

INTERVENTIONS — ISSUE 04

AFRICA AND THE GLOBAL ENERGY CRISIS

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Introduction

In the aftershock of the global COVID-19 pandemic, the Russia-Ukraine conflict, and rising tensions between the USA and China, Africa's positioning in the global energy crisis is both crucial and precarious. Decades of embracing neoliberal electricity policies, championed by the Bretton Woods Institutions, have left one of the world's most resource rich regions with the lowest energy consumption rates per capita. Despite this, African states face severe pressure to frame urgent and necessary infrastructure projects along the terms of a new Western consensus on the approach to climate finance.

This consensus, which promotes a transition from the World Bank's proposed 'Billions to Trillions' paradigm, through increased private financing, encourages states to de-risk public-private partnerships for green infrastructure through offering sovereign guarantees and public incentives, while the profits derived from these services are privatised. Essentially, the result is a green structural adjustment programme.

In a world where two out of every three people on Earth still lack access to electricity, the African continent confronts a sobering reality of the inequality between and within regional states. Using estimates from public data provided by the World Bank, South Africa and Egypt alone account for over 46% of total electrical energy consumption in Africa. Ethiopia, responsible for the most extensive national electrification programme over the past decade, leveraged the progress of the Grand Ethiopian Renaissance dam to expand grid access to its citizens and export energy to neighbouring states. Coupled with small-scale solar systems for rural access, Ethiopia has provided access to over 50 million people but about half of these residents reported the ability to use only eight hours of power per day.¹

There are an estimated 275 million people with access to electricity living in rural areas in Africa today. These connections are largely covered by three approaches: national grid extension (typically fully public); mini-grid access (private, often publicly subsidised); standalone home solar devices (private, often publicly subsidised). The International Energy Agency's 2022 *Africa Energy Outlook* indicates a future decrease in national governments' involvement in electricity provision. It predicts the rise of decentralised mini-grid systems, which will be privately owned and operated, and supply over 65% of new electricity connections for residents situated more than 20km away from existing grid infrastructure.²

The global economic impact of response measures to the COVID-19 pandemic have been both severe and well documented. Energy poverty in Africa increased by 4% from 2019 to 2021 because of rising inflation, capital costs, fuel costs, and supply chain disruptions.³ States have faced rapidly escalating debt levels with negative

implications for service utilities. These trends impacting the cost of living, service provision, and infrastructure development have been further exacerbated by the Russia-Ukraine conflict.

Escalating energy prices in developed economies coupled with mounting international pressure to decarbonise their industries are catalysing significant shifts in investment patterns. This is especially prevalent in extractive sectors including coal, fossil, gas, and a variety of rare earth metals (such as lithium, copper, and manganese) earmarked as critical for the global energy transition. Access to these natural resources, and the pursuit of domination in the high-end segments of their associated value chains are reshaping geopolitical dynamics in energy politics across the globe.

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Critical questions about Africa's own energy future revolve around its industrial aspirations, alongside the potential for realising universal provision of basic services including sanitation, electricity, and clean water. Simply put, transforming Africa's energy system to meet these ambitions necessarily implies transforming Africa's role and position in the global economy as whole.

The history of electrification in Africa

Electrification trends in Africa have several distinctive features. Firstly, limited electricity access particularly in rural areas. Secondly, relatively low demand for electricity in Africa's industrial sector resulting in demand which is dominated by urban domestic electricity consumption. Thirdly, the electricity sector continent-wide has suffered from low levels of investment, resulting in poor performance from installed infrastructure and substantial technical losses from poorly maintained and decaying grid infrastructure. From a historical perspective, electrification can be thought of as unfolding in three phases:

1. *Early electrification under colonialism (early 20th century)*

During this era, the development of electrical infrastructure was primarily driven by:

- The deployment of industrial machines to mechanise mining of natural resources bound for European economies
- Pumping water to rural areas and irrigation for plantation agriculture
- Limited industrial lighting (e.g. streetlights, railway lighting)
- Limited domestic and small commercial applications (primarily telecommunications services and lighting)

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2. *Electrification expansion under the national liberation period (post-World War II to the early 1980s)*

During this period, many African states were reforming state institutions, building state capacity and, in several cases, charting ambitious early industrialisation plans. As the first president of Ghana, Kwame Nkrumah, announced in 1957:

We shall measure our progress by the improvement in the health of our people; by the number of children in school, and by the quality

of their education; by the availability of water and electricity in our towns and villages, and by the happiness which our people take in being able to manage their own affairs.⁴

Several applications for electrical energy quickly became widespread. Through the rise of consumer electronics, energy use domestically and in small businesses rapidly expanded. The expectations of newly free Africans changed; electricity was viewed as part of the basic services a modern state was expected to provide. Electricity also became a key strategic resource required to increase local resource beneficiation and develop local productive capacity across a range of sectors. Energy sovereignty emerged as a component of proposals for a developmental state and some notable public works projects related to energy were Nkrumah's Akosombo Dam in Ghana, Gamal Abdul Nasser's Aswan Dam in Egypt, and Jawaharlal Nehru's three mega-dam projects initiated under the Indian government's first 5-year plan.

Programmes to expand energy access included ambitious rural electrification schemes tied to a range of rural development strategies. Investments in energy distribution and transmission infrastructure rose, leading to the formation of larger national grids, and subsequently, regional grid networks. Rural electrification schemes typically consisted of plans to extend the national grid network and featured projects to utilise specific local resources to support small-scale electrification projects in mining, agriculture, and for the railways. This was seen in hydro-electricity for small gold mines in Pilgrim's Rest in South Africa as early as 1892.⁵

Electrical energy demand remained heavily tied to mining and resource extraction, particularly in central and southern Africa as the transition from colonialism to independent statehood failed to break entrenched cycles of economic exploitation. Grid expansion, typically driven by public investment, and subsidies facilitated high electricity access levels across large sections of North Africa. In Egypt, Algeria and Tunisia gas power was leveraged for this use. In South Africa, the country was (and still is) largely reliant on an extensive coal generation fleet.

3. Electrification under neoliberalism (1980s until the present day)

During the national liberation period, state-owned electricity utilities strived to realise national governments' energy policies and development objectives. In the 1990s, because of the structural adjustment programmes imposed by the World Bank and the International Monetary Fund (IMF), market reforms on local electricity sectors broke up vertically integrated utilities, where they existed. Private ownership was promoted and electrical generation was shifted to so-called Independent Power Producers (IPPs).

Structural adjustment ushered in a period of grave indebtedness within Africa's electricity sector. Once emblematic of national liberation, major energy projects turned into magnets for loans from international financial institutions. Tragically, a number of these ventures also fell victim to local corruption and mismanagement, failing to fulfil their envisioned technical potential.

Civil wars have had tremendously negative impacts on the state of electricity infrastructure programmes and the prospects of grid expansion. By the end of 2023, there were at least 16 African countries involved in armed conflicts.⁶ Angola, the Central African Republic, the Democratic Republic of Congo (DRC), Libya, and South Sudan in particular, despite their immense resource wealth, have experienced significant infrastructure setbacks related to war, leaving rural communities the most cut off from electricity.

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With extractive mining forming such a key role in African economies over the twentieth century, large multinational mining magnates in countries such as the DRC, were able to rationalise and shape infrastructure projects like the Grand Inga Dam project to serve their growing needs over the local population's needs. In the words of Kambale Musavuli, a human rights activist on the Grand Inga Dam project, 'People see the power lines above them, but they don't have access to that electricity. It's not right for these people to die of electricity, yet they don't have it in their homes.'⁷

Amid the prevailing neoliberal model, which advocated for cost recovery for utility services, the burden of paying for infrastructure was shifted directly onto consumers. This shift bore substantial consequences, particularly for the working class, who found their budgets strained by high electricity expenses in relation to their

low and often precarious incomes. Neoliberal macroeconomic frameworks turned basic service delivery into profitable opportunities for multinationals and delivery of electricity has become dominated by private entities.

The absence of electricity is an unfortunate reality for many impoverished households, rural and urban periphery alike, who remain unlikely to receive equal access in the absence of significant public subsidies. For all the promise of the rush for private investment in infrastructure, very little has materialised from the reforms, and much of Africa's existing public infrastructure has been neglected, chronically underfunded, and fallen into disrepair. Rural electrification where it has occurred at significant scale has come through public subsidies and the expansion of grid network. For instance, in Ethiopia, where since 2005 the state has extended electricity access to over 35 million people as part of its national electrification strategy.

Rejecting the new Green Structural Adjustment era

Energy systems across the world have faced significant challenges in the wake of the COVID-19 pandemic. The economic slowdown during the pandemic created waning electricity demand, then demand rose sharply after industrial production and commercial activity returned to pre-pandemic levels and mandated lockdowns ended. This strained highly concentrated value chains, particularly new energy infrastructure projects, and resulted in rising project costs, delays, and, in many cases, cancellations.

A perfect storm began to develop when the Russia-Ukraine war, which escalated dramatically in February 2022, upended global gas prices, and sent energy prices as a whole soaring. Europe's decarbonisation plans, since the early 2000s, have relied on a technology mix of solar, wind, and gas power plants, with the latter dependent on cheap supplies from Russia. Europe has the largest synchronised electricity network in the world and has been used as the gold standard for informing privatisation campaigns in the Global South. The worst of the recent energy crisis saw unaffordable electricity prices threaten working-class livelihoods and weaken Europe's industrial base, encouraging offshoring of manufacturing.

The renewable energy sector has not been sheltered from economic pressures either. The global supply chain crisis saw key wind and solar power value chain inputs such as steel (up 40%), aluminium (up 100%) and copper (90%) experience price rises from January 2021 to April 2022.⁸ The IEA indicates that freight transport costs have gone up almost 400% in the same period, and upstream manufacturing outputs such as photovoltaic grade silicone, which is used in solar panel cells, also quadrupled.⁹ Combined price hikes have led to wind and solar projects

costing as much as 25% above pre-pandemic levels. These trends have seen left parties and trade unions champion nationalisation of energy, price controls for key strategic commodities, and ambitious industrial policy proposals.¹⁰

Constituents in the Global North have also been pressuring their governments to switch to sources of renewable energy to reduce reliance on polluting fossil fuels and slow down the climate collapse. While seeming noble on the surface, it is rarely acknowledged that poorer countries in the Global South, which are home to metals and minerals, such as lithium, copper, and other rare earths, needed in massive quantities for the energy transition will be expected bear the brunt of extraction, and low commodity prices.

Africa is already grappling with more severe climate change effects than many other regions, although it contributes less than 5% of the world's energy-related carbon dioxide (CO2) emissions, boasting the lowest per capita emissions globally. Nevertheless, Africans disproportionately suffer the adverse effects of climate change: water scarcity, loss of plant and animal biodiversity, diminished food production, increased extreme weather events, and stunted economic growth. These challenges are driving mass migration and regional instability.

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Since 2021, there has also been a boom in the demand for fuels such as liquified natural gas (LNG), coal, and oil. Various European states are actively aiming to diversify their sources of gas by investing new extractive projects in Africa which have been cited as one of the key strategic alternatives to Russian gas suppliers. New potential projects have been proposed in Tanzania, South Africa, and Mozambique among others. The latter has already led to bitter and bloody consequences.¹¹

In Cabo Delgado, Mozambique, French oil and gas multinational, TotalEnergies, has driven the development of the Golfino-Atum gas field capable of produc-

ing nearly 13 million tonnes of LNG per annum.¹² Many locals have been forcibly evicted from their ancestral lands to make way for the project without adequate compensation or resettlement plans. This has resulted in a loss of livelihoods and cultural heritage for these communities.¹³ As local poverty rose in the wake of the gas project, devastating conflict broke out between the state, TotalEnergies, and armed militants organising local youth under the banner of al-Shabaab over access to and control of the resources. Instead of lifting people out of poverty, and increasing investment levels in public infrastructure, the gas industry has exacerbated inequalities and entrenched dependency on extractive industries.

Despite this push to secure their own gas reserves in Africa, the European Union (EU) has resolved to establish a Carbon Border Adjustment Mechanism (CBAM), a carbon tariff on carbon-intensive products which are imported into the EU. Companies will be required to report their emissions and purchase CBAM certificates, which will increase costs and reduce the profitability of importing energy. Exporters with carbon-intensive economies, such as Brazil, China, South Africa, and Vietnam who are some of the major players in the industry, will be worst hit. China has resolved to appeal the proposed CBAM at the World Trade Organisation.¹⁴

In contrast to their approach to the fires burning at home, European and American leaders, aided by the World Bank and the IMF, have embarked on a campaign to mask their dwindling industrial strength by championing neoliberal climate solutions for the Global South. The newly established Just Energy Transition Partnerships (JETPs) set up by France, Germany, the United Kingdom, the United States, and the European Union are a key example of this.¹⁵ The JETPs target a growing set of developing nations – Indonesia, India, South Africa, Senegal, Vietnam – by offering them loans and ‘blended finance’ packages to encourage aggressive decommissioning of coal plants and local policy reform which allows private capital to participate heavily in the energy sector.

South Africa, which was intended to host the flagship JETP agreement, has seen the negotiations marred by controversy as trade unions and civil society organisations were deliberately excluded from the financing negotiations. Widespread electricity sector reforms have been accelerated but lofty promises of social programmes to protect workers and communities in/near newly decommissioned coal plants have failed to materialise.

Komati coal-fired power station, a 1960s era plant built during apartheid, was earmarked as the first closure as part of utilities JETP. With the support of the World Bank, a plan was developed to repower and repurpose the facility using a combination of small-scale renewable energy projects, worker training facilities as well as a microgrid assembly line to develop products to improve rural electricity

access.¹⁶ Despite numerous promises that no workers would be left behind during the transition process, more than half the workers onsite holding temporary contracts were effectively abandoned with no explicit plans and processes created to incorporate them into the new plans.

In May 2023, leaders from African trade unions, national workers' centres, global union federations, and allied research centres from across 15 countries convened by the Trade Unions for Energy Democracy (TUED) gathered in Johannesburg to chart a public pathway for the energy transition in Africa. The new era of Western climate policy has been criticised for rebranding and entrenching failed neoliberal economic policies in the name of sustainable development.

Vietnam, another recipient of a landmark JETP agreement worth \$15 billion in value, faces a very similar set of challenges to South Africa with just under 50% of its demand reliant on coal-fired power stations. Vietnam Electricity (EVN), the state-owned utility, has faced two waves of market reform since the late 1990s but maintains the operation and ownership of key coal and hydro-based generators.

The Communist Party of Vietnam controls the prices of key strategic commodities as part of its socialist market economy philosophy. EVN has played a central role in allowing the state to lower electricity prices, benefitting industrial development. Their choice of monetary policy ensures low, stable interest rates and controls inflation levels. In March 2023, Vietnam's central bank slashed interest rates to buffer the economy from the global economic recession.¹⁷

Following the 2004 Electricity Law, which was aimed at sector liberalisation, Vietnam initiated the integration of renewable energy, adopting policies to encourage both state-led residential and commercial projects, alongside significant private utility endeavours. Despite a heavy reliance on coal, solar PV capacity has surged by 600% since 2019, as the country aims to reduce its dependence on increasingly expensive imported gas. However, Vietnam's market reforms have also led to critical underinvestment in EVN infrastructure. This underinvestment has stalled the development of new transmission lines necessary for further solar energy deployment.

Since a significant portion of renewable energy plants in Vietnam are foreign owned, aggressive tariff policy reforms have been necessary. These reforms aim to align electricity prices more closely with actual costs, but they limit the government's ability to control prices through EVN, pushing the utility to continue its coal dependency and obstructing greater low carbon generation. This scenario in Vietnam offers critical lessons for African policymakers, underlining the intricate balance required between infrastructure improvement and the push towards decarbonisation.

AFRICA WILL NOT ACHIEVE UNIVERSAL ENERGY ACCESS WITHOUT A FUNDAMENTAL SHIFT IN ITS STATUS IN THE GLOBAL ECONOMY.

Conclusion

Africa will not achieve universal energy access without a fundamental shift in its status in the global economy. Radical social movements aiming to transform the continent's economies should be supported to reinvigorate debates around Africa's industrial futures. Africa's abundance of critical minerals required for the global energy transition away from fossil fuels, should be leveraged in multilateral economic negotiations to shift investment trends away from financialisation and towards productive sectors of local economies.

Social movements must mobilise around practical platforms to influence public policy proposals that address energy poverty and improve the productive capacity of key African industries. Going forward there must be:

- Credible, well-resourced public energy planning mechanisms that include the perspectives of working-class communities
- The integration of ambitious public energy expansion programmes with industrial policy plans to support the agro-industrial production, strategic resource beneficiation and the development of other strategic energy intensive industries (such as steel, aluminium, copper beneficiation)
- Regional electrical transmission infrastructure planning and finance co-ordination between African states
- Technology transfer and skills development included in all negotiations between African states and BRICS member states
- New macroeconomic reforms to resource state capacity to directly provide basic social goods such as water, electricity, internet, housing, and healthcare
- A shift from carrying out climate finance negotiations on a country-by-country basis towards negotiations that include regional multilateral blocs. This new approach would strengthen the bargaining power of developing countries.

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