



# The Impact of Africa GreenCo on Sovereign Guarantees in the Southern African Power Pool

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## TABLE OF CONTENTS

00. Abstract .....	03
01. Context and overview .....	04
02. Risks associated with sovereign guarantee-based contingent liabilities - the case of South Africa .....	09
03. Outlook for sovereign guarantees in the Southern African Power Pool .....	15
04. Avoided sovereign guarantees through GreenCo business model .....	19
05. Conclusion .....	20
06. Appendix .....	21

### FIGURES

01. Quasi-fiscal deficits as a percentage of GDP in sub-Saharan Africa’s major power pools .....	05
02. Typical IPP Project Structure with Government Guarantee .....	06
03. GreenCo Project Contractual Structure .....	07
04. RE IPP procurement as a share total government guarantees in South Africa .....	09
05. Scenarios I & II – Outlook for Sovereign Guarantees across SAPP .....	16
06. Termination risk due to political instability – The case of Mozambique .....	16
07. Average ‘Country-Level Growth in Sovereign Guarantee Exposure as a Percentage of GDP’.....	17
08. GreenCo avoided sovereign guarantees (2021-2030) .....	19

### TABLES

01. Summary of REIPPP Rounds 1 - 3 .....	10
02. Excerpt – IMF Fiscal Transparency Code .....	14
A1. Real fuel prices (forecasts) .....	21
A2. Africa GreenCo 10-year Portfolio .....	22

## ABSTRACT

Without systemic reforms, member states of the Southern African Power Pool will have to commit billions to underwrite power purchase agreements with private sector developers. These sovereign guarantees can amplify various fiscal risks, particularly in developing economies with financially unstable public utilities. The IMF is driving towards greater transparency and less discretion for governments in the disclosure of sovereign guarantees. Africa GreenCo's business model presents an alternative to the traditional, sovereign guarantee-reliant contract structure. The report presents the context and quantifies the measure of sovereign guarantees avoided via the Africa GreenCo approach to renewable energy procurement.

# 1

## CONTEXT & OVERVIEW

For grid-scale renewable energy technologies, which were unproven in Africa until recently, PPA's with sovereign guarantees have been a cornerstone of both the deal structure and the investment promotion effort. The GreenCo contract structure represents a pathway beyond the investment ceiling created by sovereign guarantees and the attendant risks of contingent liabilities.

Several attempts to assess the risks and impacts of sovereign guarantees on governments of developing economies have addressed their multiple sources, which include state-owned enterprises, off-budget financing arrangements, programme loan guarantees, explicit bail-out responsibilities, and civil servant entitlement schemes, among others. In the African context, particular attention is given to the relationship between governments and state-owned enterprises (SOEs) and the practice of the former to provide guarantees that shore up long-term purchase contracts of the latter. Sovereign guarantees arise under a binding or potentially binding written document, such as a contract or comfort letter. These documents express a commitment to fulfil certain obligations of an underlying contract, or to protect the beneficiary from defined losses if specified conditions occur<sup>1</sup>.

Guarantees are often implemented in cases where SOEs enter into agreements with private sector counterparties, perhaps via a public private partnership (PPP), and where private investors seek a protective allocation against risks over which they have little control or may not be willing to bear<sup>2</sup>. By issuing a guarantee, the government creates a contingent liability, which is defined as the possible sovereign credit obligation arising upon the uncertain future inability of the SOE to satisfy its contractual terms with a third party, where these terms are under explicit sovereign guarantee.

The emergence of this fiscal tool reflects the broader, yet very gradual, transition in the role of the state in Africa, from the direct provider of services to a facilitator of public service provision in partnership with specialist

private sector businesses<sup>3</sup>. For the most part, reflective scrutiny of sovereign guarantees has not kept pace with their more widespread adoption across sub-Saharan Africa (SSA). In the region's largest economy, South Africa, the guarantee portfolio of the state increased more than 700% in the fifteen years to 2020<sup>4</sup>, creating in excess of USD 37 billion in contingent liabilities and only more recently raising questions about the long-term consequences of this approach. In certain cases, governments have actively sought to provide sovereign guarantees to the private sector as a way to avoid financing infrastructure directly. This form of off-balance sheet funding has been embraced, for instance, in Nigeria where there are plans to increase the use of these assurances to 5% of gross domestic product (GDP) from 1.5% in 2019<sup>5</sup>. The critical need to plug infrastructure gaps observed in many parts of the continent may explain the willingness of donors, investors, and public officials to embrace an 'any means necessary' approach to deal structuring. Increasingly, however, it is accepted that, on a number of grounds, the risk and sustainability scorecard of this fiscal tool is sub-optimal.

### Why use guarantees in the power sector?

In the power sector in Africa, the demand for sovereign guarantees emerges from the poor credit risk profile of state-owned utilities. The existing model used to bring new, private sector, grid-scale generation online is reliant on a single offtake arrangement between a public utility and infrastructure developer. Where the government or regulator has put in place a feed in tariff or auction structure, a power purchase agreement (PPA) will be set up between the public utility and the independent power producer (IPP). This ensures that the dollar rate per kilowatt hour paid to the developer or IPP is fixed for the economic life of the asset. The state entity will commit to 'take or pay' and typically the government is required to guarantee the PPA of the public utility (in part or full) to make the entire transaction bankable. In the case of non-payment by the public utility to the IPP, the sovereign guarantee is activated, and the government commits to cover the financial obligation<sup>6</sup>.

<sup>1</sup> PPIAF, 2019

<sup>2</sup> PPIAF, 2019

<sup>3</sup> CABRI, 2016

<sup>4</sup> CABRI, 2021

<sup>5</sup> Bloomberg, 2021

<sup>6</sup> Sam, 2021 (Forthcoming)

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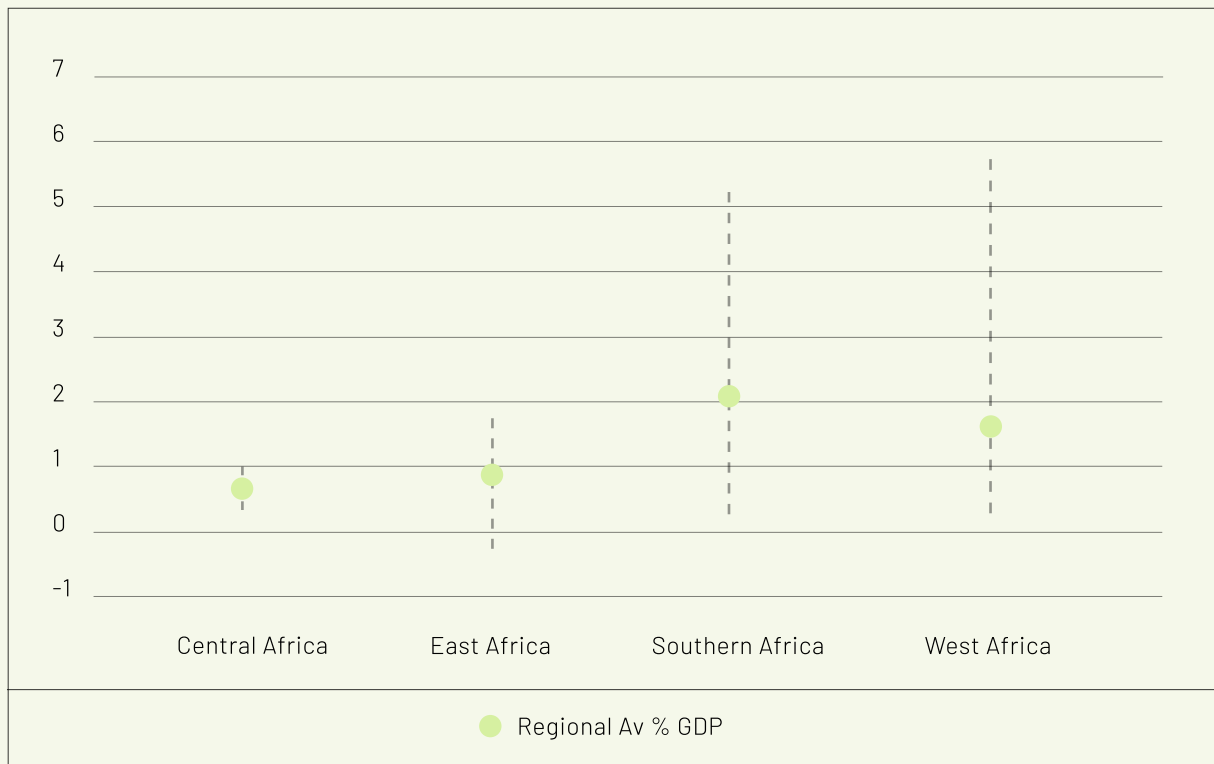
## CONTEXT & OVERVIEW

The rationale is that sovereign guarantees enhance the credit profile of the underlying project because the public utility is perceived to be at a high risk of default. While the factors that have undermined public utility credit worthiness should not be overly generalised across the

region, the challenge for public utilities to integrate break-even or profitable business models is a recurring feature. One key obstacle is the provision of service below cost, which has the added complication of often being tied up with socio-political factors (See Box 1).

### Box 1: Utility insolvency and material deficits

**Fig 1:** Quasi-fiscal deficits as a percentage of GDP in sub-Saharan Africa's major power pools



Author calculations. Data source – [World Bank, 2016](#) - where country data was available.

A 2016 study by the World Bank<sup>7</sup> discovered that across electricity utilities in 39 countries in SSA, only the Seychelles and Uganda were achieving full operational and capital cost recovery, while as few as 19 could successfully generate revenues to cover operating costs<sup>8</sup>. As an indicator of financial unsustainability in the sector, quasi-fiscal deficits (QFDs) (i.e., the revenue-expenditure gap of the public utility company) averaged 1.5% of GDP across SSA,

according to the study, and exceeded 3% of GDP in several countries. Based on data from the same study, the situation is most acute in southern Africa, where QFDs as a share of GDP among the members of the Southern African Power Pool (SAPP) are 140% higher than the next most indebted regional power sector (Fig 1).

<sup>7</sup> World Bank, 2016

<sup>8</sup> Sam, 2021 (Forthcoming)

# 1

## CONTEXT & OVERVIEW

### Is credit enhancement required across southern Africa?

None of the southern Africa's utilities is considered investment grade by major international ratings agencies<sup>9</sup>. Where information is publicly available, indicators that typically point to a business' ability to meet its obligations, such as debt-service cover ratio and net-debt to earnings before interest, tax, depreciation, and amortisation (EBITDA), create a similarly discouraging picture across the SAPP. However, there are notable exceptions. Botswana Power Corporation has more than halved the net debt to equity ratio in 5 years (albeit still above 100%), reducing long-term debt, growing net assets, and keeping capital expenditure steady or rising<sup>10</sup>. This has been achieved with strong fiscal support from the central government. Namibia's NamPower has sustained very modest but falling net profits, a respectable debt service cover ratio, and low debt to equity ratio, even amid the disruptions of the Covid-19 pandemic<sup>11</sup>. In general, however, the data points to malaise in public utility financials.

In South Africa, net finance costs for the utility, Eskom, are approximately 15% of total revenue and close to 85% of EBITDA. Government support of ZAR 49 billion (~USD 3.3 billion) was received in 2020 to support Eskom's status as a going concern, with ZAR 56 billion (~USD 3.8 billion) committed for 2021. The injection of public funds is reserved for debt servicing, according to an annual results presentation, implying that roughly 1% of South Africa's GDP is to be allocated to servicing debt of the national utility<sup>12</sup>. Meanwhile, in Zambia the situation has deteriorated markedly in the past 5 years. Executives at the state-owned power company, ZESCO, like their regional counterparts, have faced pressure to cap consumer tariffs, while inadequate revenue collection processes undercut their ability to make back the cost of supplying electricity.

At the peak of its fiscal crisis and sovereign default in 2020, Zambia's finance minister conceded that foreign currency arrears incurred by state-owned enterprises were weighing on the sovereign balance sheet. The aggregate amount at the end of June 2020 was approximately USD 1.29 billion, nearly 6% of GDP in 2019. This balance comprised guaranteed and non-guaranteed sums, mostly incurred by

ZESCO, through arrears on power purchase agreements<sup>13</sup>.

### How is Africa GreenCo a shift from the traditional approach?

Sovereign guarantees are conceived as way to render project risks more acceptable to the market and project financiers, hopefully with the result of lowering finance costs and the cost of service to end users. Once the SOE is a guaranteed entity, the default risk of the PPA will have been allocated, mitigated, or transferred in a way that satisfies the project company or special purpose vehicle, its lenders and equity investors (Fig 2).

The process of establishing a solid PPA structure along these lines has been a time consuming and cost-intensive challenge for investors and policymakers. In developing economy contexts this presents a real setback, as PPAs are regarded as cornerstone instruments and poor PPA quality undermines the investment rationale.

AfricaGreenCo is a development-focused trading and power services entity that will buy power from IPPs on a long-term basis and then diversify its risk across a portfolio of local and international buyers. The introduction of Africa GreenCo to the regional context, of utility insolvency and onerous risk allocation for investors and sovereigns, is a much-needed systemic transformation. GreenCo acts as a creditworthy off-taker that promises to resolve the investment impasse without burdening national balance sheets with contingent obligations, or burying such obligations 'off-balance sheet' and thus amplifying fiscal risks and transparency issues.

In the GreenCo business model, the project contract structure is devised to re-allocate the off-taker risk within a mechanism of over-the-counter bilateral contracts and market trades (see Fig 3). In the case of a given SAPP-member government, the state utility is no longer the PPA counterparty and thus the treasury is no longer required to underwrite PPA obligations using sovereign guarantees and act as the insurer of last resort. With GreenCo as the PPA counterparty, PPA default and termination risks are not covered by the government and no contingent liabilities accrue to the exchequer.

<sup>9</sup> i.e., foreign currency credit

<sup>10</sup> [BPC, 2020 \(p.6\)](#)

<sup>11</sup> [NamPower, 2020](#)

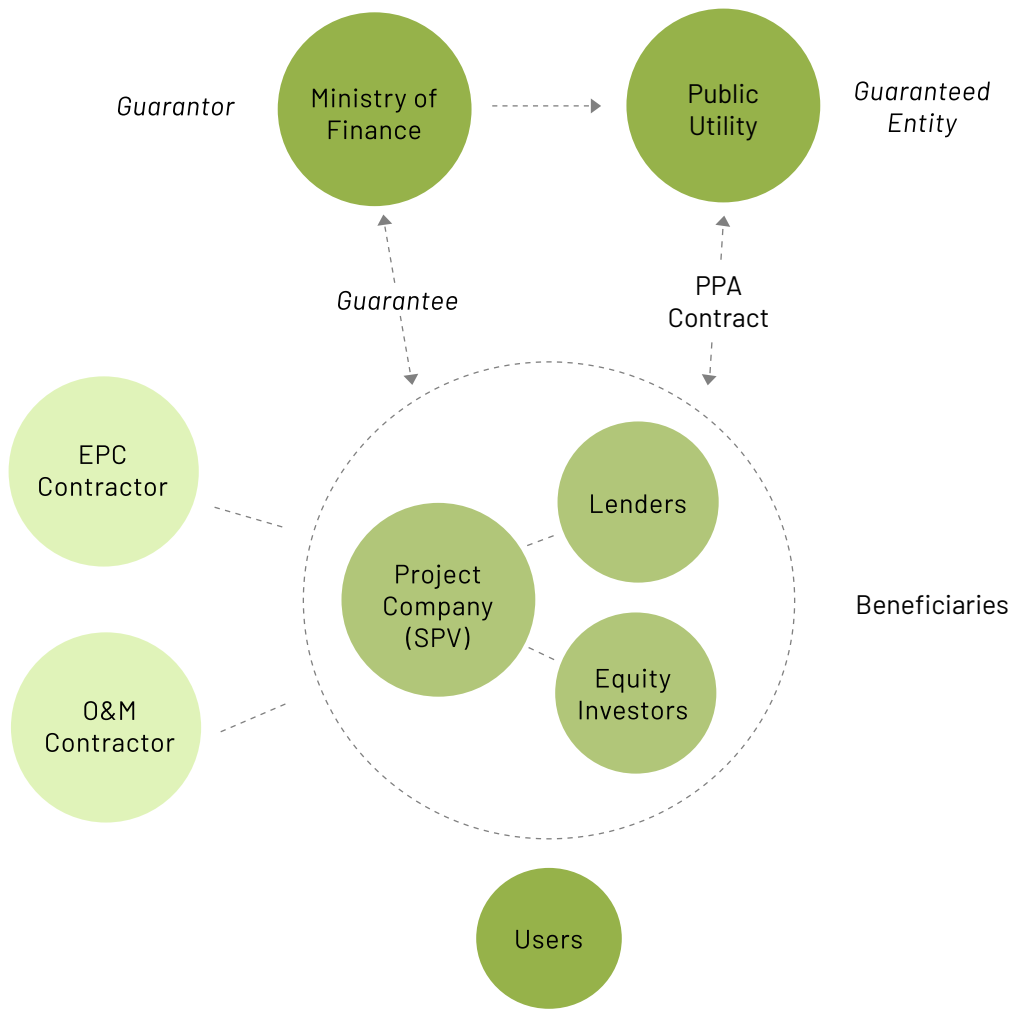
<sup>12</sup> [Eskom, 2020](#)

<sup>13</sup> [Sam, 2021 \(Forthcoming\)](#)

# 1

## CONTEXT & OVERVIEW

**Fig 2:** Typical IPP Project Structure with Government Guarantee



Source: Adapted from [PPIAF, 2019](#)

GreenCo’s approach is the first of its kind in sub-Saharan Africa and takes a systemic view of market risk that reflects the real challenges to successful IPP procurement in SSA, where guarantees and fiscal interventions have fallen short. Several developed economies have employed fiscal tools, such as subsidies and feed in tariffs, to boost RE investments. However, the liabilities generated in those cases have represented relatively insignificant sums compared to GDP and government budgets<sup>14</sup>, thus

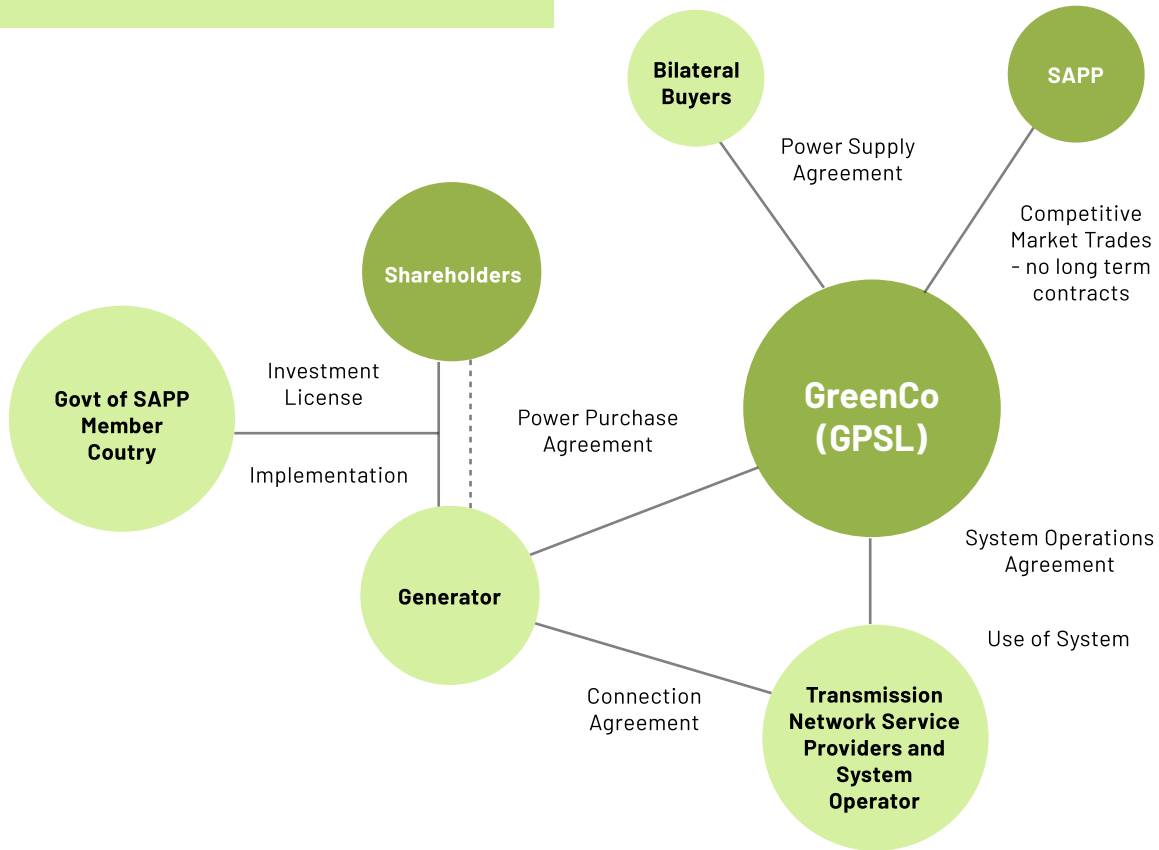
supporting the credibility of the guarantor in the eyes of the generator or IPP project company. To ensure GreenCo’s credibility, and that it can meet its commitments to the generator, GreenCo will allocate a collateralised liquidity buffer to the IPP to fund any difference between the net revenue achieved from power sales and the applicable PPA payments. The liquidity buffer is instrumental in demonstrating counterparty creditworthiness and is sized to cover 15 months of full payments under the PPA.

<sup>14</sup> For example, the United Kingdom’s renewables support scheme, referred to as ‘Contracts for Difference’, is administered by the state-owned Low Carbon Contracts Company (LCCC). Total commitments via LCCC will be circa USD 340 million in the forthcoming round, 0.024% of UK government spending in 2020/21.

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CONTEXT & OVERVIEW

**Fig 3:** GreenCo Project Contractual Structure



This report seeks to illustrate the possible pathways of contingent liability growth arising from the use of explicit sovereign guarantees in the development of power generation infrastructure across the region. The exercise uses stated projections in the SAPP’s regional masterplan and considers the likely impact of Africa GreenCo in avoiding a measure of these liabilities. The following sections include; a discussion of the historical experiences and attendant risks of contingent liabilities on fiscal management; an assessment of the outlook

for contingent liabilities based on scenarios outlined in the regional masterplan; and calculations of GreenCo’s avoided contingent liabilities using an indicative portfolio over a 10-year period. The report concludes with an acknowledgement of methodological limitations and reaffirmation of the GreenCo impact thesis as it pertains to delivering clean, reliable, and competitively priced energy in markets beset by investment challenges.



# 2

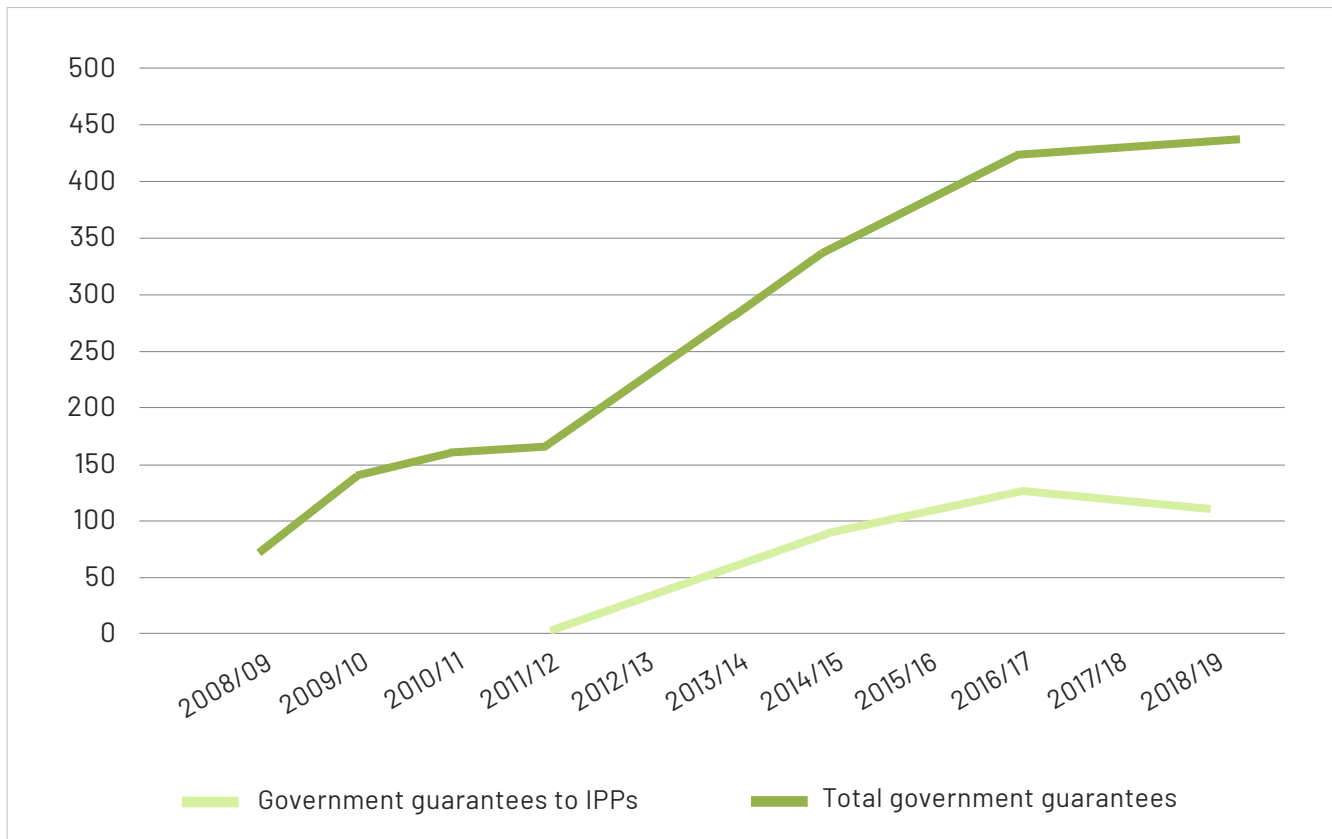
## RISKS ASSOCIATED WITH SOVEREIGN GUARANTEE-BASED CONTINGENT LIABILITIES - THE CASE OF SOUTH AFRICA

Contingent liabilities that arise through sovereign-guarantees warrant scrutiny due to the risks they pose to the sound management of public finances. Country evidence from within the SAPP provides a convincing illustration of these risks and their potentially dire impacts.

Economic slowdown in South Africa, in the aftermath of the 08/09 global financial crisis, led to a strategic shift by government towards counter-cyclical growth policies. Treasury responded with significant budgetary

allocations for state-owned enterprises (SOEs). This was intended to enable investments in public infrastructure and, in the case of Eskom in particular, increase power access, spur infrastructure projects, boost industry and job creation, and diversify the energy mix. A deliberate choice on the part of central government to adopt the use of sovereign guarantees was aimed at keeping the cost of public sector infrastructure financing as low as possible<sup>15</sup>. As a result, the portfolio of government guarantees to SOEs grew year-on-year from 2008/09 onwards (Fig 4).

**Fig 4:** RE IPP procurement as a share total government guarantees in South Africa (ZAR billion)



Source: [National Treasury 2018 Budget Review](#)

<sup>15</sup> CABRI, 2021

## 2

### RISKS ASSOCIATED WITH SOVEREIGN GUARANTEE-BASED CONTINGENT LIABILITIES - THE CASE OF SOUTH AFRICA

In 2011 the Renewable Energy Independent Power Producer Programme (REIPPP), a public procurement scheme, was introduced to attract interest in renewable energy IPP investments. The programme, now in its fifth round, has awarded more than 112 IPPs<sup>16</sup>. In each round, an undisclosed ceiling tariff has been established for each technology in the auction. Companies compete in a reverse auction on a pay-as-bid, sealed-bid, basis. Winning bidders sign PPAs, which are guaranteed for a period of 20 years.

As part of the state guarantee, which is issued by the Ministry of Energy with approval from the Ministry of Finance, the government undertakes to insure two types of risks; Eskom's failure to pay for energy sold by IPPs, and termination of IPPs by government<sup>17</sup>. In 2019, the maximum sovereign obligation to IPPs in case of early termination was estimated at about ZAR 122.2 billion (USD 8.2 billion), roughly 2.7% of GDP<sup>18</sup>.

The programme, which the government describes as 'an example for other African countries'<sup>19</sup> has succeeded in drawing private sector interest. Investment rose from a few hundred million dollars in 2011 to USD 5.7 billion in 2012 and USD 4.8 billion in 2013<sup>20</sup>. More than 5GW of large-scale renewable energy capacity has been awarded via REIPPP to date. Table 1 shows a summary of results from the first three auction windows.

Despite the investment success of the programme, alongside these PPAs, IPPs have grown from 0% of state guarantee exposure in 2008/09 to 27% in 2018/19, and nearly 3% of South Africa's GDP. In more recent rounds, the period of time for auction-winning projects to reach financial close and sign PPAs has extended substantially. Among several hurdles, developers cite difficulties obtaining their preferred guarantees as one point of deadlock.

**Table 1:** Summary of REIPPP Rounds 1 - 3

	Total	Sovereign guarantee-based contingent liabilities* (estimated, million currency)	Duration of tariff and guarantee
<b>Round 1</b>			
Capacity offered (MW)	3625	ZAR 34,400 USD 4,300	20 years
Capacity awarded (MW)	1415.5		
Projects awarded	28		
PPA close	November 2012		
Tariff data (USc/kWh)	Average tariff: Wind 14.3; solar PV 34.5; CSP 33.6		
Total investment (ZAR mill)	47792		
Total investment (USD mill) ZAR8/\$	5974		

<sup>16</sup> [World Bank, 2019](#)

<sup>17</sup> [World Bank, 2019](#)

<sup>18</sup> [World Bank, 2019](#)

<sup>19</sup> [Government of South Africa REIPPP, 2021](#)

<sup>20</sup> [Baker & Wlokas, 2015](#)

## 2

### RISKS ASSOCIATED WITH SOVEREIGN GUARANTEE-BASED CONTINGENT LIABILITIES - THE CASE OF SOUTH AFRICA

Round 2			
Capacity offered (MW)	1275	ZAR 33,900 USD 4,270	20 years
Capacity awarded (MW)	1043.9		
Projects awarded	19		
PPA close	February 2013		
Tariff data (USc/kWh)	Average tariff: wind 11.3; solar PV 20.8; CSP 31.6; Hydro 13		
Total investment (ZAR mill)	28059		
Total investment (USD mill) ZAR7.94/\$	3534		
Round 3			
Capacity offered (MW)	1473	ZAR 45,700 USD 4,635	20 years
Capacity awarded (MW)	1456		
Projects awarded	17		
PPA close	Jan 2015		
Average tariff (USc/kWh) ZAR9.86/R	Average tariff: wind 7.5; solar PV 10; CSP 16.5; Hydro 13; biogas 14.2; landfill 9.5		
Total investment (ZAR mill)	44413		
Total investment (USD mill) ZAR9.86/R	4504		
Total			Terms of guarantee
Capacity awarded (MW)	3915	ZAR 114,000 USD 13,205	The government guarantees to pay the project sponsor in the event of: <ul style="list-style-type: none"> <li>▪ Eskom's inability or unwillingness to pay for energy sold by IPPs;</li> <li>▪ Termination of IPPs by government</li> </ul>
Projects awarded	64		
Total investment (ZAR mill)	120263		
Total investment (USD mill)	14011		

\*In respect of the PPA

Source: Various; Author estimation<sup>21</sup>

<sup>21</sup>World Bank, 2014; IRENA 2013; IEA, 2017; National Treasury 2018 Budget Review

## 2

## RISKS ASSOCIATED WITH SOVEREIGN GUARANTEE-BASED CONTINGENT LIABILITIES - THE CASE OF SOUTH AFRICA

### How do contingent liability risks emerge and spread?

Contingent liability risk drivers are connected to the terms of the explicit guarantee. One such risk, termination risk, i.e., where the host government is obligated to purchase the generation facility from the generator, is nominally substantial. However, for the purposes of forecasting it is useful to distinguish between instances where termination of the IPP by the state is a choice and where it is the result of a risk out of the state's control (see Box 2). Per World Bank analysis, if an IPP were deliberately terminated by the state, and the project sponsors paid, the treasury would ultimately acquire an asset which may amortise termination payments over time<sup>22</sup>. Primarily for the state, however, per the ongoing liabilities of the PPA, the underlying contingent liability risk is related to shocks or trends that increase the likelihood of SOE fiscal distress and payment default. Ultimately this risk becomes a termination risk, as a prolonged default may leave no reasonable alternative other than for the IPP to exercise the early termination buy-out provisions included in the transaction documents; i.e., to crystallise the host government's contingent obligation to purchase the generation facility<sup>23</sup>.

Fiscal distress shocks can be exogenous. In the southern African context this might include exchange rate fluctuations or natural disasters, such as a cyclone or severe drought. They may also be correlated, such as with a fall in interest rates and a weakening of the exchange rate<sup>24</sup>. In the case of a significant natural disaster, the government will face its own fiscal challenges at the same time as addressing those of the SOE. The SOE may have to address damages to transmission and distribution

networks in one specific region, for example, diverting significant funds, while independent power producers elsewhere in the country will continue to generate power and expect contracts to be honoured. Governments and SOEs, meanwhile, will be reacting to the economic costs of disaster relief, reinforced public service provision, revenue losses from a regional economy and support of other infrastructure and utilities. In the face of exogenous shocks, correlated risks are the mechanism by which contingent liability risks can have outsized impacts. In 2020, for example, due to the economic crisis of the Covid-19 pandemic, a repricing of country risks in some developing economies led to rising government bond yields and falling currencies<sup>25</sup>. Sharp declines in sovereign bond prices can affect borrowing terms for the SOEs and where SOE financing is guaranteed by the sovereign, rising financing costs, across the board, are likely. Eskom was among several SOEs that saw debt repayments rise 15-30% higher in domestic currency terms in 2020, alongside more uncertain revenues from changing market conditions<sup>26</sup>.

The risks of contingent liabilities also increase through trend dynamics which deepen the financial vulnerability of the SOE<sup>27</sup>. A key challenge is the provision of service below cost, as discussed, which widens deficits within SOEs, worsens borrowing terms and increases not only the likelihood of contingent liabilities being realised, but the need for broad and frequent budgetary support. This is what has transpired in South Africa where direct fiscal transfers now serve as a lifeline for Eskom. The total fiscal budgetary transfers already provided to and committed to Eskom over the period 2008/09 to 2025/26 now stand at ZAR 313.7 billion<sup>28</sup> (~USD 21 billion).

<sup>22</sup> [World Bank, 2019](#)

<sup>23</sup> [Africa GreenCo, 2017](#)

<sup>24</sup> [IMF, 2020](#)

<sup>25</sup> [IEA, 2020](#)

<sup>26</sup> [IEA, 2020](#)

<sup>27</sup> [IMF, 2020](#)

<sup>28</sup> [CABRI, 2021](#)

## 2

### RISKS ASSOCIATED WITH SOVEREIGN GUARANTEE-BASED CONTINGENT LIABILITIES - THE CASE OF SOUTH AFRICA

The poor financial health of Eskom and the entangling obligations that explicitly and implicitly bind the treasury to its fate, have played a part in South Africa's worsening credit rating. In April 2020, Fitch Ratings emphasised the risks posed by SOE-related contingent liabilities as one of the factors weighing on the decision to downgrade South Africa's rating to 'BB', from 'BB+'. "Contingent liabilities are a rating weakness for South Africa, because of their relatively large size and the high risk that they could migrate onto the sovereign's balance sheet."<sup>29</sup> However, the ability for government guarantees to influence sovereign credit ratings is not consistent across the methodologies of the various ratings agencies.

As a tertiary consideration of contingent liabilities and systemic risk, is the issue of moral hazard. In the case of PPA guarantees, where credit risk is transferred from the private sector to the state, the private sector's incentive to examine the creditworthiness of the primary counterparty or the viability of the project would be diminished, increasing the likelihood that the guarantee would be called<sup>30</sup>. Academic literature also raises important political economy questions vis-a-vis traditional derisking interventions, such as sovereign guarantees, which socialise the investment risk among the taxpayers of the developing economy, while the commercial benefits of the project - unless a full PPP structure is deployed - are reserved for private investors<sup>31</sup>.

#### What is the regulatory guidance for sovereign guarantees?

The IMF suggests that priority attention be paid to liabilities emanating from SOEs in core sectors, such as electricity, where the negative macroeconomic effects of possible default are likely exacerbated by interactions between the power utility and other SOEs in so-called 'spillover effects'<sup>32</sup>.

Unfortunately, a paucity of data and a lack of transparency compound the issues governments have in measuring and managing the risks arising from contingent liabilities in general. Existing conventions on national fiscal statistics diverge significantly between regions and countries. In many developing economies, timely reporting of public finances is often limited to annual central government budgets, and this does not relate to letters of guarantee or off-balance sheet arrangements. Among countries in the Southern African Power Pool, disclosure of sovereign guarantees is sporadic and lacks uniformity, not unlike the quality of coverage observed across the continent<sup>33</sup>. Certain countries report total guarantees to SOEs, while others display disaggregated data by SOE. Where there is data, it can be presented in audited public accounts, accountability reports, public debt management reports, annual public debt reports and other formats. In certain cases, guarantee liabilities are split by local and foreign currency or stated entirely in local currency, they are reported as numerical data only or accompanied by qualitative descriptions, for example, of a sovereign debt management strategy.

The trend, however, is to expand the coverage of fiscal reporting to encompass the whole public sector, including relationships with SOEs and IPPs where relevant<sup>34</sup>. Progressively, governments will be called to report openly on the financial soundness of SOEs and reveal the full extent of financial engagement between the treasury, IPPs and PPPs, including assessments of risk. The IMF's Fiscal Transparency Code "encourages countries to disclose SOE-related contingent liabilities assumed by the government, quasi-fiscal activities undertaken by SOEs and details on transactions with the government."<sup>35</sup> (Table 2) Particularly relevant for nations in southern Africa are the IMF's conditionality on Fund-supported programmes, which extends to sustainability analysis of public debt.

<sup>29</sup> [FitchRatings, 2020](#)

<sup>30</sup> [World Bank, 2019](#)

<sup>31</sup> Sam, 2021(Forthcoming); [Gabor, 2021](#)

<sup>32</sup> [IMF, 2020](#)

<sup>33</sup> [IMF, 2020](#) Coverage is weak across non-financial public enterprises - covered in <10% of 45 nations surveyed by the IMF

<sup>34</sup> [IMF, 2020](#)

<sup>35</sup> [IMF, 2020](#) (P. 17)

## 2

## RISKS ASSOCIATED WITH SOVEREIGN GUARANTEE-BASED CONTINGENT LIABILITIES - THE CASE OF SOUTH AFRICA

**Table 2:** Excerpt – IMF Fiscal Transparency Code

#	Dimension	Principle	Practices		
			Basic	Good	Advanced
3	Fiscal risk analysis and management	<i>Governments should disclose, analyse, and manage risks to the public finances and ensure effective coordination of fiscal decision-making across the public sector</i>			
3.2	Risk management	Specific risks to the public finances should be regularly monitored, disclosed, and managed.			
3.2.3	Guarantees	The government's guarantee exposure is regularly disclosed and authorized by law.	...exposure is regularly disclosed and authorized by law. All government guarantees, their beneficiaries, and the gross exposure created by them are published at least annually.	All government guarantees, their beneficiaries, and the gross exposure created by them are published at least annually. The maximum value of new guarantees or their stock is authorized by law.	All government guarantees, their beneficiaries, the gross exposure created by them, and their probability of being called are published at least annually. The maximum value of new guarantees or their stock is authorized by law.

Source: [IMF, 2019](#)

The Fiscal Transparency Code has guided the actions of the South African treasury in their reporting of sovereign guarantees. In the reporting rationale of the South African treasury, the portion of the state guarantees to SOEs that will realise as liabilities is deemed impossible to predict and therefore the full guarantee amount is disclosed as a contingent liability in the national government's consolidated financial information<sup>36</sup>. Amounts drawn in respect of guarantees and interest on these amounts,

if guaranteed, are disclosed. The overall approach is a conservative one and sets the bar for a similar reporting standard to be adopted across the region. In the forthcoming section, an assessment of the outlook for PPA-derived contingent liabilities takes this approach, estimating the full contractual value of the PPA to be reported on the government balance sheet, based on forecast scenarios of IPP procurement.

<sup>36</sup> [International Budget Partnership, 2011](#)

# 3

## OUTLOOK FOR SOVEREIGN GUARANTEES IN THE SOUTHERN AFRICAN POWER POOL

A business-as-usual approach will demand billions of dollars in sovereign guarantees to achieve the regional power development goals laid out in the SAPP masterplan.

As introduced in the previous section, a conservative approach to calculating and reporting contingent liabilities arising from IPP-related sovereign guarantees is to report the full contractual value of the PPA on the government balance sheet (i.e., 'day 1' value, diminishing over the operational life of the asset). Following the example of the South African treasury and professionals familiar with their methodology, it is reasonable to expect this approach be standard across SAPP member countries, in line with the IMF Fiscal Transparency Code<sup>37</sup>.

For the power sector, the value of the PPA is considered to be the book value of all future electricity sales at the pre-agreed tariff, with cashflows discounted to present value. A similar approach to calculating the value of PPAs has been used by the Rwandan treasury, according to comments from advisors familiar with their methodology. The regional masterplan published in 2017 – the SAPP 'Pool Plan' – is used to formulate various scenarios of IPP procurement in the SAPP in the period 2021-2031. Forecasts of real energy prices per fuel and technology are based on the Pool Plan, IEA forecasts, and author projections (Appendix 1).

The Pool Plan presents three pathways of power generation development in the SAPP:

- The stated policies case (Component A): The existing pre-Pool Plan power generation development plans of member states.

- Full integration case (Component B): Member states of the SAPP accept a power generation development pathway based on prioritising the benefits arising from highly co-dependent integration and cross-border energy trade. Possible downsides and political economy constraints are disregarded.

- 'Realistic integration' case (Component C): A power generation development pathway is devised based on closer integration between member states and higher volumes of trade, but optimised subject to important political economy constraints.

The realistic integration case is the basis of four possible scenarios laid out in this analysis. Growth in installed capacity per technology each year is deemed to reflect newly procured power infrastructure (public + private). As governments within the SAPP are aware of the difficulty of coaxing private investment, in 2019 they forecasted that 74% of additional capacity in the coming years will have to be publicly financed<sup>38</sup>.

- Scenario I uses a constant IPP vs public procurement ratio of 26% to estimate the value of sovereign guarantees arising via IPP PPAs over the next 10 years.

- Scenario II forecasts a growth in the portion of IPPs to 33% between 2026-2031.

- In each case a discount rate of 14.75% is used, based on data from South Africa and the Grant Thornton Africa Renewable Energy Discount Rate Survey<sup>39</sup>.

- Guarantees are presented at 'day 1' value, and do not diminish over the period as outstanding PPA balances and actual exposure fall.

<sup>37</sup> IMF, 2019

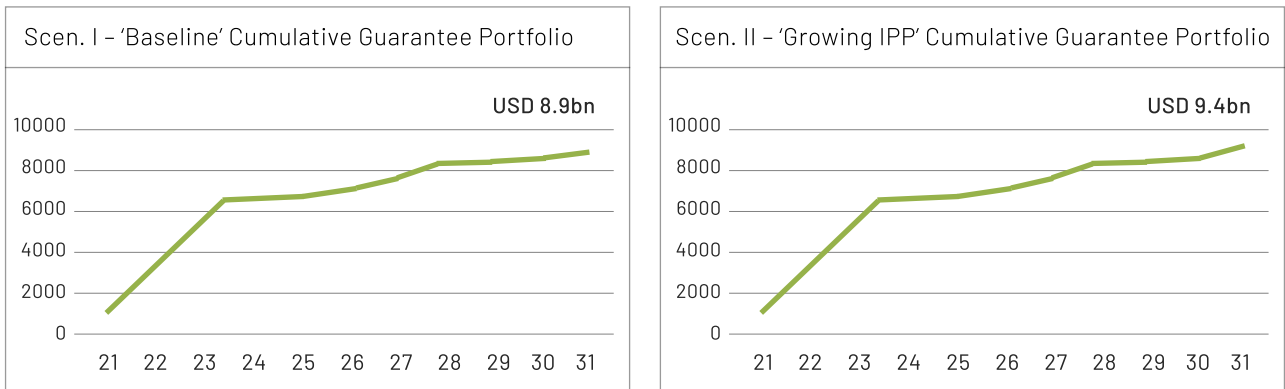
<sup>38</sup> SAPP, 2019

<sup>39</sup> Grant Thornton, 2018

# 3

## OUTLOOK FOR SOVEREIGN GUARANTEES IN THE SOUTHERN AFRICAN POWER POOL

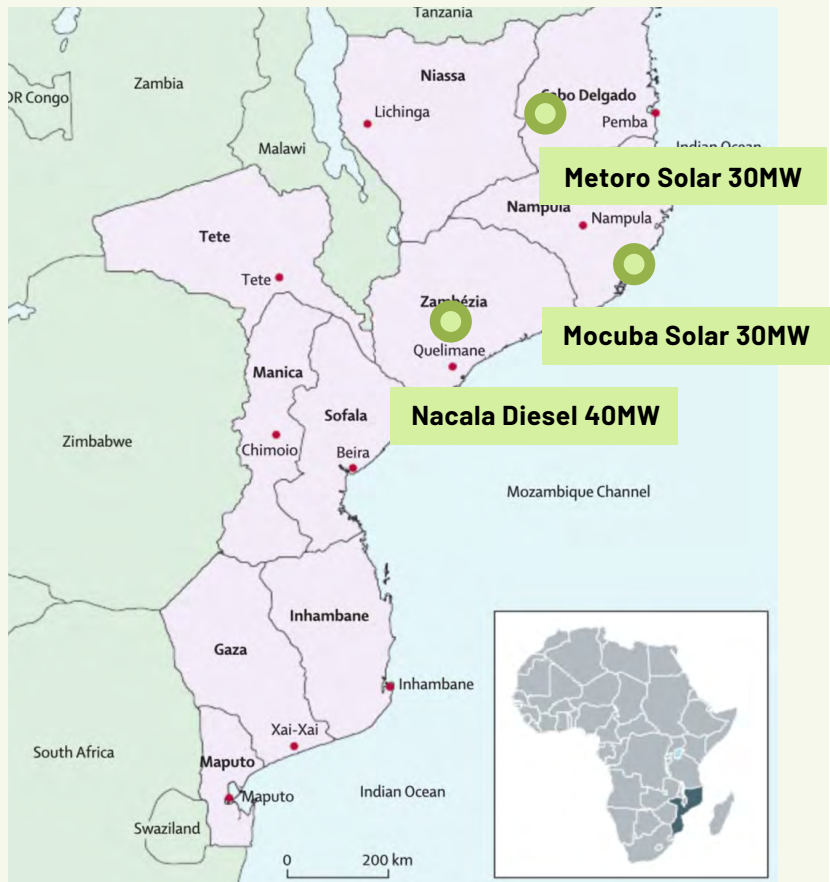
**Figure 5: Scenarios I & II – Outlook for Contingent Liabilities across SAPP (2022-2031)**



**Box 2: Termination risk due to political instability - the case of Mozambique**

The escalation of political violence in Mozambique underscores the latent risk of termination obligations arising from political force majeure events. Conflict in the Cabo Delgado province of northern Mozambique has resulted in more than 2,500 deaths and 700,000 people displaced<sup>40</sup>. The material damage caused by militants includes the destruction of houses, infrastructure, schools, hospitals and churches with an estimated reconstruction cost of more than USD 67 million<sup>41</sup>.

In 2017, the SAPP Pool Plan identified five projects, with a combined capacity of 225 MW, which should have come online in Mozambique by 2019. Three of the five are listed with defined locations (see map). Both RE projects have achieved financial close, with Mocuba Solar, the first utility-scale PV project in the country, going online in 2019, as forecasted. In both cases, substantial development finance support has enabled private participation - more than USD 10 million for Mocuba from Norfund,



<sup>40</sup> BBC, 2021

<sup>41</sup> Bazan, 2020; 360Mozambique, 2021



### 3

## OUTLOOK FOR SOVEREIGN GUARANTEES IN THE SOUTHERN AFRICAN POWER POOL

Norway's development finance institution, 75% in the form of various guarantees.<sup>42</sup>

The site of Metoro Solar, a solar PV plant already committed in 2017, is situated within the same province of the most conflict-affected zone, and this has played a part in construction delays. The project, now expected to be 41MW, achieved financial close in 2020 and is a public-private-partnership between French independent power producer Neoen and state utility, Electricidade de Mocambique (EDM), through a special purpose vehicle, Central Solar Metoro. Concessional debt has been provided by Agence Francaise de

Developpement (AFD). Dinis Vilanculos, the representative of Neoen, has referred to "the current adversities that the province is facing"<sup>43</sup> to explain project development challenges. Details of the guarantee structure supporting the project are unclear. However, in the event of violence spreading to the Ancuabe district, where the plant is located, a sovereign guarantee covering political force majeure could leave the government of Mozambique exposed to a termination obligation. Private sector ownership of this project is 75%, according to public data.<sup>44</sup> According to our estimates, a rough 'Day 1' value of this liability is USD 42 million, approximately 1% of annual tax revenues in the southeast African country.<sup>45</sup>

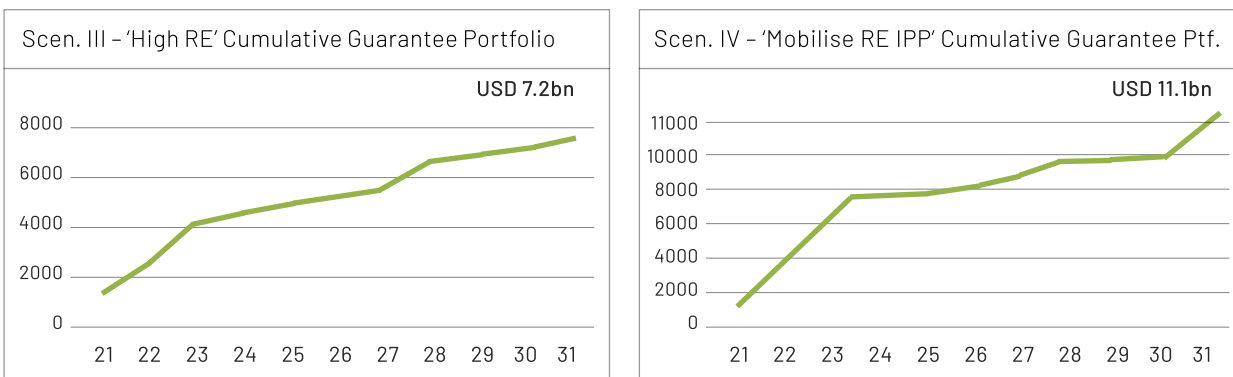
Scenarios III and IV imagine a higher representation of renewables in additional installed capacity and output over the period. Based on the SAPP Pool Plan, Scenarios I and II reflect <1% total additional output from non-hydro renewables.

- Scenario III is loosely based on the SAPP Pool Plan's 'High Renewables sensitivity' test<sup>46</sup>. In scenario III, 8GW of non-hydro renewables is added, displacing roughly equal shares of thermal (cumulative coal, natural gas, heavy fuel oil and diesel) and large hydro.
- Scenario IV reflects both the tendency for non-large hydro RE to be procured via IPP and regional policy targets

to mobilise private investment in the regional electricity sector.

- The share of non-hydro IPPs is 60% in scenario IV (based on the portfolio in scenario III).
- In each case a discount rate of 14.75% is used, based on data from South Africa and the Grant Thornton Africa Renewable Energy Discount Rate Survey.
- Guarantees are presented at 'Day 1' value, and do not diminish over the period as outstanding PPA balances and actual exposure fall.

**Figure 6:** Scenarios III & IV – Outlook for Contingent Liabilities across SAPP (2022-2040)



<sup>42</sup> [Norfund, 2020](#) These included a contingent equity guarantee, a debt service liquidity buffer, and a performance guarantee.

<sup>43</sup> [Club of Mozambique, 2021](#)

<sup>44</sup> [World Bank, 2020](#)

<sup>45</sup> [World Bank, 2021](#)

<sup>46</sup> [SAPP, 2017](#) (p.244)

### 3

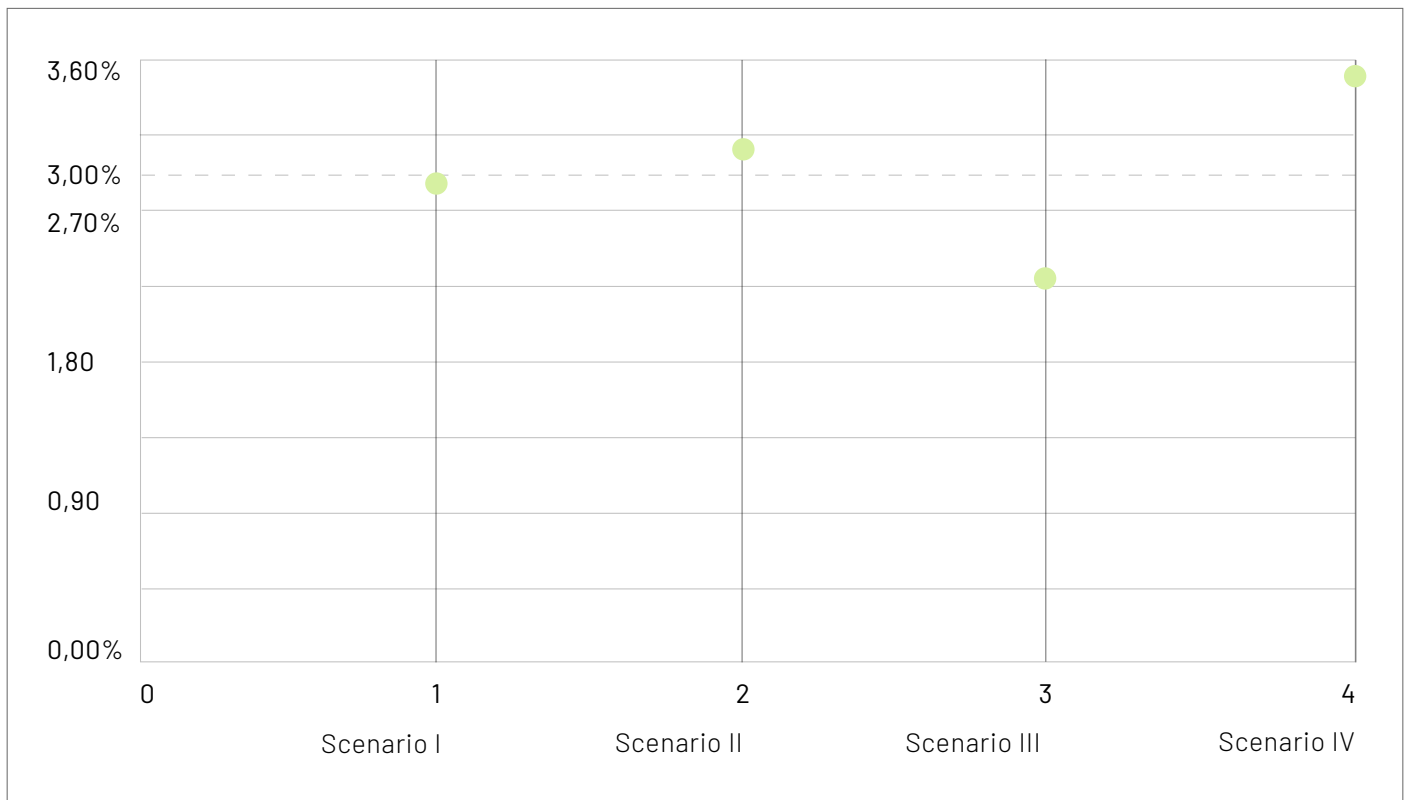
## OUTLOOK FOR SOVEREIGN GUARANTEES IN THE SOUTHERN AFRICAN POWER POOL

Over the forecast period, energy transition is a foreseeable driver of state demand for IPPs. For many nations in the region, confronting the climate vulnerability or carbon intensity of existing power infrastructure will require an improvement in fuel mix diversity and a shift to new 'green' technologies. Illiquid state-owned utilities with deep concentrations of technical capacity, whether large-hydro or thermal generation knowhow, will benefit from IPPs' expertise in renewables and speed of deployment.

The traditional sovereign guarantee de-risking structure will result in up to USD 11 billion in contingent liabilities for governments in the SAPP (2021-2031), as well as contribute to time-consuming and potentially costly project development phases.

SAPP data allows us to estimate a possible country-level distribution of these liabilities, based on the project pipeline in the realistic integration scenario<sup>47</sup>. The raw analysis produces unacceptable outliers; however Fig 7 presents a meta breakdown in graphical form, in which the average country-level additions to sovereign guarantee exposure as a percentage of GDP (2020) are plotted for each scenario. In each case the highest and lowest values were omitted from the population. The analysis suggests that, without systemic transformation, the average national increase in sovereign guarantee exposure required to deliver SAPP Pool Plan projections represents approximately 3% of GDP.

**Figure 7: Average 'Country-Level Growth in Sovereign Guarantee Exposure as a Percentage of GDP'**



<sup>47</sup>We use the ratio of expected installed capacities (2017-2031) across the SAPP to approximate the trend rate of additional procurement.

# 4

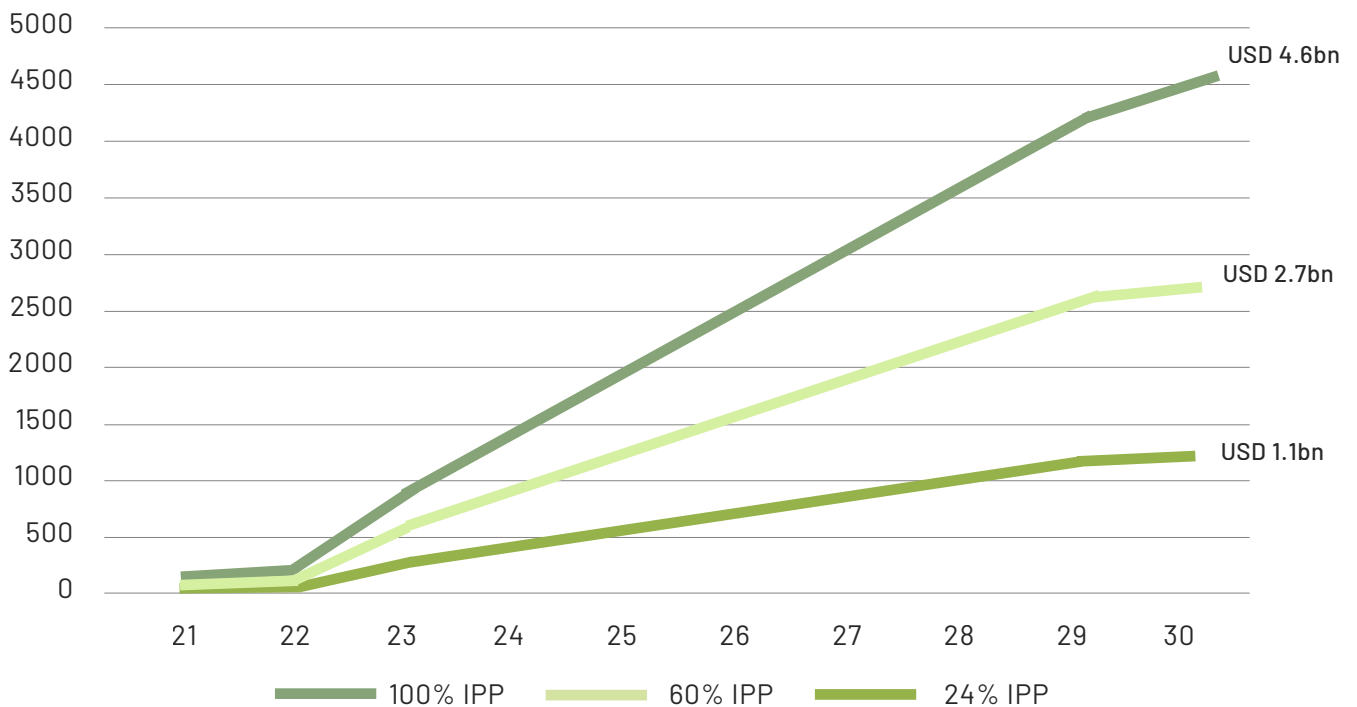
## AVOIDED SOVEREIGN GUARANTEES THROUGH GREENCO BUSINESS MODEL

GreenCo’s business model delivers 2.5GW of newly installed, privately-backed RE capacity to the SAPP while avoiding up to USD 4.6 billion in sovereign obligations to IPPs.

GreenCo aims to bring 2.5GW of new greenfield RE capacity online between 2022 and 2030<sup>48</sup>, representing roughly 20 power purchase agreements and more than 200,000 GWh of clean lifetime power production capacity.

Applying the methodology in §3 to GreenCo’s indicative portfolio of greenfield projects (Appendix 2), yields a low-estimate (conservative) of avoided sovereign guarantees equal to USD 1.1 billion over 10 years. Fig 8 shows a range of outcomes to reflect sovereign guarantees in three IPP ratios, where in a world without GreenCo, the portfolio is otherwise procured via state-guaranteed IPPs (i) 100% (ii) 60%; (iii) 24%.

**Figure 8:** GreenCo avoided sovereign guarantees (2021-2030)



GreenCo’s business model supports 2.5GW of new, privately-backed RE capacity in the SAPP while eliminating the need for governments to create USD 4.6 billion in sovereign obligations to IPPs. The mid-range estimate of 60% IPP procurement mirrors scenario IV in

§3 to provide a potential point of comparison. GreenCo’s avoided sovereign guarantee impact could represent 24.7% of the guarantee portfolio that would likely accrue to achieve the ‘High RE’ case (adjusted) laid out in the regional masterplan.

<sup>48</sup>The first PPA is expected in 2021.

# 5

## CONCLUSION

Against the need to unlock record growth in affordable, reliable, and sustainable electricity infrastructure, the sovereign guarantee can no longer be the predominant institutional arrangement for addressing infrastructure developer risk and mobilising private capital.

With GreenCo operating in the SAPP as a high impact RE procurer and trading entity, up to nearly USD 4.6 billion in sovereign guarantees can be avoided in the next ten years. On the other hand, delivering on the objectives of SAPP's regional masterplan with a business-as-usual approach could demand in excess of USD 1 billion in sovereign guarantees every year between 2021 and 2031. On average the accumulated increase in the sovereign's guarantee portfolio over that period would account for approximately 3% of GDP in a single year (USD, 2020), according to this analysis.<sup>49</sup>

Across the SAPP and Africa GreenCo portfolios, there are differences in the fuel and technology mix, as well as in the rate and scale of portfolio growth. These are noted limitations when trying to express GreenCo's avoided sovereign guarantee impact as a share of potential

sovereign guarantees in the region. With this caveat stated, in one scenario, GreenCo's portfolio presents the opportunity to reduce by 24.7% the guarantee portfolio that would likely accrue in pursuit of the 'High RE' case (adjusted) laid out in the regional masterplan.

The data shows that, holding other factors constant, the addition of non-hydro RE in the SAPP will weigh heavily on the outlook for sovereign-guarantee based contingent liabilities. This is partly due to the displacement of cheap coal with more expensive RE technologies. Additionally, in two scenarios, the assumption in the model is that RE is more likely to be developed by the private sector. The inverse also drives the assumption. As coal projects contend with an increasingly difficult financing environment, the onus will be on governments to push through with these plants self-sufficiently, if they insist.

Africa GreenCo is focused on the renewable energy sector, where it can deliver the greatest sustainable development impact in the long-term, including alleviating the burden and risks of sovereign guarantees.

<sup>49</sup> 3% of annual GDP is roughly what the government of Zambia spends on public order and safety each year, or the government of Namibia on urban and rural development.

# 6

# APPENDIX

## Appendix 1: Real fuel prices (forecasts) - USD/GWh

	2022	2030	2040
Gas (domestic)	9360	11880	14040
Gas (LNG netback)	32760	41400	49320
Coal (domestic)	9000	9720	10800
Coal (Malawi)	11160	12240	13320
Crude oil (reference)	29160	53280	59400
Uranium	5040	5040	5040
Diesel	38520	70200	78480
HFO	26280	47880	53640
Hydro Auction/F.I.T	47000	43000	40000
Solar Thermal CSP Auction/ F.I.T	76023	65000	55000
Solar PV Auction/F.I.T	39679	33000	21000
Wind on-shore F.I.T	44457	39000	33000
Wind off-shore F.I.T	109861	88000	73000
Geothermal Auction/F.I.T	73000	62000	55000
Biomass Auction/F.I.T	66000	54000	47000

Source: [SAPP, 2017](#) , IRENA, IEA, Author projections

# 6

# APPENDIX

## Appendix 2: GreenCo Forecast Portfolio 2022-2031

Project #	Project	PPA Agreement Year	Location	Technology	Size (MW)
1	Zambia Merchant - Solar	2021	Zambia	Solar	40
2	Namibia Merchant - Solar	2022	Namibia	Solar	20
3	Zambia - Solar A	2022	Zambia	Solar	25
4	Zambia - Solar B	2023	Zambia	Solar	50
5	Zambia - Hydro 1	2023	Zambia	Hydro	50
6	Phase 2 - Wind	2023	SAPP	Wind	75
7	Phase 2 - mixed A	2023	SAPP	mixed	75
8	Phase 2 - mixed B	2024	SAPP	mixed	100
9	Phase 2 - mixed C	2024	SAPP	mixed	100
10	Phase 2 - mixed D	2025	SAPP	mixed	125
11	Phase 2 - mixed E	2025	SAPP	mixed	125
12	Phase 3 - mixed A	2026	SAPP	mixed	150
13	Phase 3 - mixed B	2026	SAPP	mixed	150
14	Phase 3 - mixed C	2027	SAPP	mixed	175
15	Phase 3 - mixed D	2027	SAPP	mixed	175
16	Phase 3 - mixed E	2028	SAPP	mixed	200
17	Phase 3 - mixed F	2028	SAPP	mixed	200
18	Phase 3 - mixed G	2029	SAPP	mixed	225
19	Phase 3 - mixed H	2029	SAPP	mixed	225
20	Phase 3 - mixed I	2030	SAPP	mixed	215

Source: Africa GreenCo