

# JUST ENERGY TRANSITIONS AND PARTNERSHIPS IN AFRICA: A SOUTH AFRICAN CASE STUDY

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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.

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## Ukama

Solidarity for prosperity

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.

# EXECUTIVE SUMMARY

At COP26, a Just Energy Transition Partnership (JETP) was announced between South Africa and a consortium of donor countries, mobilising an initial US\$8.5 billion for South Africa's just energy transition. Subsequent to the announcement, the concept of JETPs as country platforms for the support of energy transitions in developing economies has attracted significant interest from across the development and climate finance communities, developed and developing countries and Development Finance Institutions (DFIs). Can JETPs provide an effective model for financing low emissions and climate-resilient development? What can be learnt from the South African experience to date? In Africa specifically, energy challenges vary from the need to transition to the need to scale up a clean and accessible energy infrastructure, whilst the priority of responding to climate impacts remains underfunded. Can JETPs work for Africa at large, and if so, how?

Three years prior to the South African JETP announcement, Meridian Economics, a small South African think tank and advisory group, embarked on a three-year programme of work to conceptualise and socialise the 'Just Transition Transaction' (JTT)<sup>1</sup>, a large-scale climate finance transaction to unlock and support South Africa's just energy transition. Working in a pre-JETP context, the JTT experience yields rich learnings for developed and developing countries wishing to embark on a JETP journey. These learnings come both from the process of advocating a large climate finance support mechanism both within South Africa and internationally, and from the technical design side. In terms of process, the JTT experience highlighted the importance of achieving and maintaining broad political buy in support, embedded in an appropriately

constituted and representative institutional platform. The timing of the JTT work meant that neither were yet in place in South Africa, although through the JTT programme the conversation was nevertheless advanced. The Presidential Climate Commission (PCC) which began its work in 2021 has been indispensable for legitimating and facilitating a national conversation on a just energy transition, and for considering research and analytical work in a moderated space to better understand the nature of the transition and its financing and other needs. The Presidential Climate Finance Task Team (PCFTT), established directly as a result of the JETP Declaration, has the all-important state-mandate and presidential backing to negotiate and balance interests in the JETP, both domestically and between the developed countries and South Africa.

Whilst the JTT work was hindered because the development team lacked a state mandate, conversely it benefited from the same: the team was small and nimble, able to respond to a rapidly evolving political-economic context to grasp windows of opportunity to progress the JTT's socialisation. Balancing the importance of mandated, consultative institutions with the need for flexibility and innovation will remain a challenge in JETPs going forward.

A just energy transition is complex, and as such it is important to access as many different perspectives and understandings of the challenge as possible, to refine the solution proposal. The JTT experience suggests that framing the energy transition as an opportunity rather than a risk facilitates buy-in and interest, rather than resistance.

The JTT was crafted to reflect unique characteristics of the South African context, as will the South African JETP Investment Plan. Access to an evidence-backed and real-time understanding of the dimensions of the local just energy transition – institutional, political,

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<sup>1</sup> ['The Just Transition Transaction: a developing country coal power retirement mechanism'](#) (Meridian Economics, 2021a).

economic, financial, technological and social – is important to inform catalytic and effective investment allocation.

On the technical design side, the JTT team worked through numerous aspects of the energy transition financing challenge during its three-year development life. The concept arose from a highly context specific and detailed analysis of South Africa's coal power utility, Eskom's, financing and coal fleet prospects. Ongoing, context-specific, evidence-based analysis remained important throughout the programme both to inform the evolution of the design but also to convey the nature of South Africa's just energy transition opportunity both domestically and internationally.

Establishing a clear problem definition and associated key objectives for the mechanism upfront served as a valuable guide as the work progressed. From here, identifying primary metrics that measured these objectives became important to ensure flexibility in the design, and to guard against unintended consequences. The JTT has tonnes of CO<sub>2</sub> mitigated and just transition funding raised locked together at the heart of the mechanism. Also to ensure that the JTT design remains resilient to the rapidly changing energy transition landscape, it is designed to create desirable

feedback loops, aimed at driving the direction and pace of the transition in an inclusive manner.

Finally, the work on the JTT encountered an international climate and development finance architecture that is not fit-for-purpose to support accelerated energy transitions in emerging economies. The inertia of large DFIs and the international development financing system works against the innovation required to respond to the urgency and scale of the energy transition financing challenge. JETPs offer the possibility for accelerating innovation and scale of financial support for just energy transitions across Africa and the developing world to the extent that they truly are partnerships, driven and led by developing countries themselves and strongly informed by the local contexts and needs.

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## Introduction

At COP26, a Just Energy Transition Partnership (JETP) was announced between South Africa and a consortium consisting of France, Germany, the United Kingdom, the United States and the European Union, a subset of the countries currently financing South Africa's energy transition. The partnership aims to support South Africa's just transition to a low carbon and climate resilient economy and society, mobilising an initial US\$8.5 billion over the next three to five years in the form of grants and concessional debt finance (South African Presidency, 2021), including through Development Finance Institutions (DFIs). It is widely acknowledged that the US\$8.5 billion is a starting point for leveraging a far greater funding programme for South Africa's just transition needs, which have

been estimated as lying between US\$250-350 billion by 2050<sup>2</sup>.

The Partnership is intended to enable a range of outcomes. South Africa has committed to reducing emissions in line with the Paris Agreement, recently updating its Nationally Determined Contribution to the international emission-reduction effort. This requires the country to speed up the process of moving away from coal in the electricity system. Importantly, workers and communities who will be affected as the country moves away from coal must be supported. The JETP is also anticipated to help finance the infrastructural developments required to transition away from coal in the power sector, and to invest in the nascent electric vehicle and green hydrogen sectors.

## Context: South Africa and Africa

South Africa is a middle-income country, which has developed over the past century on the back of its abundant coal resources, rendering the country the world's 13<sup>th</sup> biggest greenhouse gas emitter in 2020 at approximately 435 Mt CO<sub>2</sub> emissions. South Africa is by far the largest emitter in Africa, with Egypt the second largest at 270 Mt CO<sub>2</sub> emissions (European Commission et al., 2021).

The country's energy generation infrastructure is predominantly coal-based, with 85% of the country's electricity generation from coal (Eskom, 2019a). The power sector and state-owned monopolistic utility, Eskom, are therefore at the heart of South Africa's energy transition, although initiatives in transport and industry such the switch to electric vehicles and green hydrogen will become significant as the transition deepens.

South Africa still faces substantial poverty (55% of the population live below the poverty line according to the World Population Review, 2022), unemployment (unemployment rate stands at 34.5% after the first

quarter of 2022, (Stats SA, 2022)) and inequality challenges (the country has the highest Gini Coefficient in the world at .63, (World Bank, 2022)), all of which may be intensified with an unmanaged transition. The JETP has been negotiated in order to support the country's transition financially, to facilitate access to capital, provide capital at concessional rates, and enable associated support.

Whilst the level of infrastructure development, coal lock-in and well-developed capital market in South Africa are in some ways unique on the African continent, many lessons from the country's experience to date will be applicable to other African countries looking to secure support for their own energy development. With clean energy decreasing in cost, it becomes easier for countries to develop along cleaner lines. Therefore the challenge for many African countries is perhaps is less one of transition than one of accelerating clean and affordable energy access.

This notwithstanding, the impacts of climate change are intensified for the African continent, with adaptation a clear continental priority. A balance will need to be struck on how financial support is divided between clean energy, adaptation and loss and damage. The track record on this is not good in the context of international

<sup>2</sup> Dipak Patel, Presidential Climate Commission Head Climate Finance and Innovation, at the JETP Knowledge and Learning Exchange, Cape Town, September 2022.

climate policy, where adaptation and loss and damage have been continuously underfunded. Similarly, financing to support impoverished communities currently reliant on the fossil fuel value chain is as important in an African context as financing to decarbonise these value chains. Avoiding lock-in to development models based on fossil fuels is a longer term but equally important objective.

In the lead up to COP27, an initiative called 'African Common Position on Energy Access and Just Transition', adopted by the African Union Commission, details a comprehensive approach that aims to accelerate Africa's energy access and transition without

compromising its developmental priorities (African Union Commission, 2022). It also emphasizes the continued deployment of renewable and, controversially, non-renewable resources to meet energy needs in the continent, and the need to mobilize adequate funding and appropriate regulatory frameworks to establish large energy markets. Aligning development and climate objectives across the continent remains a work-in-progress, in a rapidly evolving context.

In order for JETPs to be effective in supporting energy transition in African countries, these themes and the emerging lessons from South Africa's JETP require working through in each national context.

## **Introducing the Just Transition Transaction (JTT)**

Three years prior to the South African JETP announcement, Meridian Economics, a small South African think tank and advisory group, embarked on a three year programme of work to conceptualise and socialise a large-scale climate finance transaction to unlock and support South Africa's just energy transition – The Just Transition Transaction (JTT). The JTT work programme was funded by an international philanthropy, the Children's Investment Fund Foundation, and was supported by a partner working in the international climate finance space who tested and socialised the concept of a large climate finance transaction for South Africa's energy transition internationally.

With the benefit of hindsight, the main achievements of Meridian's JTT programme were twofold. First, to get the vision of a large-scale climate finance initiative onto the policy and planning agenda, both internationally and domestically. The JTT work contributed to the early announcement of an intended 'Just Transition Transaction' by President Ramaphosa in his statement to the 2019 UN Climate Summit (Ramaphosa, 2019), and, together with other initiatives in the space, enlivened the domestic and international discussions around the role of international climate finance to support energy transitions. Getting a large-scale climate finance initiative onto the agenda was perhaps a necessary first step to enable such an initiative's

detailing and then implementation.

Secondly, the JTT entailed significant conceptual development work, which involved engaging technical, institutional and political barriers to energy transition in South Africa, and considering how finance could play a role in overcoming these. The origin of the JTT concept was an analytical project Meridian undertook in 2017 to consider the power utility Eskom's financial situation. The analysis identified the extent of Eskom's debt crisis, and how ongoing dependence on an aging and failing coal fleet was contributing to the crisis, even without carbon pricing. Eskom's financial situation jeopardises the chances of South Africa's successful navigation of the energy transition. The design of the JTT addresses this root cause.

The resulting JTT concept is described in the report 'The Just Transition Transaction: a developing country coal power retirement mechanism' (Meridian Economics, 2021a), as a proposal for a prototype coal retirement / transition finance mechanism for South Africa. The JTT is aimed at de-risking the country's power sector for affordable decarbonisation investment, and supporting affected coal-dependent communities. Structured as a large multi-lateral sovereign backed concessional loan to the South African sovereign, the JTT is predicated on realised, Paris-aligned mitigation in the form of a coal phase down trajectory. A Just

Transition Fund catalyses a holistic coal region rejuvenation programme. The JTT represents one innovative model for financing just transitions that could be considered for adaptation and inclusion in both the South African JETP and beyond.

The experience of thinking through what a large scale, catalytic transition finance initiative might look like, and working with key South African and international stakeholders to socialise the concept, provides rich learnings for South Africa and other African countries who are in various stages of negotiating JETPs. The South African JETP remains a political declaration at the time of writing, with very little detail in the public domain on what the eventual investment plan will comprise (Cassidy, 2022), although a draft investment plan was anticipated for submission to Cabinet by end September 2022. According to the Presidential Climate Finance Task Force (PCFTT), the final investment plan is set to be finalised and signed-off by November, ahead of COP27 (The Presidency, 2022).

The jury is therefore still out as to how effective and implementable the South African JETP will be, and how efficiently the funding will be applied – this will unfold over time. In addition, the introduction of this new concept into the climate finance landscape suggests that JETPs must be sufficiently different from other climate finance mechanisms. The term 'JETP' focuses on a transition, which in turn implies that the JETP should be catalytic in nature.

There is nevertheless an emerging literature on the lessons of the South African JETP for developing JETPs in other jurisdictions – see 'Making Climate Capital work' by the Blended Finance Taskforce and the Centre for Sustainability Transitions (which usefully proposes a list of donor principles to ensure climate finance commitments are fit for purpose); and the G7/G20 Track 2 Dialogue Policy Brief on Implementation of the Just Energy Transition Partnership in South Africa. (The G7/G20 Policy Brief articulates the structure and development of the JETP in South Africa and the role that relevant stakeholders can play in driving the just transition, particularly civil society. Based on learnings from the initial phases of the JETP, it then provides key insights to enable a more resilient development process, warning that a lack of civil society participation could be detrimental for the world's coal transitions (Wemanya et al., 2022)). This current paper's consideration of the JTT process and technical learnings contributes to the growing literature.

Members of the Meridian team were also involved in the initial work of the Climate Investment Fund Secretariat, which supported the PCFTT in their work of developing early drafts of the JETP Investment Plan, and attended a two day Knowledge and Learning Exchange on JETPs in late September 2022<sup>3</sup>. We draw on this experience to comment briefly on the evolution of the SA JETP since its agreement at the COP.

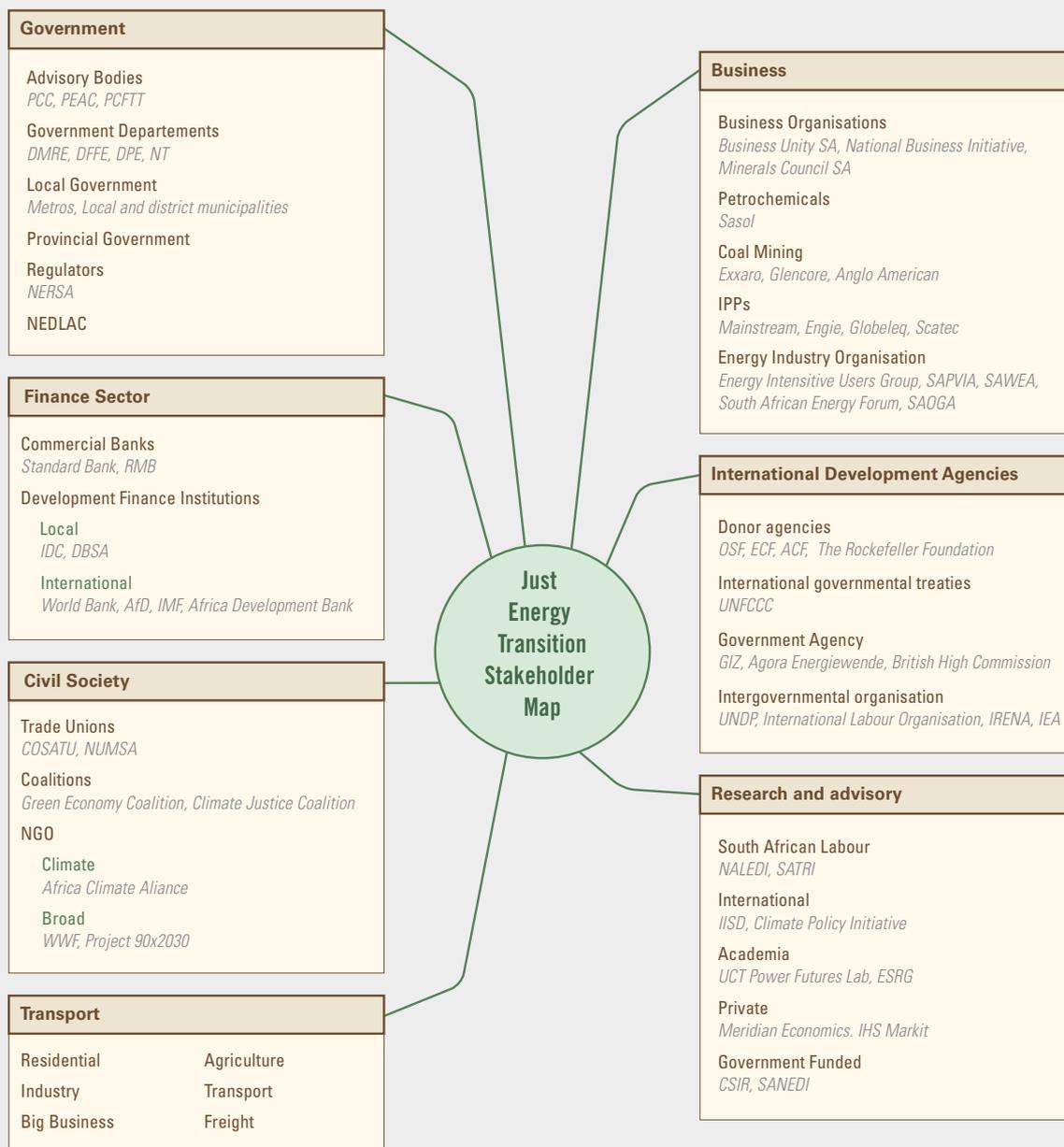
## South African energy transition stakeholders

South Africa's just energy transition involves multiple actors across different sectors in various configurations. The space has evolved over the years to include a diversity of stakeholders as the just energy transition discourse has extended to involve a wider range of sectors. The overall South African Just Transition stakeholder landscape can be sub-divided into seven dimensions – government, finance, civil society, consumers, business, international development agencies, research and advisory. These are further populated

with the main example organisations in each dimension, and platforms for collaboration. These platforms generally serve dimension members, such as coalitions in the civil society space (The Green Economy Coalition, Climate Justice Coalition), and business organisations (Business Unity SA and the Energy Intensive Users Group). However, government provides fora for cross-dimension collaboration, namely, advisory bodies that sit in and around the government, such as the Presidential Climate Commission (PCC) and Presidential Climate Finance Task Team (PCFTT)). A map of South Africa's just transition stakeholders is provided in **Figure 1**.

<sup>3</sup> This event was co-hosted by the African Climate Foundation, the Presidential Climate Commission (PCC) and Presidential Climate Finance Task Team (PCFTT)

**Figure 1.**  
Just Transition stakeholder map



Source: Adapted from *Just Urban Transition –2021– Stakeholder map*

## Process learnings from the JTT

The JTT work programme began at the beginning of Ramaphosa's Presidency, 2018, a promising moment for a country emerging from a decade of state capture and corruption under ex-President Zuma. The energy sector was a central arena for Zuma-era rent-seeking, with the extractive coal economy at its heart. However, it took until mid-2022, after the announcement of the SA JETP, for the coal paradigm to meaningfully start to shift, with coal-incumbent resistance finally eroded by the severe economic disruption of ongoing loadshedding and a threat to the ruling party's ability to hold onto political power in the next election in 2024. Ramaphosa's own political position has been tenuous during this time, and there is ongoing resistance within government to committing to an accelerated energy transition.

It was in this context that the JTT was developed and socialised. Meridian utilised our involvement in advisory fora (such as the President-appointed Eskom Sustainability Task Team, and the President's Economic Advisory Council) to introduce to key stakeholders the idea of a large-scale climate finance intervention, and many of its enabling conditions. Separately we engaged with a wide variety of energy transition stakeholders, including government departments (such as those of Environment, Minerals and Energy, Public Enterprises and National Treasury), organised labour, civil society, capital in the form of the asset management and pension fund communities, and Eskom, to socialise the JTT ideas.

Eventually, we focused our socialisation efforts on Eskom, whose new CEO (André de Ruyter, from 2020) was keen to embrace transition opportunities. We worked closely with a cross-departmental Eskom team for a year assisting in the translation of some of the JTT vision and principles into an Eskom view. Other initiatives emerged in the transition finance space and cross-pollinated with JTT thinking. The Complex Systems in Transition centre at Stellenbosch worked with the international system change company SystemIQ and the Eskom-Meridian team. The Department of Forestry, Fisheries and the Environment were continuing to elaborate the implications of South Africa's Nationally Determined Contribution (NDC) implications for the country's climate finance negotiations.

Eventually, in early 2021, a large-scale climate finance initiative was advocated by Eskom as the Just Energy Transition Transaction (JETT). The PCC, appointed in late 2020, took this up, considering and facilitating debate on the idea of agreeing large scale support for the country's transition, as well as the specific design permutations in existence. Through the PCC and Eskom, the idea was taken through Cabinet, and announced as the JETP at COP26.

This section considers what was learnt through the conceptualisation and socialising of the JTT about the process of advocating a large-scale climate finance initiative, from the perspective of what these lessons may mean for the task of developing implementable and effective JETPs in other jurisdictions.

### *Mandates and legitimating institutions*

Meridian Economics is a think tank which also has a commercial practice. We therefore had no political standing or public mandate to develop an energy transition climate finance initiative for South Africa, but rather were working to seed ideas that could then be taken up by an appropriately mandated or politically influential institution.

Given the centrality of Eskom's financial crisis and unserviceable debt to the JTT design, the ideal advocate for the JTT would be Eskom's shareholder, National Treasury, and the South African government. We worked hard to embed the idea into the Presidency, National Treasury, Departments of the Environment and Public Enterprises, but the timing was not yet right. Eventually we achieved traction with Eskom under its new leadership. Given Eskom's role as state owned utility (and 100-year-old coal monopolist), it was less able to appreciate and prioritise the debt focus of the JTT design. Eskom has been able to revert to the fiscus when financially constrained, including the current programme of state bail outs for debt servicing (National Treasury, 2021). Eskom's JETT ultimately looked quite different from the JTT proposal. However, Eskom's political standing and clout got the concept onto the national public agenda.

The role of the PCC - and subsequently the PCFTT established to implement the JETP- has been critical in holding a national-interest view, as opposed to the design of the JETP being overly captured by any one institutional agenda. In addition, achieving and maintaining broad political buy in and support requires an adequately constituted and representative institutional platform. A degree of trust and engagement by all relevant stakeholders in the development process is important, necessitating consultation and participation. Such a legitimating institution can further provide a safe and moderated space for considering analytical work and evidence that might inform the JETP, and straw dog financing structures critiqued and refined. This is important to increase the chances of realising a transition financing design that optimises for effectiveness, implementability, efficiency of concessional financial value and catalytic impact.

The lack of an institutional platform / standing hobbled the development of the JTT both domestically and internationally. Because South Africa's energy transition is highly politicised, progress was undermined by resistance to the transition itself. Internationally, that we did not have a mandate to progress the JTT work also made it more difficult.

We learnt early on that achieving high level endorsement or buy in is just a first step, and insufficient to enable an initiative such as the JTT to progress in a context where the politics of the underlying transition are contested. Whilst the President announced the JTT concept to the UN Climate Summit as early as 2019 (Ramaphosa, 2019), the announcement lacked sufficient political support domestically. Whilst the announcement certainly raised the JTT profile, without broader support and embedding in an appropriate institutional structure with an ability to influence the politics (there wasn't an obvious one available at the time), there was limited uptake on furthering the concept after the Summit announcement.

This experience suggests that a degree of domestic political alignment is necessary for the establishment of institutions that can successfully elaborate and negotiate a JETP in any particular country. In South Africa, pre-work was required to lay the foundation for a JETP, to get the concept onto the South African agenda and outline some of the functional steps towards a JETP, to which the JTT contributed.

## **Accessing different perspectives**

JETPs are by their nature large national and international initiatives, supporting fundamental change in complex and politicised systems. For them to be implementable, the various stakeholders need to recognise their own diverse objectives in the eventual JETP design.

During the work on the JTT, we found accessing South African stakeholder perspectives through broad and independent engagement invaluable for the refining of the concept. For example, we learnt early on that in addition to moral reasons for including a Just Transition Fund at the centre of the JTT design, this was also required to speak to the politics of the transition. However, ultimately a mandated institutional platform is required for the depth of stakeholder perspective work required.

## **Political economy**

Whilst financial support is the focus of JETPs, the energy transition challenge reaches far beyond financing. In countries long locked in-to a coal-based economy, institutions, networks, regulation, policy and politics tend to favour the status quo above change.

Through the JTT work, we encountered many dimensions of the South African political economy of energy in the form of stakeholder resistance to the concept and content of the JTT. Who we were perceived to represent in this landscape (a private business, foreign donor funded) played a role too. Who is promoting JETPs matters.

The design of the JTT is predicated on power sector reform, primarily through the unbundling of Eskom into separate generation, transmission and distribution entities. This is to support the entry of private investment in renewables into the sector, and to liberate the constrained fiscus to concentrate on providing essential grid infrastructure. Such sector reform is aligned to the more decentralised and modular characteristics of least cost future power generation – renewable energy. Further, Eskom has been weakened over the past decade, and its ability to finance and implement the extent of renewables generation capacity required for adequate power supply to the economy is unclear.

However, this sector reform triggers political resistance by those fearing loss of access to coal value chain related rents, and those fearing a loss of control and sovereignty, particularly to (foreign owned) private capital. South Africa's development model has long been internally contested, and the lack of resolution of this issue bedevils the articulation of a clear and coherent development plan. As such, the political economy undermined efforts on the JTT, and will likely be reflected to a degree in the eventual SA JETP design. Organised Labour has traditionally been a powerful political force in South Africa, part of the tripartite Alliance between the ANC as governing party, the Congress of South African Trade Unions (COSATU) and the Communist Party. Labour is sceptical of Capital's interests generally, has resisted efforts to privatise the energy sector, and actively resisted the JTT initially on these grounds. This position shifted significantly over the course of the JTT's development, as the discourse around Eskom's financial and operational challenges deepened and the future of the coal sector is increasingly challenged by climate concerns and the economics of renewables. That coal workers and communities are catered for in a transition is central to the JTT, and remains an ongoing concern and theme of SA JETP deliberations. The principle of procedural justice, and practice of extensive consultation with societal stakeholders is strongly held by South African society.

One of the options explored during the development of the JTT was that of directly incentivising vested interests in coal to shift these investments towards renewables (such as by converting Eskom coal supply contracts to preferential renewable generation Power Purchase Agreements). Whilst this is morally distasteful – paying the polluter rather than making the polluter pay – it may be that something like this could contribute towards undermining ongoing political resistance both in South Africa and elsewhere in a context of urgency around the pace of transition.

In our process, we learnt of the importance of framing the energy transition - and in particular the potential to access supportive financing - as an opportunity rather than a risk. This opportunity is heightened in the context of the country's ever-worsening loadshedding (Council for Scientific and Industrial Research, 2021)

which is taking a huge toll on economic growth, jobs and skills retention. Renewable energy is both the cheapest and quickest way of getting power onto the grid in the South African context (Meridian Economics, 2022). Elaborating the economic potential of a large-scale renewables investment programme for South Africa was typically better received by stakeholders than a focus on phasing down coal.

### **Defining and articulating transition barriers**

Complex situations are viewed very differently from different perspectives, and there is value in unearthing articulations of the different types of barriers to transition, together with ways in which finance can assist in overcoming these.

The origins of the JTT proposal was Meridian's development of the first publicly available valuation modelling of Eskom's financial situation, demonstrating the size of its stranded debt. This issue still has the potential to undermine South Africa's energy transition, reducing the value of any financial support committed, unless it is addressed. The JTT essentially offers a solution to this fundamental problem, linking the debt problem to the global mitigation imperative, and hence climate finance. We learnt that adequately articulating and communicating the problem was essential to communicate the proposed solution. Developing evidence-based insights into the barriers to energy transition in any one context and linking them clearly to ways in which JETPs can address these, will likely enhance both the efficacy and efficiency of the finance deployed.

Another insight that we realised was not widely understood at the time, and is critical for catalytic and efficient JETP design in South Africa, is that renewables now constitute the lowest cost future power generation option in the country. This is not necessarily the case in other jurisdictions. The NBI's study on 'Decarbonising South Africa's Power System' supports this finding, stating that a renewables dominant system is a significantly cheaper with a relatively narrow risk envelope associated to variability in cost, in comparison to coal and nuclear systems (NBI, 2021).

The Meridian 'Vital Ambitions' power systems modelling project (2020) concurs. These evidence bases were taken up by the PCC in the consultations which resulted in South African submitting a substantially more ambitious NDC than initially intended, a key motivation for the SA JETP.

We learnt that a critical building block towards a JETP capable of addressing high impact levers for transition is building up an evidence base to describe the local energy transition situation. Such an evidence base is also helpful for moving towards a more consensual and shared goal of the energy transition for any particular context. Sometimes articulating the problem is as - if not more - important than a detailed articulation of the solution for widening the possibility of a highly effective, efficient and catalytic JETP.

### ***Innovation, agility & bootstrapping***

Transition itself means moving towards something new. Therefore, that which worked for the old may no longer work going forward, and innovation is required to catalyse transition.

System lock-in - to fossil fuels or a donor-recipient model of funding - occurs on many levels, including that of institutions. The innovation within the JTT design was enabled in a large part by the nature the team that developed it. Meridian is located outside of the institutions involved in electricity provision, government departments, fiscal budgeting or climate finance. A nimble, small, multi-disciplinary senior team, we were able to make connections between the areas of state-owned entity finance and regulation, the technical power system and climate policy to propose the particular design of the JTT.

This transition finance design in and of itself requires significant innovation on an institutional level both within South Africa and within the international climate finance architecture, together with a ramp up of just energy transition ambition on both sides. Internationally, climate finance for climate mitigation has been focused on supporting the uptake of historically more expensive low carbon activities and processes. As renewables become cost competitive across many jurisdictions, financing modalities and need to be found within the international climate

finance architecture to shift focus to supported accelerated phase down of polluting activities in these contexts (Meridian Economics, 2021b). We would argue that this is what is appropriate at this point in history, given the urgency of just energy transitions.

In addition, as an independent, small and adaptive team, we were able to respond to openings in the political economy of energy as they arose. For example, we did not anticipate the opportunity that arose to work directly with Eskom as a potential transition finance advocate. However, we were able to pivot our efforts to exploiting this, especially given the lack of engagement from government at that stage.

The need for innovation in the domain of JETPs raises the question of how new thinking can be introduced into the path dependent and slow-moving environments of the institutions that will need to own and implement the ultimate JETPs. How can trust be developed between those thinking outside the institutional structures, and those within them who are so crucial for contributing the political parameters of JETPS, and their delivery?

Another feature of innovating into a new area was the need to 'bootstrap', or iterate, and build from the ground up. JETPs are aimed to increase just transition ambition, coherence, and international collaboration. Therefore, what the developing country is able to deliver domestically is informed by increases in the quantity, quality and flexibility of support offered. Seeking out the space of possibility is part of the process, with continual adaptation and iteration over time.

Finally, ongoing context analysis is important in the environment of rapid change in which JETPs will be developed. Up to date information on issues of technology, infrastructure, finance, legislation and politics will assist in ensuring the JETP modalities are as effective, efficient and catalytic as possible.

## Technical Learnings from the JTT

JETPs that are to be truly effective, efficient, and catalytic of socio-technical system transition in developing countries will require designs that go beyond climate finance business as usual.

In the development of the basic JTT concept, we tangled with many aspects of the transitioning financing problem. These included engaging with problem definition; identifying the key risks to a successful transition; how to secure mitigation additionality and ambition; how to secure financial support additionality; identifying where concessionality comes from, what is it used for, and how is it used efficiently; ensuring efficient use of the finance overall; which level the transition finance initiative should focus on (plant, power system, or country); considering how a large-scale intervention be incrementalised or phased. In this section we describe some of our learnings in tackling these questions.

### **Problem definition**

In approaching the JTT design, we spent time identifying and deeply understanding two critical barriers to South Africa's successful and just navigation of its energy transition – that of electricity market form and Eskom's financial crisis<sup>4</sup>. Without financially viable Eskom entities emerging from the current unbundling process that can act as credible power purchase counterparties, raise capital and rapidly invest in new transmission and distribution infrastructure, the required accelerated renewable programme will not be possible, and South Africa will be forced to rely on its coal powered fleet for longer.

Correspondingly, liberalising the sector to unlock the scale of renewable energy build required and ensuring that the Eskom entities are sustainably financed emerged as key objectives for a successful large scale climate finance intervention.

### **Focusing on outcomes that matter**

We then spent time identifying the outcomes that ultimately matter from a South African and international perspective as: (a) measured additional CO<sub>2</sub> mitigation

– JETPs must realise mitigation that goes beyond what would have happened were they not in place; and (b) financial support to assist relevant stakeholders to overcome political, financial, and technical barriers to achieve this accelerated mitigation in a just way. These we translated into the primary metrics of the JTT, to ensure that the initiative focuses on the outcomes that matter.

At the heart of the JTT design, therefore, is the agreement by South Africa and the international partners of a value (in \$/t) that will be granted to the country to enable accelerated carbon mitigation performance beyond an agreed counterfactual, or baseline. The eventual total financial support is determined by South Africa's actual mitigation performance over time, and can be quantified in terms of the realised concessionality of the financing package.

When the design focuses on primary metrics, flexibility and responsiveness are built into the mechanism. This is increasingly important given the uncertainty inherent in navigating a just energy transition effected by multiple internationally interconnected complex systemic factors. Such a design protects against unintended consequences – such as forcing the closure of specific functioning coal plants due to contractual obligations whilst another plant in the fleet has unexpectedly and irreversibly broken down, leaving an electricity supply deficit. The current return to commission of mothballed UK coal plants is another caution against focusing on secondary metrics (specific plant closure).

### **Building in desirable feedback loops**

Another principle of design for instances of complexity and uncertainty is that of creating mechanisms to foster desirable feedback loops.

Two lie at the heart of the JTT. The first is the link between mitigation performance and concessionality. The faster South Africa can manage to navigate the social, economic, institutional and technical barriers

<sup>4</sup> The full rationale and details of the JTT are beyond the scope of this paper, but can be found at <https://meridianeconomics.co.za/our-publications/the-just-transition-transaction-a-developing-country-coal-power-retirement-mechanism/>

to coal phase down, the more concessional support it should be able to access. (The disbursement of funds upfront mitigates the risk that this feedback loop never gets going in the first place).

The second is the link between revenue for a Just Transition Fund to support the place-specific transition in the Mpumalanga coal province, and mitigation performance. The Fund receives an annual proportion of the concessionality accruing to the country. Therefore, the greater the mitigation, the greater the funding available for socio-economic support of vulnerable communities.

### Designing for context

Close attention to context enables JETP design to mitigate risks, but also to take advantage of opportunities. In South Africa, the connections between Eskom's unsustainable debt, fiscal bail outs which undermine welfare spending capabilities, market reform, the cost competitiveness of renewable energy and the country's climate commitments, enabled the particular opportunities highlighted in the design of the JTT. For other countries, other issue-complexes will have different design implications.

Additional examples of context-specific factors that the JTT had to engage with included that the South African government has a strong desire for sovereignty, which needs to be held in tension with challenges in terms of financial governance in the ultimate design. In addition, the South African fiscus is able to regularly raise finance through bond issuances. The concessionality on any JETP financing would need to be significant to incentivise National Treasury to forego any degree of autonomy by raising finance through a dedicated mechanism such as that of a JTT. However, the world is moving in a global environment of increasing risk, rising interest rates, and slowing economic growth, which threatens the country's debt sustainability.

### Donor quantity and modalities must change

The JTT design and analysis determined bottom-up the approximate quantum of concessional support (\$7bn in net present value terms, delivered over 20 or so years) required to incentivise the South African

government to navigate the challenging socio-political terrain of an accelerated just transition. This \$7bn is situated against the amount required to deal with Eskom's unserviceable debt (\$12bn<sup>5</sup>), early estimates of the estimated value foregone in accelerated coal plant closure (\$11 bn)<sup>6</sup>, and the cost of a just transition for Mpumalanga (\$1 bn)<sup>7</sup>

Clearly the JTT assumes a significant amount of concessional finance, especially given that the developing world is not yet making good on its \$100 bn annual commitment, which is expressed as finance, not as concessional value (grant). However, the JTT mechanism translates this concessional value into a carbon price of 7 \$/tonne, a highly competitive rate given carbon prices in most developing countries. Unlocking an energy transition in a coal-dependent developing country is a highly efficient way of spending international climate finance.

But its not only the quantum of concessional value that is challenging in the current international climate finance architecture. New financial models and structures will be required of international climate finance in order to appropriately support and enable these transitions, which are critical to the world achieving the Paris Agreement goals, and in particular Article 2c, aligning financial flows with these goals.

The way development and climate finance institutions are set up and undertake their lending makes it very difficult to accommodate innovative and catalytic designs such as that of the JTT. For example, these institutions are not set up to provide climate finance that primarily compensates for additional mitigation (Meridian Economics, 2021b). Instead these institutions are highly constrained, and defined by donor finance modalities. The challenge of institutionalised thinking discussed earlier on in this paper applies here too. It is difficult to innovate in such path dependent environments. Cross pollination of international relations and multi-lateral development bank personnel with those from national treasuries or the

5 <https://www.sanews.gov.za/south-africa/national-treasury-finalising-sustainable-solution-eskom-debt>

6 Meridian analysis 2021, unpublished

7 This was determined in a Meridian Scoping Study on Mpumalanga's just transition support needs: <https://meridianeconomics.co.za/our-publications/financial-support-needs-for-mpumalanga-economic-transition-scoping-study-and-press-briefing-march-2021/>

private sector with transaction structuring expertise may prove very fruitful in engaging these challenges. One such possibility that arose during the JTT work was that of utilising the differences in interest rates across developing and developed worlds to structure a transfer of concessionality, with the developed countries taking on the risk inherent in the interest rate differential.

The architecture of the international climate finance sector has also not effectively caught up with the significant techno-economic changes in the global electricity sector, specifically that renewable generation options such as wind and solar are now the least cost way of generating power in many jurisdictions. Funding of renewables projects has been a focus of climate finance historically, to reduce the additional risk associated with an emerging technology. However, it could be argued that this is not an effective use of public funding going forward in jurisdictions such as South Africa where renewables are commercially viable. Financial support of a just

energy transition in a context such as South Africa is about accelerating coal phase down - a completely different financial problem to that of funding green or development projects.

'The essence of the just energy transition support challenge is that capital (social, political and financial) is required upfront to shift a path dependent trajectory. The benefits of the shift are only realised in the medium to long term. Financing is a powerful mechanism to assist in achieving this. Nevertheless, the governance challenge of disbursing sufficient capital upfront in anticipation of future carbon mitigation and social benefits is significant. The multilateral bank mechanism of Results Based Financing seems to be the most suitable of those currently available in the development / climate finance architecture. Here, disbursements of funding are related to achievement of particular types of results, which can include achieving certain pre-agreed indicators, as considered by the JTT mechanism. However, Results Based Financing is not yet in widespread use in the climate mitigation space.

## Exploring Differences between the JTT and the emerging JETP

As has been discussed, the work to develop and socialise the JTT occurred in a different time and context to that of elaborating the SA JETP that was launched at COP26. The Declaration created the political space, backed by Cabinet domestically, to establish the much-needed cross-cutting institutional platform of the PCFTT. There has yet been very little information in the public domain on what the Investment Plan of the JETP looks like. The update report issued by the International Partners Group in June 2022 remained very high-level<sup>8</sup>

However, what is emerging from recent PCFTT public engagements<sup>9</sup> is a picture of JETPs as country platforms for developing and developed country collaboration towards just energy transitions, where competing goals and priorities, both between developing and developed countries but also within the host country and within the International Partner Group themselves, are mediated and balanced. This is very different from the 'transaction' basis of the

JTT, which focused on revealing the value of the mitigation opportunity in highly fossil -dependent countries as a rationale for support. As a result of these different framings and institutional contexts, the JETP has a more complex and elaborate politics than that of the JTT.

In both JTT and JETP, the critical importance of leveraging the private sector, particularly in a country like South Africa with relatively deep capital markets is central.

The PCFTT highlights as a learning the importance of investing upfront in understanding the key working details of the partnership, and in establishing a controlled and constructive stakeholder process. Managing expectations around the complexity of the

<sup>8</sup> <https://ukcop26.org/six-month-update-on-progress-in-advancing-the-just-energy-transition-partnership-jetp/>

<sup>9</sup> Specifically the Knowledge and Learning Exchange of late September hosted by the ACF, PCC and PCFTT.

<sup>10</sup> PCFTT head, Daniel Mminele, at the Knowledge and Learning Exchange.

task at hand was an important component of this<sup>10</sup>. The process of developing the JTT has seeds of similar learnings as discussed in this paper, despite the very different setting of the two.

A key difference was that the JETP has had the legitimising institution which was so lacking in the development of the JTT, and which slowed progress. Both the PCFTT and the PCC provide the opportunity for the necessary collaborative stakeholder participation.

Second, and conversely, the JTT benefited from a nimble, independent team of thinkers unconstrained by path dependent and slow-moving institutions, and less embedded in the complex politics of energy transition in a coal dependent country. The pace of progress on elaborating the SA JETP post COP26 belies the urgency of the endeavour. A challenge for JETPs going forward will be to balance this tension between agility and legitimacy in the various jurisdictions encountered.

## Recommendations for African – EU Future JETPs

South Africa's JTT and JETP experiences contain both promising dynamics and precautionary tales for African countries and their EU counterparts wishing to develop JETPs.

First and foremost is the **importance of context specificity**. The needs of African country's energy transition will be highly varied, and so too will be the range of appropriate JETP designs. The extent to which there is a common understanding of the goals of an energy transition, or what it will look like will differ from jurisdiction to jurisdiction. In South Africa this was relatively aligned. It will therefore be critical to understand well the main barriers to successful just energy transition in any country. Context specific aspects such as the basic economics of fossil fuels vs renewables, the need for managing the transition of grid mixes to ensure balancing and adequate power supply, existing energy infrastructure and institutions, the level of sophistication of the financial system, policy and regulation in the country; development circumstances, mitigation ambition and commitments, narratives in the country related to coal phase down, political analysis (worker dependency on coal, governance issues); institutional analysis, including capacity levels of incumbent utilities, Independent Power Producers, mining companies, government departments; local technical analytical skills (power system, financial, socio-economics, political assessments).

The importance of **an appropriately mandated institutional home** to progress a JETP has been highlighted. High level buy-in does not necessarily imply that the broad support required to implement a JETP is in place, and alternative interventions in service

of securing this may be more appropriate.

**Supporting the vulnerable in an energy transition** is morally and politically necessary, and should be central in any JETP. Whilst distasteful to donors, it may well be worth considering some form of incentive for fossil fuel Capital to transition to hasten transition and reduce the overall cost to society.

The **narrative of accelerated energy transition as an opportunity** rather than a risk may well ring true in most African contexts, and is useful to strengthen broad local support.

**Evidence** is an important component for strengthening the motivation for a JETP, and its ultimate effectiveness, efficiency and catalytic ability. Evidence-based insights can articulate different barriers to energy transition as well as link them to ways in which JETPs can solve these.

**Innovation** has been a theme of the discussion in this paper. JETPs that are to be truly effective, efficient, and catalytic of socio-technical system transition in developing countries will require designs and concessional values that go beyond climate finance business as usual. To this end, two design aspects that the JTT focused on were:

- ▶ Identify the outcomes that matter and ensure these link to the primary metrics in the JETP.
- ▶ Design for uncertainty and opportunity, building desirable feedback loops to orientate the direction of the just transition.

The current enthusiasm for JETPs in the world of international climate finance and policy is encouraging, but this is tempered by the delay in moving from political declaration to investment plan in the first

JETP in South Africa (European Commission, 2021). Just transitions are urgent. Some organisations have warned that the lack of transparency and a clear work plan which could lead to the JETP's failure (Karrim, 2022; Wemanya et al., 2022). The number of different donor countries increases complexity: their representative institutions have their own terms and conditions regarding the disbursement of funding, and the South Africans have reported difficulty with lack of donor co-ordination. This has made it a challenge to reach consensus with the investment plan (Sgauzzin, Dlouhy & Ainger, 2022).

Ultimately, whether a raft of developing country JETPs will ultimately be able to respond to the urgency and scale of the just energy transition need will hinge on the extent to which they represent **a step change in the history of climate finance**. How will JETP's differ to traditional climate finance? Will the 'country platform' structure deliver, both financially and in terms of domestic policy and planning co-ordination and galvanising political and implementation intent? What will be different in scale, quality and delivery of finance?

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