*
>
> *"After losing my job, I started selling vegetables, but it's not enough. It's humiliating to go from earning a stable salary to barely making ends meet." (Participant 8)*
>
> *"The worst part is not knowing what the future holds. Many of my colleagues are battling depression since they feel hopeless." (Participant 10)*
>
> *"I had to leave my home and move in with relatives since I could not afford rent anymore. This transition has destroyed livelihoods." (Participant 17)*
>
> *"When Komati was running, businesses thrived, but now even local shops are shutting down since no one has money to spend." (Participant 6)*

The participant testimonies reveal that the socioeconomic impact of Komati's closure extends beyond individual job losses, affecting family structures and community well-being. The evidence highlights the need for a comprehensive JETF that incorporates not just job replacement strategies but also social support mechanisms. International examples, such as the transition from coal in Spain, demonstrated the importance of financial compensation schemes and long-term planning in cushioning affected workers (Lieberman, 2022). However, in South Africa, the transition has been marked by abrupt displacements of workers with limited safety nets.

The intersection of economic and psychological stress adds further complexity to the energy transition process, demonstrating that energy policy cannot be considered in isolation from broader social welfare concerns (Musonda, 2023). The reported decline in community businesses underscores the wider economic dislocation caused by such transitions, supporting the arguments of Velicu and Barca (2020), who asserted that just transitions must encompass

comprehensive plans for economic revitalisation. Furthermore, the data reveals that trade unions' concerns regarding their inability to fully facilitate the transition were well-founded. Without prompt action to address these issues, South Africa's vision of a fair energy transition risks becoming a broken promise.

4.5.8 Effectiveness of Reskilling and Upskilling Initiatives

Interviewees provided varied perspectives on the reskilling and upskilling efforts at Komati Power Station. The research reveals that most participants (14/20 P) expressed dissatisfaction with the training programmes offered to displaced coal workers. Participants indicated that these programmes were poorly designed or failed to equip workers with the necessary skills for the renewable energy sector as well as other alternative employment sectors. Among the 14 dissatisfied participants, a significant proportion (9/14 P) stated that the training opportunities predominantly benefitted workers with technical skills, leaving others with limited employment prospects. Conversely, 4/14 participants acknowledged that the reskilling initiatives were beneficial, particularly noting that several engineers successfully transitioned to renewable energy roles. However, these participants (14/20 P) also recognised that the transition programmes lacked sufficient inclusivity. Notably, an insignificant share of participants (2/14 P) remained neutral on the matter, as they had not directly engaged with the training initiatives. A key concern that emerged from the data was that many workers who participated in the programmes found them to be overly theoretical, with limited practical experience, which impeded the effective application of new skills in potential job roles.

“The training we received felt like a formality. They gave us a few presentations on renewable energy, but when it came to actual job placement, there was no clear path” (Participant 3).

“I took part in the training program, but it didn’t help much. They trained us on things that had little relevance to what industries need” (Participant 9).

“Some of us have been in coal for decades. Suddenly, we are expected to learn new skills in a few months and compete with younger, more educated people for jobs. It’s not realistic” (Participant 6).

“The training was useful for those with engineering backgrounds. If you worked in maintenance or technical roles, you had a better chance. But for general workers, there was little to no help” (Participant 12).

The findings outlined above reveal a significant gap in the effectiveness of reskilling programmes, particularly regarding their capacity to accommodate the broader workforce beyond those with technical expertise. The predominant focus on theoretical knowledge, coupled with limited practical exposure, undermines the potential of these programmes to adequately prepare workers for sustainable employment within the alternative employment sectors. This observation aligns with the concerns raised by Baloyi et al. (2022), who argue that reskilling efforts must be tailored to various skill levels to facilitate a just transition. Furthermore, COSATU (2022) stresses that for training programmes to be effective, they must be coupled with guaranteed job placement strategies, a component notably absent from the initiatives at Komati. Ward and Sharma's (2020) research support this, highlighting that successful transitions require bespoke programmes that address both the technical competencies of affected workers and the social and economic barriers they encounter. The expressed concerns indicate that South Africa's approach to the just energy transition is not fully supported by its policies. While the government and Eskom have promoted reskilling as a key solution (Eskom, 2021c), the overall impact of these programmes is diminished by the lack of alignment between training opportunities and actual job openings. This underscores the importance of a

structured, industry-aligned training system that focuses on practical skills and ensures that displaced workers are equipped with the means to secure new employment opportunities.

4.5.9 Workers' Perceptions of Post-Closure Support Programs

A notable proportion of respondents (12 out of 20) expressed dissatisfaction with the post-closure assistance initiatives. The primary concerns highlighted included the absence of adequate financial support mechanisms, poor communication regarding available assistance programmes, and insufficient psychological and social support for displaced workers. Specifically, 10 participants reported that severance packages were inadequate and did not reflect the cost of living, with many unaware of any structured post-closure programmes until after they had already lost their jobs. A small minority of respondents (3 out of 20) considered the post-closure support mechanisms to be somewhat helpful, although they acknowledged that these initiatives were poorly implemented. One participant remained neutral, explaining that they had already secured alternative employment and had not actively engaged with the post-closure support programmes.

“Many of us were left with nothing. The severance was small, and no one followed up to check how workers were coping” (Participant 5).

“We expected some form of financial assistance or at least guidance on what to do next, but nothing came. We were simply told the station is shutting down, and that was it” (Participant 8).

“They promised us community projects and business opportunities, but till now, nothing has been implemented” (Participant 14).

“It was clear from the start that there was no proper plan for us. If you had no backup plan, you were left stranded” (Participant 12).

The widespread dissatisfaction with post-closure support programmes highlights a significant flaw in South Africa's JET planning. The principle of a just transition underscores the necessity of protecting workers from socio-economic displacement; however, the experiences at Komati Power Station reveal that this commitment has not been effectively realised. Sweeney (2022) argued that post-closure support should encompass financial aid, social assistance, and reintegration programmes to ensure a stable transition for affected workers. Yet, as noted by the European Commission (2022), a key failure of South Africa's energy transition is the absence of long-term structural support beyond initial severance packages. Eskom (2021a) reported that social development plans were part of its closure strategy, yet workers' testimonies indicate a disconnect between policy and its implementation. Moreover, the findings corroborate concerns raised by the World Bank (2022), which observed that poorly managed post-closure programmes in many developing countries exacerbate inequality and social unrest.

Given the dissatisfaction among workers, it is evident that trade unions and policymakers must advocate for more comprehensive support systems following a closure. Such systems should include structured assistance in securing new employment, financial compensation indexed to inflation rates, and services to address workers' mental health needs. Without these measures, South Africa's vision for a just energy transition risks leaving thousands of workers without

stable employment, undermining its goal of achieving social and economic justice.

4.5.10 Broader Labour Market Implications for South Africa's Energy Sector

South Africa's energy transformation, especially the closure of coal-fired power facilities like Komati, has had major job market effects. A significant portion of respondents (14/20 P) worried about widespread unemployment after coal plant decommissioning. Participants stressed that the lack of a clear transition strategy has left many professionals concerned about their careers. 11/20 participants also indicated that reskilling programs were announced but not implemented, leaving displaced people unprepared for renewable energy jobs. Furthermore, a fewer portion of respondents (8/20 P) voiced concerns about wage disparities between coal and renewable energy jobs, arguing that new employment opportunities in solar and wind energy projects offer lower pay and less job security. Participants also noted that the broader economic consequences extend beyond direct employment, as industries dependent on coal-related activities, including transport and maintenance services, have also been severely impacted.

“The biggest issue we’re facing is the complete lack of job security. Many workers, myself included, have spent over a decade in the coal industry, and now we are being told to transition to renewables without clear training or assurances of employment” (Participant 6).

“They promised reskilling programs, but till now, we haven’t seen anything substantial. People are still unemployed, and most don’t know how to fit into the new energy sector” (Participant 9).

“The wage gap is another problem. In coal, we were earning decent salaries, but now, even when you get a job in solar or wind, the pay is far lower. How are we supposed to sustain our families?” (Participant 14).

“This transition has affected not just workers but entire communities. Small businesses around the power station have collapsed since they relied on workers’ spending power. The economic impact is devastating” (Participant 11).

“It’s not just about workers in the power plants; the trucking industry, contractors, and even local schools have been affected since there is no money circulating in the community anymore” (Participant 17).

The responses from participants suggest that the shift away from coal in South Africa’s energy sector has not been accompanied by an adequate strategy to mitigate economic disruption. The concerns raised echo broader academic discussions on just transitions, where scholars argue that insufficient workforce planning exacerbates social inequalities (Velicu & Barca, 2020). The wage disparities noted by participants align with findings from Chireshe and Bole-Rentel (2022), who highlight that employment in renewables, though growing, does not yet offer the same financial security as coal jobs. Moreover, Ward and Sharma (2020) have pointed out that without targeted investments in worker reskilling and community support programs, energy transitions risk deepening economic vulnerability.

Contrasting perspectives from international just transition studies suggest that proactive labour policies, such as those seen in Germany's coal phase-out, mitigate employment losses by ensuring workers are retrained and absorbed into alternative industries (Reinsberg & Westerwinter, 2021). But the South African case shows that there are not enough structured interventions. Trade unions had a hard time getting enough support for transition programs from the government and the private sector (COSATU, 2022). The economic downturn mentioned by the participants fits with research by Musonda (2023), who states that early coal shutdowns without economic buffers make it harder for towns nearby to make ends meet.

Based on these findings, the South African JET process fails to effectively align policy objectives with actual outcomes. The absence of robust labour market strategies places workers at significant risk, with many unable to secure employment within the renewable energy and other alternative sectors. While transitioning to sustainable energy sources is essential for long-term development, the inability of affected workers to obtain stable employment raises serious concerns regarding the fairness of the process. To ensure an equitable and seamless transition, a more structured approach is required, incorporating improved wage protections, guaranteed employment pathways, and greater involvement from trade unions.

4.6 POLICY RECOMMENDATIONS FOR TRADE UNIONS IN FUTURE JUST ENERGY TRANSITIONS

4.6.1 Lessons Learned from Komati Power Station Closure

After Komati Power Station closed, trade unions learnt several lessons about designing a just energy transition. Most participants (13/20 P) conveyed that poor worker consultation worsened the shutdown. They claimed that the decision-making process excluded the staff, preventing real transition planning engagement. Many workers felt abandoned since they were not prepared or provided other employment before the shutdown. This resonates with worries regarding South Africa's energy transition, where commercial and

environmental interests have trumped worker wellbeing (Baloyi et al., 2022; COSATU, 2022).

A fair share of participants (14/20 P) noted that the lack of planned retraining programs before the closure increased employment losses, emphasising the need for early intervention. Half of the study participants (10/20 P) noted that financial support for displaced workers was insufficient, making the energy transition even more unjust. These findings show that South Africa's JET framework fails to provide enough social and economic security notwithstanding fairness commitments, this supports the argument of raised by (Ward & Sharma, 2020; European Commission, 2022).

The gap between policy discourse and reality was another problem expressed by 11 participants. While government and Eskom have promoted repurposing coal plants for renewable energy (Eskom, 2021b), workers at Komati saw little tangible progress toward this goal. This disconnect suggests that policy frameworks must be translated into actionable, worker-centric programs to mitigate socio-economic displacement (Lieberman, 2022).

"Workers were only told about the shutdown when most decisions had already been made. It felt like the stakeholders—especially workers and unions—were sidelined. I mean, we could have provided valuable input, you know? It's frustrating since these decisions affect our livelihoods, and without consultation, people feel abandoned." (Participant 4)

"The biggest lesson here is that job security should be prioritised from the start. Workers should not have to wait until after a plant is closed to find out what's next for them." (Participant 7)

"We were promised that new jobs in renewable energy would be created, but to this day, most of us are still unemployed. They say transition, but transition to what?" (Participant 14)

"Trade unions fought for better severance packages, but ultimately, many workers still feel that they were short-changed. A just transition should not mean making people poorer." (Participant 10)

"The government and Eskom need to engage with workers long before shutting down a plant. Otherwise, this transition will always be unjust." (Participant 5)

The perspectives shared by participants highlight a fundamental flaw in South Africa's Just Energy Transition (JET): the exclusion of workers from the decision-making process. The frustration expressed by Participant 4 underscores the inadequacy of consultation, a recurring issue in previous transitions. This aligns with existing research, which indicates that top-down decision-making often marginalises affected workers, limiting their ability to influence transition outcomes (Baloyi et al., 2022; Reinsberg & Westerwinter, 2021). Furthermore, the concerns raised by Participant 7 regarding job security emphasise the necessity of strategic planning. The experiences at Komati Power Station illustrate the consequences of failing to secure employment opportunities before a plant's closure. This observation is consistent with the arguments of Ward and Sharma (2020), who assert that a just transition requires clearly defined, worker-centred strategies, including skills development

and guaranteed alternative employment. Without such measures, transitional policies risk exacerbating, rather than alleviating, social and economic inequalities (Velicu & Barca, 2020).

The response from Participant 14 indicates significant dissatisfaction with South Africa's Just Energy Transition (JET) commitments. The disparity between policy commitments and tangible job creation raises concerns regarding the effective implementation of these policies. Although Eskom and policymakers have advocated for a transition to renewable energy sources, evidence suggests that these efforts have not yet resulted in meaningful employment opportunities for workers who have been retrenched (Eskom, 2021c; Zulu, 2022). Furthermore, Participant 10 highlighted the issue of financial security, an often overlooked but crucial aspect of the transition. Workers who lose stable and well-remunerating positions in the coal sector without adequate financial support face an increased risk of falling into poverty. In this regard, COSATU asserted in 2022 that South Africa’s severance payment and financial assistance schemes remain inadequate, making it difficult for displaced workers to adapt to the new economic landscape.

Within the broader discourse on global energy transitions, the case of Komati aligns with a recurring trend in which workers' voices are insufficiently considered, often leading to socio-economic challenges. Existing research underscores the importance of positioning trade unions at the forefront of transition planning to ensure that workers are adequately protected through negotiated agreements and structured retraining programmes (Lieberman, 2022; Sweeney, 2022). The outcomes observed in Komati further reinforce the need for South Africa to institutionalise such measures. Despite governmental assurances of a "just transition," the events at Komati demonstrate shortcomings in its execution. Eskom’s (2021b) commitments to repurpose power stations have not yet materialised into substantial employment opportunities, highlighting the necessity for enhanced accountability mechanisms. Consequently, if the role of trade unions should be meaningful, enforceable commitments that safeguard workers' interests is something that could be considered. The identified deficiencies in financial and skills-based

support indicate significant flaws in South Africa's transition strategy. In 2022, the European Commission emphasised that just transitions require targeted social investment to prevent large-scale displacement. The situation at Komati exemplifies the inadequacy of such measures, reinforcing the argument that policy commitments must be translated into concrete protections for workers.

4.6.2 Best Practices in Trade Union Engagement with Energy Transition Policies

The engagement of trade unions with the energy transition policies at Komati Power Station reveals both significant shortcomings and emerging best practices. Of the participants surveyed, most respondents (13/20 P) indicated that trade unions advocated for workers; however, their actions were often reactive rather than proactive. Additionally, 9 out of 20 participants noted that trade unions were excluded from the early stages of policy discussions, thereby limiting their influence on transition planning. These findings align with existing research, which highlights the marginalisation of labour representatives in energy policymaking (Baloyi et al., 2022; COSATU, 2022).

Participants (12/20 P) indicated that trade unions played a role in securing severance packages and offering limited reskilling opportunities for displaced workers. However, respondents also acknowledged that these interventions were implemented too late to mitigate significant job losses. The findings suggest the necessity of institutionalising worker participation in both the formulation and execution of transition policies to enhance future energy transitions (Lieberman, 2022; Velicu & Barca, 2020).

A further critical insight, highlighted by ten participants, was the need for greater collaboration between trade unions, government agencies, and renewable energy investors. The absence of a structured cooperative framework at Komati resulted in a fragmented transition process, in which trade unions struggled to negotiate viable employment pathways within the renewable energy sector.

"Trade unions tried to negotiate for workers, but we were mostly kept out of the big decisions. By the time we were called to the table, most policies were already finalised." (Participant 3)

"We managed to push for severance packages, but let's be honest, that's not enough. What we need is guaranteed retraining before job losses happen." (Participant 6)

"One lesson for the future is that unions need to work closely with renewable energy investors. Right now, there is no direct link between old coal jobs and new green energy jobs." (Participant 9)

"If unions had been included from the beginning, this transition would have been more structured. Instead, workers were left scrambling for answers after the fact." (Participant 12)

"Unions fought for some reskilling programs, but the problem is that these were not well-funded or structured. Without proper collaboration, it's difficult to make progress." (Participant 8)

The responses highlight a crucial gap in trade union engagement: the failure to secure early and meaningful participation in transition planning. The frustration expressed by Participant 3 echoes broader research on labour marginalisation in energy transitions. According to (Baloyi et al., 2022; COSATU, 2022 unions have often been sidelined in key decision-making processes, reducing their capacity to shape policy outcomes effectively This is in contrast with international best practices, such as in Germany, where unions have played a central role in negotiating coal phase-outs (Huber, 2022).

The concern about severance packages, raised by Participant 6, highlights the limitations of compensatory measures in addressing structural unemployment. While severance payments offer temporary relief, they do not provide long-term job security. This finding aligns with the argument by Velicu & Barca (2020) that financial compensation alone is insufficient for a just transition—policymakers must focus on securing alternative employment pathways.

Participant 9 suggested that collaboration with investors in green energy is a best practice that can be put into action, especially for workers that wish to continue working in the electricity sector. A bigger problem with South Africa's transition plan is that it hasn't been able to connect people who work in the coal industry with new jobs in green energy. South Africa's method is still not unified, unlike models in places like Spain where worker redeployment is made easier by agreements between unions, the government, and renewable energy companies (European Commission, 2022).

The findings from Komati Power Station reinforce key lessons derived from international experiences on ensuring equitable energy transitions. Trade unions play a crucial role in advocating for workers' rights; however, their influence is often constrained due to their limited involvement in policymaking processes. Critics argue that South Africa’s JET has been predominantly driven by corporate and governmental interests, with minimal participation from workers (COSATU, 2022; Zulu, 2022). The treatment of workers at Komati reflects this broader trend. Conversely, structured labour involvement has been a fundamental component of successful just transitions in countries such as Germany and Canada. In Germany, for example, the Coal Commission integrated trade unions at every stage of transition planning, ensuring that policies included robust worker protections (Huber, 2022). South Africa has not adopted a similar approach, resulting in challenges such as those observed at Komati, where trade unions were forced to advocate for reactive measures rather than being engaged in proactive policymaking.

Additionally, international best practices highlight the necessity for greater collaboration with investors in the renewable energy sector. In Spain, for instance, the government facilitated agreements between trade unions and green energy companies to secure employment opportunities for displaced coal workers (European Commission, 2022). In contrast, South African workers face significant uncertainty regarding their future employment prospects due to the absence of comparable frameworks, further underscoring the urgent need for integrated transition planning. Concerns regarding the inadequate financial resources allocated to retraining initiatives also feature prominently in global

discussions on just transitions. Research has demonstrated that underfunded reskilling programmes fail to generate meaningful employment opportunities, thereby prolonging periods of worker displacement (Lieberman, 2022; Ward & Sharma, 2020). Given the experiences at Komati, South Africa should increase investment in workforce transition programmes and ensure that the training provided aligns with industry demands to facilitate sustainable employment opportunities.

4.6.3 Strategies for Improving Workers' Inclusion in Policy Discussions

The findings show that Komati Power Station workers were excluded from just energy transition policy debates. Most respondents (15/20 P) mentioned that formal consultations were cursory and did not include worker opinions. Employees felt uneasy and frustrated since their job security and skills development concerns were ignored. A fair share of participants (12/20 P) also noted that trade unions were reactive rather than proactive, responding to established policy frameworks.

Half of the respondents (10/20 P) cited that the government and Eskom mostly engaged with higher-level union representatives rather than rank-and-file workers, which distorted policy decisions. This detached approach led to policies that were conceptually good but lacked worker transition mechanisms. Some respondents (8/20 P) noted that transition policies like training programs were created without consulting workers on their skills needs, resulting in poor retraining. Eleven of the twenty participants (11/20 P) conveyed that they only learnt about significant policy decisions after they were made, suggesting consultations were more symbolic than meaningful.

Participants thought increased union representation in policy talks would have improved results in the Komati shut down process. Several respondents (13/ 20 P) cited that trade unions should be more assertive in policymaking to ensure workers have direct influence rather than passively receiving transition programs. In addition, 9/ 20 participants advised unions to advocate for

institutionalised worker inclusion mechanisms such required worker consultation forums or labour representative seats in decision-making bodies.

> *"We were invited to a few meetings, but those were more like information sessions rather than real discussions. By the time we got the details, everything had already been decided." (Participant 4)*
>
> *"The policies that were designed for us did not include us. If the unions had more power in the discussions, maybe we would not be struggling so much now." (Participant 7)*
>
> *"Government officials and Eskom executives met with union leaders, but they never asked the workers on the ground what we needed. We just got told what would happen." (Participant 11)*
>
> *"If trade unions were stronger in these negotiations, we would have better retraining programs. Right now, they give us training that doesn't help us get real jobs." (Participant 13)*
>
> *"I only found out that the power station was shutting down a few months before it happened. No one came to ask us how we felt or what we needed. It was all just a box-ticking exercise." (Participant 16)*

The responses highlight a fundamental gap in worker inclusion within just energy transition policies. The sentiment expressed by Participant 4—that meetings were more about information dissemination than genuine engagement—corroborates findings by Baloyi et al. (2022), who argue that trade unions in South Africa are often sidelined in policy discussions, reducing their ability to influence transition strategies. This aligns with research by COSATU (2022), which found that workers are typically informed of transition decisions only after they have been finalised, rather than being involved in shaping them.

The issue highlighted by Participant 7 regarding the ineffectiveness of policies reflects a broader challenge in labour transitions: policies formulated without worker input frequently fail to address the actual needs of affected employees.

Similar conclusions have been drawn by Velicu and Barca (2020), who argue that just transitions should prioritise worker-led policy design rather than relying on top-down decision-making. Furthermore, Participants 11 and 13 emphasised the absence of structured mechanisms for worker participation, indicating a lack of formalised labour involvement within South Africa's energy transition frameworks. Research conducted by the European Commission (2022) on just transitions in Europe found that organised participation models, such as Germany's Coal Commission, facilitated greater worker involvement, thereby ensuring smoother transitions.

The concerns raised by Participant 16 regarding the late notification of the Komati Power Station closure align with challenges observed in other coal sector transitions globally. Ward and Sharma (2020) assert that last-minute worker involvement often results in rushed and ineffective interventions, whereas early engagement ensures that workers' concerns are integrated into policy formulation. Additionally, studies suggest that if trade unions are only engaged at higher levels of decision-making, they may lack the localised knowledge required to effectively represent their members (Lieberman, 2022).

When these findings are compared with international research, it becomes evident that South Africa's current approach to JET does not fully align with established global best practices. Countries such as Germany and Spain have demonstrated that worker outcomes improve when trade unions are actively involved in transition planning (European Commission, 2022). In contrast, the South African case appears to follow a more centralised decision-making model, which limits workers' ability to influence their own future.

4.6.4 Enhancing Social Dialogue Between Unions, Government, and Industry

The data shows that trade unions, government agencies, and industry players' social conversation on South Africa's JET is lacking. Many participants (14/20 P) reported inadequate communication between these institutions, generally characterised by top-down decision-making rather than collaborative involvement. Participants claimed that trade unions were either excluded or

included only symbolically, restricting their ability to shape legislation that benefited workers.

Eleven participants (11/20 P) complained that government and corporate leaders dominated conversations, marginalising workers' opinions. They indicated that government-led transformation plans lacked concrete worker rights and job security pledges, making social discourse a tick box exercise rather than meaningful platform to solicit affected stakeholder input. In addition, nine participants (9/20 P) shared that trade unions were often given insufficient or ambiguous information, limiting their ability to negotiate for their members.

Twelve participants (12/20 P) raised concerned about the lack of a structured discourse framework, citing ad-hoc and reactionary discussions. Unions could only react to transition decisions without regular involvement forums. Eight participants (8/20 P) noted that engagement platforms lacked transparency, making it hard for workers to track decisions and hold stakeholders accountable. Several participants (7/20 P) also expressed concern that corporate interests were prioritised over worker welfare, leading to policies that favoured industry stakeholders at the expense of job security and skills development. They argued that for social dialogue to be effective, it must be based on equal participation, where trade unions have a decisive role in shaping both the pace and structure of the transition.

"The government holds meetings, but those meetings do not translate into action. We sit, we talk, but nothing changes for the workers on the ground." (Participant 6)

"Most of the discussions happen between Eskom and government officials. The unions are informed later, and by that time, there is very little we can change." (Participant 10)

"We are always invited to consultation sessions, but when decisions are made, we are sidelined. There is no real negotiation." (Participant 15)

"Companies care about their profits first. Workers are just numbers in their financial reports. The unions need to be stronger in these discussions." (Participant 17)

"Workers don't trust the process since there is no transparency. Nobody tells us what is really going on until it's too late." (Participant 19)

The findings highlight a systemic failure in the mechanisms intended to facilitate social dialogue between trade unions, the government, and industry. The concerns raised by Participant 6 regarding meetings that fail to translate into concrete action align with criticisms of South Africa's JET framework, as outlined by COSATU (2022). While stakeholder engagements are conducted, they often lack enforcement mechanisms to ensure that workers' demands are integrated into final policy decisions.

Participant 10 concerns about trade unions being informed too late in the decision-making process are consistent with the findings of Baloyi et al. (2022), who argue that meaningful social dialogue necessitates the inclusion of workers from the earliest stages of policymaking.

The concerns raised by Participant 15 regarding the performative nature of consultation sessions reflect broader critiques of corporate-driven energy transitions. Velicu and Barca (2020) assert that many purported "just transitions" prioritise corporate and governmental objectives over the needs of workers. This imbalance is particularly problematic when social dialogue

mechanisms exist in form but lack substantive influence, ultimately resulting in policies that prioritise business interests over worker protections.

Sweeney (2022) further argues that many JET initiatives globally fail to challenge entrenched power structures. The claim made by Participant 17 that corporate interests are placed above worker welfare is consistent with this perspective. Rather than restructuring the relationship between workers and employers, many JET programmes reinforce corporate dominance while offering minimal substantive benefits to workers. This dynamic is particularly evident in South Africa, where trade unions have only a limited role in high-level discussions and lack genuine decision-making power.

Concerns regarding transparency, as highlighted by Participant 19, align with findings from the World Bank (2022), which indicate that a lack of clear communication and accountability mechanisms erodes trust among workers. Without well-defined decision-making frameworks, trade unions and workers are unable to effectively advocate for their interests, exacerbating existing inequalities rather than addressing them.

A comparison with international best practices underscores the urgent need for substantial reform in South Africa's social dialogue mechanisms. The German Coal Commission model, for instance, mandates worker participation at all stages of the decision-making process, ensuring that their perspectives are not only acknowledged but also incorporated into final policies (European Commission, 2022).

To enhance social dialogue within South Africa's JET framework, several critical steps must be taken. First, legally mandated worker participation mechanisms should be established to ensure that trade unions hold equal standing with government and industry representatives. Second, structured platforms for ongoing engagement should replace ad hoc consultations, allowing for continuous policy refinement and sustained negotiations. Third, transparency and accountability systems must be strengthened to provide workers with real-time oversight and meaningful input into transition-related decisions.

4.6.5 Recommendations for a National Framework on Just Energy Transition

The insights from the data obtained show that, Komati Power Station trade union leaders feel that there is a need for a structured and comprehensive national JET framework in South Africa. A significant portion of respondents (15/20 P) emphasised that the current policy landscape lacks coherence, with fragmented decision-making that fails to prioritise workers' rights. Furthermore, twelve participants highlighted that existing policies disproportionately favour corporate interests, with inadequate safeguards for labour protections, reskilling programs, and social security mechanisms.

A significant proportion of participants (13/20 P) underscored that the absence of standardised consultation mechanisms had resulted in inconsistent engagement with trade unions. They pointed out that while government and industry stakeholders regularly convene discussions, these meetings often exclude workers or present decisions as predetermined, making union engagement superficial. Moreover, eleven participants (11/20 P) argued that a legally binding framework should be established to mandate the inclusion of trade unions in every phase of the transition, from policy formulation to implementation

"The biggest issue is that there is no clear national plan that actually prioritises workers. Right now, decisions are made at the top, and by the time they reach us, everything is already set in stone." (Participant 3)

"Government and corporations are driving this transition, but where are the workers in these discussions? A just transition should include legally binding commitments to worker protection." (Participant 7)

"They talk about retraining, but where are the structured programs? We need a framework that guarantees funding and ensures workers are reskilled before plants shut down." (Participant 12)

"Without strict policies holding companies accountable, the transition will only benefit big businesses. There needs to be a requirement for private sector contributions to worker retraining and community development." (Participant 15)

"A national framework should include financial safety nets for displaced workers. Right now, if you lose your job, you are on your own." (Participant 19)

The findings align with broader critiques of South Africa's JET policies, particularly regarding the lack of institutionalised protections for coal sector workers. The concern raised by Participant 3 regarding the exclusion of workers from decision-making is consistent with the arguments of Baloyi et al. (2022), who emphasise that the absence of mandatory trade union representation weakens the legitimacy of transition policies. In contrast, European models, such as Germanys Coal Commission, have successfully incorporated structured labour representation to ensure worker-centric policies (European Commission, 2022).

Participant 7' critique regarding the dominance of government and corporate stakeholders is supported by Sweeney (2022), who argues that energy transition policies in developing economies are often shaped by multinational energy companies rather than by local labour organisations. This dynamic

exacerbates power imbalances, limiting the ability of trade unions to negotiate fair outcomes for workers. However, models such as Spain's Just Transition Agreements demonstrate that legally binding frameworks can be implemented to compel corporate participation in worker-centric transition policies (Reinsberg & Westerwinter, 2021).

The concerns expressed by Participant 12 regarding the absence of structured retraining programmes highlight a significant shortcoming in South Africa's transition planning. The World Bank (2022) found that South Africa's existing workforce development policies are not adequately aligned with the future employment demands of the renewable energy sector. In contrast, Denmark's national framework mandates industry-funded retraining programmes to facilitate workers' transition into comparable roles within the clean energy sector (Ninan, 2022).

The critique put forward by COSATU (2022), which argues that energy companies benefit from the transition without making proportionate contributions to its social costs, aligns with the concerns raised by Participant 15. By comparison, the Norway JET model legally mandates corporate contributions to worker transition funds, thereby ensuring a more equitable distribution of industry responsibilities (Huber, 2022).

Lieberman (2022) also identifies financial insecurity as a critical concern, arguing that inadequate social protections in the energy transition process risk exacerbating income inequality. Some countries, such as Canada, have implemented "just transition" income support programmes to provide financial stability for displaced workers while they undergo retraining (Velicu & Barca, 2020).

These international comparisons underscore the urgent need for substantial improvements to South Africa's Just Energy Transition framework to align it more closely with global best practices. Firstly, trade union representation should be formally integrated at all stages of policymaking to ensure that workers' interests are adequately considered. Secondly, the framework should establish mechanisms for corporate accountability, requiring companies to

contribute to worker retraining and community development. Thirdly, the government should implement a structured employment absorption strategy to ensure that former coal industry workers are transitioned into green energy employment rather than facing prolonged unemployment. Finally, the introduction of a financial safety net for displaced workers would mitigate the economic disruption caused by coal plant closures and facilitate a more just transition.

4.7 DISCUSSION OF THE FINDINGS

4.7.1 Lack of Adequate Consultation in the Just Energy Transition Process

The data revealed that respondents worried about trade unions and workers being excluded from genuine consultation during the Komati Power Station closure. Most respondents (16/20 P) felt that stakeholder participation felt more like a formality than a meaningful discourse. They called meetings "box-ticking exercises" rather than venues for worker issues. Baloyi et al. (2022) agree that South Africa's JET has been top-down, ignoring affected workers' voices. Trade unions advocate for worker protections, but COSATU (2022) claims they are largely ignored. Ineffective consultation fosters animosity and undermines the transformation process. Given these findings, future transition plans must include trade unions as equal stakeholders to avoid worker alienation and resistance.

4.7.2 Economic Impact of the Transition on Workers and Communities

A significant concern raised by participants was the economic impact of the power plant closure. Of the 20 respondents, 18 identified job losses and the closure of small businesses as the most critical consequences. The shutdown has disrupted the local economy, making it difficult for former employees to secure new employment due to a lack of relevant skills. Ninan (2022) argues that the South African government has yet to implement adequate economic

safeguards to mitigate the adverse effects of coal plant closures. Similarly, the European Commission (2022) has highlighted that South Africa's JET-IP lacks a structured social protection system for displaced workers. These economic challenges have profound consequences for affected communities, leading to declining household incomes, increasing debt levels, and greater dependence on government grants. Without substantial policy interventions, such as targeted social welfare programmes and job creation initiatives, the transition risks exacerbating existing socio-economic inequalities.

4.7.3 The Role of Trade Unions in Advocating for Worker Rights

The interviews showed that trade unions are crucial to the JET not leaving workers behind. Most respondents (17/20 P) thought trade unions should be more aggressive in negotiations and policymaking to protect workers' interests. Musonda (2023) notes that South African unions generally lack adequate resources and access to policymaking forums to conduct in-depth policy lobbying. Trade unions continue to advocate for equitable pay, retraining, and social support for affected workers despite these limits. Ward & Sharma (2020) argue that unions should demand more institutional participation to impact policy decisions. Trade unions, community organisations, and policymakers can increase bargaining power and outcomes for displaced workers by working together.

4.7.4 Need for Retraining and Alternative Employment Opportunities

A critical issue identified was the need for comprehensive retraining programmes. Fourteen participants (14/20 P) expressed concern over the insufficient availability of structured upskilling initiatives for workers who had lost their jobs. While South Africa's JETF acknowledges the importance of skills development, its implementation has been slow, leaving many workers in precarious situations (World Bank, 2022). Several participants noted that existing retraining programmes often fail to equip workers with the necessary skills for employment in the renewable energy sector, as they are predominantly

theoretical rather than practical. This concern aligns with the arguments of Velicu and Barca (2020), who highlight that transitions within the energy sector frequently prioritise corporate interests over worker empowerment. Similarly, Huber (2022) asserts that successful energy transitions require diverse vocational training opportunities, industry partnerships, and government incentives to facilitate labour mobility across sectors. To address these deficiencies, policymakers must develop structured, sector-specific training programmes that align with labour market demands.

4.7.5 Social and Psychological Effects of the Energy Transition

The energy transition shift has had effects on workers and their families that go beyond the economy. These include social and psychological effects. Half of the participants (10/20 P) who participated conveyed they were feeling more stressed, anxious, and unsure since they had suddenly lost their jobs. Sweeney (2022) says that energy transitions not only ruin people's jobs but also make society less stable. This fits with Zulu's study from 2022, which says that energy transitions need to include ways for workers and their families to get emotional and social support to help them get used to the new situations. Without targeted mental health interventions, areas that are affected may have long-term socio-economic instability, which will make South Africa's move to a greener economy even harder.

4.7.6 The Way Forward: Strengthening Trade Union Involvement

Based on the findings, trade unions need to be more involved in South Africa's JET. Policy conversations with Eskom and government agencies have shown progress, but major gaps remain. The World Bank (2022) stresses that trade unions, governments, corporations, and civil society organisations must collaborate to ensure a just energy transition is achieved. Trade unions could improve worker outcomes by strengthening their institutional capacity through policy advocacy training, research funding, and legal support. According to COSATU (2022), legally enforceable agreements are needed to defend workers' rights throughout change. Without such safeguards, the JET risks

being exclusive and favouring corporate and environmental concerns over worker welfare.

4.8 CONCLUSION

The role of trade unions in facilitating a just energy transition at Komati Power Station remains a crucial topic of discussion, given that the shift from coal to renewable energy presents significant economic and social challenges. The analysis of data revealed that workers were experiencing considerable uncertainty and job insecurity due to the absence of structured consultations and alternative employment opportunities. Notably, fifteen (15/20 P) participants reported that the transition process had negatively impacted coal workers to a greater extent than it had benefited others. This finding underscores widespread concerns regarding job security and the inadequacy of robust reskilling programmes. Existing literature highlights that a poorly managed just transition exacerbates socioeconomic disparities and marginalises affected workers further (Baloyi et al., 2022; COSATU, 2022).

A key issue identified was the insufficient stakeholder engagement before the closure of Komati Power Station. Twelve respondents (12/20 P) indicated that interactions with workers and trade unions were largely symbolic and lacked substantive impact. Several participants expressed the view that consultations were conducted as a procedural formality rather than as a genuine effort to incorporate workers' perspectives into decision-making.

Although trade unions advocate on behalf of workers, they have encountered significant challenges in effectively representing their interests. Half of the respondents (10/20 P) acknowledged union efforts to engage in the transition discourse but also highlighted that existing political and corporate structures had constrained their influence. Respondents noted that unions were frequently excluded from critical policy discussions, limiting their ability to shape outcomes. This observation aligns with global research suggesting that trade unions must collaborate with energy transition experts and civil society organisations to enhance their impact (Sweeney, 2022; Velicu & Barca, 2020). Without such

strategic partnerships, unions risk being relegated to a reactive role rather than actively shaping policy frameworks.

Economic concerns dominated discussions on the just energy transition. Fourteen respondents (14/20 P) expressed uncertainty regarding the viability of alternative employment opportunities within the renewable energy sector. Participants pointed to insufficient training provisions and significant disparities in wages between coal industry jobs and those in renewable energy. These findings correspond with existing literature, which argues that new energy industries must offer comparable working conditions to those in fossil fuel sectors to secure worker support (Ward & Sharma, 2020; World Bank, 2022). A lack of wage parity and long-term job security in the renewable energy sector may provoke resistance from workers, thereby undermining the principles of a just transition.

Beyond employment security, community-level impacts were also a major concern. Nineteen respondents (19/20 P) emphasised that the closure of Komati Power Station had adversely affected local economies, leading to financial losses for small businesses and service providers. The decline in local employment and income levels supports the argument that poorly planned energy transitions can lead to economic stagnation rather than growth in certain regions (Reinsberg & Westerwinter, 2021; Zulu, 2022). To mitigate these negative effects, participants advocated for increased government intervention, including investment in local infrastructure projects and financial support programmes for affected communities.

The necessity for structured, government-backed retraining programmes tailored to the skills of former coal workers was highlighted by thirteen respondents. Participants argued that short-term training initiatives were insufficient and that long-term career pathways needed to be established. International case studies reinforce this position, demonstrating that countries such as Germany have successfully managed energy transitions by implementing comprehensive workforce retraining and robust social security measures (Huber, 2022; Ninan, 2022). In the absence of similar interventions in

South Africa, the energy transition risks exacerbating existing social and economic inequalities.

CHAPTER 5. CONCLUSIONS

5.1 INTRODUCTION

The transition of South Africa to a low-carbon economy is fundamentally dependent on the shift from coal-based energy production to renewable energy sources. This transformation necessitates careful management to ensure fairness and to avoid exacerbating the economic challenges faced by communities historically dependent on the coal sector. Regrettably, the principles of a Just Energy Transition (JET) were not adequately upheld during the decommissioning of the Komati Power Station. This inadequacy resulted in an energy transition that was unjust and contributed to the ongoing economic exclusion of those who were dependent on the coal economy that was provided by the Komati Power Station.

Additionally, the contributions of trade unions, which play a critical role in advocating for a fair energy transition, were largely disregarded in the process. The trade union insights and recommendations, which are vital for addressing the rights and needs of workers during this significant shift, were insufficiently integrated into the decision-making framework.

In the Komati Power Station shut down, the principles of a JET were not fulfilled. As a result, this chapter summarises the key findings of the study and outlines the necessary interventions required to ensure a sound just energy transition in South Africa. These interventions must be incorporated to achieve a just energy transition that is inclusive and promotes comprehensive support mechanisms for affected workers. This means that the management of the South African energy transition needs to be fair and not worsen the economic conditions of those who were dependent on the coal economy.

5.2 PROPOSED INTERVENTIONS TO GUARANTEE A JUST ENRGY TRANSITION IN SOUTH AFRICA

JET in South Africa necessitates a holistic approach that integrates worker protections, socio-economic stability, and multi-stakeholder collaboration.

Drawing from the findings of this study, the following are suggested interventions to guarantee JET.

5.2.1 Enhancing Trade Union Engagement in Decision-Making

The research findings indicated that while trade unions actively advocated for worker-centred policies, their impact was constrained by fragmented stakeholder collaboration. To align with international best practices, it is essential to establish structured engagement mechanisms that ensure unions play a central role in policy formulation. This can be achieved through the following considerations:

- **Legislative Inclusion**: Amending labour and energy transition policies to legally mandate trade union representation in all transition-related policymaking bodies.
- **Institutionalised Dialogue Platforms**: Creating structured forums which allow for continuous dialogue between trade unions and all responsible stakeholders. These forums should enforce accountability and implementation of energy policy.
- **Capacity Building**: Providing training for trade unions to enhance their technical expertise in energy policy, economic planning, and green sector employment trends.

5.2.2 Integrating Community-Driven Socio-Economic Planning

While trade unions successfully influenced severance packages and reskilling programs, the study highlighted a gap in community-focused socio-economic planning. Addressing this requires the following interventions:

- **Expanding Stakeholder Inclusion**: Establishing participatory frameworks that incorporate local communities, civil society organisations, and municipal governments in transition planning.
- **Targeted Local Economic Development Strategies**: Developing initiatives that promote small business support, infrastructure investment, and localised job creation in affected areas.

- **Social Protection Measures**: Implementing structured safety nets such as unemployment benefits, housing support, and targeted financial aid for displaced workers and their families.

5.2.3 Strengthening Reskilling and Employment Absorption Mechanisms

The study found that existing reskilling programs were often inadequate in equipping workers with industry-relevant skills. To improve the effectiveness of reskilling initiatives, the following interventions are proposed:

- **Sector-Specific Training Programs**: Developing vocational training curricula tailored to the renewable energy sector, in collaboration with technical institutions and industry stakeholders.
- **Public-Private Partnerships (PPPs)**: Encouraging collaboration between government, renewable energy companies, and educational institutions to facilitate targeted workforce transition programs.
- **Employment Guarantees**: Establishing mandatory employment absorption frameworks that ensure trained workers are placed into jobs within the clean energy sector and other alternative sectors.

5.2.4 Strengthening Multi-Stakeholder Governance Frameworks

One of the key limitations identified in South Africa's JET framework is the lack of transparent and collaborative governance structures. To address this, the following governance interventions are recommended:

- **Transparent Policy Formulation**: Introducing legal requirements for public consultation and disclosure of transition plans.
- **Independent Oversight Bodies**: Establishing independent commissions to monitor and evaluate the effectiveness of JET policies, ensuring accountability and alignment with worker and community interests.
- **International Collaboration**: Leveraging lessons from global best practices, such as Germany's Coal Commission and Spain's Just

Transition Agreements, to develop adaptable governance models suitable for South Africa's socio-economic landscape.

The findings of this study underscore the necessity for a more inclusive and structured approach to energy transition policymaking in South Africa. By strengthening trade union engagement, integrating community-driven socio-economic planning, enhancing reskilling mechanisms, and improving governance structures, the country can move towards a just energy transition that prioritises both workers and broader societal interests. These interventions offer a strategic framework to align South Africa's energy transition policies with international best practices while addressing local socio-economic realities.

5.3 CONCLUSIONS

It is evident that trade unions have played an insignificant role in South African JET, particularly in relation to the closure of Komati Power Station after actively participating at a later stage of discussions and plans. During the transition, unions have been instrumental in advocating for workers' rights, fairness, and sustainable economic alternatives. However, despite their significant engagement, some of their concerns were only partially addressed in the transition framework. The findings reveal critical gaps in policy implementation, stakeholder coordination, and worker reskilling. These insights can inform future trade union strategies to enhance their influence in JET policymaking and execution.

5.3.1 Conclusions Regarding Research Objective 1

Research Objective 1: *To document and analyse trade union perspectives, input, and lobbying efforts during the decision-making process surrounding the closure of Komati Power Station.*

The findings of this study indicate that trade unions were not substantially involved in the initial decision-making processes concerning the closure of Komati Power Station. Trade union perspectives and contributions were largely absent during the formulation of critical policies and strategic plans. It was only

in the later stages of the transition that trade unions became actively engaged, with their advocacy efforts primarily directed towards securing job stability, ensuring fair compensation, and promoting opportunities for worker reskilling.

Despite these efforts, the effectiveness of trade unions' advocacy was constrained by a lack of coherence and strategic alignment. Challenges such as restricted access to key decision-making platforms and the absence of a unified approach among different trade unions significantly limited their influence. The research underscores the necessity for trade unions to engage proactively and cohesively from the outset of energy transition processes to ensure that their perspectives meaningfully shape policy and implementation frameworks. Furthermore, while trade unions successfully lobbied for worker-centred policies, such as severance packages and reskilling programmes, their advocacy did not fully align with established global best practices. This misalignment was largely due to fragmented collaboration among stakeholders, highlighting the need for more integrated and strategic engagement to enhance their impact within the broader transition framework.

5.3.2 Conclusions Regarding Research Objective 2

Research Objective 2: *To examine how trade union proposals for fairness and JET principles were integrated into the planning and execution of Komati Power Station's closure.*

The findings of this study indicate that while trade unions participated in discussions regarding the energy transition, the extent to which their proposals were incorporated into policy formulation and implementation remained inconsistent. Certain recommendations, such as the provision of severance packages and commitments to reskilling programmes, were acknowledged. However, in the absence of a legally mandated framework to protect workers' rights during the transition, many of these proposals were not fully institutionalised or effectively realised.

The influence of trade unions was further constrained by the absence of robust enforcement mechanisms and legally binding agreements, resulting in an

uneven impact on transition policies. This study underscores the necessity of establishing a legally mandated framework to ensure that trade union recommendations are not merely considered but systematically implemented. Such a framework would provide a structured mechanism for embedding principles of fairness and the JET across all stages of the transition process. Furthermore, while trade unions successfully advocated for worker-centred policies, including severance packages and reskilling initiatives, the lack of a community-driven socio-economic planning framework meant that broader societal concerns remained inadequately addressed.

5.3.3 Conclusions Regarding Research Objective 3

Research Objective 3: *To evaluate the extent to which the outcomes of the Komati Power Station closure aligned with trade union concerns regarding South Africa's JET.*

The findings of this study indicate that many of the concerns raised by trade unions were substantiated by the events following the closure of Komati Power Station. These concerns predominantly related to job losses, forced migration, and insufficient access to skills development opportunities. Despite assurances from Eskom and policymakers that the transition would be equitable, the process had a significant impact on workers, with many experiencing economic displacement and uncertainty regarding future employment prospects.

Governance challenges also emerged during the Komati transition, further exacerbating trade unions' concerns regarding the exclusion of worker representatives from critical decision-making processes. Although unions were consulted at various stages, their recommendations were frequently deprioritised in favour of external financial considerations, particularly those set by international funding partners. This imbalance in governance structures highlights a broader issue within the energy transition process, wherein worker-centred policies are often subordinated to economic and environmental objectives.

The study validated trade unions' concerns regarding the socio-economic consequences of the transition, the inadequate implementation of reskilling initiatives, and the insufficient inclusion of key stakeholders. However, it also found that trade unions had limited influence in shaping broader community benefits, underscoring the need for a more inclusive and participatory approach to transition planning that extends beyond direct workforce considerations.

5.3.4 Conclusions Regarding Research Objective 4

Research Objective 4: *To develop policy recommendations, based on lessons learned from the Komati Power Station case study, on trade unions' best practices for influencing and ensuring a Just Energy Transition in South Africa.*

The findings indicate that while trade unions played a crucial role in advocating for workers' rights, economic inclusion, and procedural justice, significant shortcomings persist in the implementation of relevant policies.

For energy transition policies to be effective, they must incorporate guaranteed income support, structured transition financing, and comprehensive social protection mechanisms to ensure economic stability both during and beyond the transition process. The study highlights that trade unions can make a substantial contribution to achieving a just energy transition when their inputs are integrated into transparent and collaborative governance frameworks. However, the effectiveness of their advocacy remains constrained by fragmentation and a lack of alignment among multiple stakeholders, which limits their overall impact on policy development and implementation.

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Table 5-1 depicts a consistency table below linking research objectives to conclusions and the contribution to knowledge.

Table 5-1: Consistency table: research objectives, conclusions and contribution to knowledge

RO #	State Research Objective	State literature-based proposition	State conclusion or answer based on own research	Highlight key differences between initial propositions and findings
1	Document and analyse the trade unions' positions, input, and advocacy during the decision-making processes leading to the closure of Komati Coal Power Station as part of the Just Energy Transition in South Africa.	Adapting international best practices in policy frameworks can enhance the efficacy of South Africa's energy transition strategies.	The research found that trade unions effectively lobbied for worker-centered policies, such as severance packages and reskilling programs. However, their advocacy was not fully aligned with global best practices due to fragmented collaboration among stakeholders.	The findings indicate that while trade unions actively advocated for their members, limited adaptation of global best practices constrained the potential effectiveness of their contributions. This highlights the need for unions to adopt broader frameworks that integrate local and international strategies.

RO #	State Research Objective	State literature-based proposition	State conclusion or answer based on own research	Highlight key differences between initial propositions and findings
2	Critically assess how trade unions' inputs on fairness and their proposals for a Just Energy Transition were incorporated into the planning and implementation of Komati Coal Power Station’s closure.	A comprehensive policy framework addressing socio-economic impacts can mitigate adverse effects on communities and workforces in South Africa.	Trade unions influenced the inclusion of severance packages and reskilling programs. However, the absence of community-driven socio-economic planning left broader community concerns unaddressed	The findings show that while unions advocated for socio-economic policies, gaps in community-focused planning highlight the importance of integrating wider stakeholder needs into transition frameworks. This extends the understanding of "fairness" beyond worker-related concerns.
3	Evaluate the extent to which outcomes of Komati Coal Power Station closure validate trade unions’ concerns on energy transition in the country.	The outcomes of the Komati closure reflect the validity of trade unions' concerns regarding fairness in the energy transition process.	The study validated trade union concerns about socio-economic impacts, inadequate implementation of reskilling, and insufficient stakeholder inclusion. However, it found limited use of trade unions’ input in shaping broader community	This research underscores that energy transition outcomes must align with both worker and community needs. Trade unions' concerns were justified but need to extend advocacy to include holistic socio-economic solutions.

RO #	State Research Objective	State literature-based proposition	State conclusion or answer based on own research	Highlight key differences between initial propositions and findings
			benefits.	
4	Develop policy recommendations, from lessons learnt from the Komati experience, on trade unions' best practices in influencing and ensuring just energy transition in a country like South Africa.	Incorporating trade unions' best practices in policy frameworks will enhance the justness and effectiveness of energy transition strategies.	The findings emphasise that trade unions can contribute significantly to just energy transitions when their inputs are integrated into transparent and collaborative governance frameworks. However, fragmented advocacy and lack of multi-stakeholder alignment limit their effectiveness.	This study contributes by highlighting the need for trade unions to refine advocacy strategies that align with inclusive governance models. It identifies the importance of capacity-building for unions to strengthen their influence in national and local energy transition strategies.

Source: Author's adaptation (2025)

CHAPTER 6. RECOMMENDATIONS AND FUTURE RESEARCH

6.1 INTRODUCTION

This chapter presents recommendations based on the findings of this study, with the aim of improving the effectiveness of the Just Energy Transition (JET) in South Africa. The recommendations are directed towards key stakeholders, including trade unions, policymakers, energy sector businesses, affected communities, and the academic community. The Komati Power Station case study highlighted several challenges in implementing JET, including inadequate worker protection, limited economic diversification, and governance deficiencies. Addressing these issues requires coordinated efforts among stakeholders to ensure a fair and sustainable transition from coal to renewable energy. In addition to stakeholder-specific recommendations, this chapter outlines suggestions for future research to address existing knowledge gaps and improve the design and implementation of JET policies in South Africa.

6.2 RECOMMENDATIONS FOR TRADE UNIONS

Trade unions must engage workers at the early stages of policy development to strengthen their lobbying efforts. The Komati Power Station case demonstrated that trade unions primarily operated within pre-defined transition frameworks rather than actively shaping them. Furthermore, stronger alliances between labour and environmental groups are essential to increasing credibility and policy influence.

Greater coordination and collaboration among trade unions is also required. At Komati, the absence of a unified labour front weakened their negotiating position. To ensure that future JET policies balance economic security and sustainability, trade unions should develop comprehensive labour transition frameworks that align with both economic and environmental objectives.

6.3 RECOMMENDATIONS FOR POLICYMAKERS

Policymakers must institutionalise community and trade union involvement in JET processes through more inclusive and transparent decision-making. The Komati Power Station shutdown demonstrated that union engagement had an inconsistent impact on policy outcomes, underscoring the need for legally binding tripartite agreements that formalise labour representation in energy transition governance.

Additionally, policymakers should establish an independent monitoring body to ensure that employment commitments and retraining programmes are effectively implemented. Addressing governance gaps in policy execution will enhance credibility and build trust among affected communities and workers, ultimately reducing resistance to energy sector reforms.

6.4 RECOMMENDATIONS FOR ENERGY SECTOR BUSINESSES

Energy companies, including Eskom and private renewable energy investors, must play a more proactive role in workforce transition planning. The Komati case exposed deficiencies in employer-led workforce restructuring, particularly regarding reskilling and alternative employment pathways.

Corporate Social Responsibility (CSR) initiatives should be expanded to support local economic development programmes, thereby facilitating employment opportunities for displaced workers. Collaboration between trade unions and vocational training institutions is also essential to ensure that skill development programmes remain aligned with the evolving demands of the energy sector. By actively participating in labour transition planning, businesses can enhance their competitiveness in a decarbonised economy while mitigating public opposition to energy reforms.

6.5 RECOMMENDATIONS FOR AFFECTED COMMUNITIES AND WORKERS

Workers and communities require improved access to information, participation platforms, and economic alternatives to transition away from coal-dependent

employment. The Komati case revealed that uncertainty and resistance to change were exacerbated by a lack of transparency in worker and community engagement mechanisms. Labour unions, local governments, and corporations should collaborate to develop comprehensive community engagement plans that outline transition timelines, employment opportunities, and available support mechanisms.

In South Africa, affected regions should establish alternative economic development programmes, with financial and institutional support for worker cooperatives and small enterprises. Government and business investment should enhance economic resilience and create employment opportunities within the renewable energy sector and other alternative employment sectors.

6.6 RECOMMENDATIONS FOR THE ACADEMIC COMMUNITY

There is a need for further research into labour market dynamics, policy effectiveness, and the socio-economic implications of JET. The Komati Power Station case illustrated that long-term employment prospects for displaced coal workers remain uncertain. However, limited research has been conducted on reskilling opportunities and employment alternatives within South Africa's energy transition.

Interdisciplinary research in environmental justice, labour studies, and economic planning can provide more comprehensive insights into the challenges of JET and inform more effective policy interventions.

6.7 SUGGESTIONS FOR FUTURE RESEARCH

6.7.1 Expanding Case Study Analysis of Just Energy Transitions in South Africa

This study focused on Komati Power Station, but similar assessments are required for other coal transition projects across South Africa. Labour, environmental, and economic challenges differ by region, necessitating tailored policy responses. Future research should analyse trade union participation,

community engagement, and policy implementation across various transition sites to identify best practices and recurring challenges in JET.

6.7.2 Investigating Gender Dynamics in Energy Transition Labour Markets

Women are significantly underrepresented in JET policymaking and employment opportunities. Further research should examine structural biases in South Africa's energy labour market, particularly in terms of access to reskilling programmes and employment in the renewable energy sector and other energy transition alternative employment sectors.

6.7.3 Evaluating Long-Term Economic Outcomes of Energy Transitions

One of the key research gaps in the Komati case was the lack of longitudinal tracking of the economic impacts on workers and communities. Future studies should assess the long-term effects of coal plant closures on employment, income levels, and regional economic stability. Analysing the effectiveness of reskilling and job creation programmes over time would provide valuable insights for future labour market interventions.

6.7.4 Analysing Policy Implementation Gaps in Just Energy Transitions

JET implementation in South Africa has been hindered by governance inefficiencies, financial constraints, and institutional capacity limitations. Further research is required to investigate the root causes of these challenges and their impact on policy outcomes. A critical analysis of financial support mechanisms for affected workers and the effectiveness of retraining initiatives could help identify solutions for improving policy execution.

6.7.5 Exploring the Potential of Community-Led Renewable Energy Models

Community-driven renewable energy projects offer a means of promoting local economic opportunities and ensuring a socially just transition. However, South Africa's energy transition policies have largely favoured large-scale corporate investments, limiting community participation. Future research should explore the governance structures and economic viability of decentralised, community-led renewable energy initiatives. By evaluating the strengths and limitations of the community ownership model, research can contribute to more inclusive energy transition policies.

6.8 CONCLUSION

By addressing these research gaps, future studies can enhance the effectiveness of South Africa's Just Energy Transition, ensuring more equitable outcomes for workers, communities, and key stakeholders in the energy sector. A well-designed transition strategy must integrate economic, social, and environmental considerations, with active participation from all affected groups. The recommendations outlined in this chapter provide a foundation for developing a more sustainable and inclusive approach to energy sector transformation.

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APPENDIX A THE PARTICIPANT INFORMATION SHEET

Dear Sir / Madam

My name is Lesego Sekano. I am a master's student in MMEL at the University of the Witwatersrand Business School, Johannesburg. My supervisor is Dr Stanley Semelane I am conducting a research study about the role of trade unions within the energy transition process in South Africa. The study title is: **The role of trade unions in shaping the Just Energy Transition in South Africa: A case study of Komati Power Station.**

I am inviting you to take part in an interview. If you decide to take part, your participation in this research study will last about 45-60mins. The interview will take place on an online platform either Google meet or TEAMS.

With your permission, I would like to audio record the interview. This data will be stored in a locked computer for 3 (three) years and deleted after 3 (three) years. Only the researcher will have access to the data.

During the research activity, I will need to ask for some personal information about you, including Name, gender, age group, education level and work experience.

The interview will be confidential and anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this research study, but your name and any personal information will not be used or passed on.

If you decide to take part in the research study, it should be because you want to volunteer. You do not have to take part. You can stop being in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any services, benefits or rights you would normally have if you decided not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

The risks for this research study are minimal. If there is a reason you feel uncomfortable during the interview, I will stop the interview and continue another time with your permission.

This research study will be written up as a research report. The report will be available on the university library website. If you would like to receive a summary of this report, I will be happy to send it to you.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor on the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,

Researcher:

Lesego Sekano,

0203234R@students.wits.ac.za

+27 82 6829698

Supervisor:

Dr Stanley Semelane,

semelanes@gmail.com

APPENDIX B INSTRUMENT

Research Title: The role of trade unions in shaping the Just Energy Transition in South Africa: A case study of Komati Power Station

Semi-Structured Interview Guide

1 Participant Background information

1.1 Gender of Respondent:

1.2 Highest formal qualification:

1.3 Employment:

1.4 Can you briefly describe your role as a community leader/trade union worker/PCC commissioner/energy expert/workers/policy or regulatory authority and your involvement with energy-related issues?

1.5 What is your understanding of just energy transition?

1.6 What are the main challenges and opportunities your community faces in the context of South Africa's energy transition?

2 South Africa is embarking on an energy transition, and we have recently experienced the partial shutdown of Komati Power Station.

2.1 Do you think there was sufficient consultation around the shutdown of Komati Power Station, please elaborate on your response?

2.2 In your view, what are the implications of the Komati Power Station shutdown, if any?

2.3 How best can South Africa implement an energy transition?

2.4 Who are key stakeholders that should be involved when defining the South African energy transition, please share why those stakeholders should be involved?

3 Awareness and involvement of trade unions

3.1 What role do you think trade unions can play in the South African energy transition?

Trade unions are well known for protecting the rights of workers, as a result

3.2 Do you think trade unions should play a leading role in shaping the South African just energy transition, please elaborate on your response?

3.3 What do you think would have transpired if trade unions led the Komati Power Station shutdown stakeholder engagement process?

4 Community impact of energy transition

4.1 Do you think the energy transition, particularly the coal shutdown in Komati has negatively affected coal sector employees?

4.2 What can be done to minimise the potential impacts of coal shutdown?

4.3 How can the concerns of coal sector workers be taken into cognisant in the South African energy transition process to ensure that the process is just?

4.4 What concerns do coal sector employees have regarding the closure of coal mines and power plants?

4.5 In what ways do you think the energy transition could benefit or harm coal sector employees and surrounding communities?

5 Advocacy and representation

5.1 Do you feel that trade unions adequately represent the interests of coal sector workers in discussions about the energy transition discourse, please substantiate on your response?

5.2 How can trade unions better advocate for the needs and concerns of coal sector workers in the energy transition process?

5.3 What issues do you think trade unions should prioritise to ensure that the energy transition is fair and just?

5.4 Is there anything else you would like to add about the role of trade unions in shaping South Africa’s energy transition

APPENDIX C PARTICIPANT CONSENT FORM

Title of project: The role of trade unions in shaping the Just Energy Transition in South Africa: A case study of Komati Power Station.

.

Name of researcher: Lesego Sekano

I, ……., agree to participate in this research project.

I agree to the following:

(Please circle the relevant options below)

The research study was explained to me. I understand what this study is about.	YES	NO
I understand that I can volunteer to take part in the study.	YES	NO
I agree that the interview be audio-recorded.	YES	NO
I agree that direct quotations from my interview activity may be used by the researcher in their research report.	YES	NO
I agree that my participation will remain anonymous (my name or other identifying data will not be used by the researcher in their research report	YES	NO
I agree that other researchers may use the information I provide in my interview (depending on their own ethics clearance being obtained) but my name and any	YES	NO

personal information will not be used or passed on.

Name of participant: _____

Signature: _____

Date: _____

Name of Researcher: **Lesego Sekano**

Signature: _____

Date: _____

APPENDIX D ETHICS APPROVAL NOTIFICATION

Graduate School of Business Administration

University of the Witwatersrand, Johannesburg

Wits Business School Ethics Committee

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

Ethics Clearance Certificate

Ethics protocol number: WBS/EL0203234R/392

This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below).

Project title	The role of trade unions in shaping the Just Energy Transition in South Afr A case study of Komati Power Station
Investigator / Researcher	Ms Lesego Sekano
Nature of Project	MM (Energy Leadership)
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed confidentialty.
Issue Date of Certificate	21/10/2024
Expiry date	Date of submission of the project / research report

Declaration by Researcher

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

I fully understand the conditions under which I am authorized to carry out the abovementioned research an 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 Date: