

## Ensuring a Just Transition: South Africa

### Case Study 24. Toward a Just Transition and Greener Future for South Africa's Coal Sector

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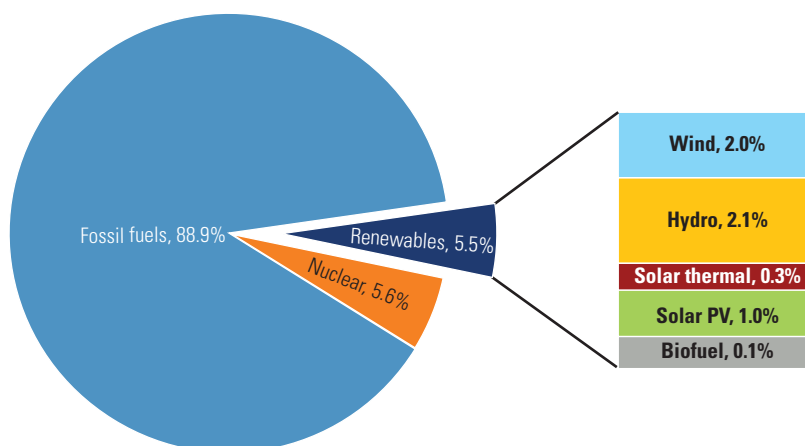
#### Context

South Africa is increasingly adopting measures to address climate change, demonstrating the government's commitments toward a low-carbon economy and resilient society. The country is facing a severe energy crisis. The breakdown of several coal-fired power plants in late 2021 and early 2022 caused widespread blackouts and load shedding, which had a significant impact on the country's economy and disrupted the lives of millions of people.

To address the energy crisis, the South African government announced plans to invest in RE sources such as wind and solar power while also making commitments to decommission coal mines. In accordance with the Integrated Resource Plan (IRP) created in 2019, Eskom, the country's primary electricity supplier, has revealed plans to shut down 8 to 12 GW (30 percent) of coal-fired power generation in the next 10 years. South Africa's updated NDC in September 2021 raises the country's mitigation ambition further by committing to reduce annual GHG emissions to 398 to 510 MtCO<sub>2</sub>e by 2025 and 350 to 420 MtCO<sub>2</sub>e by 2030 (UNFCCC 2021). However, 12 of South Africa's 15 coal-fired power stations are more than 30 years old, and this inefficient and outdated infrastructure makes the country increasingly susceptible to carbon lock-in and other hazards (World Bank 2019b). The government is aware of such risks and is pushing to transition away from a predominantly coal-based economy and energy grid as it seeks to increase RE.

South Africa has the most carbonized electrical grid of all G20 countries, and its power system is the biggest in Sub-Saharan Africa, representing about half of the region's installed capacity. The energy mix (figure 3.23) is dominated by fossil fuels (89 percent), of which coal makes up over 75 percent and gas and diesel over 10 percent. Nuclear contributes around 5.6 percent, followed by RE at 5.5 percent, but this number has been increasing. There are three main groups of electricity generators: the public utility Eskom, which operates 89 percent of South Africa's total generation capacity; municipal generators, which operate about 1 percent; and IPPs and private generators, which operate about 10 percent, including cogeneration. In kilowatt-hour terms, IPPs contribute less than 5 percent of total electricity.

To uphold national commitments toward a low-carbon economy while focusing on improving the livelihoods of those most vulnerable to climate change, South

**FIGURE 3.23 Breakdown of South Africa's Energy Mix**

Source: Akinbami, Oke, and Bodunrin 2021, based on data in IEA 2023.

Note: PV = photovoltaic.

Africa has embraced the just transition principle. Already outlined in various national plans since 2009, the just transition principle was reinforced in June 2022 with the endorsement of the cabinet of the Just Energy Transition Framework (JETF), led by the Presidential Climate Commission (PCC), a multistakeholder body that aims to advise on the country's climate change response and support the just transition agenda at a political level (PwC South Africa 2022). However, the PCC lacks the mandate and resources to implement JETF at the local level. More inclusive movements are forming—such as local municipal climate change task forces and local government climate change support programs—but they require more support and funding from influential powers, including government and business (ICLEI Africa 2019).

South Africa has always relied heavily on its abundant coal reserves as a source of energy and jobs (Hodder and Richards 2022). In 2019, the coal industry employed over 92,000 people, representing about 19 percent of total employment in the mining sector (Makgetla 2021; Minerals Council South Africa 2022). The Social and Labour Plan, introduced in 2002 to support local economic development by addressing social conflicts associated with mining, describes how mining companies will share benefits with local communities; yet there has been a lack of accountability and enforcement (Strambo, Burton, and Atteridge 2019). Over 42,000 mining jobs have already been lost in Mpumalanga province between 2008 and 2015, and it is estimated that a further 120,000 will be lost to future planned coal mine closures (Gatticchi 2020; Steyn et al. 2021). Long overdue transition planning in the province has now taken place with, among others, the establishment of the Mpumalanga Green Cluster Agency to advance a sustainable and inclusive green economy and create shared values in the Mpumalanga

province (Steyn et al. 2021). This is one of many examples, as South Africa has implemented several national policies that are helping translate policy commitments into concrete actions.

## Policies

In 2012, the PCC proposed a framework for a national-level social dialogue, later launched as the Social Partner Dialogues on Pathways for a Just Transition. Aimed at building toward including the just transition in South Africa's National Development Plan (National Planning Commission 2022). These dialogues called together the four social partners—government, labor workers and unions, business, and civil society—to build a common vision for the just transition and create pathways to achieve this vision. Participants reached a consensus on the importance of just management of the energy–water–land use nexus for a sustainable socioeconomic future in South Africa supported with corruption-free governance, social dialogue, and participatory decision-making. However, several issues remain under discussion, including emissions reduction pathways, state versus private ownership of energy resources, conservation versus equitable access to natural resources, the timing of the coal phaseout, and the future of Eskom and a reformed electricity industry (National Planning Commission 2019).

The IRP sets out a long-term diversification of the power mix by 2030. The plan helps the country move toward reducing the energy sector's carbon footprint, replacing coal power with RE while meeting growing energy demand and ensuring a socioeconomically just transition. The IRP aims to retire 12 GW of aging coal-fired power plants by 2030 while installing 18 GW of RE (World Bank 2022n). The government is also accelerating its Coal Transition Investment Plan and the Department of Mineral Resources and Energy's JETF.

The Eskom Just Energy Transition (JET) Project was selected as a demonstration project by the government to establish a pathway for retiring future coal plants in a sustainable manner. For example, the project will decommission the Komati coal-fired power plant and repurpose the site with renewables (150 MW solar PV, 70 MW wind) and 150 MW battery storage. The project will also mitigate socioeconomic impacts on affected workers and communities while enhancing opportunities to support them during the transition process. Expediting the repurposing and repowering of its power stations and actively pursuing a larger share of RE generation are part of the JET Project. The strategy aligns with South Africa's IRP (Department of Mineral Resources and Energy 2019).

The development of South Africa's Just Energy Transition Investment Plan (JET IP) 2023–27 is key for longer-term success and planning. It includes priority investments over the next five years in the electricity, EV, and green hydrogen sectors, focused on supporting South Africa's goals of energy security, just transition, and economic growth. The JET IP was prepared through a joint engagement between the Presidential Climate Finance Task Team established in February 2022 and the International

Partners Group comprising France, Germany, the United Kingdom, the EU, and the United States. To support implementation of the JET IP, they agreed to channel \$8.5 billion over five years as a catalytic contribution toward addressing the JET IP priorities (Presidency of the Republic of South Africa 2022).

## Challenges and Opportunities

Eskom's coal-fired plants are concentrated in Mpumalanga province, which has no RE plants, making a just transition a complex challenge. Having identified the communities most at risk in the distributional analysis and identified how to engage with and build trust with them through inclusion and procedural justice, there is an acute need for restorative justice plans (Mahachi and Rix 2016). Restorative justice looks at repairing harm caused from the just transition against marginalized communities (Montmasson-Clair 2021). It is rooted in union movements demanding the restoration of lost jobs, with unions agreeing to support the shift to renewables and cleaner technology on the condition that job losses for coal communities could be (at least) restored to previous levels (Stevis and Felli 2015). One solution is Renewable Energy Development Zones (REDZs), such as the eMalahleni REDZ in Mpumalanga. The South African Wind Energy Association emphasizes that REDZs will play a key role in the just transition, as they create priority areas for investment in the electricity grid and increase South Africa's green energy map by enabling higher levels of renewable power penetration (Bungane 2021).

Recent bouts of load-shedding and subsequent outcries from civil society and public and private enterprise have also placed further pressure on Eskom to act. A missed opportunity to sign RE contracts in 2014 is causing high load-shedding and has recently sent the country into a declared state of disaster (Nyathi 2023). In response, Eskom has issued an RfP to lease land to IPPs in Mpumalanga to create RE projects. The process will involve auctioning suitable land near power stations to develop RE generation sites that can deliver rapid additional generation capacity to the grid. Eskom says it views this process as validation of its commitment to being part of the just transition (Smith 2022). The National Development Plan also includes a critical action that states the need for “New spatial norms and standards—densifying cities, improving transport, locating jobs where people live, upgrading informal settlements and fixing housing market gaps” (National Planning Commission 2022, 4). These all seem to be steps in the right direction, and a monitoring mechanism would help hold such actions accountable.

The transition process is expected to have a significant impact on people's well-being through its effects on the economic growth trajectory, composition of GDP, employment, relative prices, and health cobenefits. For example, an estimated 0.6 million jobs will be lost—mainly in sectors with large proportions of unskilled or low-skilled employees—with the impacts felt most acutely by vulnerable groups (Kilumelumelume

et al. 2022). In 2021, over 90 percent of coal workers were low- or semi-skilled, which would make it more difficult for them to find other jobs (World Bank 2022j). Women will also be widely affected, as they generally work in indirect jobs, such as services provided by small firms to workers and firms in coal-related industries. The spatial dimension of transition is equally important—in the coal belt of Mpumalanga Province, which is home to over 80 percent of the country’s coal-fired power plants and coal mines, an estimated 150,000 to 200,000 jobs are at risk (about 18 percent of the employed provincial labor force); this includes about 75,000 coal miners and 15,000 jobs in the transport sector (World Bank 2022l). However, the exact number of jobs lost in the coal sector will depend on the number of power plants decommissioned (IASS 2022). Municipality revenues and services will also be affected—for example, in eMalahleni, coal accounts for almost half of local revenues (TIPS 2020). Eskom and coal mining companies provide key public services, such as water and electricity, to communities close to their sites. However, a recent study from IASS (2022) shows that the transition from coal to RE could create an estimated 150,000 to 300,000 new jobs by 2030.

## Key Takeaways

Accelerating the transition away from coal is crucial. Early planning with policy makers and all stakeholders, including affected coal communities, is key to achieving justice, with a specific focus on implementing restorative plans for vulnerable communities in coal-dependent regions. Immediate, deeper baseline mapping will enable early lending that provides comprehensive, on-the-ground support on pending closures, using learning to improve on future closures and new opportunities for people and communities.

Establishing an independent statutory body, the PCC, to lead, coordinate, and oversee the just transition provided the political weight required to steer the process across various government institutions and stakeholders. The broad representation of the PCC—which comprises commissioners represented by government ministers, business, labor, youth, academia and research institutions, advocacy groups, civil society, and traditional leadership—is equally important, providing legitimacy in terms of both representation and credibility. Likewise, extensive and robust stakeholder engagement led by the PCC while drafting and finalizing the JETF helped create a shared vision of how South Africa can build a zero-carbon economy by 2050 while upholding the three principles of procedural, distributional, and restorative justice.

Managing impacts will require a multisectoral approach, with collaboration and coordination between the national governments, local governments, the private sector, community groups, and so on. Taking such an approach has allowed South Africa to secure commitments from the private sector and others.

A just transition protects people and the environment. It helps workers and communities build and access new economic opportunities in the transition to clean energy.

It also ensures that those most impacted by the transition help create the plans, policies, and reforms that will strengthen the institutions and mobilize the investments needed to remediate the land, support people in their post-transition jobs and lives, and build a new economic future. Deeply vested international, national, and local political economy issues can hamper early planning discussions, and a poorly managed closure process will only build opposition, eroding public support for further closures. Proper planning and preparation are essential to demonstrate from the outset that there is a better way to transition away from coal. If planned and implemented effectively, the transition process can create significant opportunities. For example, while 0.6 million jobs are expected to be lost during the transition, 1.6 million jobs may be gained.

The current energy crisis has highlighted the need for a long-term strategy for energy production and distribution in South Africa. In the coming years, the country will need to invest in modernizing its energy infrastructure and diversifying its energy sources to ensure it can meet the growing demand for electricity and avoid future crises. The government of South Africa will need to make difficult decisions as it aims to diversify its energy sources and reduce its environmental impact. Its integrated policymaking, robust regulations, and effective incentives for low-carbon investments—including private investments—give it an advantage in accomplishing this task (IEA 2021e), while its emphasis on energy efficiency and regional integration strengthens its position.