

— KEYS TO —  
CLIMATE  
ACTION

How Developing Countries  
Could Drive Global Success  
and Local Prosperity



Amar Bhattacharya, Homi Kharas,  
and John W. McArthur  
Editors

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## SEVEN

# South Africa's "Just Transition"

## *A Whole Economy Transformation*

Richard Calland

### Introduction: Context, Risks, and Opportunities<sup>1</sup>

#### *The Carbon Emissions, SocioEconomic Precarity, and Energy Insecurity Context and Risks*

South Africa is an emerging market economy with a serious coal problem.<sup>2</sup> For this and several other vital reasons, it needs to navigate an economic transition urgently. South Africa's economy is highly carbon intensive: in 2020, it was the 13th highest emitter globally. Per capita, it is in the top 50 carbon-emitting countries in the world (38th), and certainly the highest in Africa (Statista, 2022). Alongside the environmental risks and South Africa's obligations in international law under the Paris Agreement, its dependency on coal creates multiple economic risks of stranded assets, and in terms of its fiscal reliance on coal exports.<sup>3</sup> As a 2019 CPI/AFD report found, "South Africa faces transition

1. Methodological note: The author conducted several interviews with actors and stakeholders close to the South African transition, and in particular, people working for the Presidential Climate Commission. Given the political sensitivities, these interviews were generally conducted on an off-the-record basis.

Accordingly, they inform the chapter by way of background, and in certain cases there are quotes referenced to "anonymous sources."

2. Roughly 90 percent of installed power generation capacity is coal based, as well as significant portions of transport fuel and chemical output.

3. South Africa received U.S. \$4.2 billion in coal export revenue in 2017 (Huxham et al., 2019, p. 7).

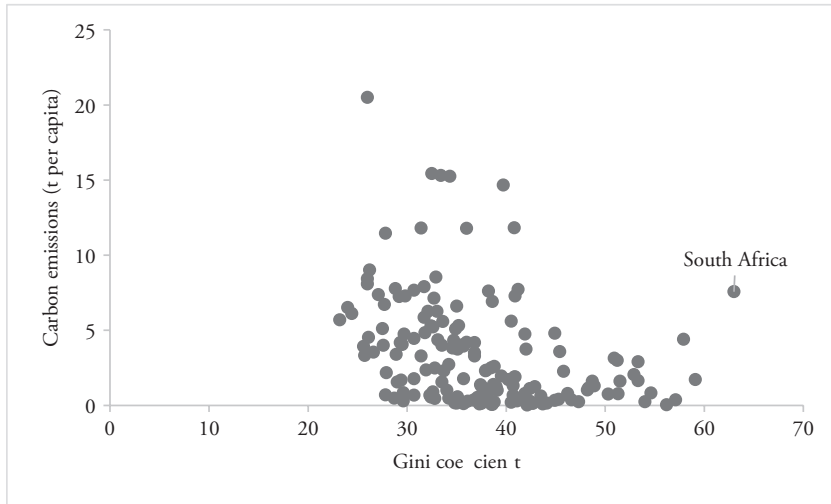
risk of more than \$120 billion in present value terms between 2013 and 2035. The analysis shows that these risks will accumulate slowly in the coming years before accelerating in the mid-2020s. Unless the government takes action to mitigate these risks, they could jeopardize South Africa's investment grade sovereign rating, which would cause further losses" (Huxham, Anwar, & Nelson, 2019, p. 29).

South Africa is also a country with high levels of socioeconomic precarity and inequality, which have worsened in the past 10–15 years due to the negative impact of the global financial crisis (2008–2009), the debilitating effects of corruption caused by what is referred to locally as "state capture" during the nine years of Jacob Zuma's presidency, and then the COVID-19 pandemic. Officially, the unemployment rate currently stands at 34 percent, though the numbers go up to over 40 percent if one includes people who have given up seeking employment (Statistics South Africa, 2022). Youth unemployment (18–29 years old) is over 50 percent, a figure that coincides almost exactly with the percentage of eligible young voters who have dropped out of the electoral process by declining to register to vote (in the past two elections, one national, in 2019, the other local government in 2021), implying that there is also an emerging crisis in democratic legitimacy.

In addition, South Africa's economic development continues to be threatened by energy insecurity. A lack of investment and the absence of consistent, coherent policy, plus the institutional decay caused by corruption during the era of state capture, as evidence adduced before the judicial commission of inquiry shows (Zondo, 2022), has weakened Eskom, South Africa's electricity utility, burdening it with enormous debt, while the fragile power generation and transmission grid persistently breaks down. While on paper South Africa's energy generation and transmission capability is around 50 GW, it is rarely capable of producing more 58 percent of its capacity, meaning that even on a typical summer's day (when demand is between 20 and 25 GWh) let alone in winter (25–30 GWh), supply is unable to match demand, leading to regular "load shedding" (Eskom, 2022). At the time of concluding this chapter (September 2022), South Africa had entered a period of several days of stage 6 or stage 5 (on a scale of 1–8 stages, with stage 8 being complete collapse of the grid), plunging households and businesses into darkness for at least 12 hours a day. This energy precarity represents a further pressure point on the system, both socioeconomically and politically. The economy is suffering greatly as a result. This fossil fuel-based energy system is simply not working; a transition is urgently needed.

If nirvana is a low carbon, low inequality society, then South Africa represents the opposite extreme—high carbon, high inequality (Figure 7.1). As former sustainability specialist at "big four" South African bank Nedbank, Dr. Gary

Figure 7.1. Carbon emissions (tons per capita) and inequality (Gini), 2019



Source: World Bank (2022a).

Kendall, has pointed out in a presentation to colleagues about the state of social sustainability of South Africa, the country is a mixture of Australia and Mozambique—it has the high carbon intensity of the former *and* the high inequality of the latter (Kendall, 2021). It needs to invert the relationship, so that what he calls “Austrabique”—a positive composite of the two countries—could emerge, one that would have the low carbon intensity of Mozambique and the low inequality of Australia. In one straightforward way, this represents the simple but profound goal of South Africa’s green transition.

Hence, these three considerations—its carbon intensive economy, its socioeconomic precarity, and its chronic energy insecurity—are the primary starting points for any exploration of South Africa’s economic transition. They not only frame and underpin the imperative for a just transition but render the task an even more difficult one to accomplish. Even in the most congenial of macro conditions, a “green transition” of the sort contemplated by the conceptual outlook of this volume, aligned as it is with the climate science and the transformational ambitions rightly imposed by the Paris Agreement and the Glasgow Pact, would still represent a “wicked problem”—that is to say one of such complexity that there is no single, silver-bullet answer, and only a series of clumsy “solutions.” The transformative goals of South Africa’s transition must be set against this background.

Accordingly, this chapter seeks to explain why South Africa’s transition represents such a wicked problem, and to then extract lessons from its increasingly

meaningful attempt to achieve a just transition. Since in many respects South Africa, despite some local particularities, represents something of a microcosm of global system pressures and trends, there are rich pickings for policymakers, thinkers, and advocates who are interested in learning from the comparative experience.

The chapter does so by focusing on three elements of the transition: policy, political economy, and process. In the section headed “Policy,” the chapter sets out the latest nationally determined contributions (NDCs), net zero, and other policy commitments made by South Africa and offers a view on the status of the debate in the country regarding the notion of a “green transition.” In the second section, headed “Political Economy,” the chapter explores South Africa’s challenging political economy in respect of the most salient obstacles to implementing a green transition. Thirdly and finally, in attempting to understand what it would take to overcome these obstacles and whether decarbonization presents any major new economic development opportunities, the chapter offers a process answer: South Africa is a country where good process matters, where the importance of process is still woven deeply into its political culture and (some) institutions, and where, in the past, the most challenging of problems—such as the transition from apartheid to constitutional democracy—were unlocked through carefully organized, convened, and facilitated processes. Within this section, the Presidential Climate Commission (PCC) is presented as a case study within a case study, such has been its positive impact since its establishment in late 2020.

Indeed, it is absolutely clear that, but for the arrival on the scene of the PCC’s freshly minted institutional capability, free from the organizational weaknesses of the public service, and unsullied by the corruption and maladministration that characterized South Africa’s governance from 2009 to 2018, the groundbreaking international climate finance “political declaration” announced at COP26 in Glasgow would not have been possible. Since the resourcing of any just green transition in South Africa is a major issue to be addressed, the importance of the U.S. \$8.5 billion international climate finance deal should not be underestimated in terms of its catalytic potential—even though not only is the deal not yet (as of September 2022) concluded, but also that the sum involved, although historic in terms of such an international climate finance package, still represents a relative drop in the ocean in terms of what is needed to properly resource a just transition in South Africa (approximately U.S. \$250 billion until 2035) (Blended Finance Taskforce, 2022, p. 20).

### *The Climate Finance Opportunity*

Nonetheless, the Glasgow climate finance declaration is a significant part of the South African political landscape, making the case study even more important and interesting. It is not an exaggeration to say that the eyes of the world are on

this deal—to see if it can, in fact, be pushed over the line; to examine the precise terms of the final deal, if and when it is done; and, then, to see if indeed it will prove to be sufficiently catalytic to leverage the resourcing needed for the longer term. South Africa's ability to put forward a clear and realistic new development pathway that combines a sufficiently urgent transition away from its fossil fuel dependency with its socioeconomic needs is essential to not only concluding the Glasgow climate finance deal but to ensuring that the investment in international climate finance can be truly catalytic. In short, can climate finance help deliver a just green transition in a country like South Africa, with all its complexity and challenges? As a "country platform" approach to matching international climate finance to local demand, South Africa's Just Energy Transition Partnership (JETP) is a key test case for the global climate finance community and has the potential to provide a best practice example for similar decarbonization financing deals. This opportunity presents responsibilities on both sides: on South Africa, to deliver a credible plan for the transition; and on the donor countries that are part of the JETP, to provide climate finance on sufficiently advantageous and unambiguous terms.

*Potential Upsides of a Green Transition and the Costs of No Transition in South Africa*

Countries are (belatedly) directing significant resources toward averting wholesale climate breakdown. Climate change is most likely to impact the most vulnerable in societies, with countries such as South Africa particularly having to strike a difficult balance in allocating scarce resources for adaptation to the direct physical effects of climate change, improving resilience, and managing the transition, while balancing other immediate societal concerns. South Africa faces the challenge of transforming entrenched (and systemically important) high emissions industries and established vested interests in sectors such as energy. While opportunities for new growth markets are apparent, particularly for first movers, those less quick to action or less well-resourced will nevertheless be confronted by the changing nature of trade, production, and foreign investment, as well as the inescapable physical environmental effects of climate change (Swilling et al., 2022, p. 10).

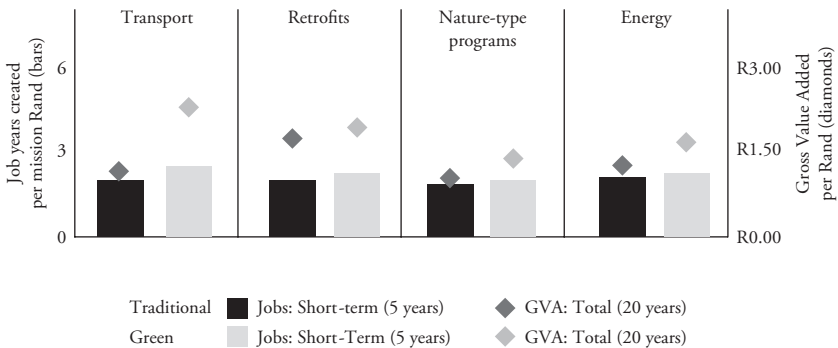
Approaches by dominant actors are increasingly trending toward "green protectionism"—isolation of countries that heavily contribute to global emissions without implementation of adaptation or mitigation efforts (Montmasson-Clair, 2020, p. 5). These increasingly punitive measures, including trade barriers and reductions in foreign investment, are becoming more prevalent, with potentially dire consequences on employment, growth, and development (Markkanen & Anger-Kraavi, 2019, p. 2).

For example, South Africa is at risk of external carbon taxes, such as the proposed EU Carbon Border Adjustment Mechanism (CBAM), which will affect imports into the EU from any country. Border adjustment tariffs linked to the cost of emission allowances under the EU Emissions Trading System will be levied on products like emissions-intensive aluminum, cement, iron, and steel. Moreover, this may reflect the start of a broader trend in world trade, with President Biden recently pledging to impose carbon adjustment fees on carbon-intensive goods. These are worrying trends for a status quo scenario in South Africa, as two major economic partners move toward more assertive climate policies. South Africa, as a highly coal and heavy industry dependent country, is faced with a significant threat, requiring transformation of major value chains to more sustainable sectors. Even South Africa’s manufactured exports are at threat, as bans on internal combustion engines in South Africa’s key vehicle export markets are not far away. As a result, entrenched interests in fossil fuels need to be confronted if South Africa is to retain relevance in the global economy.

In the short term, the investment stimulus required by a green transition (in both industry and energy) could assist South Africa in returning to a higher growth path in the longer term (Lowitt, 2022, p. 13). Modeling conducted for UNECA in a recent report suggests that investment in select green initiatives could result in approximately 60 percent more short-term job creation, as well as up to 140 percent greater economic value generation in the long term (O’Callaghan, Bird, & Murdock, 2021, p. 2) (sectoral averages provided in Figure 7.2). The South African government’s COVID-19 *Economic Reconstruction and Recovery Plan* provides a strong foundation for South Africa to undertake decisive green investment initiatives in order to facilitate job creation and spur GDP growth, thereby improving socioenvironmental prosperity.

The effect of green stimulus mechanisms on a country chronically reliant on declining fossil fuel industries could have a significant effect on post-COVID-19

Figure 7.2. Economic effects of green spending



Source: O’Callaghan et al. (2021), p. 2.

recovery prospects. This can provide short-term economic gains in conjunction with the essential environmental dividends, ultimately restructuring the economy to be more sustainable and resilient in the long term.

From this, new growth pathways for the medium term will be developed, ultimately mitigating the most acute long-term environmental degradation.

The figure depicts the average job and gross value added (GVA) impacts of green spending policies in comparison to traditional spending measures in RSA (O'Callaghan et al., 2021, p. 2).

In order to capitalize on the green transition imperatives while turning around the COVID slowdown, three priority focal areas for South Africa should include (1) renewable energy, (2) low-emissions transport, as well as (3) natural capital investments.

First, through renewable energy investment, South Africa could leverage high economic multiplier effects while reducing its current vulnerability to both fossil fuel price volatility as well as the associated negative environmental externalities (Huxham et al., 2019). Additionally, focusing on renewable energy capacity alone should serve as the core mechanism for reducing emissions across other economic sectors, as South Africa is reliant on coal power generation for over three-quarters of its electricity. Projected population growth, as well as increased demand for electricity access, will place additional stress on the aging coal generation fleet, as will the imminent decommissioning of the oldest plants.

Regarding cleaner energy production, the growing hydrogen economy offers a potentially transformative path to a greener economic structure in conjunction with traditional renewable sources. A recent TIPS analysis noted that South Africa's unique weather endowment for renewables generation, existing technological capabilities in the Fischer–Tropsch process, and access to platinum resources make it well-placed to capitalize on the development of the global hydrogen market (Patel, 2020, p. 4).

Moreover, South Africa stands to benefit from leveraging the increasing international investment being directed toward employing hydrogen as an energy carrier, particularly for energy production and chemical product applications. The development of a domestic hydrogen economy could serve a wide range of export markets, with the EU, Japan, and South Korea projected to be large, high-demand markets for hydrogen. Domestically, South Africa could use hydrogen as a means of storage for renewable energy in the medium term to complement or replace battery and storage capacity. Importantly in South Africa's case, hydrogen could be used as a substitute for coal-based generation, as well as supplementing the grid during periods of high demand.

Encouraging the development of such industries will be crucial to avoiding the punitive effects of international green trade mechanisms. In addition to



increasing renewable energy contribution, hydrogen could be used as a feedstock in traditionally high-emissions sectors of the economy, reducing emissions in line with South Africa's commitments under the Paris Agreement. Patel (2020, p. 4) sees positive effects as achievable in South Africa's petrochemical industry: "South Africa's petrochemical complex is an example of how hydrogen can reduce emissions. The production of vital chemicals such as fuels and other petrochemicals constitute important feedstocks in downstream markets for which alternate low-carbon options are limited."

Second, the importance of increasing low-emissions transport capacity is severalfold. Given a population with underserved transportation access, the reduction in air pollution and other climate benefits from low emissions transportation investment would also prove beneficial.

Investment in this sector, as well as associated infrastructure importantly would have a strong job creation potential and go some way to addressing spatial inequality in South African cities. This could leverage South Africa's existing competence in automobile manufacturing, thereby future-proofing and expanding current and potential jobs in the industry, respectively (McLean, 2018, p. 26).

Third, natural capital investments in the form of nature-based interventions such as habitat restoration, agricultural productivity interventions, and urban greening are a less high profile but no less important transition lever. Such initiatives could create desperately needed low-skilled jobs that can be swiftly rolled out. Additionally, investments made in these spheres are not at risk of leaking outside of South Africa, ensuring such stimulus effects are well targeted toward domestic growth and recovery. Additional benefits from such initiatives could be enjoyed by the tourism sector, increasing the likelihood of a much-needed post-pandemic recovery. This could also provide increased resilience to future economic shocks while again supporting climate change adaptation (O'Callaghan et al., 2021).

## Policy

### *Overview: Greater Policy Certainty is Emerging*

South Africa's transition policy landscape is a patchwork quilt. On the climate policy side, relative clarity is beginning to emerge—at least in theory and on paper—due to shifts in the political economy (see subsequent discussion) and in certain institutions (predominantly the PCC). On the just transition side, it is a work in progress, being driven by the PCC, which has articulated a serious and carefully constructed conceptual framework that was approved by the Cabinet in July 2022. On both fronts there are positive trends, but South Africa's accomplishments in policy development are not matched by its track record in

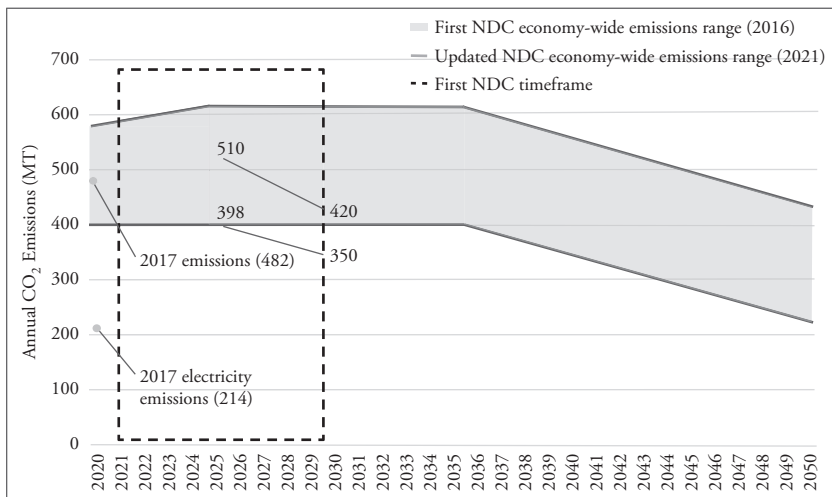
implementation. As a result, the policy documents and commitments have to be approached with caution and with a realistic assessment of what is achievable.

South Africa is committed to addressing climate change, as demonstrated by its new climate targets for 2030 and for 2050—both underpinned by a recently adopted climate change bill that provides a legal basis for action. For the first time, South Africa's climate targets are compatible with limiting warming to 1.5 degrees Celsius—although there is still contestation around this proposition, not least because of policy uncertainty relating to the country's future energy mix and the ongoing and unresolved public policy debate about the extent to which gas should be included in the future energy mix.

*South Africa's NDC Commitments*

The Department of Forestry, Fisheries, and the Environment (DFFE) released an updated draft to South Africa's NDCs in March, 2021, building on the fairly conservative initial proposal made in 2016 (Figure 7.3). The Presidential Climate Commission subsequently commissioned a further technical study by the University of Cape Town's Energy Systems Research Group (ESRG) in May 2021, with the updated NDC commitments being confirmed by the Cabinet in September 2021 (PCC, 2022a). In comparison to the 2016 target emissions range of 398–614 MtCO<sub>2</sub>-eq in 2025 and 2030, South Africa's new target emissions range is set between 398–510 MtCO<sub>2</sub>-eq in 2025 and 350–420 MtCO<sub>2</sub>-eq in 2030 (Republic of South Africa, 2021, p. 15). The latest available data from

Figure 7.3. South Africa's updated first NDCs, 2015 compared to 2021



Source: Tyler and Grove (2021, p. 2).

DFFE show South Africa's total emissions in 2017 standing at 482 MtCO<sub>2</sub>-eq, with electricity emissions standing at 214 MtCO<sub>2</sub>-eq (Republic of South Africa Department of Forestry, Fisheries, and Environmental Affairs, 2021).

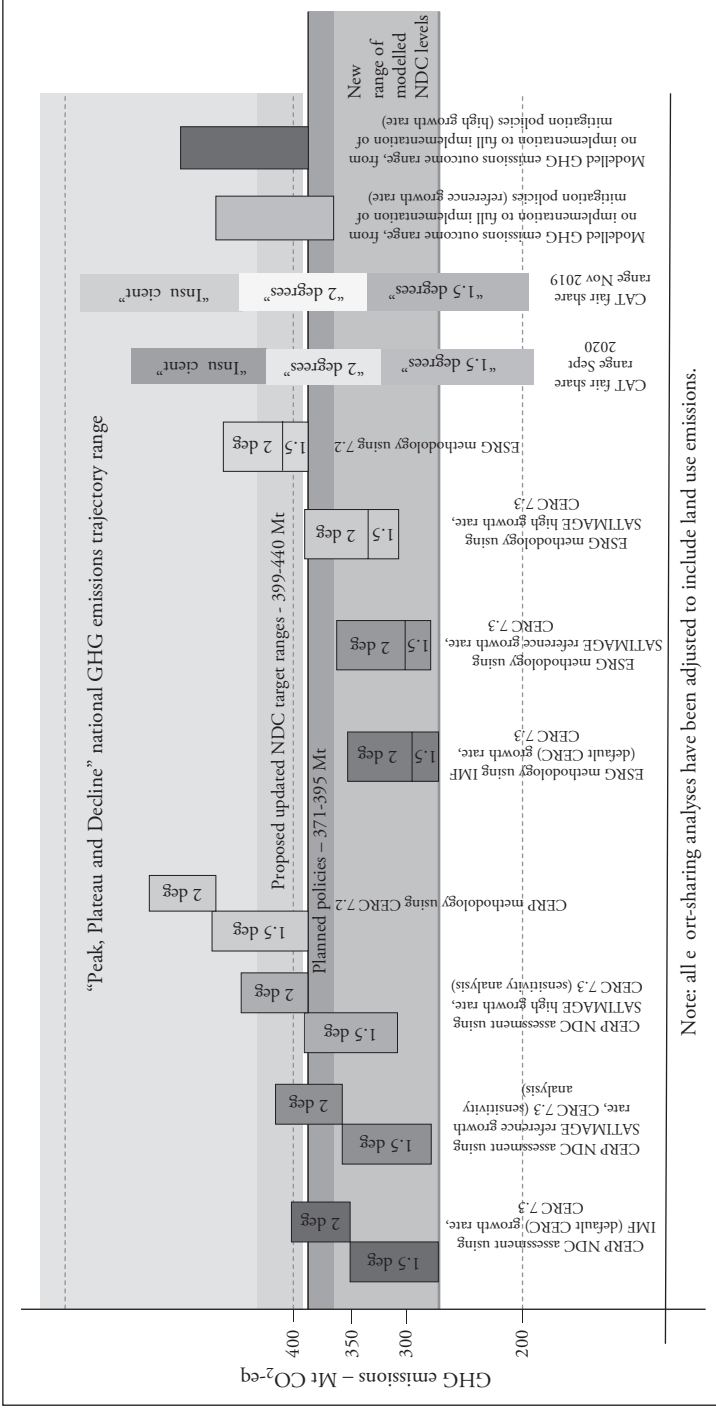
In updating its commitments, the PCC was informed by two models of weighted necessary emissions reductions: (1) the Climate Action Tracker (CAT) analysis, which conducts in excess of 50 analyses of countries' fair shares of emissions reductions, interpreting the results using the core equity principles of the Paris Agreement; and (2) the Climate Equity Reference Calculator (CERC) (the model preferred by the PCC) (Marquard et al., 2021, p. 4) (Figure 7.4).

According to both models (employing most recent data from 2020), in order to meet the agreement's goal of limiting global temperature increases to 1.5 degrees Celsius above pre-industrial levels (or the "second prize" target of *well below* 2 degrees), South Africa's contribution to equitable emissions must be at or below 350 MtCO<sub>2</sub>-eq in 2030, or 420 MtCO<sub>2</sub>-eq in 2030, respectively (Marquard et al., 2021, p. 4) (Figure 7.5). According to the current policy framework, South Africa's emissions in 2030 are projected to be within the range of 370–395 MtCO<sub>2</sub>-eq (dependent on economic growth), that is, below the updated target (Marquard et al., 2021, p. 4).

While these more ambitious commitments are welcome, there nevertheless remain some concerning conclusions from the modeling. First, the electricity sector remains the source of most emissions mitigation efforts (Tyler & Grove, 2021, p. 4). Any loftier ambitions to South Africa's mitigation strategy would involve further reforms in the South African power sector. South Africa's move toward decreased reliance on coal powerplants, as well as renewable energy schemes and investment rollouts, has been painfully sluggish. Second, without the support of significant climate finance assistance, the current models indicate significantly detrimental economic impacts of more ambitious emissions mitigations efforts by South Africa (defined as below 360 MtCO<sub>2</sub>-eq) (Marquard et al., 2021, p. 5). This is primarily due to the longstanding inadequate investment in the power sector. Third, the ESRG technical report noted that current "policies and measures are not necessarily the most cost-effective mitigation options to 2030. Policy optimization will result in a more ambitious national mitigation outcome up to around 350 Mt in 2030" (Marquard et al., 2021, p. 5). This is, however, unlikely, as this rests on the assumptions of the successful earlier retirement of the Eskom coal fleet, the introduction of additional renewable energy capacity, as well as favorable economic growth conditions. *Finally*, the report noted that, while longer term projects with regards to emissions reductions are less technically sound, South Africa's prospects of achieving net zero by 2050 are highly constrained:

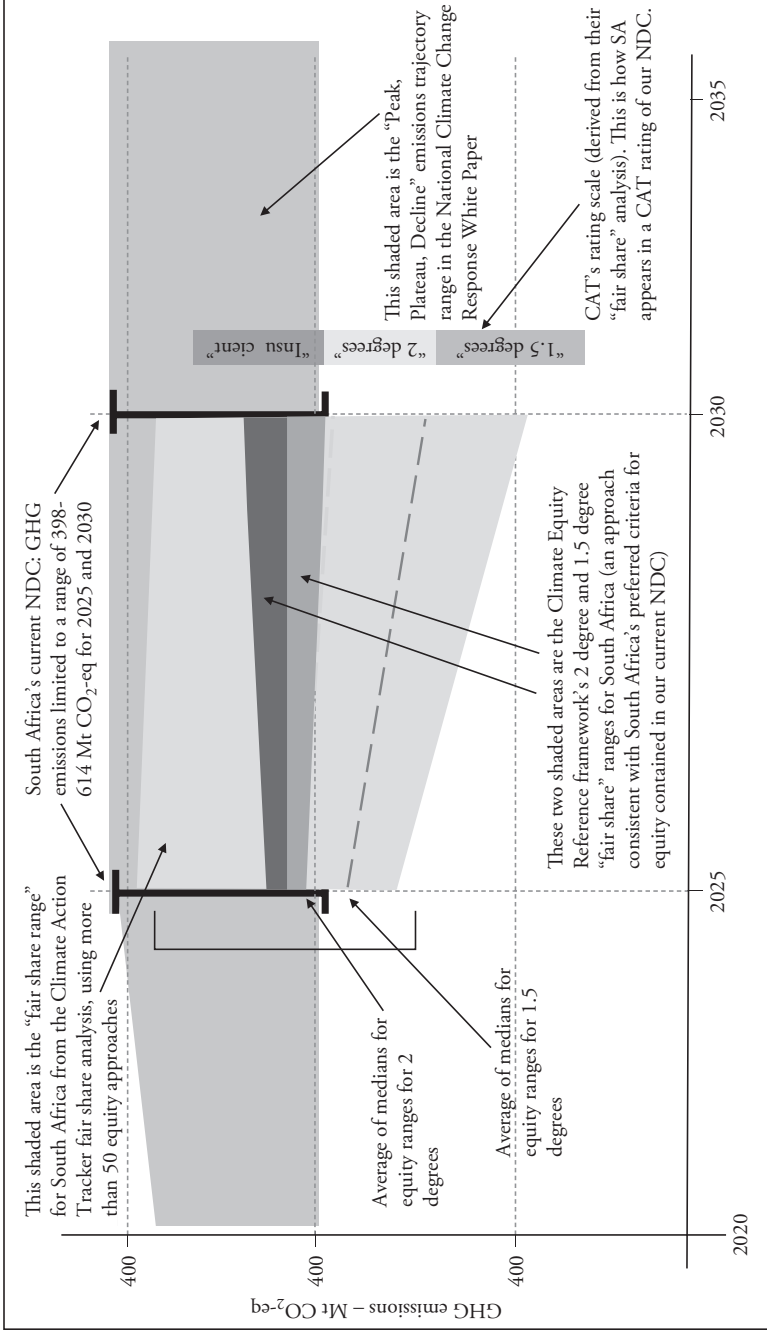
Reaching this goal will require very rapid decarbonisation of the South African economy in the 2030s and 2040s. A net zero CO<sub>2</sub> goal is

Figure 7.4. South Africa's 2030 "fair share" emissions reductions according to the CAT and CERC models



Note: all e ort-sharing analyses have been adjusted to include land use emissions.

Figure 7.5. "Equity lens" for South Africa's updated 2025 and 2030 NDCs, according to CAT and CERC models



Source: Marquard et al. (2021, p. 10).

equivalent to around 60Mt of CO<sub>2</sub>-eq in 2050 (comprising remaining non-CO<sub>2</sub> GHGs), which means decarbonising the economy at a rate of more than 150Mt per decade in the 2030s and 2040s. A more ambitious mitigation target in 2030 will considerably lessen the risk of the necessity of undertaking very costly and rapid mitigation in the two decades that follow. (Marquard et al., 2021, p. 5)

As the Climate Action Tracker (2022) notes, the updated targets are still not compatible with the Paris Agreement, and success in achieving them is highly contingent on successfully implementing the 2019 Integrated Resource Plan (IRP), whose future remains highly uncertain. In light of this, the PCC (2022a) commissioned a study to review the NDC commitments and to examine its relationship with other policy instruments and commitments, including the relatively new 2050 net zero commitment. The study found that South Africa's current policy makeup is not the most effective in terms of cost mitigation, and that optimization could reduce national emissions to 350 Mt by 2030 (48 Mt or 12 percent lower than the existing NDC). Optimization chiefly consists of accelerating the retirement of the coal power generation fleet and expanding renewables generation—with the dual benefits of reducing the cost of generation and accelerating emissions reduction. Meridian Economics (2021) similarly highlights that the existing IRP could enable meeting the upper bound of the NDC range, but that reaching the lower bound affordably would require much lower utilization of coal power. The implication of this study is that the PCC will now seek to drive a new consensus about a further recalibration of South Africa's NDC. So, to that extent, it is not fully settled and represents something of a dynamic space.

There are other policies that are relevant, principally: the energy mix policy (the IRP, 2019), the draft post-2015 National Energy Efficiency Strategy, the Green Transport Strategy (GTS), and the carbon tax. The most important of these is the IRP, since it falls under the authority, primarily, of the Department of Energy and Mineral Resources (DMRE). While IRP 2019 represented a significant shift, it still does not make a whole-hearted commitment to what some commentators and analysts in South Africa regard as the obvious strategy: to invest heavily and urgently in renewable energies. To do so would imply, further, a wholesale deregulation of the sector, which is more or less what President Ramaphosa's administration has been moving toward, despite feet dragging from the DMRE. A forthcoming review of the IRP will be indicative of the balance of power in deciding on energy policy—between the current president's reformist, renewables-heavy strategy and the approach of the Ministry of Energy, which has a more conservative energy strategy that includes both gas and coal.

*A “Just Transition”*

Regardless of these contested debates, there is a broad recognition now in South Africa that there must be a transition and, moreover, that it must be a “just” transition. The notion of a “just transition” first surfaced in South Africa just over 10 years ago, during the first phase of the life of a newly established national planning commission, as well as in the build-up to the Durban COP in 2011. In the course of stakeholder engagement on the diagnostic that would inform the first national development plan (NDP), it was the trade union movement, principally the union federation COSATU, that broached the topic of a just transition. Although the union movement is now a shadow of what it once was, not least because of the break-up and consequent diminution of power and influence of COSATU in the past decade, the unions remain in general a key stakeholder in South Africa’s policy dialogue because of concerns about job losses in the context of already-high unemployment levels. This may explain why South Africa was the only country to mention a just transition in its initial NDC, having included a chapter on just transitions in the 2012 NDP (World Resources Institute, 2021). So, the topic has been in and around the public policy arena for at least a decade, and valuable work has been done on different aspects of a just transition by a range of academic, business, and nongovernmental organizations.

The PCC’s February 2022 “A Framework for a Just Transition in South Africa” is a key document and may, in time, come to be regarded as foundational (Presidential Climate Commission, 2022b). It is a classic example of what is referred to previously: It is adroitly written and crafted, containing thoughtful and penetrative conceptual analysis. But it now has to land within, and survive, a rocky political economy. Importantly, the PCC—as a semidetached, insider–outsider organization—has both the perspective and the political wherewithal to not only comprehend the nature of this challenge but to be sufficiently politically savvy to navigate it (see following, Process).

The Just Transition Framework that was approved by the Cabinet in July 2022 proceeds from the starting point of what is required by (climate) science. It accepts that there must be a transition but stresses that any strategy must address the disruption and economic disaffection this would cause. This leads the PCC to raise questions of how to empower communities in implementing the just transition, how to ensure those worst affected are not “left behind” by green growth, and how to align the goals of the just transition with addressing the “triple challenge” of inequality, poverty, and unemployment in South Africa.

Interviews with key members of the PCC reveal the underlying philosophical approach, which sees the transition as not only a transition away from a

carbon intensive economy, but to one that can offer hope in addressing South Africa's socioeconomic precarity—in other words, a holistically different economic paradigm (or “whole economy” approach). This reflects the ideological bias of the main actors within the policymaking arena, which is politically progressive (“social democratic,” broadly speaking). As the Framework document (PCC, 2022b) states, the just transition seeks both to redesign the economy to benefit the many, as well as drive a domestic response to climate change—improving resilience and cutting emissions. The Framework itself is in fact less focused on climate mitigation and adaptation policy, and more focused on mitigating social consequences and reaping economic rewards from these policies.

It is in the delivery of this mandate, and with this ambition, that the PCC is seeking to lead. Importantly, the PCC has now settled on three strategic levers to pull as it tries to drive transition planning: Electricity, hydrogen, and electric vehicles. Electricity is the obvious priority, and the space where the quickest wins and greatest emission reduction gains can be secured. Hydrogen and electric vehicles are more medium-term (2035) targets.

In September 2022, the executive director of the PCC outlined the plan for delivering the just transition framework (JTF), including the next steps (PCC, 2022c). On an institutional and fiscal level, Olver reported that bilateral discussions are being conducted with the National Planning Commission to integrate JTF into the national planning system, and, in collaboration with DPME, to integrate it into the Budget Prioritisation Framework, and finally, with the national treasury about mainstreaming JTF into fiscal policy. An announcement in relation to the final element is expected in the Finance Minister's Medium Term Budget Policy Statement (MTPBS) in late October 2022. Next steps include:

- Translation of the JTF into other languages and development of communications material.
- Report back to all communities visited in consultation process and convene just transition implementation forums.
- Engage with business and mining companies about ways to take up JTF in their planning.
- Integrate JTF into JET-P investment plan.
- Continue to engage line departments about their roles and activities.
- Undertake detailed modeling around employment in Mpumalanga and mobilize implementation partners.



- Undertake detailed skills planning with the department of higher education and training.
- Support Mpumalanga and Green Cluster Agency.
- Work with cities to implement Just Urban Transitions policy.
- Develop monitoring and evaluation system for just transition. (PCC, 2022c)

In terms of climate finance support for the JTF, the overarching objective is to implement strategy for financing the climate transition, including establishing a baseline for climate finance flows and mobilizing capital for a just transition. Funding has been secured from the French Development Agency (AFD) for tracking climate finance flows over a three-year period. The conceptual design of a just transition financing mechanism has been completed, and the detailed work is about to commence. More detailed costing of climate mitigation, adaptation, and just transition costs are being undertaken (PCC, 2022c).

In terms of organizational form and legal standing, in an important move for its longer-term institutional character, the PCC will physically move to NEDLAC—the National Economic Development and Labour Council, which was established as a statutory body in the very early days of South Africa’s new democracy in 1994. At times, NEDLAC has played a crucial role in enabling business, labor, and government to negotiate key policies. The connection with the just transition should breathe new life into the corporatist entity, aligning the process-orientated approach to consensus-building of the PCC, and its technical know-how and political constituency, with the country’s primary statutory body mandated to drive high level dialogue on economic development.

Pursuant to the terms of the climate change bill that is before parliament, the PCC is due to become a statutory authority, with formal authority for leading the transition. This may not be as good an institutional development as it appears at first sight in that it may dilute the organizational agility and sense of purpose that the PCC currently has. Regardless, it is planning accordingly, with a medium-term time-horizon.

Finally, however, it is worth referencing an additional layer of the conceptual onion that the PCC has tabled, and one that has deep origins in the policy debates of the past decade in South Africa. It goes to the underlying question of how to think about the word “just” in South Africa’s formulation of the transition as being necessarily a “just” one. There is consensus in this regard that there are three dimensions to transitional justice (PCC, 2022b, p. 5):

1. *Distributive justice*, that is, distributing risks and responsibilities of the transition equitably.

2. *Restorative justice*, seeking redress for historical damage to communities and the environment (we may point to the health and environmental downsides for mining communities).
3. *Procedural justice*, or allowing communities affected by the transition to have control over defining their future livelihoods and development.

While there may be theoretical consensus about the justification for all three dimensions of a just transition, there will continue to be deep contestation about the application of the principles and the practice of managing the transition (see for example, *Toward a Just Transition Finance Roadmap for South Africa* from the Trade and Industrial Policy Strategies paper commissioned by the PCC, which analyzes the issues), which brings one inevitably to the questions of political economy.

## Political Economy

As noted in the introduction, South Africa faces multiple system pressures and crisis points— social, economic, environmental, and governance. The social and economic pressures, although challenging and urgent, are not unique. Many other countries that must transition face similar levels of poverty, inequality, and unemployment. But South Africa's political economy is, by definition, unique. The first aspect relates to governance. On the one hand, South Africa is well endowed with expertise and professional capability. The "first world" dimension to South Africa's society and its economy means that it not only has well-developed capital markets of its own and a highly respected and trusted financial system, but that in terms of human capital it remains reasonably well stocked. However, there has been a brain drain away from the state in the past decade or longer, as professionals with skills and integrity have turned their backs on the public sector, given the rising tide of corruption and the impact of what is known as "cadre deployment"—a phenomenon whereby the ruling African National Congress (ANC) creates, in effect, protected categories of employment for people that are either loyal to it or active within the organization.

Public power utility Eskom is a prime example of the negative impact of this phenomenon. As the Zondo Commission of Inquiry into what is now known as state capture found, cadres were employed by Eskom on an industrial scale, up and down the state-owned entity, weakening it and undermining the ability of properly trained and skilled employees to do their job (Zondo, 2022, p.1046). This pattern was repeated throughout the state-owned entity (SOE) sector, with many others, such as Transnet (the state-owned transport and logistics company), hollowed out during the Zuma era.

State capture has, therefore, had a corrosive impact on governance in South Africa. Since any just transition implies a strong role for government and the public sector more generally—regardless of the extent to which private capital and private enterprise are the driving force of the transition—these structural weaknesses in state institutional capacity will need to be taken into account.

Indeed, on this very point, the PCC is concerned that, at the time when deregulation to permit municipalities to generate their own electricity has occurred, most of the metro (large city) governments are highly unstable, fiscally weakened, and struggling to protect the integrity of procurement processes against the onslaught of rent-seeking conduct by groups inside and around the governing ANC. In this increasingly unstable and unsavory political environment, Ramaphosa's administration tries to hold the line and rebuild broken institutions. It is the task of Sisyphus. Executing a reform program is made harder due to deliberate obstruction of factions in the ANC who want to see Ramaphosa and his reforms fail. Some of these factions have significant interests in the energy sector. Their willingness to cause disruption extends to acts of sabotage on the grid, designed to worsen load shedding and further undermine both Ramaphosa and the "turnaround" CEO appointed by Ramaphosa at Eskom.

In addition, the coal lobby is strong. Whereas the traditional mining sector has faced up to the need to move away from coal, with companies such as Anglo-American divesting from coal (selling its coal interests, etc.), there are (five) new black-owned coal companies who are well-connected politically and who likely have overlapping interests with the ANC and/or powerful figures within the ANC. There are value chains built on the back of these direct coal interests—for example, the transportation industry, with, again, close ties to the ruling party or members of its leadership. There are also significant political actors in cabinet, such as the current minister of energy, who is a former general-secretary of the national union of mineworkers (and the current chairperson of the ANC) and whose positioning on the energy transition fluctuates—sometimes positive, sometimes obstructionist, and often equivocal.

Having noted the sensitive politics of the landscape, it is also important to recognize that there are different kinds of interests at stake here. There are interests in the coal sector that are illegitimate, in that they are wrapped up in the patronage and other forms of corruption that plagued South Africa's governance in the last decade. There are other interests that are legitimate in the sense that there are understandable because of genuine concerns about how a transition away from a carbon-based economy will impact the jobs and livelihoods of those that work in the coal industry and connected parts of its value chain, as well their communities. Finally, in stark contrast, there are those whose interests in the transition are in favor of a transition because they stand to gain.

Climate change is not a big political issue, so there is minimal to low public pressure and few political costs if any for "bad" climate behavior. Climate change dips in and out of political consciousness; there is no green party, for instance. There are few, if any, votes to be won or lost based on a green agenda, despite the growing evidence of extreme weather conditions—such as the winter 2022 flooding in KwaZulu-Natal which cost hundreds of lives and thousands of livelihoods—and of climate change—droughts and water shortages have been a regular feature in several parts of the country in recent years. Hence, there is no public or political pressure on a "green deal" transition (though there is massive public pressure with regard to unemployment and poverty), placing an even greater premium on the efforts of the PCC to build cross-sectoral consensus on the need for concerted, collective action.

### *Process*

How, then, to navigate such a political economy? South Africa, as intimated earlier in the section on policy, is very good at producing finely honed policy positions and documents but has a rather uneven track record in terms of execution. As one of the main stakeholders in the PCC process put it, "there is the formal policy landscape, but behind and underneath it, there is the below-the-radar political economy which tends to eat up the good policy intentions." And, during the Zuma era, this malign political economy was enabled to the point that it flourished, largely obliterating the formal policymaking arena, as a shadow government was formed as Zuma took the presidency "off book" and hollowed out the presidency's capacity for policy coordination and thinking (a capacity that had been painstakingly built up under Thabo Mbeki's time as president).

Since Ramaphosa ousted Zuma from power in February 2018, his administration has sought to not only arrest the decline of the democratic state and to rebuild hollowed-out public institutions but also restore the authority of the policymaking process. It has proved to be a steep uphill climb in many respects, but there have been significant advances. Merely by appointing far better suited and honest people into key positions, Ramaphosa has been able to reintroduce greater integrity into public policymaking. The climate policy space is a very good example of this, and aptly so for the purposes of this chapter and this volume. Ramaphosa has moved to appoint experienced, reform-minded people into key positions in the Cabinet. This has created the high-level political conditions necessary for reasoned public policy debate and decision making.

The appointment, for example, of Barbara Creecy as minister of environment contains important lessons: Prior to her appointment to national cabinet after the national election in 2019 that reinforced Ramaphosa's grip on executive

power, Creecy was provincial minister for finance in the provincial government of Gauteng, the province where Johannesburg and Pretoria are located—and, therefore, the governmental and economic heartland of the country. If Gauteng was a country, it would be the ninth biggest economy in Africa. So Creecy's five-year term as provincial finance minister was in many ways the ideal preparation for what awaited her at the national environment ministry at this moment in time. Or, put another way, she was the ideal recipient of the economic arguments that were put to her by key stakeholders in the just transition process. She was not only able to immediately grasp the fact that climate is not—in terms of root cause—an environmental but an economic issue, and that the most potent risks arising from environmental, ecological, and climatic changes are economic and social, but to then communicate those messages powerfully within the Cabinet and to her colleagues, some of whom remain highly suspicious of the green agenda. In addition, Creecy was well placed to understand and then respond to the international climate finance opportunity that presented itself in 2021, in the run up to Glasgow. However, significant though her appointment was, and essential though Ramaphosa's ascent to the presidency was, it is unlikely that these factors would alone have been enough to shift such a stubborn political economy. The game-changer was the establishment of the Presidential Climate Change Commission (as it then was; now renamed Presidential Climate Commission—PCC).

Why? What is it about the PCC that has had such a positive impact in such a relatively short period of time, not least because its apparent success runs so much against the grain of the current organizational character and trends in the public sector in South Africa? The answer is a combination of good leadership and capable people, smart and opportunistic (in a positive sense) funding, and luck in terms of the timing—both domestic and international. The origin of the commission can be traced back to the Jobs Summit in 2018—one of Ramaphosa's first big attempts to convene a high-level, multistakeholder process that would build consensus around job creation, and convened in parallel with other similar initiatives, such as an investment summit. This is Ramaphosa's chief political *modus operandi*. He leads through good process, but using processes to surface interests, to smoke out the true vested interests, and to forge consensus about how to move forward notwithstanding obstacles and those vested interests.

It is also Ramaphosa's way of managing political risk: instead of taking bold bilateral decisions—as many of his critics wish he would, lamenting his lack of decisive leadership—he will mitigate or spread the risk by designing and convening processes that share the decision-making responsibility (Calland & Sithole, 2022, p. 174). It derives largely from his many years as a trade union

leader; he is a negotiator who likes to ensure that good—well facilitated and convened—process will deliver an outcome that enjoys a “sufficient consensus”—a South African term of political art that comes from the days of the early 1990s, when the apartheid government was being negotiated out of power. At the 2018 jobs summit the issue of an energy transition arose, and there was immediate recognition of both the need but also the peril of embarking on such a transition. There was an immediate grasp by Ramaphosa of the fact that there would not only be winners and losers in such a transition, but that there would be trenchant vested interests that would dig their heels in and stand in the way of a smooth transition.

Hence, in the face of such a complex problem, Ramaphosa's natural instinct to reach for his habitual political response: process (Calland & Sithole, 2022, pp. 185–188). The idea of a multi-stakeholder commission was advanced. Two years later, the commission was appointed, in late 2020. The reaction of this author to the announcement of the 25-person commission was deeply skeptical: too big, too inchoate, probably an unfunded mandate, lack of political will to drive it, too vulnerable to capture or to be ignored. However, there was a glimmer of hope in the appointment of Valli Moosa, a wily, veteran ANC politician who has held a number of relevant leadership positions: minister of environment in the Mbeki government (1999–2002), then chairman of Eskom and Anglo Platinum, and later the WWF in South Africa. Yet, when the author met with Moosa in early 2021, ostensibly to celebrate the outcome of their collaboration in getting a political finance transparency law over the line, Moosa conveyed the idea that before figuring out what to do with the PCC in terms of its transition mandate, he would first be posing the “transition to what?” question. Since then, the PCC has worked hard, in dialogue with multiple stakeholders to painstakingly build consensus on both the destination—of a new, green economy—and the process to transition to it.

There was then some very nimble footwork from certain people, including Moosa. Saliem Fakir, a long-time policy analyst with WWF, had recently taken up a position as head of a new Africa Climate Foundation fund. He was itching to invest some funding in the South African transition, and recognized that the PCC might represent a fresh start, with a blank slate in terms of the crippling mediocrity and corruption that has infected much of the public service. Thus, a secretariat was created and key positions filled, rapidly—far more rapidly than if the commission had been a fully public body. Whether it was deliberate by Ramaphosa (and/or Moosa) or not—and it may well be that it was luck rather than design—the fact that the PCC was a quango—that is, quasi nongovernmental, but with public authority and a public policy mandate—meant that it could be far more agile than a traditional state institution.

Then, an executive director of the highest order was appointed: Crispian “Chippy” Olver, one of South Africa’s sharpest and most capable bureaucrats, and author of *How to Steal a City*—which is a depressing though seminal account of how corruption came to grip the city then called Port Elizabeth and how attempts by Gordhan and, as his representative, Olver, to turn the city around largely failed because of the extent to which corrupt interests had infiltrated the system. In turn, Olver brought in a small but tight and capable team to run the PCC show, providing further evidence to support the old adage that you can get a lot more done with 10 capable, determined, and focused people than 50 people, 40 of whom are passengers.

How the PCC then proceeded is a remarkable good news story, because it represents such an admirable exemplar of how to run such a process. The PCC has been as transparent and inclusive as it is possible to imagine. Instead of saying “well, this is very tricky stuff, and highly technical, and there are lots of nasty vested interests, we must keep it all behind closed doors while we sort it out,” Moosa and Olver’s approach has been the exact opposite: All of the proceedings of the commission have been in the open, live-streamed. Whether a cabinet minister or an invited stakeholder, one had to say what one had to say in open session.

As a result, the PCC’s proceedings have provided an extraordinary and rare window into the thinking and positioning of key and powerful actors. The effect—and this is where the savviness of Moosa’s leadership comes in, no doubt with the implicit support of President Ramaphosa—has been to expose, and then increasingly isolate, the trenchant vested interests of certain role-players, who in many respects have been politically managed or even side lined by the process led by the PCC. According to Crispian Olver, the PCC “was created a fortuitous time, when significant stakeholders had changed their position on the transition, creating the space for us to build consensus.” While the PCC is “unique,” in Olver’s words, it depends on the willingness of “core social partners, business and labour.” He acknowledges, however, that the shift is not complete; there are still forces within both labor and business who are attached to the old carbon economy. Key issues will be the industrial strategy—the extent to which it is persuasive to stakeholders to see value in the transition away from fossil fuels, and, by corollary, the social support measures that are put in place to help support the “losers,” the workers and other people who currently depend on the coal sector for their jobs and livelihoods.

Now the PCC is engaged in the complex task of conceptualizing and then coordinating the planning and execution of the just transition, following the cabinet’s approval of the just transition framework. It is far too early to say whether this will be successful. Given its complexity, and the complicated

political economy, it will continue to require strong, skillful leadership, as well as dedicated climate finance that can catalyze private investment at scale. Through the PCC's "intentionality" and its admirable process, it has given South Africa the best possible chance to execute a transformational economic transition.

It is not clear yet—and opinion is divided within the PCC on this point—how far South Africa is going to have to go in its transition planning to ensure that the Glasgow climate finance deal is closed. At the time of writing, the process of finalizing the details of the climate finance investments by the five donor members (France, Germany, the United Kingdom, the United States, and the European Union) of the International Partnership Group (IPG) was still unfolding. But, significant progress has been made with the unveiling of South Africa's "Just Energy Transition Investment Plan" (JET-IP) in November 2022 (Republic of South Africa, 2022). In essence, the document sets out how the South African government intends to spend the international climate finance investment of \$8.5 billion, in terms of how the IPG pledge will be allocated to the priority sectors of electricity, new energy vehicles (NEVs), and green hydrogen (GH<sub>2</sub>), the JET-IP over the five-year period of 2023–2027—with, notably, the lion's share of over two-thirds devoted to electricity infrastructure, reflecting South Africa's urgent energy security needs:

In the electricity sector, the infrastructure investment priorities are:

- to manage the decommissioning of the retiring coal generation fleet, in line with a revised Integrated Resource Plan (IRP), and in tandem with the development of renewable energy generation at scale and pace;
- to timeously strengthen the transmission grid infrastructure to accommodate the shift to renewable energy; and
- to modernise the electricity distribution system." (Presidency, South Africa, 2023, p. 9).

Again, there is an interesting process point to observe. Instead of leaving it a line ministry, whether National Treasury or the department of environment, President Ramaphosa opted to create a presidential Task Team to lead on the negotiations with the five international donors. The Task Team is run from the presidency, again providing it with presidential authority and heft. At the beginning of 2022, Ramaphosa appointed former ABSA bank CEO Daniel Mminele to lead the Task Team, to lead the work of finalizing the details of the climate finance support package in negotiation with the JETP donor countries by the end of 2022. The Task Team was supported by a JETP secretariat—a technical team of experts reporting jointly to the IPG and the South African government.



It remains to be seen whether the donors will provide finance on terms that are sufficiently advantageous. If they are not markedly better than what South Africa could borrow on the open market, then the deal may yet fail, even though there is intense pressure on the international climate finance community to deliver and, as noted in the introduction, there is a spotlight on this historic, ground-breaking deal. Again, this issue is relevant to the domestic political economy. Unless Mminele, via president Ramaphosa, can convince cabinet and ANC colleagues that the deal is sufficiently advantageous, it will be harder for them to overcome political opposition, especially with regard to the controversial topic of conditionality. Clearly, a climate finance deal such as this contains an implicit understanding that the recipient country will contribute its fair share to reducing global emissions and helping thereby to arrest runaway global warming. This takes one back again, therefore, to the just transition. Without sufficient policy clarity, the PCC is unlikely to be able to secure sufficient consensus to move forward with the necessary urgency and with sufficient decisiveness about how South Africa's NDC and net zero commitments and targets will be met. But this policy clarity is now emerging, and so there are very positive signs, as the building blocks for a successful green transition are painstakingly put in place.

### **Conclusion: Tentative Lessons from South Africa's Transition Experience (So Far)**

First, leadership matters, especially when faced by a challenging political economy that may discourage key political actors from taking the necessary decisions to advance a transition pathway. While President Ramaphosa has proved to be willing to deploy the authority of the presidency as well as some of his political capital to unlock a potential policy logjam, so it was also necessary to innovate institutionally to put in place processes that could build multi-stakeholder consensus—in South Africa's case, the PCC. Savvy political skills, as well ample technical capabilities, will be needed to succeed.

Second, the complexity of the task, especially given a challenging political economy, implies that those charged with managing a transition process be provided with the highest possible level of political coverage and support, ideally from the head of government (assuming that the president is supportive of the need for a transition and there is will to back it). So, in this respect, the fact that the PCC is a presidential commission and comes with the political authority and the engaged political imprimatur of the head of government is very significant.

Third, South Africa's progress in the past year or so is a result of having put in place a robust and fit-for-purpose consensus-building process, and one that is

unequivocally inclusive, so that every significant player is involved in accordance with the “nothing about us, without us” principle.

Fourth, an institutional design lesson from South Africa is that such a process must be sufficiently isolated from short-termism and other contaminating effects of domestic politics and the negative organizational culture of government, whether it be corruption or lack of skills or the excessively restrictive bureaucratic process. It needs to be lean and agile but also have the necessary political heft and clout to be taken seriously so that it can attract attention, buy in, and participation by the key stakeholders. The legitimacy of such a process is crucial for the efficacy of the transition itself.

Fifth, strong technical know-how is needed—preferably with domestic roots, so as to build local understanding of all the options and to translate them precisely into what is most meaningful for the domestic economy. This will help ensure that the transition design is domestically owned and as a result has greater legitimacy and authenticity. Outsider experts and consultants are more likely to miss local nuance.

Sixth, talk economics—investment and infrastructure—not environment. Language and framing matter, so communicating the need for a green transition is not helpful and should be avoided in a country such as South Africa where suspicions of “Western” agendas are never far from the surface and where the concern may also be that the transition agenda of developed economy actors, such as those providing the climate finance to help fund a transition, are unduly focused on the climate and decarbonization dimensions to the transition and that the social and economic elements of a sustainable transition are less of a priority. That is why South Africa’s approach has been to accentuate the “whole economy” potential of the transition and to emphasize the need for the transition to be a just one.

Seventh, a coherent pathway to transition can help secure international climate finance and the resources needed to unlock potential and provide for the technical and other investment needed to enable the transition. But, clear-mindedness is needed about both the terms of such climate finance and how it will be catalytic both in terms of crowding in private finance and in helping to overcome domestic fiscal constraints. On this issue, South Africa is currently at a rather delicate point in the climate finance country partnership (the JETP), in that it is hurriedly drafting an investment plan as its side of the grand bargain that underpins the Glasgow Agreement (UKCOP26, 2021) (while, in return, and on the other side of the deal, the group of international donors need to be able to put forward a convincing submarket financial package).

South Africa has made a promising start and has now laid a reasonably sturdy platform for a successful transition. There is still a long way to go. Any residual policy equivocation, and especially a lack of full consensus about the future

energy mix, could obstruct the route to a new economic development pathway and, thus, to an expeditious green transition—as defined in South Africa’s own terms, namely a just transition. Full attention will need to be paid to the losers of the transition to ensure that they are not left behind. A “whole economy” approach will be needed to build new localized industrial and other economic opportunities for South African entrepreneurs and workers.

A multisector, multi-stakeholder process approach to contending with these challenges and opportunities will continue to be essential. In this regard, the most valuable part of South Africa’s experience in transition so far, however, is the institutional innovation of the PCC, which because of its design and organizational character, and its leadership, has proved to be a game-changer. This, combined with the impetus of the country platform/JETP impelling the focusing of minds, given the prospect of potentially catalytic international climate finance, indicates that South Africa has created a meaningful opportunity to forge a development pathway that will enable it to escape its dependency on fossil fuels, and, in decarbonizing its economy, substitute old risks with a once-in-century opportunity to build a clean, green, and inclusive new economy. To seize the opportunity, however, South Africa’s leaders—across the governmental, business, and labor sectors—will have to continue to dialogue to agree on new standards of governance to undergird the transition to ensure that it is not derailed by either incapacity or corruption. This, in turn, will require leadership that is courageous, agile, and ethical, as well as visionary.

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The Center for Sustainable Development generates leading research, insights, and convening to advance the economic, social, and environmental challenges of global sustainable development and help implement the Sustainable Development Goals (SDGs) within and across all countries.



To set a more robust global path to net-zero emissions by 2050, the world needs to pay greater attention to the needs of emerging markets and developing economies (EMDEs), even when holding aside the special case of China. Over the coming several decades, no part of the world will play a greater role in both experiencing and affecting global climate change outcomes than EMDEs themselves. They need greater international support to tackle growth-enhancing sustainable development strategies.

In *Keys to Climate Action*, twenty-five authors describe new economic narratives and global actions that can help catalyze progress toward inclusive, sustainable, and resilient growth in EMDEs. The volume begins with the stark reality of climate change's devastating consequences already hindering economic development around the world. It underscores the need for urgent investments in adaptation, resilience, and nature to avoid development setbacks while paying heed to the world's narrow window for climate action. It requires empathy for many developing countries' profound energy conundrum: a tension between the need to expand access for people who need it most while facing pressures to pursue low-carbon opportunities, often in the face of local political and financing headwinds. It implies practical urgency in tackling the broken threads of the international financing system for climate and development.

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