

TRANSITIONING SOUTH AFRICA AWAY FROM COAL: A DELICATE BALANCE TOWARDS A CLEANER FUTURE

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South Africa faces the significant challenge of transitioning away from coal, long a cornerstone of South Africa's development, to cleaner, more environmentally sustainable renewable energy. But encouraging prospects for additional funding sources and promising public-private sector collaboration make this delicate balance possible despite the naysayers.

Coal is immensely important for employment and energy generation in South Africa and, as a developing nation and emerging market, the coal industry has played a pivotal role in powering the nation and stimulating economic growth.

With more than 80%¹ of the country's electricity generated through coal, it is understandable that South Africa is one of the world's largest contributors to climate-warming greenhouse gases. This dependence on coal has helped create jobs and sustain a significant portion of the nation's workforce - the coal sector has been a substantial employer, providing jobs to thousands of South Africans. It has also been a significant revenue generator, contributing to the nation's coffers. The country's reliance on coal also stems from the abundance of coal reserves locally, thus historically providing a stable, reliable and affordable energy source.

The challenge lies in balancing our reliance on the coal sector with the imperative of transitioning towards cleaner, more sustainable energy alternatives.

Transitioning away from coal is thus a delicate balancing act between mitigating potential job losses while ensuring a cleaner, more sustainable future for the country. The move towards renewable energy sources may initially result in job displacement within the coal sector, which means we need to invest in reskilling and retraining the workforce to ensure a smooth transition while minimising the adverse impact on livelihoods.

Many positives will arise from a shift away from coal as the predominant energy source. Embracing renewable energy sources will significantly reduce carbon emissions, mitigate climate change effects and enhance environmental sustainability. Renewable energy technologies are becoming more efficient and cost-effective, offering South Africa long-term economic benefits and energy security.

Other positives include the development of a green economy that creates new employment opportunities in the renewable energy sector. Moreover, investing in renewable energy will reduce the country's reliance on imported fossil fuels, fostering energy independence and enhancing resilience in the face of global energy market fluctuations.

South Africa's Just Energy Transition – a just and equitable transition

South Africa recognises the need for a just and equitable transition away from coal.

But for this to gain traction, funding is needed. Recently, Minister of Forestry and Fisheries and Environmental Affairs Barbara Creecy told parliament that the country aims to raise R1.13 trillion over the next five years to fund this transition to green energy from fossil fuels. This follows an announcement in mid-October that the World Bank is in talks with South Africa for a \$1 billion loan to "help enable South Africa to reform its energy sector". Further potential funding sources included multilateral development banks, local and international Development Finance Institutions (DFIs), and South Africa's private sector.

With regards to these figures, it aligns with comments from February 2023 by the Energy Council of South Africa, which noted that as a country, we would require 56,000MW of wind and solar generation, 8,000MW of battery storage and 5,000MW of gas drive power, at a cost of cR1.2 trillion. The comments further made reference to the view that this would then allow for a meaningful decommissioning of older coal plants, known to be significant emitters.

¹ CSIR Report, February 2023

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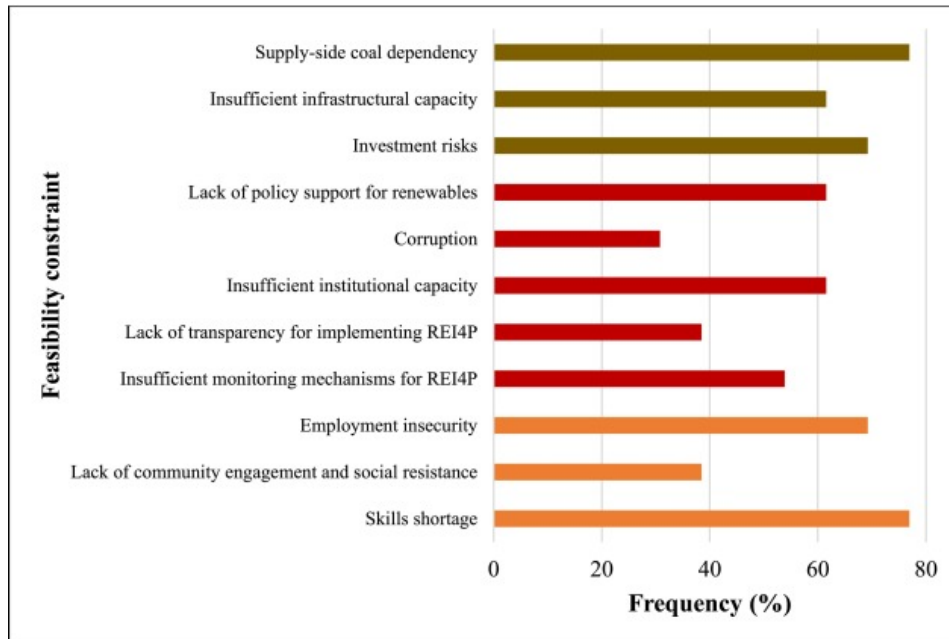
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The concept of a JUST energy transition is not without its critics and challenges. A recent report by Economist Impact noted that without supporting policies, the transitions are unlikely to progress at the requisite pace.

A study by Mirsania et al. (July 2023) also drew attention to further issues or barriers to the transition, as highlighted in the bar graph below. As expected, these included economic dependence on coal, lack of infrastructure, socio-political constraints and skills and manufacturing capacity shortages.



Source: Mirsania, et al (as at July 2023)

Integrated Resource Plan (IRP) – still applicable?

One cannot consider South Africa's energy mix, and importantly the country's transition without making mention of our Integrated Resource Plan (IRP). Importantly, *the IRP is an electricity development plan, based on least-cost electricity supply and demand balance, taking into account security of supply and the environment*. Simply put – it sets out to determine the long-term energy demands of the country, and details how this should be met in terms of generating capacity, type, timing, cost, etc. Importantly, it seeks to align the National Development Plan 2030. Taking one step back – the IRP currently in use is date 2019. Given the ever-changing needs of the country, we await an update thereto, which would incorporate various assumptions, including new(er) technologies available, as was used in the 2019 version.

It is our view that that updated IRP ("IRP 2023") will be instrumental in setting the tone for discussions on South Africa's energy transition, specifically noting the views on gas, nuclear and coal (clean technology coal in particular); and all importantly, the use of renewable energy sources.

Private sector's role in the transition

The private sector has already played a crucial role in funding infrastructure development in South Africa, particularly in renewable energy.

As the South African government sought to diversify its energy mix (and thereby reduce its reliance on fossil fuels), the private sector, comprising both local and international investors, responded to the call to participate in South Africa's renewable energy programme by investing significantly in renewable energy projects. To date, these investments have facilitated the construction and operation of solar, wind, and other renewable energy facilities, contributing to the nation's energy security and environmental objectives. The private sector funding has enabled the expansion of renewable energy infrastructure and spurred innovation, improved technology, and enhanced overall efficiency in the energy sector.

Moreover, the private sector's involvement has brought in capital and expertise that might have otherwise been limited within the public sector. Public-private partnerships have been instrumental in pooling resources and knowledge, optimising project planning, and ensuring the successful implementation of renewable energy initiatives. Despite wobbles along the way, the government's role cannot be ignored in helping projects reach financial close. This collaboration, driven from all sides, has not only accelerated the development of renewable energy projects but has also created job opportunities, stimulated economic growth, and positioned South Africa as a leader in sustainable energy on the African continent.

In addition to the financial contributions made by the private sector, its technological expertise, market influence, policy influence, risk mitigation and diversification measures, and collaboration are essential in successfully transitioning away from coal towards a more sustainable energy landscape.

The way forward

The funding sources that are becoming available to enable the transition and the public-private sector capacity do offer hope for this transition. But there are still risks associated with moving away from coal, including potential disruptions in the energy supply and economic challenges.

It goes without saying that South Africa is at a critical juncture in its energy trajectory. Balancing the need to move away from coal for a sustainable future with the existing reliance on the coal sector is a complex endeavour. However, with prudent planning, strategic investments, and a commitment to this transition, it is possible for the country to move towards a cleaner, greener energy future, benefiting both its people and the planet for generations to come.

Ends

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