A comparative analysis of the legal and policy frameworks for a just energy transition in South Africa and Zimbabwe

Tariro Mary Tingini

orcid.org 0000-0001-8317-6017

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Supervisor: Prof Oliver Fuo

Co-Supervisor: Chantelle Moyo

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DEDICATION

I dedicate this dissertation to my late mother, Venancia Tingini, and my father, Prosper Tingini, for setting a strong foundation for my love and passion for success. I always aim higher to make them proud. This Master's Degree is for them and I know they are proud of me.

The information used and presented in this mini-dissertation was correct and up to date as of 16 November 2024, when the research was concluded. Any later political, social and/or legal developments have not been considered.

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ABSTRACT

The global urgency to mitigate climate change has spurred the push for a just energy transition. The concept of a just energy transition entails the shift away from fossil fuels towards renewable-energy sources, emphasising social equity and the consideration of the vulnerable communities that may be affected during the just energy transition process. Coal is the predominant source of energy in Southern Africa. It accounts for 77% in South Africa and 52.4% in Zimbabwe.

This study compared the legal and policy frameworks of South Africa and Zimbabwe and evaluated their effectiveness in facilitating a just energy transition. The research employed a desktop-based approach, utilising primary legal sources, such as national legislation and case law, as well as secondary sources, including academic articles and policy documents. A comparative legal methodology was used to analyse the legal and policy frameworks of both countries.

The study established that, although South Africa and Zimbabwe have developed legal frameworks that signal a commitment to renewable energy, coal remains a significant part of their energy mix. The study established that South Africa has made strides with its Climate Change Act and Integrated Resource Plan, aiming to reduce the reliance on coal and expand renewable-energy sources. In contrast, Zimbabwe's National Renewable Energy Policy promotes solar, hydro, and wind energy but faces significant challenges in implementation due to economic constraints and energy poverty. Both countries demonstrate gaps in achieving social justice and inclusivity during the transition, particularly in addressing the needs of vulnerable communities affected by the energy shift. The study highlights areas of similarities, differences, gaps, and challenges that exist in both countries.

The study recommends several legal and policy reforms, including improving the coherence of existing frameworks, strengthening enforcement mechanisms, and promoting regional cooperation within the Southern African Power Pool (SAPP). It further suggests that both countries enhance the focus on social equity in their energy policies, ensuring that marginalised communities benefit from the transition to sustainable energy.

KEYWORDS: Climate change, just energy transition, law and policy, South Africa, Zimbabwe.

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LIST OF ABBREVIATIONS

EIAs	Environmental Impact Assessments
EMA	Environmental Management Act
ERA	Electricity Regulation Act
GHGs	Greenhouse Gases
ILO	International Labour Organisation
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Plan
ITUC	International Trade Union Confederation
LEDS	Low Emission Development Strategies
NCCP	National Climate Change Policy
NCCRS	National Climate Change Response Strategy
NDCs	Nationally Determined Contributions
NDP	National Development Plan
NDS1	National Development Strategy 1
NEA	National Energy Act
NEMA	National Environmental Management Act
NEP	National Energy Policy
NEPS	National Energy Policy and Strategy
NREP	National Renewable Energy Policy
PCC	Presidential Climate Commission
REFA	Rural Electrification Fund Act
SDGs	Sustainable Development Goals
SAPP	Southern African Power Pool
UNFCCC	United Nations Framework Convention on Climate Change
ZERA	Zimbabwe Energy Regulatory Authority

CHAPTER 1: INTRODUCTION

1.1 Background

Globally, the impacts of anthropogenic activities have led to climate variability and change patterns that exceed normal expectations over the last decade.[1] Climate change has emerged as the most crucial environmental concern confronting the international community.[2] It is therefore important to combat it with urgency. The energy sector has been deemed the highest contributor to climate change, owing to its higher dependency on fossil fuels, which accounts for two-thirds of global carbon emissions.[3] The concept of a just energy transition has become popular as a mitigation measure for climate change.[4]

In Southern Africa, coal dominates in the energy mix as the primary source of energy although to different degrees.[5] As of 2022, South Africa's energy mix comprised coal (77%), crude oil (14%), and (8%) renewables.[6] Zimbabwe's energy mix is slightly different from South Africa's, since its main source of energy is a mixture of coal (52.4%) and hydro-power (43.2%), with bagasse (3.7%) and solar PV (0.6%).[7] The two countries highlight that coal is still dominant in the energy mix, thus showing the need for a just energy transition in both countries. The legal and policy frameworks regulating the energy sector in the two countries are important in facilitating a smooth, just energy transition. Therefore, conducting a comparative analysis is necessary to highlight areas for improvement in the energy sector, thereby advancing the Sustainable Development Goals (SDGs) in both countries and within the Southern African Power Pool (SAPP).[8]

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1 Fuggle and Rabie *Environmental Management in South Africa* 618.

2 Kidd *Environmental Law* 60.

3 Das and Sharma 2023 *Advancement in Oxygenated Fuels for Sustainable Development* 1-6.

4 It places emphasis on the need to abandon fossil fuels for renewable fuels, and the need for an energy system that is inclusive, equitable, and environmentally friendly. Barnard 2014 *Journal of Energy in Southern Africa* 31.

5 Banya 2023 *The just energy transition paradox for Africa* 18.

6 Department of Mineral Resources and Energy *South African Energy Price Report 2023* 9.

7 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 13.

8 The Southern African Power Pool (SAPP), plays a role in regional energy integration, aiming to promote economic development and energy security through cooperation among member states. However, the SAPP's energy mix is still largely dominated by fossil fuels, highlighting the need for a just energy transition in the region. See Aidoo, Khobai, and Kleynhans 2023 *The impact of renewable energy on economic growth in the Southern African Power Pool* 1-2.

1.1.1 The concept of a just energy transition

Globally, there is a call to move towards a "just energy transition".[9] This "just energy transition" refers to a strategic shift from fossil-fuel-based energy sources, such as coal, to sustainable and renewable alternatives, such as solar, wind, and hydro-power.[10] The concept of a just energy transition also requires that special attention should be directed towards marginalised or vulnerable groups, such as indigenous peoples and low-income communities, which may suffer disproportionate impacts in the transition from fossil fuels to renewable energy.[11] According to the International Trade Union Confederation (ITUC):

> "A Just Transition secures the future and livelihoods of workers and their communities in the transition to a low-carbon economy. It is based on social dialogue between workers and their unions, employers, government and communities. A plan for Just Transition provides and guarantees better and decent jobs, social protection, more training opportunities and greater job security for all workers affected by global warming and climate change policies."[12]

As an organisation primarily representing the interests of workers, it is not surprising that the ITUC definition focuses on the need to ensure the protection of workers in just energy transition programmes. However, it is important to pay attention to all vulnerable groups that may suffer disproportionate impacts in the transition from fossil fuels to renewable energy.[13]

In 2015, the International Labour Organisation (ILO) established non-binding guidelines for a just transition towards environmentally sustainable economies and societies for all.[14] Some of the guidelines include the importance of social dialogue in policy-making, gender equality, promotion of labour rights, and enforcement of policies that promote these guidelines for a just energy transition in all sectors, depending on the specific needs of each country.[15] The main goal of these guidelines is to promote sustainable and inclusive economies and to ensure that the affected workers, such as those in coal mines, are protected and provided with more decent jobs throughout the transition process.[16]

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9 Nzimande and Khambule 2022 *A Just Transition to a Low Carbon Future in South Africa* 31.
10 Carley and Konisky 2020 *Nature Energy* 569-577.
11 Morena, Krause and Stevis 2020 *Social Justice in the Shift Towards a Low-Carbon World* 9.
12 The International Trade Union Confederation 2020 https://www.ituc-csi.org/just-transition-centre.
13 Morena, Krause and Stevis 2020 *Social Justice in the Shift Towards a Low-Carbon World* 9.
14 Department of Mineral Resources and Energy *Integrated Resource Plan 2019* 45.
15 Department of Mineral Resources and Energy *Integrated Resource Plan 2019* 45.
16 Department of Mineral Resources and Energy *Integrated Resource Plan 2019* 45.

However, the above discussed principles have been constantly criticised and politicised and deemed to be insufficient for theorising the concept of a just energy transition.[17]

1.1.2 A just energy transition from an international point of view

Countries globally recognise the urgency of climate change and the necessity to embark on a just energy transition.[18] Notably, estimates show that greenhouse gas emissions (GHGs) are predicted to surpass the Intergovernmental Panel on Climate Change's (IPCC)[19] tolerable limit by an astounding fivefold by the year 2050.[20] International instruments, which are going to be discussed briefly below and further in Chapter 2 of this study, form the basis for a just energy transition framework and commit countries (including South Africa and Zimbabwe) to solve the problem of climate change.[21] Both South Africa and Zimbabwe are signatories to these international instruments.

The United Nations Framework Convention on Climate Change, 1992 (UNFCCC)[22] forms the foundation for a just energy transition by setting out the overarching principles and objectives for international action against climate change.[23] The Paris Agreement of 2015 builds upon the principles of the UNFCCC to enhance the response to climate change.[24] The Paris Agreement also aims to limit global warming to below 2 degrees Celsius above industrial levels, with an ambitious goal of capping it at 1.5 degrees Celsius,[25] which is central to a just energy transition. In addition, the Glasgow Climate Pact[26] is an important

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17 Healy & Barry 2017 *Energy Policy* 451–459.

18 Tomain *Ending Dirty Energy Policy* 1.

19 The IPCC, established in 1988 by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO), serves as a vital global authority on climate change. It produces periodic Assessment Reports that synthesize climate science and inform policymakers about the impacts and mitigation strategies related to climate change. Its special reports, such as those on the 1.5°C target, play a key role in shaping global climate agreements, by emphasizing the policy relevance of its findings. See Buntaine and Pizer 2014 *Climate Policy* 543-564.

20 Buntaine and Pizer 2014 *Climate Policy* 543-564.

21 Mehrotra and Benjamin 2022 *Climate Policy* 728-742.

22 The UNFCCC, which was established in 1992 serves as the parent treaty for pivotal agreements like the Kyoto Protocol and the Paris Agreement, and its annual Conference of the Parties (COP) meetings drive global discussions on climate action.

23 Article 2 and 3 of the UNFCCC, 1992.

24 Article 4.1 offers a more comprehensive approach to climate action whilst the transparency and ambition mechanisms, detailed in Articles 4.2 and 4.3. See Paris Agreement, 2015.

25 Article 2 of the Paris Agreement, 2015.

26 The UN's climate summit, the 26th Conference of Parties (COP26) to the UNFCCC, was held at Glasgow from 31 October to 13 November 2021. It emphasized restraining coal use and setting down the inefficient fossil fuel subsides. Almost 200 participating nations negotiated to phase down the unabated coal power to mitigate climate change. See Glasgow Climate Pact, 2021.

global framework for facilitating a just energy transition. The Glasgow Climate Pact aims to promote global collaboration to tackle climate change by focusing on the reduction of fossil-fuel reliance and encouraging the adoption of sustainable energy options.[27] Furthermore, the SDGs are pivotal in aiding countries in achieving a just energy transition by promoting access to affordable, reliable, sustainable, and modern energy for all, emphasising equitable energy access and facilitating a just energy transition.[28]

1.2 South Africa

In South Africa, the just energy transition framework aspires to bring about coordination and coherence in energy planning.[29] The government, through the implementation of various policies, aims to reduce carbon emissions, highlighting South Africa's quest for expanding renewable-energy sources, and fostering sustainable development, which is key to a just energy transition.[30] The Constitution[31] is the supreme law of the country, and any other law should be consistent with it.[32] While the Constitution of South Africa does not explicitly address a just energy transition, its provision provides the foundation for it. The Constitution recognises environmental rights,[33] the right to equality,[34] socio-economic rights,[35] the right to public participation and access to information.[36] As will be shown in Chapter 3 of this study, these rights are key in a just energy transition.

Furthermore, South Africa has legislation that seeks to facilitate a just energy transition, such as the National Energy Act 34 of 2008 (NEA). The NEA seeks to facilitate a just energy transition by encouraging the development of renewable energy and the reduction of carbon emissions, with an emphasis on the achievement of social and economic justice throughout the transition.[37] In addition, the Electricity Regulation Act 38 of 2024 (ERA) also facilitates a just energy transition by ensuring that electricity entities promote

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27 Glasgow Climate Pact, 2021.
28 UN SDG 7, 2015.
29 Moyo 2023 *The legal autonomy of municipalities in energy governance in South Africa* 211.
30 Ismail 2023 *South African Journal of International Affairs* 245-262.
31 Constitution of the Republic of South Africa, 1996.
32 Section 2 of the *Constitution of the Republic of South Africa.*
33 Section 24 of the *Constitution of the Republic of South Africa.*
34 Section 9 of the *Constitution of the Republic of South Africa.*
35 Section 26 of the *Constitution of the Republic of South Africa.*
36 Section 32 of the *Constitution of the Republic of South Africa.*
37 Section 2 of the National Energy Act.

equitable access to affordable, reliable, and sustainable energy to reduce GHGs and mitigate climate change.[38]

Moreover, South Africa also has policies that commit the government to promote a just energy transition. The Energy Efficiency Strategy of the Republic of South Africa promotes the sustainable use of energy and the reduction of greenhouse gas emissions in all sectors of the economy, ensuring equitable access to energy resources.[39] In addition, the 2023 Integrated Resource Plan (2023 IRP)[40] highlights the South African government's efforts towards renewable-energy sources, which is a key element for a just energy transition.[41] This policy promotes energy efficiency, a reduction in dependence on coal, specifications of priorities for investment, dealing with environmental concerns, and social and economic equity.[42] Furthermore, the National Climate Change Response White Paper[43] highlights South Africa's commitment to a just energy transition by characterising a just transition as an important climate change mitigation measure, through the promotion of sustainable energy sources, emphasising environmental responsibility and social inclusivity.[44] Therefore, these policies fall in place with the overall framework of a just energy transition and are aligned with the vision in South Africa's National Development Plan (NDP),[45] which pushes for an equitable transition to a low-carbon economy.[46]

Recently, South Africa reached an important milestone in its energy policy, on 23 July, when the President assented to the Climate Change Act 22 of 2024.[47] This Act is an important framework that has the main objective of achieving a just energy transition and giving a clear roadmap for climate change mitigation in South Africa.[48] The Act also promotes fairness, consideration of social and economic factors in the shift towards renewable sources of energy, and the promotion of job opportunities and skills

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38 Section 27(f) of the Electricity Regulation Act.
39 Department of Minerals Resources and Energy *Energy Efficiency Strategy of the Republic of South Africa 2005* 1-3.
40 Department of Mineral Resources and Energy *Integrated Resource Plan 2023*.
41 Department of Mineral Resources and Energy *Integrated Resource Plan 2023* 1.
42 Department of Mineral Resources and Energy *Integrated Resource Plan 2023* 1-26.
43 Republic of South Africa *National Climate Change Response White Paper 2011* 9.
44 Republic of South Africa *National Climate Change Response White Paper 2011* 24.
45 National Planning Commission *National Development Plan 2030* 38.
46 National Planning Commission *National Development Plan 2030* 38.
47 South African Government 2024 https://www.gov.za/sites/climatechangeact222024.pdf
48 Preamble of the Climate Change Act of 2024.

development within renewable-energy sectors, which are all key elements for a just energy transition in South Africa.[49]

1.3 Zimbabwe

As the discussion below shows, a comprehensive legal and policy framework underpins Zimbabwe's commitment to ensuring an equitable energy transition. This forms a critical basis for sustainable energy practices and a critical response to the challenges posed by climate change.[50] Like South Africa, the Constitution of Zimbabwe[51] does not explicitly address a just energy transition. However, constitutional provisions, such as environmental rights,[52] equality and non-discrimination rights,[53] socio-economic rights,[54] public participation,[55] and the right to access information,[56] serve as a tool for advancing a just energy transition. As will be shown in Chapter 4 of this research, these rights are key in a just energy transition.

The Electricity Act[57] is central to the quest for a just energy transition in Zimbabwe. The Electricity Act sets up the Zimbabwe Electricity Regulatory Commission and contains detailed regulations that seek to ensure efficiency in the energy sector, enabling the transition to clean and more sustainable sources of energy, which is important for addressing environmental and energy concerns.[58] In addition, the Rural Electrification Fund Act[59] also seeks to facilitate a just energy transition in Zimbabwe by addressing energy access disparities in Zimbabwe. This Act establishes the Rural Electrification Fund Board, focusing on distributing funds to extend electricity access to rural areas, thereby attempting to bridge the urban-rural energy gap, and promoting the aspect of fairness which is central to a just energy transition process.[60] Furthermore, the Environmental

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49 Preamble of the Climate Change Act of 2024.
50 Howells, Boehlert and Benitez 2021 *Energies Journal* 5827.
51 Constitution of the Republic of Zimbabwe of 2013.
52 Section 73 of the *Constitution of the Republic of Zimbabwe.*
53 Section 56 of the *Constitution of the Republic of Zimbabwe.*
54 Section 77 and 81 of the *Constitution of the Republic of Zimbabwe.*
55 Section 141 of the *Constitution of the Republic of Zimbabwe.*
56 Section 62 of the *Constitution of the Republic of Zimbabwe.*
57 Electricity Act of 2002.
58 Section 42(2) of Electricity Act.
59 Rural Electrification Fund Act of 2002.
60 Section 2 of Rural Electrification Fund Act.

Management Act[61] establishes the National Environmental Council and the Environmental Management Agency.[62] These agencies regulate and administer the control of pollution, conservation of natural resources, and sustainable development, closely related to the just energy transition.[63]

Several relevant national policies in Zimbabwe seek to facilitate a just energy transition. The National Energy Policy[64] provides a road map to a complete transition to cleaner and more equitable energy solutions, which highlights Zimbabwe's efforts towards the advancement of safe, sustainable, and environmentally friendly energy practices.[65] In addition, the Zimbabwe National Renewable Energy Policy[66] also seeks to facilitate a just energy transition by promoting equitable access to renewable-energy sources, such as solar, wind, and hydro-power in the energy mix, thereby reducing greenhouse gas emissions, and providing energy access to marginalised communities.[67] This policy aspires to create and develop skills in the energy sector, hence building an inclusive and sustainable energy economy that forms the basis of a just energy transition.[68] Furthermore, Zimbabwe's National Climate Change Response Strategy[69] facilitates a just energy transition by tackling the impacts of climate change, through the understanding of the climate threat in a holistic way and the implementation of measures to control its impacts in Zimbabwe.[70] In addition, the National Climate Policy[71] provides an important framework in Zimbabwe for fostering a just energy transition by providing the basis for developing action plans for national efforts on adaptation and mitigation. It provides a platform to unpack and implement Zimbabwe's Nationally Determined Contribution, which will contribute to the global goal of limiting the temperature rise to below 1.5ºC.[72]

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61 Environmental Management Act 2002.
62 Section 7 of Environmental Management Act.
63 Section 10 of Environmental Management Act.
64 Ministry of Energy and Power Development *National Energy Policy 2012*.
65 Ministry of Energy and Power Development *National Energy Policy 2012* 1-21.
66 Ministry of Energy and Power Development *National Renewable Energy Policy 2019*.
67 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 19-20.
68 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 44-51.
69 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014*.
70 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 10-26.
71 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Policy 2017*.
72 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Policy 2017* 3-20.

1.4 Research Question

How do the legal and policy frameworks regulating the energy sector facilitate a just energy transition in South Africa and Zimbabwe?

1.5 Research aim and objectives

This study aims to critically analyse the legal and policy frameworks for a just energy transition in South Africa and Zimbabwe. The following are the subsidiary research objectives:

i. To identify and critically analyse the legal and policy framework for a just energy transition in South Africa and Zimbabwe.

ii. To identify similarities, differences, gaps, and challenges in the legal and policy framework for a just energy transition in South Africa and Zimbabwe.

iii. To provide recommendations for enhancing the legal and policy framework for a just energy transition in South Africa and Zimbabwe.

1.5 Research Outline

Chapter 1: Introduction

Chapter 2: International perspectives on the just energy transition

Chapter 3: Legal and policy frameworks for a just energy transition in South Africa

Chapter 4: Legal and policy frameworks for a just energy transition in Zimbabwe

Chapter 5: Findings, recommendations, and conclusion

1.6 Research Methodology

This research employed a desktop-based methodology, utilising primary sources, such as legislation and case law, and secondary sources, such as internet data, books, and journal

articles. The study also employed the comparative legal research methodology.[73] It compared similarities, differences, gaps, and challenges in the legal and policy framework for a just energy transition in South Africa and Zimbabwe to identify potential areas for improvement. Both countries face shared challenges related to energy poverty and transitioning to a low-carbon economy. The proximity of these countries within the Southern African region adds regional significance.

1.7 Relevance of the study to the research unit

The proposed study seeks to analyse how the legal and policy framework regulating energy in South Africa and Zimbabwe can be used to facilitate a just energy transition in both countries. This study is highly relevant and significant, given the global focus on transitioning to sustainable energy sources and reducing the reliance on fossil fuels. This research is relevant to the sub-project Environmental Change under the Research Unit Law, Justice, and Sustainability in that it seeks to address a burning climate change related question, "How do the legal and policy frameworks regulating the energy sector facilitate a just energy transition in South Africa and Zimbabwe?" By examining the legal and policy framework in these two countries, this research will contribute to generating new knowledge in the area of energy transitions. By so doing, the study will provide new insights into the challenges and opportunities that arise in the two focus countries.

1.8 Statement regarding ethics

This study does not require ethical clearance because it uses a desktop-based research approach that draws on freely available primary sources, in this case, legislation and case law, while internet data, books, and journal articles will be the secondary sources. In this case, since no human subjects are involved and all the data being used are from existing sources that are publicly available, ethical clearance would therefore not apply. The completed ethics checklist is attached.

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[73] Zweigert and Kötz say that comparative law provides a means to illustrate the principles behind the various legal systems, which could increase understanding of one's own law and further its legal development and reform. See Zweigert, Konrad, and Kötz *Introduction to Comparative Law* 2-3.

CHAPTER 2: INTERNATIONAL PERSPECTIVES ON THE JUST ENERGY TRANSITION

2.1 Introduction

The global urgency of climate change mitigation and the quest for a just energy transition have resulted in many international frameworks evolving.[74] These international frameworks set a blueprint for attaining a globally sustainable energy transition by giving countries important guidelines for scaling down GHG emissions, which is central to a just energy transition.[75] A just energy transition should consider socio-economic impacts on all stakeholders, mainly vulnerable communities and coal mine workers who are affected should benefit from the just energy transition process.[76]

This chapter discusses international agreements and frameworks that form the basis for the facilitation of the just energy transition, such as the UNFCCC,[77] the Paris Agreement,[78] and the Glasgow Climate Pact.[79] Both South Africa and Zimbabwe are signatories to these international instruments.[80] By examining these international frameworks, this chapter will provide guidelines that underpin the just energy transition from an international perspective. This analysis will provide the basis for understanding how international commitments influence national policies, setting the ground for an evaluation of the legal and policy frameworks of South Africa and Zimbabwe in chapters 3 and 4. Part 2.2 below discusses the relevant international agreements and frameworks, while part 2.3 provides the chapter summary.

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74 Tomain *Ending Dirty Energy Policy* 1.

75 International instruments set targets for renewable energy adoption, energy efficiency improvements, and low-carbon energy sources through Nationally Determined Contributions (NDCs). See Mehrotra and Benjamin 2022 *Climate Policy* 728-742.

76 Morena, Krause and Stevis 2020 *Social Justice in the Shift Towards a Low-Carbon World* 9.

77 United Nations Framework Convention on Climate Change, 1992.

78 Paris Agreement, 2015.

79 Glasgow Climate Pact, 2021.

80 Will and Manger-Nestler 2021 *LJIL* 397-420.

2.2 International Agreements and Frameworks

2.2.1 The United Nations Framework Convention on Climate Change

The UNFCCC is the foundational convention under the United Nations system for climate-change-related matters.[81] The UNFCCC continues to hold global discussions on climate action through its annual Conference of the Parties (COP) meetings.[82] The UNFCCC has been a landmark international agreement since 1992 to respond to the global challenge of climate change.[83] The UNFCCC laid a foundational framework for recognising the serious potential impacts of anthropogenic emissions of greenhouse gases on the environment and human societies.[84] Hester and Williams suggest that the UNFCCC has been insufficient in fully addressing these challenges, suggesting the need for further critical analysis and evaluation of the effectiveness of the UNFCCC.[85]

The UNFCCC also seeks to stabilise GHG emissions through various mechanisms. This framework encourages international cooperation by enabling countries to develop collective strategies and commitments, such as the Kyoto Protocol and the Paris Agreement.[86] In particular, countries, under those agreements, set targets to cut their emissions and adopt mitigation and adaptation policies.[87] The UNFCCC, for example, advocates nationally developed action plans with respect to the reduction of emissions and calls on countries, to develop their policies on climate change and further provide a report about it.[88] The UNFCCC also supports financial and technological assistance to developing countries for enhancing low-emission economies and resilience towards climate-change impacts and promoting adaptation.[89]

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81 Dawson and Spannagle 2008 *The complete guide to climate change* 392-403.
82 Hermwille, Obergassel, Ott and Beuermann 2017 *Climate policy* 150-170.
83 Kinley, Cutajar, de Boer and Figueres 2021 *Climate Policy* 593-603.
84 The preamble and Articles 2, 3, and 4 of the UNFCCC, 1992.
85 Hester and Williams 2022 *Greenhouse gas removal* 502-526.
86 Articles 2 and 4 of the UNFCCC, 1992.
87 Article 3 of the Kyoto Protocol; Articles 4 and 7 of the Paris Agreement.
88 Article 4.1(b) and Article 12 of the UNFCCC, 1992.
89 Article 4.3 and Article 4.5 of the UNFCCC, 1992.

The principle of "common but differentiated responsibilities and respective capabilities" is also enshrined in the UNFCCC.[90] Article 3.1 of the UNFCCC states that parties protect the climate system based on equity and by their common but differentiated responsibilities and respective capabilities.[91] This principle underscores that nations are different, with different capacities and responsibilities based on historical GHG emissions and the ability to mitigate those emissions in a changing climate.[92] This would help developing countries (such as South Africa and Zimbabwe) to become a part of the global mitigation and adaptation efforts on climate change, thereby including the requirement in Article 4.3 of the UNFCCC. This framework under Article 4.3 calls upon developed countries to assist developing countries in matters of financing and technology.[93] However, this remains a controversial and contentious issue in the climate change debate, as developed countries often fail to meet their financial and technological commitments under Article 4.3.[94] This raises concerns about how developing countries like South Africa and Zimbabwe can secure the necessary funds and technology to address climate impacts.[95] While mechanisms such as the Green Climate Fund exist, access to these resources remains limited due to bureaucratic hurdles and insufficient funding.[96] Without concrete enforcement measures, the burden of adaptation continues to fall disproportionately on developing nations, exacerbating climate injustice, which is central to a just energy transition.[97]

The UNFCCC highlights the importance of sustainable development, primarily for countries that are processing a transition to their new energy sectors, including South Africa and Zimbabwe.[98] The UNFCCC highlights the importance of sustainable development, primarily for countries that are processing a transition to their new energy sectors, including South Africa and Zimbabwe. Article 3.4 stipulates that the parties have

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90 The Rio Declaration of 1992 also talks about the CBDR Principle 7, that developed countries have a greater responsibility, considering that their societies exert greater pressure on the global environment and on the technologies and financial resources they command; Article 3 of the UNFCCC, 1992.

91 Article 3.1 of the UNFCCC, 1992.

92 Article 3.1 of the UNFCCC, 1992.

93 Article 4.3 of the UNFCCC, 1992.

94 Article 4.1 of the UNFCCC, 1992.

95 Rajamani 2016 *International and Comparative Law Quarterly* 493-514.

96 Roberts, Weikmans, Robinson, Ciplet, Khan and Falzon 2021 *Nature Climate Change* 180-182.

97 Green Climate Fund 2023 https://www.greenclimatefund.

98 Article 3.4 of the UNFCCC, 1992.

a right to, and should, promote sustainable development,[99] which in the context of a just energy transition means ensuring that climate action supports economic growth, social well-being, and environmental protection.[100] A well-managed transition to renewable energy can drive sustainable development by creating green jobs,[101] improving energy access, and reducing reliance on fossil fuels,[102] thereby enhancing long-term economic stability and social equity. Climate policies and measures adopted to protect the climate system should support national development programmes, and any such climate action would have to be focused on not only reducing emissions but on economic growth and social development.[103] This is supportive of the fact that there needs to be a just transition to renewable energy, which should ultimately lead to job creation, poverty reduction, and energy security, all within the context of greater development goals.[104]

The UNFCCC further elaborates on the need for rigorous scientific research and systematic observation.[105] In Article 4.1(g), it is stated that the parties shall promote and cooperate in scientific, technological, technical, socio-economic, and other research. In addition, the parties have also expressed commitment to cooperate in relation to climate change related observations and the development of data archives.[106] In encouraging full-scale research and compiling data, UNFCCC reiterates that the basis for any climate policy has to be strong in its science.[107] An enhanced research capacity at a global level will serve to understand better the climate vulnerabilities in each country and formulate targeted strategies for adaptation and mitigation.[108]

The UNFCCC also provides for public awareness, education, and participation, which are key in the just energy transition process.[109] Article 6 of the UNFCCC encourages state parties to develop and implement educational and public awareness programmes about climate change and its effects.[110] Through the creation of a well informed and active

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99 Article 3.4 of the UNFCCC, 1992.
100 United Nations 2015 https://sdgs.un.org/2030agenda.
101 International Labour Organisation 2018 https://www.ilo.org/weso-greening.
102 IRENA 2021 https://www.irena.org/publications.
103 Article 3.4 of the UNFCCC, 1992.
104 Carley and Konisky 2020 *Nature Energy* 569-577.
105 Article 4.1(g) of the UNFCCC, 1992.
106 Article 4.1(g) of the UNFCCC, 1992.
107 Article 4.1(g) of the UNFCCC, 1992.
108 Klein, Schipper and Dessai 2005 *Environmental science & policy* 579-588.
109 Article 6 of the Paris Agreement, 2015.
110 Article 6 of the Paris Agreement, 2015.

public, the UNFCCC develops further understanding and support for the policies and measures for addressing climate change.[111] Public empowerment and awareness are essential tools in making sure that the just energy transition to renewable energies becomes all-inclusive and sensitive to the perspectives, desires, and needs of all stakeholders.[112] Therefore, the UNFCCC is a comprehensive framework in global climate governance that guides principles, such as equity, sustainable development, and public participation. These are important for South Africa and Zimbabwe to meaningfully engage with the complexities of climate change while ensuring an inclusive transition to a low-carbon economy.

2.2.2 Paris Agreement

The Paris Agreement, adopted in 2015 under the UNFCCC, contains commitments by all countries, including South Africa and Zimbabwe, to curb GHGs.[113] Building upon the preamble of the UNFCCC, the Paris Agreement sets the target of holding the increase in the global average temperature to below 2 degrees Celsius above pre-industrial levels and limiting the temperature increase to 1.5 degrees Celsius by 2050.[114] The preamble of the Paris Agreement emphasises that every level of government and other stakeholders have an important role in contributing towards climate governance, thereby establishing a comprehensive plan for fighting climate change.[115]

The Paris Agreement also focuses on NDCs and, according to Article 4, each country shall prepare, communicate, and maintain successive NDCs that it intends to achieve.[116] These will represent every country's effort to reduce national emissions and adapt to the impacts emanating from climate change.[117] The flexibility of NDCs allows countries like South Africa and Zimbabwe to tailor their commitments in a manner compatible with specific national circumstances, capabilities, and levels of development, thereby respecting the principles of equity and common but differentiated responsibilities.[118] Article 4.1 sets the

111 McKenzie 2021 *Environmental Education Research* 631-651.
112 Galgóczi 2020 *European Journal of Industrial Relations* 367-382.
113 Article 4 of the Paris Agreement, 2015.
114 Article 2 of the Paris Agreement, 2015.
115 Preamble of the Paris Agreement, 2015; Fuo, Zengerling and Sotto 2022 *Climate Law* 33.
116 Article 4 of the Paris Agreement, 2015.
117 Article 4 of the Paris Agreement, 2015.
118 Pauw, Castro, Pickering and Bhasin 2021 *Making Climate Action More Effective* 64-80.

all-encompassing approach to climate action.[119] Articles 4.2 and 4.3 stipulate detailed rules on transparency and ambition mechanisms, ensuring accountability and progressive enhancement of national efforts.[120]

The Paris Agreement also enshrines a framework for transparency and accountability.[121] Article 13 presents a stronger mechanism for transparency in action and support, ensuring clear and consistent information by countries in communicating progress made towards the NDCs.[122] This framework encourages mutual trust and confidence among parties for effective implementation by understanding efforts and results from each other fully.[123] It ensures that regular updates on climate targets are done and reviewed to ensure that countries are on the right path towards achieving their commitments and progressively improving their climate action.[124]

In addition, Article 6 of the Paris Agreement enhances the spirit of voluntary coaction by nations to achieve their NDCs through market and non-market means.[125] These include internationally exchanged mechanisms for the trading of emission reductions that may help countries meet their targets more cost-effectively and provide incentives for precisely sustainable development.[126] Such cooperative approaches are supposed to encourage and induce innovative investment in low-carbon technologies and practices towards the goal of an international transition to sustainable energy systems.[127]

The Paris Agreement also facilitates the just energy transition through adaptation.[128] Article 7 of the Paris Agreement, on the global goal of adaptation, is directed towards enhancing adaptive capacity, strengthening resilience, and reducing vulnerability to climate change.[129] Such adaptation communications should be submitted by parties, indicating their priorities, implementation, and support requirements, which provide

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119 Article 4.1 of the Paris Agreement, 2015.
120 Articles 4.2 and 4.3 of the Paris Agreement, 2015.
121 Article 13 of the Paris Agreement, 2015.
122 Weikmans, van Asselt and Roberts 2021 *Making Climate Action More Effective* 107-122.
123 Weikmans, van Asselt and Roberts 2021 *Making Climate Action More Effective* 107-122.
124 Article 13 of the Paris Agreement, 2015.
125 Article 6 of the Paris Agreement, 2015.
126 Article 6 of the Paris Agreement, 2015.
127 Long, Mokhtar, Ahmed and Lim 2022 *Journal Cleaner Production* 134678.
128 Article 7 of the Paris Agreement, 2015.
129 Article 7 of the Paris Agreement, 2015.

greater coherence in adaptation actions at national and international levels.[130] This adaptation focus is important for ensuring a just energy transition and to safeguard that the disproportionate climate change impacts, affecting mainly vulnerable populations, are reduced.[131]

In summary, the Paris Agreement is a universal framework of global climate action for facilitating the just energy transition. By setting broad international targets, the Paris Agreement also establishes specific mechanisms and support to help countries (including South Africa and Zimbabwe) in meeting their commitments on climate action. This can help those countries in advancing their climate agenda by remaining relevant in utilising the varied instruments offered within the agreement to foster low-carbon, secure development that is responsive to the peculiarities of context. Transparency, adaptability, and finance will secure the just energy transition to a low-carbon economy, a transition that is both effective and fair.

2.2.3 Glasgow Climate Pact

The Glasgow Climate Pact, adopted during the 26th Conference of Parties (COP26) to the UNFCCC held in Glasgow from 31 October to 13 November 2021, represents a pivotal global framework aimed at intensifying the international response to climate change.[132] The Glasgow Climate Pact underlines the urgent need to increase efforts by the parties to reduce greenhouse gas emissions, reduce unabated coal power, and phase out inefficient fossil fuel subsidies.[133] The phrasing of "phasing down" rather than "phasing out" was a real bone of contention at COP26, given that most Global North countries wanted something more aggressive, a full "phase out" while developing countries, especially in Africa, preferred "phase down" because this would consider certain socio-economic constraints that are not like others.[134]

For African nations, the need to balance climate goals with development priorities requires a phased approach that allows for economic stability and energy security while

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130 Article 7 of the Paris Agreement, 2015; Biesbroek, Wright, Eguren, Bonotto and Athanasiadis 2022 *Climate Policy* 97-111.
131 Maxim and Grubert *Environmental justice* 139-148.
132 Obergassel, Arens, Beuermann, Brandemann, Hermwille, Kreibich, Ott and Spitzner 2021 *CCLR* 271.
133 Oxford Energy 2022 https://www.oxfordenergy.org/wpcms/wp-content/uploads/2022.pdf.
134 Oxford Energy 2022 https://www.oxfordenergy.org/wpcms/wp-content/uploads/2022.pdf.

transitioning to cleaner energy.[135] Unlike developed countries, many African countries rely on coal and other fossil fuels for affordable, reliable energy, which is essential for economic growth and poverty alleviation.[136] Thus, a "phase down" approach better aligns with Africa's developmental needs, enabling a just energy transition that promotes sustainable energy access without compromising social and economic development.[137]

A central element of the Glasgow Climate Pact is its focus on reducing the use of fossil fuels.[138] The Glasgow Pact calls for the phasing down of unabated coal power and the elimination of inefficient fossil fuel subsidies.[139] This commitment reflects a significant shift in global climate policy, recognising the need to transition away from fossil fuels to mitigate climate change effectively.[140] The emphasis on phasing down coal is particularly pertinent for countries (including South Africa and Zimbabwe) that rely heavily on coal for energy production.[141] By setting clear targets for reducing coal use, the Pact provides a framework for these countries to develop strategies for transitioning to renewable-energy sources.[142]

The Glasgow Climate Pact also highlights the importance of environmental and social justice in achieving a just energy transition.[143] It emphasises that the responsibilities and advantages of the energy transition should be distributed fairly among all parties involved.[144] By prioritising fairness and equity, the pact aims to ensure that the benefits of the transition to clean energy are shared equitably and that no one is left behind.[145] Collaboration is another key aspect of the Glasgow Climate Pact.[146] The pact promotes international cooperation to tackle climate change and to support a just energy

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135 IRENA 2021 https://www.irena.org/Renewable_Energy_Transition_Africa_2021.pdf.
136 IRENA 2021 https://www.irena.org/Renewable_Energy_Transition_Africa_2021.pdf.
137 IRENA 2021 https://www.irena.org/Renewable_Energy_Transition_Africa_2021.pdf.
138 UN 2021 https://www.un.org/en/climatechange/cop26.
139 UN 2021 https://www.un.org/en/climatechange/cop26.
140 UN 2021 https://www.un.org/en/climatechange/cop26.
141 It will be critically and further discussed in detail in chapters 3 and 4 respectively.
142 Kuramochi, Deneault, Chan, Smit and Pelekh 2024 *Climate Action* 31.
143 Heffron 2021 *Achieving a just transition to a low-carbon economy* 9-19.
144 Heffron 2021 *Achieving a just transition to a low-carbon economy* 9-19.
145 Heffron 2021 *Achieving a just transition to a low-carbon economy* 9-19.
146 Paragraph 33 of the Glasgow Climate Pact, stresses the need for international cooperation on innovative climate action, in particular by advancing technologies across sectors and initiatives.

transition.[147] It encourages countries to work together to share knowledge, technologies, and financial resources to achieve their climate goals.[148]

The pact also emphasises the need for increased climate finance to support developing countries in their mitigation and adaptation efforts.[149] Developed countries are urged to scale-up their financial contributions to help developing nations transition to low-carbon, climate-resilient economies.[150] This commitment to climate finance is particularly important for countries (such as Zimbabwe), which require substantial financial resources to implement their climate action plans effectively.[151] Access to adequate and predictable climate finance can enhance these countries' capacity to develop and deploy renewable-energy technologies, improve energy efficiency, and build resilience to climate impacts.[152]

In terms of implementation, the Glasgow Climate Pact sets out mechanisms for monitoring and reporting progress.[153] Countries like South Africa and Zimbabwe are required to submit regular reports on their progress in reducing emissions and implementing climate actions.[154] This transparency framework ensures accountability and enables countries to track their progress towards their climate goals.[155] Countries, by participating in this reporting process, can be helped to align their national policies with global climate targets, identify gaps in their strategies, and enhance their efforts to achieve a just energy transition.

In summary, the Glasgow Climate Pact provides a multifaceted framework for fighting climate change and facilitating a just energy transition. Reduction in the use of fossil fuels, development of sustainable energy, and realisation of environmental and social

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147 Paragraph 33, 44 and 62 of the Glasgow Climate Pact, 2021.
148 Paragraph 33, 44 and 62 of the Glasgow Climate Pact, 2021.
149 Paragraph 44: Takes note with deep regret that the commitment of developed country Parties to mobilize jointly USD 100 billion per year by 2020 has not yet been met, and calls upon developed country Parties to urgently achieve this commitment through to 2025 and to continue taking into account the needs and priorities of developing country Parties; Paragraph 45: Urges developed country Parties to provide enhanced support, including through finance, technology transfer and capacity-building, to assist developing country Parties with respect to both mitigation and adaptation; Paragraph 46: Recognizes the importance of adequate and predictable financial resources for the implementation of the Paris Agreement by developing countries.
150 Paragraph 33, 44-46, 62 of the Gasglow Climate Pact, 2021.
151 Kuramochi, Deneault, Chan, Smit and Pelekh 2024 *Climate Action* 31.
152 Michaelowa, Hoch, Weber, Kassaye and Hailu 2021 *Climate Policy* 47-62.
153 Paragraph 92 of the Gasglow Climate Pact, 2021.
154 Paragraph 87 of the Gasglow Climate Pact, 2021.
155 Paragraph 87 of the Gasglow Climate Pact, 2021.

justice, the pact appeals for global cooperation and enhancement of climate finance to support the strategy of developing countries. The Glasgow Pact provides an advanced framework under which the policies of countries (including South Africa and Zimbabwe) can be aligned so that such transitions are environmentally sustainable and socially equitable. It paves the way for resilient and inclusive futures by leading nations worldwide in their efforts to attain sustainability goals and to fight climate change effectively.

2.2.4 The Sustainable Development Goals (SDGs 1; 7; 8 & 13)

The Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, form an integral part of the 2030 Agenda for Sustainable Development.[156] These 17 sustainable development goals address a wide range of challenges, from poverty to climate action, and are designed to achieve a more sustainable future for all.[157] These SDGs are pivotal in helping countries achieve a just energy transition, emphasising the principles of inclusivity and equity under the overarching ethos of "leaving no one behind".[158]

SDG 7 focuses on ensuring access to affordable, reliable, sustainable, and modern energy for all, which is particularly relevant to the just energy transition.[159] This goal underscores the commitment to equitable energy access, recognising that access to energy is a critical enabler of economic development and poverty alleviation.[160] For countries like South Africa and Zimbabwe to achieve SDG 7, they have to address significant energy challenges, such as ensuring that rural and marginalised communities have access to modern energy services. By expanding access to affordable and sustainable energy, these countries can lift people out of poverty (SDG 1) and promote economic growth and decent work (SDG 8).[161]

The importance of SDG 7 extends to its focus on increasing the share of renewable energy in the global energy mix and improving energy efficiency.[162] This transition to sustainable energy sources is crucial for reducing greenhouse gas emissions and mitigating the

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156 Palmer 2015 *Journal of Global Ethics* 262-269.
157 Fuso Nerini, Sovacool, Hughes, Cozzi, Cosgrave, Howells, Tavoni, Tomei, Zerriffi, and Milligan 2019 *Nature Sustainability* 674-680.
158 Müller, Neumann, Elsner and Claar 2021 *Politics and Governance* 119-130.
159 UN SDG 7, 2015.
160 Müller, Neumann, Elsner and Claar 2021 *Politics and Governance* 119-130.
161 See SDG 1 and 8.
162 Müller, Neumann, Elsner and Claar 2021 *Politics and Governance* 119-130.

impacts of climate change.[163] For countries like South Africa and Zimbabwe, increasing the adoption of renewable-energy technologies, such as solar, wind, and hydro, is essential for reducing their reliance on coal and other fossil fuels.[164] This just energy transition not only contributes to climate mitigation efforts but also enhances energy security and creates new economic opportunities.[165]

SDG 13 calls for urgent action to combat climate change and its impacts, and provides a key impetus for a just energy transition.[166] The goal emphasises the need for countries to integrate climate measures into national policies, strategies, and planning.[167] Countries (including South Africa and Zimbabwe) aligning national energy policies with the objectives of SDG 13 involves prioritising renewable-energy development, enhancing climate resilience, and promoting sustainable land and water management practices.[168] This alignment is critical for ensuring that the energy transition contributes to broader climate goals and supports sustainable development.

The SDGs also highlight the importance of collaboration across sectors and among various stakeholders.[169] Achieving a just energy transition requires the involvement of governments, private-sector entities, civil-society organisations, and local communities.[170] This collaborative approach ensures that the diverse needs and perspectives of all stakeholders are considered, leading to more inclusive and effective solutions.[171] Countries (including South Africa and Zimbabwe), by fostering partnerships between the public and private sectors, can drive investments in renewable-energy infrastructure and support the development of innovative financing mechanisms.

The SDGs emphasise rigorous monitoring and reporting mechanisms to track progress towards achieving the 2030 targets.[172] Countries (including South Africa and Zimbabwe) must submit regular reports on their progress, promoting transparency and

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163 Elum and Momodu 2017 *Renewable and sustainable energy reviews* 72-80.
164 Nakumuryango and Inglesi-Lotz 2016 *Renewable and Sustainable Energy Reviews* 999-1007.
165 Carley and Konisky 2020 *Nature Energy* 569-577.
166 UN SDG 13, 2015.
167 Dzebo, Janetschek, Brandi and Iacobuta 2019 *The case for policy coherence* 38.
168 UN SDG 13, 2015.
169 Haywood, Funke, Audouin, Musvoto and Nahman 2019 *Development Southern Africa* 555-569.
170 Lennon, Dunphy and Sanvicente 2019 *Energy, Sustainability and Society* 1-18.
171 Lennon, Dunphy and Sanvicente 2019 *Energy, Sustainability and Society* 1-18.
172 UNEC 2021 https://unece.org/sites/default/files/2021-04/2012761_E_web.pdf.

accountability.[173] Countries, by participating in this monitoring process, help to identify areas where additional efforts are needed and to share best practices and lessons learned with other countries.

In summation, the SDGs provide a comprehensive framework for advancing a just energy transition. By focusing on equitable energy access (SDG 7), poverty alleviation (SDG 1), economic growth (SDG 8), and urgent climate action (SDG 13), the SDGs offer a roadmap for countries to transition to sustainable energy systems. Countries, by aligning national policies with the SDGs, ensure that the energy transition is inclusive, sustainable, and resilient, addressing environmental and socio-economic challenges.

2.3 Conclusion

In conclusion, Chapter 2 has identified key international agreements and frameworks that remain important in the facilitation of the just energy transition globally. The UNFCCC has laid down guidelines on the need for equity and differentiated responsibilities. The Paris Agreement and the Glasgow Climate Pact raise ambition, with binding targets to reduce emissions and transition to cleaner sources of energy. Furthermore, the SDGs highlight the significance of inclusive access to energy and rapid climate action. Together, these frameworks help countries globally (including South Africa and Zimbabwe) to align their national policies towards global climate objectives, foster resilience, and strive towards sustainable development. Chapters 3 and 4 respectively provide a detailed examination of the specific legal and policy landscape in South Africa and Zimbabwe, in terms of what opportunities exist to enhance their contributions towards global climate goals and the facilitation of a just energy transition.

[173] UNEC 2021 https://unece.org/sites/default/files/2021-04/2012761_E_web.pdf.

CHAPTER 3: LEGAL AND POLICY FRAMEWORKS FOR A JUST ENERGY TRANSITION IN SOUTH AFRICA

3.1 Introduction

South Africa, being among the top carbon emitters in Africa,[174] has an important role in the global effort towards mitigating climate change.[175] A just energy transition is both an environmental and socio-economic imperative that aims to mitigate climate change through abandoning fossil fuels, such as coal, to cleaner energy, such as solar.[176] This chapter seeks to discuss South Africa's legal and policy frameworks that facilitate a just energy transition. The chapter will also investigate how these frameworks are aligned with the international commitments discussed in Chapter 2, to which South Africa is a signatory.

The chapter starts with a constitutional framework overview of South Africa, discussing environmental, socio-economic, and public participation rights, which are all central to the facilitation of a just energy transition.[177] The chapter also analyses key legislation, such as the National Environmental Management Act, the Electricity Regulation Act, and the National Energy Act, on how these frameworks may facilitate or hinder the just energy transition.[178] The chapter further provides an implementation assessment of such legislation and key policies, evaluating strengths and gaps within these legal and policy frameworks, such as the 2023 Integrated Resource Plan and the National Climate Change Response White Paper.[179]

Therefore, the chapter is organised to present constitutional foundations in Section 3.2, then an examination of key legislation in Section 3.3, and then a look into major policies in Section 3.4. Issues of policy implementation challenges are presented in Section 3.5,

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174 Banya 2023 *The Just energy transition paradox for Africa* 18.
175 Swilling and Wakeford 2016 *Journal of Environmental Policy & Planning* 650-672.
176 As of 2022 South Africa's energy mix comprised coal (77%), crude oil (14%), and (8%) renewables. See Department of Mineral Resources and Energy *South African Energy Price Report 2023* 9; Murombo 2022 *Journal of African Law* 97-122.
177 See 3.2 below for a detailed discussion.
178 See 3.3 below for a detailed discussion.
179 See 3.5 and 3.6 below for a detailed discussion.

followed by opportunities and challenges in Section 3.6. The chapter closes with a summary in Section 3.7.

3.2 Constitutional Foundations

Underpinning the just energy transition in South Africa is the Constitution, which is the supreme law of the country.[180] South Africa's Constitution is hailed for a great number of its progressive provisions concerning human rights and care for the environment.[181] These include constitutional rights to the environment, socio-economic rights, and rights to equality, public participation, and access to information.[182] In sum, these rights impose a legal duty on the state to adopt and implement policies that are not only environmentally sustainable but also socially just and inclusive.[183]

3.2.1 Environmental Rights

Section 24 of the Constitution affords the right to an environment that is not harmful to health or well-being, commanding the state to take reasonable legislative measures for sustainable development and the use of natural resources while promoting justifiable economic and social development.[184] Section 24 is the backbone of environmental governance in South Africa, inscribing environmental sustainability into all levels of policymaking, of which energy is a keystone.[185] It develops a requirement for South Africa to shift from coal and other fossil fuels towards cleaner renewable sources of energy regarded as less destructive to the environment and protective of citizens' health.[186] This right is in close alignment with international climate change commitments, such as the right to an environment that is not harmful, as expressed in the Paris Agreement.[187] This also highlights the constitutional imperative for sustainability to compel the government to adopt energy policies that reduce emissions and conserve natural resources to contribute towards global climate goals and enable the transition towards a low-carbon

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180 Preamble of the *Constitution of the Republic of South Africa, 1996.*
181 Christiansen 2013 *Environmental Law Journal* 215.
182 Constitution of the Republic of South Africa, 1996.
183 Du Plessis 2008 *Potchefstroom Electronic Law Journal* 1-34.
184 Section 24 of the *Constitution of the Republic of South Africa, 1996*.
185 Kotzé 2007 *European Community & International Environmental Law* 298-311.
186 Christiansen 2013 *Environmental Law Journal* 215.
187 Paris Agreement, 2015.

economy.[188] This right further obligates the government to prioritise renewable-energy projects and to impose stricter environmental controls on coal mining and power generation, activities that in the past have contributed to pollution and environmental degradation.[189]

3.2.2 Socio-Economic Rights

Some of the socio-economic rights enshrined in the Constitution of the Republic of South Africa include housing, healthcare, food, water, and social security.[190] Energy access and security are linked to such rights, since energy supply is required for the satisfaction of these needs. The energy transition must be focused on reducing inequalities in energy access, with particularly disproportionate burdens faced by low-income households and rural communities.[191] The energy landscape today is one mainly dominated by coal, resulting in environmental degradation and health concerns, especially in communities located next to mines and power plants.[192] A just energy transition seeks to remedy these injustices by extending access to clean, inexpensive, and sustainable energy for all in South Africa. The Constitution requires the state to take reasonable measures so that the progressive realisation of these socio-economic rights is achieved.[193] The integration of socio-economic considerations into energy policy reflects a greater constitutional commitment to poverty and inequality reduction, which is key in a just transition.[194]

3.2.3 Right to Equality and Non-Discrimination

The Constitution of the Republic of South Africa protects the right to equality and non-discrimination.[195] A just energy transition requires that there should not be any infringement on the right to equality and non-discrimination, which is a constitutional provision under section 9.[196] Through this right, every person, irrespective of race, gender, socio-economic status, or even geographical area, is entitled to an equal share in the

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188 Murombo 2022 *Journal of African Law* 97-122.
189 Muswaka 2017 *Speculis Juris* 1-21.
190 Sections 26, 27, and 28 respectively of the *Constitution of the Republic of South Africa, 1996.*
191 Carley and Konisky 2020 *Nature Energy* 569-577.
192 See a detailed discussion of South Africa's energy mix in Chapter 1.
193 Section 26(2) and Section 27(2) of the *Constitution of the Republic of South Africa, 1996.*
194 Carley and Konisky 2020 *Nature Energy* 569-577.
195 Section 9 of the *Constitution of the Republic of South Africa, 1996.*
196 Morena, Krause and Stevis 2020 *Social Justice in the Shift Towards a Low-Carbon World* 9.

benefits accruing from the just energy transition.[197] Historic energy policies and practices have tended to focus on urban and industrial areas, leaving rural communities with poor access to adequate energy services.[198] The right to equality demands that energy policies address disparities by prioritizing renewable energy investments in disadvantaged communities.[199] These policies should create job opportunities and provide training and reskilling for workers affected by the decline of the coal industry.[200] The right to equality further requires that the just energy transition should also be gender-sensitive, considering the energy needs and roles of women, who are often disproportionately affected by energy poverty.[201]

3.2.4 Right to Public Participation and Access to Information

The Constitution of the Republic of South Africa protects rights to public participation and access to information.[202] These rights are important in the context of facilitating a just energy transition in South Africa. They make provisions for citizens to engage in various government steps that would impact the environment and citizen livelihoods.[203] Fuo emphasise that South Africa is ahead when it comes to public participation in the African continent since it adopted its Constitution in 1996, laying a legal framework for participatory governance.[204] Through this constitutional commitment, decisions such as those touching on energy policies are made in a manner that is representative of the interests of all communities, especially those that are marginalised and vulnerable. These rights also ensure that citizens are equipped with enough knowledge regarding energy matters that they hold the government and private sector accountable.[205]

3.3 Key Legislation

Various legislative frameworks facilitate the just energy transition process in South Africa. Some of these major legislative frameworks include the National Environmental

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197 Morena, Krause and Stevis 2020 *Social Justice in the Shift Towards a Low-Carbon World* 9.
198 Clausen and Rudolph 2020 *Energy Policy* 111289.
199 Carley and Konisky 2020 *Nature Energy* 569-577.
200 Carley and Konisky 2020 *Nature Energy* 569-577.
201 Anditi, Musango, Smit and Ceschin 2022 *Energy Research & Social Science* 102476.
202 Sections 32 and 33 of the *Constitution of the Republic of South Africa, 1996.*
203 Kahumbu 2017 *Journal of Human Rights and the Environment* 45-64.
204 Fuo 2015 *African Human Rights Law Journal* 167-191.
205 Section 32 of the *Constitution of the Republic of South Africa, 1996*.

Management Act of 1998, the Electricity Regulation Amendment Act of 2024, and the Climate Change Act of 2024. All these legislative frameworks are focused on facilitating a just energy transition in South Africa.

3.3.1 National Environmental Management Act of 1998

The NEMA forms one of the foundational pieces of environmental legislation in South Africa and commands the government to establish a systematic approach towards sustainable environmental management and protection.[206] The NEMA promotes constitutional provisions of environmental justice, public participation, and the need for integrated environmental management.[207] The Act considers that environmental issues are integrated and there is a need to address socio-economic and ecological factors when making decisions.[208] One of the strong pillars of the NEMA is its emphasis on all interested parties, including communities represented in environmental governance, thereby promoting public participation.[209]

The NEMA lays the foundation for a just energy transition through its provisions for environmental impact assessment and control over activities that are connected to or affect the environment within the realm of energy production.[210] Its provisions enable the identification of potential impacts energy projects are likely to have on the environment for which mechanisms for mitigating such effects would be put in place.[211] The NEMA advocates for the adoption of renewable energy to reduce reliance on fossil fuels, a key aspect of a just energy transition.[212] However, Alberts argues that the effectiveness of the NEMA has often faced challenges in terms of poor implementation and a lack of enforcement, due to capacity and resource constraints.[213]

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206 National Environmental Management Act of 1998.
207 Sections 2 and 23 of the National Environmental Management Act of 1998.
208 Section 2 of the National Environmental Management Act of 1998.
209 Section 2 of the National Environmental Management Act of 1998.
210 Section 24 of the National Environmental Management Act of 1998.
211 Kock 2017 *The Effects of Public Participation on Environmental Impact Assessment* 45.
212 Section 2(4)(g) of the National Environmental Management Act of 1998.
213 Alberts, Wessels, Morrison-Saunders, McHenry, Sequeira, Mtegha and Doepel 2017 *The Extractive Industries and Society* 267-277.

3.3.2 The Electricity Regulation Act 38 of 2024

The president of South Africa signed into law the Electricity Regulation Amendment Act 38 of 2024 (ERA) on 16 August 2024.[214] The ERA provides an updated regulatory framework for South Africa's energy regulation landscape, building upon the foundational framework established by the original Electricity Regulation Act of 2006.[215] This amendment responds to the growing urgency for a sustainable and inclusive energy transition, incorporating new provisions that aim to ease the incorporation of renewable-energy sources, enhance grid access for independent power producers, and streamline regulatory processes to support energy security and diversification.[216] The ERA entrenches the country's efforts towards efficient, sustainable electricity generation, distribution, and consumption, in line with the country's energy-transition goals.[217]

The ERA as amended provides for an independent entity called the Transmission System Operator (TSO), which shall be responsible for the operation of the national grid; one of the functions of the TSO is to provide non-discriminatory access for IPPs.[218] Such a structure would ensure non-discriminatory and equivalent access to the transmission system by all energy suppliers, including renewable-energy suppliers and that would be a fair and just development in diversifying South Africa's energy mix.[219] Another major focus of the amended Act is to develop a competitive electricity market that will hopefully spur more investments in renewable technologies and wean the nation off coal.[220] It sets the framework for the regulation of market activities through the agency the National Energy Regulator of South Africa (NERSA), for efficient, open, and fairly priced operation of the market.[221] This competitive framework is highly relevant in light of a just energy transition, given its opening of markets to renewable-energy investors and improving energy equity and security.

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214 South African Government 2024 https://www.gov.za/blog/transforming-sa%E2%80%99s-electricity-market.
215 Sections 1, 2, 2A, 3 and 33 of the Electricity Regulation Amendment Act of 2024.
216 Sections 1, 2A, 34, 34A and 35A of the Electricity Regulation Amendment Act of 2024.
217 Sections 2, 34, 34A and 35A of the Electricity Regulation Amendment Act of 2024.
218 Section 34A of the Electricity Regulation Amendment Act 2024.
219 Section 34B of the Electricity Regulation Amendment Act 2024.
220 Sections 2, 34, 34A and 34B of the Electricity Regulation Amendment Act 2024.
221 Section 4 and 5 of the Electricity Regulation Amendment Act 2024.

3.3.3 The National Energy Act 34 of 2008

The National Energy Act 34 of 2008 (NEA) remains one of the most important legal tools in South Africa's quest for energy security and sustainable development.[222] The NEA provides a framework for energy planning, promoting a diverse energy mix that includes renewable sources.[223] It prioritizes the efficient use of available energy supplies and the increased adoption of cleaner technologies.[224] The NEA is an Act that compells the formulation of an integrated energy plan, considering the country's economic, environmental, and social objectives that need to be compatible with the broader necessities of sustainable development.[225]

Furthermore, within the framework of a just transition to renewable energy, the NEA has the objective of enhancing renewable energies and efficient energy use within the national energy strategy.[226] The NEA allows for energy supply diversification and increases investment in cleaner energy technologies that will contribute to the reduction of GHG emissions.[227] The Act also facilitates a just energy transition by incorporating various provisions for social equity in energy access and has stressed that the energy requirements of the poorest of the poor must be met.[228]

3.3.4 Climate Change Act 22 of 2024

South Africa reached an important milestone in its energy governance with the signing of the Change Act of 2024 on 18 July 2024 by President Cyril Ramaphosa.[229] The Act sets up a rigorous framework that is meant to help tackle climate change in South Africa.[230] Central to the Act are sectoral targets for emissions, carbon budgets, and climate-adaptation strategies to manage GHG emissions.[231] The mechanism proposed for the coordination in the response to climate change monitors the implementation of climate

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222 The National Energy Act 34 of 2008.
223 Sections 2, 3, and 6 of the National Energy Act of 2008.
224 Sections 2, 3, and 6 of the National Energy Act of 2008.
225 Section 6 of the National Energy Act of 2008.
226 Sections 2 and 6 of the National Energy Act of 2008.
227 Section 2 of the National Energy Act of 2008.
228 Section 2 and 3 of the National Energy Act of 2008.
229 The Climate Change Act 22 of 2024; www.gpwonline.co.za.
230 Preamble of the Climate Change Act of 2024.
231 Preamble of the Climate Change Act of 2024; Section 3(h) of the Climate Change Act of 2024.

policies so that coherence and accountability exist in the country's response to climate change.[232]

The Climate Change Act has heavy implications for the facilitation of a just energy transition in South Africa, by setting clear goals and mechanisms that reduce GHG emissions across all sectors of the economy.[233] In ensuring coordination at a national level on the varied responses to climate change, it aims to ensure that action to combat climate change is integrated across the government and further aligned with socio-economic development objectives.[234]

3.4 Major Policies and Strategies

South Africa has several national policies and strategies that facilitate a just energy transition. At the core of these policies is the concern of the highly susceptible to the effects of climate change and economic transformation.[235] This chapter looks at some of the policies and strategies, their objectives, and strengths, gaps and challenges in the facilitation of the just energy transition. Although these policies are not legally binding, they provide future direction for just energy transition in the country.

3.4.1 The Energy Efficiency Strategy of the Republic of South Africa of 2005

The Energy Efficiency Strategy of the Republic of South Africa (the Strategy) was launched in 2005 to help overcome and handle conveniently the emerging energy crisis for sustainable use of energy in all sectors.[236] It targeted a 12% reduction in the final energy demand,[237] with a focus on major sectors, such as industry, commerce, residences, and transport.[238] This involves an emphasis on energy-management systems, the promotion of energy-efficient technologies, and training and awareness creation.[239] This is achieved by taking a sectoral approach whereby, besides reducing energy

232 Section 2(d) of the Climate Change Act of 2024.
233 Preamble and Section 2 of the Climate Change Act of 2024.
234 Section 3(d) of the Climate Change Act of 2024.
235 Presidential Climate Commission *A Framework for a Just Transition in South Africa* 2022 8-9.
236 Department of Minerals and Energy *Energy Efficiency Strategy of the Republic of South Africa* 1-46.
237 Department of Minerals and Energy *Energy Efficiency Strategy of the Republic of South Africa* 2.
238 Department of Minerals and Energy *Energy Efficiency Strategy of the Republic of South Africa* 12-15.
239 Department of Minerals and Energy *Energy Efficiency Strategy of the Republic of South Africa* 19.

consumption, the strategy aims to stimulate economic growth by job creation in the emerging green economy.[240]

However, significant barriers to the strategy stood in its way of being as successful as it should have been.[241] A general lack of awareness and proper knowledge of energy efficiency measures at the consumer and business levels resulted in limited uptake.[242] The absence of financial incentives and insufficient investment in energy-saving technologies further crippled success, while energy-saving efforts also varied greatly across regions and different sectors.[243] Despite that, the plan remains an important part of South Africa's step towards sustainable energy and achieving a just energy transition.

3.4.2 The Integrated Resource Plan 2023

The 2023 Integrated Resource Plan (2023 IRP) is the latest and most holistic framework for electricity planning in South Africa, updating the 2019 IRP with new targets and strategies to deal with the country's changed energy needs and climate commitments.[244] While the 2019 version focused more on reducing coal usage in favour of renewables, the 2023 IRP takes a more cautious approach by allowing some coal plants to continue operating beyond their planned decommissioning.[245] This change reflects the government's attempt to balance the immediate need to reduce power shortages, especially amid severe load shedding, with the long-term vision of a cleaner energy grid.[246] The 2023 IRP gives more emphasis to new energy sources, like gas and nuclear, and also commits to expanding renewable-energy projects, demonstrating a pragmatic approach to South Africa's energy crisis while still considering environmental goals.[247]

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240 Department of Minerals and Energy *Energy Efficiency Strategy of the Republic of South Africa* 1.
241 International Energy Agency (IEA), 2013 South Africa: Energy Efficiency Policies and Measures www.iea.org.
242 International Energy Agency (IEA), 2013 South Africa: Energy Efficiency Policies and Measures www.iea.org.
243 International Energy Agency (IEA), 2013 South Africa: Energy Efficiency Policies and Measures www.iea.org.
244 Department of Mineral Resources and Energy *Integrated Resource Plan 2023* 1.
245 Department of Mineral Resources and Energy *Integrated Resource Plan 2023* 9-11.
246 Department of Mineral Resources and Energy *Integrated Resource Plan 2023* 9.
247 Department of Mineral Resources and Energy *Integrated Resource Plan 2023* 1-6.

The 2023 IRP is designed as a two-phase plan, which will facilitate the just energy transition over the next couple of decades.[248] The first phase is from 2023 to 2030, and it is stabilisation in energy supply, which is to be achieved by improved efficiency of the Eskom fleet, more dispatchable energy options like gas, and life extensions of some coal plants for steady power.[249] The second phase is from 2031 to 2050, and it focuses on sustainability for the longer term, which is important in building up a renewable-energy base and supplements, including nuclear options, such as small modular reactors.[250] This dual approach reveals the government's efforts to manage immediate energy needs while keeping sight of broader, low-carbon goals, although the extended reliance on coal complicates alignment with global climate targets.[251] The 2023 IRP represents South Africa's efforts to meet energy demands and economic stability while laying out steps for a greener, more sustainable future in the long term.

3.4.3 The White Paper on Renewable Energy (2003)

The 2003 White Paper on Renewable Energy (White Paper) represented a pivotal moment in South Africa's energy policy, marking the government's recognition of the necessity for a diversified energy-supply system that would reduce dependence on fossil fuels like coal.[252] The White Paper set ambitious targets, aiming for 10 000 gigawatt hours of renewable energy by 2013.[253] Therefore, this was ambitious for a country so reliant on coal, representing a commitment towards a cleaner energy future.

Despite these strengths, the White Paper had implementation challenges.[254] No implementation mechanisms were proposed to translate these intentions into action.[255] Specific timelines, funding strategies, and regulatory frameworks that would have enhanced this policy's effectiveness were lacking.[256] It also had some bias towards energy-generation issues, mainly technical, whereas it virtually ignored the socio-

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248 Department of Mineral Resources and Energy *Integrated Resource Plan 2023* 7.
249 Department of Mineral Resources and Energy *Integrated Resource Plan 2023* 18-21.
250 Department of Mineral Resources and Energy *Integrated Resource Plan 2023* 24-26.
251 Department of Mineral Resources and Energy *Integrated Resource Plan 2023* 1-26.
252 Department of Minerals and Energy *White Paper on Renewable Energy 2003* 1.
253 Department of Minerals and Energy *White Paper on Renewable Energy 2003* 25.
254 Department of Minerals and Energy *White Paper on Renewable Energy 2003* 9.
255 Department of Minerals and Energy *White Paper on Renewable Energy 2003* 9.
256 Department of Minerals and Energy *White Paper on Renewable Energy 2003* 9-10.

economic aspects of the transition.[257] This oversight is highly important, inasmuch as it provided no guidance on how renewable energy was to be included for poor, marginalised communities or how it would address job losses in coal-dependent sectors.[258] However, while the 2003 White Paper on Renewable Energy created the foundation for later initiatives on renewable energy, its narrow scope and lack of measures aimed at its implementation underpin the need for broader policies that consider the socio-economic dimensions of the energy transition.

3.4.4 The National Climate Change Response White Paper (2011)

In contrast, the 2011 National Climate Change Response White Paper (NCCRWP) is a significant development of energy and climate policy in South Africa.[259] It builds from principles laid down in the 2003 White Paper by incorporating a more integrated approach across both mitigation and adaptation responses to climate change.[260] The NCCRWP took into consideration a just transition because South Africa's reliance on coal perpetuates socio-economic injustices.[261] The policy underlines the critical balance between the reduction of greenhouse gas emissions and ensuring social equity. The NCCRWP facilitates the just energy transition by ensuring full inclusivity of vulnerable communities during the just energy transition, by considering their needs and voices.[262]

However, despite these many strengths, the White Paper faces a raft of challenges, such as implementation.[263] These include institutional capacity issues, financial constraints, and resistance from the industries that stand to lose significantly because of coal dependence.[264] The balancing between economic growth and environmental sustainability is rather challenging.[265] The document, in essence, inspires the growth of green jobs while at the same time jeopardising many jobs in more conventional sources of energy, which is a socio-economic issue that needs to be dealt with.[266] Therefore, the 2011 NCCRWP

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257 Department of Minerals and Energy *White Paper on Renewable Energy 2003* 9-10.
258 Department of Minerals and Energy *White Paper on Renewable Energy 2003* 9-10.
259 Government of the Republic of South Africa *National Climate Change Response White Paper 2011* 9.
260 Winkler 2012 *Climate and Development* 194-212; Edkins, Marquard and Winkler 2010 *Energy policy and climate change mitigation in South Africa* 45-67.
261 Government of the Republic of South Africa *National Climate Change Response White Paper 2011* 30.
262 Government of the Republic of South Africa *National Climate Change Response White Paper 2011* 30.
263 Government of the Republic of South Africa *National Climate Change Response White Paper 2011* 45.
264 Government of the Republic of South Africa *National Climate Change Response White Paper 2011* 45.
265 Government of the Republic of South Africa *National Climate Change Response White Paper 2011* 45.
266 Government of the Republic of South Africa *National Climate Change Response White Paper 2011* 34.

expands on principles laid down by the foundational 2003 White Paper, setting a sound framework in place for the pursuit of a just energy transition.

3.4.5 National Development Plan

The National Development Plan (NDP) 2030 was adopted in 2012. It is South Africa's long-term socio-economic development strategy, which the country will pursue until 2030.[267] The NDP is key in the just energy transition since it incorporates energy policy into broader developmental imperatives, such as poverty alleviation, reduction in inequalities, and promotion of inclusive economic growth.[268] The NDP's main priorities include the transition to a low-carbon economy, well aligned with the National Climate Change Response White Paper goals.[269] In addition, the question of renewable-energy capacity expansion is considered critical in the NDP, through which South African economic growth is separated from the carbon-intensive energy base towards the advancement of environmental sustainability and socio-economic justice.[270]

The NDP realises that going into the low-carbon economy is not only an environmental imperative but also a tool for correcting historical inequalities within the country.[271] It prioritizes job creation, skills development, and economic inclusivity to ensure that the benefits of the energy transition are shared equitably with poor communities.[272] Moreover, the NDP recognises that energy security is one of the key enablers in the development strategy of South Africa. It also acknowledges that a secure, efficient, and cost-effective energy supply is imperative to realising sustainable economic growth.[273] However, similar to the White Paper, there are also significant implementation challenges in the NDP on issues of financial constraints, a lack of political will, and resistance from industries reliant on fossil fuels.[274] Overcoming these challenges will be important in making the energy transition of South Africa just and sustainable to realise the vision set by the NDP.

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267 National Planning Commission *National Development Plan 2030* 1.
268 National Planning Commission *National Development Plan 2030* 12-22.
269 National Planning Commission *National Development Plan 2030* 24-33.
270 National Planning Commission *National Development Plan 2030* 12-22.
271 National Planning Commission *National Development Plan 2030* 33-48.
272 National Planning Commission *National Development Plan 2030* 24-27.
273 National Planning Commission *National Development Plan 2030* 33-48.
274 National Planning Commission *National Development Plan 2030* 22-48.

3.4.6 Just Transition Framework

The Just Transition Framework is a vital policy developed by the Presidential Climate Commission (PCC) at its Sixth Meeting held on the 27th of May 2022, following months of research and intense consultations with various social partners and communities across the country.[275] This framework is meant to enable the just energy transition of South Africa to a low-carbon economy.[276] It focuses on responding to the socio-economic impacts of the just energy transition, on communities reliant on the coal mines, especially those impacts that will affect coal mine workers, through reskilling and upskilling, and strengthening social protection mechanisms for those workers negatively affected.[277] The Just Transition Framework strikes a balance between environmental objectives and social equity aimed at a fair distribution of benefits arising from the transition, with a focus on job protection and opening economic opportunities in the rising green economy.[278]

Inclusivity that advances local economic development within the framework is of paramount importance within the Just Energy Transition Framework. The framework pushes for participatory decision-making by the government, business, labour, and civil society to take place as far as local economic development is concerned.[279] This is further emphasised within the framework by stating that transition benefits, such as improved air quality, job creation, and energy access, should flow to the poorest and most vulnerable first. The framework portrays a just energy transition as an instrument of social upliftment and a way of redressing historical inequalities.[280] The success of this framework will either take place or not, depending upon addressing a few challenges:

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275 Government of South Africa 2022 https://www.gov.za/news/media-statements/climate-commission-government%E2%80%99s-commitment-transition-and-calls-integrated.

276 Presidential Climate Commission 2022 https://pccommissionflow.imgix.net/uploads/images/A-Just-Transition-Framework-for-South-Africa-2022.pdf.

277 Presidential Climate Commission 2022 https://pccommissionflow.imgix.net/uploads/images/A-Just-Transition-Framework-for-South-Africa-2022.pdf.

278 Presidential Climate Commission 2022 https://pccommissionflow.imgix.net/uploads/images/A-Just-Transition-Framework-for-South-Africa-2022.pdf.

279 Presidential Climate Commission 2022 https://pccommissionflow.imgix.net/uploads/images/A-Just-Transition-Framework-for-South-Africa-2022.pdf.

280 Presidential Climate Commission 2022 https://pccommissionflow.imgix.net/uploads/images/A-Just-Transition-Framework-for-South-Africa-2022.pdf.

financial constraints, institutional resistance, and the risks associated with the shift away from a carbon-intensive economy.[281]

3.5 Analysis of Policy Implementation

3.5.1 Renewable-Energy Expansion

South Africa, in its attempt to achieve a just energy transition, reached a milestone when the 2023 IRP was introduced.[282] The 2023 IRP sets South Africa's targets to meet energy demands and economic stability while laying out steps for a greener, more sustainable future in the long term.[283] Despite this progress, the major development of renewable-energy sources in South Africa faces several challenges.[284] Financial barriers, largely driven by the big capital outlays for most large-scale solar and wind projects, persist.[285] On top of these economic issues are regulatory challenges, such as delays in project approval and grid connection problems.[286] Complexities around land rights and the upgrading of modern grid infrastructure also make it difficult to scale up renewable-energy projects rapidly.[287] The dependence on coal has traditionally been part of the socio-economic identity of the country; hence, opposition from the regions and sectors reliant on coal is strong.[288]

Therefore, South Africa needs to enhance its policy frameworks. Streamlining the regulatory processes could lead to more investments in renewable energy.[289] Improving financial incentives, the simplification of procedures concerning land acquisition, and upgrading the grid infrastructure are important in making sure that there is a realisation of efficient and deployed renewable-energy projects at scale.[290] Public to private partnerships and community engagement are important means for building local support

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281 Presidential Climate Commission 2022 https://pccommissionflow.imgix.net/uploads/images/A-Just-Transition-Framework-for-South-Africa-2022.pdf.
282 Baruah and Enweremadu 2019 *Renewable and Sustainable Energy Reviews* 328-341.
283 Department of Mineral Resources and Energy *Integrated Resource Plan 2023* 1-26.
284 Fouché and Brent 2019 *Sustainability* 755.
285 Murombo 2016 *Journal of World Energy Law & Business* 142-165.
286 Murombo 2016 *Journal of World Energy Law & Business* 142-165.
287 Murombo 2016 *Journal of World Energy Law & Business* 142-165.
288 Department of Mineral Resources and Energy *South African Energy Price Report 2023* 9.
289 Murombo 2016 *Journal of World Energy Law & Business* 142-165.
290 Murombo 2016 *Journal of World Energy Law &* Business 142-165.

and ensuring that the transition to renewable energy is inclusive and will be equitably distributed.

3.5.2 Reduction of Carbon Emissions

It is within this context that the policies of South Africa, as outlined in the National Climate Change Response White Paper and multiple sectoral approaches to energy and transport, are centred on the reduction of carbon emissions.[291] The country relies on coal for electricity generation; hence, it stands out as a substantial carbon emitter on the continent, a huge factor in meeting the international climate commitments under the Paris Agreement.[292] Energy efficiency, the transition to low-carbon sources of energy, and the reduction of emissions are all emphasised in the NCCRWP across various sectors.[293]

While South Africa has made efforts to promote renewable energy and improve energy efficiency, the actual reduction of general carbon emissions has been slow. Coal remains the dominating fuel in the energy sector, and coal-fired power stations, such as Eskom's Medupi and Kusile, are certainly among the mainstays of the country's carbon footprint.[294] The efforts to move away from coal have been hampered by economic and social considerations, most especially in regions dependent on coal.[295]

3.5.3 Socio-Economic Justice

In South Africa, socio-economic justice is one of the most important concerns in the facilitation of the just energy transition. A range of South Africa's energy policies, such as the 2023 IRP, emphasise job creation, energy access, and rural development.[296] The government of South Africa has tried to integrate the local community into the renewable-energy supply chain, particularly through the creation of jobs in both the construction and operating functions at renewable-energy plants.[297] In addition, decentralised energy

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291 Government of the Republic of South Africa *National Climate Change Response White Paper 2011* 30.
292 Department of Mineral Resources and Energy *South African Energy Price Report 2023* 9.
293 Department of Minerals and Energy *White Paper on Renewable Energy* 9-10.
294 Department of Mineral Resources and Energy *South African Energy Price Report 2023* 9.
295 Government of the Republic of South Africa *National Climate Change Response White Paper* 30.
296 Presidential Climate Commission 2022 https://pccommissionflow.imgix.net/uploads/images/A-Just-Transition-Framework-for-South-Africa-2022.pdf.
297 Presidential Climate Commission 2022 https://pccommissionflow.imgix.net/uploads/images/A-Just-Transition-Framework-for-South-Africa-2022.pdf.

access solutions like solar mini-grids are deployed to enhance energy access in these resource-constrained areas.[298]

While designing such policies, their implementation has not ensured equity in the distribution of outcomes. The socio-economic challenges faced by communities dependent upon coal are gigantic, as the country is trying to shift towards cleaner energy; job losses in the coal industry are a vital issue to be considered.[299] The renewable-energy sector can promise new jobs in prospect, yet there is inequality in the distribution of those jobs, at least in rural areas.[300] The high cost of renewable-energy technologies and limited access to finance are also financial barriers for low-income households and small businesses.[301] By constantly addressing socio-economic challenges, South Africa is getting closer to achieving an inclusive just energy transition that leaves no one behind.

3.6 Challenges and Opportunities

For South Africa, the just energy transition has not been without challenges and opportunities.[302] The country, through its legal and policy frameworks, set a clear foundation for advancing a just energy transition, but numerous obstacles seriously hinder progress. Challenges come with opportunities for innovation, investment, and further development of more inclusive and sustainable energy systems.[303] This section discusses some of the critical challenges and possible opportunities in the facilitation of a just energy transition in South Africa.

3.6.1 Institutional and Regulatory Barriers

Some of the key imminent challenges to the just energy transition in South Africa are institutional and regulatory.[304] These result from incomprehensive policy implementation, passing on some mandates within the different government departments, and

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298 Presidential Climate Commission 2022 https://pccommissionflow.imgix.net/uploads/images/A-Just-Transition-Framework-for-South-Africa-2022.pdf.

299 Department of Mineral Resources and Energy *South African Energy Price Report 2023* 9.

300 Mirzania, Gordon, Balta-Ozkan, Sayan and Marais 2023 *Energy Research & Social Science* 103122.

301 Mirzania, Gordon, Balta-Ozkan, Sayan and Marais 2023 *Energy Research & Social Science* 103122.

302 Abram, Atkins, Dietzel, Jenkins, Kiamba, Kirshner, Kreienkamp, Parkhill, Pegram and Santos Ayllón 2022 *Climate Policy* 1033-1049.

303 Nwaiwu 2021 *Energy, Sustainability and Society* 48.

304 Hanto, Schroth, Krawielicki, Oei and Burton 2022 *Energy for Sustainable Development* 164-178.

uncertainties in regulation that prevent investments.[305] These are further worsened by the slow pace at which these regulatory bodies are being reformed, coupled with extended processes for project approvals, project adverse impacts on project rollouts, and investor confidence.[306] The legacy of a centralised coal-dominated energy sector itself provides many more regulatory challenges.[307] Decentralised renewable-energy systems, such as rooftop solar and community-based energy projects, have to undergo substantial policy changes to adapt the existing regulatory framework.[308]

However, these challenges also concurrently provide a very good opportunity for regulatory innovation, such as the simplification of processes for approval, clarification of regulatory functions and roles, and flexibility and adaptability of regulatory environments.[309] All these facilitate investment in and the accelerated deployment of renewable projects.[310] Logically developed, transparent, predictable sets of regulatory frameworks that would give priority to integrating renewable energy into the market can give certain investment and thereby contribute towards developing a more robust and diversified energy sector.[311]

3.6.2 Economic and Financial Constraints

Some of the huge challenges of the energy transition in South Africa relate to economic and financial constraints.[312] Generally, high initial costs associated with renewable-energy projects combined with a lack of access to affordable financing have discouraged large-scale adoptions of clean-energy technologies.[313] High levels of public debt in the country and budgetary constraints do hinder the government in the financing of just energy transition initiatives.[314]

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305 Hanto, Schroth, Krawielicki, Oei and Burton 2022 *Energy for Sustainable Development* 164-178.
306 Hanto, Schroth, Krawielicki, Oei and Burton 2022 *Energy for Sustainable Development* 164-178.
307 Cock 2021 *Transformation: Critical Perspectives on Southern Africa* 1-25.
308 Gawusu and Ahmed 2024 *Energy Regulation in Africa: Dynamics, Challenges, and Opportunities* 25.
309 Chipangamate and Nwaila 2023 *Energy Geoscience* 100257.
310 Gawusu and Ahmed 2024 *Energy Regulation in Africa: Dynamics, Challenges, and Opportunities* 25.
311 Gawusu and Ahmed 2024 *Energy Regulation in Africa: Dynamics, Challenges, and Opportunities* 25.
312 O'Connell 2024 *Energy Research & Social Science* 103478.
313 O'Connell 2024 Energy *Research & Social Science* 103478.
314 O'Connell 2024 *Energy Research & Social Science* 103478.

However, despite these hosts of limitations, the transition also presents economic opportunities.[315] An expansion in the renewable-energy industry will lead to more investment, job creation, and energy security.[316] The manufacturing of local technologies for renewable energy, such as wind turbines and solar panels, may create industrial growth and new options in various economic ways.[317] While these indeed are opportunities that can be used, there is an urgent need to unleash creative financing mechanisms through green bonds, climate finance, and blended models combining public and private capital.[318] Access to finance for small and medium-sized enterprises in the renewable-energy sector can trigger domestic supply chains and entrepreneurship.[319] The mobilisation of international climate finance and the development of partnerships with multilateral development banks can advance the acceleration of the just energy transition.[320]

3.6.3 Social and Political Considerations

A just energy transition is multidimensional, socially and politically, and it presents challenges and opportunities.[321] It requires strong political leadership to be made simultaneously open to a variety of multifaceted stakeholder considerations, not least from powerful coal and fossil fuel concerns.[322] Politicians and policymakers are often challenged to weigh short-term economic imperatives, such as job security in coal-dependent regions, against the longer-term goals of sustainability.[323] Other stakeholders that may be socially affected by this energy transition are workers in the fossil fuel industries, the local community, and vulnerable communities. As underlined by the Just

315 Swilling, Nygaard, Kruger, Wlokas, Jhetam, Davies, Jacob, Morris, Robbins, Funder and Hansen 2022 *Energy Research & Social Science* 102567.
316 Swilling, Nygaard, Kruger, Wlokas, Jhetam, Davies, Jacob, Morris, Robbins, Funder and Hansen 2022 *Energy Research & Social Science* 102567.
317 Bohlmann, Bohlmann, Chitiga-Mabugu and Inglesi-Lotz 2023 *Sustainability* 10854.
318 World Bank 2015 https://documents.worldbank.org/.
319 African Development Bank Group 2020 https://www.afdb.org/en/documents/catalyzing-climate-finance-lessons-learned-african-development-bank.
320 Climate Policy Initiative 2021 https://www.climatepolicyinitiative.org/.
321 Gürtler 2023 *Energy Research & Social Science* 103277.
322 Gürtler 2023 *Energy Research & Social Science* 103277.
323 Harrahill and Douglas 2019 *Energy Policy* 110990.

Transition Framework, no one should be left behind, but this requires serious investment in education, reskilling, and other forms of social-protection measures.[324]

3.6.4 Technological Innovation and Capacity Building

In South Africa, a just energy transition indicates the challenge and an opportunity for technological innovation.[325] Modern energy technologies, such as smart grids, energy storage systems, and digital energy management solutions, are of paramount importance for the integration of renewable sources of energy into the national grid, whose higher cost and lack of necessary skills domestically might delay their deployment.[326] The promotion of the growth of local technological solutions and building capacity in renewable-energy technologies creates economies of scale and brings costs down, hence making the country competitive in the global energy market.[327]

Capacity building is of equal importance in ensuring that the just energy transition is appropriately realised.[328] Technical knowledge generation regarding the design, installation, and maintenance of renewable systems will be in very high demand with growth within the renewable sector.[329] This can be complemented by an increase in vocational training, which ensures an incentive to pursue higher learning in the fields of science, technology, engineering, and mathematics, with special training for workers currently employed in fossil-fuel industries so as to maintain a competent labour force with the stated intent of the transition to alternative energy.[330]

3.6.5 Environmental and Climate Resilience

Environmental and climate resilience issues relating to the just energy transition are complex and interrelated between challenges and opportunities.[331] Transitioning to renewable energy means a reduction in GHG emissions and, therefore, impacts

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324 Presidential Climate Commission 2022 https://pccommissionflow.imgix.net/uploads/images/A-Just-Transition-Framework-for-South-Africa-2022.pdf.
325 Xaba 2023 *Energy and Environment* 478.
326 Xaba 2023 *Energy and Environment* 478.
327 Mutezo and Mulopo 2021 *Renewable and Sustainable Energy Reviews* 110609.
328 Sovacool, Hess and Cantoni 2021 *Energy Research & Social Science* 102027.
329 Sovacool, Hess and Cantoni 2021 *Energy Research & Social Science* 102027.
330 Sovacool, Hess and Cantoni 2021 *Energy Research & Social Science* 102027.
331 Sarkodie, Adams and Leirvik 2020 *Journal of Cleaner Production* 121262.

associated with climate change.[332] However, the development of renewable-energy projects should account for environmental impacts, such as land-use change, biodiversity loss, and water use.[333]

A holistic approach to energy planning presents opportunities to incorporate environmental considerations at every stage in the development of projects.[334] Low environmental impact and renewable-energy-project promotion would include low-impact hydro and offshore wind that allow the transition to sustainability.[335] This will also make some very powerful co-benefits that come with renewable energy, improved air quality, and the reduction of natural environment degradation, available for meeting big-ticket environmental and public-health objectives.[336] The just energy transition to a resilient climate will make the country's energy system more sustainable in the long run.[337] The measures include decentralised energy systems and flexibility in grids that will make the energy sector resilient against different types of shocks and stresses caused by the climate.[338]

3.7 Conclusion

In South Africa, the pursuit of a just energy transition is supported by the Constitution and legislative frameworks that seek a balance between environmental sustainability and socio-economic justice. The Constitution of South Africa creates a strong basis for environmental protection and socio-economic rights, which is an important element in the facilitation of the country's just energy transition. The regulation of energy resources to limit environmental impacts is guided by legal and policy frameworks like the Climate Change Act of 2024, the ERA of 2024, and the 2023 IRP. These frameworks, as discussed in the chapter, provide critical guidelines for sustainable development, environmental protection, and public participation, which are central to a just energy transition. This

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332 Gürsan and de Gooyert 2021 *Renewable and Sustainable Energy Reviews* 110552.
333 Gürsan and de Gooyert 2021 *Renewable and Sustainable Energy Reviews* 110552.
334 Dagoumas and Koltsaklis 2019 *Applied Energy* 1573-1587.
335 Yihdego, Salem and Pudza 2017 *Journal of Sustainable Energy Engineering* 281-306.
336 Yihdego, Salem and Pudza 2017 *Journal of Sustainable Energy Engineering* 281-306.
337 Bohlmann, Bohlmann, Chitiga-Mabugu and Inglesi-Lotz 2023 *Sustainability* 10854.
338 Bohlmann, Bohlmann, Chitiga-Mabugu and Inglesi-Lotz 2023 *Sustainability* 10854.

speaks to the issue of the inclusivity needed for the transition to be just and responsive to socio-economic realities.

The chapter also identified challenges that may create a bottleneck for the timely implementation of renewable-energy projects. For this to be at a reasonable level, legislation that focuses on reforms aimed at simplifying regulatory processes is very necessary in accelerating the movement of South Africa towards cleaner energy sources. The variation of energy sources, greater independence from the use of coal, and energy efficiency are further supported by the 2023 IRP.

CHAPTER 4: LEGAL AND POLICY FRAMEWORKS FOR A JUST ENERGY TRANSITION IN ZIMBABWE

4.1 Introduction

Globally, a just energy transition plays a critical role in keeping the temperature rise to not more than 1.5 degrees Celsius in the attempts to mitigate climate change.[339] A rapid transition to clean, renewable, and sustainable sources of energy, such as hydro and solar, is important to mitigate climate change.[340] The just energy transition is crucial for Zimbabwe in the global efforts to mitigate climate change.[341] Zimbabwe is a signatory to the international commitments discussed in Chapter 2, such as the UNFCCC and the Paris Agreement, which commit countries to mitigate climate change.

Zimbabwe, like many other developing countries, faces the dual challenge of addressing energy poverty while ensuring an equitable transition from fossil fuels.[342] A just energy transition therefore becomes an important measure rather in this context, and it should target not only the reduction of GHG emissions but also socio-economic justice, equity, and inclusiveness.[343] For Zimbabwe, this would mean that, during the transitional process, all stakeholders, most importantly the marginalised community, are taken into consideration, while their rights are protected.

Therefore, this chapter will give a detailed analysis of the legal and policy frameworks that facilitate a just energy transition in Zimbabwe. The chapter commences with an analysis of the constitutional framework under Section 4.2 below, which focuses on rights relating to environmental protection, socio-economic justice, and public participation. Section 4.3 of the chapter will review main or key legislation, like the Environmental Management Act, for its enabling or inhibiting effects on a just transition. Section 4.4 looks at major policies, such as the National Renewable Energy Policy. Section 4.5 looks at the implementation of the identified policies, highlighting strengths and gaps. Section

339 Barnard 2014 *Journal of Energy in Southern Africa* 31.
340 See Chapter 1 for a detailed discussion of Zimbabwe's energy mix.
341 Mushayavanhu *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 38.
342 Muyambwa *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 91.
343 See Chapter 1 and Chapter 2 for a detailed discussion of the concept of a just energy transition.

4.6 highlights the challenges and opportunities that Zimbabwe faces for a just energy transition path.

4.2 Constitutional Foundations

The Constitution of Zimbabwe provides an important foundation for the country's approach towards a just energy transition.[344] The constitution has provisions that offer guidelines for policy and legislative actions to ensure that the energy transition aligns with fundamental human rights and national development goals.[345] This section deals with the constitutional provisions that underpin the just energy transition, considering rights to the environment, socio-economic rights, equality, and public participation.[346]

4.2.1 Environmental Rights

The right to a healthy environment is protected under Section 73 of the Constitution of Zimbabwe of 2013. Every person has the right to an environment that is not detrimental to their health or well-being.[347] Importantly, the Constitution of Zimbabwe was amended and so, is the environmental right provision which replicates section 24 of the Constitution of South Africa. This right imposes on the state duties to take reasonable legislative and other measures necessary to prevent pollution and promote conservation, together with a requirement for ecologically sustainable development and use of natural resources.[348] Section 73, therefore, constitutes the legal framework for environmental governance in Zimbabwe,[349] entrenching the concept of sustainability in national policymaking, especially in the energy sector. Section 73 is consistent with international commitments, such as the Paris Agreement, which emphasises the need for policies that protect the environment.[350] This right commits the government of Zimbabwe to developing renewable-energy sources and decreasing the dependence on fossil fuels.[351]

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344 Chigumira, Mbengo, Chitopo and Chigumira 2019 *The Sustainability Ethic in the Management of the Physical, Infrastructural and Natural Resources of Zimbabwe* 467.
345 Chakunda 2023 *Handbook of Public Management in Africa* 187-208.
346 See the discussion that follows below.
347 Section 73 of the *Constitution of the Republic of Zimbabwe of 2013.*
348 Section 73 of the *Constitution of the Republic of Zimbabwe of 2013.*
349 Madebwe 2015 *African Human Rights Law Journal* 121.
350 Article 4(1) and Article 6(8) of the Paris Agreement, 2015.
351 Madebwe 2015 *African Human Rights Law Journal* 121.

4.2.2 Socio-Economic Rights

Section 77 of the Constitution of Zimbabwe enshrines socio-economic rights, specifically the right to adequate food and clean, safe water, and Section 75, concerning the right to health care services.[352] Access to energy is connected to these rights, given the function of reliable energy supply in agricultural productivity, water distribution, and health provision.[353] The existing energy landscape in Zimbabwe largely depends on fossil-fuel energies, which goes along with environmental degradation, together with health concerns, especially in communities living next to coal mines and power plants.[354] A just energy transition, therefore, must address these injustices through the advocacy of equal access by all Zimbabweans to clean, affordable, and sustainable energy sources, with special consideration for vulnerable groups.[355] The Constitution further calls for the state to take reasonable steps towards the progressive realisation of such socio-economic rights.[356] This calls for a structural transformation of the energy sector that is inclusive and makes equity a priority, as part of the transition, so that the communities that are already suffering get further dislocated.[357]

4.2.3 Equality and Non-Discrimination Rights

Section 56 of the Constitution of Zimbabwe enshrines the right to equality and non-discrimination. This right is central to the just energy transition, especially the need for involvement at all levels of society concerning energy planning and policy-making.[358] Above all, fair sharing of the resulting benefits helps in addressing historical inequalities and structural disparities that have served to impede rural women, poor households, and other actors from accessing energy services.[359] An example is energy poverty, which hits harder on rural women, due to their responsibility to collect traditional biomass fuels. This

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352 Section 75 and 77 of the *Constitution of the Republic of Zimbabwe of 2013.*

353 Davidson and Mwakasonda 2004 *Electricity access for the poor: a study of South Africa and Zimbabwe. Energy for Sustainable Development* 26-40.

354 Chigumira, Mbengo, Chitopo and Chigumira 2019 *The Sustainability Ethic in the Management of the Physical, Infrastructural and Natural Resources of Zimbabwe* 467.

355 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 37.

356 Chigudu 2020 *African Journal of Governance and Development* 55.

357 Chigudu 2020 *African Journal of Governance and Development* 55.

358 Healy and Barry 2017 *Energy policy* 451-459.

359 Finley-Brook and Holloman 2016 *International journal of environmental research and public health* 926.

is commonly a very time-consuming and deteriorating job in health standards.[360] A just energy transition should consider the many needs of women and the various contributions and full participation of women in the energy sector. This can be done through targeted inclusion, strategies related to capacity-building programmes, inclusive policy dialogues, or preferential support for community-led renewable-energy projects.[361] Embedding equality and non-discrimination into the energy-transition framework would make the energy landscape more inclusive and just, leaving no one behind in Zimbabwe.[362]

4.2.4 Public Participation and Access to Information

The Constitution of Zimbabwe, through Sections 13 and 62, enforces rights to public participation and access to information. These rights ensure good governance, transparency, accountability, and inclusiveness of government processes.[363] Public participation ensures that the voices of all stakeholders, communities, civil society, and the private sector are heard concerning the formulation and implementation of energy policy.[364] Public involvement will act as a major driver for community ownership and the acceptance of renewable-energy projects throughout the transition process.[365] Public participation in both planning and implementation aspects makes the projects more realistic to sustainability, as this will make sure that the project addresses their needs and their conditions.[366]

4.3 Key Legislation

The legal framework for the just energy transition in Zimbabwe is guided by various pieces of legislation regulating the development and management of the energy sector.[367] Some major legislative instruments in guiding the energy sector of Zimbabwe are briefly discussed in the section below, focusing on their role in facilitating a just energy transition.

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360 Chigwada and Chikowore 2021 *African Journal of Environmental Science and Technology* 1-12.
361 Slayi, Zhou, Thamaga and Nyambo 2024 *The Role of Social Inclusion in Restoring Communal Rangelands in Southern Africa: A Systematic Review of Approaches, Challenges, and Outcomes* 1521.
362 Mapuva 2020 *Journal of Energy in Southern Africa* 19-27.
363 Sections 13 and 62 of the Constitution of the Republic of Zimbabwe of 2013.
364 Sections 13 and 62 of the Constitution of the Republic of Zimbabwe of 2013.
365 Mushosho and Qutieshat 2024 *International Journal of Business Continuity and Risk Management* 77.
366 Carley and Konisky 2020 *Nature Energy* 569-577.
367 See the discussion that follows below.

4.3.1 Environmental Management Act

The Environmental Management Act (EMA) serves as Zimbabwe's main legal framework for protecting the environment and managing natural resources sustainably.[368] Through the EMA, the Environmental Management Agency was established to enforce environmental laws, conduct environmental impact assessments (EIAs), and educate the public about environmental issues.[369] Section 97 of the EMA provides that a project that is likely to have an impact on the environment shall not proceed without first undertaking an environmental impact assessment.[370] This section enumerates certain activities needing EIAs, including those resulting in significant emissions, waste discharges, or disturbance of ecosystems.[371] By enumerating these activities, section 97 secures that high-hazard advances cannot be made without taking a proper look at their environmental and social impact, which is central to a just energy transition.

The EMA emphasises that environmental management shall focus on the needs of the people, ensure the involvement and participation of all interested and affected parties, and improve public awareness and education in terms of environmental matters.[372] Furthermore, EIAs in energy projects would be important in discovering how human rights are likely to be violated, as well as in involving affected stakeholders in the process of preventing and providing redress for likely negative impacts on the environment and communities' rights, central to a just energy transition.[373]

4.3.2 The Energy Regulatory Authority Act

The Energy Regulatory Authority Act facilitates the just energy transition in Zimbabwe through the establishment of the Zimbabwe Energy Regulatory Authority (ZERA).[374] The ZERA is responsible for regulating the acquisition, production, transportation, transmission, distribution, importation, and export of energy derived from any energy source, which is important to achieve a just energy transition.[375] The ZERA was mandated

368 Environmental Management Act of 2002.
369 Sections 9 and 10 of the Environmental Management Act of 2002.
370 Section 97 of the Environmental Management Act of 2002.
371 Section 97 of the Environmental Management Act of 2002.
372 Section 4 of the Environmental Management Act of 2002.
373 Murombo 2024 *Domestic and Regional Environmental Laws and Policies in Africa* 69-85.
374 Energy Regulatory Authority Act of 2011.
375 Sections 4 and 6 of Energy Regulatory Authority Act of 2011.

to guide and develop these renewable sources of energy to maximise access to energy by all consumers in an efficient, affordable, and environmentally sustainable manner.[376]

On the other hand, the ZERA is given a mandate to assess and advise the relevant minister on the environmental impacts of projects at the pre-licensing stage, to have sustainability at the fore of energy policy.[377] This broad mandate puts the ZERA at the centre of facilitating the realisation of a just energy transition in Zimbabwe. It also empowers the authority to withdraw licences for those who do not comply with its stipulations, hence further enforcing accountability within the energy sector.[378] Therefore, it can contribute much to an equitable energy future by harnessing its regulatory power wherein the transition is across all groupings of society.

4.3.3 Electricity Act

The Electricity Act constitutes the main piece of legislation for the licensing, generation, distribution, and supply of electricity in Zimbabwe.[379] This Act plays an important role in facilitating the engagement of independent power producers, which is very important for the diversification of energy sources and increasing the share of renewable energy in the national grid.[380] However, the Act is notably limited in that it lacks the specific provisions which can be said to directly incentivise the production, transmission and distribution of clean and sustainable energy.[381] This has deprived the legal framework of full support for the just energy transition, purposed to enhance energy security by facilitating a shift towards cleaner alternatives of energy.

Any amendment to the Electricity Act to make its spirit and purport in tune with the goals of a just energy transition must explicitly consider amendments aimed at encouraging the development and integration of renewable-energy technologies.[382] Guidelines for investment in sustainable energy projects, among others, besides decentralised energy

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376 Sections 4, 6, 10 of Energy Regulatory Authority Act of 2011.
377 Sections 4, 7 and 9 of Energy Regulatory Authority Act of 2011.
378 Sections 4, 7 and 8 of Energy Regulatory Authority Act of 2011.
379 Electricity Act of 2002.
380 Section 3 and 4 of the Electricity Act of 2002.
381 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 54.
382 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 54.

systems, such as microgrids and off-grid, are new matters related to which specific instructions may be issued.[383] Besides, fixing a more concrete target for renewable-energy production and reporting periodically will make it accountable and transparent. Therefore, closing these gaps would have the amended Electricity Act assure appropriate regulatory climes for environmental sustainability and social equity, hence playing a key role in driving a just energy transition for Zimbabwe.

4.3.4 Rural Electrification Fund Act

The Rural Electrification Fund Act (REFA) further addresses the principles of a just energy transition by creating a specific fund that advances rural electrification interests.[384] Rural communities bear the brunt of energy transitions in that they rarely benefit from the energy produced from their resources.[385] This energy is largely extracted and exported, leaving the communities with no share of the electricity produced from mining transitional minerals and renewable projects.[386] In this regard, the REFA ensures that rural areas have a way of accessing and benefitting from the renewable energy produced in their areas.

The REFA also aims to build isolated mini-hydroelectric, solar, and wind generators in the countryside, including water collection, diversion, or storage to generate electricity sustainably.[387] By focusing on rural electrification with clean, renewable energy, the REFA continues to drive climate justice forward while supporting a just energy transition that empowers rural communities to equitably benefit from the energy resources that are often extracted from their areas.

4.3.5 Draft Climate Change Bill

At present, Zimbabwe does not have specific legislation on climate change, something that will change with the proposed Draft Climate Change Bill (the Bill), which provides for clear objectives related to climate justice and a just energy transition.[388] The Bill is intended to strike a balance between economic and social development while protecting

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383 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 54.
384 Rural Electrification Fund Act of 2002.
385 Section 3, 4, 5 and 6 of the Rural Electrification Fund Act of 2002.
386 Section 4 of the Rural Electrification Fund Act of 2002.
387 Section 5 and 9 of the Rural Electrification Fund Act of 2002.
388 Section 2, 4 and 7 of the Zimbabwe Draft Climate Change Bill.

the climate system, in order to make real the right to an adequate living standard for all, and to guarantee an equitable distribution of benefits.[389] Therefore, this showcases the CBDR principle, taking in human rights in the context of climate change as well, so as to ensure that advantages and liabilities related to the transition are equitably shared.[390]

The Draft Bill provides for the efficient management of climate change impacts, social resilience, and emergency response strategies that take its commitment to climate justice even further.[391] Notably, it calls for "ensuring a just transition to a low-carbon and climate-resilient society."[392] Guiding principles and values that can be taken from the Bill are augmented with guiding principles from sections of the Constitution and Environmental Management Act on access to information about climate impacts, participation in climate governance and consideration of vulnerable groups when decisions are taken.[393] Overall, it can be noticed that the Draft Climate Change Bill maps out the ambition for incorporating climate justice and just energy transition principles into the Zimbabwean legislative framework.[394]

4.4 Major Policies and Strategies

Several of the national policies and strategies lay the foundation for a transition towards a just and sustainable energy system in Zimbabwe, setting the direction for energy development, climate action, and socio-economic resilience.[395] The section provides a critical analysis of the National Energy Policy 2019, National Renewable Energy Policy 2019, National Climate Change Response Strategy 2014, and National Climate Policy 2017. They are part of the integral frameworks in setting the country's energy landscape, increasing the adoption of renewable energy, reducing the impact of climate change, and making the transition to a clean energy future just and equitable.[396]

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389 Sections 3, 4 and 6 of the Zimbabwe Draft Climate Change Bill.
390 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 50.
391 Sections 8,10 and 11 of the Zimbabwe Draft Climate Change Bill.
392 Sections 2, 4 and 5 of the Zimbabwe Draft Climate Change Bill.
393 Section 4 of the Zimbabwe Draft Climate Change Bill.
394 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 50.
395 Dzvimbo and Zhanda 2020 *Journal of Urban Systems and Innovations for Resilience in Zimbabwe* 203-222.
396 See discussion below.

4.4.1 National Energy Policy

The National Energy Policy (NEP) is targeted at the attainment of the optimum supply and use of energy for socio-economic development in a secure, sustained, and environmentally sustainable manner.[397] The NEP aims to ensure adequate supplies of a mixed source of energy, including conventional sources of energy, such as coal and oil, among others, supplemented by renewable-energy alternatives.[398] It faces difficulties in categorising fossil fuels as safe and sustainable, since they are the leading contributor to GHG emissions and a major driver of climate change.[399] At any rate, it is expected that the NEP will provide an enabling environment for the energy-sector players, while the latter should seize the opportunity for developing and expanding renewable sources of energy.[400]

Furthermore, the NEP is inextricably interlinked with the issues of climate justice, since it underlines the imperatives of the right to sustainable development and right to the equitable entitlement to energy.[401] The NEP advocates principles of transparency and participation by the public in policymaking so that the interests of the poor and vulnerable communities are taken into consideration, whose livelihood is many times severely affected by energy projects without them reaping any trickle effects of development.[402] Renewable energy in the energy mix of Zimbabwe can also play a very vital role in the pursuit of a low-carbon economy and a more equitably distributed energy transition.[403] Therefore, it would be expected that, by prioritising renewable sources, the NEP contributes to environmental sustainability and also offers routes towards meeting broader goals of social equity and justice within the energy sector.

4.4.2 National Renewable Energy Policy

The National Renewable Energy Policy (NREP) marks a government initiative in the effort to meet the long-term energy needs of Zimbabwe sustainably, with much appreciation

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397 Ministry of Energy and Power Development *National Renewable Energy Policy 2019*.
398 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 19-20.
399 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 44-51.
400 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 44-51.
401 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 19-20.
402 *Dhliwayo The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 53.
403 Moyo 2014 *International Journal of African Renaissance Studies* 39-60.

for the rich and varied renewable-energy resources that this country is endowed with, namely solar, hydro, biomass, and geothermal.[404] Anchored on the NREP, will increase the share of renewable energy in the overall energy mix and shall address climate change and the nation's commitment to GHG-emission reduction.[405] This policy explicitly links climate justice to a just energy transition through its vision, principles, goals, and objectives, emphasising the right of all to have access to sustainable energy.[406]

The NREP is a vision to provide access to energy for all by increasing the share of renewables in the country's energy mix.[407] This is also a route towards transitioning the country into a low-carbon economy. The aim of the just energy transition is further enriched by the policy calling for improved access to clean and affordable energy through the development of installed renewable-energy capacity.[408] This vision addresses the following strategies: putting in place a sound institutional and regulatory framework concerning renewable energy; driving electrification off-grid; improving local ownership of renewable-energy projects; and empowering disadvantaged groups, particularly women and youth, through training and other skills-building activities.[409] Therefore, the NREP makes sure that these social groups, in particular, have equal chances to fully exercise their rights and participation in decision-making processes related to renewable-energy production and is progressive concerning an inclusive just energy transition.[410]

4.4.3 National Development Strategy 1

Environmental protection, climate resilience, and natural-resource management remain the enablers in attaining Vision 2030 and SDGs, as stated in the Zimbabwe economic blueprint, the National Development Strategy 1 (NDS1).[411] The NDS1 makes it simple that, without addressing climate change, the country cannot achieve its goals of turning into a prosperous, upper-middle-income society by 2030.[412] The document highlights how

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404 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 19-20.
405 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 21.
406 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 19-20.
407 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 22.
408 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 21.
409 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 49.
410 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 54-55.
411 Republic of Zimbabwe *National Development Strategy 1 2020* 1-81.
412 Republic of Zimbabwe *National Development Strategy 1 2020* 2.

poor communities, women, youth, and children suffer more from the effects of climate change, in a way reminding it of the need for an increase in climate action.[413]

The NDS1 recommends a set of measures that would further enhance the climate-action framework in order to reduce the impact of climate change.[414] These have included, among others, mainstreaming climate-change related financing across all national programmes, fostering climate-smart innovations and facilitating the transfer of technologies, enhancing capacity-building, raising awareness of climate adaptation and mitigation, and promoting low-emission development pathways.[415] The NDS1 also advocates a reduction in GHG emissions and diversification of energy sources.[416] Although the NDS1 does not give certainty to the establishment of a just energy transition and principles of climate justice, there are indirect statements of the economic threats of climate change and strategies that show a way of mitigating those risks.[417] An approach developed in this way recognises an interlink between economic development, environmental sustainability, and social equity.[418]

4.4.4 National Climate Change Response Strategy

The National Climate Change Response Strategy (NCCRS) was designed to guide national measures in Zimbabwe's response to the impacts of climate change effectively.[419] This is because the negative impacts of climate change are felt disproportionately by developing countries like Zimbabwe.[420] The NCCRS envisions a climate-resilient country, with a mission of attaining sustainable development and a green economy, by engaging all the stakeholders on matters regarding this.[421]. It requires a commitment to the core principles

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413 Republic of Zimbabwe *National Development Strategy 1 2020* 189.
414 Republic of Zimbabwe *National Development Strategy 1 2020* 209-210.
415 Republic of Zimbabwe *National Development Strategy 1 2020* 209-210.
416 Republic of Zimbabwe *National Development Strategy 1 2020* 116.
417 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 54-55.
418 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 54-55.
419 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 10.
420 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 12-16.
421 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 60-70.

of climate justice through a just energy transition for addressing the needs of the most vulnerable people regarding both vision and mission.[422]

The strategic goals of the NCCRS also entrench principles of a just energy transition through resource-use efficiency and decarbonisation of all economic activities.[423] This embraces the realisation of energy infrastructure that is not energy-intensive, environmentally sustainable transport systems with reduced carbon emissions.[424] Some of the guiding principles of the NCCRS are those relating to access to information and include an integrated rights-based approach to development, considering the rights and interests of all stakeholders in decision-making processes.[425] The NCCRS also advocates policies that favour renewable energy, as well as enhanced energy planning, research, and development for low-carbon energy supply and use.[426] The NCCRS also looks to create an all-inclusive framework that shall help address climate change while pushing forward the just energy transition in Zimbabwe.[427]

4.4.5 National Environmental Policy and Strategies

The National Environmental Policy and Strategies (NEPS) also facilitates a just energy transition in Zimbabwe.[428] The NEPS emphasises poverty alleviation and improving living standards for all Zimbabweans.[429] Climate change is one of the biggest risks for meeting this vision, since the most impoverished people are affected by impacts.[430] A properly implemented just energy transition can uplift the standard of living of all Zimbabweans

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422 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 10.

423 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 31-40.

424 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 31-40.

425 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 58-60.

426 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 64.

427 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 56-57.

428 Ministry of Environment and Natural Resources Management *National Environmental Policy and Strategies 2009* 2.

429 Ministry of Environment and Natural Resources Management *National Environmental Policy and Strategies 2009* 2.

430 Ministry of Environment and Natural Resources Management *National Environmental Policy and Strategies 2009* 3.

and ensure long-term economic growth, with environmentally sustainable employment opportunities.[431]

The link between NEPS and a just energy transition is further highlighted by the objectives of the policy, such as sustainable development, which is central to a just energy transition.[432] NEPS objectives are clear in terms of underlining the right to energy for Zimbabweans.[433] Several strategic directions that underscore such a commitment include the promotion of equitable access to energy for all sectors, improving energy efficiency and good energy-use practices, and discouraging the overexploitation of non-renewable resources.[434] The NEPS, further, promotes investment in renewable sources of energy and the extraction and utilisation of cleaner sources of energy, such as methane gas.[435] Therefore, the NEPS supports a just energy transition towards an alternative, sustainable energy future in Zimbabwe.[436]

4.4.6 The National Climate Change Policy

The core objective of the National Climate Change Policy (NCCP) is to provide a pathway to a climate-resilient low-carbon development economy.[437] Anchored on existing frameworks, including the National Climate Change Response Strategy and the Renewable Energy Policy, the approach of the NCCP includes comprehensive principles of a just energy transition.[438] The NCCP calls for full participation by all stakeholders, government, businesses, and the general public in its implementation.[439] The policy

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431 Ministry of Environment and Natural Resources Management *National Environmental Policy and Strategies 2009* 16.

432 Ministry of Environment and Natural Resources Management *National Environmental Policy and Strategies 2009* 25-29.

433 Ministry of Environment and Natural Resources Management *National Environmental Policy and Strategies 2009* 2.

434 Ministry of Environment and Natural Resources Management *National Environmental Policy and Strategies 2009* 16-25.

435 Ministry of Environment and Natural Resources Management *National Environmental Policy and Strategies 2009* 16-25.

436 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 57-58.

437 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Policy 2017* 3.

438 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Policy 2017* 1-4.

439 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Policy 2017* 19-22.

requires the implementation of low-carbon development paths that are consistent with national aspirations and programmes, which is central to a just energy transition.[440]

At the centre of the NCCP is the vision of a climate-resilient, low-carbon economy for Zimbabwe that effectively contributes towards curbing the impacts of climate change.[441] The NCCP also aims to include scaling up mitigation actions through the development of low-carbon paths, technology transfer, and capacity building.[442] To realise these goals, the NCCP actions include those around renewable-energy deployment, research in gender-sensitive green technologies, and the enhancement of monitoring and reporting systems for GHG emissions from the energy sector.[443] These objectives indeed highlight how the NCCP facilitates the just energy transition in Zimbabwe.

4.4.7 Zimbabwe Long-Term Low Greenhouse Gas Emission Development Strategy

The Long-Term Low Greenhouse Gas Emission Development Strategy of Zimbabwe is targeted towards GHG emission reductions contributing to sustainable development.[444] Energy use in many sectors, such as power generation, transportation, manufacturing, and agriculture, is projected by LEDS as the highest contributor of GHGs, with the most significant contributor being electricity generation, which heavily relies on coal.[445] The projected increase in energy demand emerges from industrialisation and economic growth. The strategy cites, out of necessity, sustainable energy solutions that would reduce GHG emissions associated with energy generation.[446]

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440 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 58-59.

441 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Policy 2017* 19-22.

442 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Policy 2017* 15-22.

443 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Policy 2017* 10.

444 Government of Zimbabwe *Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy (2020-2050)* 1.

445 Government of Zimbabwe *Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy (2020-2050)* 3.

446 Government of Zimbabwe *Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy (2020-2050)* 3-10.

The Long-term Low Greenhouse Gas Emission Development Strategy also advocates the generation of energy from renewable sources like hydropower, solar, biofuels, and biogas, to reduce GHG emissions, which is central to a just energy transition.[447] Besides decarbonisation of the energy sector, improvement of livelihoods and creation of job opportunities advance a basic indirect linkage to the just energy transition.[448] LEDS not only focuses on reducing GHG emissions but also on a just energy transition approach that brings the social and environmental concerns of developing policies that prioritise increased sustainability and resilience of energy for the future in Zimbabwe.[449]

4.5 Analysis of Policy Implementation

4.5.1 Renewable-Energy Expansion

Zimbabwe's energy policies like the National Renewable Energy Policy and the National Energy Policy highlight the country's effort towards renewable-energy expansion.[450] Similarly to South Africa, upscaling renewable-energy sources has not been easy for Zimbabwe.[451] Economic uncertainty, characterised by a fluctuating exchange rate coupled with a weak economy, has made large-scale private investment in renewable projects unattractive.[452] All these have been further compounded by the regulatory bottlenecks that delay project approval and undermine efficiency in renewable-energy deployment.[453]

The regulatory framework in Zimbabwe is one of the most important areas that still requires considerable enhancement.[454] Zimbabwe's reliance on coal results in resistance to renewable-energy expansion from communities and industries which are dependent on it, since their livelihoods and jobs are at stake.[455] These socio-economic factors make

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447 Government of Zimbabwe *Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy (2020-2050)* 21.

448 Government of Zimbabwe *Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy (2020-2050)* 3.

449 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 59.

450 Chivhenge, Mabaso, Museva, Zingi and Manatsa 2023 *Global Environmental Change* 102708.

451 See discussion in Chapter 3.5.

452 Chivhenge, Mabaso, Museva, Zingi and Manatsa 2023 *Global Environmental Change* 102708.

453 Chivhenge, Mabaso, Museva, Zingi and Manatsa 2023 *Global Environmental Change* 102708.

454 Chirisa, Gumbo, Gundu-Jakarasi, Zhakata, Karakadzai, Dipura and Moyo 2021 *Sustainability* 6517.

455 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 28-30.

the pace of renewable-energy expansion slow and point out the need to have a more inclusive approach towards energy transition.[456]

4.5.2 Reduction of Carbon Emissions

The reduction of carbon emissions is a central goal of Zimbabwe's climate policies, including the National Climate Change Response Strategy (NCCRS) and the National Climate Policy.[457] These frameworks outline strategies for mitigating GHG emissions across various sectors, including energy, agriculture, and transportation. Key measures include promoting energy efficiency, transitioning to cleaner fuels, and reducing emissions from industrial processes.[458]

Improvements regarding emission reduction have been mixed: though various initiatives on energy efficiency and cleaner technologies have taken place, all these various initiatives have had limited overall impacts on Zimbabwe's carbon footprint.[459] This is mainly because the country still has a heavy reliance on coal for power generation.[460] The major sources of carbon emissions emanate from coal-fired power plants; their phasing out or retrofitting has been very slow.[461] This further inhibits the underdevelopment of comprehensive emission monitoring and reporting systems with the tracking of progress and efficient implementation of various policies of the country.[462]

4.5.3 Socio-Economic Justice

Ensuring socio-economic justice is one of the key elements of a just transition. The policies developed by Zimbabwe seek to address the social and economic consequences of energy and climate actions.[463] The National Energy Policy and the National Renewable

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456 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 10-12.

457 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 10-12.

458 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy* 2014 15-17.

459 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 15-17.

460 A detailed discussion of the energy mix was given in Chapter 1.

461 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 12-14.

462 Government of Zimbabwe Ministry of Environment, Water and Climate *National Climate Change Response Strategy 2014* 35-37.

463 Healy and Barry 2017 *Energy policy* 451-459.

Energy Policy place great emphasis on increasing access to energy, job creation, and rural development.[464] These policies promote decentralised energy solutions for improved energy access in disadvantaged communities, such as solar home systems.[465]

However, while it has been up to now in practice, it has been stuck on how the benefits arising from the transition have equitably been distributed.[466] Vulnerable and marginalised communities are among the ones that particularly get barred from access to clean energy technologies and include low-income families and rural populations.[467] These disparities have been largely driven by the rather high cost of renewable-energy systems, due to their frontline costs, combined with limited access to finance.[468] Besides, there is a need for much more attention to be paid to the social consequences of the transition: protection for those workers who will be affected by the shift away from fossil fuels.[469]

4.6 Challenges and Opportunities

4.6.1 Institutional and Regulatory Barriers

Some notable challenges that are mainly affecting Zimbabwe's progress towards a just energy transition are institutional and regulatory barriers.[470] The regulatory framework concerning the energy sector in Zimbabwe has been criticised because it is fragmented, incoherent, and inconsistent, hence less effective in having oncoming projects efficiently and timely implemented.[471] Overlapping responsibilities among various government agencies and regulatory bodies, for instance, may tend to create confusion and delay decision-making processes. For instance, the regulation of aspects of energy policy and project approvals involves both the Zimbabwe Energy Regulatory Authority and the Ministry of Energy and Power Development. Often their mandates are not clearly defined because one's mandate often overlaps with the other.[472] All this is compounded by the absence of a well-articulated national strategy for the just energy transition.

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464 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 44-51.
465 Ministry of Energy and Power Development *National Renewable Energy Policy 2019* 44-51.
466 Zhou and Chikodzi 2020 *Renewable Energy Journal* 1078-1086.
467 Munyati and Chikozho 2021 *Sustainability* 6521.
468 Carley and Konisky 2020 *Nature Energy* 569-577.
469 Healy and Barry 2017 *Energy policy* 451-459.
470 Mushosho and Qutieshat 2024 *International Journal of Business Continuity and Risk Management* 77.
471 Munyati 2021 *Zimbabwe Journal of Environmental Law* 22-34.
472 Chikodzi and Zhou 2022 *Journal of Energy and Development* 111-125.

The renewable-energy projects' regulatory environment is usually complex, since usually it takes time to get permits and approvals; the regulations may not be quite clear and are subject to frequent changes.[473] Such a lack of clarity in regulations and stability may hinder investors and developers in committing to renewable-energy projects.[474] Dhliwayo has pointed out that, although the beginning of the National Renewable Energy Policy and the National Climate Policy was a starting point for Zimbabwe, these policies are full of loose definitions that make the implementation worthless.[475] Murombo supports this by citing how vague legal expressions bring down accountability and weaken mechanisms of enforcement in the energy sector.[476] These faults have sustained investment barriers and slowed the progress towards renewable-energy objectives.

4.6.2 Economic and Financial Constraints

Economic and financial constraints are also some of the factors affecting the successful implementation of the just energy transition policies in Zimbabwe.[477] The country is still struggling a great deal in terms of the mobilisation of financial resources necessary for undertaking renewable-energy projects and infrastructure development.[478] Poor access to finance coupled with high capital costs and economic instability combine to pose enormous obstacles to the perspective of investment in the energy sector.[479]

High up-front costs of renewable-energy technologies, such as solar panels and wind turbines, remain out of reach for many small-scale and community-based projects.[480] The financial viability of renewable-energy projects is compromised owing to fluctuating energy prices and economic instability. Limited access to international climate finance

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473 Makombe and Chanza 2024 *Global Environment* 546-578.
474 Makombe and Chanza 2024 *Global Environment* 546-578.
475 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 60.
476 Murombo 2016 *Journal of African law* 230-263.
477 Muzamwese 2016 *Wiley Interdisciplinary Reviews: Energy and Environment* 510-518.
478 Muyambwa 2022 *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 91.
479 Dhliwayo *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 60.
480 Makumbe 2023 *Journal of Energy Policy and Development* 103-118.

and investment also hinders the country from funding large-scale renewable-energy initiatives.[481]

4.6.3 Social and Political Considerations

Social and political considerations are important in facilitating a just energy transition in Zimbabwe. A just energy transition should have complex social and political dynamics that address the critical concerns and interests of various stakeholders.[482] These stakeholders include industry stakeholders, communities affected, and even up to policymakers. It might not be easy to balance and could also potentially lead to conflicting priorities.[483]

Public acceptance and support are indispensable to renewable-energy projects. Communities and interest groups that feel that their livelihoods are compromised by the transition, such as coal industry workers or communities that depend on the extraction of fossil fuels, will oppose this.[484] These can be overcome and transitioned equitably, inclusively through public appeals for support to ensure a smooth transition.[485] A just energy transition also requires political will and leadership.[486] Therefore, in the long term, the energy transition needs to ensure that there is broad-based support and aligns with broader social and economic development imperatives.

4.7 Conclusion

The pursuit of a just energy transition in Zimbabwe is anchored in constitutional and legislative frameworks that seek to strike a balance between environmental sustainability and socio-economic justice. As has already been discussed above, the Constitution of Zimbabwe creates a strong basis for environmental protection and socio-economic rights, the reason it has emerged as a critical component of the country's just energy transition strategy. The regulation of energy resources with a view to limiting environmental

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481 Chikova 2022 *African Development Review* 89-102.
482 Mandivenga 2022 *Renewable Energy Policy Review* 56-70.
483 Mandivenga 2022 *Renewable Energy Policy Review* 56-70.
484 Chitiyo 2021 *African Journal of Development and Sustainability* 78-93.
485 Chitiyo 2021 *African Journal of Development and Sustainability* 78-93.
486 Muyambwa 2022 *The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives* 91.

impacts is guided by legal instruments, such as the Environmental Management Act and the Petroleum Act.

The chapter also identified disparities between this intention and actual operation in practice. Economic challenges and regulatory and institutional inefficiencies are contributing to slower progress in the realisation of a just energy transition in Zimbabwe. Despite the above-mentioned challenges, Zimbabwe has made some progress in policy development, especially through the development of the National Renewable Energy Policy and the National Climate Change Response Strategy, which outlines the country's commitments towards the diversification of energy supplies and the reduction of carbon emissions. The energy transition in Zimbabwe has to be just, inclusive, and equitable, by building institutional capacity and strengthening public to private partnerships so that no one is left behind.

CHAPTER 5: FINDINGS, RECOMMENDATION AND CONCLUSION

5.1 Background to the dissertation

This dissertation focused on analysing and comparing the legal and policy frameworks that facilitate a just energy transition in South Africa and Zimbabwe. This dissertation is structured in five chapters. Chapter 1 introduced the research problem, objectives, and methodology employed in this research. Chapter 2 looked into the role of international instruments in facilitating the just energy transitions in both countries. Chapters 3 and 4 examined South Africa and Zimbabwe's legal and policy frameworks that facilitate a just energy transition, their strengths and weaknesses, challenges and opportunities relating to implementation.[487] This research employed a comparative legal methodology and used primary sources like legislation and secondary sources like journals, books, and internet data. Therefore, this concluding chapter aims to synthesise the main findings from the preceding chapters, and to give practical recommendations to these findings to strengthen the just energy transition process in both countries.

5.2 Key Findings

5.2.1 Comparative Legal Frameworks

Chapters 3 and 4 showed that South Africa and Zimbabwe have established legal and policy frameworks that are aligned with the worldwide commitments to direct climate change. The constitutions of both countries set the foundation for the advancement of a just energy transition, as discussed in chapters 3 and 4. In terms of legislative frameworks, each country has various laws in place which support the facilitation of a just energy transition. South Africa recently reached a milestone with the enactment of the Climate Change Act of 2024, which sets clear goals and mechanisms that reduce GHG emissions across all economic sectors.[488] Similarly, Zimbabwe also introduced a Draft Climate Change Bill; even though it is not yet law, it serves a similar purpose to that of South Africa. Both countries also have key policies that facilitate the just energy transition.[489] South Africa, for example, has policies like the 2023 IRP, which was recently

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487 See detailed discussions in Chapter 3 and 4.
488 See detailed discussion in Chapter 3.
489 See detailed discussion in chapters 3 and 4.

introduced, and the National Climate Change Response White Paper. Similarly, Zimbabwe also has key policies, such as the National Renewable Energy Policy and the National Climate Policy, all of which are intended to facilitate the just energy transition.[490]

However, despite these similarities, South Africa and Zimbabwe also differ in terms of the enforceability and clarity of their policies. South Africa seems to be ahead of Zimbabwe when it comes to legislation that is specific to just energy transition facilitation, such as the enactment of the Climate Change Act of 2024, while Zimbabwe is still at the preliminary stages of its Draft Climate Change Bill. South Africa's policies, like the 2023 IRP, also have clear targets for renewable energy and time frames, showing the country's commitment to a systematic reduction of emissions. In contrast, the policies of Zimbabwe, such as the National Climate Policy and the National Renewable Energy Policy, lack specific targets and have weak enforcement, due to financial and institutional constraints, as discussed in Chapter 4. While Zimbabwe has shown commitment, especially after the Paris Agreement, its development remains rather slow because of being constrained by resources and a heavy reliance on international support, hence great implications for national and international action to provide sufficient backing for a just energy transition.[491]

5.2.2 Implementation Challenges

Implementation challenges are crippling in both countries but to different degrees. In South Africa, the transition to renewable energy is slow, due to regulatory and administrative inefficiencies, which often involve long procedures for project approval, thereby discouraging investment. Consequently, the Department of Mineral Resources and Energy has to navigate a landscape primarily filled with rivalries in the form of powerful interests from fossil-fuel-based industries, labour unions, and environmental activists. Such forces set up dialectical tension between economic imperatives and environmental imperatives that make the task of seeking consistent energy policies rather difficult.[492]

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490 See detailed discussion in chapter 4.
491 See detailed discussion in chapters 3 and 4.
492 See discussion in chapter 3.

While Zimbabwe is in a precarious position, the country faces economic instability and issues of governance that affect the effective implementation of energy policy. As discussed in Chapter 4, bureaucratic inefficiency and corruption in governmental institutions worsen the challenges of policy execution. Many of the stakeholder engagement processes in Zimbabwe are superficial, yielding weak levels of involvement from civil society and affected communities in making decisions. Therefore, this negatively affects the overall level of public trust and gives minimal positive results in the implementation of just energy transition initiatives.

5.2.3 Socio-Economic Implications

The just energy transition is meant to bring socio-economic implications that are immense, multilayered, and complex for both South Africa and Zimbabwe. There is an increased consensus on the need for a just energy transition in South Africa, emphasising that benefits accruing from renewable energy must be equally shared among all citizens, including those from disadvantaged communities in the country.[493] Increased mobilisation by civil society organisations in advancing social-justice struggles regarding energy policies has been an emerging trait in efforts towards inclusiveness in energy governance. Much is yet to be done to translate this advocacy into concrete policy measures that will ensure equitable access to clean energy and job creation in the renewable sector.

Moving on to Zimbabwe, its socio-economic context presents a unique set of challenges. Economic challenges like hyperinflation hamper the state from protecting vulnerable communities in Zimbabwe during the energy transition.[494] Without implementing social security, further reinforcement of inequalities and potential re-marginalisation of already vulnerable groups are increased, as discussed in Chapter 4. Not developing a strategy for addressing socio-economic justice in terms of energy transition identified a critical gap in how Zimbabwe addresses energy governance, for which urgent policy reforms are called.[495]

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493 See detailed discussion in chapters 1 and 3.
494 See detailed discussion in Chapter 4.6.
495 See detailed discussion in Chapters 4.6 and 4.7.

5.2.4 International Commitments and Influence

South Africa has been quite proactive with international agreements on climate change, such as the Paris Agreement, which commits countries to meeting specific targets for the reduction of GHG emissions. These international commitments influence South Africa's climate governance, and policies such as the 2023 IRP aim to increase renewable generation and enhance efficiency in energy use. The success of these policies depends on resource mobilisation and international cooperation. South Africa still faces the challenge of fully integrating these international commitments, where emission-reduction goals need to be weighed against the imperatives of economic growth and job creation. This underlines the challenge of coherence between international expectations and domestic realities, given that South Africa will have to carefully balance its development imperatives and its climate commitments.

As for Zimbabwe, it occupies a slightly different position regarding the ambition of meeting goals set in international climate policies, because its industrial capacity and emissions are negligible compared to developed countries. It is important to bear in mind that Zimbabwe is still a developing country, which places economic growth and the poverty alleviation process as its top priority, and this demands greater industrial productivity. It will be quite unrealistic to see Zimbabwe assuming the same stride of emissions reduction as those countries that are more developed.[496]

5.3 Recommendations

For both South Africa and Zimbabwe, legal and policy frameworks that facilitate the just energy transition need to be strengthened by making comprehensive use of both local and international resources for the implementation of policies on renewable energy. The South African government thus needs to continue updating its legislative frameworks and making them adaptable to the ever-changing landscape of energy. At the same time, it also needs to provide mechanisms for streamlined accountability and compliance. This approach will establish a sound consolidated base of the existing laws and policies, enhancing the resource allocation to renewable-energy projects. Improvement in stakeholder involvement regarding policy reviews and implementation would make

[496] See discussion in chapter 4.

legislative updates relevant to the demands of diverse actors, social, economic, and environmental, and give strength to the just energy transition policies and make them inclusive.

As for Zimbabwe, resource-mobilisation strategies should be further developed, while capacity-building programmes should be enhanced to supplement the existing policy of the country. In this respect, institutions such as the United Nations Development Programme and the Infrastructure Development Bank of Zimbabwe already have important roles in channelling financial and technical resources towards projects for renewable energy. Going forward, especially with the just-appointed Zimbabwe Chair of the Adaptation Fund, the country is well placed to commit a specific budget allocation to renewable-energy projects, especially those benefitting vulnerable communities. By using this existing channel of support, Zimbabwe will be in a position to better converge its national policies through international climate commitments into economic development.

Like South Africa, with its enactment of the Climate Change Act of 2024 and the 2023 IRP, Zimbabwe's government should also go further and enact climate-specific legislation. The climate-specific legislation aligns with the objectives of various renewable energy laws and policies with broader socio-economic objectives of a just transition, considering the needs of the most marginalised communities. In South Africa, further action to enhance inter-departmental coordination and strengthen community engagement in energy planning would lead to better execution of policies at the local levels. This could be supported in Zimbabwe through targeted programmes, such as job training in renewable energy and support for programmes focused on communities affected by shifts in the coal industry, to name a few components that would ensure a just and equitable transition.

In this regard, neither country can afford to give up on international commitments. International climate-change talks have given South Africa the prospect of garnering resources as well as technical support for renewable-energy-related projects from its standing. Its international forum participation means that South Africa could share its experiences in such projects with other countries while learning about each country's approach to the just energy transition. Closer cooperation on the part of Zimbabwe with international organisations promoting sustainable development would also give it easier

access to finance and expertise in further consolidating its efforts towards a sustainable energy transition. Mobilising such partnerships, both South Africa and Zimbabwe are well placed to build on their present commitments to socially inclusive energy transitions, in line with international standards.

5.4 Conclusion

The dissertation has outlined the elaborate landscape of the legal and policy frameworks for an equitable energy transition in South Africa and Zimbabwe. Whereas South Africa shows a far more advanced legal structure and clearer pathways for policy implementation, Zimbabwe poses significant challenges emanating from the economic and political instability within the country. The recommendations underscore that socio-economic justice must form the basis of a just energy transition in both countries, to achieve the equitable distribution of renewable-energy benefits among all citizens.

These recommendations, if implemented, as identified in this chapter, would go a long way in making the energy futures of both South Africa and Zimbabwe not only just but also sustainable. Both countries will have ongoing needs to improve their legal frameworks, enhance the capacity to implement policies, and be engaged internationally, if they are going to meet the challenges offered by the just energy transition. Therefore, the road to sustainability needs to be all-inclusive, considering that transitioning into renewable energy is not just an environmental dictate but also a social-justice concern that calls for the contribution of all stakeholders together.

Despite the importance and broad nature of the topic investigated, this study is a mini-dissertation. The limited length allowed for the dissertation makes it impossible to focus in an in-depth manner on all aspects of the just energy transition in South Africa and Zimbabwe. An in-depth analysis of different aspects from a comparative law and policy perspective can be the subject of future publications in law journals or book chapters. For example, it is possible to explore concrete ways what is being done to ensure that coal miners have an alternative livelihood when existing coal mines are closed in specific regions of both countries.

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