ENERGY ALERT

ACEP Africa Centre for Energy Policy

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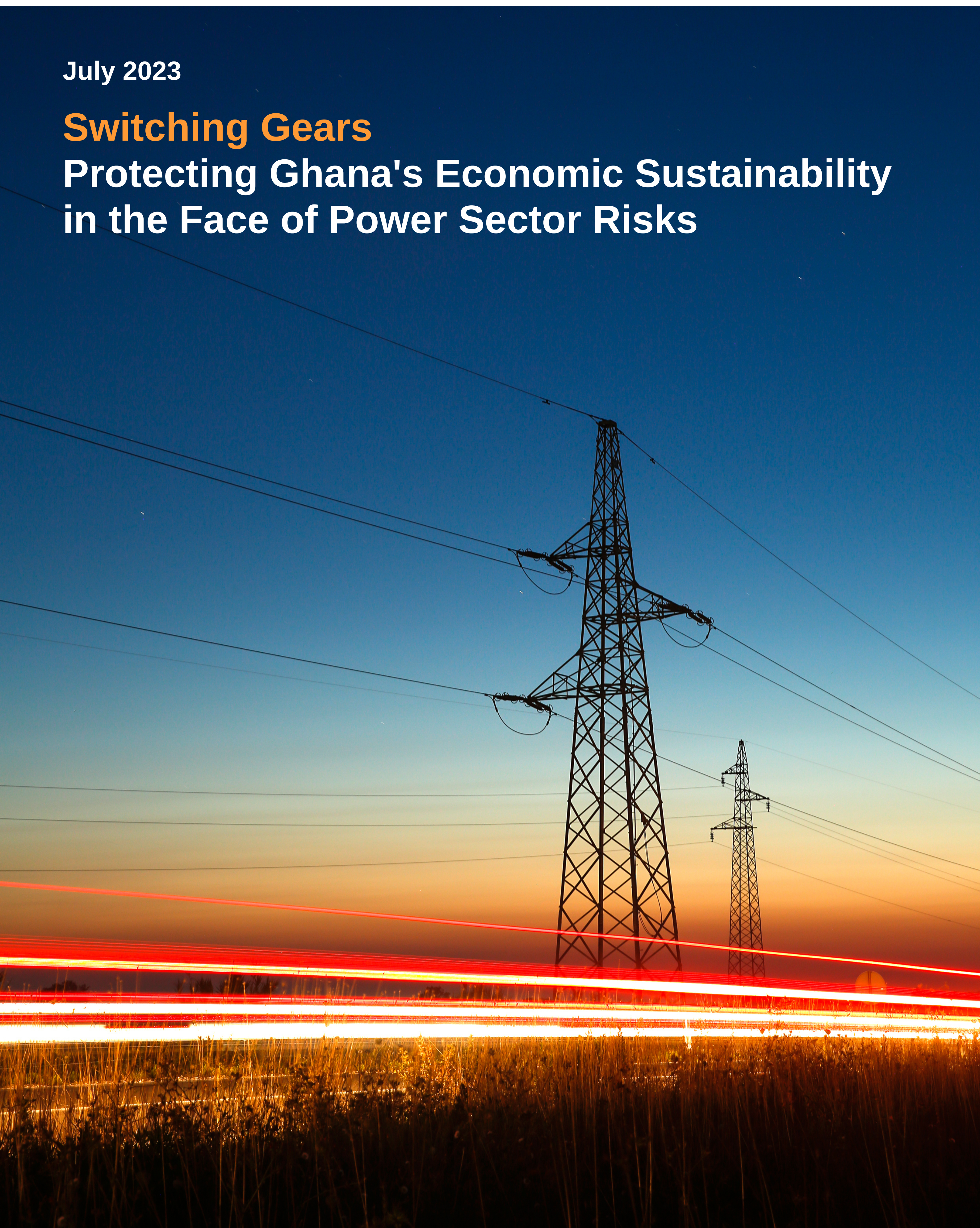


July 2023

Switching Gears
Protecting Ghana's Economic Sustainability in the Face of Power Sector Risks

Summary of issues

1. The power sector remains a major threat to Ghana's economic sustainability.
2. The IMF programme recognises the reform of the sector as key to economic recovery.
3. Tariffs have increased by about 100% in the past nine months, but liquidity has worsened within the same period, raising concerns about revenue accounting by ECG, and the impact of the adjustments.
4. The Cash Waterfall Mechanism recorded its poorest performance in March and April 2023, meeting only 11% of the revenue requirement. This is because of ECG's discretionary spending and poor accounting.
5. At the same time, more poor decisions are being made to further threaten the sustainability of the power sector, requiring a seismic shift in the governance of the sector.

Background

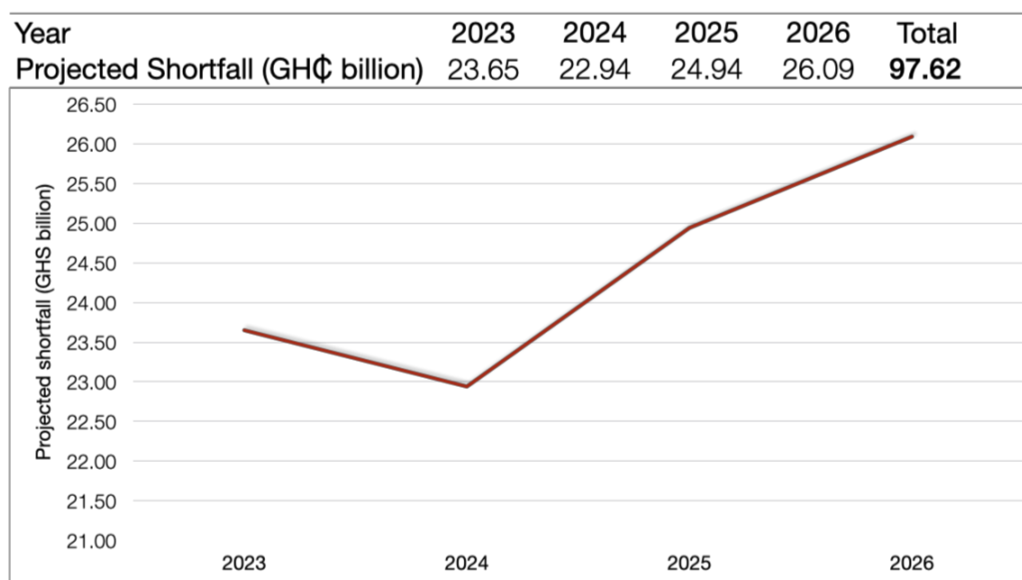
The power sector is heavy on the agenda of the IMF to redirect Ghana to the path of fiscal sustainability. To that extent, the Fund is hopeful that the $3 billion Extended Credit Facility (ECF) and the accompanying fiscal consolidation pledges of the government will deliver for the power sector what the government and other Multilateral agencies, including the World Bank, the African Development Bank and other development partners, particularly the US government, have been unsuccessful to deliver for the past decade.[1] That certainly is a hard sell, and analysts remain cautious in believing that the IMF can deliver this miracle, undermined by a lack of political will, inefficient decisions, lack of accountability and deficit of context-appropriate solutions to the problems.

Is there a silver bullet in the IMF programme for the power sector?

The IMF programme offers two main strategies: "cost-reflective tariffs" and improving the efficiency of the distribution system. These approaches aim to address issues that previous programs failed to solve. However, this time, the IMF focuses on implementing conditionalities and targets for the government. The goal is to create a power sector that can sustain itself financially, thereby relieving the national budget from excessive under-recoveries projected to be about GHS97 billion, at business-as-usual, between 2023 and 2026.

[1] The world bank has spent on Energy Sector Recovery programme for four years and failed to reduce inefficiencies. The US government spent about $308 million through the MCC Compact 2, and other interventions through Power Africa. AFDB has supported the PURC on regulatory efficiency and transparency. Nonetheless, the sector has deepened in inefficiency and drained the public resource in that period more than ever.

Figure 1: Projected energy sector payment shortfalls from 2023 to 2026



Source: Author's construct from the 2023 Budget Statement of Ghana

Addressing the under-recoveries will free up resources in the budget to allow for socioeconomic investments, which are estimated to be far below the projected shortfalls in the power sector. Investments in capital expenditure in critical social sectors such as agriculture, fisheries, roads, education, gender and health is about GHS 48 billion, against the projected power sector under-recoveries of GHS 97 billion. Thus, if the under-recoveries were blocked, the government could invest almost twice the projected capital investment in the sectors presented in Table 1 below.

Table 1: Projected capital investment in key social sectors from 2023 to 2026

Sector	2023	2024	2025	2026
Agriculture	532.63	568.50	626.89	697.08
Fisheries and aquaculture	31.48	33.02	36.54	41.28
Roads	2,639.47	2,964.67	4,189.94	5,967.12
Education (incl GETFund)	4,212.22	6,835.68	8,420.72	10,009.01
Gender and social protection	1.08	0.86	1.02	1.46
Health	134.50	144.13	158.81	175.94
Total CAPEX	**7,551.38**	**10,546.87**	**13,433.92**	**16,891.90**
Capex % of shortfalls	32%	46%	54%	65%
Multiplier	3.13	2.17	1.86	1.54

Source: Extract from the 2023 budget statement of Ghana

The IMF conditionalities and the power sector

The IMF conditionalities are already being operationalised, primarily based on the theoretical assumption that raising tariffs would enhance the sector's liquidity. From September 2022 to June 2023, tariffs have increased by approximately 100%, a situation which could never have been possible without the IMF programme. However, liquidity has worsened. The Cash Waterfall Mechanism (CWM), implemented to improve liquidity, has failed to achieve its objectives in two key areas: ensuring proportional distribution of revenues and enhancing revenue collection.

Recently, the Electricity Company of Ghana (ECG) has garnered attention for its determined efforts to improve the collection of outstanding bills from consumers and implement a new billing system to address recurring inefficiencies in power sales. As the primary contributor to the financial struggles within the sector, ECG has embarked on a debt recovery campaign to collect approximately GHS 5.7 billion (around $475 million) owed by power consumers. The company asserts that it successfully recovered about GHS 3.1 billion (around $258 million).

Remarkably, despite these touted recoveries, there has been no discernible improvement in liquidity, at least through the CWM – the established mechanism for tracking collections and payments along the power sector value chain. The Independent Power Producers(IPPs), Volta River Authority (VRA), Ghana Grid Company Limited (Gridco), Ghana National Gas Company (GNGC), Ghana National Petroleum Company (GNPC) and the Public Utilities Regulatory Commission (PURC) all echo the same question: **Where is the money?**

It is clear from the CWM data that substantial portions of ECG’s collections were not directed towards paying off the value chain or making any substantial impact on the continually escalating debt owed to the IPPs and the rest of the stakeholders.

Testing ECG’s claims of revenue collection and accounting

The whereabouts of the GHS 3.1 billion collected by ECG remain illusive. According to the CWM, all revenues should be appropriately accounted for, and distributions should be carried out based on approved proportions determined by the CWM committee. However, reports from the CWM indicate that between March and April, ECG reported total revenue of GHS 1.1 billion, averaging GHS 550 million per month. This amount represents approximately 35% of the GHS 3.1 billion claimed by ECG. Even more concerning is that more than 50% (about GHS 540 million) of the reported revenue was used for discretionary spending by ECG. **The balance of the GHS 1.1 billion accounted for, only represents about 11% of the revenue requirement for the sector under the CWM for March and April 2023.**

The company claims that it used the GHS 540 million to procure liquid fuel for some power plants during shortfalls in gas supply, while refusing to pay the gas suppliers through GNPC.

The non-payment to the gas sector companies compelled the West Africa Pipeline Company Limited (WAPCO) to reduce Reverse Flow gas volumes from the West to the East to the contracted volume of 60mmscfd. On July 1, 2023, WAPCO curtailed the reverse flow of gas for hours because of the outstanding payments. Out of the prior agreed scheduled payment of $15.236 million due for June 2023, GNPC could pay only $1.246 million, attracting the activation of contractual clauses to cut supply. Subsequently, gas supply has been restored on condition that the government pays half of the outstanding balance of $20 million by July 7, 2023.

Gas supply payments from Sankofa Gye Nyame (SGN) field are also in arrears of nearly $600 million – about $380 million for LC drawdowns and additional invoices of about $207 million. The companies have only been magnanimous for not crossing the $400 million threshold on the LCs, which would activate World Bank guarantees. It remains unclear how long the producers will hold off further drawdown on the LCs to prevent Ghana from becoming the next Argentina, the only country to have attacked World Bank guarantees in recent history.

The government has already paid more than $1 billion for gas consumed by the power sector since 2018, though captured in the tariff. Thus, for ECG to ignore all the realities and pay for liquid fuel while undermining gas supply, it is not difficult to conclude that the company does not care what fiscal damage it causes to the public.

ECG, in a glaring discrepancy, allocated a disproportionate amount of its revenue under the Cash Waterfall Mechanism (CWM) to itself while significantly underpaying other entities within the value chain. According to the CWM formula, ECG was entitled to 26.37% of the revenue, which should have amounted to about GHS 113.5 million of the reported revenue of about GHS 430 million for March and April. However, ECG disbursed to itself approximately GHS 256 million (about 59% of the CWM revenue), deviating significantly from the prescribed allocation formula.

The GHS 256 million ECG encumbered is about 78.4% of its billed invoices for March and April. On the contrary, ECG paid between 3.1% and 12.4% of the invoices billed by other entities within the value chain (See Table 2). **Beyond the 78.4% disbursement, ECG's claim of improved revenue collection suggests that far more revenues collected are not reported under the CWM**.

Table 2: Actual invoices revenues disbursed under the CWM for March and April 2023

Stakeholders	Actual March & April Invoice	ECG Payment under CWM	honoured Portion of Invoices
	GHS	GHS	%
Total Generation Cost/payments	2,046,724,687.69	111,700,000.00	5.5%
Fuel Cost/payments	1,280,782,000.79	40,000,000.00	3.1%
Transmission Cost/payments	186,220,027.85	23,000,000.00	12.4%
Distribution Cost/payments	326,235,742.28	255,911,524.56	78.4%
Total CMW invoices/ payments	**3,839,962,458.61**	**430,611,524.56**	**11.2%**

Source: CWM mechanism

While the government is negotiating to restructure IPP debts, more mess is created.

The government is actively negotiating to restructure the substantial debt owed to Independent Power Producers (IPPs), which amounts to approximately $1.7 billion as of the end of May 2023. However, the IPPs have expressed their unwillingness to accept the proposed debt reduction plan put forth by the Ministry of Finance. The IPPs threatened to cease operations and shut down their plants if 30% of their outstanding debts as of March 2023 remained unpaid by the June 30 deadline. This was averted by ECG's last-minute interventions to create a separate payment arrangement for the IPPs, a further indication that ECG had money which did not go through the CWM. The IPPs have been able to secure some payments because of the threats, however, the state agencies in the value chain such as VRA and Gridco, continue to endure the non-payments.

While the total outstanding debt is indeed significant, the recurrent nature of the power sector debt is particularly concerning. **Given the alarming rate at which debt continues to accumulate within the power sector, it is evident that even if the entire $3 billion to be accessed through the IMF's ECF were directed towards the power sector, it would still fall short of covering two years' worth of under-recoveries.** This sobering reality, combined with the potential consequences of the IPPs' threat to halt operations, underscores the urgent need to address the issue of financial sustainability in the power sector with even greater importance than ever before.

The government's approach of allowing ECG to reform itself and manage its challenges has failed to generate the needed quality of management, thus proving unsustainable due to the perennial intervention of the political class. These have perpetuated the financial and technical challenges, emphasising that a government-controlled management structure is unlikely to succeed.

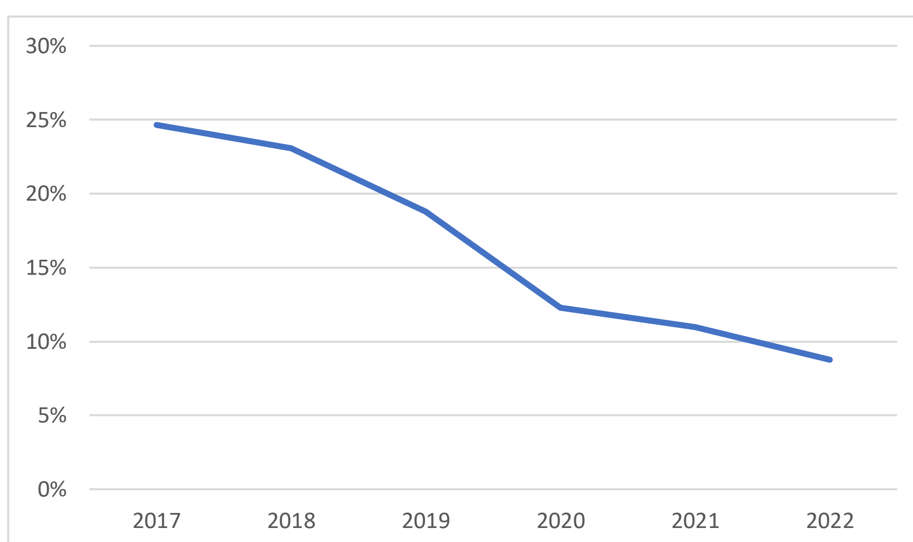
The renegotiated AKSA plant agreement

With the mounting threats to the economy, ECG provides further evidence that it does not care about the broader impact of poor decisions on the country. Recently, ECG yielded to political pressure and extended the operation of emergency power plants procured during the "*Dumsor*" (power crisis) era in 2015. ACEP has consistently argued that deploying the most efficient power plants in Ghana is crucial for long-term sustainability and prudent management of the sector to save costs and ensure reliability.

The renewed AKSA power plants are old plants overpaid for by Ghanaians. It is unbelievable that ECG has signed an additional 15-year extension for the plants. The fact that both the technical and commercial regulators of the power sector (Energy Commission and PURC) approved this renewal is highly disappointing.

Here are the facts at play: The AKSA plants are old Watsila engines assembled by a private developer during the *Dumsor* period in 2015, with units from various countries, including Cyprus and Sri Lanka procured at the cost between $1.2 million and $2 million per unit. ACEP estimates that the total investment cost of the projects would not exceed $60 million, a fact that the sector regulators are aware of. However, over the past six years, the company has earned approximately $700 million from the people of Ghana for capital recovery and fixed O&M while delivering an average of 16% utilisation between 2017 and 2022 (See Figure 2). Remarkably, these same plants are now being assigned a capital recovery charge of about $750 million for the next 15 years under the pretext of retrofitting them to improve efficiency. In other words, the government and ECG suggest that these over 20-year-old plants will operate efficiently for another 15 years.

Figure 2: AKSA plant utilisation between 2017 and 2022



Source: Energy Commission

This posture is not only incompetent but also undermines engineering feats of new power generation systems. Proper system planning would ensure that generation additions deploy state-of-the-art modern equipment, mainly when the state is the fuel supplier. It is also a basic fact that old plants are less reliable. For a power system struggling to recover from persistent power interruptions, planning to build long-term efficient power systems is a fiducial duty of the government and its agencies. No company should promise a reliable power supply from dead plants no matter how cheap the promise would be.

The inconsistencies surrounding the justification for extending these power plants necessitate a closer examination. The Ministry has put forth an explanation stating that there is a current need for additional capacity, which contradicts the ongoing assertion that there is already excess capacity. Meanwhile, ECG persistently attributes the under-recoveries to this purported excess capacity.

Furthermore, a perplexing shift in perspective has occurred, as individuals who previously criticised the concept of take-or-pay agreements now deem it acceptable when the percentage is lower – about 40% in the case of AKSA. It is important to note that even a mere 1% of take-or-pay becomes problematic when a plant is deemed surplus to requirements. In essence, take-or-pay is not a problem when the plant is required. It is only a risk mitigation measure to guarantee the repayment of investment capital which has proven to be relevant in our context. Had the companies not signed take-or-pay agreements, there would have been a high chance that the government would ignore paying the IPPs for their investments.

These inconsistencies in reasoning and selective acceptance of unfavourable terms raise concerns about transparency and accountability. It is crucial to scrutinise these contradictory narratives and rid the sector free from political expediency. It is imperative to hold those involved accountable and ensure efficient decision-making that aligns with the overall welfare of the Ghanaian people. This is a test that the new AKSA contract fails at all levels.

The mysteries surrounding the AKSA project would be subject to criminal investigation in any serious country. The same AKSA project is under scrutiny by the United States government authorities for alleged bribery payments to Ghanaian government officials. Moreover, Payments to AKSA were given priority over the years, much to the dismay of industry stakeholders.

Ameri and other idling plants

While extending the AKSA plant, the Ameri plant for which Ghanaians have paid the full value of $510 million for is idling and deteriorating. The plant has been left neglected under the pretext of relocation to Kumasi. The lack of maintenance of the plant has rendered it deplorable, with leaky roofs, damaged air conditioners and operating computers on some of the units. While the relocation tarries and the plant deteriorate, the pipeline to supply gas is already completed, requiring a pass-through of the cost to the public through tariffs. Already,

GNPC is demanding a tariff adjustment to accommodate gas discounts provided to Genser, which ACEP and Imani estimate to be about $1.5 billion over the 16-year contract period.

Again, other single-cycle plants of VRA, like the KTPP and TTIP, require investment to convert them to combine-cycle plants to achieve better efficiency than AKSA. However, those critical assets are wasting away while ECG and the Ministry extend other power plants on a take-or-pay basis.

High investments correlate with high losses in ECG

In 2014, a comprehensive assessment of the power sector identified three primary factors contributing to its challenges: managerial, technical, and financial issues. To address these concerns, the assessment recommended exploring the option of private sector participation (PSP) in power distribution. Consequently, the government initiated the involvement of Power Distribution Services (PDS), a concessionaire tasked with managing ECG and its assets. However, due to political complications, the agreement's selection process and subsequent implementation were aborted.

As part of the agreement, the concessionaire was obligated to invest a minimum of $100 million annually for five years to reduce technical and commercial losses from 23% to 18%. ECG reports that it has invested approximately $667 million in distribution infrastructure between 2019 and 2022, more than what was to be invested by PDS. Unfortunately, these investments did not yield the intended reduction in losses. On the contrary, technical and commercial losses increased from 24% in 2018 to 30.6% in 2021. This rise in losses, despite significant investments, shed light on the existing managerial challenges within ECG.

No Meter syndrome

The persistent issue of meter shortages at ECG is an unfortunate reality that has persisted for far too long. A preliminary assessment of just a few districts of the utility reveals that there are thousands of applications and consistent queues for meters. However, the severe scarcity of meters denies many people access to available power. Consequently, incidents of meter theft and racketeering are on the rise. It now costs between GHS3,000 and GHS5,000 to buy meters from "*Goro guys*" (black market sellers), mostly ECG workers and contractors. The root causes of this problem are not solely financial, but political factors also contribute to the dire situation.

One of the contributing factors to the high cost of meters in Ghana is the presence of shady contracting practices and an abusive local content policy that ignores competitive pricing and fails to deliver value to the consumer. The exorbitant costs associated with meters can be attributed to these inefficiencies. In the coming days, ACEP will release a meter cost

benchmarking report to shed light on how meter costs are inflated, highlighting the padded expenses that render the utility unable to procure adequate quantity of meters, regardless of the tariff increases for meter installations. Given the urgent need to reduce under-recoveries in the power sector, such inefficiencies cannot be tolerated.

Addressing the issue of meter shortages requires a comprehensive approach that tackles both the financial and political aspects of the problem. It is crucial to reform the contracting processes and review the local content policy to ensure that consumers receive meters at reasonable costs, promoting affordability and accessibility. Additionally, transparency and accountability must be prioritised to eliminate corrupt practices and efficiently allocate resources. The power sector cannot afford to continue suffering from the consequences of meter shortages, and urgent action is required to rectify this situation.

Conclusion and recommendation

Efficient and effective policies to address the challenges in the power sector are significantly delayed, and unfortunately, the situation is not improving. The central government's payments to cover under-recoveries have escalated yearly due to inefficiency and disastrous policy decisions throughout the value chain. ECG serves as a key contributor to these poor choices. The recent reality of ECG's payment to CWM covering about 11% of the revenue requirement represents a distressing level of under-recoveries, undermining the revenue adjustments made recently, despite a significant increase of about 100% over the past nine months.

The urgency to prevent further deterioration in the power sector's condition is now more critical than ever, considering the broader implications for the oil and gas sector. Investors in this sector are already concerned about payment issues related to gas production and future exploration. The consequences of mismanaging the power sector impact the national budget and cannot be overstated.

A key recommendation stemming from this crisis is the immediate need for enhanced transparency and accountability throughout the power sector value chain. Additionally, it requires a patriotic commitment to prioritise systemic planning and policy implementation over narrow interests. Without such fundamental changes, no intervention or solution will effectively address the prevailing challenges.

In addition to the conditionalities imposed by the IMF, it is imperative that the government implements publicly trackable actions and mobilise citizens for honest and crucial discussions on how to sustain the power sector. The following urgent recommendations need to be thoroughly explored:

1. **ECG must account for revenues:** Before the major adjustment in September 2022, ECG's collection was about 50% of the revenue requirement under the CWM. However,

payments under the CWM have deteriorated to a new low of about 11%, although there has been a 100% increase in tariffs since September 2022. Therefore, ECG needs to account for all its revenues over the period, including the GHS 3.1 billion it has recovered from debts. This accountability would help measure tariff adjustments' effectiveness on the power sector's financial sustainability.

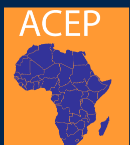
2. **Periodic accountability and performance reporting by ECG**: It is crucial to elevate the reporting of ECG's performance improvement beyond mere Public Relations (PR) campaigns. Regular and transparent reporting should encompass comprehensive data on collections and expenditures to address the needs of the entire value chain. This will enable informed decision-making and targeted interventions. This should be done by reforming the CWM, which has remained a black box. The payments and retentions outside the CWM are unacceptable.

3. **Urgent procurement of meters**: The prolonged lack of meters is unacceptable. ECG must take immediate action to make meters available. An option will be allowing customers to make upfront payments for meters, which the consumer can recover through billing. This creates an option outside the explosion of black marketeering of meters. Again, the procurement system must be transparent, with the involvement of PURC to protect the consumer.

4. **Long-term private investment in ECG**: Given the recurring challenges in the power sector, primarily influenced by political factors, there is a pressing need to reconsider the role of the private sector. However, this should not replicate the flawed model of the previous Power Distribution Services (PDS) concession. ACEP strongly recommends that the government divide the financing requirements into manageable portions that Ghanaian businesses and funds can absorb. These local investors can then establish a robust management structure that paves the way for the eventual listing of ECG on the Ghana Stock Exchange. This approach will encourage domestic investors to pool resources to raise equity and underwrite additional debts for investment in ECG on an appropriate thin capitalisation rule.

5. **Procurement of efficient power plants**: There is an urgent need for regulators to set policy benchmarks on the efficiency of new generation addition. Some examples of efficient power plants in Ghana prove that installing the most efficient power plant is possible. Extending inefficient power plants by ECG signifies poor oversight of the regulatory institutions, which ultimately risks the stability of the grid, pollutes the environment and expensive for the consumer in the long run.

Implementing these recommendations requires a collective effort involving government agencies, stakeholders, and the public. The urgency of the situation demands swift and decisive action to revitalise the power sector, ensuring its stability, reliability, and long-term sustainability for the benefit of all Ghanaians



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