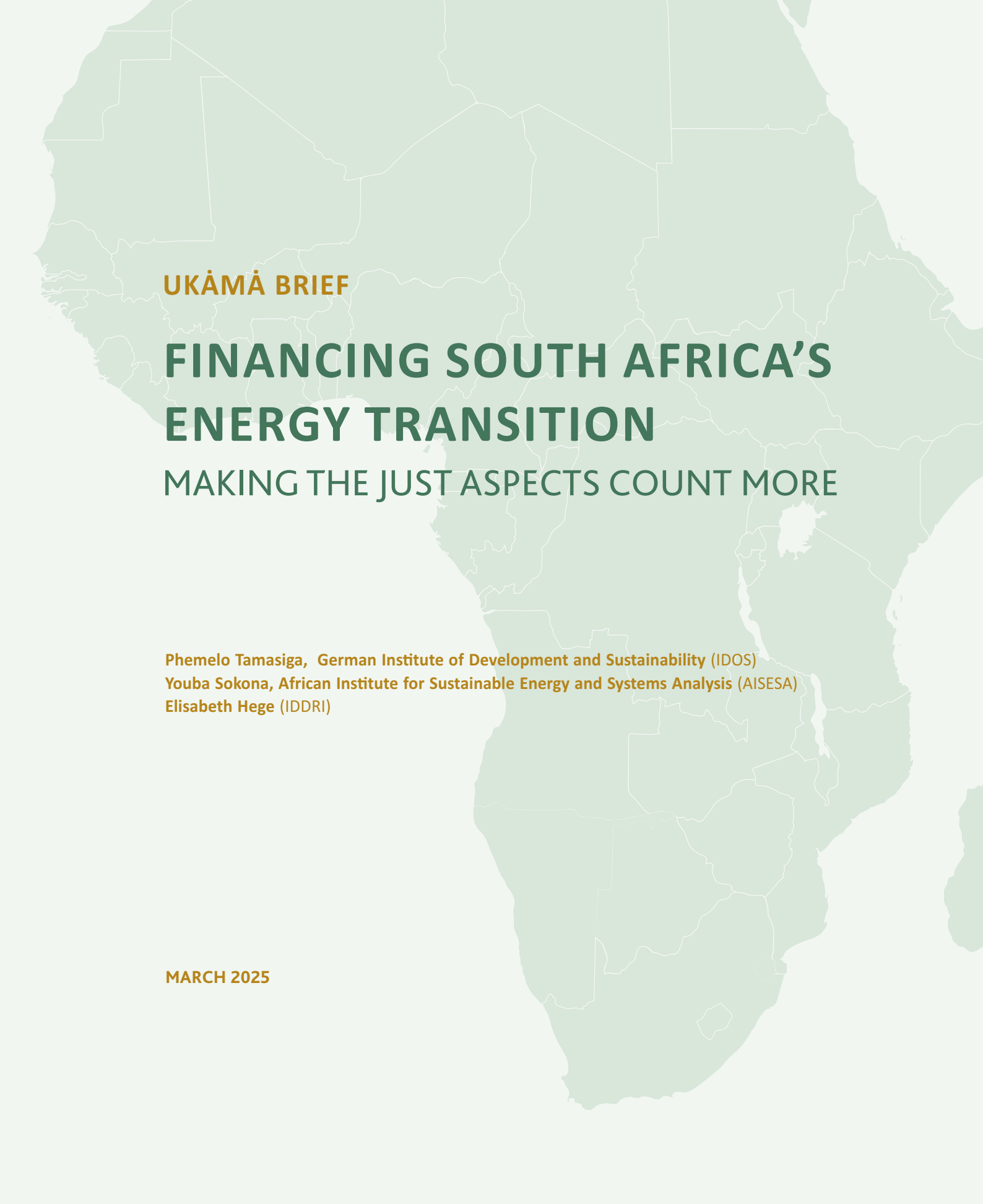




UKÀMÀ BRIEF

FINANCING SOUTH AFRICA'S ENERGY TRANSITION

MAKING THE JUST ASPECTS COUNT MORE

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Solidarity for prosperity

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The Ukama platform aims at building an informal dialogue process between a diversity of African and European experts bringing together perspectives of the Europe-Africa cooperation, including Climate, Sustainable Development, Economic transformation, International Cooperation, Finance and Trade to facilitate the emergence of such shared expectations. The main objective of the platform is to convene critical thinkers to help set out the themes and issues that are relevant for shared sense of prosperity for Africa and Europe.

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Disclaimer :

The aim of this project was to discuss a variety of views therefore each paper does only reflect the views of the author(s) and not the views of other participants in the project or the Ukama network as a whole.

Introduction

South Africa's transition from a coal-dependent economy to a low-carbon future is not merely a technical or infrastructural challenge; it is also a social transformation. While significant infrastructure investments, such as modernizing electricity grids and expanding renewable energy capacities, are essential, the heart of a just energy transition lies in prioritizing the people and communities affected by this change. Social interventions—ranging from workers retraining and skills development to social safety nets and local economic diversification—matter as much as infrastructure investments. These measures ensure that the benefits of the transition are equitably shared and that vulnerable communities are not left behind.

The **Just Energy Transition Partnership (JETP)** represents a transformative approach to supporting South Africa's shift away from coal, emphasizing socio-economic inclusion and sustainability. At the heart of this transition are six priority areas outlined in the **Just Energy Transition Investment Plan (JET IP)** for **2023-2027**: electricity infrastructure, economic diversification in Mpumalanga, skills development, municipal governance, green hydrogen, and new energy vehicles. These areas aim to reduce emissions, create sustainable employment opportunities, and strengthen local economies, addressing South Africa's pressing energy challenges. Nearly three years into the JET IP's implementation, it is an opportune moment to reflect on progress, evaluate emerging insights, and consider how a recalibrated emphasis on social measures can further strengthen South Africa's pathway to a low-carbon future.

On March 6, 2025, the Department of International Relations and Cooperation in South Africa reported that the United States withdrew from the International Partners Group (IPG), a coalition supporting energy transitions in South Africa, Indonesia, Vietnam, and Senegal (Department of International Relations and Cooperation, 2025). German Development State Secretary Jochen Flasbarth expressed regret over the decision, emphasizing the importance of stable and reliable regulations for sustaining investment in the energy transition (Federal Ministry for Economic Cooperation and Development [BMZ], 2025). The U.S. withdrawal and the loss of associated pledges add complexity to South Africa's transition, potentially affecting renewable energy expansion and economic diversification in coal-dependent regions like Mpumalanga. This shift underscores the urgent need for alternative funding sources to bridge the gap and maintain progress.

The **JET Project Management Unit** within the **Office of the Presidency** is the primary coordinating entity for the JETP's objectives. Additionally, the Presidential Climate Commission plays a vital role in engaging stakeholders and building capacity across communities. By integrating both infrastructure and social interventions, South Africa's energy transition can serve as a global model for achieving an inclusive, sustainable, and just transformation.

Data and consultations

The views expressed in this paper are informed by 10 interviews with a diverse range of stakeholders—including trade union representative, academic experts, NGO representatives, and public sector official—who provided critical insights into the socio-economic implications of current funding patterns and highlighted actionable gaps. Additionally, data from the **JETP grants register** and analyses within the JET IP were utilized to assess the proportional distribution of funding across the six priority areas.

This methodology serves as a valuable tool to triangulate the anticipated costs outlined in the JET IP and evaluate the extent to which they have been funded. The JETP grants register has been relied upon as the primary source of information regarding the social and just transition-related expenditures underpinning the JETP.

Workers' transition and supporting coal-dependent communities

South Africa's transition from coal-based energy to renewable sources presents a significant challenge for coal-dependent communities. Approximately 200,000 individuals are directly employed in the coal industry, including 90,000 in mining and nearly 50,000 in Eskom's coal-fired power plants, with their livelihoods—and those of their families—hanging in the balance. This transition must extend beyond merely building renewable energy infrastructure; it requires creating equitable and viable pathways for those whose lives and economies have long depended on coal.

Efforts to support coal-dependent regions, such as Mpumalanga, have made some progress. For example, the province has received \$147.6 million (ZAR2.59 billion) in grant allocations—an important step toward addressing the region's socio-economic challenges. However, this amount falls significantly short of the ZAR 60.4 billion projected funding need outlined in the JET IP.

Creating sustainable jobs, implementing re-skilling and upskilling programs, and ensuring energy access for marginalized communities are pivotal to achieving a just transition. Organizations such as the Congress of South African Trade Unions (COSATU) have voiced

concerns about potential job losses in the coal sector and the lack of concrete alternative employment strategies.

South Africa's social protection systems further complicate the transition. For instance, the Unemployment Insurance Fund (UIF) provides only limited support and excludes many informal sector workers, who are among the most vulnerable to economic shocks. Interviews with social inequality experts and a former workers' union representative emphasize the urgent need for innovative approaches, such as universal income grants or job guarantee schemes. These mechanisms could ensure that workers affected by plant closures or industry shifts receive a baseline income or minimum paid working hours.

However, such proposals remain unimplemented, primarily because South Africa's social protection system does not fully account for the broader socio-economic and unemployment implications of systemic economic shifts linked to environmental outcomes. These policy blind spots highlight a critical gap in the support system—one that must be addressed to ensure a just and inclusive transition.

JET IP estimated funding needs and the recorded allocations in the grant registry

South Africa's Just Energy Transition is shaped by complex financial realities, balancing both opportunities and challenges arising from international pledges and domestic economic conditions. The vision and objectives of the JETP are to:

- ▶ Establish an ambitious, long-term partnership to support South Africa's pathway to low-emissions and climate-resilient development.
- ▶ Accelerate the just transition and the decarbonization of the electricity sector.
- ▶ Develop new economic opportunities, such as green hydrogen and electric vehicles, among other interventions aimed at shifting South Africa toward a low-carbon future.

Achieving these goals requires substantial financial support from the International Partners Group (IPG). At COP26, an initial \$8.5 billion pledge was made by France, Germany, the United Kingdom, the United States, and the European Union. However, this funding was overwhelmingly structured as loans and guarantees (96%) in hard currencies (US dollars and euros), with only 4% allocated as grants.

Following COP26, the partnership expanded, and by November 2023, it included the Netherlands and Denmark. Additionally, several original IPG members increased their financial commitments—most notably by boosting the grant component, which rose by 57%. As a result, the overall support package has

expanded from the original \$8.5 billion to approximately \$11.6 billion.

The JETP IP (Presidency of the Republic of South Africa, 2023) underscores a funding need of approximately ZAR1.5 trillion (\$98.7 billion) for 2023–2027. The initial \$8.5 billion pledge from the IPG serves as a catalyst to unlock additional funding from both public and private sector sources.

Private capital is expected to play a critical role, with domestic financial institutions already committing approximately ZAR500 billion (\$33.3 billion) to climate finance assets over the next 3–5 years (JET IP). These efforts, supported by innovative financing mechanisms such as guarantees, blended finance, and international funding, aim to bridge the gap and facilitate South Africa's transition to a low-carbon, inclusive economy. However, the current pace of fund mobilization highlights persistent gaps between the funding required for South Africa's energy transition and the available financial resources.

Table 1 illustrates the proportion of grant registry allocations (Fair Finance Southern Africa, 2024) across each priority area, revealing significant disparities between allocated funding and estimated investment needs. The findings underscore both progress and challenges in grant distribution.

Electricity infrastructure has received the largest share of grant funding (27.89%), yet this represents only 0.25% of the estimated ZAR1,200 billion required

under the JET IP, highlighting the scale of the infrastructure gap (see **Table 1**).

Similarly, Mpumalanga—a coal-dependent region central to a just transition—has received 24.07% of grant allocations, covering only 4.29% of its ZAR60.4 billion funding needs (see **Table 1**).

Skills development, which is crucial for helping workers transition to renewable energy and emerging sectors, has secured 11.21% of allocations, meeting only 45.66% of the ZAR2.65 billion requirement (see **Table 1**).

Other priority areas, such as green hydrogen and new energy vehicles, have received minimal grant funding, indicating the need for greater financial support to accelerate their development.

The figures highlight critical funding gaps in South Africa's just energy transition, revealing an overemphasis on electricity infrastructure at the expense of initiatives that directly support workers' transition and community resilience. Insufficient investment in skills development and Mpumalanga's economic diversification underscores these imbalances.

Addressing these challenges requires a stronger commitment to reskilling programs, enhanced social safety nets, and localized economic strategies that align with both environmental and socio-economic objectives (Phalatshe et al., 2024). Additionally, reforming grant management processes is crucial to ensuring resources are effectively allocated to the communities that need them most.

Table 1. Comparison of Grant Allocations and JET IP Needs

Priority Areas	Registry Allocation (USD)	Registrya Allocation (ZAR)	JET IPb Estimated Needs (ZAR)	Proportion of Needs Covered (%)*	Proportion of Total Registry Allocation (%)*
Electricity Infrastructure	171.03 million	3.01 billion	711.4 billion	0.423%	27.89%
JT Mpumalanga	147.6 million	2.59 billion	60.4 billion	4.29%	24.07%
Skills Development	68.74 million	1.21 billion	2.65 billion	45.66%	11.21%
Municipalities	84.17 million	1.48 billion	319.1 billion	0.46%	13.73%
Green Hydrogen	141.08 million	2.48 billion	319 billion	0.78%	23.01%
New Energy Vehicles	0.56 million	9.89 million	128.1 billion	0.008%	0.09%

*Author calculations based on the reported figures in the JET IP document and Grant mapping register

Source a: Grant mapping register summary (Fair Finance Southern Africa, 2024)

Source b: South Africa's Just Energy Transition Investment Plan (JET IP) (Presidency of the Republic of South Africa, 2023)

To bridge the funding gap, strategic mobilization of additional resources, improved grant distribution mechanisms, and greater private sector engagement are essential. Without these efforts, South Africa risks falling short of its ambitious transformation goals.¹¹ While the allocations reflect efforts to address infrastructure and regional challenges, they also underscore the need for greater funding in critical areas such as skills development, municipal support, and new energy vehicles (see **Figure 1**). While the allocations demonstrate a commitment to investing in the infrastructure necessary to support the energy transition, there remains a shortfall in funding for critical social programs such as skills development and workers reskilling. Although some attention is given to these areas, the current funding levels are insufficient to fully support the communities and workers impacted by the shift from coal to renewable energy. This imbalance underscores the need for a more balanced approach—one that prioritizes both the physical infrastructure and the social dimensions of a just transition. As illustrated in **Figure 1**, skills development accounts for only 11.21% of total grant allocations (\$68.74 million), covering just 45.66% of the ZAR2.65 billion estimated needs in the JET IP. While this is relatively higher than other social programs, it remains insufficient given its critical role in equipping workers for a low-carbon economy. Similarly, Mpumalanga—a coal-reliant region central to South

Africa's just transition—receives 24.07% of total allocations (\$147.6 million), yet this covers only 4.29% of its ZAR60.4 billion projected funding need. This stark discrepancy highlights the urgent need for targeted funding to support workers reskilling and mitigate economic displacement as South Africa transitions away from coal. Of the R10 billion tracked in the grants register, only 24% is allocated to South African entities, such as local companies, universities, and NGOs (University of Witwatersrand Johannesburg, 2024). A significant portion—approximately R1.7 billion—flows to GIZ, the German development agency, while another R2 billion goes to KfW, the German development bank. In total, over R3.7 billion, or more than a third of total grant financing, is directed through German development agencies and research institutions which serve as intermediaries that disburse financing to support energy transition projects in South Africa (University of Witwatersrand Johannesburg, 2024). This funding pattern underscores a systemic issue where international partners control the flow of funds, often prioritizing their own agencies' operational costs. Such a donor-driven approach risks misalignment between funding objectives and resource allocation. By prioritizing administrative expenses, critical funds may be diverted from transformative projects, potentially reducing their impact on affected communities.

Figure 1. Proportion of Grant Registry Allocations by Priority Area



Sources: Authors' illustrations

Similarly, the current donor behavior and funding composition within South Africa's JETP may not fully align with the JET IP's principles, which emphasize:

- Needs-based funding
- Country-led resource determination
- A diversified portfolio of income- and non-income-generating investments

While concrete evidence of misalignment within the JETP is not yet established, these risks warrant careful monitoring and proactive management to ensure funding delivers tangible benefits for South Africa's just transition. To tackle these systemic challenges, bold and targeted reforms are essential. The IPG must not only focus on the total volume of financing under JETP-like arrangements but also on its composition—ensuring that funds are allocated in a way that directly meets local needs. The South African experience underscores the need for a global shift toward:

i. Reforming International Funding Mechanisms:

International agencies must streamline operations by reducing administrative overheads and ensuring a greater share of resources flows directly to local communities. Operational costs should be capped and transparently reported to enhance accountability.

ii. Instituting Needs-Based Funding: Funding should be explicitly tied to the needs of affected communities, prioritizing economic diversification, social protection, and local capacity-building in coal-dependent areas. Currently, social dimensions (such as skills development, workers retraining, and community support) receive about half the funding share of infrastructure investments (e.g., electricity grid expansion). However, because infrastructure costs are significantly higher due to equipment, construction, and materials, this allocation imbalance means social programs remain critically underfunded.

Even modest increases in funding for social interventions could have a disproportionately positive impact on community resilience and workers protection. To achieve this, we recommend incorporating detailed cost-benefit analyses to compare the marginal benefits per unit of investment across infrastructure and social programs. This approach would help policymakers optimize resource allocation, ensuring that lower-cost, high-impact social measures receive adequate funding to mitigate the adverse social effects of the energy transition.

Enhancing support for coal-dependent workers and communities in the energy transition

Feedback from stakeholder interviews highlights the critical need to tailor transition policies to the unique circumstances of coal-dependent regions. For example, pilot programs in Technical and Vocational Education and Training (TVET) institutions have demonstrated potential but must be scaled up to effectively meet the labour demands of renewable energy value chains. Simultaneously, renewable energy projects should prioritize enhancing local participation in content production across these value chains. As Cruywagen (2020) notes, locally owned green energy cooperatives and innovative education centres can serve as powerful catalysts for this transformation. However, stakeholder interviews also revealed significant gaps in the design and implementation of the JETP. Early engagement with local labour unions was inadequate, limiting their ability to represent both formal coal-sector workers and informal labourers. This shortfall underscores the necessity of adopting a more inclusive, bottom-up

approach to policy development. Civil society groups—including labour unions, community organizations, and NGOs—play a crucial role in ensuring that transition policies effectively address socio-economic disparities, such as job losses, wage inequalities, and the lack of robust social protection mechanisms.

To better support workers and communities reliant on coal value chains, targeted measures should be implemented. These include:

1. Expanding and enhancing training programs tailored to renewable energy sectors through partnerships with local TVET institutions.
2. Strengthening social safety nets to mitigate the short-term impacts of the transition on vulnerable populations (Bhorat *et al.*, 2024; Tamasiga, 2024).
3. Increasing local economic participation in renewable energy projects by fostering early and sustained stakeholder engagement.

Recommended measures

- i. **Expand and scale up TVET programs:** Successful TVET programs have demonstrated their potential to address labour market mismatches and prepare workers for emerging industries. These programs should be expanded and replicated nationally to align with labour demand in high-growth sectors, such as renewable energy, green hydrogen, and new energy vehicles. Conducting comprehensive skills audits in coal-dependent regions will help identify gaps and tailor training to local needs. With only 11.21% of the total grant currently allocated to skills development, it is essential to increase funding for workers reskilling, education, and social safety nets. Enhanced funding for social programs will mitigate economic dislocation, improve community resilience, and support integration into new economic opportunities.
- ii. **Strengthen social protection mechanisms:** existing mechanisms, such as unemployment insurance, are insufficient to meet the livelihood needs of displaced workers. Universal income grants and job guarantee programs should be prioritized to provide financial stability and transition support for affected workers. These measures would ensure that displaced coal-sector workers and informal labourers have a safety net while transitioning to renewable energy industries.
- iii. **Promote local participation in renewable energy value chains:** Increasing local participation in renewable energy value chains can boost the development of domestic manufacturing, assembly, and maintenance industries. For example, promoting the production of solar panels, wind turbines, and hydrogen fuel cells within South Africa can create stable, high-quality jobs and reduce reliance on imported technologies. Investments in infrastructure and capacity-building for small and medium-sized enterprises (SMEs) should also be prioritized to ensure they actively contribute to the renewable energy transition.

Implementing these measures will enable South Africa to support coal-dependent communities and ensure the transition to renewable energy is equitable and sustainable.

The JETP is both an attractive and complex initiative, as it provides a critical platform for mobilizing resources, fostering international collaboration, and accelerating the shift toward sustainable energy systems. However, its complexity lies in navigating a delicate balance between conflicting priorities and interests, such as economic growth, environmental sustainability, and social equity. For the JETP to truly fulfil its purpose, it is crucial to place the social and just dimensions at the forefront of its design and implementation. This means ensuring that the transition not only reduces carbon emissions and promotes renewable energy but also addresses the needs of vulnerable communities, protects workers' rights, and creates inclusive economic opportunities. By prioritizing these dimensions, the JETP can become a model for a fair and equitable energy transition that leaves no one behind.

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