



Shifting Finance in South Africa to Support a Just Energy Transition

Policy Paper

Authors :

Bertha Argueta

—
The author is grateful to the reviewers Samson Mbewe, Gillian Hamilton, Malango Mughogho, Charlene Watson and David Ryfisch for their constructive and insightful comments and suggestions.

Layout Design :

Maginate Creative Communication

Photo Cover Credit:

© baarssen / Shutterstock

December 2023

Table of Contents

02	/	Abbreviations
04	/	Executive Summary
06	/	Introduction
08	/	Background for South Africa's just energy transition
12	/	South Africa's JETP and its Investment Plan
22	/	Current status against Article 2.1c approaches
34	/	Integration of justice elements in the Article 2.1c approaches
42	/	Unlocking additional finance
44	/	References

Abbreviations

BUR	Biennial Update Report	IIMF	International Monetary Fund
CBAM	Carbon border adjustment tax	IPAP	Industrial Policy Action Plan
CBDR	Common but Differentiated Responsibilities	IPCC	Intergovernmental Panel on Climate Change
CBT	Climate Budget Tagging	IPG	International Partnership for Energy Transition
COP	Conference of the Parties	IRP	Integrated Resource Plan
CPAT	Carbon Pricing Assessment Tool	ISSB	International Sustainability Standards Board
CSP	Concentrated Sola Power	ILO	International Labour Organization
DBSA	Development Bank of Southern Africa	JET IP	Just Energy Transition Implementation Plan
DMRE	Department of Mineral Resources and Energy	JETP	Just Energy Transition Partnership
DTIC	Department of Trade, Industry and Competition	JSE	Johannesburg Stock Exchange
E&S	Environmental and Social	LEDS	Low Emission Development Strategies
EE&DSM	Energy Efficiency and Demand-Side Management	LT-LEDS	Long-Term Low-Emissions Development Strategies
EBRD	European Bank for Reconstruction and Development	MRV	Measuring, Reporting, and Verification
ECB	European Central Bank	MSMEs	Micro, Small, and Medium-sized Enterprises
EESL	Energy Efficiency Standards and Labelling	NCCRP	National Climate Change Response Policy
EU	European Union	NDP	National Development Plan
FBE	Free Basic Electricity	NDC	Nationally Determined Contribution
FL	Fuel levy	NDCs	Nationally Determined Contributions
GBP	Green Bond Principles	NEV	New Energy Vehicles
GCF	Green Climate Fund	NIR	National Inventory Report
GEF	Global Environmental Facility	OECD	Organisation for Economic Co-operation and Development
GEPF	Government Employees Pension Fund	PA	Prudential Authority
GH	Green Hydrogen	PCC	Presidential Climate Commission of South Africa
GHG	Greenhouse Gas	PIC	Public Investment Corporation
GRI	Global Reporting Initiative	QE	Quantitative easing
GST	Green Transport Strategy	RAF	Road Accident Fund
ICAAP	Internal Capital Adequacy Assessment Process	REIPPPP	Renewable Energy Independent Power Producer Procurement Programme
IDC	Industrial Development Corporation of South Africa	SAREM	South African Renewable Energy Masterplan
DCF	International Development Finance Club	SAICA	South African Institute of Chartered Accountants
IFC	International Finance Corporation	SCF	standing Committee on Finance
IFRS	International Financial Reporting Standards	SOEs	State-Owned Enterprises
IF	Investment Plan	SWH	Solar Water-Heating
		TCFD	Task Force on Climate-related Financial Disclosures
		UNFCCC	United Nations Framework Convention on Climate Change
		VAT	Value-Added Tax

Executive Summary

As countries transition to low-carbon and climate-resilient economies, finance flows will need to shift to support these transitions. The implementation of the Paris Agreement's third goal, stated in Article 2.1c, of making finance flows consistent with a pathway towards low emissions and climate-resilient development could be a tool to support countries, especially those whose economies and energy systems are highly depended on fossil fuels, like South Africa, to successfully achieve this transition. However, the transition's success will also depend on it considering justice elements, to avoid the potential negative impacts of the energy transition.

South Africa was the first country to sign a Just Energy Transition Partnership (JETP) with a group of contributors who agreed to provide it with finance to support the country's energy transition. In this context, South Africa developed a Just Energy Transition Investment Plan (JET IP) laying out a series of policies and regulatory tools the country would implement to achieve its just energy transition. An analysis of these, using existing Article 2.1c approaches, shows that the country has made progress in developing and implementing policy tools, as well as voluntary private sector initiatives, to achieve the goals stated in its JET IP. However, more progress is needed to ensure that the financial needs identified by the country for its energy transition are met, and their mitigation targets achieved in a manner compatible with the 1.5°C temperature goal of the Paris Agreement.

Existing approaches to assess the level of implementation of Article 2.1c, on the other hand, rarely include elements of justice. The case of South Africa, where the government developed a framework that included the justice aspects of their energy transition, provided an opportunity to assess and integrate these considerations into Article 2.1c approaches. This allowed for a more nuanced assessment of the implementation of Article 2.1c in the country, and highlighted the trade-offs that exist between a rapid implementation or Article 2.1c in line with a 1.5°C temperature goal, and the potential social and economic impacts that this can have in developing countries.

As South Africa accelerates its efforts to achieve a just energy transition, existing policy levers will need to be enhanced and their implementation accelerated, while making sure the impacts of the transition on workers, communities and the country's finances are addressed. New policy tools will be needed to close the financing gap that the JET IP identified and to finance the justice elements of the transition. Support from international contributors will remain key for the country's just energy transition, and it will be important that this support comes with terms and conditions that do not put additional strain on South Africa.



© whyframe / Shutterstock



© Jordi Huisman / Shutterstock



1

Introduction

Article 2 of the Paris Agreement outlines three long-term goals aimed at strengthening the global response to climate change, including mitigation and adaptation goals. It places these goals in the context of sustainable development and efforts to eradicate poverty, to be implemented to “reflect equity and the principle of common but differentiated responsibilities and respective capabilities (CBDR), in light of different national circumstances”. The third goal, Article 2.1c, aims to make “finance flows consistent with a pathway towards low greenhouse gas emissions (GHG) and climate-resilient development”. Efforts have been made before to map information related to the implementation of Article 2.1c, particularly by the Standing Committee on Finance. However, no clear guidance is available as to what may be considered relevant in this case (SCF, 2021), highlighting the lack of agreement surrounding Article 2.1c. This has led to a broad range of interpretations of what is relevant for its implementation (SCF, 2021).

Many interpretations of Article 2.1c focus on promoting “Paris alignment”, which translates into public and private financial flows being aligned with the other objectives of the Paris Agreement. This alignment can be achieved in many ways. It can be done by ensuring that financial decisions by the public and private sector take climate change into account (Rydge, 2020), and investments reduce climate impacts, support low-carbon pathways and help avoid carbon lock-in (The World Bank, 2023a). From a development cooperation perspective, it can also mean ensuring cooperation does not undermine the Paris Agreement but contributes to transformation and addresses the needs of developing countries, catalyses countries’ transitions to low-emissions and climate-resilient pathways, while also supporting the short- and long-term processes under the Paris Agreement (OECD, 2019). Paris alignment is expected to result in increased financial flows for climate action (Rydge, 2020).

¹For example, the “Just Transition Finance Roadmaps in South Africa and India Project”, for which more information can be found here: <https://www.polity.org.za/article/project-launched-to-define-role-of-finance-in-south-africa-and-indias-just-transitions-2021-01-19>



The intersection between Article 2.1c implementation and the finance required for a just transition has also been explored (SCF, 2021). The operationalisation of Article 2.1c, which establishes the need to align financial flows with a pathway to low-GHG emissions, can facilitate the energy transition by redirecting financial resources towards renewable and sustainable energy sources. The consistency of financial flows has been considered as an opportunity to support just transitions while at the same time representing a challenge due to a lack of low-GHG transition pathways that account for development needs, including poverty eradication, energy, water and food access and security, among others (SCF, 2022). Some existing initiatives are trying to outline the role of the financial sector in a just transition.¹ Many others have begun to include just transition considerations in activities considered to support the implementation of Article 2.1c (SCF, 2022).

This paper will look at how the operationalisation of Article 2.1c supports the just energy transition in South Africa by unlocking financial flows while considering the incidence of the costs and benefits as financial flows shift towards consistency with low-emission development

pathways. This work was conducted through secondary research. However, it benefited from exchanges with partners in Indonesia, another country currently working on the different elements of its just energy transition. It was also informed by the discussions held during the two workshops under the Sharm el-Sheikh Dialogue on Article 2, paragraph 1(c), of the Paris Agreement and its complementarity with Article 9, held in July and October 2023, in Thailand and Switzerland.

Section 2 of this paper will introduce background information relevant to South Africa’s just energy transition. Section 3 will look at South Africa’s Just Energy Transition Investment Plan (JET IP) and the relevant policies for its implementation. Section 4 will assess the consistency of these policies with a low-emissions pathway, while section 5 will introduce the justice lens into this assessment and propose ways in which these elements can be introduced more broadly into Article 2.1c frameworks. Finally, section 6 will explore ways in which South Africa could further enhance its enabling environment to unlock additional finance while considering justice elements and the role that international public finance can play.



Background for South Africa's just energy transition

Socio-economic profile of South Africa

South Africa is a middle-income country and an emerging market, with a GDP of close to USD 406 billion and a GDP per capita of USD 6,776 in 2022 (The World Bank, 2023b). However, its economic growth has been slow in the period between 2009 and 2019, with an average of 1 per cent growth (The World Bank, 2022a). The country had a population of approximately 62 million people in 2022 (Statistics South Africa, 2023).

The country was considered the most economically unequal country in the world (The World Bank, 2022a) by income and wealth standards. The percentage share of income going to the wealthiest 10 per cent of the population represented 51 per cent, while that going to the poorest 20 per cent stood at only 3 per cent (International Monetary Fund, 2020). In terms of wealth, the top 10 per cent of the population concentrated 95 per cent of all wealth (Statistics South Africa, 2019). The country also had high levels of poverty and unemployment (The World Bank, 2022a), with 40 per cent of the population living below the national poverty line in 2015 (International Monetary Fund, 2020) and an official unemployment rate of 29.83 per cent in 2022 (The World Bank, 2023b). However, the expanded unemployment rate² was higher, at 42.1 per cent in the second quarter of 2023 (Maluleke, 2023).

² Which includes those officially unemployed as well as those that are available to work but are either discouraged to seek work or have other reasons for not searching.

The main drivers of inequality in South Africa include place-based disadvantages between rural and urban populations and between regions; the legacy of apartheid, rooted in racial and spatial segregation; historically high inequality of land ownership; low intergenerational mobility; poor functioning of urban labour markets; large gender gaps in earnings; constrained markets; and a missing middle in wage distribution, with a small number of people with highly paid jobs, while most of the population works in basic, poorly paid ones (The World Bank, 2022b). They also include the unequal access to and returns on financial assets, paired with the higher growth rate of capital income compared to labour income (Statistics South Africa, 2019). On top of this, climate shocks are also unequally distributed and affect the poorest more (The World Bank, 2022b), a situation that is likely to exacerbate existing inequality.

Government debt in 2022/2023 was estimated at 71.4 per cent of GDP in South Africa, and it is affected by inflation and exchange rates (Republic of South Africa, 2023a). In 2022/2023, debt-service costs were projected to average 4.9 per cent of GDP and 18 per cent as a share of revenue (Republic of South Africa, 2023a).

Finally, South Africa's financial markets are the most developed and liquid in Africa (Republic of South Africa, 2022a; IMF, 2022) and are well-developed by global standards (IMF, 2022). The Johannesburg Stock Exchange (JSE) had a market capitalisation of USD 1,230.120 billion in July 2023 (CEIC Data, 2023), and has been ranked the 17th largest stock exchange in the world by market capitalisation (Sustainable Stock Exchanges Initiative, n.a.). Financial institutions have been increasing the low-carbon project and company development in South Africa, in response to increased green investment opportunities in the energy sector (Montmasson-Clair, 2013). At the same time, South Africa faces large transition risks, of over USD 120 billion between 2013 and 2035, of which close to 84 per cent will be initially borne by private investors, but will eventually be transferred to the national government, threatening South Africa's sovereign credit rating (Huxham, Carus, & Anwar, 2019). Much of this risk arises from policies and actions outside of South Africa's control (Huxham, Carus, & Anwar, 2019), and could lead to a disorderly transition for which the financial sector needs to prepare (Nichols & Clisby, 2021).



Greenhouse gas (GHG) emissions profile and the energy sector

South Africa was the 16th largest GHG emitter in 2022, with a 0.99 per cent share of global emissions; GHG emissions in South Africa decreased by 12.5 per cent in the period 2019-2022 (Crippa et al., 2023). South Africa still has one of the most emissions-intensive economies of the G20, only surpassed by Russia (Crippa et al., 2023). This is primarily due to its heavy reliance on coal for electricity generation and industrial processes. According to some estimates, the country ranks 16th in the list of countries with the largest cumulative emissions, from 1850 to 2021. Nevertheless, this does not account for factors like shifting in territorial ownership, consumption-based emissions, national emissions on a production basis or per capita emissions, with methodologies focusing on the latter excluding South Africa from the list of top 20 historical emitters (Evans, 2021).

According to South Africa's last National Inventory Report (NIR), the energy sector is the largest contributor to GHG emissions in the country, representing 80.1 per cent of total emissions in 2017 (excluding the Forestry and Other Land Uses sector) and was responsible for 96.6 per cent of the increase in emissions in the 17-year period considered by the NIR (Republic of South Africa, 2017a). Energy industries³ accounted for 60.7 per cent of the energy sector's emissions, of which electricity and heat production represented the largest share (84 per cent), reflecting the sector's high dependence on coal. Transport was the second most emitting subsector, representing 13.3 per cent of energy sector emissions.

Structure of the energy sector in South Africa

As shown by the GHG emissions profile of South Africa, electricity production is one of the key emitting sectors in the country. It is largely dominated by one company, Eskom.

Eskom is a vertically integrated, state-owned utility company (Eskom, n.a.), which means it owns and operates assets for the generation, transmission, distribution, and retail sales of electricity and also operates the transmission system.⁴ However, the South African government is undertaking processes to unbundle Eskom, which entails functionally and legally separating the utility into generation, transmission, and distribution entities, supported by an Electricity Regulation Amendment Bill currently under discussion, while the establishment of an independent Transmissions System Operator is also contemplated (SAGEN, 2022; Republic of South Africa, 2022a).

Currently, Eskom produces approximately 95 per cent of electricity in South Africa, primarily through coal-fired power plants, while the company purchases the remaining capacity from independent power producers through Power Purchase Agreements (SAGEN, 2022). It supplies most of the distribution, with the rest being supplied by municipalities (Vagliasindi & Besant-Jones, 2013). Eskom has been increasingly facing trouble in fulfilling this role, leading to electricity rationing, known as load-shedding, largely linked to the ageing fleet of coal power plants on which much of the electricity generation depends needing maintenance and performance improvements and the need for new generation capacity (Kuhudzai, 2023).

³ Including electricity and heat production, petroleum refining and manufacture of solid fuels.

⁴ For more information on the definition of a vertically integrated utility:

<https://energyknowledgebase.com/topics/vertically-integrated-monopoly-utility-electric-market-model.asp>

Eskom relies on government guarantees and equity injections to finance its operations due to high levels of debt and increased liabilities (Republic of South Africa, 2022b), with gross debt reaching ZAR 424 billion in 2023, leading to debt servicing costs of ZAR 72 billion, and net debt at ZAR 399 billion (Eskom, 2023a). Bailouts for Eskom reached ZAR 56 billion (USD 3 billion) in 2020/2021 due to its increasing debt, straining the government budget (Bridle et al., 2022). Additional and substantive debt relief was approved in July 2023 for Eskom. This included a debt takeover of ZAR 70 billion and ZAR 184 billion for the period 2023-2026 advanced as loans, partly to be converted to shares (Republic of South Africa, 2023b). Conditions attached to this debt relief included the need for approval by the Minister of Finance for the development of new generation projects as well as a prohibition of new borrowing by Eskom during the debt relief period unless approved by the Minister of Finance (Eskom, 2023b).

Eskom's debt had been increasing since the early 2000s due to increasing primary energy costs and the installation of new generation capacity, which were not fully offset by tariff increases over the same period (Parliamentary Budget Office of South Africa, 2017). Eskom's total liabilities have increased over the years because of its capacity expansion programme and asset maintenance costs, requiring the Government of South Africa to provide it with additional funding through equity injections (Parliamentary Budget Office of South Africa, 2017). Additionally, Eskom's financial risks are high, partly due to tariff uncertainty (Republic of South Africa, 2022b). Eskom's credit rating has fluctuated, but is currently considered "speculative" and subject to credit risk (BusinessTech, 2023). The government's exposure to Eskom represents a significant risk to South Africa's debt sustainability (OECD, 2022).



© fuyu liu / Shutterstock



3

South Africa's JETP and its Investment Plan

Introduction

Just Energy Transition Partnerships (JETPs) are financing mechanisms created to support mainly heavily coal-dependent emerging economies' transition away from coal while including justice considerations as part of the transition and reconciling the transition with an increasing demand for power. This highlights the trade-offs faced in JETP planning and implementation and the need for support. Under a JETP, a group of partner countries and organisations, including multilateral development banks and the private sector, commit to contribute finance to support a country's self-determined transition path, using a variety of instruments, including grants, loans, and investments (Kramer, 2022; Kusuma, 2023).

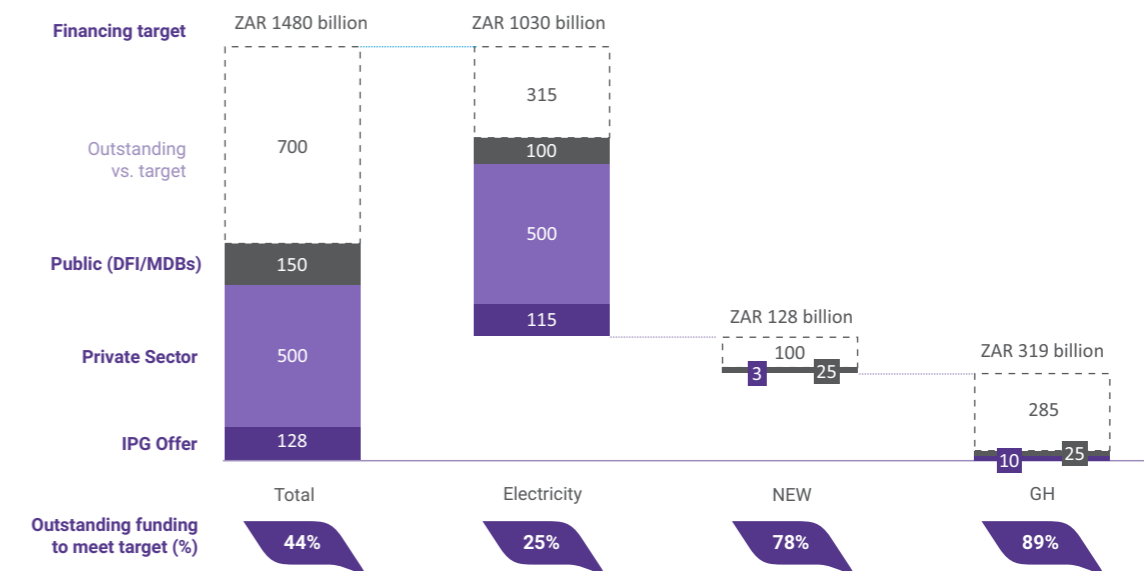
South Africa was the first country for which a JETP was announced at COP26 in Glasgow in November 2021. The country was promised USD 8.5 billion for 2023-2027 from five contributors forming the International Partners Group (IPG), including Germany, France, the UK, the USA, and the European Union (EU), subject to agreement on an investment framework (Republic of South Africa, 2021a).

The following year, at COP27 in Sharm El-Sheikh, South Africa presented its JET IP covering three priority sectors: energy, electric vehicles (NEV), and green hydrogen (GH).

The plan estimated financing requirements for the 2023-2027 period of ZAR 1,480 billion (USD 98.7 billion), close to 10 times what the IPG has promised in contributions. The JET IP also identified other existing sources of finance for the implementation of the JET IP from public and private sources. Including all these existing sources, the plan estimates that South Africa has 56 per cent of the finance needs covered, leaving 44 per cent of the needs outstanding.

¹ Based on the exchange rate used in the Investment Plan itself, of 15:1. This exchange rate has varied considerably since then.

Figure 1: Projected funding needs and estimated availability by source and sector



Source: South Africa's JET IP

The South African government convened the Presidential Climate Commission (PCC), which prepared the Just Transition Framework in 2022 to establish the country's approach to the justice aspects of the transition,⁶ which underpins the JET IP's approach to justice.

Despite this focus on justice in the JET IP, the process of designing the investment plan has been criticised for not including those most likely to be affected by the transition and for not providing space for the wider public to consult this and other relevant policy documents (Suharsono & Maulidia, 2023). While the process of development of the JET IP included convening JET forums, these were not seen as sufficient (Suharsono & Maulidia, 2023). This is a missed opportunity considering the importance of stakeholder engagement in strengthening the acceptability and effectiveness of the just transition policies.

⁶ Available here: <https://www.climatecommission.org.za/publications/design-addition-and-amendment-to-just-transition-framework-with-dedication-to-pcc-secretary>

South Africa's JET-related policies and instruments

The JET IP of South Africa identifies five types of policies that underpin the just transition efforts of the country: climate-related policies, electricity-related policies, just transition-related policies, finance-related policies, and industrial-related policies. The just transition-related policies of the JET IP will be reviewed in section 6, which looks at the integration of just transition considerations in Article 2.1c frameworks.

Climate mitigation policies

South Africa's relevant climate-related policies include its 2011 National Climate Change Response Policy, the Low Emissions Development Strategy (LEDS), the country's updated Nationally Determined Contribution (NDC) from 2021, and the Climate Change Bill, tabled before the South African Parliament in 2022 and currently under discussion.

In its **National Climate Change Response Policy (NCCRP)**, originally prepared as a white paper, the country established an approach to mitigation that put the country's international contributions, as well as its need to manage development and poverty eradication challenges, at the centre of its mitigation action. It stated South Africa's commitment to contribute its fair share to the global mitigation effort. The policy included a section on response measures, looking at the economic impacts of measures taken both at the national and international levels to reduce GHG emissions due to South Africa's heavy reliance on coal-based energy. The policy also outlines an approach to managing these potential impacts, both at the national and international levels (Republic of South Africa, 2011a).

The NCCRP mandated carbon budgets for highly emitting sectors and a set of emissions reduction goals for the long (2050), medium (2030), and short term (2020), called Desired Emission Reduction Outcomes (DEROs), to ensure emissions stay within the trajectory range specified by the policy. The trajectory was called the "Peak, Plateau and Decline trajectory". These budgets and goals have not yet been developed.

Near-term flagship programmes were included as part of this policy for all relevant sectors. For the energy sector, the Renewable Energy Flagship Programme, the Energy Efficiency and Energy Demand Management Flagship Programme, and the Transport Flagship Programme were established. Details of these programmes were reported in South Africa's Second Biennial Update Report (BUR) to the UNFCCC. The report detailed the sub-programmes implemented by the country as part of each flagship programme. Still, it did not offer any details of emissions reductions linked to their implementation (Republic of South Africa, 2017b).

Table 1: South Africa's Climate Change Near-term Priority Flagship Programmes 2016

<p>The Renewable Energy Flagship Programme</p>	<ul style="list-style-type: none"> • Renewable Energy Independent Power Producer Procurement (REIPPP) Programme • National Solar Water Heating Programme • Eskom renewable energy projects • Off-grid household electrification • Green industries development • Green Energy Accord • Strategic environmental assessment for renewable Energy Development Zones
<p>The Energy Efficiency & Management Flagship Programme</p>	<ul style="list-style-type: none"> • Integrated Demand Management Programme • Industrial Energy Efficiency • Residential Energy Efficiency Programme • Government Building Energy Efficiency Programme • Energy Efficiency Labelling Standards • Biofuels
<p>The Transport Flagship Programme</p>	<ul style="list-style-type: none"> • Integrated Rapid Public Transport Networks • Non-Motorised Transport Networks • Promotion of Fuel Efficiency Measures • Transport Modal Shifts • Taxi Recapitalisation Programme • Integrated Urban and Transportation Planning

Source: 2nd BUR of South Africa to the UNFCCC

South Africa updated its NDC in September 2021, raising its ambition. The JET IP was established to support the targets established in South Africa's updated NDC and to address the social costs of achieving these targets. The NDC established a reduction range of 420-350 megatonnes of carbon dioxide equivalent (MtCO₂-eq) by 2030 (Republic of South Africa, 2021b). In this context, the JET IP focuses on an "emissions reduction trajectory that strives to achieve the lower range of South Africa's updated 2021 NDC" (Republic of South Africa, 2022a).

In 2020, **South Africa published its LEDS**, including a vision statement that committed the country to follow a low-carbon growth trajectory to make a fair contribution to the global effort of limiting temperature increase while ensuring a just transition. The vision did not include a quantitative target but referenced the "Peak, Plateau and Decline trajectory" of the NCCRP as a benchmark for assessing the performance of the LEDS (Republic of South Africa, 2020)

The LEDS includes a list of mitigation measures for energy supply and demand and industry, as well as cross-cutting measures.

Table 2: GHG emissions mitigation measures included in South Africa's LEDS

<p>Energy Supply</p>	<p>Integrated Energy Plan: analysing supply and demand trends to project future energy requirements.</p> <p>Integrated Resource Plan: guiding the evolution of South Africa's electricity supply sector by identifying preferred generation technologies.</p> <p>Biofuels Opportunities – linked to a Biofuels Industrial Strategy prepared in 2007 but not implemented.</p>
<p>Energy Demand</p>	<p>National Energy Efficiency Strategy: outlines goals for energy efficiency improvements and measures to be implemented in each sector.</p> <p>Support for increased uptake of Solar Water Heaters: including goals and support programmes to drive uptake.</p> <p>National Building Regulations and Buildings Standards Act: implementing energy efficiency and energy consumption standards under the National Building Regulations and Buildings Standards Act.</p> <p>Promotion of cleaner mobility: including different policies and related investments, like the Public Transport Strategy (2007), the implementation of the bus rapid transport system in Johannesburg, the Green Transport Strategy (2018), and a CO2 tax established in 2010 on the selling price of new motor vehicles exceeding an established emissions limit.</p>
<p>Energy Demand</p>	<p>The Industrial Policy Action Plan (IPAP).</p> <p>Tax incentives for green project development: including tax deductions for costs incurred when investing in technologies like renewable energy from taxable income, as well as tax incentives for the manufacturing sector linked to requirements to demonstrate the use of energy-efficient equipment, among others.</p>
<p>Cross-cutting</p>	<p>Carbon Tax Act: brought into effect in 2019 through a phased approach, it aims to price carbon. It covers about 90 per cent of the country's GHG emissions (International Monetary Fund, 2023). It included a basic tax-free allowance that ranges from 60 per cent to 75 per cent of emissions across sectors, with additional allowances and offsets to allow businesses time to transition (International Monetary Fund, 2023). The rate was set at R120 per tonne of CO2-eq. This rate has been raised progressively and will continue to increase every year. In 2022, it reached R144 and will increase yearly to USD 20 per tonne until 2026 and at least USD 30 per tonne by 2030, while allowances will also be reduced (Republic of South Africa, 2022a).</p> <p>Establishment of sectoral emissions targets (SETs) and carbon budgets.</p> <p>Phasing out of inefficient fossil fuel subsidies/incentives: this includes an indication of willingness to identify and minimise the harmful impact of these subsidies and incentives but does not include any specific measures or refer to any specific targets.</p>

Source: adapted from South Africa's Low-emission Development Strategy 2050

Finally, **South Africa's Climate Change Bill**, passed by the National Assembly at the end of October 2023, sets out institutional arrangements across government, the private sector, academia, civil society, and management systems for climate policies and actions. It will also make mandatory the implementation of a carbon budgeting system and the establishment of sector emissions targets,⁷ as well as the identification and determination of measures and mechanisms by municipalities to manage and implement the required climate change response.

Electricity-related policies

Many of the electricity-related policies mentioned in the JET IP are policies that were included in the climate-specific strategies and policies. For example, it featured prominently the **Integrated Resource Plan 2019** as well as the **Renewable Energy Independent Power Producer Procurement Programme (REIPPPP)**. It also mentions the different demand-side management measures implemented by the Department of Mineral Resources and Energy (DMRE) in cooperation with Eskom.

It also included a series of changes in regulations to allow for more competition and attract more private sector investments. These changes included the new **Electricity Regulation Amendment Bill**, still under discussion and which is expected to enable a competitive electricity market with more private sector participation in generation (Republic of South Africa, 2022a). It also

included an amendment to the **Electricity Regulation Act**, raising and subsequently removing the thresholds for electricity generation projects that do not require a licence, allowing private generation projects to sell electricity in addition to self-generation (Republic of South Africa, 2022a).

In addition to more private sector participation, another amendment, this time to the **Regulations on New Generation Capacity**, introduced in 2020, allowed municipalities to procure electricity independently (Republic of South Africa, 2022a).

Finance-related policies

Two finance-related policies were included in South Africa's JET IP: the carbon taxation system, previously mentioned in the climate-related policies, and South Africa's Green Taxonomy. **The Green Taxonomy** was published in March 2022 as part of the country's Sustainable Finance Initiative.⁸ The taxonomy is intended to unlock significant investment opportunities in green and climate-friendly assets, to support regulatory and supervision oversight of the financial sector and to provide a basis for regulators to align green financial products, among other benefits (Republic of South Africa and IFC, 2022). The taxonomy contains a catalogue of sectors and activities, basic attributes, and mapping to environmental objectives.

The catalogue includes energy as a macro sector. Within this macro sector, the production of electricity, heating

and cooling from solar PV, Concentrated Solar Power (CSP), wind power and ocean energy, hydropower, geothermal, and bioenergy are included as making substantial contributions to climate mitigation linked to own performance. Other activities making substantial contributions through their own performance include transmission and distribution networks for renewable and low-carbon gases, district heating and cooling distribution, installation and operation of electric heat pumps, and the production of heating and cooling using waste heat. Transmission and distribution of electricity are included as making a substantial contribution both through own performance and as an enabling activity. Storage of electricity, thermal energy, and hydrogen are included as making a substantial contribution as enabling activities.

⁷ The current version of the Bill is available at: <https://www.parliament.gov.za/bill/2300773>
⁸ More information on the initiative can be found at: <https://sustainablefinanceinitiative.org.za/>

The criteria for significant contribution to mitigation for electricity generation heating, cooling, and heat pumps include supporting the transition to low-carbon net-zero emissions economy; avoiding lock-in; ensuring activities meet best practice standards; ensuring equal comparability within an economic activity with regards to achieving low-carbon net-zero emissions target; and incorporating technology-specific considerations if needed. In the case of transmission and distribution, criteria include supporting the integration of renewable energy into the power grid; supporting the transition from carbon-intensive energy supply via electrification and development of low-carbon generation capacity; supporting grid management technology for integrating low-carbon generation and demand-side savings; and decreasing direct emissions from transmission and distribution infrastructure. For storage, criteria include power grid stabilisation, effective utilisation of peak electricity generation, enabling integration of low-carbon electricity, and back-up power capabilities.

Transportation is also included as a macro sector. In this sector, infrastructure for low-carbon transport is included as an enabling activity. The sector also includes commuter road, passenger rail, and freight rail transport; passenger cars, road commercial vehicles, and road freight transport; and inland passenger and freight water transport as making substantial contributions through own performance. In the case of transport, the criteria for significant contribution to mitigation include increasing the number of low and zero-emission fleets; improving fleet efficiency and overall transport/mobility system efficiency; and increasing the substitution of fossil fuels with sustainable alternative and net-zero carbon fuels.

The South African Treasury promoted the Green Taxonomy as part of a broader set of recommendations seeking to unlock access to sustainable finance, in a technical paper on financing a sustainable economy published in 2021. Additional recommendations included the development and adoption of technical guidance, standards, and norms for monitoring and reporting and mitigating the financial sector's environmental and social (E&S) risks, including climate-related risks, as well as the disclosure of progress on risk management in the supervision activities conducted by the Prudential Authority (PA) and the Financial Services Conduct Authority. They also included the development of a benchmark climate risk scenario for use in stress tests by the sector and the development of capacities across the sector (Republic of South Africa, 2021c).

Additionally, in 2022, the Johannesburg Stock Exchange (JSE) published its **Sustainability Disclosure Guidance**. The guidance is aimed at JSE-listed companies, as well as other institutional investors, companies, and other stakeholders interested in sustainability disclosure and performance. It builds on existing initiatives, including GRI Sustainability Reporting Standards, The Taskforce on Climate-related Financial Disclosures (TCFD) recommendations, and the IIRC's International IR Framework (JSE, n.a. a). The guidance lists a series of recommended disclosures related to governance, strategy, management approach, metrics, targets and performance, and outlines metrics for governance, social, and environmental elements and standards (JSE, n.a. b).

Most large financial institutions in South Africa have also published sustainability and climate-related policies and commitments (Republic of South Africa, 2022a).

Industrial-related policies

The industrial policies of the JET IP include the South African Renewable Energy Masterplan (SAREM), a Hydrogen Roadmap and a Green Hydrogen Commercialisation Strategy, currently under cabinet consideration, and a policy direction on the advancement of NEVs through the South African Automotive Master Plan 2035 (SAAM2025), the Green Transport Strategy (GST), the Green Paper on NEVs, and a NEV Roadmap. Many of these policies are still not adopted or implemented.

Concerning the **SAREM**, a draft for consultation was published in July 2023.⁹ The plan focuses on how to take advantage of the growing market for renewable energy and battery storage in South Africa and internationally by supporting the development of industrial value chains that leverage the country's existing manufacturing and services capabilities. The plan includes several interventions related to aligning existing policies, making information on renewable markets available, establishing clear objectives and targets, and skill development. Some of the interventions also relate to tax incentives to support the development of value chains, as well as making public funding available to support new entrants and using public procurement rounds, with a focus on just transition hotspots. Interventions to support demand for renewable energy and storage technologies are also included in the SAREM, some specifically focused on supporting demand from micro, small, and medium-sized enterprises (MSMEs). These include designing and implementing a ZAR 1.3 billion Energy Resilience Scheme, a blended finance scheme to support companies affected by load-shedding, including grant financing for township and rural enterprises aiming to invest in solar back-up solutions. It also includes designing and implementing a concessional financing mechanism for small and medium-sized industrial, commercial, and farming operations to procure renewable energy and storage.

Industrial-related policies also include a **roadmap for the development of a hydrogen economy**.¹⁰ The roadmap presents a theory of change for the hydrogen sector and

details several expected outcomes, including the decarbonisation of transport, an energy-intensive industry, a green and enhanced power sector, as well as the creation of an export market for South African hydrogen, a centre of excellence in manufacturing, and a transition from grey to blue and then to green hydrogen. It identifies existing policies that could contribute to this outcome, like the National Energy Efficiency Strategy, the NCCPR, and the Integrated Resource Plan, as well as detailing needed changes in policy and regulatory frameworks. These reforms include the identification, publication, and implementation of new regulations, codes, and standards for zero-emissions transport.

The roadmap also identifies changes in the fiscal framework to address demand and supply. It calls for the evaluation and implementation of incentives, including tax and subsidies, to promote demand for hydrogen vehicles, as well as the elimination of existing subsidies for fossil-fuelled transport. On the supply side, it calls for tax incentives for local manufacturers of hydrogen vehicles and hydrogen technology, as well as tariffs to discourage imports. It also calls for the establishment of a procurement requirement for zero-carbon transport for the central and local governments and encouragements for corporate buyers to follow. Finally, it calls for additional finance to be made available to promote the demand and supply of hydrogen vehicles; and financing mechanisms to facilitate investment in decarbonising industry. For the power sector, similar measures are also called for.

⁹ Available here: [https://www.dmr.gov.za/Portals/0/Resources/Renewable%20Energy%20Masterplan%20\(SAREM\)/South%20Africa%20Renewable%20Energy%20Masterplan%20\(SAREM\)%20Draft%20III.pdf?ver=2023-07-17-141604-137×tamp=1689596128318](https://www.dmr.gov.za/Portals/0/Resources/Renewable%20Energy%20Masterplan%20(SAREM)/South%20Africa%20Renewable%20Energy%20Masterplan%20(SAREM)%20Draft%20III.pdf?ver=2023-07-17-141604-137×tamp=1689596128318)

¹⁰ More information on the initiative can be found at: <https://sustainablefinanceinitiative.org.za/>



Additionally, a **Green Hydrogen Commercialisation Strategy is under discussion**. Though not yet published, the preparatory work related to it identified additional incentives, tax breaks, infrastructure support, customs and tax exemptions for equipment, and carbon pricing, potentially in the form of a carbon tax or levy, needed for its successful implementation (Republic of South Africa, 2022c).

Despite the South African government's interest in developing this technology, civil society groups have been critical of this approach, partly due to a lack of transparency and participation in the process of development of the strategy. Criticism also stems from the technology itself and its role in the decarbonisation of South Africa. This is explained by the perceived inferiority of this technology compared to other solutions, the country's relative position in supplying green hydrogen internationally, the potential social and environmental impacts, and the use of public finance to support renewable energy for commercial green hydrogen production, in light of the worsening energy crisis in the country, among others (Centre for Environmental Rights and Natural Justice, 2023).

Finally, the country has a series of policies related to the third sector included in the JETP, New Energy Vehicles (NEVs). These include the South African Automotive Master Plan 2035 (SAAM2035),¹¹ which has no specific focus on NEVs and looks more generally at the development of the automotive industry. It also includes the Department of Transport's Green Transport Strategy (GTS) 2018-2050, the Department of Trade, Industry and Competition's (DTIC) Green Paper on NEVs, and a recently announced NEV Roadmap.

The **GTS 2018-2050**¹² seeks to promote behavioural changes towards sustainable mobility, promote energy efficiency and emission control measures in all transport modes, minimise the adverse effects of transport activities on the environment, and facilitate the sector's just transition. It aims to do so by promoting modal shifts, converting the fleet to cleaner alternative fuel and efficient technology vehicles, reducing fossil-fuel related emissions in the transport sector by promoting norms and standards for fuel economy, and putting in place regulations that promote improved efficiency in fossil-fuel powered vehicles and improved environmental performance of fossil fuels.

The GTS identifies a series of transport-related environmental taxation and fiscal policy instruments. These include fuel taxation, carbon taxation, and vehicle taxation. Fuel taxation applies to petrol, diesel, and biodiesel based on volume (per litre). The fuels are classified as fuel levy goods and zero-rated for value-added tax (VAT) purposes. The purpose of these taxes, which include the fuel levy (FL), the Road Accident Fund (RAF) levy, and the customs and excise levy (C&E), is to raise revenue and support environmental objectives by incorporating negative externalities into the fuel prices. Carbon taxation, already mentioned in several other policies, has already been adopted by the country and is currently in its first phase of implementation. Vehicle taxation, on the other hand, includes a value-added tax and ad valorem customs and excise duty, which applies to all motor, passenger, and commercial vehicles based on the price of the vehicle. Medium and heavy commercial vehicles are exempt from the ad valorem customs and excise duties.

Since the primary focus of these taxes and charges is to raise revenue, there is still scope, according to the policy, to improve the environmental outcomes of these taxes. The policy, therefore, called for assessing the impact of the current environmentally related taxes and identifying opportunities to improve the environmental effectiveness of the existing taxes and charges.

Concerning the **Green Paper on NEVs**, this document has not yet been approved. A draft for consultation from 2021 is available,¹³ proposing a series of key policy options. These include tax reforms to address demand and supply issues. As for the **roadmap**, a discussion document is available,¹⁴ which identifies requirements for the automotive industry transitions, including subsidies, tariffs, rebates, and other incentives, and increased support for NEV investments.

¹¹ Available here: http://www.thedtic.gov.za/wp-content/uploads/Masterplan-Automotive_Industry.pdf

¹² Available here: https://www.transport.gov.za/documents/11623/89294/Green_Transport_Strategy_2018_2050_onlineversion.pdf/71e19f1d-259e-4c55-9b27-30db418f105a



4

Assessment of the current status of South Africa's JETP and its investment plan against Article 2.1c approaches

Different approaches have been developed to assess the Paris alignment of finance flows, and therefore the degree of implementation of Article 2.1c. Existing approaches to assess the Paris alignment of finance flows can be grouped under three categories: “climate positive”, “climate negative”, and “enabling” (Feyertag, Watson, & Ryfisch, 2023). Climate positive approaches refer to the Paris alignment of finance flows that go beyond finance under Article 9 of the Paris Agreement,¹⁵ including domestic and private sector flows from both developed and developing countries. On the other hand, climate negative approaches look at misaligned flows, mostly focusing on finance flowing to a few high-emission sectors and activities, often in the energy sector. Enabling approaches look at the enabling environment for Paris alignment; they qualitatively assess actions, policies, and instruments taken or implemented by public and private stakeholders. Assessment under the enabling approach sometimes overlaps with the positive and negative approaches.

A widely used enabling approach focuses on identifying policy tools or levers that governments can use to shift finance into low-emission and climate-resilient activities that support the goals of the Paris Agreement and thus serve to implement Article 2.1c. Four categories are used to classify these policy levers: 1) financial policies and regulations; 2) fiscal policy levers; 3) public finance; and 4) information instruments (Whitley, Thwaites, Wright, & Ott, 2018; Pauw, König, Sadikhova, & Stutzmann, 2021). Recent iterations also include private sector voluntary initiatives (Hoffmann, Karenfort, Micozzi, & Ryfisch, 2022; Bingler, Kellenberger, Kolberg, & Watson, 2021).

¹³ Available here: https://www.gov.za/sites/default/files/gcis_document/202105/44606gen308.pdf

¹⁴ Available here: <https://naamsa.net/wp-content/uploads/2023/02/20230220-naamsa-NEV-Thought-Leadership-Discussion-Documents-1.pdf>

¹⁵ Article 9 of the Paris Agreement refers to the obligation of developed countries to provide and mobilise climate finance to support developing countries.

Table 3: Enabling approach's policy lever categories

Policy lever	Rationale	Examples
Financial policies and regulations	Primarily influence behaviour through force of law	Lending requirements, mandates of supervisory authorities, standards, plans and strategies, regulatory frameworks disclosure requirements, taxonomies – where mandatory and enforced
Fiscal policy levers	Primarily influence behaviour through price	Taxes, levies, subsidies, feed-in-tariffs, price support or controls, public procurement, budget support
Public finance	Primarily influence behaviours by shifting financial risk	Grants, debt, equity, guarantees, insurance, public budget and spending, green bonds
Information instruments	Primarily influence behaviours through awareness	Certification and labelling, taxonomies, transparency initiatives, awareness campaigns, corporate strategies, green bond guidelines, measuring, reporting and verification (MRV) systems, plans and strategies – Where voluntary

Source: adapted from (Whitley, Thwaites, Wright, & Ott, 2018)

Additionally, this framework has been expanded through lessons learned from country case studies to address policy implementation gaps by assessing the Paris alignment of overall strategies and targets, including key government targets outlined in NDCs, long-term low-emissions development strategies (LT-LEDS), and net-zero commitments (Feyertag, Watson, & Ryfisch, 2023).

It is important to note that the impact of changes in the enabling environment on climate outcomes in the real economy is difficult to assess, especially with financial sector alignment approaches, which could open the door for greenwashing (SCF, 2022). Addressing this issue would require addressing existing data and methodological challenges (Noels & Jachnik, 2022).

To assess the level of consistency of South Africa's JETP as outlined in its investment plan, the three different approaches outlined above describe different information that can give a comprehensive picture. The first two approaches give an overview of the actual finance flows that either support the energy transition and the mitigation goals of South Africa and the Paris Agreement (climate positive) or finance activities that go against these goals, by providing finance for fossil fuels (climate negative). The enabling environment lens is more focused on the policies and regulations that either support the transition and the mitigation goals of the Paris Agreement, or can be considered to be misaligned with these goals. As mentioned before, these three lenses often overlap in different ways and it is not always easy to separate the analysis of one from the others. This analysis has tried to be as comprehensive as possible, based on available information related to the three different approaches.

Climate positive

In terms of climate positive, in 2017-2018, the CPI estimated that climate finance flowing to South Africa totalled ZAR 62.2 billion for 2017 and 2018, with the majority of this finance coming from domestic sources (Cassim, Radmore, Dinham, & McCallum, 2021).

The South African government invested more than ZAR 12 billion in climate-related activities. Of this total, close to ZAR 3 billion was invested in clean energy, while some ZAR 500 million were invested in low-carbon transport and around ZAR 600 million in energy efficiency and demand-side management (EE&DSM) (Cassim, Radmore, Dinham, & McCallum, 2021). While investments in renewables are significant, they are small compared to the needs (Cassim, Radmore, Dinham, & McCallum, 2021).

The South African government budget expenditure accounted for ZAR 8 billion. However, a large majority was spent on adaptation and dual benefit sectors. Clean energy and EE&DSM accounted for 2 per cent and 8 per cent, respectively, of the total budget expenditure (Cassim, Radmore, Dinham, & McCallum, 2021). It is important to note that the numbers provided are estimates due to the limited available data from the government.

Public climate finance from international sources reached ZAR 4.4 billion in the same period, representing 20 per cent of total public finance flows. A large majority was directed to the clean energy sector (close to ZAR 2.8 billion) (Cassim, Radmore, Dinham, & McCallum, 2021).

Private finance accounted for ZAR 35.3 billion in 2017 and 2018, with 100 per cent of it invested in clean energy, energy efficiency, and demand-side management (Cassim, Radmore, Dinham, & McCallum, 2021). In 2022, green bond issuance reached ZAR 37 billion, an increase of ZAR 16 billion from 2021 in the JSE (JSE, 2023), though the details of the use of this finance and its links to the energy transition are not clear.

The South African JET-IP has already identified the finance needs for the period covered by the plan, 2023-2027. It has also identified available public, national, and international finance, as well as assessing the availability of private finance, which resulted in the estimation of a gap in finance to implement a just energy transition in the focus sectors.

A detailed look at the different sources identified includes commitments by the private sector, especially large local financial institutions, which aggregate to ZAR 500 billion (approx. USD 26.7 billion), over three years. However, the country's development finance institutions have already invested, committed, or are projected to invest close to ZAR 150 billion (approx. USD 8 billion¹⁶). It is unclear, however, how other initiatives and funding are included in these calculations, for example, the World Bank's Eskom Just Energy Transition Project, which will provide USD 497 million to support Eskom in decommissioning a coal-fired power plant.¹⁹

The JET IP also details the contributions by the IPG, consisting of a combination of grants, concessional loans, commercial loans, and guarantees, with concessional loans representing a large majority of the finance provided (63 per cent), followed by commercial loans (17.7 per cent), and guarantees (15.4 per cent), with grants representing less than 4 per cent of the offer. The IP does not quantify any contributions that come directly from the national budget. It is also unclear how the country expects to fill the finance gap identified. However, it highlights the need to use a variety of financial instruments and approaches to raise and crowd-in additional finance, e.g., blended finance and thematic bond issuance, as well as the need to enhance budgetary support by mainstreaming climate considerations in government spending. It also highlights the need for increased support from developed countries to finance the just transition.

¹⁶ Defined as local, national, and transnational financing from public, private, and alternative sources.

¹⁷ At the exchange rate of November 11, 2023: <https://www.oanda.com/currency-converter/en/?from=ZAR&to=USD&amount=NaN>

¹⁸ idem

¹⁹ More information on the project can be found here: <https://www.worldbank.org/en/news/factsheet/2023/06/05/factsheet-eskom-just-energy-transition-project-in-af-south-africa>

Climate negative

The JET IP lacks a climate negative focus. It fails to identify public or private finance that is misaligned with the JETP's objectives in the focus sectors by contributing to continued investments in coal or other fossil fuels.

However, other sources have identified instances of public finance and fiscal instruments contributing to continued reliance on fossil fuels in South Africa, as well as private finance continuing to flow towards misaligned activities. The role of Eskom is key in understanding how misaligned finance continues to grow.

According to some estimates, between 2020 and 2021, South African energy subsidies totalled ZAR 172 billion (USD 10.4 billion), including subsidies to fossil fuels, electricity, hydroelectricity, nuclear, carbon tax exemptions, and bailouts for several carbon-intensive industries (Bridle et al., 2022).²⁰ A key subsidy included is a bailout of Eskom in 2020-2021, representing the largest subsidy in that period. Because Eskom's power generation largely relies on coal, the study considered the bailout to support the ongoing combustion of coal in South Africa. The second largest subsidy identified resulted from South Africa's carbon tax exemption. With the additional support for Eskom approved recently, these figures have increased substantially in 2023.

Additionally, the IMF estimates that the Government of South Africa's large transfers to Eskom, which still relies primarily on coal for its power plants, offset the impact of the carbon price and the other relevant taxes and levies placed on electricity and, therefore, provide little incentive for Eskom to move away from coal for its generation (International Monetary Fund, 2023).

Available data on private sector investments in fossil fuels shows that South African institutional investors' holdings in coal, oil, and gas companies in South Africa amount to USD 17.1 billion. The largest investors include South Africa's Government Employees Pension Fund

(GEPF) and the Public Investment Corporation (PIC), an asset manager investing funds on behalf of many public sector entities (Centre for Environmental Rights, 2023). In the specific case of Eskom, the GEPF is the largest institutional investor in Eskom Bonds, with USD 5,588 million invested; they also include many private investors based in developed countries, like Allianz (Germany) with USD 441 million, M&G (UK) with USD 218 million, and BlackRock (USA) with USD 207 million, among others (Mbewe, 2023). Of this total, the majority went to fossil fuels and coal-fired electricity.

South African financial institutions, both public and private, provided over USD 8.6 billion in finance for fossil fuel projects and companies in Africa, between 2016 and 2021, according to some estimates (Geuskens & Butijn, 2022), including project finance, corporate loans, and underwriting services attributable to fossil fuel operations. This represented around 6.6 per cent of the total finance (USD 132.3 billion) for fossil fuels flowing to Africa in that period, with the majority of the largest fossil fuel financiers being from North America and Europe. The majority of the finance provided by South African financial institutions (close to 86 per cent) came from the private sector. However, national Development Finance Institutions, including the Development Bank of Southern Africa (DBSA), the Industrial Development Corporation of South Africa (IDC), and the Public Investment Corporation (PIC), provided close to USD 1.2 billion of that total, or around 14 per cent (Geuskens & Butijn, 2022).

²⁰ <https://www.iisd.org/system/files/2022-01/south-africa-energy-subsidies.pdf>

²¹ Including JPMorgan Chase, Standard Chartered, and Barclays in the top 5.

Enabling approach

Where the JET IP is more detailed is in the country's progress in building an enabling environment. As shown above, it specifies a long list of policies and policy reforms, legal and institutional frameworks, voluntary commitments, and other instruments that will support alignment with the country's NDC goals. The relevant levers are assessed below, in Table 4, for the status of their implementation as well as qualitative and quantitative information on Paris alignment and, whenever possible, impact on finance flows. Additional policies not mentioned in the JET IP are also included, where known and considered relevant.

Voluntary private sector initiatives like the JSE's Sustainability Disclosure Guidance, and the more recent introduction by the JSE of a sustainability and transition segment for listed bonds, are not included in the table because they do not constitute policy levers, which for this analysis are understood as tools deployed by governments. However, they are still relevant for Paris alignment and therefore are discussed here.

The JSE's Guidance is discussed above and was included in the JET IP. As for the Transition Segment, it is a "platform on JSE's Main Board to list transition debt securities, where issuers can raise funds for climate or just transition-related purposes (JSE, n.a. c)". The listing of Transition Debt Securities is granted if the debt security complies with the Transition Segment standards, supported by a review report (JSE, n.a. c). It is important to note that JSE's sustainability-linked securities do not require the issuer to ring-fence the use of proceeds; it only requires that the goals and targets set by the issuer and previously agreed related to its sustainability objectives are met (JSE, n.a. d).

The JSE expects to introduce new instruments to guide the market on sustainability and climate change in the future. These include carbon credit trading, governance solutions to promote inclusivity and transparency, education for listed companies on climate and ESG risks and training for climate disclosure, and supplements to support disclosure (JSE, 2023).

Other private sector initiatives include the voluntary adoption by the South African banking industry of the TCFD framework for the disclosure of climate-related risks (AfDB, GCA and UNEP-FI, 2021) and the launch of the International Sustainability Standards Board (ISSB)'s Sustainability Disclosure Standards by the South African Institute of Chartered Accountants (SAICA) (SAICA, 2023). The second standard, IFRS S2, requires entities to disclose climate-related risks and opportunities, including transition risks, and will become effective for reporting in 2024 (IFRS, 2023).

Where the JET IP is more detailed is in the country's progress in building an enabling environment. As shown above, it specifies a long list of policies and policy reforms, legal and institutional frameworks, voluntary commitments, and other instruments that will support alignment with the country's NDC goals. The relevant levers are assessed below, in Table 4, for the status of their implementation as well as qualitative and quantitative information on Paris alignment and, whenever possible, impact on finance flows. Additional policies not mentioned in the JET IP are also included, where known and considered relevant.

Voluntary private sector initiatives like the JSE's Sustainability Disclosure Guidance, and the more recent introduction by the JSE of a sustainability and transition segment for listed bonds, are not included in the table because they do not constitute policy levers, which for this analysis are understood as tools deployed by governments. However, they are still relevant for Paris alignment and therefore are discussed here.

The JSE's Guidance is discussed above and was included in the JET IP. As for the Transition Segment, it is a "platform on JSE's Main Board to list transition debt securities, where issuers can raise funds for climate or just transition-related purposes ". The listing of Transition Debt Securities is granted if the debt security complies with the Transition Segment standards, supported by a review report . It is important to note that JSE's sustainability-linked securities do not require the issuer to ring-fence the use of proceeds; it only requires that the goals and targets set by the issuer and previously agreed related to its sustainability objectives are met .

The JSE expects to introduce new instruments to guide the market on sustainability and climate change in the future. These include carbon credit trading, governance solutions to promote inclusivity and transparency, education for listed companies on climate and ESG risks and training for climate disclosure, and supplements to support disclosure.

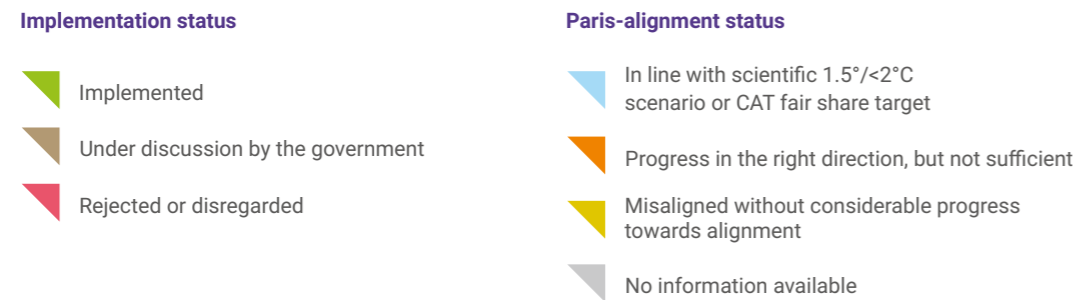
Other private sector initiatives include the voluntary adoption by the South African banking industry of the TCFD framework for the disclosure of climate-related risks and the launch of the International Sustainability Standards Board (ISSB)'s Sustainability Disclosure Standards by the South African Institute of Chartered Accountants (SAICA). The second standard, IFRS S2, requires entities to disclose climate-related risks and opportunities, including transition risks, and will become effective for reporting in 2024 .



© bilano/ Shutterstock

It is important to note that, where impact on GHG emissions cannot be assessed, the framework proposed here relies on a subjective assessment of Paris alignment.

Table 4: Assessment of South Africa's enabling environment for the energy transition



It is important to note that, where impact on GHG emissions cannot be assessed, the framework proposed here relies on a subjective assessment of Paris alignment.

Lever	Specific measure and status of implementation	Information on Paris Alignment
Strategies and targets	General climate policies and targets	<p>The NDP's 5th chapter focuses on ensuring environmental sustainability and an equitable transition to a low-carbon economy. Its vision includes growth in the renewable energy sector by 2030 and a reduction in carbon emissions in line with the country's international commitments while maintaining competitiveness. (Republic of South Africa, 2011b).</p> <p>The Plan mentions two instruments for the establishment of a carbon-pricing strategy: carbon pricing and a carbon budget approach.</p> <p>The plan is based on a phased approach that accounts for an equitable transition, using strategic planning, the establishment of a sound evidence base and substantial investments.</p> <p>Considering that the plan is linked to South Africa's international commitments, which are its NDC and LEDS, the NDP is assessed similarly to these commitments for the Paris alignment.</p>
		<p>South Africa's NDC commitment is considered "almost sufficient" when assessed against 1.5°C compatibility. This is the case for the whole range included in the updated NDC when comparing the NDC target against modelled domestic pathways (Climate Action Tracker, 2022).</p> <p>When the NDC target is assessed against the country's fair share, the upper end of the range is considered "insufficient"; however, the lower end of the range is considered "almost sufficient" and very close to the 1.5°C compatible (Climate Action Tracker, 2022). This indicates that if the JET IP supports South Africa in achieving the lower end of its updated NDC target, as the plan itself states, it will bring the country very close to 1.5° compatibility.</p>
		<p>South Africa's LEDS includes only a vision statement: "South Africa follows a low-carbon growth trajectory while making a fair contribution to the global effort to limit the average temperature increase while ensuring a just transition and building of the country's resilience to climate change (Republic of South Africa, 2020)." However, it does not include a quantitative target.</p>
		<p>It is included as part of South Africa's LEDS vision statement, with a target year of 2050, but no further information is made available that could allow for its evaluation.</p>
		<p>NCCRP establishes an approach to mitigation, mandating a set of emissions reduction goals for the long, medium, and short term, and specifies a trajectory for South Africa's emissions. This trajectory called the "Peak, Plateau and Decline" trajectory, was used as a basis for South Africa's first NDC mitigation targets. It is also mentioned in its LEDS. Considering South Africa's original mitigation targets were less ambitious than those of its revised NDC, the "Peak, Plateau and Decline" trajectory cannot be considered sufficient to achieve the goals of the Paris Agreement. At the same time, the NCCRP predates the Paris Agreement, so it cannot easily be evaluated for alignment.</p>

Strategies and targets	Sectoral climate policies and targets	<p>The Sectoral Emissions Targets (SETs) are one of the cross-cutting measures included in South Africa's LEDS. They are defined as targets allocated to an emitting sector, or sub-sector, over a defined period of time, in alignment with the IPCC emissions categories. The LEDS states that these will be allocated based on their socio-economic benefits, best available science, evidence, and information. The cumulative targets are expected to be constrained by the GHG emissions trajectory of the country so that when the trajectory is revised to the requirements of the Paris Agreement, all government departments implement the necessary policies and measures to drive down emissions.</p> <p>Carbon budgets were also introduced by the LEDS. These set a maximum volume of emissions from specific activities for individual companies over a rolling five-year period. A penalty can be imposed if the company exceeds its budget allocation. The first phase, with a limited number of companies participating, took place from 2016 to 2020.</p> <p>So far, there has been no legal basis for the SETs or the carbon budgets. However, the Climate Change Bill currently under discussion is expected to establish the mandatory implementation of the carbon budgeting system and SETs. However, the sectors and sub-sectors included, the targets set for each of them, and the entities subject to carbon budgets and their respective budgets will only be known sometime after the passing of the Bill when the mandate to establish them is completely implemented.</p>
		<p>The IRP is South Africa's electricity infrastructure development plan for 2010-2030. It is based on the least-cost electricity supply and demand balance but also takes into account other objectives like affordable electricity, GHG emissions reductions, diversification of electricity generation sources, and regional development and localisation (Republic of South Africa, 2019). The IRP was updated in 2019.</p> <p>The updated version outlines the long-term plan for installed capacity and the annual energy contribution of different technologies, including coal, nuclear, hydro, storage, solar photovoltaic (PV), concentrated solar power (CSP), wind, gas and diesel and distributed generation, co-generation, biomass, and landfill. From a 2018 baseline of installed capacity where coal represented over 75 per cent of total capacity, it plans for the share of coal to be reduced to 43 per cent of total installed capacity in 2030 (and 58.8 per cent annual energy contribution). This is to be achieved by decommissioning coal power plants representing over 11,000 MW of installed capacity. Still, it includes the addition of 1,500 MW in new capacity, beyond the capacity already committed or contracted up until 2022 of around 5,700MW. The share of renewables is increased, with wind accounting for 22.53 per cent of total installed capacity by 2030, an increase of close to 900 per cent, from 1,980 MW to 17,742 MW. Solar PV accounts for 10.52 per cent, an increase of more than 500 per cent from 1,474MW to 8,288MW; hydro more than doubled in capacity, and other technologies also increased, except for nuclear, which remains constant (Republic of South Africa, 2019).</p> <p>The IRP contemplates a reduction in coal power generation by 2030, but this reduction is not compatible with existing estimates of the pace of coal phase-out needed for a 1.5°C pathway, which would need the country to reduce the share of coal to between 8 and 36 per cent of the total by 2030 while scaling up the share of renewables to between 60 and 90 per cent in the same period (Climate Action Tracker, 2023).</p> <p>The IRP will be reviewed in light of South Africa's need for additional generation capacity and considering climate commitments (Republic of South Africa, 2022a). However, the exact timeline of this review is unclear.</p> <p>It is important to note that the Ministry of Mineral Resources and Energy, under which the IRP is developed, has stated before that their priority when it comes to the transition is to ensure a secure supply of affordable, accessible, and reliable energy. This translates into a prioritisation of interventions that contribute to reducing high energy costs and dealing with the high levels of unreliable supply of energy (DMRE, 2021), and not necessarily those that will lead to reductions in GHG emissions.</p>

Lever	Specific measure and status of implementation	Information on Paris Alignment
Financial policies and regulations	Regulatory framework and disclosure requirements for climate risks	<p>South Africa has no active regulations that consider climate risks (AfDB, GCA and UNEP-FI, 2021). The Prudential Authority (PA) of South Africa is working on a set of regulations expected to be enforced within the next years, using an approach based on the work of the European Central Bank (ECB) and the Bank for International Settlements (BIS) (AfDB, GCA and UNEP-FI, 2021).</p> <p>The PA also communicated requirements for the banking industry to consider climate risk as part of stress testing and the Internal Capital Adequacy Assessment Process (ICAAP) (AfDB, GCA and UNEP-FI, 2021). In early August 2023, the PA released four draft guidance documents for banks and insurers on how to integrate climate risks in governance and risk management frameworks (Costa, 2023). The PA invited comments on the proposed guidance before finalising them; the period to receive comments was open until 13 September 2023.²²</p>
	Monetary policy: support for increased green lending and decreased lending to polluting sectors	<p>The South African Reserve Bank appears to have considered and rejected the provision of credit lines to commercial banks for green lending, as well as the engagement of the Bank with green quantitative easing (QE) (Kganyago, 2023). Additionally, the possibility of penalising banks with high exposure to carbon-intensive sectors, as part of micro prudential requirements was also considered an inadequate way to deal with the task of changing relative prices to favour green sectors (Kganyago, 2023)</p>
Fiscal policy levers	Carbon pricing	<p>South Africa established a carbon tax in 2019 through its Carbon Tax Act. The tax was introduced using a phased approach to account for concerns about the impacts on competitiveness and on low-income households. It includes a basic tax-free allowance. These tax-free allowances are considered to contribute to a low effectiveness of the carbon tax, even when considering the planned increases in the carbon tax rates by 2030.</p> <p>Using the Carbon Pricing Assessment Tool (CPAT), estimates by the IMF found that the current path of South Africa's carbon tax rate will not be enough to meet the country's emissions targets included in its updated NDC (420-350 MtCO₂-eq). The CPAT estimates that current efforts will reduce GHG emissions in a range of 475-492 MtCO₂-eq for 2026-2030 (International Monetary Fund, 2023).</p>
	Environmental related taxes	<p>South Africa already has other environmental taxation in place, including fuel and vehicle taxation. However, the country's own Green Transport Strategy recognised that the primary goal of these taxes is to raise revenue and not to achieve environmental goals. The policy called for an assessment of the environmental effectiveness of these taxes.</p> <p>The IMF, however, which also identified additional environment-related taxes in South Africa, considers in its evaluation that the fuel levy significantly raised the price of carbon in the country (International Monetary Fund, 2023).</p>
	Subsidies, rebates, and other fiscal incentives promoting energy transition	<p>Within the existing energy-related policies, two had already established subsidies, tax exemptions, rebates, and other fiscal instruments to support the country's energy transition.</p> <p>One example is the Solar Water-Heating (SWH) Programme, included as part of the implementation of the NCCRP's Renewable Energy Flagship Programme. This programme initially aimed to install 1 million solar heaters by 2014, using subsidies to promote imports of SWH systems. However, this was changed in 2014 to favour local manufacturing (International Energy Agency, 2020).</p> <p>The taxi recapitalisation programme also included a scrapping allowance for taxi operators, which had reached ZAR 5.6 billion by 2023 and more than 81,000 vehicles scrapped (Republic of South Africa, 2023c). However, as with other policies, the primary goal of this programme, when established, was not related to climate change but more to improving the safety of users.</p> <p>Less clear is the role of REIPPPP in providing subsidies for renewable energy. A study on South Africa's subsidies considered that the programme is likely providing subsidies, defined as any excess paid to renewable energy generators over a nominal "market price". However, there was not enough publicly available information to estimate the amount of subsidies provided (Bridle et al., 2022).</p>

²² More details on the drafts and invitation for comments can be found here: <https://www.resbank.co.za/en/home/publications/publication-detail-pages/prudential-authority/pa-documents-issued-for-consultation/2023/Proposed-Guidance-Note-Climate-related-risk-practices-for-banks>

Fiscal policy levers	Misaligned subsidies phase-out	<p>South Africa's LEDS included a commitment to phase out inefficient fuel subsidies and incentives but with no specific measures or targets.</p> <p>As part of its G20 commitments, South Africa had also committed to rationalise and phase out "inefficient fossil-fuel subsidies that encourage wasteful consumption" over the medium term while preventing negative impacts on the poorest (Runnalls, n.a.). However, a comparative assessment of the implementation of this commitment shows little progress in South Africa, including because of the weakness of the commitment, the still large support for coal exploration, production, processing, and transportation, and medium support for fossil fuel power and fossil fuel use (Geddes et al., 2020).</p> <p>More specifically, subsidies by energy and subsidy type have increased from the period 2017/18 to 2020/21, as shown in Figure 2 below.</p> <p>Figure 2: Subsidies by energy and subsidy type, FY 2017/18 to FY 2020/21</p> <table border="1"> <thead> <tr> <th>Subsidy Type</th> <th>FY 2017/18</th> <th>FY 2018/19</th> <th>FY 2019/20</th> <th>FY 2020/21</th> </tr> </thead> <tbody> <tr> <td>Bailout</td> <td>10</td> <td>6</td> <td>25</td> <td>67</td> </tr> <tr> <td>Carbon tax exemption</td> <td>0</td> <td>0</td> <td>25</td> <td>45</td> </tr> <tr> <td>Oil and gas</td> <td>28</td> <td>28</td> <td>41</td> <td>43</td> </tr> <tr> <td>Electricity</td> <td>14</td> <td>14</td> <td>16</td> <td>16</td> </tr> <tr> <td>Nuclear</td> <td>0.6</td> <td>0.6</td> <td>0.8</td> <td>0.9</td> </tr> <tr> <td>Coal</td> <td>0.7</td> <td>0.6</td> <td>0.9</td> <td>0</td> </tr> <tr> <td>Renewable energy & hydro</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>ZAR billion Source: Bridle et al. 2022</p> <p>The definition of subsidies, in this case, includes direct and indirect transfers of funds and liabilities; government revenue foregone (reduced tax rates and tax exemptions); provision of goods or services below market value; and income and price support through market regulations. Specifically for South Africa, subsidies include, among others, the Free Basic Electricity (FBE) Access initiative, the Integrated National Electrification Programme, and the recapitalisations, bailouts, and restructuring of State Owner Enterprises (SOEs), including Eskom, South African Airways, and South African Express.</p>	Subsidy Type	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	Bailout	10	6	25	67	Carbon tax exemption	0	0	25	45	Oil and gas	28	28	41	43	Electricity	14	14	16	16	Nuclear	0.6	0.6	0.8	0.9	Coal	0.7	0.6	0.9	0	Renewable energy & hydro	0	0	0	0
	Subsidy Type	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21																																					
Bailout	10	6	25	67																																						
Carbon tax exemption	0	0	25	45																																						
Oil and gas	28	28	41	43																																						
Electricity	14	14	16	16																																						
Nuclear	0.6	0.6	0.8	0.9																																						
Coal	0.7	0.6	0.9	0																																						
Renewable energy & hydro	0	0	0	0																																						
Public procurement	<p>The key element of public procurement for the energy sector in South Africa is the REIPPPP. This is a competitive procurement process that aims to facilitate private sector investment in renewable energy in South Africa. Winning projects under the REIPPPP are awarded long-term power purchase agreements. According to the JET IP, REIPPPP had procured 6,422 megawatts (MW) of renewable electricity capacity in 10 years through 4 bids, with an additional 2 bid windows in progress at the time of publication of the plan, for which an additional 5,183 MW were announced. As of March 2023, the REIPPPP had attracted ZAR 228.8 billion in investments from projects that reached financial close, including ZAR 42.6 billion in foreign investments and financing (19 per cent) (Republic of South Africa, 2023d). The latest bid window (BW6) is expected to attract an additional ZAR 14.7 billion in investments (Republic of South Africa, 2023d).</p> <p>The programme is often seen as a success, including because of its positive outcomes linked to the country's development and the reductions in tariff rates for solar and wind energy; though it has also presented challenges and opportunities for improvement (Eberhard, Kolker, & Leigland, 2014; Eberhard & Naude, 2016; Bruce, 2019; Partnership on Transparency, 2018; Republic of South Africa, 2023d; Republic of South Africa, 2023e)</p> <p>In 2021, the government also announced Schedule 2 of the Electricity Regulatory Act, which raises the licensing threshold to 100 MW. The JET IP estimates that this change unlocked a pipeline of more than 80 confirmed private sector projects with a combined capacity of over 6,000 MW and paved the way for investment in larger, utility-scale projects.</p> <p>At the municipal level, several municipalities have issued power procurement tenders, according to the JET IP. Information on these tenders is available for the City of Cape Town,²³ but no integrated information sources for all concerned municipalities seem to exist.</p> <p>Other existing public procurement policies include the SWH Programme, with the government, through the Department of Energy (DoE) procuring SWH systems, focusing on meeting local production and content requirements to promote local industries (International Energy Agency, 2020).</p>																																									

²³ Available here: https://resource.capetown.gov.za/documentcentre/Documents/Procedures,%20guidelines%20and%20regulations/IPPP_FAqs.pdf

Lever	Specific measure and status of implementation	Information on Paris Alignment
Public finance	National public finance	<p>The DBSA, which is one of the country's leading public financial institutions, has developed a Climate Change Policy Framework, that sets targets for financial flows into mitigation projects and programmes, in support of the Bank's Paris alignment. The Bank also approved an Integrated Just Transition Investment Framework, to limit the increase in high carbon-intensive investments and address transition risk, while addressing human rights, social equity, and biodiversity needs (IDCF, 2021).</p> <p>The DBSA has also published a statement on net zero, which established that the Bank will incorporate its net-zero pathway by 2050 as part of its Integrated Just Transition Investment Framework. This pathway will include details of the Bank's net-zero emissions targets in its investment and loan portfolios and will align with South Africa's net-zero targets as detailed in the country's NDC (DBSA, n.a.). The exact targets will be disclosed once the Bank has assessed and committed to timeframes (DBSA, 2023).</p> <p>The DBSA also considers its accreditation to the Green Climate Fund (GCF) and the Global Environmental Facility (GEF) as part of its commitment to support mitigation and adaptation action. These accreditations have resulted in several projects and programmes that support climate action, including the Climate Finance Facility Programme (DBSA, 2023), which draws inspiration from the "green investment bank" model, to test innovative financial instruments in local currency (Clark, Choi, Tonkonogy, Micale, & Wetherbee, 2019).</p> <p>The DBSA also developed a Green Bond Framework, which applies to the financing or refinancing of projects that meet one of a set of criteria, including contributing to climate mitigation in compliance with the International Development Finance Club (IDFC); aligning with the objective of an "environmentally sustainable and equitable transition to a low carbon economy"; and the Sustainable Development Goals (SDGs). Projects should also comply with the Bank's environmental and social safeguards and social screening (DBSA, 2021). This framework was independently assessed and shown to comply with the Green Bond Principles (GBP) (Carbon Trust Africa, 2021).²⁴</p> <p>Other public institutions, including the PIC, the Export Credit Insurance Corporation, and the IDC do not seem to have made significant strides to align their investments with the goals of the Paris Agreement. The PIC includes monitoring of climate risks as part of the work of its ESG team. PIC has started to develop a climate change position paper, which is awaiting Board approval, and which should inform its investments in the future (Public Investment Corporation, 2023).</p>

²⁴ For more on the GBP: <https://www.ifc.org/content/dam/ifc/doclink/2022/the-green-bond-principles-202206.pdf>

Lever	Specific measure and status of implementation	Information on Paris Alignment
Information instruments	Climate Budget Tagging (CBT)	<p>South Africa's NCCRP included provisions for the development of climate responsive budgeting. In this context, the country has moved forward with the development of a CBT system to support climate responsive budgeting.</p> <p>Several pilots were initiated in 2020 and rolled out between 2021 and 2022 at the provincial, municipal, and national levels, including one SOE; not all pilots were completed due to capacity constraints and the need to create capacity and simplify the existing methodology (Republic of South Africa, 2023f). A new pilot is expected to be deployed at some point in the future, but no clear timeline is available.</p> <p>The absence of a CBT system explains the difficulties in accurately assessing government budget expenditure in climate-related activities.</p>
	South Africa's Green Finance Taxonomy	<p>Evaluating the impact of the introduction of a green taxonomy on the country's energy transition and the finance flows shifting to support it is difficult, especially considering its recent publication and voluntary nature. However, taxonomies are seen as instruments that could facilitate the mobilisation and reallocation of finance towards sustainable and green investments by improving market clarity but are complementary to good planning, policies, and regulations (OECD, 2020).</p> <p>Available information from a comparative study between South Africa's taxonomy and the EU's taxonomy shows that for the energy sector, the criteria for significant contribution included in South Africa's taxonomy are more ambitious than those included in the EU taxonomy (Republic of South Africa, 2022d). Both taxonomies use the technical screening criteria approach (Xu & Deng, 2022). This is because they include declining thresholds towards zero emissions; but only for the production of electricity, heating, and cooling from geothermal and bioenergy, as well as for the transmission and distribution of electricity. However, unlike other taxonomies,²⁵ the South African taxonomy does not include other social or transition aspects.</p> <p>On the other hand, preliminary findings by a group of organisations found that the taxonomy is hardly being used. The findings are based on interviews with relevant stakeholders, including financial market participants, real economy enterprises, business associations, government departments, and civil society. Factors explaining this state include the voluntary nature of the tool, which also had to compete with other classification systems developed in parallel. Other factors include the lack of recognition of the taxonomy by the EU, the need to develop capacities and expertise to implement the taxonomy, and fossil path dependencies that prevent bankable green products from emerging (Arnoldi, 2023).</p>
	Standards and labels	<p>The Energy Efficiency Strategy of the Republic of South Africa relies partly on developing energy labels and energy performance standards to achieve its objectives, including reducing CO2 emissions through energy demand reductions (Republic of South Africa, 2005).</p> <p>With support from international agencies, South Africa implemented its Energy Efficiency Standards and Labeling (EESL) programme, which resulted in the establishment of standards and labelling regulations in 2014 for white goods and audio-visual equipment, and in 2016 for electric water heaters (de la Rue du Can et al., 2020), which are expected to achieve 2.15 TWh of savings by 2020 and 5.55 TWh by 2030 (de la Rue du Can & McNeil, 2018), with the cost of the savings being extremely low (de la Rue du Can et al., 2020).</p>

5

Integration of justice elements in the Article 2.1c approaches

As with the Article 2.1c discussions, there is no agreed framework for what constitutes a just transition, or a just energy transition, within or outside of the UNFCCC. Definitions vary, but many definitions converge around ensuring that a transition to low-emissions or “green” economies is achieved in a way that is inclusive, equitable, and fair, especially by ensuring a fair distribution of risks and opportunities among different groups, leaves no one behind, and ensures decent work opportunities (ILO, n.a.; Pinker, 2020; EBRD, n.a.; European Commission, n.a.). The Paris Agreement mentions just transition, focusing on the workforce and creating decent work and quality jobs, as defined by countries’ development priorities. In this sense, a just transition is seen as context-specific. Though often the definitions focus on the national level, just transition can also be seen through a global lens that includes principles of climate justice and CBDR as well as support for developing countries based on their needs (Tavares, 2022; Walsh, Ahmed, Said, & Faria e Maya, 2021).

South Africa's Just Transition Framing

South Africa has included elements of just transition in several of its policies. The JET IP mentions some of these policies and their role in framing the understanding of just transition in the country. These include the NDP, which links low-carbon objectives within the country’s development pathway and places livelihoods at the centre of the country’s response to climate change (Republic of South Africa, 2022a). It also includes South Africa’s Just Transition Framework and a draft Just Transition Framework specifically for the mining and energy sectors, which is still under discussion. The

concept of just transition is included in other climate policies, for example, in South Africa’s LEDS, as part of its vision statement and the phased planning for implementation. The concept is also key to the NDC, where it is mentioned as the core of implementing climate action in the country and where measures to achieve a just transition are outlined.

Socio-economic and development aspects that are key to a just transition are also included in many relevant sectoral policies in South Africa, both for the energy and industrial sectors, through considerations and requirements linked to localisation of production and local content requirements, job creation, enterprise development, and socio-economic development. This is

particularly clear in the industrial-related policies of the JET IP but is also part of programmes like REIPPPP, for which the bid evaluation includes non-price, “economic development requirements” factors as incentives for bidders to include the promotion of job growth, domestic industrialisation, community development, and black empowerment as considerations (Eberhard, Kolker, & Leigland, 2014).

The Just Transition Framework

South Africa’s Just Transition Framework sets a vision for the country’s just transition. The framework outlines the principles, policies, and governance arrangements needed to implement a just transition. The document is framed as the nexus between climate and development in South Africa. It focuses on managing the social and economic consequences of climate policies (Republic of South Africa, 2022e).

The Just Transition Framework defines just transition as aiming to “achieve a quality life for all South Africans, in the context of increasing the ability to adapt to the adverse impacts of climate, fostering climate resilience, and reaching net-zero greenhouse gas emissions by 2050, in line with best available science (Republic of South Africa, 2022e)”. It also defined it as contributing to “the goals of decent work for all, social inclusion, and the eradication of poverty” while putting people at the centre of decision-making, with particular focus on “those most impacted, the poor, women, people with disabilities, and the youth”; and building “the resilience of the economy and people through affordable, decentralised, diversely owned renewable energy systems” among other relevant outcomes.

The framework is underpinned by three key principles: distributive justice, restorative justice, and procedural justice. Distributive justice refers to a fair distribution of risk and opportunities resulting from the transition and avoiding the costs of the necessary adjustments falling on workers and communities. Restorative justice focuses on rectifying damages caused to people and the environment and ameliorating the situation of harmed and disenfranchised communities. Finally, procedural justice deals with the need to empower and support workers, communities, and small businesses to define their own development and livelihoods.

The framework identified key policy areas for a just transition, including human resources and skills development; industrial development, economic diversification, and innovation; and social protection measures. These are further detailed and translated into specific financial needs, estimated at USD 10 billion over the next three decades for climate justice outcomes (Republic of South Africa, 2022e).

A series of strategies are included in the framework to mobilise finance towards a just transition. These include many that would move the country’s existing policies further in the right direction on Paris alignment. For example, strategies include reviewing mechanisms such as taxes and subsidies to ensure they are “fit-for-purpose”; gradually eliminating perverse or regressive subsidies that are misaligned, while introducing incentive schemes that support the transition; integrating just transition in the national budget to reorient government spending; integrating climate risks and just transition in all investment decisions; and using green and thematic bonds to mobilise capital. The ability of public sources to support the just transition by reviewing their effectiveness is also considered. Finally, some strategies are geared towards attracting private sector capital by creating a business case for just transition projects, employing a taxonomy for transition finance flows that is aligned with the green taxonomy, expanding the use of blended finance, and encouraging public-private partnerships.

The operationalisation of the JET IP

The just transition framework is operationalised further and expanded beyond the national focus in the JET IP in different ways. First, by developing a specific definition of just energy transition that builds on the existing framework by adding the NDC targets as a goal and outlining ways to achieve this, including:

- Accelerating affordable, decentralised, diversely owned renewable energy systems;
- Restoring previous and future ecosystems and natural resources impacted by coal mining and energy production;
- Reskilling present workforces and educating future ones in green and other new and viable development pathways;
- Building new productive models for comprehensive economic transitions;
- Supporting various impacted constituencies to play an active role in decisions and implementation of energy transition programmes; and
- Outlining anticipatory actions focused on employment opportunities for future generations and locating innovative industries in underserved communities.

The JET IP also identifies specific investment needs to ensure the just transition and costs them and integrates just transition aspects in the rest of the investment needs identified. It includes just transition investments in Mpumalanga's coal communities and in the electricity sector and more cross-cutting ones for skills development and municipal capacity, amounting to ZAR 385.45 billion (approx. USD 20.6 billion).²⁶

The specific investments for Mpumalanga include social investments to support local communities, supply chain development for new technologies, remediating and repurposing coal mining land, social infrastructure upgrades, diversification of local economies, reskilling, retraining, and mobility support, including a focus on youth, policy alignment, and ensuring financing and budget support, and technical assistance for government agencies. These are underpinned by enabling conditions that require policy, regulation and legal reforms, the

legal reforms, the development of stakeholder engagement strategies, establishment of the necessary entities, coordination, and governance arrangements to manage the just transition, and fiscal analysis of revenue loss due to coal wind-down.

For the electricity sector just transition, investments include localising the clean energy value chain to promote local manufacturing, increasing job creation, and testing diverse models for social ownership of electricity generation, including building the capacity of communities to participate in these models effectively.

In the case of municipal capacity investments, their contribution to the just transition is linked to the role of municipalities in providing a service that ensures equitable energy access to communities and local users, including low-income households and MSMEs.

²⁶ Exchange rate of November 11, 2023: <https://www.oanda.com/currency-converter/en/?from=ZAR&to=USD&amount=NaN>

The JETP IP also embeds considerations of just transition in its financing principles and preferred terms and conditions for finance from international sources, bringing the global lens to the justice question. The plan builds on the principles of the UNFCCC, including the commitment that developed countries support developing countries in implementing climate action through climate finance, technology transfer, and capacity building, and ensuring the additionality and predictability of climate finance. It also goes further into the quality of the support by looking at the composition of the financial instruments in light of the need for fiscal sustainability, considerations of debt, equitable risk-sharing, including with the private sector, and a suitable grant component that reflects the country's needs. Furthermore, it details the necessary terms and conditions of the financial instruments required to fund the JET IP, including the flexibility to choose the most appropriate disbursement channel and the establishment of risk-sharing and cost arrangements that offer advantages to South Africa. The arrangements include arrangements to address currency risks, by using loans denominates in local currency; reducing or waving lender's fees; a reduction in the need for government guarantees to international lenders when lending to SOEs; and the allocation of finance to the "just" components of the plan.

The extension of the concept of shared responsibility beyond the usual differentiation between developed and developing countries to include the private sector puts the spotlight on the expectation that the public sector and public finance need to take on increased risks and budgetary pressure to support the private sector. This expectation fails to recognise how the climate crisis was created and, therefore, how the risks and responsibilities need to be shared between the public and private sector, including by carefully considering the burden that incentives to the private sector can put on public finances, in light of limited fiscal capacity (Naidoo et al., 2023).



© dimitrova / Shutterstock

The JET IP often reflects the principles and conditions in the context of specific investments. For example, it details the types of financing needed for investments in the localisation of the clean energy value chain. In this case, grants and concessional finance are needed to support research, finance feasibility studies and capacity enhancement.

The international aspect of justice is also reflected in the overall phased approach of the JET IP, which is in line with the country's phased approach in its LEDS and reflected in other policies like the carbon tax. In the JET IP, implementation is to be done in a "managed, phased, long-term process of economic, social, and environmental change (Republic of South Africa, 2022a)." This phased approach highlights the fact that decarbonisation of the energy sector needs to happen at a pace that considers social and economic impacts, recognises the trade-offs that exist between mitigation and sustainable development outcomes, and places sustainable development at the centre of the discussion again, reflecting again the CBDR and respective capabilities principle.

How can just transition considerations be included in the existing approaches to Article 2.1c?

Building on the case of South Africa and recognising that a just transition will take on a different nature in different countries and, therefore, include different elements, key aspects can be outlined that need to be considered in existing approaches to the implementation of Article 2.1c, and the assessment of progress, to align them with the concepts of justice and equity.

The first overarching element that needs to be considered in existing Article 2.1c approaches is the clear and explicit inclusion of sustainable development considerations in implementing and evaluating actions and initiatives to implement this Article. These should be seen through a lens that considers their impacts on key sustainable development outcomes and recognises the trade-offs that can exist between mitigation action, sustainable development, and poverty eradication. Just transition frameworks and definitions provide clear examples of this, like impacts on growth, employment, and the quality of available jobs, impacts on livelihoods and public finances at the national, regional, and local levels. Evidence already exists for South Africa that greater ambition in emissions reductions in line with net-zero scenarios would reduce GDP and require investments in the transition that could crowd-out resources for other productive investments (The World Bank, 2022a).

Considerations of the impacts of actions and initiatives on development and poverty should include the national as well as the international level, considering that international initiatives promoting consistency of finance flows with decarbonisation and transitions to net zero will have broad applicability around the world and affect many developing countries (Naidoo et al., 2023; Republic of South Africa, 2022a).

Policies and other levers should also be evaluated through the lens of their level of consideration and contribution to these outcomes. REIPPPP is an example of this, where the South African government's evaluation of its success includes the broader economic and socio-economic impacts of the programme's implementation (Republic of South Africa, 2023d), despite the fact that those additional factors were considered controversial by the private sector bidders, especially international ones (Eberhard, Kolker, & Leigland, 2014).

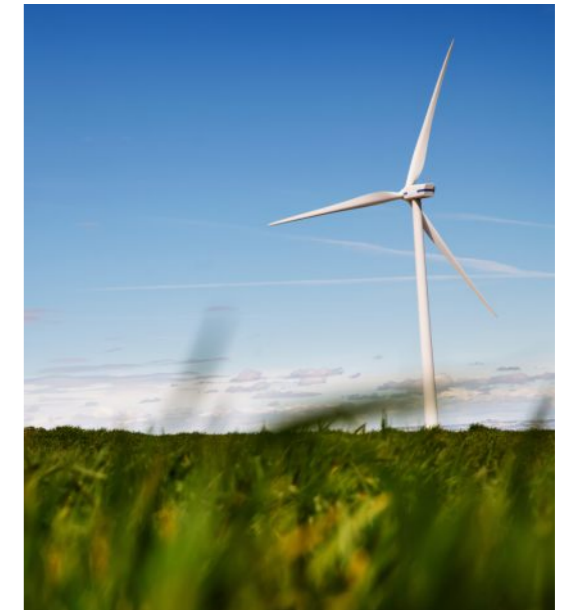


© kitreel / Shutterstock

A second consideration would look at the fair distribution of risks and opportunities created by the transition and the actions taken to align finance flows to support this transition. For example, the implementation of carbon taxes often implies negative distributional effects (Braga & Ernst, 2023). In the case of South Africa, evidence already exists of the potential distributional impacts of the carbon tax as it is phased in. Estimates by the IMF found that an NDC-aligned carbon tax would increase fuel and electricity prices, pushing output prices and affecting the transport and industry sectors primarily, while also having a larger impact on the poorest households' consumption through increased prices in electricity, food, and transportation (International Monetary Fund, 2023). This impact could be exacerbated by existing gender, racial, and geographical disparities (The World Bank, 2022a).

Another such example is the FBE access initiative, which has been included in the analysis of subsidies in South Africa as part of the misaligned fossil fuel subsidies because it is considered to lock in coal-based electricity due to the sector's high dependence on coal (Bridle et al., 2022). The FBE is an initiative implemented by Eskom and South Africa's municipalities to allow low-income households access to enough energy to run basic lighting, media access, and basic appliances (Eskom, 2021). As such, it pursues social objectives linked to energy access and the reduction of energy poverty. The need to phase out such subsidies needs to be weighed against the impacts it will have on poor households, with solutions being clearly outlined to deal with the potential impacts of a phase-out. Strategies that prioritise pro-poor measures and ensure continued access to energy for poor communities should be included as part of the transition.

These assessments should also include considerations of fairness in the distribution of risks and opportunities between the public and private sectors. De-risking of investments by the public sector is often mentioned as a tool to leverage and increase private finance flows to support the transitions to low-carbon economies, particularly in sectors, technologies, or countries perceived as risky by private investors (Browne, Duma, Muñoz Cabré, Sanchez, & Shawoo, 2023; Climate Champions, 2023; Sekyoung Choi, Zhou, & Laxton, 2022; Jett, 2018). However, the term de-risking does not mean that the risks disappear; it requires a transfer of risks to other stakeholders, in this case the public sector. Financial de-risking, in particular, therefore creates the risk of increased public debt if contingent liabilities materialise (Georgieva & Adrian, 2022), which, in the case of South Africa, where many of these are linked to the power sector, would negatively impact fiscal space and debt accumulation (Bachmair & Bogoev, 2018). Again, the JET IP of South Africa tried to address this issue by including in its preferred terms and conditions a reduction in the need for government guarantees to international lenders, reflecting the already high exposure to contingent liabilities by Eskom; and outlines how the private sector has already invested in renewables without the need for government guarantees.²⁷ Beyond limiting the potential impacts on the government of taking on these risks, new ways for the state to retain a share of the



© cavan / Shutterstock

rewards created by the partnerships with the private sector should be explored (Mazzucato, 2022). Other means to de-risk investments should also carefully consider potential impacts and their distribution across different stakeholders.

The impacts of a transition and transition policies in public finances is another aspect to consider in the evaluation of just transition policies. The first part of this conversation is about how transitioning away from fossil fuels could affect public finances. The effects of common policy instruments used to support the transition have both direct and indirect effects on public revenues through the reduction of fossil fuel production and consumption, as well as changes in economic activity and household consumption, with the direction of this effect depending on the type of instrument used (Fouré, Dellink, Lanzi, & Pavanello, 2023). In the case of South Africa, a risk to municipal sustainability and finances resulting from the transition away from coal has already been identified in the JET IP. This is because of the role that Eskom's coal plants and mines play in the economic activity of some areas in South Africa. The shift away from coal will reduce such economic activity, resulting in strained municipal budgets and capacity and negative impacts on the provision of community-related activities and services (Republic of South Africa, 2022a).

The second aspect of this link between just transition policies and public finances is related to the impact of fiscal policy levers and international finance to support the transition. Transition measures in many countries, especially those that heavily depend on fossil fuels, will require substantial increases in public spending, including subsidising investments in line with decarbonisation, which could potentially crowd-out other forms of public investment (Oliinyk, Pieter de Groen, Zwaneveld, & Vicente, 2022). The potential for the transition to put pressure on the public finances of South Africa can already be seen in the many calls for tax and subsidy support for the development of green hydrogen and electric vehicles, including in the different roadmaps and initiatives. However, public finance coming from international sources, like the support provided by the IPG to the South African transition, could further impact public finances, depending on the type of instruments offered. High levels of concessionality will be needed, as well as grants, to finance the just transition, particularly the “justice” elements.

Evaluations of the different policy levers that build an enabling environment for a just energy transition need to go beyond the evaluation of alignment to 1.5°C pathways, especially global ones and explicitly include considerations of justice. This is not only because the Paris Agreement does state that the mitigation goals are to be achieved in the context of sustainable development and poverty eradication, with considerations of equity and CBDR, but because it is also likely to make the implementation of the necessary policies more politically feasible and acceptable to different stakeholders.

The list of policies that are evaluated should also include those that create the enabling environments to ensure that a transition is just. This could include social protection, and redistributive policies,²⁹ as well as stakeholder engagement strategies, and platforms for coordination and governance arrangements to manage the just transition.



The considerations included here are largely based on the South African case. Nevertheless, many of these challenges are not particular to South Africa and relevant to all countries. However, the analysis of the justice aspects of the transition should still be tailored to each specific context.

An additional element that is relevant but not easy to include in a national analysis is the impact of international policies and regulations in the just transition of different countries. Framings of equity, as well as the JET IP of South Africa, have already identified this element as important (Naidoo et al., 2023; Republic of South Africa, 2022a). For example, the JETP IP highlights the risks posed by a carbon border adjustment tax (CBAM) for the country's industries and the pressures it puts on the faster decarbonisation of these industries. Nevertheless, these considerations are also relevant to ensuring a just transition at the global level. Addressing these international elements will require countries to engage in international forums and dialogues, to ensure that global efforts take into account their needs and circumstances, reflecting equity and justice principles. Co-creation and collaboration in the development of international standards can play a significant role in a fair and equitable transition.

²⁹ For more on these policies: <https://www.google.com/url?sa=t&ct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjo18rglYSCAxUt1gIHHCtuAVKQFnECAQAw&url=https%3A%2F%2Fdesapublications.un.org%2Ffile%2F242%2Fdownload&usq=A0vVaw0lh36lRZ9xhpwGz3hHSHFP&opi=89978449>



6

Unlocking additional finance for the implementation of a just energy transition

South Africa has already identified a large gap in the finance and investments needed for the just transition for the period of the JET IP. How the country could fill this gap in the coming years is unclear. Though South Africa has already made progress in establishing the enabling environment to align finance flows with the transition, there is still a need to improve the existing policy levers and explore the implementation of new ones in order to address the gap.

The enabling environment of South Africa could be strengthened by developing and implementing the country's financial policies and regulations. The Prudential Authority should accelerate developing and implementing the regulatory framework and disclosure requirements for climate risks. The country could introduce transition and other social considerations in its existing taxonomy. South Africa could also consider other fiscal policy tools. For example, the Just Transition Framework's proposed strategies, including a review of fiscal policy levers like taxes and subsidies to ensure that they promote just transition objectives, should be pursued.

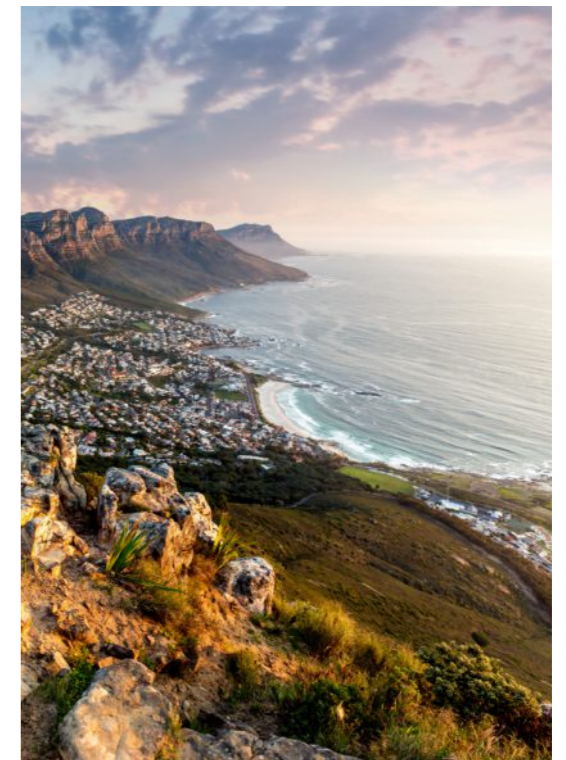
Other existing policies could be enhanced to make more finance available for a just transition. One such policy is the existing carbon tax, which, as shown previously, is not currently aligned with South Africa's climate ambition. However, considerations of how to prevent the negative impacts on industries and households, especially the poorest ones, are key to ensuring that this policy is aligned with the just transition framing. One potential way of achieving low-carbon sustainable development using the carbon tax is to use revenue recycling in a way that tackles the unequal impact of the tax on different stakeholders by correcting distributional effects and promoting growth while using part of the proceeds to finance additional climate action (Fouré, Dellink, Lanzi, & Pavanello, 2023; International Monetary Fund, 2023).

The availability of public finance to support the transition could also be increased. The commitment of all national development finance institutions, like DBSA and PIC, to support the transition and the country's decarbonisation pathways should be clearly established and implemented, including with clear targets. The issuance of a sovereign green bond could be explored and could encourage further investment by the private sector (Boule, 2021).

Beyond the existing climate and sectoral policies and policy levers, South Africa would also need to address more fundamental issues linked to fiscal space. For example, South Africa's LEDS already identifies the need to decouple tax revenue from fossil fuel sales and exports to ensure financial sustainability over time and to give the government the room needed to finance climate action (Republic of South Africa, 2020). Though this paper has not focused on governance issues, strong governance will be essential to drive the just energy transition (Verma, 2023).

Public finance from international sources will likely play a crucial role in closing the finance gap identified in the JET IP. The original offer by the IPG is largely insufficient to meet the needs of South Africa. The terms and conditions offered do not necessarily meet the needs of South Africa, considering that some of the support is provided in commercial terms. Very little of the offer comes in the form of grants, particularly for enabling activities and those incorporating "justice" elements. Nevertheless, this finance could still allow South Africa to crowd-in additional finance from other public and private sources, including multilateral development banks (MDBs) (Republic of South Africa, 2022a).

South Africa also plans to rely on blended finance as a means to mobilise additional resources from the private sector. In South Africa, blended finance provided an average of ZAR 4.9 billion per year during 2017 and 2018 (Cassim, Radmore, Dinham, & McCallum, 2021). This confirms the JET IP's assessment that blended finance



represents a small share of South Africa's climate finance and will need to be significantly expanded, particularly to finance investments with high up-front. Some approaches that could serve to scale up blended finance have been identified, including the use of diversified blended funds, local green investment facilities, the development of a pipeline or projects, and the use of portfolio and programmatic approaches, as well as the incorporation of technical assistance to develop capacity (Tonkonogy, Brown, Micale, Wang, & Clark, 2018; Pande, Sivaprasad, Salleh, & Tan, 2023; Bartz-Zuccala et al., 2022). Additionally, multi-stakeholder coordination platforms will be needed to successfully scale up blended finance (Bartz-Zuccala et al., 2022). The role of international public finance, from both bilateral and multilateral sources, will likely be key in scaling up blended finance for South Africa's just transition.

References

- AfDB, GCA and UNEP-FI. (2021). Climate risk regulation in Africa's financial sector and related private sector initiatives. Baseline study November 2021.
- Arnoldi, M. (2023, August 3). Research institute explains why SA's Green Finance Taxonomy is not being used. <https://www.engineeringnews.co.za/article/research-institute-explains-why-sas-green-finance-taxonomy-is-not-being-used-2023-08-03>
- Bachmair, F., and Bogoev, J. (2018). Assessment of Contingent Liabilities and their Impact on Debt Dynamics in South Africa. World Bank. <https://documents1.worldbank.org/curated/en/645381528134003501/pdf/126841-NWP-add-series-PUBLIC-MTI-Discussion-Paper-1.pdf>
- Bartz-Zuccala, W., Taskin, Ö., Hos, T., et al. (2022). Scaling up Blended Finance in Developing Countries. Paris: OECD. https://www.oecd.org/dac/scaling_up_blended_finance_in_developing_countries.pdf
- Bingler, J., Kellenberger, S., Kolberg, S., et al. (2021). Consistency case study: actions supporting Article 2.1c of the Paris Agreement in Switzerland. San Francisco and London. Part of 'Climate-consistency of finance flows: iGST case study series': Climate Works Foundation and ODI.
- Boule, B. (2021). Green Bonds in South Africa: How Green Bonds can Support South Africa's Energy Transition. Climate Bonds Initiative.
- Braga, J., and Ernst, E. (2023, August 31). Financing the green transition. The role of macro-economic policies in ensuring a just transition. *Frontiers in Climate*, 5 -2023. doi:<https://doi.org/10.3389/fclim.2023.1192706>
- Bridle, R., Muzondo, C., Schmidt, M., et al. (2022). South Africa's Energy Fiscal Policies: An inventory of subsidies, taxes, and policies impacting the energy transition. Geneva, Switzerland: IISD. <https://www.iisd.org/system/files/2022-01/south-africa-energy-subsidies.pdf>
- Browne, K., Duma, D., Muñoz Cabré, M., et al. (2023, June 15). Perspective: Seven ways to reform the global financial system for climate and sustainable development goals. <https://www.sei.org/perspectives/seven-ways-to-reform-the-global-financial-system-for-climate-and-development-goals/>
- Bruce, A. (2019, May 21). Auctions as a tool to improve investor confidence. IRENA. <https://www.irena.org/-/media/Files/IRENA/Agency/Events/2019/May/Session-5b-Lesson-learned-on-Auction-by-Mainstream-Renewable-Power.pdf?la=en&hash=6B5EB5B19C6FC699B4B94AC9210A73937504DFDA>
- BusinessTech. (2023, September 7). Eskom gets a big boost. <https://businesstech.co.za/news/business/716840/eskom-gets-a-big-boost/>
- Carbon Trust Africa. (2021). Evaluation of the Development Bank of Southern Africa Limited Green Bond Framework and Green Bond. Pretoria, South Africa. <https://www.dbsa.org/sites/default/files/media/documents/2021-03/Evaluation%20of%20the%20DBSA%20Green%20Bond%20Framework%20and%20Green%20Bond.pdf>
- Cassim, A., Radmore, J., Dinham, N., et al. (2021). South African Climate Finance Landscape 2020. CPI.
- CEIC Data. (2023). South Africa Market Capitalization. <https://www.ceicdata.com/en/indicator/south-africa/market-capitalization>
- Centre for Environmental Rights. (2023, April 20). News: New data reveals extent of South African investors' fossil fuel holdings. <https://cer.org.za/news/new-data-reveals-extent-of-south-african-investors-fossil-fuel-holdings>
- Centre for Environmental Rights and Natural Justice. (2023, February 3). Joint Submissions: Green Hydrogen Commercialisation Strategy. <https://cer.org.za/wp-content/uploads/2023/02/GHCS-Comments-3-February-2023.pdf>
- Clark, A., Choi, J., Tonkonogy, B., et al. (2019). Implementing Alignment with the Paris Agreement: Recommendations for the Members of the International Development Finance Club. CPI. <https://unfccc.int/sites/default/files/resource/Aligning%20with%20the%20Paris%20Agreement%20-%20Part%202%20-%20CPI-I4CE.pdf>
- Climate Action Tracker. (2022, October 28). Countries: South Africa - Targets. <https://climateactiontracker.org/countries/south-africa/targets/>
- Climate Action Tracker. (2023). Clean electricity within a generation: Paris-aligned benchmarks for the power sector. Climate Analytics and New Climate Institute. https://climateactiontracker.org/documents/1159/CAT_2023-09-19_Briefing_ParisBenchmarks_PowerSector.pdf
- Climate Champions. (2023, September 17). News: UN Climate Change High-Level Champions present a finance blueprint to narrow the climate & nature funding gap. <https://climatechampions.unfccc.int/un-climate-change-high-level-champions-present-a-finance-blueprint-to-narrow-the-climate-nature-funding-gap/>
- Costa, M. (2023, August 29). News: South African banks may need to take climate and litigation risk into account. <https://greencentralbanking.com/2023/08/29/south-african-reserve-bank-climate-litigation-risk/>
- Crippa, M., Guizzardi, D., Pagani, F., et al. (2023). GHG emissions of all world countries. Luxembourg: Publications Office of the European Union. doi:oi:10.2760/953332
- DBSA. (2021). DBSA Green Bond Framework. <https://www.dbsa.org/sites/default/files/media/documents/2021-03/DBSA%20Green%20Bond%20Framework%20-%202022%20January%202021.pdf>
- DBSA. (2023). Sustainability Review 2023. https://www.dbsa.org/sites/default/files/media/documents/2023-08/DBSA%20Sustainability%20Review%202023_0.pdf
- DBSA. (n.a.). DBSA Statement on Net Zero. <https://www.dbsa.org/press-releases/dbsa-statement-net-zero>
- de la Rue du Can, S., and McNeil, M. (2018). South Africa: Energy Savings Estimates from New Standard and Labeling Program Policy Brief.
- de la Rue du Can, S., Thaba, L., Heaps, C., et al. (2020). South Africa's Appliance Energy Efficiency Standards and Labeling Program: Impact Assessment. Department of Energy. Republic of South Africa.
- DMRE. (2021, July 30). News Room: Meeting of the Presidential Climate Commission on Just Energy Transition - Virtual Platform. <https://www.dmr.gov.za/news-room/post/1928/meeting-of-the-presidential-climate-commission-on-just-energy-transition-virtual-platform>
- Eberhard, A., and Naude, R. (2016, November). The South African Renewable Energy Independent Power Producer Procurement Programme: A review and lessons learned. *Journal of Energy in South Africa*, 27(4). http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S1021-447X2016000400001

Eberhard, A., Kolker, J., and Leigland, J. (2014). South Africa's Renewable Energy IPP Procurement Program: Success Factors and Lessons. Public-Private Infrastructure Advisory Facility (PPIAF).

EBRD. (n.a.). What is a just transition? <https://www.ebrd.com/what-we-do/just-transition>
Eskom. (2021, September 29). Media Statements: Eskom Encourages Indigent Households to Claim Free Basic Electricity. <https://www.eskom.co.za/eskom-encourages-indigent-households-to-claim-free-basic-electricity/>

Eskom. (2023a, October 31). Media Statements: Eskom releases its results for the 2022/23 Financial Year. <https://www.eskom.co.za/eskom-releases-its-results-for-the-2022-23-financial-year/#:~:text=Eskom's%20net%20debt%20was%20up,shareholder%20during%20the%202023%20period.>

Eskom. (2023b). Group annual results for the year ended 31 March 2023. https://www.eskom.co.za/wp-content/uploads/2023/10/Eskom_results_presentation_2023.pdf

Eskom. (n.a.). Company Information. <https://www.eskom.co.za/about-eskom/company-information/>

European Commission. (n.a.). The Just Transition Mechanism: making sure no one is left behind. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism_en

Evans, S. (2021, October 5). Analysis: Which countries are historically responsible for climate change? <https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change/>

Feyertag, J., Watson, C., and Ryfisch, D. (2023). Developing a collective framework for operationalising Article 2.1(c): lessons from six case studies. San Francisco and London: ClimateWorks Foundation and ODI.

Fouré, J., Dellink, R., Lanzi, E., et al. (2023). Public finance resilience in the transition towards carbon neutrality: Modelling policy instruments in a global net-zero emissions scenario. OECD. doi:<https://doi.org/10.1787/19970900>

Geddes, A., Gerasimchuk, I., Viswanathan, B., et al. (2020). Doubling Back and Doubling Down: G20 scorecard on fossil fuel funding. IISD.

Georgieva, K., and Adrian, T. (2022, August 18). IMF Blog: Public Sector Must Play Major Role in Catalyzing Private Climate Finance. <https://www.imf.org/en/Blogs/Articles/2022/08/18/public-sector-must-play-major-role-in-catalyzing-private-climate-finance>

Geuskens, I., and Butijn, H. (2022). Locked out of a Just Transition: Fossil Fuel Financing in Africa. BankTrack, Milieudéfense, Oil Change International. https://www.banktrack.org/download/locked_out_of_a_just_transition_fossil_fuel_financing_in_africa/07_md_banktrack_fossil_fuels_africa_rpt_hr_1.pdf

Hoffmann, C., Karenfort, M., Micozzi, M., et al. (2022). Consistency case study: actions supporting Article 2.1c of the Paris Agreement in Germany. San Francisco and London. Part of 'Climate-consistency of finance flows: iGST case study series': ClimateWorks Foundation and ODI.

Huxham, M., Carus, F., and Anwar, M. (2019). Understanding the impact of a low carbon transition on South Africa. CPI.

IDCF. (2021, October 18). PDBS are moving forward on the Alignment with the Paris Agreement on the way to COP 26. <https://www.idfc.org/news/pdbs-are-moving-forward-on-the-alignment-with-the-paris-agreement-on-the-way-to-cop-26/>

IFRS. (2023). IFRS S2 Climate-related Disclosures. <https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/ifrs-s2-climate-related-disclosures/#about>

ILO. (n.a.). Frequently Asked Questions on just transition. https://www.ilo.org/global/topics/green-jobs/WCMS_824102/lang-en/index.htm

IMF. (2022). South Africa Financial Sector Assessment Program: Technical Note on Systemic Liquidity Management. <https://www.imf.org/en/Publications/CR/Issues/2022/06/16/South-Africa-Financial-Sector-Assessment-Program-Technical-Note-on-Systemic-Liquidity-519722>

International Energy Agency. (2020, February 7). Policies: Solar Water Heating Programme. <https://www.iea.org/policies/3039-solar-water-heating-programme>

International Monetary Fund. (2020). South Africa: Staff Report for the 2019 Article IV Consultation. International Monetary Fund. (2023, June 6). South Africa Carbon Pricing And Climate Mitigation Policy. <https://www.elibrary.imf.org/view/journals/002/2023/195/article-A003-en.xml>

Jett, A. (2018). Risk Mitigation and Sovereign Guarantees for Public-Private Partnerships in Developing Economies. ADB. <https://www.adb.org/sites/default/files/publication/468626/ewp-564-risk-mitigation-sovereign-guarantees-ppps.pdf>

JSE. (2023). JSE Sustainability Report for the year ended 31 December 2022.

JSE. (n.a. a). JSE's Sustainability and Climate Disclosure Guidance. <https://www.jse.co.za/our-business/sustainability/jses-sustainability-and-climate-disclosure-guidance>

JSE. (n.a. b). Sustainability Recommended Disclosures and Metrics. https://www.jse.co.za/sites/default/files/media/documents/JSE%20Sustainability%20Recommended%20Disclosures%20and%20Metrics_FA_.pdf

Kganyago, L. (2023). Climate change and policy coordination: What can central banks do? (p. 11). Gqeberha. <https://www.resbank.co.za/content/dam/sarb/publications/speeches/speeches-by-governors/2023/gov-kganyago/Speech%20by%20Governor%20Lesetja%20Kganyago%20at%20the%20Nelson%20Mandela%20University.pdf>

Kramer, K. (2022, December 7). Insight: Just Energy Transition Partnerships: an opportunity to leapfrog from coal to clean energy. <https://www.iisd.org/articles/insight/just-energy-transition-partnerships>
Krogstrup, S., and Oman, W. (2019). Macroeconomic and Financial Policies for Climate Change Mitigation: A Review of the Literature. IMF.

Kuhudzai, R. (2023, August 3). South Africa Now Has Over 10 GW of Wind & Solar Generation Capacity. <https://cleantechnica.com/2023/08/03/south-africa-now-has-over-10-gw-of-wind-solar-generation-capacity/>

Kusuma, N. (2023, March 2). News: What is Just Energy Transition Partnerships? <https://greennetwork.asia/news/what-is-just-energy-transition-partnerships/>

Maluleke, R. (2023). Quarterly Labour Force Survey (QLFS). Statistics South Africa. <https://www.statssa.gov.za/publications/P0211/Presentation%20QLFS%20Q2%202023.pdf>

Mazzucato, M. (2022). Missions and public purpose: A new social contract between business, labor and the state. UCL Institute for Innovation and Public Purpose (IIPP).

Mbewe, S. (2023, July 20). Exploring Operational Pathways for Article 2.1(c) of the Paris Agreement in Africa. https://unfccc.int/sites/default/files/resource/4%29%20Samson%20Mbewe%20-%20SES%20Dialogue_20%20July%202023.pdf

Montmasson-Clair, G. (2013). Tracking Climate Finance Inflows to South Africa. <https://www.tips.org.za/smart-search?q=climate+finance>

Naidoo, C. P., Lehmann-Grube, P., Sheehama, A., et al. (2023). Exploring the intersection of equity and Article 2.1(c): Towards an improved Global Stocktake. Rabia Transitions Initiative and ODI. https://cdn.odi.org/media/documents/iGST_Exploring_the_intersection_of_equity_and_Article_2.1c.pdf

Nichols, W., and Clisby, R. (2021, May 26). G20 disorderly transition all but inevitable: even climate-leading UK at risk: Environmental Risk Outlook 2021. <https://www.maplecroft.com/insights/analysis/g20-disorderly-transition-all-but-inevitable-even-climate-leading-uk-at-risk/>

Noels, J., and Jachnik, R. (2022). Assessing the climate consistency of finance: Taking stock of methodologies and their links to climate mitigation policy objectives. OECD. <https://www.oecd-ilibrary.org/docserver/d12005e7-en.pdf?expires=1697792339&id=id&accname=guest&checksum=D4E78B845BC2DF9D0AA2953B9DBF175A>
OECD. (2019). Aligning Development Co-operation and Climate Action: The Only Way Forward. Paris: OECD Publishing. doi:<https://doi.org/10.1787/5099ad91-en>.

OECD. (2020). Developing Sustainable Finance Definitions and Taxonomies, Green Finance and Investment. Paris: OECD Publishing. doi:<https://doi.org/10.1787/134a2dbe-en>

OECD. (2022). OECD Economic Surveys: South Africa. Executive Summary.

Oliinyk, I., Pieter de Groen, W., Zwaneveld, P., et al. (2022). Assessing the fiscal policy impact of the climate transition. Contribution to the EFB Annual Conference 2022, The Network of EU Independent Fiscal Institutions. <https://cdn.ceps.eu/wp-content/uploads/2022/03/20220224-Network-of-EU-IFIs-Contribution-to-the-EFB-AC-final-draft-edited.pdf>

Pande, V., Sivaprasad, D., Salleh, N., et al. (2023, October 12). Climate Change: How national-level blended finance can catalyse the climate transition in emerging markets. <https://www.weforum.org/agenda/2023/10/blended-finance-climate-transition-emerging-markets/>

Parliamentary Budget Office of South Africa. (2017). Analysis of Eskom's financial position. https://www.parliament.gov.za/storage/app/media/PBO/Analysis_of_Eskom_finances_Report_to_SCOA_presented_8_March_2017.pdf

Partnership on Transparency. (2018, September 9). South Africa's Renewable Energy Independent Power Producer Procurement Programme. <https://transparency-partnership.net/gpd/south-africas-renewable-energy-independent-power-producer-procurement-programme>

Pauw, W., König, M., Sadikhova, K., et al. (2021). Financing low-carbon and climate resilient development: Do countries integrate Article 2.1(c) of the Paris Agreement in their Long-Term Strategies? Frankfurt am Main: Frankfurt School-UNEP Centre.

Pinker, A. (2020). Just Transitions: a comparative perspective. A Report prepared for the Just Transition Commission. <https://www.gov.scot/binaries/content/documents/govscot/publications/independent-report/2020/08/transitions-comparative-perspective2/documents/transitions-comparative-perspective/transitions-comparative-perspective/govscot%3Adocument/transitions-comparati>

Public Investment Corporation. (2023). Integrated Annual Report Twenty23. <https://www.pic.gov.za/DocAnnualReports1/PIC%20Integrated%20Annual%20Report%202023.pdf>

Republic of South Africa. (2005). Energy Efficiency Strategy of the Republic of South Africa. Department of Minerals and Energy. https://www.gov.za/sites/default/files/gcis_document/201409/energy-efficiencystrategy051.pdf

Republic of South Africa. (2011a). National Climate Change Response. https://www.gov.za/sites/default/files/gcis_document/201409/nationalclimatechangeresponsewhitepaper0.pdf

Republic of South Africa. (2011b). National Development Plan 2030 - Our Future-make it work. National Planning Commission. https://www.nationalplanningcommission.org.za/National_Development_Plan

Republic of South Africa. (2017a). National GHG Inventory Report: South Africa. Department of Forestry, Fisheries and the Environment. <https://unfccc.int/sites/default/files/resource/South%20Africa%20%20NIR%202017.pdf>

Republic of South Africa. (2017b). South Africa's 2nd Biennial Update Report. Department of Environmental Affairs. https://unfccc.int/files/national_reports/non-annex_i_parties/biennial_update_reports/application/pdf/south_africa_2nd_bur.pdf

Republic of South Africa. (2019). Integrated Resource Plan (IRP2019).

Republic of South Africa. (2020). South Africa's Low-Emission Development Strategy 2050. <https://unfccc.int/sites/default/files/resource/South%20Africa%27s%20Low%20Emission%20Development%20Strategy.pdf?download>

Republic of South Africa. (2021a, November 2). Presidency on international partnership to support a just transition to a low carbon economy and a climate resilient society. <https://www.gov.za/speeches/presidency-international-partnership-support-just-transition-2-nov-2021-0000>

Republic of South Africa. (2021b). South Africa First Nationally Determined Contribution under the Paris Agreement. Updated September 2021. <https://unfccc.int/sites/default/files/NDC/2022-06/South%20Africa%20updated%20first%20NDC%20September%202021.pdf>

Republic of South Africa. (2021c). Financing a Sustainable Economy: Technical paper. National Treasury. https://www.treasury.gov.za/comm_media/press/2021/2021101501%20Financing%20a%20Sustainable%20Economy.pdf

Republic of South Africa. (2022a). South Africa's Just Energy Transition Investment Plan (JET IP) for the initial period 2023-2027. <https://pccommissionflo.imgix.net/uploads/images/South-Africas-Just-Energy-Transition-Investment-Plan-JET-IP-2023-2027-FINAL.pdf>

Republic of South Africa. (2022b). Budget Review: Financial position of public-sector institutions.

Republic of South Africa. (2022c, November 30). Summary of Green Hydrogen Commercialisation Panel Report. <http://www.thedtic.gov.za/wp-content/uploads/Powerpoint-Summary-Green-Hydrogen-Commercialisation-Strategy.pdf>

Republic of South Africa. (2022d). A comparison of the EU Green Taxonomy with South Africa's Green Taxonomy. National Treasury. Republic of South Africa.

Republic of South Africa. (2022e). A Framework for a Just Transition in South Africa. Presidential Climate Commission. <https://pccommissionflo.imgix.net/uploads/images/A-Just-Transition-Framework-for-South-Africa-2022.pdf>

Republic of South Africa. (2023a). 2023 Budget Review: Government Debt and Contingent Liabilities. National Treasury.

Republic of South Africa. (2023b, July 7). Government Gazette. Act No. 07 of 2023: Eskom Debt Relief Act, 2023. https://www.gov.za/sites/default/files/gcis_document/202308/48915eskomdebtreliefact72023.pdf

Republic of South Africa. (2023c, May 8). Taxi Recapitalisation Programme makes significant strides. <https://www.sanews.gov.za/south-africa/taxi-recapitalisation-programme-makes-significant-strides>

Republic of South Africa. (2023d). Independent Power Producers Procurement Programme (IPPPP): An Overview as at 31 March 2023.

Republic of South Africa. (2023e). South African Renewable Energy Masterplan (SAREM). An industrial and inclusive development plan for the renewable energy and storage value chains by 2030. Draft version for review 7 July 2023.

Republic of South Africa. (2023f). 2024 MTEF: Medium Term Expenditure Framework - Technical Guidelines.

Republic of South Africa and IFC. (2022). South African Green Finance Taxonomy. 1st Edition. https://www.treasury.gov.za/comm_media/press/2022/SA%20Green%20Finance%20Taxonomy%20-%201st%20Edition.pdf

Runnalls, D. (n.a.). The G20 to phase-out fossil-fuel subsidies - a breakthrough. <https://www.cigionline.org/articles/g20-phase-out-fossil-fuel-subsidies-breakthrough/>

Rydge, J. (2020). Aligning finance with the Paris Agreement: An overview of concepts, approaches, progress and necessary action. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2020/12/Aligning-finance-with-the-Paris-Agreement-3.pdf>

SAGEN. (2022). Research Paper on The South African Electricity Market: Capacities for an Energy Transition. <https://www.sagen.org.za/publications/all-publications/184-south-african-electricity-market/file>

SAICA. (2023, July 18). SAICA's launch of the ISSB standards pave the way for sustainability reporting in South Africa. <https://www.saica.org.za/news/saicas-launch-of-the-issb-standards-pave-the-way-for-sustainability-reporting-in-south-africa>

SCF. (2021). Fourth (2020) Biennial Assessment and Overview of Climate Finance Flows. UNFCCC. SCF. (2022). Mapping of available information relevant to Article 2, paragraph 1(c), of the Paris Agreement, including its reference to Article 9 thereof. UNFCCC.

Sekyoung Choi, E., Zhou, L., and Laxton, V. (2022, July 2022). How to De-risk Low-carbon Investments. <https://www.wri.org/insights/de-risking-low-carbon-investments>

Statistics South Africa. (2019). Inequality Trends in South Africa: A multidimensional diagnostic of inequality. <https://www.statssa.gov.za/publications/Report-03-10-19/Report-03-10-192017.pdf>

Statistics South Africa. (2023, October 10). Population characteristics. <https://www.statssa.gov.za/?cat=15>

Suharsono, A., and Maulidia, M. (2023). What Can Indonesia Learn from South Africa's Experience of the Just Energy Transition Process? IISD. <https://www.iisd.org/system/files/2023-07/indonesia-south-africa-jetp-lessons.pdf>

Sustainable Stock Exchanges Initiative. (n.a.). Johannesburg Stock Exchange (JSE). <https://sseinitiative.org/stock-exchange/jse/>

Tavares, M. (2022). A just green transition: concepts and practice so far. UN DESA. https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/PB_141.pdf

The World Bank. (2022a). Country Climate and Development Report: South Africa. Washington, DC.

The World Bank. (2022b). Inequality in Southern Africa: An Assessment of the Southern African Customs Union. Washington, DC.

The World Bank. (2023a, July 3). What You Need to Know About World Bank Group Alignment with the Paris Agreement. <https://www.worldbank.org/en/news/feature/2023/07/10/what-you-need-to-know-about-world-bank-group-alignment-with-the-paris-agreement>

The World Bank. (2023b). World Development Indicators. <https://databank.worldbank.org/source/world-development-indicators>

Tonkonogy, B., Brown, J., Micale, V., et al. (2018). Blended Finance in Clean Energy: Experiences and Opportunities. CPI. <https://www.climatepolicyinitiative.org/wp-content/uploads/2018/01/Blended-Finance-in-Clean-Energy-Experiences-and-Opportunities.pdf>

UNFCCC. (n.a.). Event: Sheikh Dialogue on Article 2, paragraph 1(c) of the Paris Agreement and its complementarity with Article 9. <https://unfccc.int/event/second-workshop-under-the-sharm-el-sheikh-dialogue-on-article-2-paragraph-1c-of-the-paris-agreement>

Vagliasindi, M., and Besant-Jones, J. (2013). Power Market Structure: Revisiting Policy Options. Washington, DC: World Bank. doi:doi:10.1596/978-0-8213-9556-1

Verma, P. (2023, May 4). Reimagining governance for a just energy transition. <https://www.undp.org/blog/reimagining-governance-just-energy-transition>

Walsh, G., Ahmed, I., Said, J., et al. (2021). A Just Transition for Africa: Championing a Fair and Prosperous Pathway to Net Zero. <https://www.institute.global/insights/climate-and-energy/just-transition-africa-championing-fair-and-prosperous-pathway-net-zero>

Whitley, S., Thwaites, J., Wright, H., et al. (2018). Making finance consistent with climate goals: Insights for operationalising Article 2.1c of the UNFCCC Paris Agreement.

Xu, X., and Deng, M. (2022). Global green taxonomy development, alignment, and implementation. Climate Bonds Initiative. https://www.climatebonds.net/files/reports/cbi_taxonomy_ukpact_2022_01f.pdf



Germanwatch e.V.

Office Bonn

Kaiserstr. 201

D-53113 Bonn

Phone +49 (0)228 / 60 492-0, Fax -19

Website: www.germanwatch.org

Office Berlin

Stresemannstr. 72

D-10963 Berlin

Phone +49 (0)30 / 5771 328-0, Fax -11

E-mail: info@germanwatch.org

Financially supported by the German Federal Ministry
for Economic Cooperation and Development and GIZ.
Responsibility for the content rests with Germanwatch.

