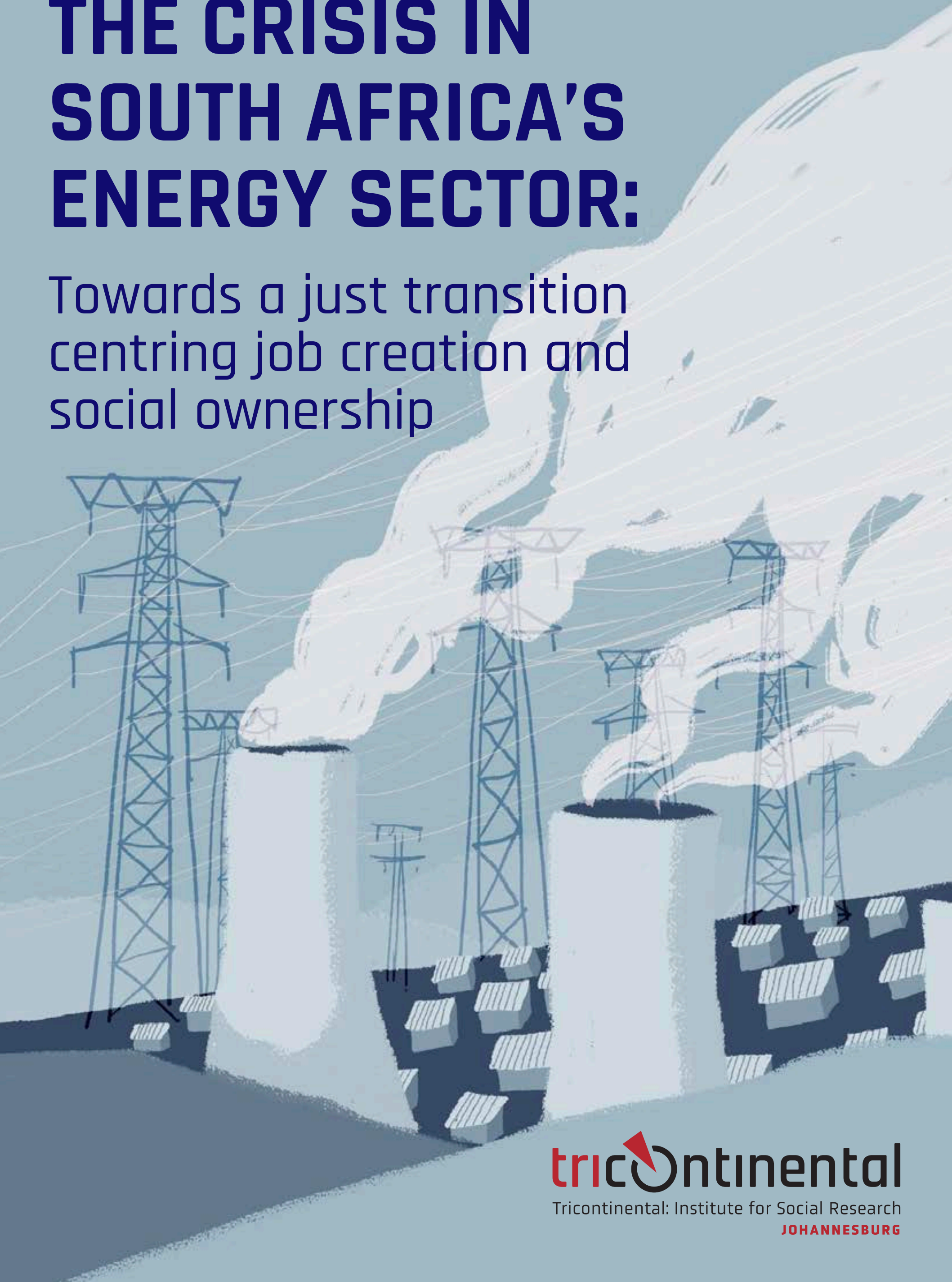
Working Document

THE CRISIS IN SOUTH AFRICA'S ENERGY SECTOR:

Towards a just transition centring job creation and social ownership



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The Crisis in South Africa's Energy Sector: Towards a Just Transition

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South Africa stands at the precipice of a major economic crisis. In this increasingly dangerous situation, the near collapse of the state-owned electricity utility, Eskom, presents a set of serious challenges to the working class and society at large. Amid rolling blackouts and rising domestic electricity tariffs, which cut into low and stagnating wages, retrenchments loom over Eskom workers, and workers across the country. These are fuelling protests across the country, igniting resistance which glows with the intensity of centuries of struggle.

Wide-scale industrialisation during the twentieth century led to massive environmental changes across the planet, disproportionately affecting the most oppressed communities with harsh weather conditions. Crises caused by environmental changes are generally met with a demand for urgent policy reforms. However, these reforms often adopt approaches that de-emphasise the importance of historical context and lack an appreciation for the opportunity presented by the crisis. This includes raising fundamental questions about the transformation of society.

In the wake of modern industrial development, which was driven by racial capitalism across Southern Africa, fierce conceptual debates have raged in an attempt to understand and characterise the South African economy. These debates have a real impact on public policy, and state and industry planning for the country. In 1996, soon after the dawn of a new democratic dispensation in South Africa following the end of apartheid, academics Ben Fine and Zavareh Rustomjee introduced the conceptual lens of the Minerals-Energy Complex (MEC) — a system of capital accumulation driven by mining and electrification — to better understand the political economy of South Africa. This lens offers powerful insights into the relationship between national and global capital, emphasising the evolving nature of classes and linkages to shifting patterns of accumulation and social reproduction.

The advent of mining that followed the discovery of precious metals in South Africa was central to the formation of the South African state and the expanding net of industries that followed in its wake. Today, though, mining plays a significant but markedly shrinking role in the economy. Nonetheless, its linkages to the state and patterns of capital accumulation still underpin the ongoing reproduction and worsening of inequality. As a result, the power of the MEC framework remains useful as it emphasises the impact of historical shifts in the way that f mining has shaped the economy over time. A historical approach enables key questions to be asked and new paths of inquiry to be opened for the development of progressive responses to the roots of the Eskom crisis.

In an effort to engage the debates around the 'Eskom crisis', this working document sets forward the following propositions:

1. South Africa's economy is dominated by competing sets of interests amongst international monopolies and local elites. They are reliant on different but overlapping regimes of capital accumulation which must be understood historically.

2. South Africa's rate of industrial development runs in proportion to the intensity of resistance against exploitation, dispossession and marginalisation. It is not evidence of the technological superiority of a resident 'master race', as is often implied.

3. As part and parcel of the legacy of British colonialism — and later apartheid state expansionism — Eskom must be understood as a regional entity whose reach is fundamentally shaped by the interests of mining capital across Southern Africa.

4. The Eskom crisis is part of a deeper structural economic crisis that stems from the failure of post-apartheid reforms to adequately address a society deeply damaged by the economic, social and political impact of centuries of colonialism, dispossession, exploitation, and extraction.

5. The fossil fuel-based industrialisation of the twentieth century — largely based in Europe and the United States of America — has led to the release of dangerous amounts of carbon emissions into the atmosphere. This, in turn, has fuelled climate change, which has an increasingly severe impact on global weather conditions and the availability of natural resources. The impacts of this phenomena are felt most severely in the Global South.

6. Alongside calls to rapidly expand the provisions for Independent Power Producers (IPPs), pressure to unbundle (and by de facto privatise) Eskom appear largely through the renewable energy sector. These changes mark a shift in the strategy of capital accumulation by a fraction of local capital towards rent seeking and short-term speculative investment patterns. The conditions of a slowing economy — as well as the deepening of a post-apartheid investment strike in productive manufacturing industries — has necessitated this shift in strategy. Private renewable energy is presented as an altruist project rooted in the idea that 'green capitalism' can resolve the conditions that precipitated climate change.

7. A just transition from technologies and systems that utilise fossil fuels towards the use of renewable energy systems and a host of other technologies marketed as sustainable must accompany a break from the old systems of exploitation and oppression in order to realise a just and equal society.

The Trek Towards a Settler Colonial Economy

In 1652, Jan Van Riebeek, the leader of a Dutch East India Company (VOC) expedition, arrived at the Goringhaicona trading settlement of the indigenous peoples at the Camissa River mouth, which would later become Cape Town. Settlers of Dutch, Scandinavian, and French origin moved into the area with the initial aim of establishing a refreshment station and trading post for VOC vessels. This brought them into contact with Khoe, San, and, later, Xhosa communities.

Though they initially co-existed, this relationship quickly shifted to conflict and war driven by settlers seeking dominance over resources — chiefly prime farming land and access to water. This marked a decisive and devastating intervention in the historical development of societies in Southern Africa.

The labour required to develop the growing settlement's sprawling fruit and vegetable farms and winelands, including building and road construction, was provided by people enslaved predominantly from the east coast of Africa and the Dutch East Indies. They were coerced into the emerging slave labour force through conquest or purchase from existing slave trade routes operating in the Indian ocean.

Dutch settlers, with increasingly localised aspirations, began developing an expanding array of institutions to support their burgeoning economy, introducing the region to emerging capitalist modes of production and a money-based financial system pegged to the Dutch banking system. Accompanying this expansion, Lombaard Bank, the country's first bank, was established in 1793 to meet the rapidly expanding need for currency in the colony.

The Netherlands' competing empire, Britain, sought to monopolise trade routes to the east and came to dominate the territory in 1814 following the Treaty of Vienna, where the Dutch permanently ceded the Cape settlement to Britain. The arrival of British settlers, the introduction of the abolition of slavery (in favour of a 'free labour' system), and minor extensions in the political franchise to the African elite set in motion a large-scale migration of Boers (Dutch descendants, later called Afrikaners) from the Cape across the region, where they established new settler colonies.

Despite being met with fierce resistance from the establishment of the first VOC trading post in 1652 to the early nineteenth century, the frontier edge of the colony expanded as colonial wars interrupted, dispossessed, and integrated existing agrarian-based economies into the new colonial system.

Gold, Greed, and Racial Capitalism

In 1884, gold was discovered in the Witwatersrand. This radically transformed the colony's economy from agriculture to mining — yielding immense profits for international investors and local prospectors. The battle for power and control of the colony soon escalated into the Anglo-Boer War (1899–1902). Despite the hostility that existed between the Afrikaners and the English, they were still able to unite — on the basis of white supremacist elitism — to form the Union of South Africa in 1910. This unification of the white polities in the region was established in order for the four colonies (the Cape, Natal, Orange River, and Transvaal) to maintain a degree of self-determination.

This new social compact, which included rule over Namibia (then German South West Africa), excluded Africans and other black people (such as those of Indian descent and people deemed to be 'Coloured' or 'mixed-race') from the democratic franchise. This further created the basis for the consolidation of a local white elite and laid the foundation for industrialisation in the region. In 1920, the first central bank in Africa and the fourth in existence outside of Europe, the South African Reserve Bank, was formed. The Bank issued a currency pegged against the value of gold in South Africa, then the world's largest gold producing country.

Colonialism forced African societies into a now well-established commodity exchange system. In the wake of the destruction of pre-colonial economies and agrarian modes of production, the African and black majority were forced to sell their labour power to acquire wages in order to pay taxes and access goods. African migrant workers were confined to grim hostels near the mines and were prohibited from having their families live with them in the cities. The migrant workers received such low wages that they could not support social reproduction in the rural areas where they came from. Subsistence farming by women in rural areas supplemented this paltry income — helping to sustain and reproduce the reserve army of labour for mining work.

What became known as the migrant labour system completely transformed African societies in the Southern African region. Bernard Magubane, a leading academic, described it as a transformation which 'gave a new complexion to almost every feature of South African life'. Family life and the social fabric were irreversibly unravelled by this transformation — a process that began when the gold mining industry established itself as the central axis of South Africa's political economy.

Men were required to travel to mining centres, largely across what was then the Transvaal (today known as Gauteng) and were thus separated from their families. They would often be required to be away from home for at least six months to a year, or up to two years in some instances. From the late 1800s, South Africa developed one of the most extensive systems of migrant labour in the world, with the migrant labour system accounting for 70% of the mining labour force.

For many, migrant wage labour was the only option to sustain themselves and their families, which forced men away from family life and caused a shift in the division of domestic labour. Men were commissioned in their youth to work in the mines. When they fell ill, whether from the lung disease silicosis (caused by exposure to particles in the mines) or in their old age, after years of exposure to poor working conditions that rendered them no longer able to work, they were shipped back to their hometowns. In such cases, the devastating social costs of migrant labour were shifted to poverty-stricken rural areas — a model based on the labour extraction system on Native American reservations in the United States. The challenges facing neglected rural areas fell squarely on women whose labour was fundamental in the emerging system of racial capitalism and the accumulation it enabled. Women were responsible for farming, raising children, caring for the elderly and taking care of households in rural areas. Later, as the colonial economy expanded and farming became less opportune, women would migrate to urban areas and seek work in the emergent urban informal economy.

The fruits of this brutal form of social reproduction proved bountiful for the white-owned industrial economy in South Africa. As Magubane noted, the mining industry produced the impetus for chemical, steel, and other manufacturing industries. Profits and surplus value generated from gold mining provided the driving force for extensive, if selective, industrial expansion. Without the migrant labour system, South Africa's capacity to finance apartheid's repressive apparatus, along with a growing engineering industry, would not have been possible.

The Electrification of Colonial South Africa

Electrification was fundamental to the making of modern South Africa. It played a massive role in the transformation of the economy and the country's political development. In 1860, electricity was first used in South Africa for the transmission of a telegram, from Simon's Town to Cape Town, to deliver a message between merchants.

Due to the absence of natural gas, which was commonly used to provide lighting in other parts of the world, electrical arc lighting technology caught the eye of the wealthy, in what was then the Cape Colony, and began to be used shortly afterwards. The first bulk-use electricity consumer, the Anglo-African Electric Light Company, provided harbour and railway lighting. This served as a precursor to the widespread use of municipal lighting first implemented in the mining town of Kimberly, which had electric street lights before London.

Some of the early uses of electrification in South Africa included lighting, electricity provision for agricultural water pumping, and a variety of applications in mining and manufacturing. The efficiency provided by electrical machines was central to transforming the economic base from agriculture towards industrialisation, and subsequently urbanisation.

Seminal archival research by Renfrew Christie charts the role that electrification played in the industrial development of South Africa until the height of the apartheid era. Central to Christie's observations are the changing links between finance capital and industrial production, which shifted from conflicts between competing industrialists to the rapid formation of a state monopoly, all the while providing some of the cheapest electricity in the world for decades. This was accomplished by the availability of cheap black labour, extensive coalfields, and significant state support.

The discovery of gold in 1886 in Johannesburg — the Witwatersrand region or often referred to as 'the Rand' — led to an influx of prospectors and wealthy financiers who were eager to stake an early claim on the frontier lands. The availability of cheap labour lowered operational costs, which slowed the mechanisation of mining operations. However, as strikes and other forms of resistance to low wages and poor working conditions spread, technological advances in electric machines developed as a way to cut the cost of human labour, and locally-based industrialists began to explore the potential of wide-scale electric power stations in the colony.

In 1889, the British imperialist and businessman Cecil John Rhodes formed the British South Africa Company (BSAC). The company had a speculative subsidiary arm, the African Concessions Syndicate Ltd, formed in 1896, which owned the preferential right to generate 190MW of electricity at the Victoria Falls, as well as the exclusive right to transmit power from the Victoria Falls to the Rand, for seventy-five years. In 1906, the African Concessions Syndicate Ltd created a company called the Victoria Falls Power Company (VFP), which was intended to produce the first large-scale hydroelectric dam in what was then Southern Rhodesia, now Zimbabwe. The hydroelectric dam was meant to supply large quantities of cheap energy to the Rand mining area in South Africa.

Rhodes and the company's vision of supplying a huge volume of electricity from the power of the Victoria Falls was inspired by the 1882 generation of hydroelectric power from the Niagara Falls in the United States. Speculators travelled to the US on an exploratory mission to determine the viability of the project. The VFP leveraged speculation of the proposed plant to attract finance capital, largely from Britain, to establish the company using their newly acquired rights to generate electricity from the dam as their asset. However, the proposed power supply from the Victoria Falls to the Rand never materialised for a number of reasons: high capital costs of transmission lines, expected power losses along the long lines because of limitations in existing technology, and the high cost of land rights.

German and British interests sought to build expanded electrical generation in the Rand. The German electrical engineering company AEG, whose machinery had superior technology, and Deutsche Bank purchased the Victoria Falls concession at a high price with the aim of gaining market penetration into the British colony of Southern Rhodesia. At the same time, the British-funded German company Siemens & Halske (which founded the Rand Central Electric Works Ltd in 1895) deployed its own steam-powered electric generation schemes using German technology. This was to supply power directly to the gold mines and marked the first use of electricity at this scale in the Transvaal. Noting the expansion of electrical transmission, the locally-based industrialist Isaac Lewis began acquiring concessions in nearby Vereeniging to lay power lines.

Using capital gained from speculation on the Victoria Falls project and the eventual sale of the associated concession rights, the VFP was well placed to dominate the emerging power industry and quickly established a monopoly on delivering power to the Rand. Given the rapid rising demand for electrical power and the infrastructure-intensive nature of establishing extensive power networks, early entry into the market virtually ensured monopoly control over the provision of electricity as a commodity.

Competing industrialists such as Isaac Lewis resisted the early monopolisation of the sector by attempting to establish a power station in Vereeniging. He did this by leveraging his concessions for transmission lines in the hopes of beating the VFP in the rush to deliver significant power to the Rand. However, the state granted the rights to the VFP, which, in turn, brokered an agreement with Lewis that guaranteed that the coal needed for the construction of the power station would be purchased from the coalfields that his company owned in Vereeniging.

Transforming the Union

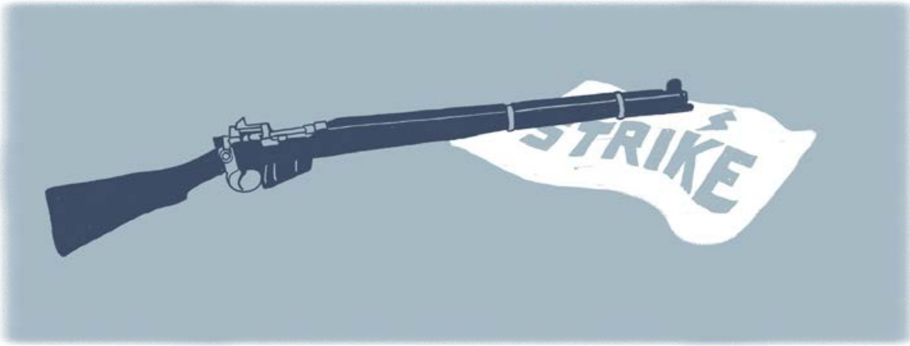
The tensions between Britain and Germany leading up to WWI also led to British financiers in South Africa refusing to invest in the maintenance, upgrades and expansion of German machines, which resulted in further capital investment by German banks.

Despite rapid gold extraction, which expanded the local economy and offered greater diversity for skilled white workers, the end of WWI led to declining wages. This, coupled with increasingly gruelling conditions in the deepening levels of the mines, led to strike actions that caused labour shortages, further fuelling efforts to mechanise mining activities. Increases in gold yields also resulted in higher tax returns for the state, which grew from strength to strength, creating a layer of local elites determined to regulate, support, and protect the needs of the developing Minerals-Energy Complex.

When the Union of South Africa came into existence in 1910, the state enacted the Power Act, which sought to concretise its relationship with the largely private energy sector. Following the enactment of the legislation, the state reviewed instances of state expropriation of power plants in Britain and the United States in an effort to gain more control of the industry and its surplus.

The exploration of the possibility of expropriation drew shock and anger from British capital, which threatened to withhold investment. This friction marked the unfolding of broader tension within white supremacist politics in the shift to independence through the declaration of the Union. In the aftermath of the events of 1910, enduring political tensions between the English elite and the burgeoning Afrikaner elite would be managed within the ruling South African Party.

Deepening labour shortages and a post-war economic slump created conditions that led to the Rand Strike of 1922. This strike became a rebellion when armed commandos of white workers took to the streets — attempting to take over the Johannesburg post office and the power station — in the cities of Benoni, Brakpan and the Johannesburg suburbs of Fordsburg, and Jeppe. In response, the state declared a state of emergency. Prime Minister Jan Smuts, a former military general and member of the Imperial War Cabinet — the British Empire's wartime coordinating body, crushed the rebellion by deploying 20,000 soldiers, artillery, tanks, and bomber airplanes. By the end of the rebellion, about 200 people had been killed and 1,000 injured.



The strike had a profound impact on the Rand's economy. Expanded electrical power generation once again became central to the economy, and mechanisation became the preferred strategy by capital to contain labour. This accelerated the process of displacing skilled white workers, who were absorbed into other sectors of the economy, while the mining and energy sector remained dependent on cheap black labour.

Statecraft and Powering Up the Apartheid Machine

In the same year as the Rand Strike, a state company was created through the Electricity Act: the Electricity Supply Commission. The company is also referred to by its Afrikaans name, Elektrisiteitsvoorsieningskommissie (Evkom), or Escom in English, later renamed Eskom by merging its English and Afrikaans acronyms into one. Escom, established during Smuts' administration, had the express intent of rapidly industrialising the union's economy through the provision of low-cost power and the development of steel and iron works. This coincided with the development of the state manufacturing company Iscor — locking the new economy into the Minerals-Energy Complex. A by-product of this was the public provision of electricity to whites-only neighbourhoods, from which the African majority was systematically excluded.

The establishment of Escom relied on the development of municipal plants for domestic consumption. More crucially, it relied on providing cheap power for electric rail, resolving long-standing transportation problems from the coalfields in what was then the Natal province (today KwaZulu-Natal) to the Rand, and on operating on the principle of not making a profit or loss. The new expansions in electricity provision increased productivity not only at the point of raw materials extraction but also through their distribution and increasingly through the transport of a growing array of manufactured goods. Within the Union of South Africa, two elite factions continued to jostle for power: English capital, largely linked to international capital based in Europe, and Afrikaner capital — which was tied to small-scale enterprises and was highly reliant on state subsidies and tariff protection. These state-led subsidies provided a considerable amount of support and protection to white-owned enterprises.

The growth in the economy during this period led to a complimentary acceleration in the urbanisation and proletarianisation of African people in the major cities as capital began to require more labour. This, in turn, ushered in further state-led regulation aimed at imposing limits and controls on the movement of African people. The Industrial and Commercial Workers' Union (ICU) was formed in Cape Town in 1919, arising out of the deepening discontent amongst black workers.

Emerging from a long history of encounters between dockworkers in South Africa and radicalised sailors from the Caribbean and the United States, the ICU developed an explosive mix of Garveyism, syndicalism, and pre-colonial forms of popular politics, which spread across the country and into other countries in the region. Though its power had waned by the early 1930s, legislation that had been passed with the aim of inhibiting popular black organisations remained.

The Council of Non-European Trade Unions was formed in 1941 following the economic pressures beginning to unfold from the start of World War II. It included participation from the African Mineworks Union (AMWU), which had ties to the African National Congress (ANC) and the Communist Party of South Africa (CPSA). By 1946, these pressures — intensified by the growing wage disparities between black and white workers — would culminate in another massive strike on the Rand, this time decisively led by the black working class.

The strike started on 13 August 1946, when around 60,000 miners embarked on a march across the Rand. The peaceful protest was met by a special police task force which opened fire — leading to 1,248 people being injured, 9 killed, and hundreds arrested and deported. In the aftermath of the repression, the police force banned organised workers' meetings, effectively preventing the strike from spreading. While the strike failed to raise wages, its legacy contributed to the radicalisation of political organisations within the country.

It would not be long before the burgeoning Afrikaner elite would reach for power under white nationalist populist rhetoric, appealing to white sections of the working class to capture political and economic control. This would ultimately result in the victory of the National Party in 1948. The Party was, to a significant extent, inspired by German fascism. It ushered in an era of state-sanctioned racial segregation and large-scale land dispossession. This resulted in the forced displacement of the majority of Africans into rural Bantustans (territories set aside for Africans considered to be indigenous to particular areas and were administered by the apartheid government and styled after Native-American reservations). Smaller groups of Africans were relocated into urban townships along with other racialised people. This coincided with the successful expropriation of the VFPC by Escom in the face of vigorous resistance from British mining interests, consolidating power generation, distribution, and transmission under the state monopoly control of Escom.

In 1940, the nationalist government set out an aggressive state-led industrialisation programme, in part aided by the development of the Industry and Development Corporation (IDC). It would, among other entities, develop South African Synthetic Oil Limited (Sasol) in 1950, a state-owned company aimed at producing chemical fuels and cheap electricity as a by-product of coal. The rapidly modernising economy invested significant amounts of capital in research and development, leading to the founding of the state-owned Council for Scientific and Industrial Research in 1945.

This institution would go on to make innovations in mining, agricultural, and military technology, with the development of radar systems and, eventually, the advent of the infamous mine-resistant, ambush-protected vehicle Casspir. First built in 1980, this technology was used to suppress urban rebellions in South Africa and continues to be deployed against student protests and popular demonstrations today. It was also used against anti-colonial forces in wars in Namibia and Angola, and would later be used by the US military in the occupations of Iraq and Afghanistan, before being deployed against the Ferguson Uprising in 2014.

The demand for electricity grew steadily as the economy continued to industrialise. The strong links between finance capital and British elites enabled ongoing mechanisation in mining, making deep mining possible and supporting the enrichment of uranium, a by-product of gold mining processes. The expansion of gold mining in the Free State province led the apartheid regime to seek a loan agreement with the World Bank in 1951 to fund the growing operations.

Popular struggle intensified with the launch of the Defiance Campaign against apartheid laws in 1952 under the authority of the ANC and its partners, which, unlike the ICU, was organised into racially-based formations. It led to boycotts and civil disobedience against strategic laws and industrial strike action. In 1960, the ANC, the CPSA (later the South African Communist Party), the South African Trade Union Congress (SATUC), and the Pan Africanist Congress (an Africanist offshoot of the ANC) were banned. This resulted in a long period of continued wealth accumulation achieved via the hyper-exploitation of black people and enforced relative political passivity.

This changed decisively with the Durban Moment in the early 1970s. Durban was the city where the Black Consciousness Movement emerged, with figures like Steve Bantu Biko, Barney Pityana, and Rubin Phillip as early leaders. Breaking with the political culture of the ANC, the Durban Moment organised on what Biko termed a non-racial basis, including people classified by the state as African, Indian, and Coloured. In 1972, the movement began running workshops on Paulo Freire's concept of a 'pedagogy of the oppressed', which would become a key concept in the trade union and community struggles to come.

The 1973 Durban Strikes — which surprised the ANC as much as the apartheid state — provided an opportunity for organising and challenging the regime on a massive scale. The Metal and Allied Workers Union (Mawu) — born in the crucible of social ferment in factories and communities around low wages and racist legislation — marked an important step in building democratic, non-racial, worker-controlled unions.

By the mid 1970s, a national electricity grid was established which lessened the dependence on labour-intensive coal-fired railways, resulting in job-shedding of unskilled workers while simultaneously creating higher profits for mine owners who benefited from the cheaper and more efficient transport networks. During this period, the apartheid regime exempted employers from requiring recognition agreements with trade unions, undermining the effectiveness of existing structures. This was the period in which the mass structural unemployment of urbanised and urban working class first began to become a feature of South African society.

Opposing a 1974 government declaration that imposed the Afrikaans language as a medium of instruction in secondary schools and inspired by the Black Consciousness Movement, the militant student-led 1976 Soweto Uprising was met with violent state repression. In the aftermath of the uprising, many committed to militant and organised opposition against the apartheid regime. Some left the country to join armed organisations in exile, in some instances travelling on the same trains that brought migrant workers to the mines due to the symbiotic relationship between the mining industry and the railway system, which maximised the exploitation of cheap migrant labour. Others joined new workplace structures and, later, community-organised challenges to the state.

During the 1970s and 1980s, there was a rapid and significant increase in the demand for electricity, boosting South Africa's industrialisation efforts, which were built on secondary beneficiation of iron and steel-deriving inputs from local mines. During this time, electricity demand rose at a rate that would require Eskom to double its capacity every 8 years. As a result, several power stations were built, including the Koeberg Nuclear Power Station — among the largest in the world at the time.

Domestic consumption rose, primarily among the beneficiaries of apartheid, and a growing array of diverse forms of commodities were produced as global prices for electronic devices (for lighting, cooking, and a growing list of additional activities) dropped, and electricity began to become incorporated and essential to modern life.

The formation of the Federation of South African Trade Unions (Fosatu) in 1979 brought many of the growing unions together under a shared commitment to worker control of unions and, eventually, of workplaces. Fosatu had a strategic commitment to keep its autonomy from the ANC, which it saw as dominated by aspirations for bourgeois nationalism.

On 24 July 1980, roughly 600 workers, based at the Orlando Power Station in Johannesburg, led industrial strike actions over a wage dispute. Within a week, over 10,000 black workers spread across various municipal departments had joined. Workers organised against the formation of an in-house union that was friendly to the demands of the management staff, instead forming the Black Municipal Workers' Union (BMWU). A significant portion of workers were migrant workers recruited from the Bantustans and neighbouring states. The BMWU organised the largest strike against a single employer in the country's history. After several weeks, the strike was smashed and over 1,200 workers were forcibly sent back to the Bantustans.

Committed to non-racialism and grassroots democratic organising, and sometimes seeing itself as an internal front for the ANC, the United Democratic Front (UDF) was launched in Cape Town in 1983. It would go on to draw millions of people under its banner and to play a key role in a sustained urban insurrection. In 1985, the Congress of South Africa Trade Unions (Cosatu) was launched in Durban as a non-racial union committed to supporting the exiled and underground ANC.

In the same year — under significant pressure from growing and increasingly militant popular struggles in both communities and workplaces, as well as escalating international pressure — the apartheid government imposed a state of emergency in order to enable widespread, sustained political repression. The large and militant National Union of Metalworkers of South Africa (Numsa) was founded in 1987 in an attempt to defend attacks on wages and the job security of mainly black metalworkers. Numsa, affiliated with Cosatu, was an important alliance partner of the ANC and the SACP.

In 1985, the Regional Services Councils, separated into local authorities, were established to manage state service provision in racially differentiated zones in alignment with the explicit apartheid policy of separate development. Housing an increasingly urbanised working class at the periphery of major industrial centres, black townships began to receive selective upgrades in the late 1980s in response to the growing community-level protests threatening the legitimacy of the state.

Black Local Authorities (BLA), local government structures similar to those in white areas were set up by the state to rival popular democratic structures. The BLA were severely underfunded, which led to very limited capacity to invest in the expansion of infrastructure for the provision of water and electricity across their jurisdiction. BLA were then forced into agreements with White Local Authorities (WLA) to provide services. The tariff collection regime used for the BLA was the industrial energy use class, the category reserved for big industrial consumers. This effectively meant that residents served under BLA directly subsidised WLA at an institutional level. This developed alongside the ongoing rise in class status of white residents as a by-product of the cheap labour regime used to power the new industrial economy.

By the early 1990s, the impact of mass boycotts on payments for state services — including the impact of the 1986 Soweto boycott — led the BLA to a debt crisis that saw Eskom involve itself directly with the distribution industry by taking over the running of BLA altogether. During the same period, leading up to the eventual transition from apartheid, political and economic sanctions forced the country inwards into isolation. Local financial institutions responded to the instability by shifting investments from long-term assets to short-term speculative investments — marking a shift towards financialisation and weakening the power of the incoming political forces set to lead the immediate post-apartheid reconstruction efforts.

Powering the Frontier's Expanding Edge

In the 1970s, wedded to the Minerals-Energy Complex, the apartheid regime maintained and expanded its frontier further into southern and central Africa, through Angola and the Congo. The Cahora-Bassa hydroelectric dam project was successfully built between 1974-79 in Mozambique. Owned by Escom and a Mozambican-Portuguese firm, Hidroeléctrica de Cahora Bassa, the project stood as one of the early examples of the regionally emboldened posture of the National Party.

Much like the early electrification projects in the Witwatersrand, German machines supplied by Siemens and AEG (along with technical support from Italy, France, Portugal, and Switzerland) outfitted the project. The rationale for the project involved prospects for agriculture and mining in the resource-rich province of Tete, Mozambique. A major project, the Kunene River Scheme, was also initiated. However, it was never completed due to the civil war, which began when Angola attained independence in 1975, where the US and the apartheid state supported the National Union for the Total Independence of Angola (Unita) against the People's Movement for the Liberation of Angola (MPLA), supported by Cuba.

The expansionist policies of apartheid South Africa were aided and abetted by Western-based financial capital, as in the case of the Kunene River scheme. The South African communist intellectual Ruth First noted that, 'The large companies that have straddled the area up to now, the Anglo American group, American Metal

Climax, Rio Tinto-Zinc, and more recently Lonrho, are slowly integrating all their activities, consolidating themselves economically as well as financially'.

In 1987, the Electricity Act was revised, and a new Eskom Act was published. Escom (Evkom in Afrikaans) was renamed Eskom by merging its English and Afrikaans acronyms into one. The following year, the apartheid military and The National Union for the Total Independence of Angola (UNITA) were defeated by the armed wing of The People's Movement for the Liberation of Angola (MPLA) and the Cubans in Angola in the Battle of Cuito Cuanavale, marking the beginning of the end of the apartheid state's regional power.

A New South Africa, Somewhere Over the Rainbow

South Africa's late colonial state, and the apartheid state, capitulated in 1990 through dynamic and ongoing processes of struggle from below, the military defeat in Angola, and as a result of the end of the Cold War. Consequently, political prisoners were released, and the ANC and other banned organisations were legalised. As the eminent economist Vishnu Padayachee has shown, the process of discussion and planned policy alternatives for the future came to be dominated by capital and the views of organisations like the World Bank. Nonetheless, there was broad agreement among progressive forces for the necessity of a national electrification scheme. In 1990, in Electricity for All: The Need and the Means, academic Charles Dinley's proposals that would help precipitate the multi-stakeholder National Electrification Forum (NELF). The NELF, and later the National Electrification Programme (NEP), framed national electrification as a developmental imperative.

The apartheid system was formally ended through a national election open to all in 1994 and the adoption of a new Constitution in 1996. A process of 'transformation' similar to Affirmative Action was embarked on as a common paradigm with the newly-elected ANC in alliance with the SACP and Cosatu. Through this process democratic reforms of the South African state in line with the Constitution would be established. These included constructing a national education system from the remnants of a fragmented, inequitable system, the expansion of health care services, the provision of social grants and, in principle, commitments to the provision of basic services.

The NEP programme was largely financed by Eskom and integrated millions of people into the national grid with a focus on urban townships alongside rural service provision. The viability of this programme was strengthened by the considerable amount of local capital available to the state and to Eskom. The new government mobilised the NEP programme, marking a significantly different set of conditions to other newly independent African states which often did not have large amounts of local capital to invest in electrification infrastructure to marginalised communities. This policy shift was an important change in the role of Eskom as a state utility whose fate would become increasingly tied to the ability to deliver affordable, reliable electricity to domestic consumers. By 2014, the proportion of the population that had access to electricity had increased and 86% was connected to the grid.

In 1996, the ANC rejected its initial moderate social democratic commitments and adopted a self-imposed structural adjustment programme dubbed the Growth, Employment, and Redistribution Macroeconomic Strategy (GEAR). It opened the door to increased privatisation and austerity measures, as well as the proliferation of public-private partnerships and the corporatisation of state-owned enterprises. It undermined the already limited capacity of the state to provide social welfare, particularly in a context where corporate taxation remained pegged at 28%. While the new dispensation set out expansive aspirations for the provision of basic services, the economy suffered from deindustrialisation and financialisation.

Against the backdrop of the shifts introduced by GEAR, the ANC government introduced its Free Basic Services for All policy. In this policy, the government provided 50kWh of electricity and 6,000 litres of water per month to qualifying households. The decision to settle on a figure of 50kWh was recommended through a University of Cape Town study which argued that this could provide sufficient energy for lighting, limited water, heating, and cooking, though this figure would be challenged by Cosatu and others.

Free Basic Electricity (FBE) was then defined in legislation as an opt-in 'self-targeted' approach for providing the service. This was done via a broad-based rollout to avoid 'leakage' of subsidies to non-targeted households. One of the central goals

of the allocation was to help substitute the use of wood and paraffin for cooking and lighting in low-income households. The rollout of FBE was contested by Cosatu, along with some NGOs, with calls to raise the allotment to 100kWh. Rather, 200kWh was put forward as a viable figure in a 2010 report compiled by the environmental justice organisation Earthlife Africa. Discrepancies in terms of access to FBE emerged: users supplied from municipalities received 50KWh per month, whereas others directly connected to Eskom received as much as 100kWh per month. Access to FBE was also tied to the installation of prepaid electricity meters, which served as the backbone for the overhaul of the procurement system for collecting tariffs for water and electricity. This would result in significant, although localised, organised resistance.

The transition to free electoral competition in 1994 marked a transition to liberal democracy in South Africa, a period which, within five years, would usher in a wave of protests and strikes. At the turn of the century, a number of social movements emerged, including the Treatment Action Campaign (TAC), the Landless People's Movement (LPM), the Western Cape Anti-Eviction Campaign (WCAEC), and the Anti-Privatisation Forum (APF).

These movements took different forms. TAC was centrally concerned with the struggle for access to medication for people living with HIV and Aids. In a significant victory, these movements eventually forced the South African Cabinet to support the rolling out of antiretroviral treatments through public sector health clinics. The LPM was initially set up to struggle for access to rural land, the WCAEC to oppose urban evictions, and the APF to oppose privatisation.

Resistance to urban evictions, disconnections from electricity and water, and popular struggles for urban land became central to this first generation of post-apartheid movements, with the exception of TAC. Resistance to electricity disconnections became important for the WCAEC and the APF, and these movements, along with the LPM, also engaged in setting up self-organised connections for people who had been disconnected due to non-payment, or people who had never been connected to the grid, many of whom lived in shack settlements.

Activists argued that it was unconscionable that people were being forced to make a trade-off between buying additional units of electricity or buying bread and cooking oil or saving money for transport to commute to work. The Soweto Electricity Crisis Committee (SECC), one of the affiliates of the APF, was specifically concerned with electricity issues including high costs and disconnections and was able to give these issues a significant profile in the elite public sphere.

The strategies used by these movements included demonstrations, pickets and marches, direct action, litigation, conscientisation, and public awareness initiatives through media statements and cultural expression. The SECC spoke of 'communing' electricity and effectively politicised an already widespread practice of making self-organised connections to the grid, galvanising it to the status of an explicit social campaign called Operation Khanyisa (Operation Light Up). The state described people making self-organised connections as 'criminals', and then 'izinyoka' (snakes). The SECC and other movements contested such narratives, instead speaking of 'guerrilla electricians' or, less combatively, 'people's electricians' and 'community electricians'.

Activists understood the installation of prepaid metres in households to monitor residential usage of electricity as another neoliberal mechanism that forced residents to regulate their own consumption while avoiding direct conflict with the state as a result of disconnections. This was directly contested in Orange Farm in Johannesburg by the APF under the slogan 'smash the meter, enjoy the water'. In the end, though, the metres were installed.

The social movements that emerged at the turn of the century were largely made up of marginal and vulnerable sections of society, with the majority of participants usually being middle-aged to elderly women who were often responsible for paying family bills. Women continue to make up the majority of people participating in grassroots organisation today.

The pressures of neoliberal capitalism have consigned women to the labour of reproducing life (raising children, cooking, household maintenance) and to playing a functional role in the production of goods and services (providing food, paying for/sourcing electricity and water, and paying rent). It is, therefore, unsurprising that women have often made up the majority of participants in popular struggles over the last twenty years, or that issues related to the home (access to urban land, water, and electricity as well as opposition to evictions and disconnections) have been central to these struggles. What feminist scholar and activist Nomboniso Gasa famously termed 'motherism' has become a significant political force.

The APF, followed by the WCAE and LPM, collapsed within a few years, but the issues that they confronted remain urgent. For instance, the electricity crisis in Soweto remains unresolved. As of 2019, it is claimed that the residents of Soweto owe up to R18 billion ($1.2 billion) in unpaid bills to Eskom, 53% of which is accumulated interest. The SECC collapsed years ago but the practice of resisting disconnections and making self-organised connections remains widespread, as was the case before the SECC and other movements emerged.

Electricity was a central concern for the new wave of popular politics that emerged in 2004. Frequently referred to as 'the rebellion of the poor', popular protests swept the country, often organised by residents of shack settlements and taking the form of road blockades. Abahlali baseMjondolo, the largest contemporary grassroots social movement in the country, emerged from this sequence of protest. The practice of making self-organised connections to electricity continued to be politicised in this new period of struggle alongside resisting disconnections and demanding the formal installation of electricity.

For people living in shacks, the demand for electrification was directly related to regular and often catastrophic shack fires resulting from using open flames for heating, lighting, and cooking in very cramped conditions and highly flammable building materials. The state resorted to routine brutality to try and prevent the popular appropriation of electricity in shack settlements. In a particularly grim instance of armed confrontation by the state, two people were killed and another seven injured during an operation to disconnect residents of the New Germany shack settlement in Durban on 20 October 2002.

In August 2012 in Marikana, less than 150km from Johannesburg, the unfulfilled promises of the liberation movements and the unfettered exploitative practices of mining magnates at the Lonmin mine culminated in a wildcat strike in the Rustenburg platinum belt. Over 3,000 miners went on strike, primarily to demand a living wage of R12,500 (then valued at around $1,500), as well as to protest poor working and living conditions. The ANC colluded with the firm to deploy police repression. Police forces opened fire on a group of peaceful protestors, which ultimately resulted in the massacre of 34 miners, with twice as many injured. The tragedy would come to be known as the Marikana massacre. Current President Cyril Ramaphosa was then a significant shareholder in Lonmin.

Due to South Africa's deep reserves of rare precious metals and the absence of an alternative development plan by the ruling party, mining remains a significant feature of the post-apartheid economy. South Africa holds 75% of the world's share of platinum, largely found in an area of the country called the Bushveld Complex that straddles the North West, Mpumalanga, Limpopo, and Gauteng provinces. Platinum mining has been at the forefront of contestation between competing sections of the local elite and foreign multinationals.

The platinum industry, like much of the mining sector, has continued to be dominated by Afrikaner and English capital represented by Glencor, Anglo American, and Lonrho (London Rhodes) and their subsidiary companies. Ownership incentives created to address this have been legislated through the ANC government's Black Economic Empowerment initiative. More recently, its Mining Charter enabled Mvelaphanda Resources, African Rainbow Minerals (ARM), and the traditional authority of the Royal Bafokeng Nation to gain significant, and in some cases controlling, shares in platinum mine projects — positioning its leaders as an emerging black elite.

Charting the shifts in the platinum industry, Andrew Bowman reveals how post-democracy market liberalisation reforms exposed the industry to internationalised capital markets. The focus of shareholders has changed from the traditional formulas of manufacturing and resource beneficiation under apartheid to maximising shareholder benefit for returns which can immediately be redeployed elsewhere.

The aftershocks of the Marikana massacre have been monumental and enduring. They have included new forms of popular militancy, including a militant strike on farms in the Western Cape, shifts in electoral politics, and bitter disputes within the union movement. The Association of Mineworkers and Construction Union (Amcu) displaced the ANC aligned National Union of Mineworkers (NUM) across the platinum belt and in many other mining areas.

In 2014, Numsa — the largest and most militant union in the country — was expelled from Cosatu for its repeated criticism of the ANC and then-President Jacob Zuma. In 2017, the South African Federation of Trade Unions (Saftu) was formed as an independent trade union federation, seeking to rebuild the trade union movement beyond the control and interference of the ANC and the SACP. Saftu came to represent most organised industrial workers, while Cosatu continued to represent the majority of organised workers in the public service.

The emergence of Saftu simultaneously presents new opportunities for mass-based challenges to racial capitalism in South Africa and marks a new level of fragmentation within organised labour.

The Corporatisation of Eskom and the Rise of Independent Power Producers

In 1998, the Department of Energy and Minerals 'Energy White Paper' articulated a government policy that opened up mechanisms for private developers to contribute to South Africa's capacity to generate energy. This move, seen as a threat to the state's monopoly of the utility, was met with hostility from Eskom and Cosatu, which prevented commissioned developments for several years. In 2009, the National Planning Commission was appointed to chart South Africa's. The National Development Plan (NDP) 2030 was the resultant policy document released in 2012. The NDP projected that South Africa's energy demand would double by 2030.

This led to the development of two highly polluting and massive coal-fired power stations, Medupi (4.7MW) and Kusile (4.8MW). The coal industry, whose largest source of business is Eskom itself, is consolidated in five main multinational companies: Anglo American, BHP Billiton, Glencore, Exxaro, and Sasol. For electrical transmission purposes, the South32 Hillside and Mozal smelters are located relatively close to the Medupi and Kusile power stations. These smelters draw 5.6% of the national maximum energy demand and have benefitted from a 25-year Special Purchasing agreement in effect from 1995 to 2020 with tariffs lower than the cost of production.

In 2010, the Integrated Resource Plan (IRP 2010), a national electricity plan, marked a shift in energy policy, requiring 40% of newly generated capacity to be produced from renewable energy systems. The IRP and the 2006 Electricity Regulation Act — which set out mechanisms to allow private feed-in tariffs — effectively meant that the renewable energy sector had been ceded to the private sector.

The proliferation of Independent Power Producers (IPPs), which include coal-fired power plants alongside more extensive renewable energy deployments, marks a shift in Eskom's ability to maintain its monopoly by introducing new actors, as well as new political and economic forces, in the energy sector.

The researcher Lucy Baker mapped the development of the emerging financial players in the sector and identified a set of key concerns. Following the IRP 2010 from August 2011, five bidding rounds were initiated to increase the complement of renewable energy into the national energy mix organised under the Renewable Energy Independent Power Producer Procurement (REIPPP) programme. In order to enhance the viability of the programme, the state backed Power Purchasing Agreements, over the span of 20 years, with successful bids signed under non-disclosure agreements, which allowed companies to compete for bids. IPP investments operate as special purpose vehicles, using project finance and debt financing mechanisms at relatively low risk in combination with equity investment options at a higher risk. In the first two rounds, the major national banks — Standard Bank, Absa, First National Bank, Nedbank, and Investec — played a major role in debt financing. However, by the fourth round in 2013, it appeared that the process structurally favoured larger international utilities which did not require local debt finance agreements.

Eskom Collapses into Crisis

Recent developments in the South African energy sector are emblematic of the political and economic crisis that the country finds itself in. Eskom reported a loss in the 2017–18 financial year of over R20 billion ($1.3 billion), while having lost millions in irregular expenditure. This forced a recent government bailout as well as investments from the Chinese Development Bank to finance the debt for the construction of the coal-fired Kusile Power Station. High levels of inefficiency and inadequate planning have collectively resulted in chronic overspending and contributed to rising electricity costs — hitting residential consumers hard and sparking wide-spread protests. Environmental concerns have risen sharply in the public consciousness as a consequence of international campaigns and agreements, alongside increasingly extreme and unpredictable climatic shifts in the region, putting pressure on South Africa to transition away from its fossil fuel-based electrification system.

As part of the post-apartheid state reforms, the planning around South Africa's energy sector is governed by the Integrated Resource Plan (IRP), which is submitted to and approved by Parliament. In 2013, the Department of Energy published an update to the IRP which saw projections for energy demand slightly decrease, following a period of lacklustre growth and changes in electricity consumption in response to Eskom's steep price increases. The figures below — drawn from Eskom public data — demonstrates these trends, delimited by sector:

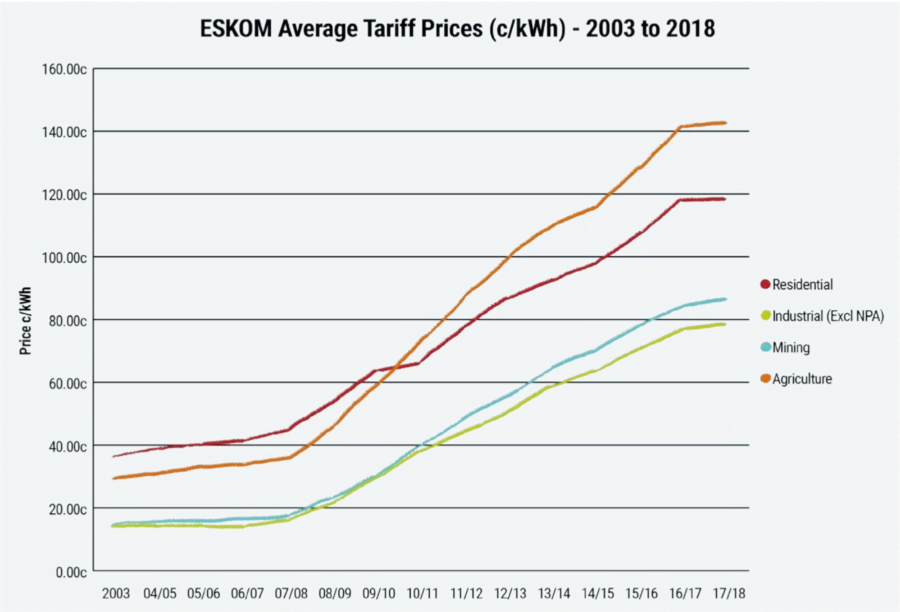


Figure 1. A figure illustrating the average tariff prices (c/kWh) from 2003 to 2018

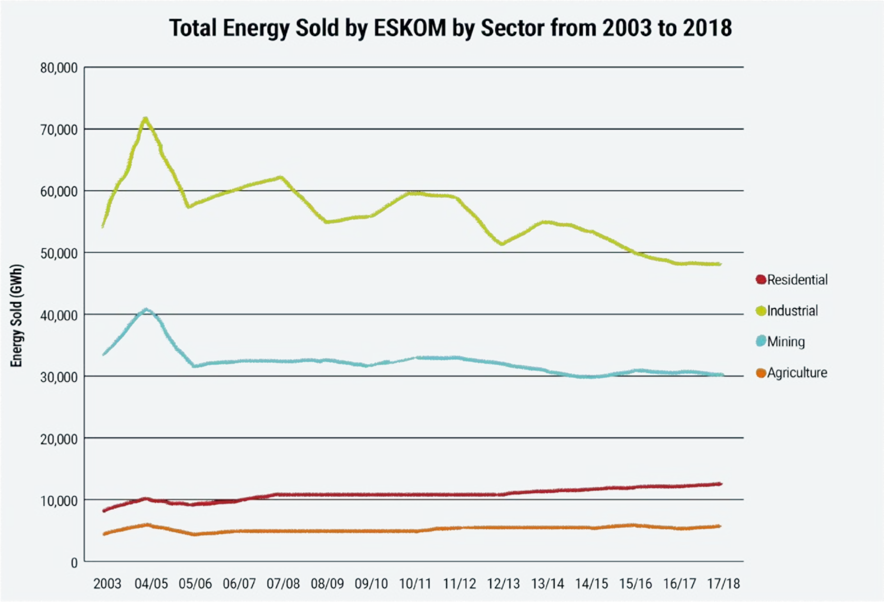


Figure 2. A figure illustrating the total energy sold by Eskom from 2003 to 2018

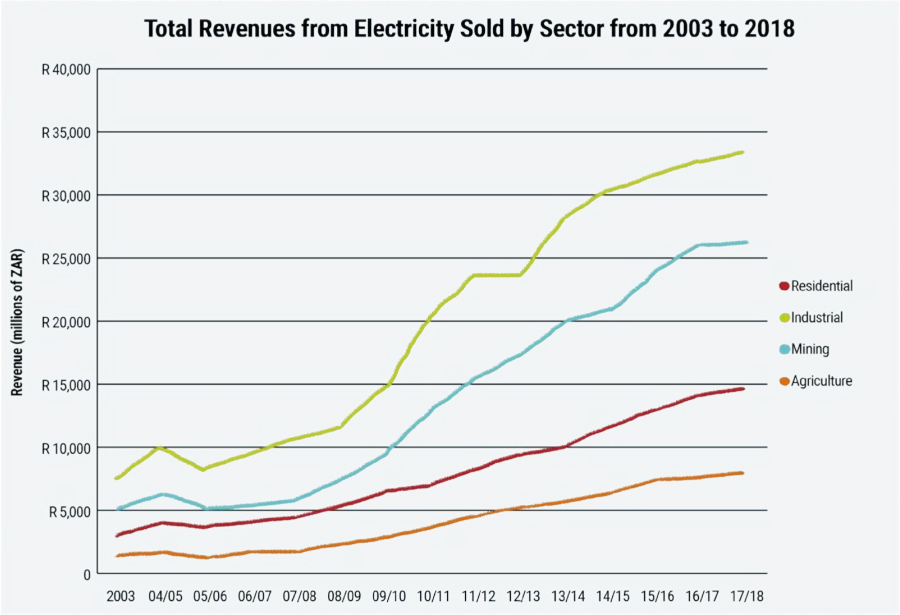


Figure 3. A figure illustrating the total revenues from electricity sold by sector from 2003 to 2018

The stagnation in electricity demand led to the IRP2010 investment strategy, which had previously called for 9,600MW of nuclear generation capacity. However, in the same year, then-Minister of Energy Joemat-Pettersson was allegedly instructed by then President Jacob Zuma to design a nuclear programme. In 2014, this nuclear programme was allegedly discussed with representatives of Russian nuclear interests. By then, media reports began to allege that rent seeking and patronage were shaping the nuclear agenda. In particular, the issue of South Africa's geopolitical alliances with Russia were brought to the fore. Reports were published claiming that Zuma had made a deal at a BRICS meeting held in Brazil to exclusively procure 9,600MW of nuclear energy from Russia's state-owned nuclear consortium, Rosatom. The existence of a nuclear procurement programme was confirmed in a joint statement by the Department of Energy and Rosatom, in which the former neglected to explain the deviation from official national policy.

Early on, the nuclear programme drew heavy criticism on technical and political grounds. The criticism did not impede the nuclear programme's progress. Rather, it led to the talks about the acquisition of nuclear energy to take place behind closed doors, out of public scrutiny. On 9 December 2015 hours after the Cabinet approved the nuclear procurement programme that the then-Finance Minister Nhlanhla Nene maintained was unaffordable, Nene was fired.

On 21 December 2015, Joemat-Pettersson issued a ministerial determination, an order from the minister based on the IRP2010 strategy amending existing legislation for the country to acquire 9,600MW of nuclear power, which was then based on data five years out of date. In response to renewed concern about the affordability of the nuclear programme, Nene's successor, Pravin Gordhan, echoed his reservations and assured the nation in his 2016 Budget Speech that no deal that threatened the South African economy would be approved.

The Eskom CEO at the time, Brian Molefe, resigned from his post following investigations into his preferential treatment of coal companies owned by the Gupta family, a wealthy Indian-born family that had become very close to key people in the ruling party and the state, including then-President Zuma. The family also came to own the 2014 Johannesburg Stock Exchange-listed company Shiva Uranium Mine through its company, Oakbay. It claimed to have the largest uranium deposits in South Africa and the fifth-largest in the world.

Following mass public outcry centred around a slew of corruption allegations and the declining electoral fortunes of the ANC, then-President Zuma was recalled through an internal party process in 2017. After the appointment of Cyril Ramaphosa as president, the Judicial Commission of Inquiry into Allegations of State Capture, also known as the Zondo Commission, was established to investigate the allegations of massive corruption.

During hearings at the Zondo Commission, the symbiosis between corporate corruption and key state institutions came into sharp focus. Scandals once again swirled around the Gupta family and linked multinational entities, including the consulting firm McKinsey & Company and the auditing firm KPMG. Auditing companies have been exposed as key players in the chain of corrupt decision-making processes that led to the awarding of state contracts — legitimising public sector theft and enabling state capture.

As a result of the crisis between the management of supply and demand of energy within South Africa, Eskom has been forced to implement rotated power cuts, or planned power outages, which it calls 'load shedding'. This has disproportionately impacted working-class communities and small enterprises, as they often cannot afford backup generators and private, off-grid solar schemes. Under the previous IRP 2019, the Ramaphosa regime has sought to expand the renewable energy programme through the policy on Independent Power Producers. The path chosen to implement this re-prioritisation was immediately criticised and challenged by Numsa and a number of other organisations as a mechanism to privatise energy provision in the interests of white monopoly capital, an allied section of the ANC, and the black business elite.

These emerging dynamics came to a head in March 2018 when Numsa called for an urgent court interdict. The successful interdict prevented Eskom from concluding outstanding renewable energy Independent Power Producer (IPP) products, including the power purchase agreements. The basis for the interdict, then Numsa Deputy General Secretary Karl Cloete argued, was rooted in an attempt to halt a 'capitalist capture' of renewable energy and in favour of 'a socially owned and democratic alternative'. Numsa was also concerned about major job losses in the coal-fired power sector, from which the union draws a considerable constituency.

The rising debt crisis at Eskom, tied with the reality that the renewable energy sector has been ceded to the private sector and a revolving door of Chief Executive Officers (ten since 2007), has escalated calls to unbundle the utility and avoid a bailout from the national fiscus. In 2019, in the wake of the appointment of André de Ruyter as the new Eskom CEO, a state-issued plan for the electricity supply sector laid out a reform path based on the diversification of the energy mix, maximisation of revenue, the cutting of wasteful expenditure, and the resolution of the utility's debt burden.

A revealing report conducted by the Public Affairs Research Institute (PARI) discusses the impact of the development of Eskom's Medupi Power Station on the expansion and development of Lephalale Local Municipality. The boom in economic activity in the area stemming from investment by Eskom and coal giant Exxaro led to a rise in population in the municipality and an increase in electricity demand. The municipality, like most across the country, carries the weight of racial segregation characterised by unequal access to basic infrastructure, which is compounded by rapid urban growth. The municipal funding system is highly reliant on the rates and collection of water and electricity tariffs. This deeply disadvantages under-resourced municipalities like Lephalale, where self-organised connections are routinely used by residents. Such municipalities struggle to raise the capital to build new infrastructure — particularly in shack settlements — and meet their financial obligations to Eskom.

Municipal tariffs for domestic consumers operate from a cross-subsidisation model, in which high-income users cross-subsidise the tariffs of low-income users. This structure is determined by definitions of different users (domestic, lifeline, and home), which local authorities measure using their own sets of parameters regulated by the National Energy Regulator of South Africa (Nersa). However, 2019 municipal data from the City of Cape Town shows that many low-wage working-class residents living in houses that are charged under the domestic tariff and pay higher effective rates for electricity than affluent households. Rising levels of debt have led to many households falling behind on payments, leading to aggressive revenue collection mechanisms. Outstanding municipal arrears are being deducted as a percentage of domestic users' prepaid electricity token purchases, further reducing the number of units of electricity per rand for working-class users, many of whom have sunk into debt over prior non-payment.

Meanwhile, affluent households are beginning to capitalise on the dropping costs of solar photovoltaic technology, purchasing rooftop systems that will dramatically reduce their reliance on the national grid. This will result in domestic and lifeline users, which account for low income and the majority of working class users, paying higher rates to cover the potential drop in revenue from the drop-in demand from wealthy users. Without delinking the funding of municipalities from the collection of rates, and without the means to support reinvestment in infrastructure in under-resourced communities, there remains little hope for a path along the journey towards decentralised generation and greater use of renewable energy systems that are developed to service impoverished and working-class communities.

Towards a Just Transition

The concept of a just transition, with its origins in the labour and environmentalist movements, has come to be adopted by a broad array of policy proposals from states to corporations, non-governmental organisations, and trade unions. It is largely an attempt to speak to concerns of the livelihood of workers and communities implicated in the historical use of fossil fuel-based industrialisation and to suggest that the cost of the transition should not be borne by workers and communities.

In 2011, Cosatu published its framework of policy positions on climate change through its research arm, Naledi, where it opposed market mechanisms such as carbon trading to reduce emissions and joined international calls for the developed economies to pay for their climate debt. NUM, a Cosatu and therefore ANC-affiliated trade union, supports emissions reduction strategies such as carbon storage and the development of clean coal technologies, demonstrating their reformist posture to issues of climate change. In contrast, Numsa adopted a position in favour of renewable energy in 2012 with calls for the development of a 'socially-owned renewable energy sector' and calling for democratic ownership and control. The union foregrounded its interpretation of the idea of a just transition as part of a broader strategy for social transformation.

Emerging Lines of Struggle

Numsa's scepticism towards the roll out of the REIPPP programme is, in part, rooted in the early impacts of the privatised and expanding renewable energy sector. For example, the construction phase of similar projects has relied on the use of poorly treated temporary workers; in fully operational plants, low staffing requirements cast doubt on the ability of the sector to create long term meaningful jobs.

Workers organised a strike at Abengoa, a Spanish-owned solar energy plant in the Northern Cape, demanding increased wages and employee benefits in March 2018. The strikes continued into 2019.

The need to think seriously about the loss of livelihoods in state-directed proposals for just transition frameworks is clear. The reality of the early stages of privatisation casts doubt on optimistic employment projections from those who argue that a shift to privately owned and managed renewals will lead to a jobs bonanza.

However, the idea of a just transition has been widely co-opted by the state, capital, and Eskom itself. Eskom uses the phrase in its roadmap report to herald current deployments of the REIPPP in positive terms, while ignoring obvious problems. In an extensive public interview on Eskom's response to criticisms of pollution levels in the province of Mpumalanga, CEO André de Ruyter identified the decommissioning of old coal-fired plants and the retrofitting of retired infrastructure for new renewable energy systems by private actors as a key part of its just energy transition plans. However, the developments in Abengoa, if indicative of the behaviour of actors in the REIPPP, demonstrate that inequality is being reproduced through the new paths of capital accumulation.

Severe periods of load shedding during the national lockdown have continued to add pressure and raised critical questions around Eskom's reliability. On 23 August, the Department of Minerals and Energy opened a call for an emergency round of private bidding to supplement a shortfall in the power supply under the new Risk Mitigation Independent Power Producer Procurement Programme (RMIPPPP). The programme will attempt to meet the projected shortfall of 2,000 MW stated in the IRP 2019 and will also seek solutions that reduce reliance on the use of expensive diesel generators during peak periods of consumption and include non-renewable generation sources, notably natural gas.

On 11 September, Deputy President David Mabuza stated that round five of the REIPPP process would close bidding by December 2020. The allocations for this round include a 6,800MW for onshore wind and solar photovoltaic generators, 3,000 MW of gas to power, 1,500 MW of new coal, and 513 MW of energy storage.

Despite the public perception that the accelerated drive toward renewable energy is fuelled by climate change, the reality is that it is primarily driven by imperatives to implement private sector reform in the power generation sector. This is done by leveraging the advances in renewable energy systems. This can be seen in the expressed need to accelerate the use of renewable energy systems in South Africa, where great emphasis is placed on the need to increase the reliability of the network, decrease generation costs, and access capital required for new infrastructure. Environmental considerations, decent job provision, and community benefits remain secondary features used to market the emerging public-private partnership.

On 16 October, the state gazetted changes to the new generation capacity legislation. The changes allow municipalities to submit proposals to the Department of Mineral Resources and Energy (DMRE) for projects in line with the goals of the IRP 2019. Cape Town, a municipality in the Western Cape run by the second biggest party in the country, the Democratic Alliance, which is the official opposition. The Democratic Alliance has played a prominent role in lobbying for the generation of electricity at municipal level as part of a broader effort to liberalise the energy sector. The City is going as far as to develop its own dividing its anticipated generation capacity into smaller projects over which private entities can bid.

While progressive possibilities for the local control and development of manufacturing sectors exist, the impact of these private sector reforms on municipal generation will mean deeper financialisation and the opening up of the sector to private monopolies, mirroring the larger national REIPPP programme trends.

As the pace of private sector reform gains momentum, the landscape of electrification in South Africa has begun to mirror the early phases of its development. International finance is again dominating investment in capital-intensive infrastructure, which is linked to machines and relies heavily on expertise based in imperial centres. Mining and manufacturing industries are increasingly returning to small scale private power generation due to increasing electricity costs in the country and Eskom's lack of reliability. Evidence of this lies in the large-scale requests for proposals by the steel giant ArcelorMittal and the fuel company Sasol, which mark a shift towards a broader divestment from the state.

What Is to Be Done?

From the onset of electrification in Southern Africa beginning with the Victoria Falls Power Company, mass-scale alternatives to fossil fuel-based technologies have been part of development plans in the region. What remains clear from a historical standpoint is that the ownership and control of technology and the inputs and processes of production — together with its relation to systems of accumulation — are more central factors to social transformation than the means of energy utilisation itself. Simply put, colonialism and the capitalist development that it heralded have no fundamental historical commitment to fossil fuel use as such. However, they are responsible for its grim record of exploitation and are directly implicated in the climate crisis.

South Africa's economic woes can, in part, be seen in its slowing economic growth rate, which stood at 0.2% in 2019, compared to approximately 5% in 2008. The manufacturing sector in South Africa has significantly diminished, the economy has become highly dependent on the export of raw materials, and most profits solicited from services, particularly in the financial sector. In the face of this economic slowdown the state remains the largest employer.

There is a striking absence of clarity around ideas for appropriate and feasible industrial policies that could accompany a genuinely just transition away from fossil fuels. Campaigns, organisations, and movements concerned with transforming society at a fundamental level must accept that an alternative energy system does not automatically imply a break with systems of domination and exploitation. On the contrary, a shift away from energy derived from fossil fuels could well be accompanied by job losses, an increase in private profits, and increasingly exploitative and precarious forms of labour.

Different forms of social organisation centred around cooperation, redistribution, and restitution for historical harm must develop working alternatives. It is not only the technological means of energy utilisation that will shape the future of Eskom, and the progressive potential the sector holds for working people. The emerging concerns from labour and broader national debates that re-centre radical demands for industrialisation, centred on democratic ownership and control as a means of meeting the basic needs for all which hold promise for restructuring a deeply divided and unequal South Africa.

The following demands and struggles, both defensive and offensive, have come to the for amongst the leading social organisations campaigning for a just, alternative energy system:

Defensive Struggles

- **Stand against retrenchments, the erosion of worker benefits, and the casualisation of labour in Eskom.** The strike action led by Numsa and NUM in 2019 demonstrated the increasingly urgent need to guard against looming mass retrenchments and labour casualisation as a result of the unbundling of Eskom.

- **Restructure the funding of municipalities.** The current system forces municipalities to generate profits from the provision of basic services to fund their operation, invest in new infrastructure, and pay off existing debt. There needs to be restructuring of municipal funding by the state recouped through a wealth tax. This would drastically reduce municipalities' dependence on tariffs for revenue collection, lower tariffs for working-class residents, and allow under-resourced municipalities to perform a more transformative function.

- **Combating the private capture of municipal generation.** While municipal-led renewable energy generation is set to follow the path of private sector reform, the philosophy of Cosatu's plan to bail out Eskom offers a potential path for ownership of the emerging set of municipal plants through the use of pension funds, potentially through the Public Investment Corporation (PIC), to finance municipal generation. This could give leverage to trade unions and community-based organisations that are demanding basic service delivery and pressure private plants to increase the amount of construction materials sourced within South Africa, which would stimulate local manufacturing.

- **Mitigate rent-seeking agreements with large private rural landholders.** In South Africa, power plants are commonly built on private land that has been determined to be able to yield a particular energy resource (high, steady winds, high solar irradiation availability, and so on).

  Rental agreements are brokered between private landholders and developers during the bidding and awarding process. The 20 to 25-year lease agreements (the length of the power purchasing agreement) stand to benefit wealthy landholders in a country shaped by brutal histories of land dispossession. This could lead to the exacerbation of already existing inequalities. The pace and trajectory of the national land reform process is therefore a relevant question for the development of REIPPP, where public land should be utilised to mitigate against rent-seeking agreements and to strengthen longer term efforts to bring existing and future REIPPP plants under public ownership and control.

- **Renegotiate the terms of Free Basic Electricity allocations.** A broad consultative process tied to a commitment to radically restructure FBE needs to be financed directly from the fiscus. This would break the toxic cycle of non-payments accompanied by the arrested development of municipal infrastructure and shift their role away from focusing on revenue collection. This measure would put an end to the cycle of generating municipal debt through guaranteed electricity sales to Eskom paid by the state subsidy. This measure could also mitigate against the drop in domestic demand due to an inability to pay ever-increasing tariffs in the face of large-scale retrenchments (as a result of the slowing economy along with the more devastating economic impact of COVID-19).

- **Re-evaluate the fairness of domestic and lifeline tariff definitions for each municipality.** South Africa's national electricity scheme for domestic consumers operates off of a cross-subsidisation model where presumed affluent users are intended to subsidise the tariffs of the poor. This structure is determined by definitions of domestic and lifeline tariff users, which local authorities measure using their own sets of parameters regulated by Nersa. In Johannesburg and Cape Town, the valuation of a user's house based on their municipal rates determines which category the user falls into. The cut-off for the lifeline tariff is houses valued at less than R500,000 ($33,411) in Johannesburg and R400,000 ($26,729) in Cape Town. The concept of the lifeline tariff must be reinterpreted through a transparent and consultative process to account for the deep crisis facing working-class households.

- **Scrap municipal arrears for all users of the lifeline tariff structure as part of a relief package for COVID-19.** Currently, outstanding municipal arrears are being deducted as a percentage of domestic users' prepaid electricity token purchases, further reducing the number of units per rand for working-class users. The tremendous levels of outstanding municipal arrears across the country emanates from a flawed system of generating revenue for municipalities and not the result of individualised instances of bad behaviour from users. A post-COVID-19 economic recovery plan must take seriously the need to overhaul the financing of municipal budgets through the implementation of wealth taxes and increased corporate taxes. This municipal funding reform would replace the current attempts to employ increasingly aggressive debt collection mechanisms on working-class residents with little real prospects of paying the outstanding debt.

- **Protect the viability of the existing manufacturing sector, focusing on strategic sectors that form part of renewable energy system value chains.** As the energy demand from the industrial sector has been in steady decline, in part due to rising input costs, notably including electricity (as seen in Figure 1) and increasingly unreliable access to electricity the more Eskom stands to lose considerable revenue. This in turn forces the utility to increase tariff costs which further threatens the viability of industrial production in South Africa. This is most recently shown by the plans for restructuring at the Saldanha Bay-based steel company owned by multinational ArcelorMittal, where over 2,000 workers are facing imminent retrenchment.

- **Uplift and support the emerging class struggle coming to the fore in the burgeoning renewable energy sector.** Bring greater attention through advocacy tools to ongoing struggles in the sector and to areas of the country far away from major metropolises, which often dominate media attention.

- **Cease the criminalisation of people making self-organised electricity connections.** Cease the violent state action against these people. Instead, provide electricity to people living shack settlements.

- **Demand the full public release of financial agreements.** Ensure that documentation of the Power Purchasing Agreements made between IPPs and Eskom is made public, as well as full details of all the standing Special Tariff Agreements between Eskom and mining and manufacturing companies, such as BHP Billiton and Anglo American, among others.

- **Implement tax regulations to discourage the increase in demand for off-grid electrification solutions for businesses, mines, and wealthy households.** As more legislative clarity emerges on the rules for decentralised private generation regarding the capacity for IPPs to provide reliable supply solutions for businesses and industries of various scales, the more Eskom stands to lose revenue from its existing base of industrial consumers. This phenomenon has also manifested in wealthy households, which have increasingly sought to reduce their reliance on Eskom through generators and Solar PV solutions — part and parcel of a broader divestment from state redistributive mechanisms.

- **Increase mechanisation to replace low-wage labour.** Following the historical development of Eskom, labour shortages resulting from economic crises have resulted in increased mechanisation in the mining sector. The widely anticipated recession from the economic slowdown triggered by the COVID-19 pandemic and policies of social distancing may see mines close, low-wage workers retrenched and re-opened with lower staff compliments and greater mechanisation. Note that, unlike the Eskom expansion periods in the previous era, the potential increase of energy demand from a rise in mechanisation is likely to be supplied by private IPPs. These trends will need to be interrogated by trade unions and opposed to prevent large scale loss of livelihood in mining intensive areas.

- **Support progressive actors who are holding mining corporations accountable.** This is essential in order to ensure that obligations are met for existing mining corporations to rehabilitate sites impacted by the development of their extractive activities. Greater state support must also be given to local groups who are raising these concerns.

- **Socialise Eskom through governance reform.** In February 2020, Cosatu put forward a proposal to National Economic Development and Labour Council (Nedlac) for an Eskom bailout using workers' pensions invested in the Public Investment Corporation (PIC), the Investment Development Corporation (IDC), and the Development Bank of South Africa. The call accompanied requirements for a comprehensive forensic audit of the state enterprise, along with decisive action against incidences of corruption. Numsa Deputy Secretary Karl Cloete criticised the proposal for focusing on covering the outstanding debt and 'saving Eskom' but lacking clarity on the mechanisms to finance the energy transition. Much needs to be debated by workers on the proposal to use pension funds to bailout Eskom. However, what remains absent from the debate is how refinancing Eskom with workers' pensions could be used to increase worker control of the state-owned enterprise directly through governance reform, away from its present neoliberal corporate structure.

- **Expropriate all existing renewable energy plants.** Use the data on the tariff agreements in the Power Purchasing Agreements of existing projects under the REFIT programme. once made public and transparent, to make a case for the expropriation of all existing renewable energy plants where the public subsidy of the feed-in tariff exceeds a reasonable threshold. Since Eskom itself was established through the expropriation of private enterprises to form the state utility, this mechanism should be considered as a possible path to establish direct state involvement in the renewable energy sector in order to avoid the current scenario where the utility subsidises a new regime of accumulation.

- **Encourage cooperative sector development.** Worker cooperatives should be supported to maturity within a broader strategy of realising the possibility of socially-owned renewables beyond narrow definitions of state ownership. Such an initiative would greatly benefit from the establishment of a worker-controlled cooperative bank that could enable the financing and development of an increasing array of cooperatives throughout the value chain of renewable energy systems.

- **Establish publicly-funded centres and action-oriented research groups.** This can be done in technical research areas in universities and Technical and Vocational Education and Training (TVET) colleges to develop infrastructure solutions compatible with community ownership and worker self-management. Community Learning Centres, TVET colleges, educational institutions, and universities should develop programmes that introduce the notion of cooperative development planning along with service courses to help upskill technical workers interested in transforming existing enterprises.

- **Agitate for the state to adopt a comprehensive set of reforms curbing the prevalence of illicit financial flows on the economy.** A portion of the recovered capital should be reserved for initiatives led by communities affected by extractive industries.

- **Seize manufacturing companies facing imminent closure in favour of state ownership and/or worker self-management where feasible.** This would accompany a directive to repurpose a portion of these industries to develop products and materials suitable for use along the value chain of renewable energy systems for local use and international export.

- **Support campaigns for a general strike demanding massive re-investment in the productive sectors of the economy.** This strike would agitate for harsh penalties for labour casualisation and a radically improved array of social protections advancing the related aspects of the platform advanced in the 25 April 2018 strike led by Saftu, NGOs, unionised casual workers, and students, among others.

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