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CLIMATE FINANCE SERIES, POLICY BRIEF 1

TOWARDS A JUST ENERGY TRANSITION

A Framework for Understanding the Just Energy Transition Partnership on South Africa’s Just Transition

SUMMARY

- The USD 8.5 billion Just Energy Transition Partnership (JETP) is a proposed climate financing deal between South Africa and the governments of France, Germany, the United Kingdom, the United States, and the European Union. The deal aims to support the implementation of South Africa’s revised Nationally Determined Contribution (NCD).
- The JETP is a mix of concessional loans, grants, blended finance, and public-private partnerships (PPPs). The prioritisation of blended finance and PPPs – in this instance Independent Power Producers (IPPs) – commits the state to ‘de-risking’ private investment. This approach carries numerous risks.
- This is an expensive approach to financing in which the state assumes the majority of the commercial risk, providing sovereign guarantees for much of the debt.
- The blended financing model subsidises the cost of capital for IPPs and further encourages them to take on greater risk and engage in short-term speculative activity in financial markets to secure additional sources of profit.
- A private financing model is likely to deepen energy poverty through increasing energy prices. This is because the state (or state utility) is locked in to high tariffs, irrespective of the falling costs of renewable energy production, and obliged to purchase a minimum amount of electricity from IPPs. →

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- This set of priorities stands to undermine the implementation of a robust renewable energy localisation policy and thus decent work creation. A narrow focus on IPP financing excludes developmental industrial finance for the nascent local renewables energy manufacturing sector and encourages IPPs to resist the state's attempt to localise renewable energy manufacturing. This will leave workers and affected communities behind.
- In response some argue to better regulate de-risked climate finance through contract transparency, profit sharing, cost management, improving the state's capacity to negotiate, and developing enforcement mechanisms for local content requirements. However, this must contend with a global financial architecture that has entrenched the prioritisation of minimising private sector risk exposure and maximising profit opportunity.
- Instead, odious debt repudiations and climate reparations are touted as a means of ensuring Global South countries access to climate financing. The World Bank loans to Eskom's Medupi coal power plant could be an example of the former, with debt cancellation and restructuring and grants examples of the latter. Special issuance, and the redistribution, of International Monetary Fund (IMF) Special Drawing Rights could also be used.
- Finally, green credit allocation policies that combine monetary, fiscal, industrial, and environmental policies are a mechanism to promote the just energy transition. These instruments use the banking system and institutional capital to promote industrial financing and cheap public debt to support the local renewable energy manufacturing industry. This acts as a counterweight to the short-term price increases of local components associated with nascent industries.
- South Africa's JETP – approved without any meaningful public consultation – is a warning to other Global South countries of the danger of climate finance driven by the interest of Global North countries and the global financial elite.

1. INTRODUCTION

South Africa stands to be at the centre of the Global South's just transition planning through the historic Just Energy Transition Partnership (JETP) announced on 2 November 2021. The JETP is a proposed financing deal between South Africa and the governments of France, Germany, the United Kingdom, the United States, and the European Union to mobilise USD 8.5 billion over the next three to five years to support the implementation of South Africa's revised Nationally Determined Contribution (NCD).

The President of South Africa announced that the country "will need to establish a multi-tranche, multi-year facility, funded by a multi-lender syndicate, which will provide funding from a combination of sources to support just energy transition projects in South Africa, within the context of an economy-wide just transition framework, while improving public-private sector collaboration in the implementation of the financing facility. This facility will be consistent with the current regulatory framework established by the National Treasury to finance the gross borrowing requirement, taking into account affordability and sustainability."

Indications are that the JETP's financing instruments will be in the form of **concessional loans**,¹ **grants**,² **blended finance**,³ and **public-private partnerships**^{4 & 5}. And tied to the latter, the government's 'energy plan' refers to accelerating **Independent Power Producers (IPPs)**^{6 & 7} and **embedded generation**. While the use of concessional loans and grants seems a reasonable approach to development finance, the inclusion of private finance and IPPs should be treated with great scrutiny and raises numerous concerns. This is because the increasingly dominant approach to development finance is the mobilisation of the fiscus to create an enabling environment for the flourishing and dominance of private finance and private accumulation. This approach, otherwise known as de-risking private finance, saddles the state and end users with all the risks while opening opportunities for private gain.

The purpose of this Policy Brief is two fold. First it aims to explain the negative implications of a de-risking climate financing regime through the use of blended finance and public private partnerships (PPPs) in energy generation, that is, IPPs, on a just energy transition. Secondly, it aims to outline possible climate financing pathways that may support a just energy transition.

Development has been financialised with global finance being reframed as the central actor in achieving the Sustainable Development Goals.

2. BACKGROUND

Developing countries are burdened by a large sustainable development deficit which exposes them to climate and transitional risks. The mobilisation of climate finance is central to closing this sustainable development gap. However, developing country economies are integrated into a financialised global economic system on subordinate terms as their currencies are relatively weaker, their industrial base is relatively uncompetitive, and they have relatively weak access to finance when compared to developed countries.

Despite, or because of, this, development has been financialised with global finance being reframed as the central actor in achieving the Sustainable Development Goals. This strategy, what has become known as the “Wall Street Consensus” (WSC),⁸ recognises that the climate crisis impinges on the stability of the global financial system but seeks an alternative to a more interventionist ‘green developmental state’. The WSC, therefore, seeks ways to exploit the climate crisis for profitable opportunities that benefit financial markets and financial institutions.

In its quest, both in South Africa and abroad, for the dominance of private finance in climate finance, the WSC advocates for the use of public finance to de-risk private finance, thereby reallocating commercial risks to the state in order to support private gains. Therefore, one of the consequences of the WSC is the reconstitution and reduction of the state’s role in the just transition and climate policy more broadly to that of a ‘de-risking state’ that serves private profiteering under a de-risking climate finance regime. The de-risking state employs institutional reforms that aim to de-risk private financing through state-backed guarantees; privatise infrastructure arrangements, such as PPPs; and blended financing. The use of these instruments is not necessarily new, rooted in Post Washington Consensus approaches to development finance. Therefore, the effects of these instruments on developing and developed countries are well recorded and have often resulted in the capture and commodification of public goods.

The dominance of financial markets, motives, and actors in the provisioning of green commodified public goods, such as renewable energy IPPs, is an example of financialisation. Broadly, financialisation refers to the intensive and extensive penetration of the logic of financial markets into ever more facets of economic, political, and social life⁹. The effects of the financialisation of renewable energy IPPs on Eskom, instead of direct state investment into renewables, will undermine a just energy transition.

First, it will worsen South Africa’s debt profile. This is because, amongst other things, the fiscus generally provides sovereign guarantees to the more-expensive private finance which is raised.

Second, financialised utilities can substantially inflate user costs in order to ensure stable revenue streams to support short-term speculation. There is a constant pressure to move towards ‘cost reflective tariff structures’ which could more honestly be labelled ‘cost + profit + interest reflective tariff structures’ as ‘normal’ rates of profits are naturalised and hidden as costs. This can be extremely regressive and undermine development, as energy poverty faced by poor South African households may be drastically exacerbated by raising electricity tariffs.

Third, a strategy for a transition to renewable energy dominated by trying to attract private finance detracts from a broader understanding of the industrial policies and social policy needed for a just transition. These should create decent work, protect vulnerable members of society, and reduce inequality. It also can undermine green industrial policy as this requires investing in ambitious long-term coordinated renewable manufacturing projects with large positive externalities for local development. This is at odds with financial markets’ desires for short-term, stable, and internalised gains from projects. So a focus on attracting private investment biases state investment away from industrial policy, even if de-risking can help make investments for development more ‘bankable’.

Additionally, financialisation endangers long-term green development even as it funds short-term projects. This is because it ties green investment into volatile international financial markets. External and climate shocks could suddenly change the risk profile associated with such investment by financial markets. Further cycles in international financial markets make reliable long-term investment plans to build capacity difficult, as tides of money ebb and flow in the Global South following the gravitational pull of Global North interest rates.

This Policy Brief explores these implications below.

3. DE-RISKING WORSENS OUR FISCAL POSITION BECAUSE IT EXPOSES THE STATE TO MORE DEBT

We argue that JETP financing geared towards PPPs in the electricity sector will saddle the state and end users with all the risks, while the financial gains are privatised. To unpack this, we explain the approaches to infrastructure financing in order to analyse the fiscal implications of IPPs.

BACK TO BASICS: APPROACHES TO INFRASTRUCTURE FINANCING

There are two ways in which corporations approach raising funds for infrastructure investment. In the traditional corporate financing approach, a corporation will borrow from banks and capital markets by taking loans or issuing shares or bonds to invest in its operations. This debt will appear on its balance sheet, that is, it carries a liability (it owes this money back to the bank or investor). Under such a financing arrangement, the corporation must be careful of how much debt it has relative to its equity,¹⁰ which is known as gearing or leverage. The higher the gearing, the higher the returns to investment because the owners of the business use less of their own money to invest in the business as they use more debt, this stands to earn them higher returns. However, the higher gearing the riskier it is to invest in this business too. This is because there is a chance it may default on its debt obligations if it does not generate enough returns from investments made to cover its operating expenses and/or costs of financing. This might make investors wary or increase the cost of raising funds for the corporation.

The second approach to corporate financing, including infrastructure financing, is via project finance. Project finance involves setting up a limited liability company or a special purpose vehicle (SPV). An SPV is a limited liability entity established for infrastructure projects by the project equity partners (that is, shareholders) for the exclusive purpose of financing, developing, operating, and owning the actual project (the 'limited liability' character shields owners and investors from personal risk). Public Private Partnerships (PPPs) in general, and IPPs in particular, are set up in this way. What is attractive to IPPs about this type of financing model is that it is 'off balance sheet' financing. This means the debt mobilised by the equity investors appears on the balance sheets of the SPV and not on the balance sheets of the main corporation (the project owners). The implication of this is that the project owners do not take associated risks onto their balance sheet, and the primary corporate's leverage does not rise. Rather, the SPV assumes that risk, this is why SPVs are said to be bankruptcy proof. Since

many SPVs are unlisted, they do not have to make their annual financial statements public.

South African IPP SPVs are highly leveraged entities with debt-equity ratios of 80% debt and 20% equity, on average over Bid Windows 1-4. However, some IPPs have also benefited from leverage of up to 90% debt and even 95%. This is in comparison to Eskom's debt to equity ratio at 74.6% debt and 25.4% equity over the same period. Eskom's debt backs 44 gigawatts of electricity generating capacity whereas IPPs currently provide 5.2 gigawatts. At a ratio of 80-20 for 5.2 gigawatts capacity, IPPs are quite vulnerable to default risk. This is summarised in Table 1.

Table 1: Debt to Equity % of Eskom and IPPs Bid Window 1-4, 2011-2021

	ESKOM	IPP
Debt	74.6	80
Equity	25.4	20
Gigawatts	44	5.2

Source: Authors construction using Eskom Annual Financial statements (2011-2021) and DPME data¹¹

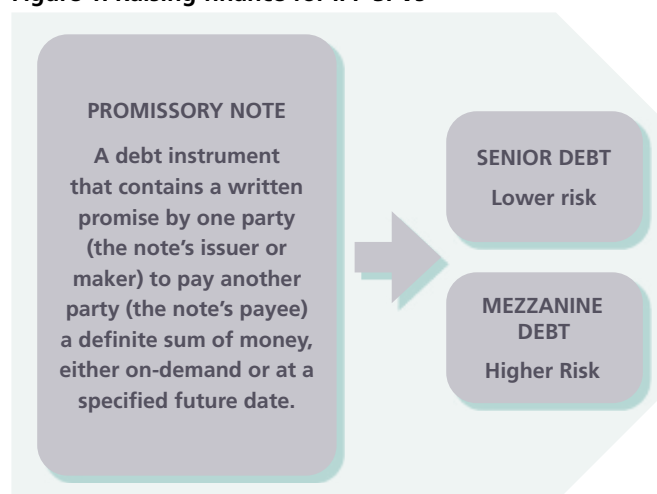
A critical question then is: how do IPP equity partners and lenders reduce their risk exposure? Before we answer that question, we need to understand how these SPVs raise their finances. The SPV obtains financing by selling securities to investors in financial markets. What these investors get is the profits from the infrastructure project as it becomes available once the infrastructure starts to operate (more specifically, they have a claim upon the future cash flows from the infrastructure project's underlying income stream). In the case of an IPP in the energy sector, this would be in the form of money the IPP gets from charging people for electricity (that is, revenues generated from the agreed utility tariffs and volume formula).

In order to pool financing from a broad range of investors with different risk appetites, the project developers will employ a 'credit enhancement strategy' to reduce the risk to certain investors. This will be done by splitting up the securities they sell to investors into different parts ('tranches'), see Figure 1. Each 'tranche' represents a

IPPs require 'state-backed guarantees' – that is, a guarantee that the state will be able to pay the loan obligations should the need arise – on the loans mobilised by the private sector project equity partners for them to be 'bankable'.

different risk and return profile. The returns are earned through cash flows from tariff revenues generated once all the costs of the business have been paid. The 'senior debt lenders' are more risk averse and earn lower returns and so will be the first to get paid out should the project default on its debt obligations. The 'mezzanine debt lenders' are investors that have a higher risk appetite and earn higher returns, and so they will be the last to get paid should the project default on its debt obligations.

Figure 1: Raising finance for IPP SPVs



Source: Authors' construction

Finally, it is important to distinguish between the project funder and the project financier in order to establish how commercial risks are allocated. The project financiers, discussed above, mobilise the capital from lenders to develop the infrastructure. Project funders must pay for the services that are rendered by the infrastructure project such as end-user charges or unitary payments by the government. The funders are Eskom and the end-users and the financiers are the private sector project owners, banks, pension funds, and Development Finance Institutions (DFIs). Project funders, such as Eskom, make unitary payments¹² through offtake agreements¹³ to the IPP for the energy generated and Eskom passes on this cost to the other project funder, the end-user, in the form of a tariff.

At this stage the following should be clear. First, IPPs are highly leveraged assets (that is, they have high debt-to-equity ratios). Second, the owners of these IPPs set them up as SPVs for the exclusive purpose of financing the development and operation of the infrastructure. Third, the SPV financing model is popular amongst IPP project owners because it allows them to mobilise the finance 'off balance sheet'. Off balance sheet financing ensures that the project owners do not absorb the risks of the project,

instead the SPV assumes these risks. Fourth, most SPVs are not listed on the stock exchange, so they do not have to make their financial statements public. Fifth, to raise financing, the project owners sell securities to investors. Sixth, to attract a broad spectrum of investors with different risk profiles, the securities are split into tranches, or parts, and each tranche represents a particular risk and return profile to cater to a particular type of investor.

STATE ASSUMES MAJORITY OF THE COMMERCIAL RISK

Now that we have got the basics right of the project financing approach to infrastructure financing (particularly applied to IPPs), there remains a crucial question that is unanswered. Given that IPPs are highly leveraged, how do IPP equity partners and lenders reduce their risk exposure? In answering this question, we will debunk a particular myth of climate finance, and market-based reforms of the energy system through IPPs, that claims them to be a cheaper form of infrastructure financing and to be of minimal risk to the state and society. This myth underpins JETP financing. We discuss four mechanisms that IPPs use to reduce their risk exposure, or de-risk: namely state-backed guarantees, blended finance, demand guarantees, and lock-ins.

State backed guarantees: IPPs require 'state-backed guarantees' – that is, a guarantee that the state will be able to pay the loan obligations should the need arise – on the loans mobilised by the private sector project equity partners for them to be 'bankable'.¹⁴ Without state-backed guarantees, the private sector equity partners will not be able to mobilise the financing in the form of loans from banks, institutional investors, insurance companies, and so on. State-backed guarantees reduce the risk exposure of the financiers because they guarantee that the state will be able to pay the loan obligations should the need arise. In 2021/22, at R200 billion for 5 GW installed capacity, IPPs have the second largest state-backed guarantees after Eskom at R350 billion for 44 GW of installed capacity, a major subsidy to the private sector which exposes the state to financial risk. Importantly, comparative ratios of value of guarantee per GW of installed capacity reveals that IPPs are more heavily dependent on state guarantees than Eskom. The value of state-backed guarantees for Eskom per 1GW of installed capacity is R7.95 billion, while the value of state-backed guarantees for IPPs per 1GW of installed capacity is R38.47 billion. This level of state subsidies empowers these financiers to take on even more debt.

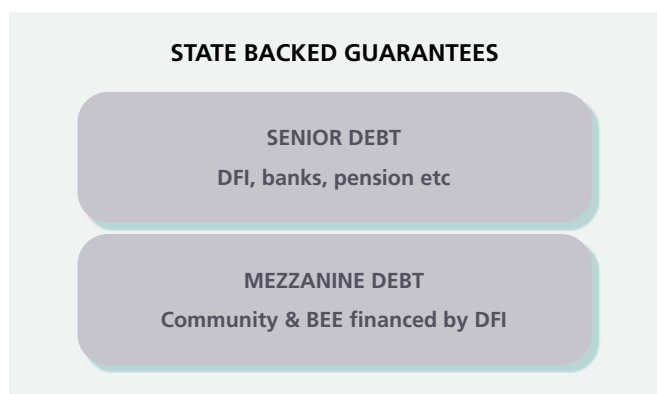
Table 2: Eskom public finance versus IPP private finance

	ESKOM	IPP
Stated-backed guarantee* (billions of Rands)	350	200
Installed capacity in Gigawatts	45	5.2
Guarantees per 1 GW (billions of Rands)	7.8	38.47

Source: National Treasury, Budget Review 2022¹⁵

Blended finance: This type of financing involves the mobilisation and blending of public concessional finance and grants obtained from DFIs and governments with private finance obtained from capital markets and commercial banks in the securities traded by the SPV. The inclusion of public finance reduces risk exposure because it comes at concessional terms, for example, grace periods, cheaper interest rates, long repayment periods, or in the case of a grant there is no need to pay back at all. Typical IPP securities have two tranches comprising the top tranche, that is, senior debt and bottom tranche, that is, mezzanine debt. These tranches are blended finance as the senior security is held by commercial banks and Developmental Financial Institutions (for example, Industrial Development Corporation and the Developmental Bank of Southern Africa), and the mezzanine debt is held by Black Economic Empowerment SPVs and community vehicles, but financed by DFIs.

Figure 2. IPP blended finance state backed security



Source: Authors' construction

Demand guarantees: Other ways in which IPPs encourage the state to take up more commercial risks is through revenue guarantees that guarantee demand for what the IPPs are selling, in this case electricity. In the energy sector, these are set by 'offtake agreements' establishing the amount of electricity the state (or state utility) will purchase and the tariff rates, thereby guaranteeing the IPPs a certain revenue over its lifecycle. The state guarantees that it will pay these amounts through a 'take or pay clause'. The take or pay clause means that the state

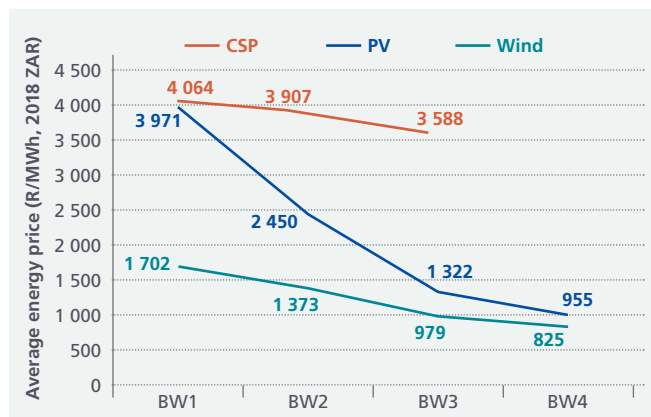
will pay the set revenue to the IPP throughout its lifecycle, even if the state does not need the agreed amount of power at any time through that lifecycle. Therefore, the demand risk is borne by the state.

Lock-ins: A typical IPP project can have a 20-year lifecycle with the revenues guaranteed upfront for the project's lifecycle. However, a lot can happen over this 20-year lifecycle. The most notable event that has taken place since Bid Window 1 is that the levelised cost of electricity¹⁶ (LCOE) for renewable energy has been decreasing with every successive bidding round. Put simply, it has become cheaper and cheaper to produce renewable energy. This is shown in Figure 3 which compares the levelised cost of different renewable-energy generating technologies: concentrated solar power (CSP), photovoltaic (PV), and wind. The LCOE for wind and PV have dramatically fallen.

Without contractual lock-ins, these cheaper costs could be passed on to Eskom and its consumers. Of course, the initial investment incurred the higher costs but in a truly competitive market (without lock-ins) the renewable-energy provider would need to reinvest their profits in improving their operational efficiencies and replacing old technology with new technology. Therefore, this lock-in reduces the incentive for IPPs to upgrade and reinvest or recycle old technology in order to drive costs down. If the renewable energy technology was instead owned by Eskom – with a public mandate – reinvestment might be more likely as the benefits of further investment might outweigh the costs through the societal benefit of lower energy costs.

Ironically, 'lock-ins' give the IPPs a sort of monopoly position, where they are less subject to competitive pressures once built – exactly the opposite of what those in favour of IPPs argue. Further, both the state and consumers do not benefit from the falling cost of renewable energy production for the earlier bidding rounds because Eskom is locked into these long-term contracts with energy producers at tariffs now higher than market rates.

Figure 3: Average energy prices for Renewables, BW1-BW4



Source: Multi-Year Price Determination (MYPD) 5 Revenue Application for FY2023 – FY2025. Eskom submission to NERSA¹⁷

The IPPs, in fact, use the de-risked renewable energy project to earn further profits in financial markets.

Eskom is bound by these early bid-round contracts in spite of cheaper renewable energy that could help to manage Eskom's financial fragility. Should Eskom seek to terminate its contract with old bid window energy producers for failing to pass on the lower energy costs, then Eskom faces high costs of termination through a set of clauses that manage political risk, namely, the 'unforeseeable conduct' clause and an 'international arbitration' clause. Let us say for instance that the contract term is 20 years and in year 5 Eskom wants to cancel its contract because the energy producer is failing to pass on the reduced costs. The unforeseeable conduct clause entitles the IPP to compensation to the tune of the remaining 15 years of the contract for cancellation of the contract. Similarly, Eskom could face domestic or international arbitration due to cancellation.

Instead of unilateral cancellation, Eskom is free to renegotiate the contract terms with the IPP. However, renegotiation comes with high transaction costs (that is, it is a lengthy and costly process due to lawyer fees, the use of courts, and the likelihood that the unforeseeable conduct clause will be implemented) especially if the idea is rejected by the IPP. Indeed, renegotiation was attempted in 2019 under the same circumstances. Eskom's Chief Executive Officer, Andre De Ruyter, and Minister of Public Enterprise, Pravin Ghordan, signalled to the market that they wanted to renegotiate bid windows 1 and 2 as a means of managing Eskom's financial fragility. The tariffs were highly subsidised by the state through a feed-in tariff¹⁸ which came to an end in 2011. Eskom has the option to take the matter to court, however the transaction costs, as discussed above, would be extremely high as the sector has resisted such renegotiations with the former South African Wind Energy Association CEO Brenda Martin, threatening Eskom with court action for breach of contract¹⁹. In summary, Eskom may remain a high cost energy provider as it will not be able to pass through future cheaper renewable energy costs to its customers as past IPPs deter the utility from doing so, all while the IPPs' risk exposure is reduced and profits guaranteed.

FINANCIAL RENTS EXTRACTION VIA SHORT-TERM SPECULATION

We have debunked the myth that JETP financing based on IPPs, or more broadly PPPs, is a cheaper form of infrastructure financing with minimal commercial risk to the state and society. We have done this by showing the ways in which IPPs specifically, and PPPs more generally,

disproportionately transfer the commercial risks of the project to the state through a broad range of tactics and contract terms. It would, however, be naive of us to think that the reason why the IPPs go through all this trouble to secure their revenue streams is because all their earnings are derived from the sale of electricity.

The IPPs, in fact, use the de-risked renewable energy project to earn further profits in financial markets. Once the infrastructure project is in operation the financiers have leeway to undertake a range of short-term speculative measures over the lifecycle of the project to accumulate more money. They can resell the IPP securities in secondary securities markets.²⁰ Or they can hold onto the security and refinance the loan agreement as and when market conditions improve, for example, when lower interest rates occur. In both instances, they are earning or capturing future cash revenue streams that have not been realised. This financial extraction, through resale and refinancing, is the major attraction for private financing. It allows these investors to engage in short-term speculative activities so that, in addition to their earnings from tariffs, they can make even more money from earnings from financial speculation.

Two inferences can be drawn from this analysis. First, earnings from resale and refinancing is the major attraction for private financing rather than earnings from the underlying infrastructure's revenue stream due to the financial rents that can be extracted from short-term speculative activity. Secondly, contracts that lock-in the state over the long term, along with their associated demand guarantees, are built that way to ensure that the private sector can enjoy financial rents from short-term speculative activity all 'de-risked' by various forms of state guarantees and subsidies.

In summary, as mentioned, JETP financing is set to decarbonise the electricity sector through the use of financing instruments such as PPPs more generally, and IPPs more specifically. The accelerated and wide usage of these instruments in the electricity sector and in other infrastructures will not only deepen Eskom's financial fragility it will also deepen the country's sovereign risk. Alarmingly, the JETP financing deal is helping to support the dismemberment of the country's planned infrastructure from the public interest to commodify and reconfigure it into a financial instrument that is then traded in local and global financial markets to enrich the private, short-term, speculative investors to the detriment of the public interest. Disturbingly, these are not the only negative consequences of JETP financing.

4. ENERGY PRICING AND IMPLICATIONS ESPECIALLY FOR POOR HOUSEHOLDS AND SMMES

Historically energy prices in South Africa have been heavily subsidised both for households and industry. However, this has been combined with limited access for poorer communities. Additionally, high levels of poverty have meant that poor households are very vulnerable to increases in energy prices. Existing measures to address electricity access, such as free basic electricity, do not provide adequate electricity even for cooking and reach very few of the households facing energy poverty.

Without access to enough affordable energy, households are vulnerable to malnutrition from limiting cooked meals, and health risks from using dirty energy sources. Additionally, increasing energy prices can force households to redistribute income away from other basic needs including nutritious food and undermine households income generating activities.²¹

The energy plan and JETP financing have implications on energy prices and thus on access to energy. Recall that the JETP and energy plan insists on the rollout of IPPs and the use of blended finance as part of a decarbonisation agenda. The rollout of IPPs and increasing state dependency on private finance for basic infrastructure may deepen energy poverty. This is because, in addition to the de-risking discussed above, the state needs to ensure adequate revenue is secured through user fees and tariffs. This is necessary to guarantee the revenue streams that the state has promised the private sector.²²

This means that the heavy reliance on private finance could produce large pressures to increase user fees. These could be demanded by private financiers initially, or they could be pursued later by the state if it struggles to mobilise other funds to meet off-take agreements. Finally, in cases of crises where the state cannot meet its obligations, private investors and international financial institutions can use their leverage to ensure liberalisation. For example, when the Nigerian state could not meet payments for the Azura power plant IPP, they were forced to rely on the World Bank's assistance which was conditional upon further privatisation of the Nigerian energy sector. This indicates a systemic pressure to increase revenue from user fees, to an extent forcing the hand of policy actors.

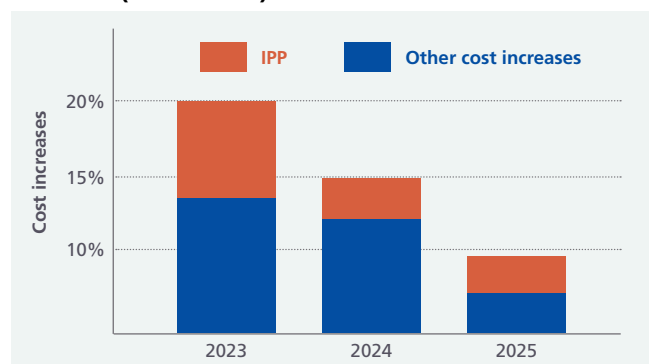
Typically, policies to raise electricity tariffs have been politically legitimised as a shift to 'cost-recovery pricing'. Here electricity costs are modelled to include a reasonable level of profit and interest. Low prices are blamed for a number of crises, including underinvestment in infrastructure, state fiscal deficits, pollution from overconsumption, and even inequality, as household electricity subsidies are often regressive in their

distribution²³. Some concessions may be made to address energy poverty, but these are often severely inadequate.

Further, proponents for market-based reforms argue that the cost-recovery pricing will not be so devastating for households because energy costs will fall due to efficiency improvements, staff cuts, and competitive forces. Therefore, encouraging well-regulated and subsidised private companies is an effective way to address energy poverty and expand access. However, efficiency improvements can be significantly overestimated, and competition is limited due to the need for massive economies of scale in the industry and the long contracts required by the private sector to limit their risk and technological compatibility issues. The types of lock-ins discussed above limit users reaping gains from 'more competitive' markets. Additionally, winning contracts have become highly concentrated in later bid windows.²⁴

Eskom has argued that IPPs are responsible for the greatest increase in its costs.²⁵ Figure 4 depicts how IPPs raise costs due to lock-in at high prices for early bid windows; a 'fair' rate of return; guaranteed for IPPs; and massively increased investment in IPPs. As illustrated, IPPs are responsible for a disproportionate portion of the proposed price increases over the next 3 years given their share of energy generation.

Figure 4: Eskom contributions to year-on-year price increases (2023 – 2025)



Source: Multi-Year Price Determination (MYPD) 5 Revenue Application for FY2023 – FY2025. Eskom submission to NERSA²⁶

In sum, internationally IPPs have been heavily promoted by international Development Finance Institutions. This has often resulted in extremely high costs, and entailed hidden indebtedness and risk. In combination with energy market liberalisation, this allows private companies to gain

from raising consumer energy prices. Additionally the high financing costs have exacerbated the high price of IPPs in many developing countries.²⁷ Therefore, there is a risk that JETP financing for expanding IPPs could continue to drive up user fees for energy-poor South African households.

5. JETP FINANCING CHOICES DETERMINES THE PERFORMANCE OF RENEWABLE MANUFACTURING LOCALISATION POLICY

The mechanisms for financing a transition to renewable energy will also shape industrial development in the ‘green industrial sectors’, such as renewable energy manufacturing. At the time of writing, the proportions of JETP financing that will be allocated to renewable energy IPPs, Eskom debt restructuring, or renewable energy downstream industrialisation, is unknown (this is because the investment plan was not yet released for public consultation, although approved by cabinet in late October).

However, poor financing decisions could jeopardise long-term growth, and limit the development of renewable manufacturing in South Africa and decent work creation, if two things happen that are discussed below.

First, if the financing continues to reassert the Minerals-Energy-Finance Complex (MEFC) through a narrow focus on IPP financing to the exclusion of developmental industrial finance for the nascent local renewables energy manufacturing sector, then a just energy transition associated with the creation of decent work is in jeopardy. Historically, South Africa’s financial institutions, both private and public, have been intertwined with a narrow collection of mineral, energy, and upstream beneficiation industries. The MEFC has historically received state support while state support for labour-intensive downstream manufacturing has been comparatively minimal.

Importantly, IPPs are part of the MEFC and exhibit the same features of other elements of the MEFC. The industries in the MEFC are heavily capital-intensive (that is they employ more machinery than labour). Further, they have few linkages with other sectors in the South African economy. As Table 2 demonstrates, MEFC sectors are largely detached from the rest of the economy, with only 23% of other manufacturing inputs coming from the MEFC, and only 6% of other industrial outputs going into the MEFC.

Table 3: MEC Internal and External Linkages

MEC SUBSECTOR	SHARE OF INPUTS FROM MEC SECTORS (% of total)	SHARE OF OUTPUT TO MEC SECTORS (% of total)
Coal mining	26	90
Gold and uranium ore mining	55	5
Other mining*	23	77
Coke and refined petroleum products	88	18
Basic chemicals	77	60
Other chemicals and man-made fibres	67	37
Plastic products	68	30
Non-metallic minerals	73	8
Basic iron and steel	82	59
Basic non-ferrous metals	91	59
Metal products excluding machinery	70	41
Machinery and equipment	63	53
Electricity, gas and steam	53	47
Non-MEC manufacturing	23	6

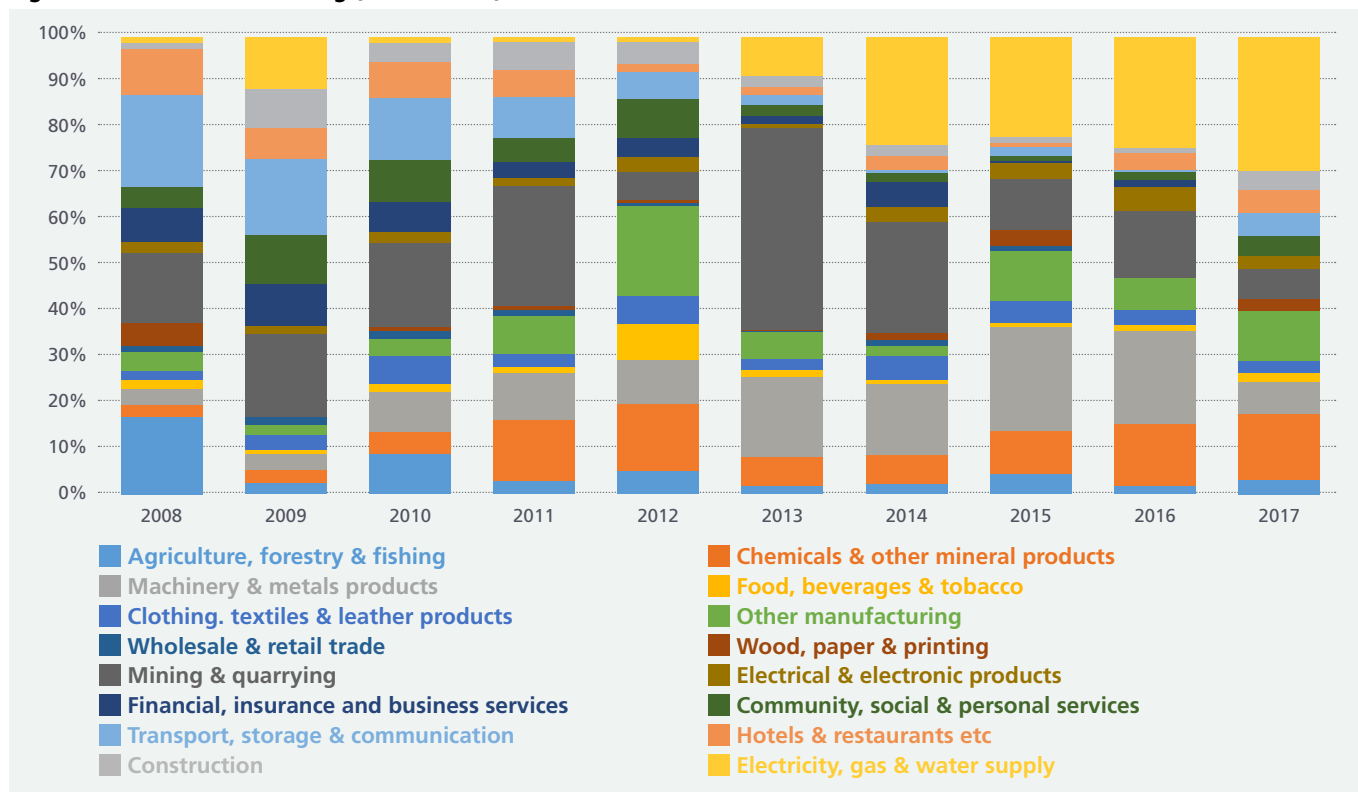
Source: “Systems of accumulation and the evolving South African MEC”.²⁸

Historically, the MEFC has benefited from ready access to state finance, including from the Industrial Development Corporation (IDC).

The MEFC sectors have constrained South African development because they wield significant political capital that has shaped South African industrial policy away from a focus on diversification into higher value-added, labour-intensive manufacturing, while securing industrial support for themselves. Historically, the MEFC has benefited from ready access to state finance, including from the Industrial Development

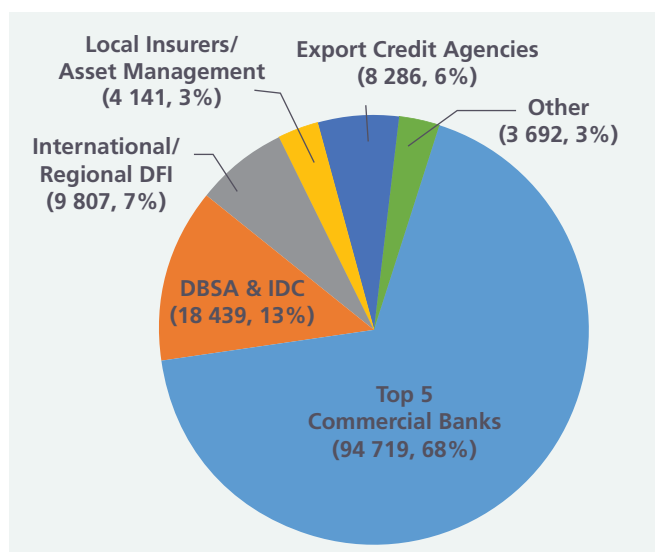
Corporation (IDC). Further, as can be seen in Figure 5, this has continued, as development financing has largely focused on core MEFC sectors, mining and quarrying, as well as chemical and mineral processing. However, the largest expansion of financing has been for the electricity, gas, and water generation from 2013 onwards occupying more than 20% of IDC lending from 2014.

Figure 5: IDC Sectoral Funding (2008 – 2017)



Sources: "The role of development finance in the industrialisation of the South African economy."²⁹

Figure 6: Debt Financing by Lender Bid Window 1-4 by R 1 million value and share of total debt



Source: "The South African Renewable Energy Independent Power Producer Procurement Programme: A Review and Lessons Learned."³⁰

The large expansion of financing to electricity, gas, and water generation has largely gone to financing IPPs as part of the state’s de-risking strategy previously discussed. Downstream manufacturing sectors, including renewable manufacturing, have received significantly less financing in spite of the potential for job creation. The IDC and the DBSA, for example, are the second largest lender to the Renewable Energy IPP Procurement Programme (REIPPPP) at R18.4 billion, after the top 5 commercial banks (see Figure 6) followed by international and regional DFIs. By contrast, investment in renewable energy manufacturing remains extremely low. It is imperative that the JETP financing breaks with this cycle.

Second, if JETP financing supports the dominance of IPP financing with limited financing of renewable manufacturing, there is a high and credible risk that IPPs will resist the state's attempt to localise renewable energy manufacturing through the use of various industrial policy instruments, as is already the case. These industrial policy instruments include local content requirements, tariffs, subsidies, state-led development finance, technology transfer strategies, skills development, and designing a state procurement plan. While these instruments help to create larger and more stable demand for renewable manufacturing components, they are also associated with price rises in targeted nascent industries like the renewables manufacturing sector. Therefore, JETP industrial financing and cheap debt must be used to counterweight the rise in prices over the short term as the sector develops to ensure competitive costs.

However, to date, IPPs have resisted the state's attempt at localising the renewable sector. This is because IPPs seek short-term guaranteed high revenue streams of

financing at the least cost. Therefore, they are a form of impatient capital and are reluctant to cooperate with the longer-term higher-risk mission of building a local renewable industry and would rather import renewable manufactured components. This has been proven through the sector's continued antagonism to local content requirements, which has not been helped by weak private and public financial support to the renewable manufacturing sector. Therefore, JETP financing threatens to reproduce this MECF structure of the economy, should renewable manufacturing localisation policies receive insufficient JETP financing. The implications of this on a just energy transition are dire, as the shift towards a low-carbon economy will deepen inequality and social unrest if job losses in the coal-energy value chain are not counterweighted by job gains in the renewables-energy value chain. The latter may only take place through the localisation of renewable-energy manufacturing components and services, however this will require significant state support to achieve it.

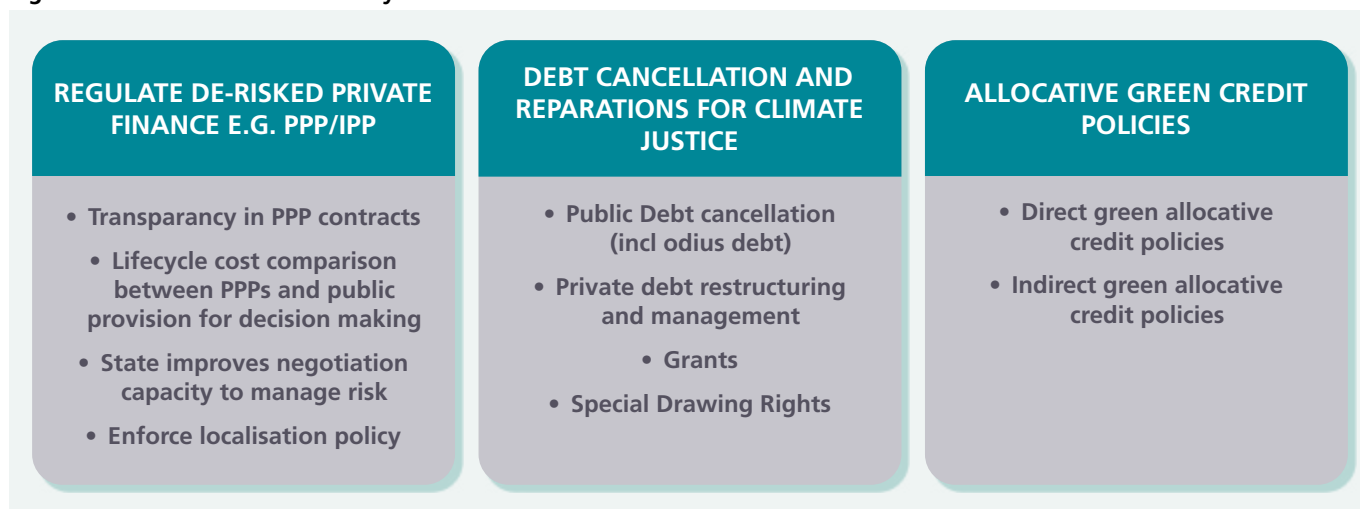
6. OPTIONS FOR JUST CLIMATE FINANCE

We have argued that JETP financing has the potential to further entrench the notion of a de-risking state at the service of private capital and financial markets. This notion of de-risking can pervert the energy transition if financing choices contribute to an unsustainable debt burden, high costs, energy poverty, and job losses due to weak localisation. Market-shaping policies that are underpinned by public investments are crucial to meet the challenge of ushering in the entry of green technology in a manner that promotes decent work through localisation and energy access.

We outline and weigh up possible climate financing pathways that may support a just energy transition. Figure 7 below describes the climate financing pathway

options: regulate de-risked private finance, particularly PPPs; debt cancellation and reparations for climate justice; and allocative green credit policies.

Figure 7. Climate Finance Pathways



Source: Authors' construction

Debt forgiveness or cancellation and reparations for climate justice will contribute to creating fiscal space for developing countries to pursue a sustainable development path that will tackle climate change and environmental degradation, while also reducing inequality and poverty.

REGULATING DE-RISKING PRIVATE CLIMATE FINANCE THROUGH PUBLIC PRIVATE PARTNERSHIPS

This pathway suggests that, at the very least, where IPPs are part of a renewable energy provision strategy, they have to be regulated on the basis of the following. First, IPP contracts should be made public for the sake of accountability and risk oversight. Second, lifecycle cost comparison between PPPs and public provision are important and the state needs to improve its negotiation capabilities and capacities with IPPs. Third, the state must enforce localisation policies on IPPs. This pathway suggests that these measures will create an appropriate risk-sharing structure between the state and IPPs, to ensure that the state does not assume a disproportionate amount of risk, and to support energy access. Moreover, the pathway suggests that IPPs will most likely be able to meet a developmental agenda of decent work creation if the state integrates and enforces a localisation policy that is composed of the industrial policy instruments already discussed. Therefore, this particular pathway suggests that to have appropriate private sector investment, we need a state with strong regulatory capacity.

However, this particular pathway must contend with a global financial architecture that has entrenched the prioritisation of minimising private sector risk exposure (with the expectation that the state and society should assume the risk) and maximizing profit opportunity. The global financial architecture encourages the re-engineering of financial markets and influences governments to change their regulations to create favourable terms for private investments. Therefore, no amount of oversight will allow for a fair share of the risks under such a regime, more especially as these instruments are pooled and combined with other securities and then traded on secondary markets. The compulsion for reallocating private risks to the state is supported by Bretton Woods institutions. The World Bank's cascade approach is a case in point. As argued by Phalatsé:

"These private-first dynamics are encapsulated in the 'cascade' approach by the World Bank – whereby private sector investment in infrastructure is institutionally prioritised and embedded through reforms, and the creation of new markets for de-risked instruments. It sidelines public financing

and systemises the necessary conditions for the ease of private flows. Risks and regulatory gaps are bypassed by use of de-risking methods, paving the way for institutional investors to invest in more speculative capital, such as trading derivatives on the stock markets."³¹

ODIOUS DEBT AND REPARATIONS FOR CLIMATE JUSTICE

Debt cancellation and reparations for climate justice as climate financing options have gained a lot of traction amongst progressive civil society movements and researchers. There are two ethical grounds upon which the demand for debt cancellation and reparations for climate justice have been made, namely: odious debt and climate reparations. Odious debts are debts that arise from actions that are not in the public interest of the borrower state and that this is already known by the lender and borrowing state at the time of lending. Climate reparations are ecological and economic debts that are owed to the Global South by corporations and Global North countries for their historical, and ongoing, plunder and climate and environmental degradation.³² Therefore, the argument is that debt forgiveness or cancellation and reparations for climate justice will contribute to creating fiscal space for developing countries to pursue a sustainable development path that will tackle climate change and environmental degradation, while also reducing inequality and poverty.

Odious debt: the Medupi and Kusile coal-fired power stations have been argued, by researchers and activists, to be prime candidates for debt cancellation on the basis of being odious debt. First, the debt incurred is linked to a 2010 World Bank loan made to Eskom for R3.75 billion associated with mass looting and bribery, which benefited the ruling party, state officials, including at Eskom, and private-sector actors, to the detriment of society at large. Second, the World Bank knowingly made the bulk of the loan to Medupi, a coal-fired power plant, in spite of the widely known negative climate and environmental impacts of coal. Third, it is claimed that the World Bank knew about the corruption, because the World Bank's Vice President of Integrity, Leonard McCarthy, a former Director of the Directorate of Special Operations (Scorpions) with close relations to the ruling party, refused a request to investigate the corruption associated with the loan.³³ The request was made when it emerged

that the United States' Security and Exchange Commission had reached a settlement with Hitachi for breach of the United States Foreign Corruption Act for Hitachi's role in the corruption that ensued in partnership with the ruling party at the Medupi power station. For these reasons, the call for the cancellation of Eskom's odious debt has been made.

Climate reparations: the fiscal burden of climate mitigation and adaptation can be reduced under the moral obligation of climate reparations through a range of financial instruments. The Global North's cancellation of Global South publicly-held debt and its implementation of debt-restructuring mechanisms to manage privately held debt is one such instrument that can reduce the Global South states' fiscal burden and open room to support climate mitigation, adaptation, and just transitions. Ensuring the dominance of grants over loans in overseas development assistance (ODA) for climate mitigation, adaptation, and just transitions support is another financial instrument that will not burden the state and society. Therefore, the commitment by rich countries to disburse \$100 billion per year for climate finance must not only be met, it must also be dominated by grants rather than loans. Currently, grants constitute about 3% of JETP financing, which is very low.³⁴

In addition, the International Monetary Fund (IMF) has the ability to expand the Special Drawing Rights' (SDRs)³⁵ of member countries as was done during the Covid-19 pandemic. These can be used to support climate mitigation, adaptation, and just transitions at minimal cost. Currently, Global North countries, particularly the United States, have the greatest share of SDRs, yet (relatively speaking), the least need given the status of their currencies and economies. Therefore, the redistribution of these specially-issued SDRs from developed to developing countries would buttress climate action and recovery.

Debt cancellation and reparations for climate justice underscores the need for a multilateral public climate financing regime to ensure that the intentions of climate finance, that is, mitigation, adaptation, loss and damage, and just transitions are met based on the UNFCCC principle of common but differentiated responsibility. Without this, we will see a race to the bottom to secure blended financing package deals that seek to financialise the climate emergency response for private gain and burden the state with unsustainable debt.

Therefore, this pathway suggests that debt cancellation for odious debt and climate reparations would allow the state (Eskom and municipalities) to invest in renewable energy and to free up the space of public financing to support decent work creation through the local manufacturing of renewable components. Again, this public pathway is underpinned by a capable and well-governed public energy system.

ALLOCATIVE GREEN CREDIT POLICIES

South Africa will need an estimated R8.9 trillion, or R596 billion in annual investment, over a 15-year timeframe (from 2015 to 2030) to meet its Nationally Determined Contribution (NDCs). Therefore, the mobilisation of domestic financial resources is as important as the mobilisation of international climate finance. Climate finance public policies that feature what³⁶ call 'allocative credit policy' will be crucial to achieve this, our analysis draws from their work. Allocative credit policies, notably used by the East Asian tigers, are policies that integrate financial, monetary, fiscal, and industrial policy to ensure that finance is directed towards productive investments that can catalyse development. Integrated with environmental policies, these allocative green credit policies are central to directing investments towards sustainable productive investments to ensure a just energy transition or a green transition more broadly. Importantly, under this green macro-financial framework, rather than a prudential role, central banks play a promotional role that aligns "financial regulation, credit and monetary policies with green industrial strategy to ensure that the dynamics of private capital allocation do not undermine this policy effort"³⁷.

Taking inspiration from the success of financial policies by late industrialisers, Kedward et al. have created a typography of a broad range of direct and indirect green credit instruments for two key financial market actors in the green transitions, namely the banking system and institutional capital. The banking system is a network of licensed financial institutions that provide financial services to the public³⁸ which includes central banks, commercial banks, and internet banks. Institutional capital include pension funds, insurance funds, and asset managers. Indirect and direct credit policies can therefore be mobilised to ensure that these market players direct investments towards a just transition.

Indirect allocative policies are monetary policies that "aim to adjust the relative costs of providing capital to different sectors, hence influencing capital allocation through incentive rather than coercive means".³⁹ Monetary policy instruments that can adjust the relative costs of finance for a sector through the banking system on favourable or unfavourable terms, depending on whether that sector is 'dirty' or 'green'. For instance, reserve requirement adjustments⁴⁰ can be made high (or low), credit guarantees can be dispensed (or not), and loan refinancing terms can be made favourable (or unfavourable) depending on whether the sector being financed is green (or dirty). There is also the need to have monetary policy instruments that prevent back door shadow banking that allows institutional capital to be the outlet for the financing of dirty energy⁴¹. Monetary policy instruments that can adjust the relative costs of finance for institutional capital for green investments are,

for instance, high capital requirements for allocations to dirty assets, punitive leverage ratios for dirty assets, or collateral haircut adjustments.

Direct allocative credit policy is another set of credit policies with a long history in developed as well as East Asian tigers. As defined by Kedward et al (2022), "Direct allocative policies are coercive credit allocation that intervene to directly set the price or quantity of bank credit for particular sectors".⁴² These monetary policy instruments can take the form of "interest rate controls such as ceilings, floors or subsidised rates; and they can also take the form of quantitative targets on lending for certain sectors".⁴³

For example, lower interest rates have been set for green sectors by the the central banks of Bangladesh and South Korea and the Peoples Bank of China has "launched a green targeted refinancing scheme stipulating that banks must lend to green activities at close to benchmark rates in order to qualify for discounted funding".⁴⁴

These green allocative credit policies are well suited not only to encourage investment in renewable energy generation but also to support the expansion of domestic renewable sector manufacturing. They, therefore, can contribute to the dual objectives of expanding clean energy capacity while ensuring industrial development and creating decent work. In contrast to the de-risking, private-sector prioritising approach of current JETP financing, such policies work in the public interest rather than allowing the financial elite to profit from the climate emergency at the potential expense of the majority.

ENDNOTES

1. Concessional loans and loans disbursed by development finance institutions at favourable terms, for example, attracting low interest rates or grace periods for repayment.
2. Grants are financial awards that do not have to be paid back.
3. Blended finance is finance composed of public and private finance.
4. A PPP is a type of procurement contract entered into by the state and a private sector contractor that aims to shift the risk and management of service provision from the public to the private sector. The contracts encompass a wide variety of concessions, which take on any combination of the following: design, finance, build, operate, maintain, and transfer.
5. Bayliss, K. & Waeyenberge, E. (2017). Unpacking the Public Private Partnership Revival. *The Journal of Development Studies*. 54. 1-17. Available at: 10.1080/00220388.2017.1303671. Last accessed on: 07/11/2022.
6. "An Independent Power Producer is an entity, which is not a public electricity utility, but which owns and or operates facilities to generate electric power for sale to a utility, central government buyer and end users. IPPs may also be privately-held facilities, such as rural solar or wind energy producers, and non-energy industrial concerns generating electric power for on-site use and who may also be capable of feeding excess energy into the distribution or transmission grid system".
7. South African Independent Power Producers Association (SAIPPA). (2022). Website. Available from: www.saippa.org.za. Accessed on: 7 November 2022.
8. Gabor, D. (2021). *The Wall Street Consensus. Development and Change*, 52: 429-459. Available from: <https://doi.org/10.1111/dech.12645>. Accessed on: 7 November 2022.
9. Isaacs, Gilad Lee (2018). *Financialisation in post-apartheid South Africa*. PhD thesis. SOAS University of London. Available at: <https://doi.org/10.25501/SOAS.00026178>. Last accessed on: 07/11/2022.
10. Equity is the amount in shares that owners of a business have invested in their company.
11. Department of Mineral Resources and Energy (DPME). (2021). *Independent Power Producers Procurement Programme: An Overview as at 31 December 2021*. Available from: https://www.ipp-projects.co.za/Publications/GetPublicationFile?fileid=2d03d621-6dc4-ec11-956e-2c59e59ac9cd&fileName=20220318_IPP%20Office%20Q3%20Overview%202021-22%20WEB%20VERSION.PDF. Accessed on: 7 November 2022.
12. A charge payable by an Institution such as Eskom to the private party, example IPP, in connection with the performance of the private party's obligations included in offtake agreement.
13. An arrangement between a the producer's good or service i.e. IPP and the buyer of a good or service i.e. state utility to purchase or sell portions of the producer's upcoming good or service before the construction of the facility.
14. The business is deemed by the bank to be in financial health such that it will be able to pay back its loans and generate profits.
15. National Treasury. *Budget Review 2022*. Available from: <http://www.treasury.gov.za/documents/national%20budget/2022/review/FullBR.pdf>. Accessed on: 7 November 2022.
16. The LCOE measures lifetime costs of a particular energy generating technology divided by energy production. The measure is typically used to compare the relative competitiveness of different energy generating technologies. This information is used for the selection of an energy mix that ought to be invested in.
17. Eskom. (2021). *Multi-Year Price Determination (MYPD) 5 Revenue Application for FY2023 – FY2025 Submission to NERSA*. Available from: https://www.eskom.co.za/wp-content/uploads/2021/12/Eskom-Holdings-Summary-Submission_MYPD5.pdf. Accessed on: 7 November 2022.
18. A mechanism established to accelerate investment in private sector renewable energy generation by the state utility accepting to buy the electricity generated by the IPP at a highly subsidised above market rate.
19. Creamer, T. (2019). *Gordhan's IPP renegotiation proposal triggers breach of contract warnings*. Available from: <https://www.engineeringnews.co.za/article/gordhans-ipp-renegotiation-proposal-triggers-breach-of-contract-warnings-2019-02-15>. Accessed on: 7 November 2022
20. A market where investors buy and sell securities they already own.
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26. Ibid.
27. Eurodad. (2022). *PPPs in energy infrastructure: regional experiences in light of the global energy crisis: The risky business of public-private partnerships in the energy sector – state of play and challenges ahead Summary. Brot für die Welt (Bread for the World) and Heinrich-Böll-Stiftung*. Available from: https://www.eurodad.org/ppps_in_energy_infrastructure_regional_experiences_in_light_of_the_global_energy_crisis. Accessed on: 7 November 2022.
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37. Ibid
38. These services include receiving deposits and withdrawals, offering loans, lending funds etc.
39. Kedward, K., Gabor, D. and Ryan-Collins, J. (2022). *Aligning finance with the green transition: From a risk-based to an allocative green credit policy regime*. UCL Institute for Innovation and Public Purpose, Working Paper Series (IIPP WP 2022-11). Available from: <https://www.ucl.ac.uk/bartlett/publicpurpose/wp2022-11>. Accessed on: 7 November 2022.
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42. Ibid
43. Ibid
44. Ibid