

# Resources on the just energy transition in South Africa

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### Question

What evidence, policy documents, position papers are available on just energy transition in South Africa? Please provide an overview of key findings and messages, and any key gaps in evidence or policy documents.

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# 1. Summary

This rapid review highlights and explores the literature on the just energy transition<sup>1</sup> in South Africa. In simple terms, a just energy transition can be defined as where the process of shifting energy systems is made as fair and just as possible (Project 90 by 2030, 2019). However, the term is not rigidly defined and can mean different things to different people and elicits a wide range of responses depending on the contexts within which it is utilised and the interests of the groups involved. This is a vast and complex topic, with a large and growing literature base and considerable interest by donors, government, civil society organisations (CSOs) and industry in South Africa. Hence, this rapid review only provides a snapshot of the literature identified.

This review is a hybrid between a standard helpdesk literature review and an annotated bibliography, providing a brief discussion of key findings and messages from the literature in section 2 and a list of key documents with information on what they are looking at in sections 3 – 7. Section 3 focuses on key relevant policy documents and institutional support from the South African government. Sections 4, 5, 6 and 7 provide an annotated bibliography of resources around some key themes – Putting the "just" in the just energy transition; Energy reform; Financing the just energy transition; and Lessons learned from other countries. Where useful these sections have been further divided using sub-headings as a guide, but much of the literature is cross-cutting. Some key websites and further resources are flagged in section 8.

There is a significant and growing literature base on a just energy transition in South Africa, with contributions from academia, think tanks, donors and non-governmental organisations (NGOS). The idea has especially gained traction in recent years, but there has been a dialogue on this term for many years in South Africa. A broad approach to literature searching was used in this review, including database and website searches and snowballing of references. In particular, the Just Transition Knowledge Portal from Trade & Industrial Policy Strategies (TIPS)<sup>2</sup> was used to search for relevant papers. Although there is a growing body of research on just transitions, much of what currently exists is in the realm of theory, with only a few examples of success and critical analysis of lessons learned.

### Key findings:

- No agreement exists at present on the end state (the so-called "inclusive green economy") and the pathways to achieve this (the parameters of action for the three dimensions of transitional justice) in South Africa.
- Definitions of just energy transition vary depending on the context and level of ambition. There also continues to be confusion with some stakeholders (especially at the local level) around terms, including "just transition finance" (Lowitt, 2021: 5).
- How to ensure a just energy transition is in fact just remains a key concern and sticking point in much of the literature.
- The need to meaningfully engage with local stakeholders and especially underrepresented stakeholders and communities, throughout the transition process to

<sup>&</sup>lt;sup>1</sup> Please note, a just transition applies to system change in a variety of economic sectors. The term a just energy transition is used when dealing with the energy sector. Both terms are used in this report.

<sup>&</sup>lt;sup>2</sup> See https://www.tips.org.za/just-transition

- ensure inclusive outcomes and buy-in is emphasised in the literature. However, there remain many underrepresented stakeholders in Mpumalanga not currently engaged in discussions, such as coal workers in the informal sector.
- Much of the literature is concerned with a transition away from coal in South Africa given its high dependence on coal for electricity production. However, whilst this is crucial, a just energy transition must cover a much broader array of issues and take a big picture perspective of the energy system (such as tackling energy poverty, improving transport systems, increasing energy efficiency etc.).
- The question of financing must still be answered and who should pay for the required interventions (i.e. the burden-sharing agreement) remains a fundamental issue. A genuine just transition agenda should aim to achieve a more equitable repartition of costs and benefits between stakeholders.
- Although policy tools and interventions necessary to affect a just energy transition are known and already largely tested in South Africa, these are yet to be meaningfully harnessed for an ambitious just energy transition agenda.

# 2. Just energy transition in South Africa

### **Background**

Popp and de Pous (2021: 3) define the Just Transition as "a time-limited opportunity to shape the shift to a sustainable and prosperous society[, which] seeks to anticipate and proactively manage the negative impacts for some, such as job losses, and to reap the benefits for all like future-proof development of regions." They further highlight that there "is no single formula for a Just Transition because it is shaped by national and regional circumstances as well as factors such as political culture, strength of social security systems and the role of social dialogue between employers, workers and government representatives" (Popp & de Pous, 2021: 3).

The need for just transitions is especially urgent in South Africa and is closely tied to the country's reliance on coal. As the largest emitting sector, the power sector in particular will be critical in the decarbonisation of the South African economy. It is estimated that approximately 90% of electricity produced in South Africa comes from coal-fired power plants, despite the introduction of a small but significant programme for renewable energy (Baker et al., 2019: 178). Coal also accounts for 74% of South Africa's total primary energy supply (Climate Investment Funds (CIF), 2020). Coal is also a major export: 25-30% of South Africa's mined coal is exported at prices higher than are found domestically (WRI, 2021). As of 2019, up to 200,000 workers were employed in South Africa's coal mines, coal power plants and coal transport (equivalent to about 1% of formal employment in 2020) (WRI, 2021; CIF, 2020). State-owned electric utility Eskom produces 90% of South Africa's electricity supply, is responsible for roughly 40% of the country's greenhouse gas emissions, and holds ZAR 464 billion (US\$32 billion) in debt. Further domestic challenges have been created by load shedding and high costs (WRI, 2021). Coal mining and power generation are concentrated in one province, Mpumalanga, where it accounts for 5% of formal workers. It is further concentrated within just four municipalities - eMalahleni (Witbank), Steve Tshwete (Middelburg), Govan Mbeki and Msukaligwa (Ermelo) - where it is critical to those workers and communities (WRI, 2021). Any potential job losses from an energy transition are politically sensitive, especially as South Africa has faced long-term high rates of

unemployment (over 25% since 2010, which spiked to over 30% in late 2020 due to the COVID-19 pandemic) and is one of the most unequal countries in the world (WRI, 2021).

Energy poverty remains a problem. Although grid connection rates have increased from approximately 33% to 87% since the end of apartheid in 1994, many low-income households cannot afford to use the grid to which they are connected and 3.2 million households, particularly those in informal settlements, lack access to electricity and other basic services (Baker et al., 2019: 178). Furthermore, 43% of South Africans are considered "energy poor", meaning that they do not have "access to adequate, reliable, safe and environmentally benign energy" (Sustainable Energy Africa, 2015 cited in Baker et al., 2019: 178).

South Africa has put in place a sophisticated and consultative climate governance system but faces a range of domestic challenges as it moves to implement its national climate goals and ramp up ambition to meet the Paris Agreement. These challenges are diverse in nature: "some arise from overstretched human and technical capacity[, others] from structural issues, such as historical tensions between the main players, lack of clarity in...responsibilities, lack of ownership over implementation agendas, [lack of] sufficient coordination [between ministries], and cumbersome and ineffective communication practices" (Averchenkova, Gannon & Curran, 2019: 3).

South Africa's national dialogue on just transitions is one of the most advanced in the world. Including the need for a just transition in high-level policies and plans, such as the National Development Plan (NDP) and Nationally Determined Contributions (NDC), provides a strong foundation for this dialogue and has built support to establish more tangible measures, such as the National Employment Vulnerability Assessment (NEVA) (WRI, 2021). A range of national dialogues, assessments and policies, combined with the 2020 Presidential Climate Change Coordination Commission's mandate to coordinate South Africa's just transition, helps to lay the ground for a just transition in the energy sector. However, any significant change in the energy system is complicated by the country's longstanding coal dependence and high unemployment rate, and will require overcoming entrenched challenges and vested interests (WRI, 2021). The Presidential Climate Commission (PCC) has produced a just transition framework, released in February 2022 for public consultation, which is aimed to be a strategic plan for achieving a just and equitable transition to net-zero CO2 emissions in South Africa by 2050 (PCC, 2022). The just transition framework will provide the necessary foundation to guide other planning and policy-setting processes.

# Key areas and issues

In South Africa, a consensus has emerged in favour of a just transition to net-zero carbon emissions by 2050 (Patel, 2021), defined as "a shift towards low carbon, climate resilient and ecologically sustainable economies and societies which contributes to the creation goals of decent work for all, social inclusion, and the eradication of poverty" (Nedlac, 2020: 7). Yet the just transition agenda remains a source of debate and South Africa's just transition is very much in the making (Montmasson-Clair, 2021). Furthermore, the literature can be dominated by issues around coal. It is critical to consider and engage all aspects of the energy system in a just energy transition in South Africa. For example, tackling energy poverty; increasing energy efficiency; adding renewable energy generation; growing the number of jobs in the green economy; and

improving local transport systems are also core components for developing a just energy transition (Project 90 by 2030, 2020).

According to Montmasson-Clair (2021), defining the degree of ambition of any just transition agenda is paramount to achieve the end goal(s), and will also inform the tools, interventions and mechanisms that are required. Applied to the just transition debate, ambition can be categorised along three dimensions of transitional justice: procedural, distributive and restorative justice. The degree of ambition associated with the just transition paradigm varies extensively – ranging from managerial reform to transformation. In particular, the degree of ambition to be pursued by South Africa's just transition is, indeed, the key bone of contention between stakeholders.

Project 90 by 2030 (2019: 3) highlights five key (ongoing and emerging) drivers of energy system change in South Africa: the falling cost of renewable energy, climate change and the importance of mitigating emissions, negative effects of coal production on the environment and human health, addressing socio-economic challenges, and the urgent need to reform Eskom (both financially and operationally). The transition away from coal offers new opportunities as well as costs. It should make electricity cheaper and more reliable, and prevent trading partners from imposing carbon taxes on South African exports. These benefits should ultimately boost overall economic growth and job creation. In contrast, the costs of the transition to new energy sources will fall mostly on stakeholders in the coal value chain itself – with mining jobs declining, the four districts in Mpumalanga that rely on coal will have to diversify into new economic activities (Makgetla, 2021: 5).

Montmasson-Clair (2021: 23) argues that "most policy tools and interventions necessary to affect a just transition are known and already tested in South Africa. But these are yet to be meaningfully harnessed for an ambitious just transition agenda. No agreement exists at present on the end state (the so-called "inclusive green economy") and the pathways to achieve this (the parameters of action for the three dimensions of transitional justice)." The question of financing must similarly be answered (i.e. availability of both public and private resources and financial flows) and who should pay for the required interventions (i.e. the burden-sharing agreement) remains a fundamental question. A genuine just transition agenda should aim to achieve more equitable repartition of costs and benefits between stakeholders (Montmasson-Clair, 2021: 23).

The policy decisions required for a successful just transition range from clear-cut, short-run choices to strategic directions to guide trade-offs as they arise. Makgetla (2021: 21-24) highlights the following key steps and decisions in the implementation of the just transition away from reliance on coal:

- Agreement on a just transition A just transition away from coal has already been agreed in principle. However, some immediate decisions are required to achieve emissions targets, above all an agreement to end plans for new coal plants and to develop targets for Sasol to achieve net-zero etc. The fragmentation of decision-making on coal leads to stop-start actions and opens the door to lobbying.
- 2. Agreement on timeframes, targets, strategies and responsibilities Government agencies and major stakeholders have not been able to align decisions that affect the energy transition and emissions, which demobilises efforts to secure a just transition. Leading departments and agencies do not include either emissions targets or support for coal communities and miners consistently in their mandates and key performance

- indicators. No structure is currently mandated or designed to align government efforts around the just transition in the coal districts.
- 3. Development and testing of proposals The just transition requires viable and sustainable programmes to diversify the economies of the coal districts in Mpumalanga, and to support displaced workers and small businesses. A number of decisions will have to be made around the quality of livelihoods supported through just transition programmes, e.g. only include formal jobs or extend to public employment schemes and self-employment. Decisions also have to be made around how to link measures to support individual workers, through active labour market policies and social protection, with economic diversification. It may prove difficult to identify viable new economic clusters as a result of slow national or global growth; lack of capacity and funding; and poor risk management systems, which effectively restrict innovation by technical experts, stakeholders and public agencies. Furthermore, the government needs to be specific about the support it wants from stakeholders in order to forge agreement on initiatives. Discussion is also important, especially with communities and workers.
- 4. Successful implementation of programmes and projects Once programmes and projects are authorised, state agencies and private actors must implement them, through committing resources and skills; managing the inevitable risks; and adapting to changing conditions and new insights (requiring adequate institutional and decision-making systems). The programmes will fail if stakeholders inside and outside of the state do not provide consistent support, including infrastructure, investment, capacity and regulatory changes.
- 5. Working people and their communities successfully transition away from coal into sustainable, dynamic new livelihoods The final outcome should be that the key performance indicators set for inclusive growth in the coal districts are met, despite some inevitable failures and modifications along the way.

Patel (2021: 42) emphasises that while there are many policy tools and governance systems available, "there is no "best practice" and South Africa will have to decide on the combination of these tools to be used, their management over time, and how they will be adapted to different regional and sectoral contexts." Much work has been done in establishing a clear definition and vision for a just transition, which is necessary for moving the process forward. Establishing the just transition framework is the next appropriate policy step, according to Patel (2021), which will ideally establish guiding principles for South Africa's approach to the just transition, tracking when intervention is required and laying out how policy mechanisms should behave in response to impacted value chains and regions in the economy.

A recently released synthesis report by the PCC (2021: 6-8) summarises the findings of the body's work in preparation of developing the framework for South Africa's just transition to a low-emission economy. Six key thematic issues were investigated by the PCC, and inform the framework. Namely:

1. The necessary policy foundation to support a just transition — A just transition presents an opportunity for social redress in South Africa, particularly for vulnerable populations. It also presents the possibility of new forms of collaboration between the state and private sector, and between South Africa and the rest of Africa. Achieving a just transition will "require a mix of measures and approaches that reflect the diversity of views in a country, through a series of incremental building blocks". Moreover, the long-

- term vision for addressing climate change should "balance the urgency of the climate crisis with what is feasible in terms of South Africa's existing developmental challenges".
- 2. The coal value chain South Africa has very high levels of greenhouse gas emissions globally, largely due to the overwhelming majority of South Africa's energy capacity being coal-based. A transition from a carbon-intensive economy in South Africa will "fall mostly on the coal and petrochemical value chains and therefore alternative economies must be developed". "The workers and communities that depend on the coal and petrochemical value chain may not have the social, human, and financial capital to adapt to the changes that lie ahead. A carefully planned and phased energy transition will be necessary."
- 3. **Employment and sustainable livelihoods** South Africa has the highest levels of unemployment, poverty, and inequality in the world; "the transition... will affect where jobs are created and lost". "The transition is expected to result in an overall net gain in jobs" and that "renewable energy projects are a powerful job creator. All efforts should be made to absorb the unemployed/affected workers, rather than creating a migration of skills from other sectors."
- 4. Financing a just transition South Africa requires financial assistance and investment from the international community to support its transition and decarbonisation agenda. Some estimates posit that South Africa requires investment of ZAR 300-billion over the next three decades to support such a transition. The PCC report affirms that while international finance is typically geared towards large-scale initiatives, "communities should also reap the benefits". And that "there is no just transition if the financing and rewards do not reach the most vulnerable sectors of the population".
- 5. **Water security** South Africa is already a water-insecure country and will be challenged with further water insecurity as the climate changes, making water security essential to building climate resilience and supporting a just transition.
- 6. Governance "Achieving a just transition will require a novel and coherent governance model." "Intergovernmental cooperation, including on planning and implementation, is a key component of effective governance for a just transition. All spheres of government must embrace the just transition agenda."

The PCC's draft Just Transition Framework for South Africa is now out for public consultation. However, how inclusive these consultations will be remains questionable. Although public participation resides at the heart of South Africa's Constitution and democratic governance principles and systems are in place so that public participation does occur at a formal level. Meaningful engagement with low-income communities is not happening generally, and even less so when dealing with access to energy (Project 90 by 2030, 2020). Where engagement does take place, it is often presented as a once-off activity rather than a negotiated, people-centred process over time. For example, insights from a case study of coal-related socio-economic dependency and just transition planning in Mpumalanga (South Africa) found that many underrepresented stakeholders and communities are not currently engaged in transition discussions, such as coal workers in the informal sector (Just Transition Initiative, 2021: iv).

# 3. Annotated bibliography: Relevant policies and institutional support

Department of Environmental Affairs. (2011). National Climate Change Response Policy (NCCRP) White paper. Pretoria: Government of the Republic of South Africa.

https://www.dffe.gov.za/sites/default/files/legislations/national\_climatechange\_response\_whitepaper 0.pdf

The NCCRP White Paper approved by Cabinet in 2011, presents the government's vision for an effective climate change response and the long-term, just transition to a climate-resilient and lower-carbon economy and society. It represents government's comprehensive policy framework for responding to climate change. It reflects a strategic approach referred to as "climate change-resilient development", addressing both adaptation and mitigation, which makes use of three time-bound planning horizons: Short-term – five years from date of publication of the policy; Medium-term – 20 years from date of publication of the policy; Long-term – a planning horizon that extends to 2050.

National Planning Commission. (2012). National Development Plan (NDP). Pretoria: Government of the Republic of South Africa. https://www.nationalplanningcommission.org.za/assets/Documents/ndp-2030-our-future-make-it-work.pdf

Adopted in 2012, with an overarching objective of eliminating poverty and reducing inequality by 2030, the NDP outlines a set of goals and actions to meet the country's environmental sustainability and resilience needs and dedicates an entire chapter to "Ensuring environmental sustainability and an equitable transition to a low-carbon economy" (Chapter 5: 197-216). The chapter proposed a framework for a national-level social dialogue (see below).

National Planning Commission. (2019). Social Partner Dialogue for a Just Transition: May 2018 to June 2019. Draft Proposal – Version Two. https://oneworldgroup.co.za/wp-content/uploads/2019/10/NPC-JT-Vision-and-Pathways-draft-2-final.pdf

The Social Partner Dialogues on Pathways for a Just Transition were launched in 2017 and formed part of the second phase of the National Planning Commission's work on Chapter 5 of the NDP. The aim was to build consensus on a common vision for a Just Transition to a low carbon, climate-resilient economy and society by 2050 and develop proposals for pathways to achieve this vision. The process involved a series of dialogues, with civil society, business, government, labour, communities and experts. Each dialogue built on the previous ones and this draft document aims to capture the stakeholders' voices and the cumulated and consolidated outcomes of this process, which resulted in the Concluding Conference on 29 May 2019. The Commission adopted an economy-wide scope for planning for a Just Transition in South Africa, prioritising 3 key sectors: Energy, Water and Land-use. Through the dialogues, consensus was reached on general principles such as social dialogue, corruption-free governance and participatory decision-making, but several major issues remain under debate, including emissions reduction pathways, state vs. private ownership of resources, the balance between conservation of natural resources and equitable access to them and the future of Eskom (WRI, 2021).

# Department of Mineral Resources & Energy Affairs. (2019). Integrated Resource Plan (IRP2019). Pretoria: Government of the Republic of South Africa.

http://www.energy.gov.za/IRP/2019/IRP-2019.pdf

The IRP is an electricity capacity plan which aims to provide an indication of South Africa's electricity demand, how this demand will be supplied and what it will cost. On 6 May 2011, the then Department of Energy (DoE) released the Integrated Resource Plan 2010-2030 (IRP 2010). The IRP 2010 was intended to be a "living plan" that would be periodically revised by the DoE, at least every two years. However, this was never done and resulted in an energy mix that failed to adequately meet the constantly changing supply and demand scenarios in South Africa, nor reflect global technological advancements. After a lengthy public participation and consultation process, the overdue IRP2019 was issued in October 2019, which updates the energy forecast from the current period to the year 2030.<sup>3</sup>

IRP2019 highlights a short-term supply gap between 2019-2022, primarily due to lead-time of first new-build capacity in 2023 (Wright & Calitz, 2020). IRP2019 aims to procure a total of 14,400 MW of Wind and 6,000 MW of photovoltaics (PV) between 2022 and 2030, which would bring the annual energy generation of PV, wind and concentrated solar power to approximately 24.7% of the power mix by 2030 –short of the 78% and 90% required for a 1.5°C compatible pathway. The IRP2019 does not include a near-term phase-out of coal. While it outlines the decommissioning of several older coal plants, the commissioning of another 1500 MW of coal and 3000 MW of gas and diesel by 2030 is also outlined and incompatible with bringing the carbon intensity of power production to zero. This means that by 2030 coal would make up 43% of total installed generation capacity, down from 65.5% in 2018.<sup>4</sup>

Makgetla, N., Maseko, N., Montmasson-Clair, G. & Patel, M. (2019). Sector Jobs Resilience Plan: National Employment Vulnerability Assessment - Analysis of potential climate-change related impacts and vulnerable groups. TIPS.

https://www.tips.org.za/projects/current-projects/item/3936-sector-jobs-resilience-plans

As stipulated in the 2011 NCCRP White Paper, the government launched a comprehensive National Employment Vulnerability Assessment (NEVA) in 2017 to evaluate the impacts of climate change and climate action on employment by sector and understand what measures could offset those impacts. The main report provides a detailed analysis of the capacity of vulnerable communities, workers and businesses to adjust to climate-change related impacts. The report identifies four key dimensions of vulnerability: income and financial assets; physical assets; human capital; and social capital. It then explores the potential impacts of climate change and identifies vulnerable groups within each value chain. Potential impacts on the value chain are analysed, and the number, nature and location of livelihoods that stand to be threatened as a result. The report identifies the vulnerable groups within the value chain and analyses their scope in responding to potential effects on their jobs and businesses.

<sup>&</sup>lt;sup>3</sup> Information taken from https://www.cliffedekkerhofmeyr.com/export/sites/cdh/en/news/publications/2019/Corpor ate/downloads/Energy-Alert-22-October-2019.pdf [accessed 08/04/2022]

<sup>&</sup>lt;sup>4</sup> Analysis taken from https://1p5ndc-pathways.climateanalytics.org/countries/south-africa/ [accessed 08/04/2022]

In parallel, the National Climate Change Response White Paper also requires the development of Sector Jobs Resilience Plans (SJRPs). These plans aim to protect vulnerable groups that may lose their jobs or livelihoods as a result of climate change impacts, related either to physical effects or to the transition to alternatives. The proposals for the SJRPs, and the evidence supporting them, are presented as a suite of related documents (see above link). As well as the NEVA, these include the SJRP Toolbox: Summary for policy makers, and proposals for five value chains that seem particularly likely to be affected: coal, metals, petroleum-based transport, agriculture and tourism.

Department of Forestry, Fisheries and the Environment (DFFE). (2020). South Africa's Low Emission Development Strategy 2050. https://www.dffe.gov.za/sites/default/files/docs/202 Olowemission\_developmentstrategy.pdf

This is South Africa's first Low Emission Development Strategy (SA-LEDS). Approved in September 2020, it sets out long-term low greenhouse gas emission development strategies. It builds on years of work on climate change in the country to articulate the path going forward and specifically builds on three key policy documents (The NDP; The NCCRP; and The Climate Change Bill (forthcoming<sup>5</sup>)). The Strategy narrates how various sectors of the economy would implement policies and measures to reduce emissions up to 2050. While principally focused on low-carbon development, the Strategy also takes into account how mitigation options may affect or be affected by adaptation measures and the potential combined effects of these interventions.

National Economic Development and Labour Council (Nedlac). (2020). Nedlac Report on the Climate Change Bill, 2020. Johannesburg: National Economic Development and Labour Council. https://www.tips.org.za/just-transition/item/4266-nedlac-report-on-the-climate-change-bill-2020

The draft Climate Change Bill was published by the Department of Environmental Affairs (now Department of Environment, Forestry and Fisheries) on 8 June 2018 for public consultation of a period of 60 days. Subsequent to the publication of the Bill, the Department convened provincial workshops for stakeholder participation in all nine provinces and a number of bilateral engagements with business associations, NGOs, research institutions as well as sector departments in government were held. A Nedlac engagement commenced on this version of the Bill as it was in line with the Nedlac protocol. The Task Team comprised representatives of organised labour, organised business and government. The purpose of the task team was: to consider the proposed Climate Change Bill tabled by government, and engage with the contents; undertake a line by line analysis of the revised Climate Change Bill, 2020 with a view to reaching consensus on the provisions; and develop a report for submission to all relevant structures in Nedlac containing maximum areas of agreement, as well as areas of disagreement.

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<sup>&</sup>lt;sup>5</sup> South Africa's Climate Change Bill was formally introduced to the National Assembly on 18 February 2022. The aim of the Bill is to ensure that South Africa has the necessary statutory framework to respond to climate change. See <a href="https://www.parliament.gov.za/bill/2300773">https://www.parliament.gov.za/bill/2300773</a> [accessed 08/04/2022]

# Government of the Republic of South Africa. (2021). Updated Nationally Determined Contribution (NDC).

https://www4.unfccc.int/sites/ndcstaging/Pages/Party.aspx?party=ZAF&prototype=1

The Government submitted its updated NDC in September 2021 (its first NDC was submitted in November 2016). The updated NDC raises ambition, strengthens clarity, transparency and understanding, and clearly states it's just transition approach, laying out a paradigm-shifting pathway for low emissions and climate-resilient development. The updated NDC aims to reduce emissions 350-420 MtCO<sub>2</sub>e/yr by 2030 including through land use, land-use change and forestry (LULUCF) and conditional on international support. The updated NDC translates into emissions reductions of 20-33% below 2010 levels (or 366-436 MtCO<sub>2</sub>e/yr), excluding LULUCF. This is an increase in ambition compared to South Africa's draft updated NDC circulated for public consultation in March 2021. A 1.5°C compatible domestic emissions pathway would require a 43% reduction below 2010 levels (or 304 MtCO<sub>2</sub>e/yr by 2030), excluding LULUCF.<sup>6</sup>

Presidential Climate Commission (PCC). (2022). Framework for a Just Transition in South Africa. Draft for Discussion. https://pccommissionflow.imgix.net/uploads/images/South-Africas-Just-Transition-Framework-for-Stakeholder-Consultation-Feb-2022\_2022-02-23-092221\_xtvt.pdf

This is a draft for consultation and discussion. It presents a framework for achieving a just transition in South Africa – it's the first building block towards reaching South Africa's vision. The framework sets out the vision, principles, planning elements and policy measures to achieve a just transition in South Africa, as well as the outcomes to be achieved over the short, medium, and long-run. The framework aims to bring coherence and coordination to just transition planning and builds on a series of dialogues conducted by the PCC in 2021 on issues pertinent to a just transition. The PCC is proceeding with a series of community consultations, along with broader outreach activities, to ensure that the development and production of the Just Transition Framework is consultative and benefits from the views and experiences of those affected, to ensure that the framework is fit-for-purpose. The framework is intended to be a living document, updated as circumstances change, and new learning takes place. The document is not, however, a detailed implementation plan (that is to follow later).

### Other relevant policies

These include:

- National Environmental Management: Air Quality Act 39 of 2004: https://www.gov.za/documents/national-environment-management-air-quality-act
- New Growth Path (2010): https://www.gov.za/about-government/governmentprogrammes/new-growth-path

<sup>&</sup>lt;sup>6</sup> Analysis taken from https://1p5ndc-pathways.climateanalytics.org/countries/south-africa/ [accessed 08/04/2022]

<sup>&</sup>lt;sup>7</sup> See here for recordings of community and stakeholder consultations undertaken on the Framework: https://www.climatecommission.org.za/events [accessed 11/04/2022]

- Carbon Tax Act (2019): https://www.gov.za/documents/carbon-tax-act-15-2019-english-afrikaans-23-may-2019-0000
- Mineral and Petroleum Resources Development Act (2004): https://www.gov.za/documents/mineral-and-petroleum-resources-development-act
- Provincial Green Economy Plans: https://www.dffe.gov.za/projectsprogrammes/greeneconomy/resources

# 4. Annotated bibliography: The "just" in just energy transition

### General

Burton, J. (2021). Coal in 2022: South Africa's Just Energy Transition Partnership. E3G Blog. https://www.e3g.org/news/coal-in-2022-south-africa-s-just-energy-transition-partnership/

Blog discussing the launch of the Just Energy Transition Partnership (JETP) political declaration between UK, USA, Germany, France and South Africa, and the extensive just transition work undertaken over the past year(s) by local South African think tanks and electricity company Eskom and unprecedented levels of inter- and intra-governmental coordination.

Climate Investment Funds (CIF). (2020). Supporting Just Transitions in South Africa: Just Transition Case Study. CIF.

https://www.climateinvestmentfunds.org/sites/cif\_enc/files/knowledge-documents/supporting\_just\_transitions\_in\_south\_africa.pdf

This case study from CIF explores the key elements of just transitions in South Africa and draws lessons on how CIF investments affected just transitions efforts in the country. It uses an iteration of the emerging framework developed under the Just Transition Initiative — a partnership between CIF and the Center for Strategic and International Studies (CSIS) — to explore the diverse perspectives and approaches of the key actors involved in South Africa's just transitions. It reflects on the CIF's contributions to the energy transitions in South Africa and highlights the importance of considering both the distributional effects of climate action and recognising marginalised groups by including them in discussions and decision-making processes. The report also examines the role that CIF and Multilateral Development Banks can play in supporting Just Transitions. Recommendations include: Transparent and participatory socioeconomic modelling; Cross-sectoral dialogues, social inclusion and participation; Concessional finance, critical at the early stages of innovation for de-risking initial investments; Skills development; Adopting a regional focus that supports repurposing and rehabilitating coal mines, economic diversification, and investments in built and ecological infrastructure.

Montmasson-Clair, G. (2021). Policy primers for a South African just transition framework. Working Paper for the Presidential Climate Commission. Pretoria: Trade & Industrial Policy Strategies. https://www.tips.org.za/images/Working\_Paper\_PCC\_Policy\_primers\_foral\_pust\_Transition\_framework\_2021.pdf

One of five working papers that provide an evidence-based foundation for the PCC's new Framework for a Just Transition. This paper aims to contribute to unpacking the meaning of a just transition and the tools to foster it in the South African context. Building on current global debates, it discusses the current domestic situation and possible way forward. Specifically, it unpacks the existing spread in ambition and discusses the state of play and possible policy responses in terms of participatory, distributive and restorative justice. She concludes that achieving a just transition in South Africa will be an incremental process made of small steps, important breakthroughs and some setbacks. Political will from all stakeholders (notably to reach consensus and engage with diverging views) and the alignment of vested interests are both needed and are key driving forces.

Patel, M. (2021). Towards a just transition. Technical Report No.1., A review of local and international policy debates. Pretoria: Presidential Climate Commission. https://a9322a19-efe3-4459-9a6c-

ab806fededa3.filesusr.com/ugd/1eb85a\_0a6e785b0f444df89d7f7696b9d1627e.pdf

This review presents a situational analysis of the key debates and issues that will inform the development of South Africa's Just Transition Framework. Situating itself within the literature, existing debates, and international experience, this review considers the different approaches to understanding and defining a just transition for South Africa. The review draws on international experiences (specifically Germany and Spain) and some important lessons from these experiences, key stakeholders and gaps. The review also considers the range of policy tools available to facilitate a just transition (such as job and training placement schemes, retraining, temporary income support, small business support, and transitioning workers out of the labour force), which will be most effective when applied in combination, and with appropriate governance systems and funding. The review ultimately recommends that the just transition vision adopted for South Africa is one that builds on existing (and extensive) consultation processes, particularly those established by the National Planning Commission and for the Climate Change Bill, but with a greater emphasis on social justice and a clearly defined endpoint: net-zero carbon dioxide emissions by 2050. The review also argues that the Presidential Climate Commission has a fundamental role to play in ensuring evidence-based discourse as a guide to hold stakeholder claims to account and in navigating the way forward.

Presidential Climate Commission (PCC). (2021). Laying the Foundation for a Just Transition Framework for South Africa.

https://pccommissionflow.imgix.net/uploads/images/SPIPA-PCC-Report-Design-v8-1.pdf

In 2021, the PCC commissioned several studies and undertook public consultations to help inform the development of the just transition framework (draft produced in February 2022 for consultation (see above) and cited for approval in 2022). These studies and consultations helped

unpack some of the issues at the heart of a just transition in South Africa. This report presents a summary of these studies and consultations, highlighting important considerations for the development of the just transition framework in South Africa. It highlights the key messages from each thematic study and dialogue.

Swilling, M., Musango, J. & Wakeford, J. (2016). Developmental States and Sustainability Transitions: Prospects of a Just Transition in South Africa, Journal of Environmental Policy & Planning, 18:5, 650-672, DOI: 10.1080/1523908X.2015.1107716

This paper endeavours to fuse the core conceptual concerns of the developmental state and sustainability transition literatures. It is argued that a just transition would consist of a dual commitment to human well-being (with respect to income, education and health) and sustainability (with respect to decarbonisation, resource efficiency and ecosystem restoration). However, to understand these processes, we need a better understanding of political dynamics, and for this purpose the notion of a socio-political regime is introduced. The difference between South Africa's dual developmental and environmental trajectories and the East Asian experience is presented. The paper adopts a pessimistic outlook on a Just Transition in South Africa, arguing that South Africa is an institutionally weak state that has not broken the power of the Minerals Energy Complex within the socio-political regime, not promoted employment-creating industrialisation and has facilitated accelerated financialisation. At the same time, a myriad of environmental and resource challenges have emerged, without an adequate paradigmatic framework to ensure a full understanding of what is going on within the socio-political regime.

## **Governance and power**

Cock, J. (2019). Resistance to coal inequalities and the possibilities of a just transition in South Africa, Development Southern Africa, 36:6, 860-873, DOI:

10.1080/0376835X.2019.1660859

Environmental inequality intersects with other forms of inequality, domination and exclusion, specifically those of race, class and gender. Furthermore, there is no consensus on the goals of a just energy transition, which vary from shifting to a new renewable energy regime, to transformation towards an eco-socialist order. This article suggests that, despite heavy constraints, initiatives involving resistance to coal in South Africa are building a "counter-power" which challenges inequality, generates solidarity, and is potentially infused by imaginative visions of another world beyond coal. Following the "social power" approach this vision could, with deeper connections between three sites of resistance to coal – organised labour, mining affected communities and environmental justice organisations – cohere into a vision of a 'just transition'. This could embed the anti-coal struggle in a social movement for an alternative development path to challenge deepening poverty and inequality.

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<sup>&</sup>lt;sup>8</sup> See studies here: https://www.climatecommission.org.za/publications#PCC-recommendation-reports [accessed 11/04/2022]

# Field, T. L. (2021). A Just Energy Transition and Functional Federalism: The Case of South Africa. *Transnational Environmental Law*, 10(2), 237-261. doi: 10.1017/S2047102520000436

This paper explores federalist systems' allocation of powers among central, regional and local governments in the context of climate change and the need for a just transition. The article situates the "functional federalism" that arises from South Africa's multi-sphere system of government within these debates. The article explains the system of functional federalism in South Africa and details the tripartite structure (physical, market, and regulatory) of the South African electricity sector. It delineates the complex interactions that have unfolded between governmental and non-governmental actors in the electricity sector in recent times.

# Maseko, N. (2021a). Governance and the Just Transition. Pretoria: Trade & Industrial Policy Strategies. https://www.tips.org.za/images/Working\_paper\_PCC\_Governance\_and\_the\_Just\_Transition\_2021.pdf

One of five working papers that provide an evidence-based foundation for the PCC's new Framework for a Just Transition. This paper explores governance in relation to a just transition, as achieving such a thing will require profound changes in both market outcomes and social and political relationships. In practice, despite some substantial successes, government efforts to promote a just transition have run into internal contradictions, inadequate capacity and funding shortfalls, and conflict with some communities. This working paper explores the systemic changes in governance that could mitigate these challenges. There is, however, no perfect solution, governance systems will have to evolve continuously as new information and blockages emerge. It analyses the governance functions required for the just transition and their current allocation between state agencies; explores municipal and provincial resourcing and responsibilities; ways to improve the incorporation of the just transition into government's decision-making systems; and pulls out learnings from the past 30 years of democracy around participation and the use of evidence in policymaking.

# Ward, M. (2018). Just transitions and the green economy - navigating the fault lines. University of Witwatersrand's Centre for Researching Education and Labour. https://www.tips.org.za/just-transition/item/4064-just-transitions-and-the-green-economy-navigating-the-fault-lines

The paper frames the Just Transition from a moral and business perspective. It assesses how much responsibility companies and organisations should have for the impact their clients have on climate change and asks to what extent the processes and products of the businesses can influence their clients' behaviour. The paper considers the history of the notion of Just Transition, the debates and differences of approach in relation to the concept, and the implications that an engagement with the concept may have for companies and organisations. The paper also explores different interpretations of notions such as Just Transition, the green economy and value creation.

The paper argues that a transformative or deep Just Transition must not only address the unemployment crisis in South Africa, but demand redistribution of power and resources to challenge the conventional understanding of economic growth, and mobilise for an alternative development path. One of the fault lines within the business case discourse is the difference between instrumental and transformative approaches. Instrumental approaches tend to focus

only on those transitions that will generate profit for a company. Businesses should recognise that significant transformation is possible through engaging with the societies and ecosystems within which they operate.

Winkler, H. (2020). Towards a theory of just transition: A neo-Gramscian understanding of how to shift development pathways to zero poverty and zero carbon. *Energy Research & Social Science*, 70, 101789. https://doi.org/10.1016/j.erss.2020.101789 [pre-proofs open access version here: https://tips.org.za/just-transition/item/4268-towards-a-theory-of-just-transition-a-neo-gramscian-understanding-of-how-to-shift-development-pathways-to-zero-poverty-and-zero-carbon]

The academic article focuses on the need to better understand how a just transition can shift development paths to achieve net-zero emissions and eliminate poverty. The article begins by introducing and reviewing different theoretical approaches to theorising just transition. It builds a neo-Gramscian theory of just transition around concepts of ideology, hegemony, change agents and fundamental conditions. The coalition needs to gain broader support, establish a new cultural hegemony in support of just transitions and be able to transform the fundamental conditions of the 21<sup>st</sup> century. The just transition theory is needed to shift from past development paths which brought high carbon, poverty, and inequality. Building on neo-Gramscian theory, just transition is poised as an ideological element that acts as a unifying vision around which an alliance of change agents coalesces. The article suggests that just transitions require coalitions of change agents coalescing around an ideological element – the just transition. A just transition requires organising broad front politics and finding ways to cooperate with others. The article briefly considers how this better understanding can be applied to the practice of shifting development pathways. The article also presents some limitations to the study and discusses implications and further research directions.

# Inclusion and engagement

Just Transition Initiative (2021). Understanding Just Transitions in Coal-dependent Communities: Case Studies from Mpumalanga, South Africa, and Jharkhand, India. Center for Strategic and International Studies (CSIS) and Climate Investment Funds (CIF). https://justtransitioninitiative.org/wp-content/uploads/2021/10/CoalDependentCommunities\_Report.pdf

This study by the Just Transitions Initiative explores coal-related socio-economic dependency in Mpumalanga (South Africa) and Jharkhand (India) and investigates the following key elements of just transition planning: (1) the challenges and opportunities associated with diversification of provincial/state economies; (2) the prospects for environmental rehabilitation of coal mines and power plants; and (3) the landscape of stakeholders important for just transition planning, including underrepresented stakeholders.

Key insights from the case studies include (Just Transition Initiative, 2021: iii-iv):

 Additional analysis is needed to identify and quantify points of dependency and transition risks across the coal ecosystem for a just transition. Both case studies show that local governments and communities are deeply intertwined with the coal industry, and the coal-dependent ecosystem has many layers. Although existing literature

- and data sources clearly show that the industry generates significant local jobs, government revenues, and local mixed infrastructure, among other key services, many elements of the ecosystem have not been quantified.
- In-depth feasibility and scalability assessments of regional economic diversification options are required to map and assess realistic regeneration pathways.
- Following a diversification mapping exercise, long-term pathways for diversification to alternate sectors need to be developed and should be grounded in local priorities. There is a need to create diversification strategies based on the mapping exercise proposed above and which take into account factors such as local needs and priorities, resource availability, and workforce skills.
- Provincial and state government and coal company diversification plans need to be better coordinated to ensure transitions are well planned and inclusive.
- Strengthened regulatory regimes are needed for the effective environmental
  rehabilitation of current and legacy coal mines and power plants as part of the
  diversification of coal-dependent economies. Addressing challenges will require
  ensuring that regulatory bodies managing the rehabilitation process are adequately
  resourced to ensure sufficient enforcement capacity; that rehabilitation processes are
  quided by adequate laws; and that mine closure plans are transparent and made public.
- Robust land use policies and plans are needed to ensure effective environmental rehabilitation and subsequent diversification pathways following mine closures.
   The rehabilitation of current and legacy coal mines must be based on land use policies and resultant plans that require consultation with local stakeholders for better, more inclusive outcomes.
- Local stakeholders, including underrepresented stakeholders, must be
  meaningfully engaged throughout the transition process to ensure inclusive
  outcomes and buy-in. There are many underrepresented stakeholders in Mpumalanga
  not currently engaged in transition discussions, such as coal workers in the informal
  sector.

Maseko, N. (2021b). Unemployment and Sustainable Livelihoods: Just Transition Interventions in the Face of Inequality. Pretoria: Trade & Industrial Policy Strategies. https://www.tips.org.za/images/Working\_Paper\_PCC\_Just\_transition\_and\_sustainable\_livelihoods\_2021.pdf

One of five working papers that provide an evidence-based foundation for the PCC's new Framework for a Just Transition. This paper makes the case for why South Africa's just transition must be proactive in its inclusion of unemployed people and poor communities in all just transition-related conversations and policies. It first explains why moving beyond the status quo is necessary, and then provides brief profiles of the unemployed and households to understand what resources these groups have. It also proposes some interventions that can be used to build resilience for these affected groups, and at the same time build local manufacturing capacity and create jobs and other economic opportunities. The paper does not, however, discuss the employment implications for workers in value chains directly affected by the just energy transition, such as coal mining and related downstream industries, agriculture, tourism and other manufacturing.

Maseko, N. (2021c). Just transition in South Africa: the case for a gender just approach. Policy Brief 4/2021. Pretoria: Trade & Industrial Policy Strategies. https://tips.org.za/just-transition/item/4263-just-transition-in-south-africa-the-case-for-a-gender-just-approach

This policy brief makes the case for a gender just transition in South Africa. It does so by: a) explaining why a gender just transition is vital by discussing the gendered impact of climate change; b) locating South African women within the broader society and within the economy; and c) providing a brief idea of what a gender just transition would look like.

# 5. Annotated bibliography: Energy reform

#### General

Roff, A., Steyn, G., Tyler, E., Renaud, C., Brand, R. & Burton, J. (2020). A Vital Ambition: Determining the Cost of Additional CO2 Emission Mitigation in the South African Electricity System. Rondebosch: Meridian Economics.

https://meridianeconomics.co.za/wp-content/uploads/2020/07/Ambition.pdf

This is a sector level study to assess the cost of climate mitigation in the future South African power sector. It looks at how South Africa can meet its power demand for the coming decades whilst drastically reducing its emissions from electricity generation and the associated costs. Finding that cost is no longer a barrier to significant mitigation in the power sector. It is aimed at providing guidance regarding the size and cost of a possible climate transaction.

Strategy&. (2021). What a 'just transition' means for jobs in South Africa: Considering employment in a lower-carbon economy. PWC.

https://www.pwc.co.za/en/publications/just-transition.html

This article discusses what a 'just transition' means in the South African context. It lays out the context within which South Africa's 'just transition' is set — a context of widespread poverty, inequality, unemployment and an urgent need for economic recovery. It is also a context of a high-emissions economic structure. It also covers transition risk arising from South Africa's own domestic policies as it moves to implement its internationally binding targets for reducing greenhouse gas emissions. The article estimates the current jobs and economic activity associated with the coal industry that could be lost in a transition to renewable energy and also examines potential employment gains in alternative energy. It also discusses the economic costs of a delayed transition.

WRI. (2021). South Africa: Strong Foundations for a Just Transition. WRI Snapshot. https://www.wri.org/update/south-africa-strong-foundations-just-transition

This article by the World Resources Institute (WRI) provides an easily digestible snapshot of the steps taken and the foundation laid for the just transition in South Africa.<sup>9</sup> It provides a good

<sup>&</sup>lt;sup>9</sup> Taken from the WRI's Just Transition and Equitable Climate Action Resource Center, which provides snapshots from initiatives by governments, communities and companies that provide lessons for how workers and communities can benefit from the just transition <a href="https://www.wri.org/just-transitions">https://www.wri.org/just-transitions</a> [accessed 07/04/2022]

background, with information on policies, actors and historical context, as well as highlighting strengths and challenges and gaps associated with the just transition process in South Africa. Strengths include good institutional support and policy frameworks being developed and put in place, as well as a proactive, ongoing, national social dialogue to develop a vision for a just transition. Challenges and gaps include that this social dialogue has mostly remained at the national level and that entrenched challenges and vested interests in the existing energy system and Mpumalanga district.

### **Transition away from coal**

Makgetla, N. (2021). The just transition in coal. Working Paper for the Presidential Climate Commission. Pretoria: Trade & Industrial Policy Strategies (TIPS). https://www.tips.org.za/images/Working\_Paper\_PCC\_The\_Just\_Transition\_in\_coal\_2021.pdf

One of five working papers that provide an evidence-based foundation for the PCC's new Framework for a Just Transition. Although the transition away from coal in South Africa will likely take place over decades, it will accelerate from 2025. This paper describes the nature of the transition away from coal in South Africa and the associated costs, benefits and risks; the nature of existing governance systems; possible timelines for phasing out coal-based on current trends and policies; and key debates arising around the way forward. It draws on a TIPS working paper by Makgetla and Patel (2021) to outline the factors behind the decline in coal.

Project 90 by 2030. (2019). Remaking our energy future: towards a Just Energy Transition in South Africa. Muizenberg: Project 90 by 2030. https://90by2030.org.za/wp-content/uploads/2020/03/Remaking-our-Energy-Future.pdf

This accessible report offers an analysis of the current energy system and its dynamics in employment, the current international shift from coal to renewable energy, and the drivers of an energy system change in South Africa. It emphasises the importance of a transparent and people-centred Just Energy Transition led by social dialogue and consultation, ensuring equality in all forms. It combines learnings from international experiences with what has already been done in South Africa, to make recommendations about how to move forward, with a focus on the shift from coal to renewable energy. Lessons are around the importance of stakeholder engagement, to emphasise the economic argument for an energy transition, and proactive and efficient planning to manage the transition

Res4Africa. (2020). A Just Energy Transition in South Africa: Socio-economic needs and the positive impacts of a future low-carbon economy. Res4Africa, CSIR and ERM. https://static1.squarespace.com/static/609a53264723031eccc12e99/t/60ed4d6d4918f36a6d5eb6d3/1626164593677/A+Just+Energy+Transition+in+South+Africa.pdf

This study assesses the changes necessary in employment and workers' skills in line with the shift to renewables, as well as lessons learned from other countries transitioning away from coal. The first section of the study evaluates the number of jobs generated by renewables under the IRP2019 deployment schedule and the skills which will be required as a consequence, providing a framework for the re-skilling of coal sector workers. The second section analyses the low-

carbon transitions of five countries across three continents, identifying their successes and how they can inform South Africa's unique transition.

Strambo, C., Burton, J. & Atteridge, A. (2019). The end of coal? Planning a "just transition" in South Africa. SEI Report. https://www.sei.org/wp-content/uploads/2019/02/planning-a-just-transition-in-south-africa.pdf

This report explores some of the main challenges associated with the likelihood that South Africa's coal production might decline significantly, potentially over the next five to ten years. Highlighting some of the key issues that need to be thought through and discussed as part of ensuring a "just transition" to this future. The report is based on insights from a workshop held in Tshwane in September 2018, titled "The end of coal? The risks and opportunities facing South Africa's energy economy", as well as on interviews conducted in September 2018 in Gauteng and Mpumalanga with public officials (national government and state-owned enterprises), business associations, civil society organisations and researchers. The main economic and political impacts of a coal decline are discussed, as well as potential economic development alternatives, knowledge gaps and the institutional arrangements required to implement a just transition. In particular, risks to livelihoods may become a political barrier, exacerbated by institutional dynamics and union resistance. Local stakeholders are more concerned about the local impacts than nationally focused stakeholders, indicating a difference in priorities. The current environmental and mining governance landscape is inadequate for addressing the social and environmental impacts of mining activities. After describing the evolving role of coal in South Africa and the likely impacts of a coal phase-out, the report outlines the key elements of a coal transition, including available policy mechanisms and the role of subnational governments.

#### Governance

Caprotti, F., Essex, S., Phillips, J., de Groot, J., & Baker, L. (2020). Scales of governance: Translating multiscalar transitional pathways in South Africa's energy landscape. *Energy Research & Social Science*, 70, 101700. https://doi.org/10.1016/j.erss.2020.101700

This paper uses the case of South Africa to argue for a multi-scalar focus on the governance of energy policy and practice, which reveals the translation of agendas and policies across scales stretching from the global to the local. It provides an analysis of South Africa's energy landscape, which is influenced by: a highly complex and dynamic set of generation and production networks, policy strategies, multiple state and non-state actors, and the continuing impact of apartheid. The paper establishes a dialogue between Actor-Network Theory and studies of socio-technical transitions to analyse the translation and purification of discourses and practices across scales, and to consider how these processes may impact on spatialised processes of energy transition.

Department of Public Enterprises. (2019). Roadmap for Eskom in a reformed electricity supply industry. Hatfields: Public Enterprises. https://dpe.gov.za/wp-content/uploads/2019/10/ROADMAP-FOR-ESKOM 0015 29102019 FINAL1.pdf

The document sets out actions to overcome the crisis at Eskom and put it on a new path of sustainability, in the form of a roadmap. The report defines the key steps in transforming the electricity supply system that are required, including the energy sources proposed by IRP2019;

addresses steps to restore Eskom's finances, including government support; identifies measures to reduce the cost structure of Eskom to enable provision of affordable electricity; and details the process through which the restructuring of Eskom will take place, and through which a new transmission entity will be established. Through retiring end-of-life power stations and diversifying primary energy sources, the reform of Eskom will minimise the impact on the utility's workers and in related industries and communities. In managing the transition, alternative economic activities will be implemented to economically sustain communities dependent on the power stations and associated coal mines. The reforms require capable leadership and personnel at Eskom and greater transparency in the governance of both Eskom Holdings and the subsidiaries. The roadmap notes "tough decisions will have to be made" and all institutions, organisations and citizens will have to play their part.

Eskom Research Reference Group. (2020). Eskom Transformed: Achieving a Just Energy Transition for South Africa. Cape Town, New York and Amsterdam: Alternative Information & Development Centre (AIDC), Transnational Institute (TNI), and Trade Unions for Energy Democracy (TUED). https://www.tni.org/es/node/25539

The contents of the report reflect the work of three research organisations – the Alternative Information and Development Centre (AIDC) in Cape Town, Trade Unions for Energy Democracy (TUED) in New York and the Transnational Institute (TNI) in Amsterdam. These worked closely with the trade unions involved in organising workers at Eskom - the National Union of Mineworkers (NUM) and the National Union of Metalworkers of South Africa (NUMSA). The report has a different take on Eskom and puts forward the case for a new, modern Eskom with a new and perhaps expanded role in shaping South Africa's energy future. It discusses the damaging misconceptions in the current discourse on energy transition in South Africa, the problems associated with the Eskom debt crisis, the challenges associated with the transition towards renewable energy, and the current unbundling + Independent Power Producer (IPP) approach and its contribution towards Eskom's decline. The report aims to open the door to an alternative assessment of South Africa's energy crisis and the longer-term challenges of transition. The report recommends a forensic audit of Eskom's debt, repudiating debt, investing funds from government institutions in Eskom and halting any plans to unbundle Eskom; moving towards a socially owned renewable energy sector of which Eskom is a driving part, building global cooperation around renewable energy technologies, ending the REI4P programme and focusing instead on building/rebuilding skills, competencies and technologies for the rollout of renewable energy; and basing governance on using public financing to build a public system and a future Eskom according to key public ethos principles, not subsidising a for-profit system.

## Energy policy and other parts of the energy system

Baker, L., & Phillips, J. (2019). Tensions in the transition: The politics of electricity distribution in South Africa. *Environment and Planning C: Politics and Space*, *37*(1), 177-196. https://doi.org/10.1177/2399654418778590

This paper argues that the distribution of electricity represents an important yet neglected aspect of the politics of energy transitions. In recent years, South Africa's electricity sector has seen the introduction of new actors and technologies, including the 'prosumer' (producer-consumer) of electricity and small-scale embedded generation from roof-top solar photovoltaics. This paper

analyses these recent developments in a historical context and considers implications for contemporary planning, regulation and ownership of electricity. They find that the reconfiguration of electricity distribution faces significant political and economic challenges that are rooted in the country's socio-economic and racial inequalities and its heavy dependence on coal-fired power.

Bridle, R., Muzondo, C., Schmidt, M., Laan, T., Viswamohanan, A. & Geddes, A. (2022). South Africa's Energy Fiscal Policies: An inventory of subsidies, taxes, and policies impacting the energy transition. GSI REPORT. Winnipeg: IISD.

https://www.iisd.org/publications/south-africa-energy-subsidies

This report aims to assist the South African government by identifying whether or not its energy fiscal policies are aligned with its stated objectives for the energy sector. Fiscal policies denote broad government spending, including subsidies, taxes, and grants. As such, the report is a tool to support government and foster informed discussion among national stakeholders. Monitoring and reporting of fossil fuel subsidies are included in the Sustainable Development Goals indicators, and International Institute for Sustainable Development modelling has shown that fossil subsidy reform could reduce South Africa's carbon emissions by nearly 3% by 2030 (Kuehl et al., 2021; United Nations, 2021 cited in Bridle et al., 2022). However, the extent to which fossil fuel subsidies still exist in South Africa is disputed. This report aims to shine a light on the current status of energy subsidies and present a basis for debate about their role in the energy sector.

Project 90 by 2030. (2020). Energising Our Future — Together: Tackling Energy Poverty and Improving Community Engagement in the Western Cape. Muizenberg: Project 90 by 2030. https://90by2030.org.za/wp-content/uploads/2020/12/Energising-Our-Future-Together-web-version.pdf

This report emphasises that coal regions in South Africa are not the only areas that should be concerned with a just energy transition. This report concentrates on examining aspects of a just energy transition in the Western Cape. It provides a summary of strategic priorities identified through interviews with provincial and municipal officials. This is followed by a closer look at tackling energy poverty, focusing on improved community engagement – drawing on conversations with community members, civil society and government representatives. Five core components for developing a just energy transition in the province were identified: tackling energy poverty; increasing energy efficiency; adding renewable energy generation; growing the number of jobs in the green economy; and improving local transport systems. The report further highlights that public participation resides at the heart of South Africa's Constitution and democratic governance principles and that systems are in place and public participation does occur at a formal level. However, meaningful engagement with low-income communities is not happening generally, and even less so when dealing with access to energy. Where engagement does take place, it is often presented as a once-off activity rather than a negotiated, peoplecentred process over time.

Todd, I., & McCauley, D. (2021). Assessing policy barriers to the energy transition in South Africa. *Energy Policy*, *158*, 112529. https://doi.org/10.1016/j.enpol.2021.112529

This paper contributes to the need to identify and assess the policy barriers which are holding South Africa back from an energy transition. The limited literature on barrier theory is reviewed,

and a new taxonomy of policy barriers is developed. This is then used to interpret the findings of 28 elite semi-structured interviews with key organisations and individuals, which are analysed to ascertain what lies beneath the current direction of travel, and how these barriers are impeding progress. The paper develops the policy implications of those findings and presents conclusions for action needed by the South African government and others.

# 6. Annotated bibliography: Financing the just energy transition

Lowitt, S. (2021a). Finance and the Just Transition. Working Paper for the Presidential Climate Commission. Pretoria: Trade & Industrial Policy Strategies (TIPS). https://www.tips.org.za/images/Working\_Paper\_PCC\_Finance\_and\_the\_Just\_Transition\_2021.pdf

One of five working papers that provide an evidence-based foundation for the PCC's new Framework for a Just Transition. The just transition financing challenge is both about the quantity and the quality of finance mobilised and deployed. This TIPS working paper aims to move the financing a just transition discourse forward by proposing a framework that considers a spectrum of just transition ambitions, different project funding characteristics and their implications for fund mobilisation and deployment. Using place-based, action research, a project sample of selfidentified just transition projects in Mpumalanga's coal-dependent regions are analysed based on their procedural, distributive and restorative impacts, their ticket size, and their funding requirements. Although the evidence-based work focuses on the just energy transition in Mpumalanga the findings will be applicable to all sectors and locations. The paper recognises and circumvents the obstacles of definitional and mandate differences on climate finance among South African stakeholders. The perspective hinges on the interplay of the monetary value of the projects (ticket size), and the level of contribution towards social justice (ambition). The underlying hypothesis developed by TIPS suggests that funding for just transitions (within the existing financial ecosystem) may become increasingly difficult as the ticket size and ambition increase. This implies that for a high just transition ambition agenda in South Africa, a systemlevel change in the financial ecosystem will be required. Further information also in Lowitt (2021b).

Naidoo, C. (2021). Insights for South Africa's Just Transition Finance Roadmap: Nexus of project needs and financing response. Rabia Transitions Initiative. https://www.tips.org.za/images/Insights\_for\_South\_Africas\_Just\_transition\_Finance\_Roadmap\_Nexus\_of\_project\_needs\_and\_financing\_response\_Chantal\_Naidoo\_Rabia\_Transitions\_Initiative.pdf

This paper builds on TIPS' initial finance work from Lowitt (2021a), which focuses on the project needs and how financing suits the demands of such projects. This paper aims to answer questions around the financing needs of projects focused on just transitions; the financial instruments available in South Africa to meet these needs; and the implications for developing a Just Transition Finance Roadmap for South Africa. The analysis draws on desktop research and reviews of project information and financial instruments, limited engagements with project developers, the work of fellow contractors supporting TIPS and their engagement with various stakeholders.

Steyn, G., Tyler, E., Roff, A., Renaud, C., Mgoduso, L. (2021). The Just Transition Transaction: A Developing Country Coal Power Retirement Mechanism, Cape Town: Meridian Economics. https://meridianeconomics.co.za/wp-content/uploads/2021/10/2021-09-28\_What-is-the-JTT\_Final-Report.pdf

This paper discusses how a Just Transition Transaction (JTT) – a prototype, multi-lateral, 'transition finance', or 'coal retirement' mechanism – could look like for South Africa. The JTT aims to secure an accelerated, Paris-aligned, well-managed, affordable, and just energy transition for South Africa's power sector and affected communities. There are many ways that such a transaction could be designed depending on different stakeholders' interests (such as different environmental, social, political, financial, economic, and technical considerations) and this paper provides a summary of how such a proposed JTT could be put together. A high-level overview of their proposals is provided along with background, context, further details and structuring options.

Winkler, H., Tyler, E., Keen, S., & Marquard, A. (2021). Just transition transaction in South Africa: an innovative way to finance accelerated phase out of coal and fund social justice. *Journal of Sustainable Finance & Investment*, 1-24.

https://doi.org/10.1080/20430795.2021.1972678

A just transition transaction (JTT) in South Africa aims to address the complex challenges of financing a transition away from coal. Accelerated decarbonisation of electricity is essential for mitigation globally and in South Africa. However, the national utility Eskom, a state-owned enterprise, is in crisis with major operational, structural and financial problems, including a legacy debt of €25bn. The paper explores how and to what extent can a just transition transaction catalyse deep, structural change that is required in South Africa's electricity system and promote social justice. The paper argues that the architecture of the JTT needs to include a blended finance vehicle, combining international concessionary and domestic commercial finance. Finance enables transition if it respects certain principles, promotes ambitious decarbonisation and assures compliance. A key problem is whether such finance is provided at activity- or entity-level. The innovation proposed to fund social justice is that concessional value provides a significant and predictable flow of funds into a Just Transition Fund. The JTT partially addresses Eskom's financial challenges, and thereby the strain on the country's fiscus against a background of increasing public debt. Significant mitigation on the scale of 1–1.5 Gt CO2-eq over thirty years is achievable.

# 7. Annotated bibliography: Lessons learned from other examples and countries

Atteridge, A. and Strambo, C. (2021). How can socio-economic transitions be better managed? Lessons from four historical cases of industrial transition. SEI report. DOI: http://doi.org/10.51414/sei2021.009

This SEI brief provides an overview of four historical case studies of the decline of major industrial or mining activities. It examines the experiences following: closure of a large steelworks in Newcastle, Australia; closure of the Kodak plant in Rochester, United States; the decline of the steel industry across the United Kingdom; and collapse of gold mining in South Africa's Free

State province. Each case explores the social, economic and environmental consequences for these regions, and how different actors tried to address these. There are also published briefs that provide further insights from each of the individual cases (found at the same web site above). The brief highlights some of the common experiences and important dynamics of disruptive socio-economic transition distilled from across the cases:

- The political economy of regional transition needs to be recognised. Transition planning is not merely a neutral coordination activity or a technical endeavour, but a highly political and usually politicised change moment. This fact introduces dynamics that can be both helpful for transition planners (e.g. resources may be made available, at least in the short term) as well as unhelpful (e.g. government engagement with planning is needed but rarely comes ahead of crisis).
- Where inequality is not addressed, transitions are likely to be less successful. Both preexisting inequalities and unequal impacts of the transition need to be tackled.
- Environmental costs are frequently transferred to the public, which undermines a just outcome.
- The assessment of "success", including in terms of fairness or justness, usually depends
  on which indicators are used or whose perspective is emphasised. The cases explored
  highlight mixed outcomes, where economic regeneration can happen together with
  declining job quality and growing inequality and poverty rates.
- Locally driven transitions produce better outcomes but rely on government support for implementation.

Popp, R. & de Pous, P. (2021). Just Transition Beyond Coal: Lessons From The EU. E3G Briefing Paper. https://9tj4025ol53byww26jdkao0x-wpengine.netdna-ssl.com/wp-content/uploads/E3G-Briefing-Transition-beyond-coal-lessons-from-eu.pdf

This briefing reviews progress made in European coal regions and countries and draws out some common lessons relevant for countries within and beyond the EU aiming to transition away from coal in a fair way. It highlights the following lessons learned:

- Set a coal phase-out date that is ambitious and be ready for an exit to happen even
  faster: Clear timelines ensure predictability for industries, sectors and regions as well as
  investor security. They also need to allow for upward revision when faced with new
  scientific evidence.
- 2. Combine climate ambition with transition support.
- 3. Make regional transition strategies the cornerstone of the transition: Regional transition strategies are an essential element of a Just Transition because they give planning security to workers, industries, investors and communities. They need to be supported by national energy and climate policies consistent with international climate commitments and transition plans need to be developed in a participatory process driven by stakeholders from affected regions.
- 4. Create regional ownership of the transition: Important to set clear rules of engagement to manage the dominance of incumbents like the coal industry and clearly link regional development discourses to climate goals.

5. Mobilise investments in renewable energy and avoid gas/biomass-conversions: A timely coal phase out relies on the building-up of alternative renewable energy generation capacities and related infrastructure.

World Bank Group. (2018). Managing Coal Mine Closure: Achieving a Just Transition for All. Washington, DC: World Bank.

https://openknowledge.worldbank.org/handle/10986/31020

This world Bank issues paper summarises lessons-learned from more than two decades of World Bank assistance on coal mine closure to governments, enterprises, workers and their communities. This in-house experience was further enhanced by a review of other global experiences to produce a summary of key considerations for planning and implementing coal mine closure programmes – necessary for a just transition for all. Given the energy transition, planning and preparing for coal mine closure are essential to lessen the shock to coal-dependent communities and facilitate new employment possibilities for redundant workers. Nine lessons learned on managing coal mine closure are proposed, organised around three pillars:

- 1. Policies and strategy development:
  - Managing the social and labour impacts of coal mine closures is best achieved when multiple agencies participate in the policy development.
  - Meeting the substantial budget needs for mine closure is a challenge given the short-term, high costs required.
  - Genuine stakeholder consultation starting at the planning stage and continuing throughout the closure process can significantly reduce the possibility of social conflicts.

#### 2. People and communities:

- A systematic process to mitigate social and labour impacts that starts before any labour layoffs can result in a more orderly, less stressful, and ultimately lower cost divestiture process.
- o Pre-layoff planning and assistance can prepare workers for impending layoffs.
- Post-layoff assistance, including temporary income support, can help sustain laidoff workers in a way that results in them staying in the labour market.
- Active labour market policies offer services, programmes, and incentives that can encourage and enable re-employment among laid-off workers.

#### 3. Land and environmental remediation:

- o Environmental reclamation is best addressed from the outset of mine planning.
- Financial assurance mechanisms can be an effective tool to guarantee funding availability.

### 8. Further references and websites

## Additional resources and further reading

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- Mohlakoana, N. & Wolpe, P. (2021). A just energy transition to facilitate household energy access and alleviate energy poverty. Policy Brief 5/2021.

  Pretoria: Trade & Industrial Policy Strategies (TIPS). https://tips.org.za/just-transition/item/4264-a-just-energy-transition-to-facilitate-household-energy-access-and-alleviate-energy-poverty
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- Wright, J. & Calitz, J. (2020). Setting up for the 2020s: Addressing South Africa's electricity crisis and getting ready for the next decade. Pretoria: CSIR Energy Centre. https://researchspace.csir.co.za/dspace/bitstream/handle/10204/11282/RS\_Setting%20up%20for%202020.pdf%20version%201.1.pdf?sequence=3&isAllowed=y

### **Key websites – South Africa specific**

#### Presidential Climate Commission. https://www.climatecommission.org.za/

Established in 2020, its mandate includes coordinating South Africa's just transition to a low-carbon, resilient economy by 2050, operationalised by finalising the NEVA and the SJRPs, and coordinating the implementation of the Low Emissions Development Strategy 2050.

### Trade & Industrial Policy Strategies (TIPS) Just Transition Knowledge Portal. https://www.tips.org.za/just-transition

An open knowledge portal curated by TIPS that allows easy access to a growing body of work on just transition, providing short summaries and key findings and recommendations from a diversity of sources (initially aimed at South Africa).

#### The Impact Catalyst. https://www.impactcatalyst.co.za/index.html

An initiative founded by Anglo American, the CSIR, Exxaro, World Vision South Africa, to create mechanisms that drive large-scale, socio-economic development initiatives through public-private partnerships. Joint programmes are established between The Impact Catalyst and the Office of the Premier in the selected provinces through the Collaborative Regional Development Platform (with the first being launched in Limpopo Province). Mpumalanga Visioning Workshop 2021: Planning towards a just transition were held on 10 and 17 August 2021, but little has been reported on this initiative so far.

### NBI's Just Transition and Climate Pathways Study for South Africa. https://www.nbi.org.za/climate-pathways-and-a-just-transition-for-south-africa/#explore

The National Business Initiative (NBI), in partnership with Business Unity South Africa (BUSA) and the Boston Consulting Group (BCG) launched this project to collectively develop a view of what the decarbonisation pathways could look like for the South African economy together with the South African private sector and other relevant stakeholders from government, labour and civil society. This is a multi-year project to understand net-zero decarbonisation pathways, sector by sector, to provide a solid input into national and local dialogues as well as to identify critical investment areas. The work is ongoing and is intended as a basis for further consultation and a foundation for future work. The project has started by developing decarbonisation pathways for the Power, Mining, Petrochemicals and Chemicals, and Forestry and Land Use sectors and a special report on Gas and Hydrogen. The reports can be downloaded from the website. Reports on the Agriculture and Transport sectors are currently being developed.

#### Project 90 by 2030. https://90by2030.org.za/resources/

A non-profit organisation established in Cape Town in 2007 with the vision of inspiring and mobilising South African society towards a sustainably developed and equitable low-carbon future. Uses a three-pronged approach to engage with: aspiring young South Africans; Strengthened communities; and Network of CSOs. They have a resources section with a number of discussion papers on the just energy transition.

# Life After Coal/Impilo Ngaphandle Kwamalahle. https://lifeaftercoal.org.za/about/just-transition

A joint campaign by Earthlife Africa Johannesburg, groundWork, and the Centre for Environmental Rights. It aims to: discourage the development of new coal-fired power stations and mines; reduce emissions from existing coal infrastructure and encourage a coal phase-out; and enable a just transition to sustainable energy systems in South Africa.

#### The Mpumalanga Green Economy Cluster Agency. https://mpumalangagreencluster.co.za/

This not-for-profit organisation works to advance a sustainable and inclusive green economy and create shared value in the Mpumalanga province. The Cluster uses the triple helix cluster model with representation from Government, Industry, and Academia as part of its design setup, working at the interface between business, government, and academia in order to identify and remove barriers to an economically viable green economy. It works at both the micro and macro levels. It has produced a number of briefs that highlight investment and job creation opportunities in the green economy in Mpumalanga (water, renewable energy, sustainable agriculture), written for investors who want to understand these opportunities.

### Key websites – general

# E3G Fossil Fuel Transition portal. https://www.e3g.org/our-work/fossil-fuel-transition/#just-transition

E3G provides research, analysis, and convening to support policy-makers, diplomatic actors, and civil society networks in their efforts to accelerate the global transition away from fossil fuels. This website collates their work on these issues and provides links to resources and opinion pieces.

#### Just Transition Initiative (JTI). https://justtransitioninitiative.org/

A partnership project developed by the Energy Security & Climate Change Program at the Center for Strategic and International Studies (CSIS) and the Climate Investment Funds (CIF) to investigate how to achieve a just transition through the transformational changes necessary to address climate change. The website includes a library of resources.

#### Coal Transitions https://coaltransitions.org/

An international research hub that aims to collect credible and feasible trajectories and policy guidance for deep transitions in the coal sector in major coal producing and consuming countries.

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